Sydney Port Botany Terminal 3 Project
Main Works Construction Environmental Management Plan

Principal Contractor	Laing O'Rourke Construction Australia A.B.N. 39112 099 000
	Level 4, Innovation Place 100 Arthur Street North Sydney NSW 2060
Project Title	Sydney Port Botany Terminal 3 Project Civil Works Construction Contract Phase 1
Project Address	Foreshore Road, Port Botany NSW 2036
Client	Sydney International Container Terminals Pty Ltd
Client ACN	134 826 798
Planned Commencement Date	August 2012
Estimated Completion Date	December 2013

Revision History

Rev	Date	Description	Reviewed	INT/Date	Authorised
0.4	16/07/2012	Dept Planning Review	JA	16/06/2012	MH
0.5	20/08/2012	Dept Planning Comments	JA	20/08/2012	MH
0.6	14/02/13	Document Review	JA	06/05/2013	MH
0.7	16/09/13	Document review	JA	16/09/13	RH

Management Reviews

Review Date	Reviewed By	Details	Initial	Date
06/05/2013	J Ambler	Minor amendments to construction program dates, ERAP created for project approvals	JA	06/05/2013

Terms and Definitions

The following terms, abbreviations and definitions are used in this plan:

Terms	Explanation
SICTL	Sydney International Container Terminals Ltd
SPBT3	Sydney Port Botany Terminal 3
CEMP	Construction Environmental Management Plan
EPA	Environment Protection Authority
OEH	Office of Environment and Heritage
LORAC	Laing O'Rourke Australia Construction Pty Limited
MSDS	Material Safety Data Sheet
OOH	Out of Hours
EMS	Environmental Management System
ERAP	Environmental Risk Action Plan
ESC	Erosion and Sediment Controls
DNR	Department of Natural Resources
EM	Environmental Manager
iGate	Laing O'Rourke Australia Business Management System
SACL	Sydney Airport Corporation Limited
DOP	NSW Department of Planning and Infrastructure
PEHEP	Penrhyn Estuary Habitat Enhancement Plan

Distribution

The master 'controlled' CEMP document will be held on the site computer network server where it can be accessed by personnel as necessary. Project Centre is Laing O'Rourke's document management and project collaboration system.

All paper copies of this CEMP will be considered as 'uncontrolled' unless they have been allocated a 'copy number' in a colour other than black.

The personnel to whom these copies have been issued will be sent amendments as they occur, and it is their responsibility to discard superseded pages and insert new pages.

Issue, Revision and Re-issue

The initial issue of this plan has been reviewed by Laing O'Rourke's Regional Environmental Manager to ensure it meets the requirements of the current EMS and policy, contract, specifications and standards. The plan is approved for use on the Project by the Project Leader. Evidence of initial review and approval is by signatures on the cover sheet

Revisions of this CEMP may be required throughout the duration of the Project to reflect changing circumstances or identified opportunities for improvement.

Revisions may result from:

- Management review
- Audit (either internal or by external parties)

- SICTL complaints or non-conformance reports
- Changes to the Laing O'Rourke's standard system.

Revisions shall be reviewed and approved by the Project Manager prior to issue. Updates to this plan are numbered consecutively and issued to holders of controlled copies.

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1. Introduction

Laing O'Rourke considers environmental management to be paramount to all of our business activities. Laing O'Rourke implements its Environmental Management System (EMS) on all projects across the group and our system has been continuously certified to ISO 14001 by SAI Global since 1997.

The Laing O'Rourke EMS includes risk assessment, stakeholder consultation, operational controls, training and induction, compliance reviews, emergency response and incident management, audit, design risk and opportunities, and legal compliance. These issues are addressed through the development of site specific Construction Environmental Management Plans.

Laing O'Rourke develops Construction Environmental Management Plans (CEMP) to address site specific requirements. The CEMP includes the necessary system elements to satisfy the requirements of ISO 14001, which detail the environmental risks and control measures to address legislation, statutory compliance requirements and the client's specific requirements.

During the development of the CEMP an assessment of the client's requirements, statutory requirements such as development approvals, Minister's conditions of approvals and statutory permits requirements is undertaken. Where relevant to construction activities, Conditions of Approval, Statement of Commitments and associated control measures are incorporated into the CEMP and specific mitigation strategies developed.

For the Port Botany Terminal 3 (SPBT3) Project, this CEMP has been specifically developed to:

- Ensure that the Project meets contractual, legal and other environmental requirements including industry codes of practice
- Comply with the Sydney International Container Terminals (SICTL) Environmental Management documents and associated procedures
- Incorporate requirements of the Project Environmental Impact Statement (EIS) into the Environmental Management System for the Project
- Comply with the relevant requirements of the Project Planning Approval
- Develop alignment with SICTL environmental objectives and targets for the Project and ensure their implementation
- Ensure that the needs and expectations of SICTL are addressed
- Provide a link between Laing O'Rourke's corporate Environmental Management System and the Project's Environmental Management System
- Provide all Laing O'Rourke personnel with systems, procedures and documentation necessary to undertake the construction of this Project with environmental requirements and to minimise the impact on the natural environment
- Meet the requirements of ISO 14001 including the need for continual improvement. Laing O'Rourke's Environmental Management System has been certified to ISO 14001 for in excess of 10 years.

The CEMP provides the high level governance framework for environmental management on the Project and is supported by a number of issue specific Sub-Plans, Environmental Risk Action Plans (ERAPs) and related documents.

2. Scope

To address the issues of increased demand on Port Botany and ensure continuous, effective operations, the Sydney Ports obtained government approval to reclaim and develop an additional 63 hectares of land for the construction of additional container handling facilities. The Sydney Port Botany Terminal 3 (SPBT3) Project works form part of the overall Port Botany Expansion Project.

This CEMP applies to the civil construction works of the Sydney Port Botany Terminal 3 (SPBT3) Project. Land reclamation works for the expansion project have been completed to allow the civil works to commence. The construction works to be completed fall largely within the reclaimed land and also the exciting, adjacent Sydney Ports rail facility.

The SPBT3 Project involves the creation of a new container terminal by Sydney International Container Terminals (SICTL). The SPBT3 Project is located within the City of Botany Bay, 12 kilometres south of the Sydney CBD. The Project site is adjacent to the existing Patricks Terminal at Port Botany. The site is bounded by the existing terminal, Penrhyn Road, Foreshore Road, Sydney Airport and Botany Bay. The new terminal will be approximately 1,200 metres by 400 metres south of the previous port expansion, covering an area of 46 hectares.

The scope of works for this project includes:

- Ground improvement, regrading and earthworks as needed to adjust final levels for the site which has been previously filled and consolidated. Excavation will be required to provide trenches for services and utilities.
- Construction of the Terminal includes internal roads, heavy duty rigid and flexible port pavements, rail siding works, crane footings, high mast and bollards lighting, (including foundations), traffic signage and road markings, fencing, noise walls, landscaping, services, conduits and drainage
- Construction of the container stacking yard including piling, container stacking beams, rail beams and rails, reefer access gantries, container tunnels, lane identification gates and entrance/exit area gates, fencing and all associated services and drainage
- Kerbs and footpaths around buildings, (including those on the maintenance building approach slab)
- Construction of rail sidings elements, (by an Independent Transport Safety Regulator accredited Contractor) including main line turnouts, earthworks, track, sleepers, ballast, buffer stops, track crossings and siding footpath
- Construction and installation of foundations, facilities and services for the operation, maintenance and manoeuvring of automated stacking cranes (ASC), reach stackers and other container handling equipment as required for the terminal operations
- Quay crane and ASC crane rails, fixings, stow pins and buffer stops
- Site wide electrical conduits and pits for HV, LV and communications cabling distribution
- Connection into existing facilities, roads, rail and services, which shall include works outside the site
- Temporary access road for other contractors
- Supply and installation of electrical distribution equipment and cabling including connection to the main substation and building equipment (by other contractors)
- Sydney Water main and all associated works in compliance with Sydney Water standards, including connection to existing water main in land leased by Patrick Stevedore

- All drainage infrastructure including, gated drain, inlet pits, SQIDS, headwalls and rock lined channels in the Estuary
- Fuel station
- Reefer access gantries, container tunnels, reefer and seaside substations, lane identification gates and entrance/exit area gates
- Reefer and seaside substations including the building structures and building services
- All aspects of the construction, including design where specified, maintenance (where specified) and the remedying of defects
- Site clearance including removal of construction waste and construction material.

Expected durations of construction activities per section are outlined below. Sectional completion areas can be seen on the following site diagram.

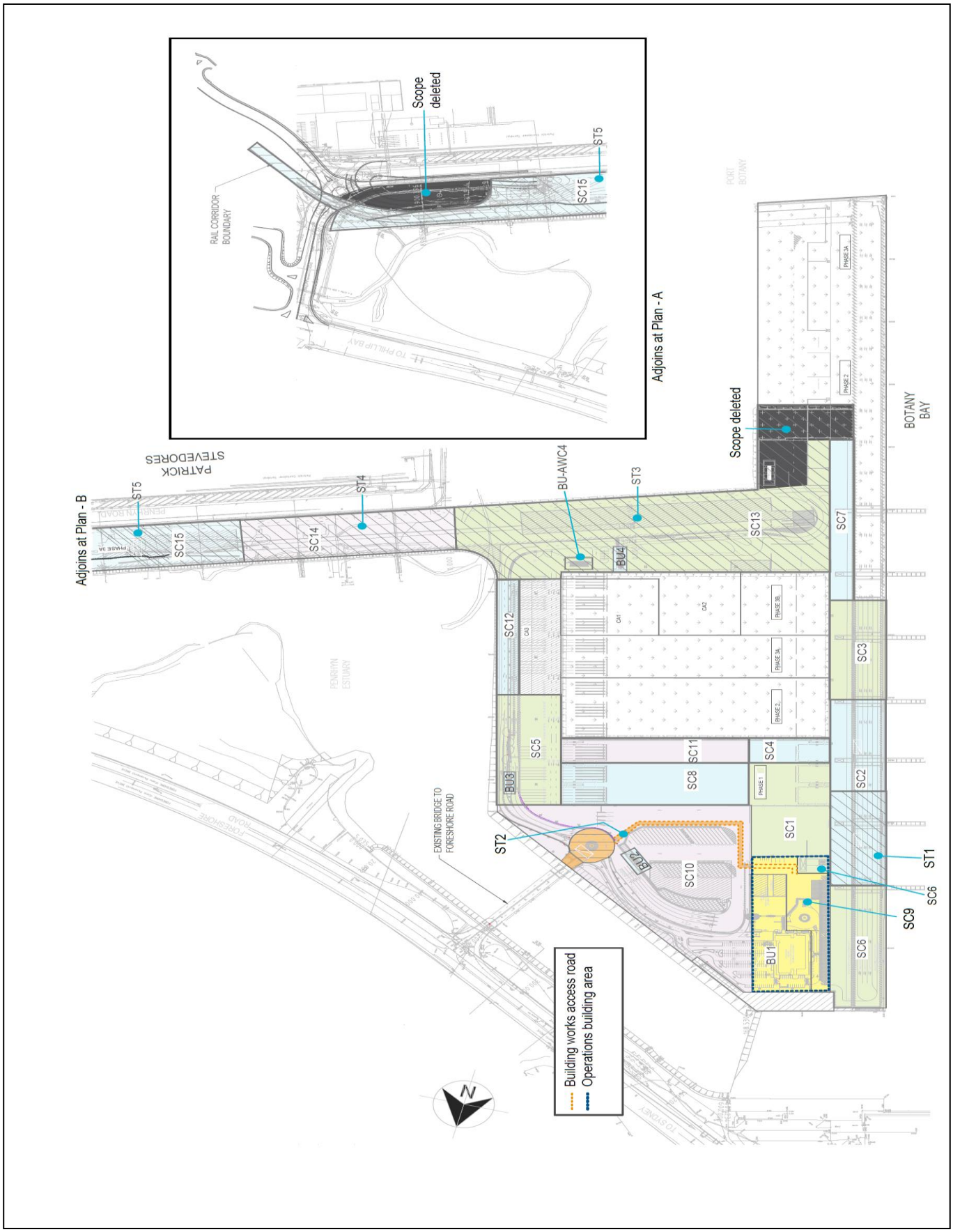
Sectional Completion	Description / Activities	Start Date	Completion Date	Associated Monitoring
Site Establishment	Environmental control installation	Aug 12	Sept 12	Noise
	Site compound construction	Sep 12	Oct 12	Noise, Dust
	Service connections	Sep 12	Oct 12	Noise
Access Road to Building	Alternate access for building contractor	Sept 12	Nov 12	Noise, Dust
BU1, BU 2, BU 3, BU4, AWC4	Earthworks	Sept 12	Nov 12	Noise, Dust
	Underground service installation	Oct 12	Nov 12	Noise, Dust
	Electrical works	April 13	June 13	Noise
Drainage in Penrhyn Estuary	Rock drainage corridor to be installed in the Penrhyn Estuary as permanent scour protection from site drainage	Sep 12	Oct 12	Noise, Dust, Shorebird, Water Quality
ST2	Earthworks	Sep 12	Nov 12	Noise, Dust
	Concrete Works	Sep 12	April 13	Noise, Dust
SC1	Earthworks and ground improvements	Sept 12	Jan 13	Noise, Dust
	Drainage and Utilities	Dec 12	April 13	Noise
	Pavements and concreting	Jan 13	May 13	Noise, Dust
	Rail works	March 13	May 13	Noise
	Substation	Nov 12	May 13	Noise
SC2	Earthworks and ground improvements	Sept 12	Nov 12	Noise, Dust

Sectional Completion	Description / Activities	Start Date	Completion Date	Associated Monitoring
	Drainage and Utilities, SQIDs	Aug 12	Jan 13	Noise, Water Quality
	Pavements and concreting	Jan 13	Jul 13	Noise, Dust
	Rail works	April 13	July 13	Noise
	Earthworks and ground improvements	Oct 12	Dec 13	Noise, Dust
	Drainage and Utilities	Oct 12	Mar 13	Noise
	Pavements and concreting	Jan 13	Jul 13	Noise, Dust
SC3	Rail works	April 13	Aug 13	Noise
	Earthworks and ground improvements	Nov 12	Dec 12	Noise, Dust
	Drainage and Utilities	Jan 13	Mar 13	Noise
	Pavements and concreting	Feb 13	May 13	Noise, Dust
	Rail works	April 13	May 13	Noise
SC4	Substation works	Dec12	May 13	Noise
	Earthworks and ground improvements	Nov 12	Feb 13	Noise, Dust
	Drainage and Utilities, SQIDs	Oct 13	March 13	Noise, Water Quality
SC5	Pavements and concreting	April 13	Aug 13	Noise, Dust
	Earthworks and ground improvements	Sep 12	Jan 13	Noise, Dust
	Drainage and Utilities	Nov 13	Jan 13	Noise
	Pavements and concreting	Jan 13	June 13	Noise, Dust
	Rail works	Mar 13	June 13	Noise
	Noise wall works	Feb 13	May 13	Noise
SC6	Fuel tank area	Nov 12	June 13	Noise, Dust
	Earthworks and ground improvements	Feb 13	Mar 13	Noise, Dust
	Drainage and Utilities, SQIDs	Jan 13	April 13	Noise, Water Quality
SC7	Pavements and concreting	May 13	August 13	Noise, Dust
	Earthworks and ground improvements	Sep 12	Jan 13	Noise, Dust
	Drainage and Utilities	Jan 13	Mar 13	Noise
SC8	Pavements and concreting	Mar 13	July 13	Noise, Dust

Sectional Completion	Description / Activities	Start Date	Completion Date	Associated Monitoring
	Rail works	April 13	June 13	Noise
	Substation works	Nov 12	June 13	Noise
	Reefer Gantry works	Feb 13	Jul 13	Noise
	Earthworks and ground improvements	Jun 13	July 13	Noise, Dust
	Drainage and Utilities	Jul 13	Aug 13	Noise
	Pavements and concreting	July 13	Sept 13	Noise, Dust
SC9	Noise wall works	April 13	May 13	Noise
	Earthworks and ground improvements	Oct 13	Dec 13	Noise, Dust
	Drainage and Utilities, SQIDs	Sep 13	April 13	Noise, Water Quality
	Pavements and concreting	Mar 13	Aug 13	Noise, Dust
SC10	Noise wall works	April 13	May 13	Noise
	Earthworks and ground improvements	Dec 12	Jan 13	Noise, Dust
	Drainage and Utilities	Mar 13	May 13	Noise
	Pavements and concreting	May 13	Aug 13	Noise, Dust
SC11	Rail works	May 13	July 13	Noise
	Earthworks and ground improvements	Feb 13	Mar 13	Noise, Dust
	Drainage and Utilities, SQIDs	Jan 13	May 13	Noise, Water Quality
	Pavements and concreting	Jun 13	Aug 13	Noise, Dust
SC12	Noise wall works	April 13	June 13	Noise
	Earthworks and ground improvements	Feb 13	May 13	Noise, Dust
	Drainage and Utilities, SQIDs	Jan 13	Jul 13	Noise, Water Quality
	Pavements and concreting	Jul 13	Dec 13	Noise, Dust
SC13	Rail Siding, Rail Yard	Aug 13	Nov 13	Noise, Dust
	Earthworks and ground improvements	Jan 13	Mar 13	Noise, Dust
	Drainage and Utilities, SQIDs	Nov 12	May 13	Noise, Water Quality
	Pavements and concreting	Aug 13	Dec 13	Noise, Dust
SC14	Rail Siding, Rail Yard	Sep 13	Nov 13	Noise, Dust

Sectional Completion	Description / Activities	Start Date	Completion Date	Associated Monitoring
	Noise wall works	Mar 13	June 13	Noise
	Earthworks and ground improvements	Mar 13	May 13	Noise, Dust
	Drainage and Utilities, SQIDs	Jan 13	Mar 13	Noise, Water Quality
	Pavements and concreting	Aug 13	Dec 13	Noise, Dust
	Rail Siding, Rail Yard	Oct 13	Dec 13	Noise, Dust
SC15	Noise wall works	Mar 13	June 13	Noise

Expected durations of construction activities



3. Objectives and Targets

Laing O'Rourke's environmental management system includes objectives and targets to drive the implementation of our environmental policy and to deliver the required outcomes during the works.

High level objectives and targets for this Project are as follows:

Objective	Target	Reporting / Monitoring
Effective site environmental controls	Environmental controls are developed and implemented prior to starting work on site. Achieve alignment with SICTL expectations in relation to best practice control measures. Complete a rigorous and effective inspection and maintenance regime. Maintenance issues addressed within specified timeframes.	Daily supervisory inspection checklists. Weekly Environmental Inspection Checklists by the Environmental Manager. Quantitative environmental monitoring and monthly reporting.
Environmental performance	Zero major environmental incidents and no breaches. Zero infringement notices from the EPA or notices from Local Council. All environmental spills to be reported to SICTL within 2 hrs of occurrence. Major incidents must be reported immediately.	Monthly reports to Regional Management. Weekly reporting to be provided as required. Monthly Environmental Monitoring Report.
Effective implementation of the environmental system	90% or better internal audit results. Full compliance with Planning Approval requirements.	Audit report – audit frequency is outlined in Clause 21 below and documented in the Project Audit Schedule.
Community issues carefully managed	Zero valid complaints. All complaints reported to SICTL's Representative immediately and responded to within two hours.	Complaints handling to be handled in accordance with Clause 20.

Specific Project objectives and targets will be developed that are aligned with the desired Project outcomes.

4. Site Location and Plan

The Project is located within the City of Botany Bay, 12 kilometres south of the Sydney CBD. The Project site is adjacent to the existing Patricks Terminal at Port Botany.

Lot and Plan Number	Street address
Lot 6 DP 1053768	Penrhyn Road Port Botany New South Wales 2036 Australia
Lot 2 DP1009870	
Lots 301 & 302 DP 712992, Part of Crown Reserve R91288	
Lots 203 & 205 DP 712991	
Lot 401 DP 816961	

A site plan can be seen in Appendix 4.

5. Legal and Other Requirements

All personnel associated with the Project will comply with all relevant requirements including:

- All relevant laws and legislative criteria
- All relevant licences and permits
- Relevant industry standards/codes
- NSW Minister for Planning Conditions of Approval for the Port Botany Expansion Project
  - MOD 1 – MOD-107-9-2006-i approved 11 September 2007
  - MOD 2 – MOD-134-11-2006-i approved 11 September 2007
  - MOD 3 – MOD-149-12-2006-i approved 11 September 2007
  - MOD 4 – MOD-78-9-2007-i approved 17 September 2007
  - MOD 5 – MOD-60-9-2008 approved 21 September 2008
  - MOD 6 – MOD-68-12-2008 approved 12 December 2008
  - MOD 7 – MOD-08-03-2009 approved 20 March 2009
  - MOD 8 – 494-11-2003-i MOD 8 approved 30 May 2009
  - MOD 9 – DA-494-11-2003-i MOD 9 approved 18 June 2009
  - MOD 10 – DA-494-11-2003-i MOD 10 approved 13 July 2009
  - MOD 11 – DA-494-11-2003-i MOD 11 approved 21 November 2011
  - MOD 12 – DA-494-11-2003-i MOD 12 approved 6 June 2012.
  - MOD 13 - DA-494-11-2003-i MOD 13 approved 8 February 2013
  - MOD 14 - DA 494-11-2003-i MOD 14 approved 11 June 2013MOD 15 – DA-494-11-2003-i MOD 14 approved 8 July 2013
- Environment Protection Biodiversity and Conservation Act approval - reference 2001/543. The environmental assessment undertaken as part of the project planning modification 12, allowing a change in design to the first flush stormwater system, includes an assessment of significance of the proposed works. It has been assessed that no referral will be required and that modification to the EPBC conditions of approval for the project.

  It is documented within this same environmental assessment that Department of Sustainability, Environment, Water, Population and Communities advised that the modification to the stormwater first flush system does not necessitate any variations to the conditions of approval for the Port Botany Expansion under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC 2002/543).
- Port Botany Expansion Environmental Impact Statement
- Penrhyn Estuary Habitat Enhancement Plan
- Sydney Ports Corporation Green Port Guideline
- Future modifications to Sydney Container Terminal 3 under Section 75W of the Environmental Planning and Assessment Act 1979
- SICTL requirements including requirements listed in the Framework Construction Environmental Management Plan completed for the Project by Aurecon. These documents

inform the additional site specific environmental requirements on the Project in addition to Laing O'Rourke's minimum standards.

An assessment of these requirements has been conducted and recorded in Appendix 2.

Other environmental requirements are detailed in the Contract Specification.

The relevant environmental contract and legal requirements have been addressed throughout this CEMP.

A list of relevant Permits, Licences and Development Consents will be kept on site (Refer Appendix 8).

Standard construction hours that will relate to the entire project:

- 7:00 am to 6:00 pm, Mondays to Fridays, inclusive
- 8:00 am to 1:00 pm on Saturdays
- At no time on Sundays or public holidays.

Laing O'Rourke will seek the Director-General's approval to conduct construction activities audible at residential premises outside the hours specified above on a case by case basis. In seeking the Director-General's approval, Laing O'Rourke will demonstrate a need for activities to be conducted during varied hours and how local acoustic amenity will be protected, as well as detail how the EPA's requirements with respect to the variation of hours have been addressed.

6. Environmental System

Laing O'Rourke Australia Construction Pty Limited operates an Environmental Management System compliant with AS/NZS ISO 14001.

The Company is currently certified (No. C10086) with SAI Global.

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

- SICTL requirements as detailed in the Contract
- Laing O'Rourke Australia Construction Pty Limited Environmental Management System as detailed in Environment on iGATE (Laing O'Rourke intranet)
- ISO 14001 Environmental Management System
- All legal requirements.

This Plan references relevant parts of the Company's Environmental Management System and incorporates the additional elements necessary to satisfy SICTL's environmental system requirements.

7. References, Standards, Codes and Regulations

The Project will be constructed in accordance with relevant standards, codes, acts and regulations (Refer Appendix 2).

Access to the latest Australian standards is available via the through iGate. A link to the website is provided in the Rules and Process – Quality and Process drop down menus.

8. Policy

The Company maintains an Environmental Policy (ref. Appendix.1) which will be:

- Displayed at prominent locations on the Project site

- Communicated to site personnel during induction and training
- Made accessible to SICTL, SPC and concerned / interested members of the public.

All personnel associated with the Project including subcontractors must comply with the spirit and intent of the policy.

9. Responsibilities and Authorities

Authorities and responsibilities for all positions are defined and communicated in Job Descriptions and project documentation.

Reporting lines are shown in the Organisation Chart within the Project Business Plan. The Organisation Chart is also retained as a controlled document on Project Centre, Laing O'Rourke's document management system for this project. Key responsibilities are indicated in the chart in Appendix 9.

Key responsibilities and authorities include:

Project Leader

- Ensure that Project responsibilities and authorities are defined and communicated
- Provide adequate resources to meet environmental objectives
- Ensure that the CEMP is effectively implemented and maintained
- Approve the CEMP
- Appoint/nominate and provide support for the Environmental Manager.
- Report to senior management on the performance of the system and environmental breaches
- Take action to resolve environmental non-conformances and incidents
- Ensure suppliers and subcontractors comply with requirements
- Report environmental incidents to SICTL/local authorities as required.

Environmental Manager

- Ensure that the CEMP is effectively established, implemented and maintained at the Project level
- Ensure compliance with all relevant statutes, regulations, rules, procedures, standards and policies
- Liaise with the Client's Environmental Representative and/or Superintendent on environmental issues, including the written notification of non-conformances (incidents, emergencies or deviations from the CEMP)
- Implement the environmental induction programme and other relevant environmental awareness training and ensure personnel are aware of their environmental responsibilities under relevant legislation and the contract
- Report to the Project Leader on the performance of the system and improvement opportunities
- Provide support to the Project Team to enable them to meet their environmental commitments
- Ensure that environmental records and files are collected and maintained
- Regular compliance checking as required by this CEMP

- Ensure that non-conformances and environmental incidents are recorded and written reports provided to the Client's Representative and Environmental Manager within 24-hours. Liaise with the required stakeholders to confirm the nature of the corrective action required and comply with the timeframe within which corrective actions must occur
- Ensure that environmental controls, materials and equipment are maintained.
- Any major or significant environmental matters which have the potential to result in significant environmental harm or regulatory action must be referred to the Project Leader.

Project Environment Representative

- Environmental Representative shall be nominated and approved by the Director- General.
- The Environmental Representative shall be employed for the duration of the construction and the on-going management, mitigation and monitoring associated with the civil construction works
- As per MCoA B4.3, the Environmental Representative shall be;
  - the primary contact point in relation to the environmental performance of the construction phases;
  - responsible for all Management Plans and Monitoring Programs required under this consent, in relation to the construction phases;
  - responsible for considering and advising on matters specified in the conditions of this consent, and all other licences and approvals relating to the environmental performance and impacts of the construction phases;
  - responsible for the management of procedures and practices for receiving and responding to complaints and inquiries in relation to the environmental performance of the construction phases;
  - required to facilitate an induction and training program for relevant persons involved with the construction phases; and
  - given the authority and independence to require reasonable steps be taken to avoid or minimise unintended or adverse environmental impacts, and failing the effectiveness of such steps, to direct that relevant actions be ceased immediately should an adverse impact on the environment be likely to occur.

Construction Manager

- Ensure adequate resources are implemented to meet environmental objectives
- Ensure that the CEMP requirements are effectively communicated to all personnel, suppliers and subcontractors
- Ensure that the CEMP requirements are incorporated into construction work method statements and construction planning
- Provide support for the Environmental Manager if required
- Report to the Project Leader on the performance of the Environmental Management System
- Take action within limits of authority to resolve environmental non-conformances and incidents
- Ensure suppliers and subcontractors comply with environmental requirements
- Report environmental incidents as required

- Ensure personnel under their control are available for the necessary environmental awareness training.

Superintendant

- Ensure adequate resources are implemented to meet environmental objectives
- Ensure that the CEMP requirements are effectively communicated to all subcontractors
- Ensure CEMP requirements are carried out on site as per the relevant work method statements
- Provide support for the Environmental Manager if required
- Report to the Construction Manager and Environmental Manager on the performance of the Environmental Management System
- Take action within limits of authority to resolve environmental non-conformances and incidents
- Ensure suppliers and subcontractors comply with environmental requirements
- Report environmental incidents as required

Contractors

- Comply with all legal and contractual requirements
- Comply with site environmental requirements
- Comply with management/supervisory directions
- Participate in induction and training as directed
- Report all incidents.

Engineering Personnel

- Ensure environmental requirements are incorporated into the construction planning and process documentation including Inspection Test Plans (ITPs), Safe Work Method Statements (SWMS) and Work Method Plans (WMPs).
- Take action to resolve environmental non-conformances and incidents
- Ensure suppliers and subcontractors comply with requirements
- Ensure that site environmental controls are properly maintained and provide support for the Environmental Manager
- Report all environmental incidents.

Procurement Personnel

- Carefully select suppliers and subcontractors based upon their ability to meet stated requirements including corporate and project environmental and sustainability initiatives
- Ensure that purchase orders and agreements include environmental requirements as necessary
- Where practical and in consultation with the Environment Manager and engineering personnel, select materials which minimise the impact on the environment.

Regional Group Quality and Environmental Manager

- Provide Environmental support to the Project Team
- Conduct internal audits.

All Personnel

- Comply with the relevant Acts, Regulations and Standards
- Comply with the Laing O'Rourke's environmental policy and procedures
- Promptly report to management any non-conformances, environmental incidents and/or breaches of the system
- Undergo induction and training in environmental awareness as directed by management
- Report all incidents
- Act in an environmentally responsible manner
- Use authority to stop work on activities that are (or have the potential to) causing a major environmental non-conformance.

10. Environmental Risk Assessment and Control

An initial environmental risk assessment has been completed for the works. Environmental aspects and impacts have been identified, assessed in detail and documented in Appendix 3 of this CEMP.

Significant environmental issues, with a risk ranking of Medium or High, will be controlled to a degree which is commensurate with the level of risk and the level of influence which Laing O'Rourke has over these issues. These are documented in Environmental Risk Action Plans which are contained in Appendix 10.

If additional risks are encountered on site, these will be addressed either by updating this CEMP or by using separate Environmental Risk Action Plans.

An overview of this process is contained in Appendix 9.

The most significant risks from an environmental protection, regulatory and a community perspective is summarised below:

Environmental Administration

- Capturing and understanding the statutory requirements from planning instruments and other regulatory authorities
- Verification of compliance with all instruments
- Engaging the workforce and subcontractors and ensuring compliance with the requirements
- Soil and water management
- Air quality and dust management
- Management of various biodiversity aspects, both marine and terrestrial
- Protection of water quality in the surrounding bay and estuaries from sedimentation, turbid water runoff and chemical contaminants
- Noise impacts
- Traffic impacts
- Waste management
- Inefficient use of potable water resources.
- Management of chemicals and fuels.

This CEMP has been developed for the construction phase of the works, in compliance with Laing O'Rourke's EMS, legislation and the contract specifications. Of particular note, the works must be delivered in accordance with the NSW Minister for Planning Conditions of Approval for the Port Botany Expansion Project.

An Environmental Control Plan for the works will be developed and posted in prominent locations throughout the site. The plan will provide up to date visual environmental information to translate the general requirements from this plan to the work face. The plan will be updated as the works progress to include revised control measures, new environmentally sensitive areas or risks.

The Environmental Control Plan is in addition to the Erosion and Sediment Control Plans discussed in the Soil and Water Management Plan for the works.

The Environmental Control Plan shall include, as applicable, locations of:

- Project offices
- Employee amenities and toilets
- First aid location(s)
- Environmental 'No Go' areas
- Known potential Acid Sulphate Soils
- Fire protection equipment
- Environmentally sensitive areas
- Sensitive receivers
- Chemical and fuel storage areas
- Site entry and exits including wheel wash
- Non-smoking areas
- Emergency / evacuation areas
- Stockpile locations
- Parking areas
- Lay down areas
- Pedestrian routes
- Spill kit locations
- Plant routes.

11. Training, Awareness and Competence

All employees will receive suitable environmental induction/training to ensure that they are aware of their responsibilities and are competent to carry out the work.

Environmental requirements will be explained to all personnel during site induction and on-going training via Tool Box meetings, briefings, notifications and other forums as required.

All personnel (including subcontractors) will receive induction/training in the following:

- Environmental Policy
- Site environmental objectives and targets
- Contamination status of the site and processes related to contamination management

- Understanding individual authorities and responsibilities
- Site environmental rules
- Potential consequences of departure from rules
- Emergency procedure and response (e.g. spill clean-up)
- Basic understanding of their legal obligations.

At the conclusion of the induction, all employees are required to complete a competency assessment to determine their overall level of understanding.

Personnel performing tasks which can cause significant environmental impacts will be competent on the basis of appropriate education, training and/or experience.

An ongoing programme of environmental Tool Box meetings will be developed and implemented on a weekly basis throughout the Project. Meetings will be undertaken to reinforce the environmental objectives and targets on the Project and ensure the workforce remains engaged. Meetings will be recorded. Specific initial Tool Box topics will include:

- Erosion and sediment control
- Water quality management – including spill response, prevention and control
- Community engagement
- Air quality and dust management
- Dewatering
- Noise control
- Vibration control
- Marine and terrestrial ecology
- Bird hazards
- Heritage and archaeology
- Concrete washouts
- Hazardous and contaminated materials
- Hazardous chemical minimum standards
- Dangerous goods
- Waste and recycling
- Traffic management
- Servicing plant and equipment
- Chemical and fuel management.

Additional topics will be developed as the works progress to address site issues and upcoming environmental issues related to the scope of works

All Laing O'Rourke site staff will be required to review the CEMP and sign the acknowledgment form in Appendix 16.

An outline of environmental training is provided below and may be amended to reflect project requirements during the construction phase. The list below does not include the list of toolbox topics to be discussed during the project which can be made available on request.

Aspect	Training Inclusion	Personnel Required	Timing / Frequency/Means
Emergency Land/Marine Spill Response	• Use and location of spill kits • Spill control • Emergency response procedures • Presentation and assessment • Spill response drill • Identification of hydraulic hose fatigue	Site based personnel	Project Induction Project Toolbox Talks Internal LOR course run as required for site personnel
Erosion and Sediment Control	• Standard erosion and sediment controls from the Landcom 'Blue Book' • Implementation of controls on site • Erosion and Sediment Control Plans	Site based personnel	Project Induction Project Toolbox Talks Internal LOR course run as required for site personnel
Heritage Awareness	• Stop works and reporting protocols for discovery of previously unknown heritage and archaeological items • Exclusion zones for Government Pier	Site based personnel	Project Induction Project Toolbox Talks Protocol posted on message boards
Contamination Awareness	• Contamination status of site • Stop works protocols for unidentified potential contamination (hydrocarbons, asbestos, etc)	Site based personnel	Project Induction Project Toolbox Talks Protocol distributed to workers and posted on message boards
Environmental Legal Obligations	• POEO Act and other project requirements • Applicable fines and prosecutions	Site based personnel	Project Induction Project Toolbox Talks
Acid Sulphate Soils	• Awareness training in the identification and management of ASS • Reporting requirements	Site based personnel	Project Induction Project Toolbox Talks
Deliveries	• Handbooks distributed including haulage routes, approved delivery hours, site access and behaviours.	Delivery drivers Site based personnel	Project Induction Project Toolbox Talks Driver handbooks distributed to all delivery companies and drivers
Energy and Resource Usage	• Awareness training of energy and resource efficiency in the workplace including office/compound and site initiatives such as harvesting rainwater for dust suppression instead of potable mains water and use of bio-fuels	Site based personnel	Project Induction Project Toolbox Talks
Community / Stakeholder Awareness	• Adjacent community and Project involvement • Relevant Project stakeholders • Accepted behaviours • Approved hours of work	Site based personnel	Project Induction Project Toolbox Talks
Biodiversity	• Wildlife status of project and surrounds (Penrhyn Estuary, Botany Bay) • Stop work and reporting protocols for injured wildlife • Bird hazards and requirements to stop ponding water on site • Measures to stop feral animals coming to site	Site based personnel	Project Induction Project Toolbox Talks
Airport Exclusion	• Project site boundaries and exclusion	Site based	Project Induction

Aspect	Training Inclusion	Personnel Required	Timing / Frequency/Means
Zones	zones	personnel	Project Toolbox Talks

12. Communication and Reporting

12.1 Communication

With respect to the functioning of the Project's Environmental Management System, Company employees, SICTL and other interested parties will be kept informed as necessary.

Internal communication methods include:

- Management reports
- Site inspection reports
- Audit reports
- Incident reports
- Noticeboards
- Site meetings
- Employee induction, training and Tool Box sessions
- Briefings, notifications and alerts.

External communication methods include:

- Site meetings with SICTL and SPC
- All significant incidents notified to SICTL and SPC as appropriate authorities
- Project reports to SICTL at progress meetings and in the Project Report
- Meetings and correspondence with interested parties (e.g. Local council and EPA) as necessary
- Regular meetings, presentations and construction notifications to the project CCC.
- Discussions with adjoining land owners/neighbours and the community who may be affected by the Project.

12.2 Reporting

Reporting of the Project's environmental performance will be undertaken in accordance with the CEMP, Ministers Conditions of Approval while also addressing other statutory requirements.

On a weekly basis, the Project Leader will be provided with the outcome and action items arising from the weekly environmental inspections. The Project Leader will then update the Project Team of any specific issues at the weekly Tool Box session and promote and reinforce leadership and compliance.

Environmental management issues including results of the weekly inspections, environmental monitoring, non-compliance and general issues will be collated into the Monthly Project Report. The Monthly Project Report is to be provided to SICTL as required. The report will serve as a summary of the monthly environmental management activities and will include compliance with the Project's Conditions of Approval as they apply to the scope of works.

To facilitate the delivery of these reports, the Project will establish an environmental compliance tracking programme.

The programme will include:

- Documentation of the Minister's Conditions of Approval, Statement of Commitments, and other environmental management requirements which are relevant to Laing O'Rourke's operations on the Project
- Review and tracking of status of compliance or close out of the requirements
- Review and tracking of compliance with the environmental monitoring requirements
- Programme for environmental audits on the Project and their corrective actions
- Status of environmental incidents and close out actions
- Status of non compliance reports, their required actions and the close out activities.

An Annual Environmental Management Report will be developed for the project. The Annual Environmental Management Report will:

- detail compliance with the conditions of the project planning approval;
- contain a copy of the project complaints register (for the preceding twelve-month period, exclusive of personal details) and details of how these complaints were addressed and resolved;
- include a comparison of the environmental impacts and performance predicted in the EIS and additional information documents provided to the DOP and Commission of Inquiry;
- detail results of all environmental monitoring required under the development consent and other approvals, including interpretations and discussion by a suitably qualified person;
- contain a list of all occasions in the preceding twelve-month period when environmental performance goals have not been achieved, indicating the reason for failure to meet the goals and the action taken to prevent recurrence of that type of incident;
- be prepared within twelve months of the commencement of construction, and every twelve months thereafter;
- be approved by the Director-General DOP; and
- be made available for public inspection.

Within one year of the commencement of construction and every year thereafter for the duration of construction a full independent environmental audit shall be undertaken by a suitably qualified person/team approved by the Director-General DOP in accordance with Ministers Condition B4.5.

As a state owned agency Sydney Ports requires waste reporting in line with NSW Waste Reduction and Purchasing Policy (WRAPP). The project will input all required information to fulfil these requirements throughout construction.

13. System Documentation

Laing O'Rourke's ISO 14001 compliant Environmental Management System is part of an integrated management system which is known as iGate. Access to iGate is provided to all employees through Laing O'Rourke's intranet.

The core elements of the Project management system are described in this CEMP.

14. Document Control and Records

All Project documentation, including environmental records, will be controlled in accordance with iGate Rules and Guidelines General Administration.

Environmental records will be:

- Kept as objective evidence of compliance with environmental requirements
- Provided to the Client's Representative upon request
- Filed in accordance with the Project Business Plan and the Rules and Guidelines Document Control - Company Records and Filing and the Project filing system – including retention for the required statutory periods.

15. Operational Control

15.1 General

Specific operational controls to manage significant environmental issues are defined in either or all of the following:

- Environmental Risk Action Plans (ERAP) – Detailed sub-procedures to address the medium or high risk aspect, impacts or activities associated with the Project
- Detailed additional plans for high risk aspects associated with the works. These aspects require detailed procedures and control measures to be implemented to address specific requirements
- Construction Work Method Statements – Provide an outline of the construction practices and methodologies for site activities. Specific environmental issues and control measures relevant to the activity are documented to ensure the commitments made in the CEMP are transferred to the work face
- JSEA's, Inspection and Test Plans / Checksheets (as appropriate) – Detailed and specific construction documents that document specific control measures from the CEMP as they apply to construction activities
- Work instructions (e.g. refuelling and servicing).

Site specific control measures for the environmental aspects and impacts associated with the Project and as outlined in Appendix 3 are documented in Appendix 10 of this plan as Environmental Risk Action Plans and Appendix 13 for sub-plans.

Specific aspects and impacts have been determined based on the requirements of Port Botany Environmental Impact Statement and Aurecon Framework Construction Environmental Management Plan Sydney Terminal 3. The nominated control measures, where relevant to the contract, have been incorporated into Laing O'Rourke's sub-plans and ERAPs.

The control measures are transferred to the construction work face through the development of the various Construction Work Method Statements, Inspection and Test Plans, Safe Work Method Statements and JSEA's.

The following sub-plans and Environmental Risk Action Plans (ERAP) have been developed for this Project:

- Acid Sulphate Soils Management Plan
- Bird Hazard Management Plan
- Air Quality and Dust Management Plan

- Emergency Response and Incident Management Plan
- Energy Management Action Plan
- Feral Animal Management Plan
- Hazardous Material and Asbestos Management Plan
- Construction Noise and Vibration Management Plan
- Out of Hours Works Protocol
- Shorebird Management Plan
- Soil and Water Quality Management Plan
- Waste Management Plan
- Waste ERAP
- Noise and Vibration ERAP
- Dust and Air Quality ERAP
- Water Quality, Site Drainage and Erosion and Sediment Control ERAP
- Hazardous Material ERAP
- Concrete Washout ERAP
- Delivery and Storage of Chemicals, Fuels and Oils (including Dangerous Goods requirements) ERAP
- Fuelling of Plant and Equipment ERAP
- Servicing Plant and Equipment ERAP
- Fuelling of Plant and Equipment over Water (including on Barges) ERAP
- Working with Barges and Hydraulic Plant and Equipment over Water ERAP
- Spill Prevention and Control ERAP
- Flora and Fauna ERAP
- Archaeology and Heritage ERAP
- Community Relations, Stakeholder Consultation and Complaint Response ERAP
- Traffic Management ERAP
- Acid Sulphate Soils ERAP.

A Traffic Management Plan and associated traffic control plans and vehicle movement plans will be developed. These will be stand alone documents.

All records relating to inspection, monitoring, training and maintenance activities are to be uploaded to the Project correspondence management system, Project Centre.

Additional controls and criteria will be established and maintained where the absence of such could result in the environmental policy, objectives and targets not being met.

15.2 Hold Points

The activities outlined in the table below are not to proceed without objective review and approval by the nominated authority. These activities below are considered hold points.

Item	Process Held	Acceptance Criteria	Approval Authority
Environmental Management Plan	Site activities	Site specific Environmental Management Plan has been developed, reviewed and approved by the relevant authorities.	Project Leader Environment Manager
Works in Penrhyn Estuary	Any works	All requirements of the PEHEP need to be addressed prior to construction activities commencing, including the required seasonal exclusion zones. Activity specific Construction Method Statements are required to be developed in consultation with an appropriate ecologist.	Project Leader Environment Manager SPC
Dewatering	Dewatering / pumping water off the site.	Verification that the water quality criteria have been met.	Environment Manager
Sediment and erosion control measures	Construction activities involving ground disturbance.	Sediment and Erosion Control Plan has been developed, reviewed, approved and implemented	Site Manager Environment Manager
Site clearing / vegetation removal	Commencement of site clearing or vegetation removal.	Clearing limits have been verified against the project approval environmental assessment, limits have been set-out and vegetation to be retained has been delineated and or protected.	Project Leader Environment Manager
Plant and Equipment Inspection	Operation of plant / equipment items on site.	Pre-mobilisation inspection completed, no damaged hoses or hydraulic lines identified, service records are up to date.	Site Manager
Construction Methodologies – direct delivery and subcontract works.	Construction process representing potential medium or high impact to the environment.	Construction methodology / SWMS / JSEA have been reviewed by the Site Environmental Management Representative and addresses the requirements of the EMP ERAPs.	Construction Manager
Dangerous Goods	Transport of dangerous goods	Verification that transport vehicles meet the requirements.	Site Manager
Dangerous Goods	Storage of dangerous goods	Verification that bunded storage is provided and that	Site Manager

Item	Process Held	Acceptance Criteria	Approval Authority
		offset distances are maintained for the storage area.	
Controlled/Hazardous Waste	Transport of Controlled / Hazardous waste from the site	Verification that the waste has been classified in accordance with the guidelines, transport licensing in place and landfill can lawfully receive the waste	Project Leader Environment Manager
Material Import	Construction fill acceptance	All material classification documents required to be reviewed and approved prior to the material coming to site. The material acceptance process is outlined in the Project Business Plan quality assurance procedures. Imported material will be VENM, ENM or material that is obtained under the Resource Recovery Exemptions as granted by the Office of Environment and Heritage (OEH).	Construction Manager Environment Manager
Spoil Transport	Removal of spoil from site	Verification that the spoil has been classified and the disposal location can lawfully receive the waste.	Site Manager Environment Manager

Proceeding past a specified Hold Point without authorisation is a system non-conformance.

15.3 Environmental Control Map

The project Environmental Control Map(s) is prepared to assist in the planning and delivery of the project. It is specific to the site or work area and outlines the location of protection measures, monitoring requirements, conditions of approval and environmentally sensitive areas. It is the practical application of the proposed control measures.

[A hardcopy of the project Environmental Control Map is provided in Appendix 12 of this CEMP]

The Environmental Control Map is to be used in project inductions, work site set-up, reviewing ongoing environmental performance, included as information in tender documents to subcontractors were applicable and in support of ancillary environmental approvals.

The project Environmental Control Map shall include but not limited to:

- The worksite layout and boundary, including entry/exit points and internal roads and clearing limits
- Location of adjoining land-use and nearest noise sensitive receivers
- Location and type of sediment and erosion control measures, including size / capacity of detention basins and wheel wash facilities

- Location of site offices
- Location of spill containment and clean-up equipment
- Location of worksite waste management facilities
- Hours of work applicable to the worksite (including deliveries and any restrictions on high noise generating activities).
- Document control and approval details
- Location of environmentally sensitive areas (e.g. threatened species, critical habitat, contaminated areas, heritage zones, etc)
- Vegetation and trees to be protected
- Location of known heritage (indigenous and non-indigenous) items
- Location of stormwater drainage and watercourses leading to / from the worksite
- Specific environmental management requirements from licenses, approvals or permit conditions
- Key environmental risk issues and the specific mitigation measures

The plan is in addition to any erosion and sediment control plans or other documentation that specify the location of environmental controls on site.

15.4 Design

The Project is a construct only contract. The following environmental issues should be considered during any temporary works:

- Ways to minimise any adverse impacts on the environment including energy efficient operation, incorporation of sustainable or recycled materials
- Strategies to improve design efficiency to conserve natural resources
- Address the requirements of Laing O'Rourke's sustainability agenda
- Strategies to meet environmental codes, regulations and other requirements

These issues should be considered, while taking into account the practicalities and economic realities of the Project.

Any temporary works design process will be controlled in accordance with the iGate Rules and Guidelines Design.

15.5 Procurement

The supply of goods and/or services by suppliers and subcontractors will be carefully controlled in accordance with Laing O'Rourke's Procurement Policy, and as follows:

- Environmental issues are taken into account when selecting subcontractors and suppliers. Each potential delivery partner is evaluated for their ability to meet or exceed the environmental and sustainability requirements relating to the works. The evaluation is documented on Laing O'Rourke form F 0418 Potential Supplier/Subcontractor evaluation
- Suppliers and subcontractors are to be made aware of their environmental requirements relating to the Project. Project specific information relating to the environmental requirements will be included in procurement and subcontract documentation through the contract and scope of works

- Suppliers of chemicals and hazardous substances will be required to submit MSDS's with delivery or prior to chemicals arriving at site. Prior approval to bring hazardous substances to site may need to be obtained from SICTL
- Subcontractors are required to carry out their work in accordance with this CEMP or submit, and have accepted, an Environmental Control Plan covering aspects of their work that are likely to have a significant impact on the environment. Where such plans are submitted they must be compatible with this CEMP and clearly state the environmental protection measures to be undertaken by the subcontractor
- The environmental performance of subcontractors will be monitored during site inspections.

Monitoring and surveillance of subcontractors will be undertaken to ensure specified requirements are met. Where subcontractors are working under the Laing O'Rourke CEMP their activities shall be monitored as if it were Laing O'Rourke's work by:

- Monitoring which will include daily surveillance provided by field personnel
- Capturing each subcontractors' work area in the weekly environmental inspections undertaken by the Environmental Manager
- Identifying and documenting non-conformances through Form F 1228 Environmental Improvement Request and issued to the relevant subcontractor for action and close out
- The Environmental Manager will reinspect non-conformances in line with the agreed completion timeframes to ensure full compliance is achieved.

15.6 Handling, Storage, Packaging and Transport

The handling, storage, packaging and transport of goods will be controlled in accordance with Laing O'Rourke's Tender and Construction Procurement.

Preference will be given to scheduling bulk orders of materials to minimise transport emissions. Where possible, items will be delivered to site in reusable packaging. Where this is not possible, packaging will be reused or recycled.

Hazardous materials will be stored and handled in accordance with Material Safety Data Sheets. They will be stored in a safe area (for example bunded and/or store) which will prevent or contain accidental spillage and harm to the environment. MSDS's must be stored along with or at the point of storage.

Further detail is provided in the Delivery and Storage of Chemicals, Fuels and Oils and Hazardous Substances Environmental Risk Action Plan.

15.7 Manufacture, Construction and Fabrication Processes

These processes will be carried out in accordance with the Laing O'Rourke Quality and Process Business Rules and Guidelines and as outlined in the Project Business Plan.

Environmental requirements relating to each construction process will also be outlined and documented in the construction process procedures or work method statements.

Project Specific Environmental Management requirements, relating to manufacture, construction and fabrication processes, are defined in:

- Construction Work Method Statements
- Inspection and Test Plans, Task Complete Checklists and associated documents
- Contract documents
- Supplier and subcontractor environmental control procedures.

These documents capture the specific environmental requirements from this CEMP, sub-plans and ERAP and bring them to the construction work face.

15.8 Plant and Equipment

Plant and equipment owned by Laing O'Rourke will be maintained in a safe and serviceable manner in accordance with Select - Plant and Equipment Policy and Procedure.

The following rules apply:

- Plant will be serviced, re-fuelled and washed-down only in approved areas where hydrocarbons can be captured and then properly disposed of. Servicing must be undertaken in accordance with the Servicing Plant and Equipment ERAP. Preference is given for all servicing to be undertaken off site with only large plant items to be serviced on site
- Major servicing is not to be undertaken on site
- Fuelling will be carried out in accordance with the relevant ERAP
- Plant and equipment will be maintained to prevent/fix oil leaks
- Plant will be driven and operated only in approved areas
- Plant will have effective pollution control and sound attenuation devices fitted.

16. Emergency Preparedness and Response

The types of environmental emergencies which could occur on this site are shown in Appendix 5.

The relevant statutory and regulatory authorities, (such as the OEH), will also be informed as outlined in Section 18 of this CEMP.

The Emergency Response and Incident Management Plan (included in Appendix 13) developed for the project details procedures and protocols for emergency situations. Environmental incidents and complaints will be handled as follows:

- Immediately report all incidents to the Project Leader/Construction Manager who will assess the situation and manage the subsequent steps
- Immediately take all reasonable steps to contain further damage or danger to personnel and the environment
- Contact emergency service personnel as necessary (e.g. fire dept., spill clean-up services). The site emergency response team will also be contacted
- Inform the Client's Representative and other relevant authorities as necessary
- Complete a detailed report of the incident using Form F 1222 Environmental Incident Complaint Report and provide to the General Superintendent and the Group Environmental Manager within 24-hours
- Add the incident or complaint to Form F 1224 Environmental Incident Complaint Report Register
- Liaise with the Client's Representative regarding corrective and preventive actions required and the timeframes within which these actions must occur
- Designated personnel will undertake the corrective and preventive actions.
- Carry out lessons learnt that can be distributed to the Project Team and within Laing O'Rourke as a measure of continuous improvement
- Review and revise existing procedures and control measures where required

- Ensure information on the handling of hazardous materials is contained in the MSDS file
- Ensure emergency Services contact numbers are displayed in the main site office.

17. Monitoring and Measurement

Key characteristics of the Project operations and activities which have a significant impact on the environment will be regularly monitored and measured. Ongoing environmental management and reporting will be required for the full duration of the works. Environmental monitoring will be generally completed through the Project. This will include:

- Quantitative environmental impact monitoring
- Recording of information to track performance
- Monitoring operational controls
- Level of conformance with objectives and targets.

Quantitative environmental monitoring will be undertaken as outlined in the respective sub-plans and ERAPs in addition to the steps outlined below:

Aspect	Target	Means	Location	Construction Stage	Time-frame	Action by:
Water Quality	No pollution of waters In-situ turbidity measurements outside of silt curtain <25ntu, (or as described in the EIS for various weather conditions), pH 6.5-8.5, no visible oil and grease.	In-situ measurement using site water quality meter Laboratory testing and assessment where required	Outside turbidity curtain as active drainage outlet construction and scour protection works progress. Sediment basins.	Whole Project	Prior to any discharge from site. Weekly monitoring outside of the turbidity curtains during active drainage works, monthly during other works.	Environment Manager
Construction Noise	Compliance with OEH Construction Noise Requirements and the project Planning Conditions Targets are outlined in the Noise and Vibration ERAP in Appendix 10	Attended sensitive receptor monitoring Plant and equipment monitoring	As per the project EIS; Location 1 - Chelmsford Avenue Location 2 - Dent Street Location 3 - Jennings Street Location 4- North of Golf Course Location 5- Australia Avenue Location 6- Military Road	Whole Project	Initial monitoring at the start of each new activity and on a monthly basis during works thereafter. Prior to operation.	Environment Manager
Construction Vibration	Compliance with OEH Construction Vibration	Targeted monitoring at sensitive receptors	Determined by works	Whole Project as required	During vibration intensive activities within safe working	Environment Manager

Aspect	Target	Means	Location	Construction Stage	Time-frame	Action by:
	Requirements Targets are outlined in the Noise and Vibration ERAP in Appendix 10	during vibration generating activities			zones. In response to complaints.	
Air Quality	Dust Deposition <4g/m2/month PM10 < 50µg/m3 averaged over 24 hours (equivalent) - Trigger level for stop work/investigation set at 45µg/m3	Dust deposition gauges Real time dust monitoring using 'Dust Track' monitor for targeted real time monitoring	3 dust deposition gauge locations will initially be along the Sydney Ports Corporation property, foreshore rd side of the works Location to be amended upon discussions with Botany Council to allow set up of gauges on Council property. Real time PM10 measurements will be taken weekly during the early works along the site boundaries.	Whole Project	Dust deposition gauges monthly Real-time monitoring weekly during early works and in response to complaints and incidents and as spot checks for performance evaluation	Environment Manager

- All monitoring, management and reporting documents required under the project development consent shall be made publicly available
- An inspection using a modified F 1227 Environmental Inspection Report is to be completed weekly
- A Supervisors' Safety and Environmental Checklist F 0905 Management Health and Safety and Environmental Checklist will be completed by the Project Supervisors weekly to monitor environmental issues on site and issued to the Project Leader for review and signing
- Issues identified during environmental inspections requiring further action beyond normal practice or maintenance is to be documented on F 1228 Environmental Improvement Request. The personnel nominated on the environmental improvement request are required to action and close out the issue within the timeframes outlined. The Environmental Manager will review and authorise the final close out of issues nominated on environmental improvement requests at the next environmental inspection
- Non-conformance to Operational Control procedures or to the Environmental Management System that are not easily rectified shall be recorded and addressed by raising a Non-

Conformance Report F 0103 or logged on the Project F 0116 HSEQ Corrective Actions Register. The register outlines the non-conforming item, evidence sighted, potential risk to the Project and the corrective action to be undertaken to address the item. The person responsible, the target date and date closed are included to ensure that each item is adequately addressed. This would also include exceedences to the limits and targets outlined in the Conditions of Approval and the targets outlined in this plan

- Specific details on the potential treatment measures to be implemented where monitoring results indicate an exceedance to the requirements are addressed in the relevant sub-plans. Refer to iGATE Rules and Guidelines Continual Improvement, Corrective and Preventive Action for further detail
- Where deemed necessary by the Environmental Manager, and as a result of revisions to Project scope or changes to Project risks, additional Environmental Risk Action Plans to control potential impacts will be developed. The Environmental Manager will manage the development and verify the implementation of additional ERAPs
- Monitoring and measuring equipment will be calibrated, maintained and controlled in accordance with the Project Business Plan and the Laing O'Rourke Business Rule - Inspection and Testing. Records of calibration will be kept in the Project Filing System.

17.1 Penrhyn Estuary

The Penrhyn Estuary runs adjacent the site on the northern and eastern sides of the site. Works that are required to be undertaken within and adjacent the Estuary include installation of a rock drainage corridor and drainage headwall outlets.

The Office of Environment and Heritage and Department of Primary Industries have been consulted on the works and have no requirement for any permits or licenses in addition to the planning modification 12, approved by the Director General.

A specific Construction Method Statement for all works undertaken within the Estuary has been developed in consultation with both an Avian and Saltmarsh ecologist. Both ecologists have been involved in Penrhyn Estuary works during previous stages of construction. The preliminary method statements can be seen in Appendix 16.

17.2 Community and Stakeholder Management

Community and stakeholder management is outlined in the Laing O'Rourke Communications Management Plan. The plan outlines Laing O'Rourke's management approach, including:

- Objectives and principles
- Management strategies including communication and engagement tools
- Roles and responsibilities which identifies key personnel with accountability for managing stakeholder communication and relationships
- Procedures and protocols
- Minimise all stakeholder impacts from the Project through effective and clear communication
- Ensure all stakeholders are appropriately informed regarding Project impacts, progress and achievements
- Promote the Project to key stakeholders to generate interest and engagement in the Project
- Consult with key stakeholders to gain input to Project elements. The project CCC has been established for previous stages of the Terminal 3 expansion and is an integral part of the stakeholder consultation process. Regular notifications, meetings and presentations will be undertaken as required for the duration of the project. Notifications of upcoming work will be

given monthly to the CCC and CCC meetings are organised to be held at quarterly during construction.

- Ensure the Project's reputation is protected and enhanced through positive stakeholder communication and engagement.

17.3 Community Notifications Procedure

Community members impacted by Project works will be issued with a written notification two weeks prior to the commencement of works. The notification will be distributed via letterbox drop and include residents/businesses identified in the Communications Management Plan. The CCC will be given construction notifications and updates monthly.

The distribution of notifications will be coordinated with SICTL. Where appropriate (for example, if the construction programme necessitates significant changes to established mitigation strategies), the notification will include 'door knocking' residents to advise them of the Project impacts and provide face-to-face information regarding the works. This may take place at the time of the letterbox drop or one week prior to the commencement of works. Where residents cannot be contacted in this way, a calling card will be left with the Project's 1800 contact information.

Notifications will include information regarding:

- Time of works
- Date of works (duration)
- Specific information regarding likely impacts - for example, traffic, visual amenity, noise and dust
- Mitigation strategies (where relevant)
- Project 1800 number
- National Translation and Interpreting Services contact number.

All notifications will be recorded in the Project communications database.

Prior to commencement of construction works on site, advertisement for the commencement of the Terminal 3 civil works will be posted in the Southern Courier newspaper. Variable Message Signs (VMSs) will also be utilised adjacent the project site to convey to Foreshore Road users of the upcoming commencement of construction.

This Construction Environmental Management Plan will be made publicly available via the project website once approved by the Director General.

17.4 Enquiries and Complaint Response

Community members and other stakeholders will be able to contact the Project team using a number of methods including email, 1800 project number, letter and verbal / face-to-face inquiries. The project contacts are given below.

Contact	Details
General Enquiries	(02) 9455 4820
Complaints Line	1800 177 722
E-mail	SPBT3Enquiries@laingorourke.com.au

Contact	Details
Media Enquiries	Please contact Manager Public Affairs Hutchison Ports Australia on (02) 8268 8000
Website	http://www.hutchisonports.com.au/port-botany-expansion

Communications personnel will respond immediately at all times to such inquires and log all relevant information on the Project communications database. Where an immediate response is not possible, (due to the need to source relevant information from personnel within the Project team for example), Communications personnel will record the inquirer's details and advise them that a response will be provided within 24 hours (or earlier if possible).

Where a written response is required, Laing O'Rourke personnel will provide SITCL with a draft response. It is anticipated that SICTL would provide approval for the response within 24 hours or as agreed. Written responses to community complaints will be provided within 7 days.

Communications personnel will ensure that the inquirer is satisfied with the response provided and close the action on the Project communications database. If the inquirer is not satisfied with the response, communications personnel should further attempt to resolve the inquiry. If a satisfactory resolution is not reached, communications personnel should refer the inquiry to the Project Leader and advise SICTL.

Information to be recorded on the Project communications should include:

- Date and time of contact / inquiry
- Name of inquirer (if agreed by the inquirer)
- Inquirer's contact details (if agreed by the inquirer)
- Nature of inquiry (for example, information request)
- The means by which the comment, inquiry or complaint was made (telephone, fax, mail, email or in person
- Proposed follow up action/s (for example immediate verbal response, letter, other). This may require one or more actions
- If no action is taken by the project team in relation to the inquiry, the reason(s) for this are to be documented
- Content of response
- Status of the inquiry (open / closed).

All communications from SICTL (including CAR's and Audit reports) expressing concern or dissatisfaction with the implementation or operation of the CEMP shall be treated as an internally raised improvement request and documented in the form a Non-conformance Report F0113.

Public Complaints shall be handled as outlined in this section using Forms F 1222 "Environmental Incident and Complaint Report" and logged into the register (F 1224). Subcontractors are required to complete this form for all complaints received at their projects. The project will provide quarterly reports to the DOP and EPA, where relevant, outlining details of complaints received.

Management system non-conformances and recurring environmental incidents will be handled in accordance with the Environmental Rules in Non-conformances, Incident Investigation and Complaints Management.

Corrective and preventive actions may include:

- Site remediation and rehabilitation
- Increased site inspections and monitoring
- Increase environmental awareness (re-training, tool-box meetings)
- Review and improve existing environmental controls and job safety analyses/ work method statements.

18. Incidents, Complaints, Corrective and Preventative Action

All incidents and complaints, (including potential incidents), must be reported so that they can be investigated and prevented from recurring. Form F1222 shall be completed and issued to the Project Leader.

The Director-General shall be notified of any incident with actual or potential significant off-site impacts on people or the biophysical environment within 12 hours of the Applicant, or other relevant party undertaking the development, becoming aware of the incident. Full written details of the incident shall be provided to the Director-General within seven days of the date on which the incident occurred. The Director-General may require additional measures to be implemented to address the cause or impact of any incident, as it relates to this consent, reported in accordance with this condition, within such period as the Director-General may require.

Records of incidents and complaints shall be maintained in accordance with the iGate Rules and Guidelines General Administration. Pollution complaints and incidents must be maintained for a minimum of four years.

Internal incident Reporting processes must also be followed. Incident Reporting and Investigation from the Project site is to be recorded in IMPACT, Laing O'Rourke Online Incident Investigation Reporting Tool. IMPACT can be accessed from the Laing O'Rourke Intranet Home Page or remotely connected via the Internet where connection is possible and direct access to the Laing O'Rourke Intranet is not available.

The Client's Representative will be notified on any environmental incidents and complaints relating to the Project. Preliminary notification will be provided within one hour of the incident.

The Group Environmental Manager and Corporate HSEQ Manager shall be notified by telephone as soon as practicable after any Actual and Potential Class 1 and Class 2 Incidents.

Environmental Incident is classified into three classes:

Class One	Class Two (Including Potential)	Class Three
Class One Environmental Incidents create permanent or long term damage to the environment. This damage will result in the environment taking 12 months or more to return to pre-existing conditions.	Class Two Environmental Incidents create short to medium term damage to the environment. This damage will result in the environment taking up to 12 months to return to pre-existing conditions	Class Three Environmental Incidents typically cause short term or nuisance damage. The damage is easily rectified usually within one day. Class 3 incidents do not cause medium or long term damage.

The classifications are explained in detail with examples in F 1204 Environment Incident Classifications which is available on iGate.

Class 3 Incidents

Where a Class Three incident has occurred, the Laing O'Rourke Project Leader or immediate supervisor is to be informed

Actual or Potential Class 2 Incidents

Where an actual or potential Class 2 incident has occurred, Group Management is to be informed via the Project Leader.

Class 1 Incidents

Class 1 incident reporting is outlined in Appendix 15. Where a Class One incident occurs the Executive Board is to be informed via General Manager.

Where complaints are received by the Project involving the media or where the Project's or Laing O'Rourke's image is likely to be affected, they shall be documented on the F 0951A HSE Internal Incident Notification form as provided below and reported.

All Class One and Class Two incidents and complaints (as required by licence conditions) will be reported to the relevant state and federal authorities as required under relevant Acts and Regulations.

Refer to the iGATE Environmental External Websites or Legal Compliance Service for the applicable legislation.

F 0951A HSE Internal Incident Notification shall be completed for all Actual and Potential Class One and Class Two Incidents within 24-hours of the incident occurring and sent (email / fax) to the distribution list as below:

- Environmental Manager
- Project Leader
- SICTL's nominated Contract Representative and HSE Manager
- Regional and/or Operational Manager
- Business HSE Manager
- Business Unit General Manager
- Corporate HSEQ Manager
- Corporate Safety Leadership Team (CorporateSLT@laingorourke.com.au).

Incident Investigation

(F 1222 Environmental Incident and Complaint Report)

The following section outlines the environmental incident and complaint investigation process. The actual detail required will vary depending on the class of the incident. In all cases, form F 1222 Environmental Incident and Complaint Report is to be used to document the incident with the relevant information included in Impact.

Step 1- Identify the class of incident and obtain the incident or complaint details

Step 2 - Observation and information gathering

The first priority is to understand the incident and how the incident occurred.

- Take samples or obtain results (required for Class 1&2) - laboratory results or insitu samples (Note: for Class 1 & 2 incidents NATA certified laboratories may be required)
- Interview persons involved where required - Include witnesses / supervisors / experts
- Inspect the incident scene - Take measurements (do not guess), photos, videos, drawings, diagrams / sketches.

If the incident is a pollution complaint the following information must be recorded:

- The date and time of the incident or complaint

- The method in which the complaint was made
- The personal details of the complainant
- The nature of the complaint
- The action taken in relation to the complaint and any follow up contact with the complainant
- If no action was to be undertaken the reason why no action was undertaken.

Where requested by an authorised officer of the OEH / EPA, records of pollution incidents are to be provided.

Collect related documentation - Attach additional material as appropriate such as Work Method Statements, JSEA's, Environmental Risk Action Plans (ERAPs), Erosion and Sediment Control Plans, Risk Assessments, induction records, toolbox talks, pre-start, environmental training records, subcontractor/SICTL incident report, relevant design documentation, maintenance records.

Step 3 - Give a detailed description of the incident

Outlined exactly what happened and give the following details as applicable:

- Area or people affected and pollutant type as appropriate
- Time, date and weather conditions
- Plant, equipment, organisations involved
- Potential stakeholders involved.

Describe the nature of the incident including:

- Breach of licence condition, Act or regulation
- Discovery of cultural heritage item, artefact
- Unauthorised release of harmful substance to environment
- Penalty or fine imposed or protection order or notice issued
- Performance of the environmental controls

Describe the immediate remedial actions undertaken:

- Notify relevant parties
- Contain pollution or clean up affected area
- Repair environmental controls
- Rectify damage and remediate the affected area.

Step 4 - Undertaken basic level incident analysis

- List the elements involved including people, equipment and environmental (weather conditions) elements involved in the incident
- List the essential and contributing factors for the items above.

Step 5 - Identify the corrective and preventative actions

- Change to equipment/machinery design/maintenance
- Improve environmental control measures
- Implement additional resources

- Change work methods or processes
- Change or conduct additional induction training
- Additional ongoing training.

Step 6 - Implement the corrective and preventative actions outlined above

- Outline responsibilities and accountabilities
- Obtain relevant approvals for the corrective and preventative actions (i.e. Regulatory Authority or SICTL requirement)
- Provide proposed completion dates for the approved actions
- Document actions implemented and close out.

Note: where a Class One Incident has occurred the Corporate HSEQ Manager will initiate the investigation and allocate responsibilities, an external consultant may be engaged. Authorities are to be notified in accordance with the legislative time frames in the applicable state.

Incident and Complaints Reporting

Environmental incidents and complaints are to be investigated, documented, actioned and closed out as per the details provided in the investigation process above.

The form F 1222 Environmental Incident and Complaint Report shall be completed for all environmental incidents and complaints within two working days of the incident and forwarded to the Project Leader.

Laing O'Rourke will provide a completed copy of the incident report to the Client's Representative as required.

All incidents and complaints reports shall be logged on F 1224 Environmental Incident Complaint Report Register or registered in the Project correspondence system (Project Centre).

Class 1 and Class 2 reportable incidents shall be reviewed by the Group Environmental Manager and Legal Counsel prior to issue to final external authorities.

Management system non-conformances and recurring environmental incidents will be handled in accordance with the rules and guidelines "Continual Improvement, Corrective and Preventive Action".

Where an environmental non-conformance or incident is identified, corrective and preventive actions shall be developed and may include:

- Review and improve existing environmental controls and job safety analyses/work method statements
- Site rehabilitation
- Increased site inspections and monitoring
- Modify construction or installation methods
- Increase environmental awareness including re-training and Tool Box meetings.

Each incident will be sufficiently investigated to allow specific and detailed corrective and preventative actions to be identified, actioned and closed out as outlined on Form F 1222 Environmental Incident and Complaint Form.

External Incident Notification

The EPA must be notified immediately of all pollution incidents that cause or threaten material harm to the environment.

Harm to the environment is "material" if the effect (or potential effect) from an incident on the health or safety of humans or ecosystems is not trivial and or results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding $10,000.

Incidents requiring notification to the EPA must also be immediately notified to the Southern Region HSEQ Manager and the Head of Legal.

If an incident presents an immediate threat to human health or property, 000 is to be called in accordance with the procedures outlined in the Construction Safety Management Plan.

The EPA Environment Line is to be contacted on 131555.

The notification will need to include information on:

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

In addition to notifying the EPA of pollution incidents other authorities as outlined below must also be notified immediately:

- The Ministry of Health (via the local Public Health Unit - 02 9391 9000)
- The Work Cover Authority (13 10 50)
- Botany City Council - (02) 9366 3666
- Fire and Rescue NSW on 000.

Regardless of the actual or potential impact, these authorities must be notified under the amended legislation for all notifiable pollution incidents.

Further information in relation to the incident must be provided immediately if it becomes available after the initial notification.

Corrective and Preventative Action

Management system non-conformances and recurring environmental incidents will be handled in accordance with the Environmental Rules in Non-conformances, Incident Investigation and Complaints Management.

Corrective and preventive actions may include:

- Site remediation and rehabilitation
- Increased site inspections and monitoring
- Increase environmental awareness (re-training, tool-box meetings)
- Review and improve existing environmental controls and job safety analyses / work method statements.

19. Environmental Management System Audit

Auditing of the Project Environmental Management System will be carried out in accordance with Environmental Management System Overview.

The audit will evaluate compliance with this CEMP and associated documentation including legal, contractual and other requirements.

The Group Environmental Manager, in consultation with SICTL's Representative and other managers, will decide on the frequency, scope and timing of project/site audits.

It is expected that an internal Project audit will be undertaken within three months of commencing on site and approximately every three months thereafter. An audit report will be issued to management for action.

20. Management Review

Project Management, will check the status and adequacy of the Project Environmental Management Plan to ensure that it meets current SICTL and Company requirements as well as relevant environmental standards.

The Plan will be reviewed as and when required during the course of the contract when the following situations arise:

- Appropriate authority recommendations for changes
- Changes to the Company's standard system
- Opportunities for improvement or deficiencies in the Project system are identified
- Following an audit of the system or the occurrence of significant incidents and non-conformances.

F 1221 Management Review of the Environmental System may be used as a guide for reviewing the system.

Appendix 1 Environment Policy

Laing O'Rourke provides design, development and construction, project management, manufacturing, and maintenance services to building, rail, infrastructure and other industries.

Laing O'Rourke is committed to the protection and enhancement of the environment. High environmental performance is an ongoing priority to be achieved by adhering to this Environmental Policy. This will be delivered by implementing and maintaining an Environmental Management System that applies to services provided by its permanent offices and to its construction and manufacturing activities. This includes activities, products and services provided by organisations working on behalf of Laing O'Rourke.

It is the objective of the Company to:

- Develop a Group Wide Sustainability Programme tailored to meet the unique business needs and abilities of the Group.
- Continually strive for improvement in the environmental performance of its activities, products and services.
- Comply with environmental legislation and other applicable environmental requirements relevant to its activities, products and services and regularly evaluate its compliance with such requirements.
- Proactively pursue the minimisation of environmental impacts associated with its activities, products and services.
- Reduce waste and improve resource efficiency
- Reduce water consumption and improve water efficiency
- Endeavour to eliminate the production of polluting emissions or discharges into the environment.
- Take proactive measures to protect and preserve wildlife / flora and their natural habitats.Set objectives, targets and programmes and review and revise them regularly with the aim of continual improvement in environmental performance
- These objectives shall be achieved through the environmental management system which complies with ISO 14001:2004. The maintenance and regulation of this system shall be facilitated by:
- Create a positive cultural change by enhancing employee understanding of Environmental Sustainability.
- Measure our progress to facilitate continuous improvement.
- Employee training and instruction in sound environmental practice.
- Maintaining registration to ISO 14001:2004 for its principal businesses.
- Progressively seeking registration to 14001:2004 for the Products and Services businesses.
- Laing O'Rourke shall participate in open consultation with interested stakeholders and ensure effective communication of this Environmental Policy to all those working for and on behalf of the business.

Steve Hollingshead
Chief Executive Officer
Laing O'Rourke Australia

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Appendix 2 Legal and Other Requirements

The relevant legal and other requirements are shown in the table below. Access to this legislation is available on iGATE at Legal Compliance Service.

Legal and Other Requirements	Summary of Obligations	Relevance to the Project/ Notes and System
Protection of the Environment Operations Act 1997	This Act is of most relevance to work being carried out under this contract. It integrates into one Act all the controls necessary to regulate pollution and reduce degradation of the environment, provides for licensing of scheduled development work, scheduled activities and for offences and prosecution under this Act. Of particular note are Section 120 of the act which relates to water pollution and Section 129 which specifies that offensive odours must not be caused external to the site. This CEMP and the associated procedures and control measures have been developed to comply with the requirement of the Licence.	High Relevance The Act provides for the issuing of environmental protection notices to control work and activities not covered by licences. Section 148 of the Act requires a pollution incident causing or threatening material harm to the environment to be notified to the EPA. The protocols outlined in Section 20 above relating to notification will be implemented.
Environmental Planning and Assessment Act 1979	This Act establishes a system of environmental planning and assessment of development proposals for the State.	High Relevance Port Botany Expansion to be "State significant development" under section 76A(7) of the EP&A Act due to their environmental planning significance for NSW. As such, the Minister for Infrastructure and Planning will be the "consent authority". Port Botany Expansion is also an "integrated development" under section 91 of the EP&A Act. Integrated development is development that, in order for it to be carried out, requires development consent and one or more of certain approvals or permits from other government authorities The conditions and obligations will be included. Laing O'Rourke's CEMP has been developed to achieve compliance with the provisions of Planning Approval.
Local Government Act 1993 Local Government (General) Regulation 2005	The Local Government Act and Local Government (General) Regulation provide a legal framework for an environmentally responsible system of Local Government including the responsibility to administer various regulatory systems (e.g. Environmental Planning, Development Consents and Conditions of Approval).	Low Relevance The project is wholly outside of their jurisdiction from a planning framework. Notwithstanding, Botany Bay City Council and Randwick City Council are a significant stakeholder in the project and ongoing consultation will be undertaken.
Roads Act 1993 Roads (General) Regulation 2000	This Act and Regulation primarily provide for such things as the opening and closing of public roads, identification of road boundaries and road widening, road levels, classification of public roads, road work, protection of public road and regulation of traffic, regulation of work, structures and activities.	High Relevance The proposed development will require approval from the NSW RTA for the proposed road works associated with the development under section 138 of the Roads Act. This Act is mostly an administrative Act for the RTA. Relevance relates to activities undertaken on the project that

Legal and Other Requirements	Summary of Obligations	Relevance to the Project/ Notes and System
		may impact on traffic on RTA designated roads.
Soil Conservation Act 1938	This Act makes provision for the conservation of soil resources, farm water resources and the mitigation of erosion. The Act is binding on the Crown, however the Crown is not liable for prosecution. The Act provides for notification in the government gazette catchments where erosion is liable to cause degradation of rivers, lakes etc (i.e. protected land).	High Relevance This Act has high relevance as the site is located within Botany Bay.
Environment Protection and Biodiversity Conservation Act 1999 (Cwth)	The main purpose of this Act is to provide for the protection of the environment especially those aspects that are of national environmental importance and to promote ecological sustainable development. The Act binds the Crown. Do not take, use, keep or interfere with "nationally significant" cultural and natural resources, protected wildlife and protected plants without Approval.	High Relevance The Commonwealth Minister for the Environment and Heritage pursuant to section 75 of the EPBC Act has declared that the proposal is a Controlled Action. The controlling provisions were set out by Environment Australia (EA) as follows: • under Part 3 Division 1: − sections 16 and 17B (Wetlands of international importance); − sections 20 and 20A (Listed migratory species); and • under Part 3, Division 2: − sections 26 and 27A (Protection of the environment from actions involving Commonwealth land).
Native Vegetation Act 2003 Native Vegetation Regulation 2005	This Act and Regulation provide for the conservation and management of Native Vegetation by requiring Development Consent to be obtained for the clearing of Native vegetation. Section 12 of the Native Vegetation Act 2003 excludes the clearing of land carried out in accordance with consent under Division 3 of Part 9 of the Roads Act 1993. Clearing of native vegetation required for construction of the work under the contract would be covered by such consent.	Low Relevance Clearing of native vegetation is not required for the contract.
Land and Environment Court Act 1979	The Land and Environment Court is constituted under this Act. The jurisdiction of the Court is divided into numerous classes. The relevant classes for the project covers matters such as the prosecution for offences under the various environmental legislation sand to appeal against conditions of approvals, permits or orders.	Low Relevance The relevance of this Act would only apply to work under the contract if Laing O'Rourke were prosecuted for an Environmental Offence.
Greenhouse Gas (GHG) Emissions National Greenhouse and Energy Reporting Act 2007	Corporations emitting more than 50kT of carbon dioxide equivalent units in the financial year of 2010-11 must register by 31 August 2010 and report Scope 1 and Scope 2 emissions by 31st October 2010.	Low Relevance Laing O'Rourke is tracking the company's GHG emissions and will register with the Greenhouse Energy Data Officer in accordance with the legislative requirements.
Contaminated Land Management Act 1997	This Act provides for a process to investigate and remediate land that has been contaminated and presents a significant risk of harm to human health.	High Relevance The relevance of this Act to Laing O'Rourke will be when suspected or

Legal and Other Requirements	Summary of Obligations	Relevance to the Project/ Notes and System
	Section 60 of the Act is a "Duty to Report Contamination". This duty applies to owners of land and persons who become aware their activities have contaminated the land. The site contains contaminated land and the provisions of this act must be complied with during the works.	contaminated ground is found during construction activities.
Environmentally Hazardous Chemicals Act 1985	This Act prohibits the manufacturing, processing, keeping, distributing, conveying, using, selling or disposing of an environmental hazardous chemical or waste (prescribed activity) except under the provisions of a chemical control or a licence. The OEH is required to prepare inventories of environmentally hazardous chemicals and declared chemical wastes. The OEH designates chemicals that are subject to a Chemical Control Order. There are currently 5 chemical control orders and it is not expected that any of Laing O'Rourke's activities will require these chemicals.	Low Relevance It is not anticipated any environmentally hazardous chemicals or declared chemical waste will be used or stored on the site.
Road and Rail Transport (Dangerous Goods) Act 1997	The purpose of this Act is to regulate the transport of Dangerous Goods by road and rail in order to promote public safety and protect property and the environment. The transport of Dangerous Goods is required to be appropriately licensed (both vehicle and driver).	Medium Relevance The proposed construction of the Port Botany Expansion design incorporates features and management systems for the on-site storage and transport of dangerous goods, including the transfer of dangerous goods between water, road and rail vessels.
Water Management Act 2000 Water Management (General) Regulation 2004	This Act and Regulation provide for the protection, conservation and ecologically sustainable development of water sources of the State and in particular to protect, enhance and restore water sources and their associated ecosystems.	High Relevance Among other matters, the WM Act has provisions for environmental protection that would require approvals for activities that impact upon water. These provisions would replace the RFI Act permits with controlled activity approvals in 'waterfront land' which includes the beds, banks (where applicable) and foreshores of rivers, estuarine and coastal water bodies. However, the provisions of Part 3A of the RFI Act still apply.
Management of Waters and Waterside Lands Regulations – NSW	This regulation includes provision for Vessel Occupation Licences within navigable waters in NSW. The regulation requires that a licence be held for commercial vessels occupying navigable waters in NSW.	Medium Relevance A vessel occupation licence under section 34 of the regulation would be required if a barge was proposed to be used for transporting materials to the site
Coastal Protection Act 1979	This Act requires public authorities to notify the Coastal Council of NSW of any information, proposed activity or work that in the opinion of the public authority is relevant to the exercise of the function of the Coastal Council. It further empowers the Minister for the Department of Commerce to require public authorities to obtain consent prior to carrying out development in the coastal zone or giving consent to a person to occupy or carry out development in the coastal zone.	Low Relevance Laing O'Rourke's activities on this project do not trigger the requirements of this Act.

Legal and Other Requirements	Summary of Obligations	Relevance to the Project/ Notes and System
National Parks and Wildlife Act 1974	The relevance of this Act is firstly in respect to the protection and preservation of aboriginal artefacts. Discovery of material on site suspected as being of aboriginal origin must be reported and protected pending assessment and direction by the Client's Representative. Secondly it is an offence under Part 8A of this Act to pick or harm threatened species. (Refer to the notes under the Threatened Species Conservation Act for more information)	Low Relevance No aboriginal artefacts have been identified within the construction area.
Threatened Species Conservation Act 1995 Threatened Species Conservation Regulation 2002 Threatened Species Conservation (Savings and Transitional) Regulation 1996	This Act and Regulations provide for obtaining licenses to harm or pick threatened species populations or ecological communities whether plant or animal or to damage any critical habitat. The offence of picking or harming any threatened species is covered under the National Parks & Wildlife Act Part 8A. It is a defence under Part 8A of that Act if the offence was essential to carrying out development that is in accordance with a Development Consent within the meaning of the EP&A Act or an approval within the meaning of Part 5 of the EP&A Act.	High Relevance Planning aspects of the TSC Act are implemented through the EP&A Act. Tests carried out as part of the marine ecology assessment found that there would be no significant impact on threatened species and ecological communities listed under the TSC Act, the FM Act and the EPBC Act, and therefore a SIS would not be required. Section 79B(3) of the EP&A Act provides that in a development where a Minister is the consent authority (as in the case of the proposed Port Botany Expansion), the concurrence of the Director-General of the NPWS in respect of the SIS is not required. Instead the Minister is required to formally consult with the Minister for the Environment (the Minister who administers the TSC Act), prior to granting consent.
Fisheries Management Act 1994	This Act is applicable to all waters within the state including private and public waters and all permanent and intermittent waters. The Act is most relevant in respect to maintaining water quality and ensuring no polluted water from site works enters streams, creeks and waterways. This Act also has relevance in relation to the reclamation activities associated with the works.	High Relevance The proposed development would result in the clearing of mangroves for the creation of tidal flats as part of the enhancement of Penrhyn Estuary as an ecological habitat. Permit is required under section 205. Along with the POEO Act water discharging from the site or as part of Laing O'Rourke's activities, must not pollute the watercourses.
Noxious Weeds Act 1993	This Act provides for the classification and control of noxious weeds. Declared noxious weeds are classified as Class 1, State Prohibited Weeds; Class 2, Regionally prohibited Weeds, Class 3 Regionally Controlled Weeds, Locally Controlled Weeds and Class 5 Restricted Plants. The characteristic of each class is given in Section 8 (2) of the Noxious Weeds Amendment Act 2005. Class 1, 2 & 5 weeds are referred to in the Act as "Notifiable Weeds".	Low Relevance The Act applies to owners or occupiers of land including public authorities and thus does not apply to Laing O'Rourke.
Water Act 1912	This Act provides for licences to extract water for construction purposes either from surface or artesian sources. Should construction water be extracted from surface (other than sedimentation ponds) or artesian	Low Relevance It is not proposed that construction water will be obtained from surface (e.g. Botany Bay, creeks, lakes etc) or

Legal and Other Requirements	Summary of Obligations	Relevance to the Project/ Notes and System
	sources a licence will be required.	artesian sources.
Heritage Act 1977	This Act provides for the preservation and conservation of heritage items such as building, works, relic, places of historic interest, scientific, cultural, social, archaeological, architectural, natural or aesthetic significance. Under this Act a relic means any deposit, object or material evidence which is 50 or more years old and relates to the settlement of the area (not being an aboriginal settlement). It is an offence under this Act to wilfully and knowingly damage or destroy items of heritage value.	Medium Relevance Section 139 prohibits disturbance of a relic unless an excavation permit is obtained from the Heritage Council. Section 148 requires that the discovery of a previously unknown relic be reported to the Heritage Council within a reasonable time of its discovery. The remains of the former Government Jetty are the only known heritage item existing in the project area. The remains of any other structures, if they survived up until the period of reclamation, would now be buried beneath the foreshore reclamation work.
Australian Heritage Council (Consequential & Transitional Provisions) Act 2003 Australian Heritage Council Act 2003 (Cwth)	The Australian Heritage Council (Consequential and Transitional Provisions) Act 2003 repealed the Australian Heritage Commission Act 1975. The Australian Heritage Council Act 2003 establishes the Australian Heritage Council. The Council is required to identify places to be included in the National Estate and to maintain a Register of the National Estate of places.	No Relevance The site is not on Register of the National Estate of places.
Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Cwth)	This Act provides for the preservation and protection from injury or desecration to areas and objects of particular significance to Aboriginals. Areas and objects can be protected by Ministerial Declaration and it is then and offence to contravene such a declaration.	Low Relevance No areas or objects within the works site have been identified as being subject to such a declaration and this Act is of little relevance to the project.
Ozone Protection Act 1989	This Act provides for a system of controls and to regulate and prohibit the manufacture, sale, distribution, use, emission, re-cycling & disposal of stratospheric ozone depleting substances and articles that contain these substances. The impact is that appropriately qualified people in accordance with this Act must undertake all servicing and maintenance of this type of equipment.	Low Relevance The relevance of this Act will relate to the use of refrigerators and air conditioning units in site buildings and vehicles which still contain CFCs. Such items are unlikely to be found on site.
Pesticides Act 1999 Pesticides Regulation 1995	This Act and Regulation establish a legislative framework to regulate the use of pesticides. They have the objective to promote the protection of human health, the environment, property and trade in relation to pesticides. It is an offence under this Act and Regulation to wilfully or negligently misuse pesticides.	Low Relevance It is not envisaged that pesticides will be used on the project by Laing O'Rourke.
Waste Avoidance and Resource Recovery Act 2001	This Act repeals the Waste Minimisation and Management Act, 1995.The purpose of the Act is to encourage the most efficient use of resources and to reduce environmental harm in accordance with the principles of ecological sustainable development. The Act provides for the making of policies and strategies to achieve these ends. It is an offence under the Protection of the Environment Operations Act to wilfully or negligently dispose of waste in a manner that harms or is likely to harm the environment.	Medium Relevance The relevance of the Act to this project is to implement the strategies by adopting the hierarchy of avoidance; avoidance of unnecessary resource consumption; resource recovery (including reuse, reprocessing, recycling and energy recovery), disposal (as a last resort).

Legal and Other Requirements	Summary of Obligations	Relevance to the Project/ Notes and System
Airports Act 1996	The Airports Act defines any activity resulting in an intrusion into an airport's protected airspace to be a "controlled activity" (section 182), and requires that controlled activities cannot be carried out without approval. The APA Regulations provide for the Department of Transport and Regional Services (DoTARS) or the airport operator to approve applications to carry out controlled activities, and to impose conditions on an approval.	Low Relevance The proposed Port Botany Expansion has been designed to ensure that all structures, including container cranes, would not penetrate the OLS for Sydney Airport or cause light reflectivity problems to aircraft operating within the prescribed airspace. Therefore, the proposed development would not be a controlled activity and would not require approval from DoTARS under the Airports Act.
Quarantine Act 1908	The Quarantine Act 1908 aims to prevent the introduction or spread of diseases or pests affecting human beings, animals and plants. It outlines measures such as the inspection, exclusion, treatment and disinfection of vessels, installations, persons, goods, animals and plants, which will prevent the introduction or spread of diseases.	Low Relevance The port berths will not be operational during the construction phase.
Sydney Water Act 1994	The Sydney Water Act 1994 (SW Act) established Sydney Water Corporation, a State owned corporation, to provide the supply of water and the disposal of wastewater in Sydney and other regions.	Low Relevance. Required for operational port trade waste agreement.

Appendix 3 Risk Assessment

All environmental issues have been assessed in accordance with the table below:

Risk Assessment Rankings: E = Extreme H = High M = Medium L = Low

Environmental issues which have an initial risk ranking of Medium or High will require the development and implementation of Environmental Risk Action Plans.

Issues which have an initial Extreme risk will require the development and implementation of an issue specific sub-plan.

The risks must be reassessed following the consideration of control measures.

Issues or activities that represent an Extreme risk after the application of control measures are not to be undertaken.

Aspect	Potential Environmental Impact	Initial Risk Rating			Control Measures	Residual Risk Rating		
		P X	C =	Risk		P X	C =	Risk
Approvals and Licensing								
Not identifying appropriate approvals / licenses required or proceeding without them.	Works delayed, infringements, poor client relations, and reputational loss.	U	5	H	Check Environmental Assessment / REF / EIS and statutory documentation. Check contract documentation. Document requirement in EMP. Establish a register of approvals, licenses, permits.	R	5	M
Noise								
Noise from general construction activities (earthworks, concreting, machinery, etc) resulting in impact to residents.	Disturbance to residents or neighbouring businesses. The project is located in close proximity to sensitive noise receptors and the proposed duration of works and	L	3	H	Develop and implement a Construction Noise and Vibration Management Plan. Consult with the community in relation to upcoming activities that may result in concern (Consultative	P	3	M

Aspect	Potential Environmental Impact	Initial Risk Rating			Control Measures	Residual Risk Rating		
		P X	C =	Risk		P X	C =	Risk
	activities have the potential to cause impact. In particular there are residential receivers adjacent to the works in Botany. Potential for complaints.				Community Committee). Provide clear and precise community notifications Monitor noise for compliance as the works progress at receiver locations. Provide periods of respite for high noise generating activities. Apply noise mitigation measures during entire project. Noise efficient equipment to be used on site. Utilise non-tonal reverse alarms for site based equipment where practical.			
Noise during works required to be undertaken out of standard construction hours.	Disturbance to residents or neighbouring businesses with potential for complaints.	L	3	H	Gain approvals required to work outside standard approved hours from regulatory authority and client. Implement noise mitigation strategies for out of standard hours work. Implement 'Out of Hours Works Protocol'. Monitor noise for compliance to project goals.	P	3	M
Vibration								
Vibration intensive activities undertaken on the site such as impact piling, vibratory rolling, etc	Disruption, annoyance and nuisance to residents. Potential damage to adjacent residential and commercial residences and structures. Disruption to businesses as a result of vibration nuisance. Vibration may be generated by compaction of fill materials.	U	3	M	Develop and implement a Noise and Vibration Management Plan. Determine vibration limits and structure/receiver offset distances. Consult with potentially affected parties prior to commencement of works on their upcoming activities that may be impacted by construction vibration. Ongoing vibration monitoring during vibration intensive works.	R	3	L
Water Quality, Erosion & Sedimentation								

Aspect	Potential Environmental Impact	Initial Risk Rating			Control Measures	Residual Risk Rating		
		P X	C =	Risk		P X	C =	Risk
Sediment laden runoff from construction works leaving site.	The project will involve earthworks on the site in close proximity to Botany Bay and construction works in close proximity to the foreshore itself. Degradation of local watercourses (Botany Bay and Penrhyn Estuary). Increased turbidity in local water ways resulting in impact on aquatic life. Fines for sediment escaping site.	L	3	H	Develop Soil and Water Quality Management Plan. Develop and implement sediment and erosion control measures including sediment ponds, water collection and dispersal systems, turbidity curtains, etc. Ensure measures are inspected and maintained as the works progress and also prior to and post rainfall events. Provide training and awareness on the need to prevent pollution. The EM will complete visual inspections before and after rainfall events. Relevant people to undertake Erosion and Sediment Control training. Provide sediment basins/tanks and collection facilities for runoff. Provide and implement water treatment and testing to ensure any discharge complies with the requirements. Test water prior to discharge (TSS, pH/Oil and Grease), implement water discharge hold point.	U	3	M
Stockpiling of vegetation and topsoil.	Wind and water erosion causing weed/seed dispersion offsite. Location of stockpiling next to waterways causing weeds/seeds to disperse from construction site.	L	3	H	Develop Environmental Control Maps to show stockpile areas. Appropriate locations for stockpiling (away from waterways, watercourses, drains). Designated vegetation stockpiling areas. Minimise stockpiling / Use temporary stockpiling. Cover stockpiles if left for extended periods.	U	3	M
Non-compliant water from construction works discharged from site; • Rain during Concrete /	Non-compliant water entering stormwater system waterways (i.e. polluting - not compliant with discharge criteria).	P	3	M	Develop Soil and Water Quality Management Plan. Induction and toolbox talks. Toolbox training on site procedures for water	U	3	M

Aspect	Potential Environmental Impact	Initial Risk Rating			Control Measures	Residual Risk Rating		
		P X	C =	Risk		P X	C =	Risk
Pavement works polluting waterways, increasing pH levels and water pollution from curing compounds • Spills or discharge from hydraulic equipment operating over waterways • Deleterious or contaminated material washed or blown offsite.					discharge. Educate site staff on licence conditions and consequences of prosecution. Environmental Manager/representative to approve all water discharges from site The EM will complete visual inspections before and after rainfall events. Provide sediment basins/tanks and collection facilities for runoff . Provide and implement water treatment and testing to ensure any discharge complies with the requirements. Test water prior to discharge (TSS, pH/Oil and Grease), implement water discharge hold point. Ensure emergency response procedures are well trained and correct equipment is kept on site. Plan concrete pours during good weather. Concrete wash out bays located away from water and regularly cleaned. Curing compound to be stored in a bunded area when not in use. Application of curing compound to be supervised			
Waste								
Waste disposal during construction.	Incorrect disposal of waste, further costs incurred for classifications and disposal, fines may be issued. Pollution of the land and waterways by waste that has been washed, blown, deposited or otherwise from the site. Illegal waste disposal.	P	2	H	Develop a Waste Management Plan. Identify opportunities to incorporate recovered materials into the permanent works. Recycle pavement material on site for incorporation into the works. Provide facilities on site for source separation and recycling.	U	2	M

Aspect	Potential Environmental Impact	Initial Risk Rating			Control Measures	Residual Risk Rating		
		P X	C =	Risk		P X	C =	Risk
	Waste of natural resources.				Ensure accurate waste records are retained. Removal of wastes from the site would only be undertaken by a licensed contractor as required by the POEO Act and with appropriate approvals, if required, for contaminated materials, etc. All material to be recovered off-site to be appropriately classified in accordance with the Resource Recovery Exemptions. All material that requires off-site disposal to be appropriately tested and classified against the Waste Classification Guidelines (DECC, 2008).			
Earthworks spoil disposal.	Incorrect classification of waste (spoil) resulting in incorrect / illegal disposal/re-use.	P	2	H	Inductions, toolbox talks and training on recycling facilities and waste segregation practices. Separation of waste on site. Tracking of disposal processes. All contamination hotspots would be clearly marked in the field. Undertake pre-classification of soils on site.	U	2	M
Washout of concrete in undesignated areas.	Sediment laden/alkaline water polluting surrounding stormwater system / watercourses.	P	2	H	Concrete washout areas clearly marked on Environmental Control Maps and delineated. Inductions on designated concrete washout areas. Subcontractor agreements to include project compliant waste management principles.	U	2	M
Contamination								
Management of contaminated or untreated materials	Non-compliant material and contaminated water entering surrounding waterways. Decrease in health of nearby ecosystems (Botany Bay, Penrhyn	P	2	H	Develop contamination management procedures and protocols. These will be incorporated into the Waste Management Plan and Hazardous Material and Asbestos Management Plan. Identify any contamination hotspots and incorporate	U	2	M

Aspect	Potential Environmental Impact	Initial Risk Rating			Control Measures	Residual Risk Rating		
		P X	C =	Risk		P X	C =	Risk
	Estuary). The historical surrounding land use at the site has involved significant and varied industrial activities although no contaminated materials have been indicated in the reclaimed area of the project.				procedures for these locations into construction documentation. Develop unexpected finds procedures. Any unexpected finds will follow the procedures outlined in the Hazardous Material and Asbestos Management Plan.			
Potential for discovery of unexpected contaminated spoil during construction.	Health effects resulting from airborne contamination, e.g. asbestos. Complaints received from odours released during excavations. Classification of spoil is changed and disposal options altered, costs incurred associated with disposal of higher classification of waste.	P	3	M	If contaminated soil is encountered, all works are to stop in the vicinity of the find and investigations commence. Induct personnel on location, type, nature, concentration of contaminants on site if found. Develop unexpected finds procedures. Any unexpected finds will follow the procedures outlined in the Hazardous Material and Asbestos Management Plan.	U	3	M
Encountering asbestos / contaminated material on site.	Transfer of material into previously uncontaminated area (outside work site) causing new contamination.	U	2	M	Inspections of excavated and filled surfaces would be made during construction to determine the presence of visible asbestos. Contaminated soils would not be stockpiled on the structural fill layer or formation layers to avoid cross contamination.	R	2	M
Hazardous Materials								
Storage of hazardous substances, leaking plant and equipment and spillage from refuelling.	Localised ground contamination / pollution of stormwater and requiring cleanup and/or receiving fines. Risk of igniting volatile substances. Unauthorised access to site / potential vandalism/damage leading to	U	3	M	Induction, toolbox talks and training on appropriate handling and storage of liquids. All storm water drains should be identified prior to works. Storage areas to be away from sensitive areas and appropriately bunded.	R	3	L

Aspect	Potential Environmental Impact	Initial Risk Rating			Control Measures	Residual Risk Rating		
		P X	C =	Risk		P X	C =	Risk
	pollution.				MSDS approved prior to bringing hazardous substances on site including risk assessment. Plans showing storage locations and associated controls e.g. spill kits, etc. (Environmental Control Maps). Training in use of spill kits Contingency plans would be developed to deal with any spills which might occur during construction. Clearly label containers. Regular auditing and inspection of storage areas and materials. Make storage areas restricted access areas. Reduce/eliminate need for hazardous substances. Ensure all work sites are secure before leaving the site. All liquids i.e. fuels, paint etc are to be securely locked away at the end of each day.			
Spills of hazardous materials	Soil contamination/water pollution as a result of spills of hazardous substances, hydrocarbons during works. Spills to ground resulting in contamination. Spills in marine environment. The project will involve the use of various types of plant and equipment. As a result there is the potential for spills of hydraulic oils, diesel, curing compound and other hydrocarbons. Spills may occur to the hardstand,	P	2	H	Measures must be implemented throughout the project to prevent the occurrence of spills on site and to prevent mitigation of escaped materials into the surround bay and waterways. Storage and use of these materials in accordance Delivery and Storage of Chemicals, Fuels & Oils and Hazardous Substances ERAP. Spill kits located at strategic locations on the site in close proximity to activities. Emergency response training and procedures in place for marine works. Biodegradable Panolin oils used for plant and machinery where possible.	U	2	M

Aspect	Potential Environmental Impact	Initial Risk Rating			Control Measures	Residual Risk Rating		
		P X	C =	Risk		P X	C =	Risk
	ground or adjacent waterways.							
Fuel contaminated runoff from construction works leaving site	Fuel contaminated runoff entering stormwater or waterways (i.e. polluting - not compliant with discharge criteria).	U	3	M	All storm water drains should be identified prior to works and controls implemented. Refuelling of vehicles away from culverts, water courses. Appropriate bunding/storage of substances. Toolbox on site procedures for sediment controls and chemical storage. Educate site staff on project conditions and consequences of prosecution.	R	3	L
Biodiversity								
Vegetation trimming / clearing required outside approved work area.	Unauthorised works / removal of vegetation outside defined work area, possibility of removing threatened species, fines incurred.	U	3	M	Induction and tool box training on clearance zones and required protection measures. Inspections during clearing activities. Fencing in place/ clear marking of trees to be retained and cleared / demarcation areas / plans showing clearing areas. Pre clearing checklist to be completed before any clearing of vegetation.	R	3	L
Clearing and grubbing of vegetation within work site.	Erosion of soils, uncontrolled runoff, sediment deposited into surrounding vegetated areas and water courses, and invasion of weeds. Wrong vegetation removed. Potential for injury to native fauna.	U	3	M	Inductions and toolbox training on erosion and sediment controls. Where possible works to be staged so environmental controls can be implemented after clearance works. Approved Erosion and Sediment Control Plans in place prior to starting works. Where applicable, mature trees and other native vegetation to be retained would be clearly delineated,	R	3	L

Aspect	Potential Environmental Impact	Initial Risk Rating			Control Measures	Residual Risk Rating		
		P X	C =	Risk		P X	C =	Risk
					with all construction activities excluded from these areas. Pre clearing checklist to be completed before any clearing of vegetation.			
Pest / rodent disturbance from site establishment	Potential to relocate into residential areas / cause of community complaint. Health associated risks with increased rodents.	U	4	L	Ensure site establishment has pest controls such as wire mesh around building bases to ensure pests do not use them for shelter. If issue is problematic during construction activities, pest control services to be implemented as soon as possible	R	4	L
Construction activities impacting surrounding environment ; traffic, noise, activities out of bounds, etc	Breach of procedures and legislation. Fines for non-compliance. Injury and or damage to foreshore birdlife, aquatic and marine species.	U	3	M	Due to the nature of the site, it is unlikely that any native flora or fauna will be impacted during the works. Notwithstanding there is the potential for interaction with marine and aquatic species and foreshore flora and fauna. Provide information during site induction process on flora and fauna issues Prepare Shorebird Management Plan, Bird Hazard Management Plan and Feral Animal Management Plan.	R	3	L
Ponding of water on site	Attracting birds to roost on site leading to bird strikes at the airport runway	U	2	M	Prepare Bird Hazard Management Plan. Ensure drainage is adequate to avoid ponding of stormwater on site. Install effective covering over sediment ponds, such as chicken wire, to stop birds roosting on site. Monitor excavations, dust suppression applications and other works with the potential to hold water to ensure no ponding of water is present.	R	2	M
Air Quality								

Aspect	Potential Environmental Impact	Initial Risk Rating			Control Measures	Residual Risk Rating		
		P X	C =	Risk		P X	C =	Risk
General construction works; site establishment, earthworks, piling, drilling, etc	The project is located in close proximity to sensitive receptors. Given the nature of the works, the reclaimed land and the distances to the nearest receivers there is the potential for dust from works associated with Laing O'Rourke's activities to cause dust and air pollution nuisance external to the site. This has been a problem for the project site in the past. In particular, significant potential dust generating activities on the site will material screening and separation and spreading and compacting imported and in-situ material. The reclaimed land has a high potential to create dust impacts at nearby residential receivers in Botany. High dust activity in close proximity to residential and commercial premises, dust deposition at sensitive receivers. Complaints from workers / public / community. Negative project perception by community. Repairs and clean up needed.	L	3	H	Develop Air Quality Management Plan. Inductions and toolbox training on Dust and Air Quality Management. Include provision for air quality monitoring during the works. Provide dust mitigation measures through water sprays/misting. Use of water carts during dry weather on haulage roads and excavations/batters. Install dust controls immediately and continually through the project; • Surface sealants • Water carts • Street sweepers • Seal haulage/access roads Implement controls from Air Quality Management PlanErosion and Sediment Control Plans approved before works commence. Controls are then reviewed for maintenance.	U	3	M
Exhaust from plant and equipment.	Emissions resulting in air pollution.	U	4	L	Inductions and toolbox training on Dust and Air Quality Management . Well maintained plant/ equipment and pre-start checks and servicing. Non-complaint vehicles removed from site / repaired.	R	4	L

Aspect	Potential Environmental Impact	Initial Risk Rating			Control Measures	Residual Risk Rating		
		P X	C =	Risk		P X	C =	Risk
Archaeology & Heritage								
Unexpected heritage items encountered. Construction impacts to Government Pier.	Exposure, loss or damage of artefacts or items of heritage value previously unidentified Work delays, additional studies, approvals required, damage to heritage item.	U	3	M	Should any items be discovered, works will cease in the area immediately and the Client's Representative advised. An ERAP will be developed to manage the subsequent process. General inductions toolbox training on heritage management protocols. Awareness training will be provided during the site induction relating to Archaeology and Heritage. Label any known heritage items on Environmental Control Maps (Government Pier) and set exclusion zones. If suspected heritage item encountered. Works to stop immediately and Environment Manager contacted.	R	3	L
Acid Sulphate Soils								
Disturbance of Potential Acid Sulphate soils and Actual Acid Sulphate Soils during excavations.	The works are located in an area know to contain potential acid sulphate soils. Excavation works are required and may encounter these soils. Mobilisation of metals within runoff to levels toxic to natural systems. Release of acidic runoff.	U	3	M	Develop and implement Acid Sulphate Soils Management Plan. Awareness training in the identification and management of ASS. Provide containment and treatment facility on site. Ensure ASS material is left underwater, disposed off site or appropriately treated in a bunded area with sump.	R	3	L
Traffic								
Loss of on-street car parking in adjacent residential streets and commercial areas during construction.	Loss of parking availability to adjacent residential and commercial properties could result in community complaints.	P	4	M	Community notifications. Develop Traffic Management Plan / Traffic control procedures.	U	4	L

Aspect	Potential Environmental Impact	Initial Risk Rating			Control Measures	Residual Risk Rating		
		P X	C =	Risk		P X	C =	Risk
General construction traffic disturbing public access between local roads.	Disturbance to local residents resulting in complaints being made, limited access, potential for delays at local road access points resulting in complaints.	P	4	M	Approved Traffic Management Plans in consultation with relevant authorities. Detour routes to be advertised/ notified. Approved access routes, detailed Traffic Control Plans. Clear notifications / signage.	U	4	L
Management of heavy vehicles / haulage routes.	Complaints from sensitive receivers due to increased level and frequency of noise.	P	4	M	Designated haulage routes. Approved Traffic Management Plans. Community Notifications. Pedestrian management with traffic controller in place where required.	U	4	L
Truck deliveries out of normal working hours (un-approved).	Non-conformance with project requirements. Noise impact to community / potential complaints.	P	4	M	Personnel training of noise awareness to community included in induction and toolboxes. Induction on Construction Hours for deliveries. Communication of delivery times to suppliers. Community Notifications on project activities occurring locally. Code of conduct / selection criteria in place for subcontractors. Out of hours works approval where required (Planning Approval/ Council) Approved traffic/haulage routes. Planning and staging of works in approved hours as much as practical.	U	4	L
Resources and Energy Use								
Energy consumption by construction plant & operation of	Inappropriate energy use, waste of energy recourses, energy wastage costs, increased greenhouse gas	L	4	M	Implement Energy Management Action Plan Inductions and toolbox training on waste management	U	4	L

Aspect	Potential Environmental Impact	Initial Risk Rating			Control Measures	Residual Risk Rating		
		P X	C =	Risk		P X	C =	Risk
site compound facilities.	emissions.				and energy saving practices in construction plant and equipment and during office work. No idling of plant equipment where possible onsite. Equipment / plant equipment inspections must be undertaken prior to use on site. Complete energy audits as the project progresses Use of alternative fuels such as B20/B10/E10			
Water usage during construction activities.	Excess usage of potable water for construction activities leading to a decline in the amount of potable water for residents.	L	4	M	Use of potable water for construction activities to be minimised. As much as practical, process water is to be used for construction activities. The project will implement measures to limit the use of potable water. Develop Water Resource Management Plan. Include water conservation measures and verifiable targets. Capture and reuse rainfall and runoff for site activities Reuse concrete wash water where possible. Utilise water from dewatering activities as dust suppression to ease use of potable water resources.	U	4	L
Resource usage (e.g. building materials, water, fuels, packaging), waste generation and disposal .	Depletion of resources due to wastage (e.g. wastage of water / no recycling, poor management of procurement, ineffective removal of off-cuts, waste, i.e. no recycling).	L	4	M	Inductions and toolbox talks on recycling facilities and waste segregation, training/education on how to recycle. Procurement of materials (selection of materials) to be considered. Subcontractor's agreements to include project compliant waste management principles. Waste management undertaken in accordance with the Waste Avoidance and Resource Recovery Act 2001.	U	4	L

Environmental Risk Assessment Rankings

This table may be used as a guide in determining the level of risk for each environmental issue.

For each identified issue, consider the 'maximum credible' (not absolute worst case) risk that could result with minimal or no controls other than existing and using normal construction practices.

Note: Any one of the listed consequences must result in the use of the applicable consequence grading.

Select a letter and a number from each column. Plot letter and number selections on the Risk Ranking Matrix to determine applicable ranking:

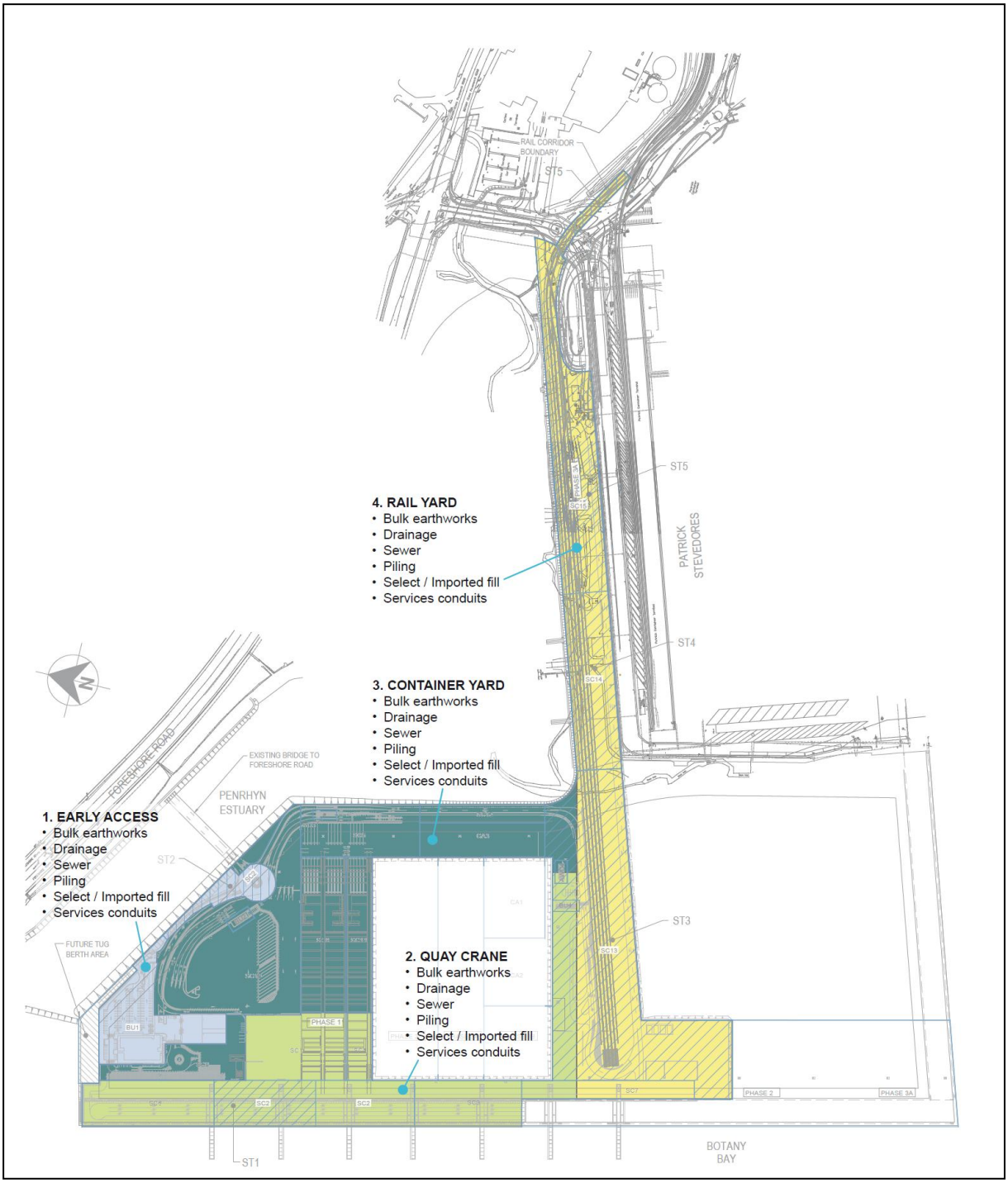
Likelihood (Probability & Frequency of Occurrence)			**Consequence (Outcome or Severity of Occurrence)**		
C	Certain	Common or repeating occurrence	1	Major	Major pollution incident causing significant damage or potential to health or the environment
L	Likely	Known to have occurred / "has happened"	2	Significant	Significant pollution incident causing damage or potential damage to health or the environment external to the site. Potential for prosecution. Numerous substantial complaints
P	Possible	Could occur / "heard of it happening"	3	Moderate	Reportable incident to EPA or other authority. Substantial breach of legislative, licence or guideline requirements. Possible fine. Will cause complaints.
U	Unlikely	Not likely to occur	4	Minor	Pollution incident that marginally exceeds licence conditions or guidelines for acceptable pollution. Fine unlikely. Potential for complaints.
R	Rare	Practically impossible	5	Insignificant	Insignificant pollution incident. Fully contained on site and can be fully remediated. Little potential for fine or complaints.

Probability ► ▼Consequence	Certain	Likely	Possible	Unlikely	Rare
1 - Major	H	H	H	H	M
2 - Significant	H	H	H	M	M
3 - Moderate	H	H	M	M	L
4 - Minor	M	M	M	L	L
5 - Insignificant	M	L	L	L	L

Risk Assessment Rankings: H = High M = Medium L = Low

Environmental issues which have a risk ranking of Medium or High will require the development and implementation of Environmental Risk Action Plans

Appendix 4 Site Location and Map



Appendix 5 Emergency Preparedness and Response

The types of environmental emergencies that could occur on this site are tabulated below.

Note: This plan is designed to supplement SICTL's site emergency response plan/s where available. In case of conflict, SICTL's plan will apply.

Type of Emergency	Preparation for Emergency	Response to the Emergency	Responsibility
Minor spill of hazardous or toxic substance (< 20L)	Awareness training of appropriate response and procedures to be incorporated into Environmental and Safety Induction MSDS on site for all materials and kept up to date Adequate supply of absorbent materials available in the site compound and on vehicles at work location	Report spills immediately to Site Manager and/or the Project Environment Representative Attempts to be made to limit or contain the spill using sand bags to construct a bund wall, use of absorbent material, temporary sealing of cracks or leaks in containers, use of geotextile or silt fencing to contain the spill. Site Manager and Supervisors to coordinate the response, clean up and disposal of the material Material to be disposed of in accordance with the manufacturers' recommendations and applicable legislation.	Site Supervisor Environment Manager
Major spill of hazardous or toxic substance (> 20L)	Awareness training of appropriate response and procedures to be incorporated into Environmental and Safety Induction MSDS on site for all materials and kept up to date Adequate supply of absorbent materials available in the site compound and on vehicles in work location Emergency telephone numbers prominently displayed around office and issued to supervisors	Report spill immediately to Project Leader and/or Site Manager who will notify SICTL. Attempts to be made to limit or contain the spill using sand bags to construct a bund wall, use of absorbent material, temporary sealing of cracks or leaks in containers, use of geotextile or silt fencing to contain the spill, righting overturned containers, transferring remaining material. Implement procedures to notify the relevant authorities in accordance with SICTL's requirements. Site Manager to coordinate the response, clean up and disposal of the material If spill is regarded to be outside the onsite resources, then the fire brigade should be called Where appropriate, evacuation procedures are to be implemented to remove non-essential personnel from the affected area Emergency response members are consulted. On site SICTL personnel are informed of the incident Access and egress to the area is established to ensure the appropriate vehicles have effective access and congestion is minimised. If the fire brigade attends, their senior officer assumes control of the operation with LORAC and subcontractor personnel assisting as required. A full investigation report of the event is to be completed by the Project Environment Representative as soon as practicable after the area has been secured.	Site Supervisor Environment Manager

Type of Emergency	Preparation for Emergency	Response to the Emergency	Responsibility
Cyclone /Severe Storm / High Wind	Monitor cyclone/storm warnings for the area. Awareness training of appropriate response and procedures to be incorporated into Environmental and Safety Induction. Ensure First Aid supplies are well stocked and adequate.	Evacuate all nonessential personnel Secure all plant, equipment and materials Remove plant and equipment from flood prone areas If plant cannot be removed ensure it is secured and in a position where it is unlikely to cause damage Stow all minor and small equipment into containers, which are to be sealed. Ensure all other materials are either removed from flood prone areas or stowed and secured. All chemicals will be in secured containers and stored within a sealable shipping container.	Site Supervisor Environment Manager
Fire (other than bushfire)	Awareness training of appropriate response and procedures to be incorporated into Environmental and Safety Induction Fire extinguishers maintained, clearly labelled and distributed around site compound and vehicles Training in the use of fire extinguishers and which one to use for each type of fire First Aid supplies are stocked and adequate	For small fires, attempts to be made to extinguish the fire or limit its spread with available fire extinguishers or water hoses if appropriate. Supervisor is to be informed immediately. Supervisor to contact SICTL and external services where necessary (fire, ambulance) as a precautionary measure. All personnel in the vicinity to be assembled in the Evacuation Assembly Area and a head count performed Any resulting fuel or chemical spill to be handled as detailed above Supervisor to coordinate with emergency services and provide assistance as required.	Site Supervisor Environment Manager
Significant adverse dust event due to weather conditions: High winds	Monitor meteorological conditions for the area - develop contingency for wind speeds in excess of 16m/s (55km/hr) High wind 'stop works' protocols in place Establish contingency strategy for additional dust control measures, additional water carts, dust suppressants, stockpile covers etc	Dust generating activities will cease under direction of the Environment Manager or Site Supervisor until adverse conditions subside. Deploy additional mitigation measures to exposed areas stockpiles and other dust generating items will be water sprayed or covered.	Environment Manager Site Supervisor
Discovery of friable asbestos.	Review previous land uses, environmental reports for potential for friable asbestos. Include asbestos awareness in the site induction where the potential exists Include contingency in relevant work procedures and SWMSs Identify potential service providers for asbestos control and removal.	Quarantine suspected area Cover or provide dust mitigation strategy Engage licensed/approved removal and disposal organisation Complete post removal verification	Project Leader Site Supervisor PSA Environment Manager

Type of Emergency	Preparation for Emergency	Response to the Emergency	Responsibility
Flooding	Monitor meteorological conditions – develop contingency strategy for rainfall > 100mm in 24hours or potential for > 1in 5 ARI All chemicals, fuels and other hazardous substances to be in secured containers and stored within a sealable shipping container Remove plant and equipment from low lying areas Secure plant that cannot be removed Review site drainage flow paths: Redirect site drainage to prevent flooding of residential/business premises Ensure site drainage does not concentrate surface flow Review and address the potential for excess water entering the site Review and maintain erosion and sedimentation controls	Recover materials washed from site including sediment and other waste. Check effectiveness of erosion and sedimentation devices and other flood controls, maintain where required and safe to do so.	Site Supervisor Environment Manager
Temporary erosion and sediment controls are damaged during rainfall.	Plan controls to be suitable for expected conditions Ensure sufficient materials, labour and plant are available for additional controls.	A review of the site to be undertaken by the Environmental Manager and Site Supervisor. Controls to be repaired or replaced within 24 hours of detection, immediately if inclement weather current.	Environment Manager Site Supervisor
Damage to sediment pond/ water treatment tanks	Check pond for suitability to project requirements; size, treatment type, etc Ensure basin construction is in accordance with QA requirements including relevant ITPs. Daily inspections of equipment during active use. Awareness training on works procedures/protocols and safe working.	Water in damaged basin to be pumped to another secure basin, or discharged if it meets the site criteria. Damage to be repaired as soon as practical. Repairs to be monitored when basin brought back online.	Environment Manager Site Supervisor
Vibration causing structural damage	Choose correct plant when working near structures; minimise size and impact Use safe working distances during planning phase Implement vibration monitoring at commencement of vibration generating works to ensure compliance with standards	Activities causing vibration would cease under direction of the Environment Manager or Site Supervisor. Any occupants of buildings may be evacuated with due consideration to safety, and the area secured to prevent unauthorised access. A structural assessment to be undertaken; and if any damage is associated with construction, rectification work would be agreed.	Environment Manager Project Leader

Type of Emergency	Preparation for Emergency	Response to the Emergency	Responsibility
Unapproved clearing / damage to protected vegetation – threatened/endangered species	Clearly demarcate site boundaries Clearly demarcate clearing areas and brief site personnel Identify/mark vegetation to be retained or that is protected. Identify species that may be impacted, include material within the project induction Included requirements within construction planning documentation.	Immediately cease activities Engage consultant to assess damage to vegetation and presence of any endangered or threatened communities.	Site Supervisor Environment Manager
Injury/death to protected/endangered/threatened fauna	Identify potentially impacted species prior to commencement on site. Identify species that may be impacted, include material within the project induction Review/inspect vegetation to be cleared prior to clearing – utilise ecologist/spotter where there is the potential for endangered/threatened species Engage with local vet/WIRES representative on the appropriate contact/procedure Site procedure for the short term management of injured fauna	Immediately cease activities upon discovery of injured fauna Implement procedure for short-term stabilisation and transport to Vet or WIRES Undertake additional vegetation inspection to identify any remaining fauna prior to recommencement.	Site Supervisor Environment Manager
Damage / destruction of indigenous heritage item	Ensure site investigations detail any heritage items on or in proximity to the site. Include awareness material within the project induction Develop a 'stop works' protocol for any heritage find on site.	Cease works and stabilise the area, under the direction of the Environmental Manager or Site Supervisor. The Environmental Manager is to report the remnants to SICTL and regulatory authority (OEH). Request an archaeologist to assess the significance and archaeological potential of the uncovered feature.	Environment Manager
Damage / destruction of European heritage	Ensure site investigations detail any heritage items on or in proximity to the site (Government Pier). Include awareness material within the project induction Develop a 'stop works' protocol for any heritage find on site.	Cease works and stabilise the area, under the direction of the Environmental Manager or Site Supervisor. Contact an archaeologist to assess the significance and archaeological potential of the uncovered feature.	Environment Manager
Unauthorised discharge of water that does not meet criteria	Awareness training of appropriate response and procedures to be incorporated into Environmental and Safety Induction. Utilise sediment ponds/dust suppression on site for excess water Hold point in place for water discharges	Discharge to immediately cease. Water to be treated to meet acceptable criteria prior to release. Water monitoring to be undertaken if not in place during incident. Incident report to be completed by the environmental manager and corrective and preventative action implemented prior to discharge recommencing.	Site Supervisor Environment Manager

Type of Emergency	Preparation for Emergency	Response to the Emergency	Responsibility
Unanticipated contaminated soil requires offsite disposal.	Unexpected finds protocol to be implemented. Site investigations to be undertaken.	Unexpected finds protocol to be implemented. Classify the sediment. Notify SPC of the requirement to remove the sediment from the project site. Once approval is received from SPC, transport to a suitable waste facility.	Site Supervisor Environment Manager

Appendix 6 Waste Disposal and Project Waste Strategy

The following project waste strategy is an indicative guide to identify and state the type of waste that is intended to be controlled and recycled where practical.

Waste Type	Disposal	Notes
General solid waste (putrescible) Food scraps etc.	Green bins, skips, etc.	Positioned outside crib facilities. No food allowed on site.
Hazardous Waste (may be General Solid Waste once chemical analysis has been completed)	Dispose of any contaminated/ hazardous waste material according to the EPA requirements. E.g. waste oil: to be stored in a bunded container and then recycled; asbestos: to be wrapped in plastic and placed in a separate labelled bin by qualified asbestos contractor.	EPA permit details the criteria for the disposal of contaminated/ hazardous materials. All asbestos waste will be managed in accordance with the approved Asbestos Management Plan.
Recyclable waste (paper, cardboard, plastic bottles etc)	Designated labelled bins for collection by recycling companies	Labelled Bins to be located in the Site Office for paper & cardboard recycling, designated labelled wheelie bins outside the crib huts for plastic bottles.
Concrete waste	Returned to the Batch Plant for disposal. Waste concrete on site will be segregated and sent to licensed concrete recyclers.	Excess concrete is to remain in the truck and be returned to the Batch Plant for disposal.
General solid waste (non-putrescible) (broken pallets, non recyclable waste materials etc)	Construction waste will be sent to an appropriately licensed resource recovery facility	Skips that are not labelled will go to an appropriately licensed resource recovery facility. A report of the waste will be received and will detail the waste streams and amount recovered.
Scrap metal	Labelled skips	Reinforcement steel, steel offcuts, stud framing, etc

The Sydney Port Botany Terminal 3 expansion works waste management is outlined further in the flowchart below.

Waste Management Flowchart

Project Waste Management Criteria

Project Start Up

OBJECTIVE
To comply with contractual and legislative requirements and ensure that waste from construction activities does not have the potential to escape from the site and cause an environmental nuisance / harm.

REQUIREMENTS/REGULATIONS
- Client Requirements
- Planning Approval Conditions
- Protection of the Environment Operations Act 1997
- Protection of the Environment Operations (Waste) Regulation 2005
- Waste Avoidance and Resource Recovery Act 2001
- Local Government Act 1993
- DECCW Waste Classification Guidelines, 2008

TARGETS
- No incidences where waste is stored in a position where it has the potential to move off-site uncontrolled.
- All off-site movements of waste will be tracked.
- The principles of the waste management hierarchy will be adopted, where practicable.
- At least 90% of construction waste diverted from landfill and either recycled or reused.
- Waste will be minimised where ever possible.

Project targets to be fed to procurement and design teams

Waste Minimisation Strategies – Design & Procurement

Strategy Implementation and Monitoring

PROCUREMENT STRATEGY
Aspects to consider:
- Location of supplier and logistics (check operational licenses and storage requirement).
- Recyclability or recyclable content of item.
- Longer life spans and durability.
- Biodegradability/non toxic.
- Environmental endorsements.
- Emergency response equipment requirements
- Sustainable site office fit-out

Procurement and Design Teams

RECYCLING STRATEGY
Assess viability to recycle based on:
- Carbon third party cost;
- Logistical costs;
- Sale price;
- Indirect savings; and
- Ongoing monitoring and improvement.

Procurement and Design Teams

EDUCATION STRATEGY
- Toolbox talks
  - Housekeeping
  - Hazardous Substance Disposal
  - Office Recycling
- Emergency Response and Spill Management
- Pre-starts
- Waste Posters
- Enviro Alerts
- Bin and Skip Signage

Environment Team

Waste Management Strategies – Construction

All Personnel on Site

GENERAL WASTE

General Solid (non-putrescible)	General Solid (putrescible)
• Non recyclable waste materials • Broken Glass • Dried sediment collected from stormwater management systems • Garden waste • Drained oil filters • Rags and oil-absorbent materials that only contain non-volatile petroleum hydrocarbons and do not contain free liquids • Building rubble	• Food waste • Putrescible Organic • Manure

Dispose to general waste skip bins or office bins

RECYCLABLE WASTE

General Solid (non-putrescible)
- Excess dried concrete
- Steel off cuts
- Reinforcing steel
- Timber
- Scrap Metal
- Paper and cardboard
- Comingled containers – milk bottles, drink bottles, cans, etc
- Non-putrescible cleared vegetation may be mulched and reused for landscaping or ground stabilisation if no invasive weeds included

Place in labelled skip bins or office bins

HAZARDOUS WASTE

Liquid	Solid
• Waste oils • Paints	• Asbestos containing material including spoil from earthworks • Empty oil and paint containers • Oily rags • Contaminated soil

Dispose to specific hazardous waste bin on site.

Asbestos is only to be handled or removed by occupational hygienist or AS1/AS2 removal contractor.

Specific oily rag bin to be used for oily rags, used spill kit material, etc.

Decant waste oils/paint into labelled, bunded drums.

Licensed waste contractors only to collect and remove all wastes from site
Laing O'Rourke to ensure the waste facility is fully licensed to accept the types of waste being sent offsite
Transport and waste facility dockets required within 3 days of disposal from site
Laing O'Rourke to input and interpret data from waste tracking spreadsheet

SPBT3 Specific Strategies

GENERAL WASTE
- Non-recyclable office waste will be placed in the general waste bins located at waste collection at the site office compound
- Any vegetation waste will be collected on site and if not mulched and reused onsite, will go to appropriate resource recovery location
- Any mixed building rubble such as bricks/plasterboard/etc will be placed in a general waste skip and sent to a resource recovery facility for sorting and recycling.

RECYCLABLE WASTE
- Office waste bins will be segregated into the following recycling streams: Comingled / Paper & Cardboard / Organics.
- Steel waste will be utilised and collected on site and go to an appropriate resource recovery / recycling facility
- Dried concrete waste will be collected on site and go to an appropriate resource recovery / recycling facility
- Verified/classified spoil material diverted from landfill and reused where practical.

HAZARDOUS WASTE
- Any oily rags or used spill kit material to be placed in the oily waste bin and disposed off site by an appropriate waste facility.
- Asbestos containing waste is only to be handled or removed by occupational hygienist or AS1/AS2 removal contractor
- Waste oil/paints will be stored in bunded drums.

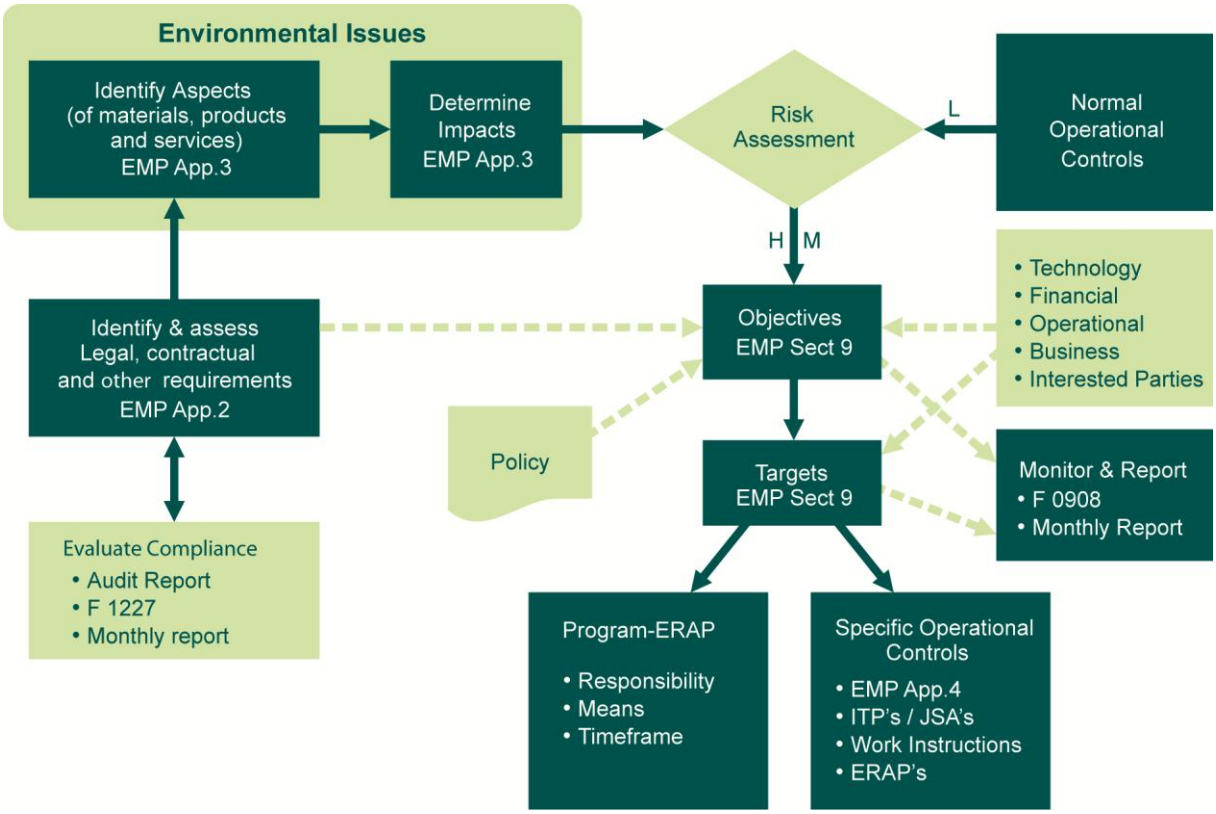
Waste to be tracked using the Waste Disposal Register F 1230 or other suitable document, and all records maintained.

Appendix 7 Permits and Licences

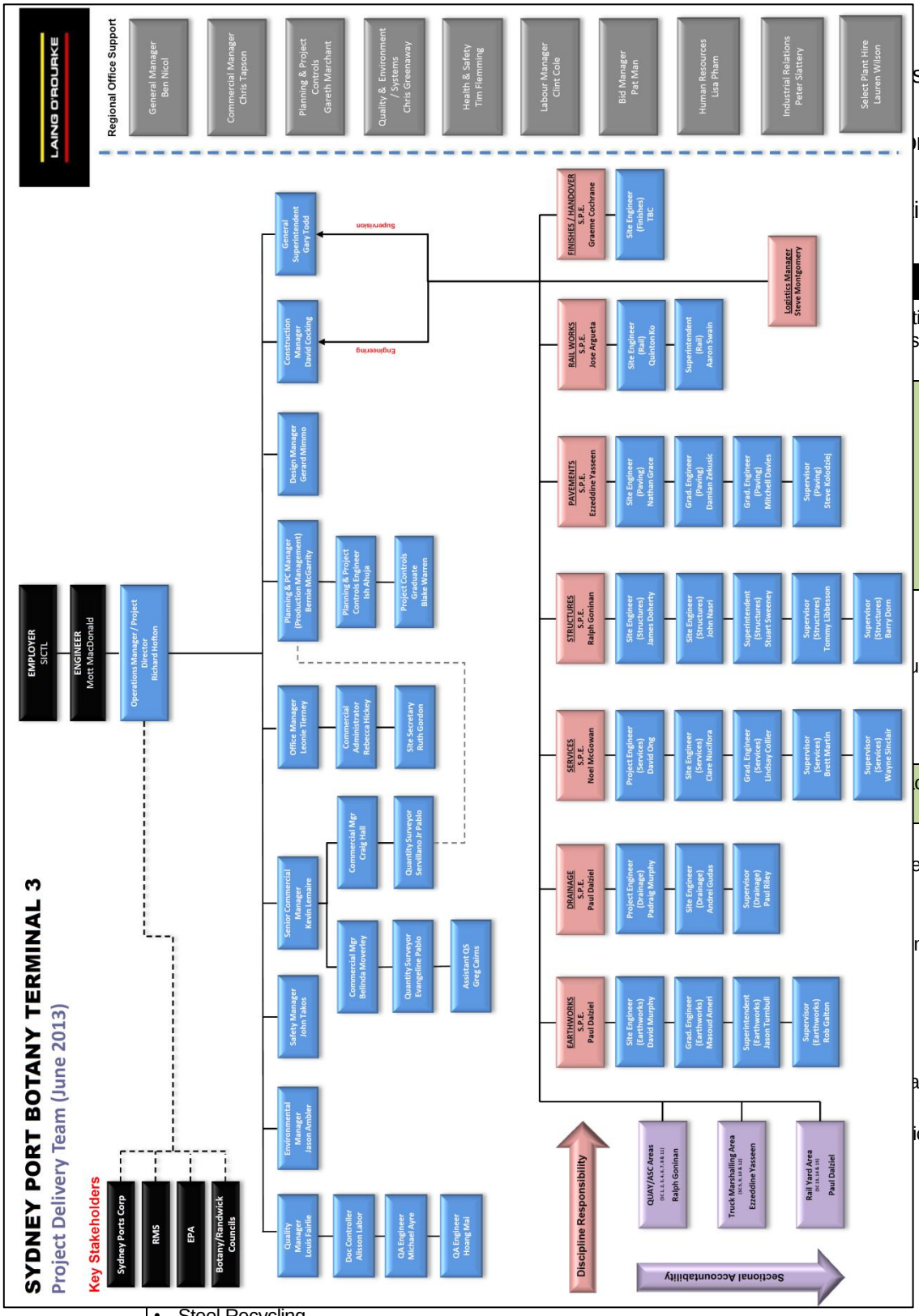
The list of licenses and consents is provided below. These will be tracked on the Project Permits and Licences Register;

- NSW Minister for Planning Conditions of Approval for the Port Botany Expansion Project
  - MOD 1 – MOD-107-9-2006-i approved 11 September 2007
  - MOD 2 – MOD-134-11-2006-i approved 11 September 2007
  - MOD 3 – MOD-149-12-2006-i approved 11 September 2007
  - MOD 4 – MOD-78-9-2007-i approved 17 September 2007
  - MOD 5 – MOD-60-9-2008 approved 21 September 2008
  - MOD 6 – MOD-68-12-2008 approved 12 December 2008
  - MOD 7 – MOD-08-03-2009 approved 20 March 2009
  - MOD 8 – 494-11-2003-i MOD 8 approved 30 May 2009
  - MOD 9 – DA-494-11-2003-i MOD 9 approved 18 June 2009
  - MOD 10 – DA-494-11-2003-i MOD 10 approved 13 July 2009
  - MOD 11 – DA-494-11-2003-i MOD 11 approved 21 November 2011
  - MOD 12 – DA-494-11-2003-i MOD 12 approved 6 June 2012.
  - MOD 13 - DA-494-11-2003-i MOD 13 approved 8 February 2013
  - MOD 14 - DA 494-11-2003-i MOD 14 approved 11 June 2013
  - MOD 15 – DA-494-11-2003-i MOD 14 approved 8 July 2013
- Commonwealth of Australia Environment, Protection and Biodiversity Conservation Act 1999 approval - reference 2001/543
- Port Botany Expansion Environmental Impact Statement.
- Sydney Port Corporation Green Port Guideline – May 2006.
- Future modifications to Sydney Container Terminal 3 under Section 75W of the Environmental Planning and Assessment Act 1979.
- Construction Environmental Management Plan (CEMP) and associated plans approval from relevant authorities
- Approval for works undertaken outside the hours approved by the Director General.
- Penrhyn Estuary Habitat Enhancement Plan

Appendix 8 EMP Flow Chart



Appendix 9 Organisational Chart



- Steel Recycling
- Timber Recycling

Waste	
	• Waste concrete to be stockpiled separately and incorporated into the works • Cardboard Recycling • Plastic Recycling • General waste bins will be provided at the sites office, amenities and crib areas. No construction/building waste is to be placed in these bins. • Bins to separate recyclable materials such as PET bottles and plastics, aluminium cans, paper, toner and ink cartridges, glass bottles etc will also be provided. • Bins to be labelled to prevent contamination • Where possible coordinate bulk deliveries to reduce packaging requirements • Specify waste minimisation requirements in supply agreements • Palletise deliveries where possible and return used pallets • Backload materials where possible • Liquid wastes such as paint and solvents to be contained within a bunded container on site and disposed of using a licensed liquid waste contractor. Labelling separation requirements must be maintained for all stored wastes • Retain waste disposal permits, dockets and quantities of the amount of waste that has been removed from site. • Ensure good housekeeping is maintained and the site maintained in a clean, neat and tidy standard. Regular site clean ups to be undertaken to maintain a high standard of housekeeping.
Timeframe	Duration of site works.
Monitoring & Reporting	• Skips monitored visually by the Supervisory personnel on a daily basis. • Environmental Checklist F 1227 • Integration of waste audits in the environmental inspection regime. • Waste Disposal Register F 1230 or other suitable record for all waste leaving the site • WRAPP reporting requirements including waste reduction progress reports

Noise and Vibration	
Objective	• To comply with contractual requirements, adhere with the project CEMP and CNCMP and ensure that noise and vibration from construction activities does not cause environmental nuisance.

Legal, Contractual & Other Requirements	• Contract Specification Clause
	• SPBT3 Planning Approval
	• Audible construction works unless otherwise approved by Department of Planning and infrastructure shall be restricted to:
	  • 7:00 am to 6:00 pm Monday – Friday
	  • 8:00 am to 1:00 pm Saturdays
	  • At no time on Sundays and Public Holidays
	• Construction activities that are inaudible external to the site may be undertaken outside of these hours where approved by the Project Environmental Manager.
	• Protection of the Environment Operations Act 1997
	• Protection of the Environment Operations (Noise Control) Regulation 2000
	• AS2436 Guide to Noise Control on Construction, Maintenance and Demolition Sites;

Targets	• No valid noise/ vibration complaints resulting from construction works. • No unreasonable noise or vibration. • Minimise noise and vibration impacts on external receptors.
Responsibilities	• The Project Leader will ensure construction activities comply with these requirements and implement the control measures. • The Environmental Representative will obtain approval to work outside approved hours

Noise and Vibration	

Controls (means & resources)	• No work will be undertaken outside of the agreed hours without prior approval.
	• Installation of the noise wall as early as possible in the program to limit noise impacts on nearby receivers.
	• Provide regular construction notifications to the nearest potentially affected residences prior to construction activities.
	• The CCC will receive construction updates and notifications monthly.
	• Inform any receivers identified in the project EIS of the proposed construction works by means of a letter box drop or consultation. Community consultation to be undertaken at sensitive receivers where noise exceedences are predicted to occur.
	• Non-tonal reversing alarms to be provided to site based equipment. Arrange work sites to avoid or minimise truck reversing movements, and ensure vehicles enter and exit work sites in a forward direction.
	• Where work outside the hours nominated above hours is required, approval shall be gained prior to the commencement of works.
	• Existing noise conditions are taken from the project EIS
	• Plan for and conduct night-time activities in such a manner to eliminate or minimise the need for audible warning alarms.
	• Non-tonal reversing alarms to be provided to all equipment except for deliveries.
	• Where construction vibration is found to be causing a disturbance, works are to cease, monitoring undertaken and the construction methods shall be reviewed to reduce the impact where possible.
	• Use vibration or rotary piling techniques for all piles where applicable. Where impact piling is required, limit the impact of noise emissions using measures such as limiting hours of operation, lowering the height of use of hammers, shielding the pile driving by the positioning of construction equipment or use of acoustic shrouding and resilient dollies.
	• Site offices, compounds and sheds will be located so as to have no negative impact on the noise amenity of nearby sensitive receptors. Site access points to be offset as far as possible from residential receivers.
	• No queuing of construction vehicles outside residential premises. Prevent vehicles and plant queuing and idling outside the site prior to the morning start time.
	• Delivery operations or other noise generating activities at compound and storage areas will take place during the designated construction hours nominated above, unless specifically required by Police or RTA requirements.
	• Where practical, substitution of excessively noisy processes with alternative processes will be undertaken. Where possible, position and orientate noisy plant and equipment away from sensitive receivers and wildlife in Penrhyn Estuary. Work compounds, offices, parking areas and stockpile areas are all located away from noise sensitive receivers.
	• Avoiding where practical the use of noisy plant simultaneously close together or adjacent to sensitive receptors.
	• High efficiency mufflers must be fitted to all plant and equipment to minimise the generation of noise.
	• All plant will be maintained in accordance with the manufacturer's requirements.
	• Noise generating equipment to be orientated away from sensitive areas
	• Undertaking loading and unloading activities away from sensitive areas and during designated construction hours.
	• Select the most appropriate plant and equipment to minimise noise generation and include where necessary screening and enclosures.
	• On-site generators and auxiliary power sources used during construction should be positioned away from existing buildings to buffer noise/ vibration.
	• Site personnel will be provided with induction training including the following;
	  • all relevant project specific and standard noise and vibration mitigation measures
	  • relevant licence and approval conditions
	  • permissible hours of work
	  • any limitations on high noise generating activities

Noise and Vibration	
	• location of nearest sensitive receivers • construction employee parking areas • designated loading/unloading areas and procedures • site opening/closing times (including deliveries) • environmental incident procedures • Regular checks are to be undertaken to ensure all equipment and vehicles are in good working order and are operated correctly. Checking should include: • engine covers; • defective silencing equipment; • rattling components; and • leakages in compressed air lines. • Awareness training and information will be provided to project personnel in relation to the vibration requirements on the project and the need to minimise vibration when in close proximity to operational areas. • Plant, equipment and processes shall be selected so as to limit construction related vibration. • Restrict or modify working hours to minimise impact if required. • All reasonable and feasible mitigation measures would be utilised to minimise the noise impact on nearby sensitive receivers. • Plant/Equipment noise monitoring will be undertaken on site. Maximum allowable levels are given below;

Item	Max Allowable Noise Level at 7m (dBA)
Bulldozer	88
Front End Loader	90
Grader	85
Compactor	85
Vibratory Roller	89
Watercart	88
Crane	85
Backhoe	88
Excavator	86
Rock Breaker	97
Compressor	75
Generator	79
Concrete truck	83
Concrete pump	84
Concrete vibrator	80
Concrete saw	93
Tip truck	83

Timeframe	• Duration of site works.
Monitoring & Reporting	• Weekly inspections to be recorded on Form F1227. • Complaints to be recorded on form Environmental Incident and Complaint Report (F1222). • Daily inspection (pre-start) checks and regular servicing of equipment. • Initial noise monitoring at the start of each new activity and on a monthly basis during works there

Noise and Vibration	
	after Prior to operation as per Section 17 of this plan. Noise criteria are taken from the project EIS and set out below.

Location	LA10 Construction Noise Criteria (DBA)		
	Daytime (7:00 am – 6:00 pm)	Evening (6:00 pm – 10:00 pm)	Night time (10:00 pm – 7:00 am)
Location 1 - Chelmsford Avenue	54	50	41
Location 2 - Dent Street	52	48	41
Location 3 - Jennings Street	45	44	45
Location 4- North of Golf Course	62	55	48
Location 5- Australia Avenue	47	45	47
Location 6- Military Road	51	51	50

- Vibration British Standard BS6472:1992 limits for human comfort (above 8 Hz):
  - 0.28 mm/s peak velocity within residences during day time; and
  - 0.56 mm/s peak velocity within offices during day time.
- In regard to potential building damage, the German Standard DIN4150 suggests a limit of 10 mm/s peak particle velocity (ppv) which is in line with the project EIS

Dust and Air Quality	
Objective	• To comply with contractual requirements, adhere with the project CEMP and ensure that dust and other air emissions from the construction activities do not cause impacts on sensitive receivers and equipment.
Legal, Contractual & Other Requirements	• Protection of the Environment Operations Act 1997 • Protection of the Environment Operations (Clean Air) Reg 2002
Targets	• No valid dust complaints from construction works. • No dust impacting on offsite activities or surrounding residences. • No uncontrolled release of contaminants, (odour, smoke etc) into the air. • Comply with construction contract conditions.
Responsibilities	• The Project Leader to implement the requirements of this plan. • Supervisor to inspect the works at regular intervals.
Controls (means & resources)	• Provision of Water tankers where necessary for dust suppression uses. Application rates would be determined based on wind conditions, the intensity of construction operations and potential risks of contamination such as asbestos. To reduce potable water consumption, recycled water would be used for dust suppression where practicable • Place a thin bituminous membrane layer to sections of the reclaimed area not being used for considerable periods of time, but where subsequent construction activities are to take place on site, to stabilise and reduce windblown dust emissions • Spraying formations & exposed work areas to suppress dust • Minimise traffic and traffic speeds on exposed areas. Stabilised access to be utilised as far as practical. • Cover haul vehicles loads & ensure tail gates are closed when operating on public roads • Provide stabilised access points in the form of shaker grids or rumble strips at site egress points.. • Remove mud from haul vehicles prior to entering public roads • Immediately remove spilt mud by construction equipment or vehicles on public roads

Dust and Air Quality	
	• Reprogram dust generating work during periods of high wind. Where dust cannot be controlled and winds exceed 10m/s, dust generating is to cease until measures can be implemented to control dust. • Provide awareness training in the need to minimise dust • Regular visual monitoring of dust generation – to be documented in the site Supervisors diary. • Maintenance of Plant & Equipment as per manufacturers requirements • Emission controls on all vehicles to comply with the POEO (Clear Air) Regulation 2010. • Turn off idling plant / equipment • Provide systems to use water from dewatering activities as dust suppression to ease use of potable water supplies • Site rehabilitation would be undertaken as soon as practicable • Disturbed areas would be stabilised as soon as practicable to prevent or minimise wind-blown dust • Options for coating the exposed surface with a soil bonding substance to be explored if standard controls are ineffective • Construction plant and equipment would be well maintained and regularly serviced so that vehicular emissions remain within relevant air quality guidelines and standards • All site vehicles and machinery would be switched off or throttled down to a minimum when not in use • Monitoring of dust would be undertaken daily. Where visible levels of dust are high, on site activities are to be reviewed, with additional control measures and/or varied site operations to be implemented as soon as practicable
Timeframe	• Shaker grids/stabilised access to be installed prior to commencement of works • Water tankers and other measures available at the commencement of earthworks • Spilt mud and sediment to be removed from public roads prior to the end of each shift. • Dust sealant to be applied to unsealed reclaimed land as soon as required and throughout construction • Duration of site works.
Monitoring & Reporting	• To comply with contractual requirements, adhere with the project CEMP and ensure that dust and other air emissions from the construction activities do not cause impacts on sensitive receivers and equipment.

Water Quality, Site Drainage and Erosion and Sediment Control	
Objective	• To comply with contractual and legislative requirements, adhere with the project CEMP and SWQMP
Legal, Contractual & Other Requirements	• Protection of the Environment Operations Act 1997 • Water Management Act 2000
Targets	• Educate all personnel in the legislation and requirements of the ESC Program • Minimise impacts from construction activities to the surrounding environment and waterways
Responsibilities	• All staff to ensure adequate ESC devices are installed and maintained. • The Environment Manager will undertake weekly formally documented inspections of on-site ESC devices, plus prior to expected rainfall and after rainfall events and also on a daily basis. Each Site Supervisor will be responsible for the repair/ management of any damage or additional ESC devices, as required.
Controls (means & resources)	• Botany Bay and associated waterways is a significant habitat immediately adjacent to the works that must be protected from sedimentation and water pollution. • Develop specific Construction Method Statements for any works in Penrhyn Estuary and have them reviewed by an appropriate ecologist prior to works.

Water Quality, Site Drainage and Erosion and Sediment Control	
	• Any works within the Penrhyn Estuary are to comply with requirements given in the Penrhyn Estuary Habitat Enhancement Plan. • Erosion and sediment control plans (ESCPs) will be developed and implemented prior to the commencement of each work activity and prior to changes to site conditions. ESCPs will be updated as the works progress. • The development of ESCPs will be guided by the Blue Book and other guidelines where required. • Erosion and sediment controls will be checked and if necessary, maintained, each day. • Particular attention will be paid to the design criteria for sediment fences, straw bales, catch drains, diversion drains, sandbags and similar controls • All works interfacing the bay requires silt curtains to be installed to protect the bay from turbidity risks • Any permanent drainage to be installed as early in the program as possible • All water to be discharged in accordance with legislation and only after Laing O'Rourke approval • Top soil/ mulch stockpiles to be not greater than 2.0m in height. All stockpiles will be located clear of watercourses and drainage works. • Should work areas remain inactive for periods of greater than two weeks, temporary stabilisation measures would be applied such as soil stabilisers or covering with a geo-fabric cover such as jute mesh. • Approval for the waste water management facilities for the site office and crib shed are to be obtained prior to site mobilisation. Only connections to existing sewer or proprietary pump out systems are permitted. • All disturbed surfaces (both cut and fill, including footpaths) will be revegetated as soon as practicable, in compliance with the Landscaping Plans. • Any damage or excess erosion/ sediment will be repaired/ managed as required to maintain ESC devices. ESC devices are to be maintained when their capacity has been reduced by 40%. • Any concrete washout required shall only be undertaken in the designated areas with appropriate bunding and control measures. • Toolbox talks will be conducted for employees and subcontractors on the requirements of the ESC Plan. • All ESC works will be removed immediately prior to final completion including restoration of all surfaces to pre-existing condition.
Timeframe	• Duration of site works.
Monitoring & Reporting	• Visually monitored daily by the Site Supervisor. • Weekly inspections to be documented on the Weekly Environmental Inspection Checklist Form F 1227. • Maintenance activities for ESCPs shall be documented. • All water quality data including dates of water release will be maintained in an on-site register.

Hazardous Material	
Objective	• To comply with contractual and legislative requirements and ensure that hazardous or contaminated material that is discovered on the site does not cause an environmental nuisance / harm and is disposed of in accordance with legislative requirements.
Legal, Contractual & Other Requirements	• Contract specification • AS/ NZS 1940: 2004 – The Storage and Handling of Flammable and Combustible Liquids • Protection of the Environment Operations Act 1997 • Contaminated Land Management Act 1997 • Port Botany Expansion Planning Approval • Aurecon Framework Construction Environmental Management Plan
Targets	• No environmental incidences involving contaminated/ hazardous materials

Hazardous Material	
	• No pollution events of the surrounding environment and water ways by contaminated material
Responsibilities	• The Superintendent and Supervisory Personnel are to ensure that the requirements of this ERAP are implemented for the project.

Controls (means & resources)	Suspected material may include that which is visibly different to surrounding material, fibrous in nature, exhibits hydrocarbon odours or other unexpected characteristics, unknown containers, piping, underground storage tanks, or similar structures are discovered;
	• Follow protocols in Hazardous Material and Asbestos Management Plan
	• Immediately cease work and contact Site Supervisor
	• Demarcate the 'unexpected find' to prevent access and install appropriate environmental and safety controls.
	• Project Leader to contact the client representative and arrange inspection by a remediation consultant
	• If substance is assessed as not presenting an unacceptable risk to human health. Site Supervisor to remove safety and environmental controls and continue work.
	• In addition, the following controls will be incorporated;
	• Manage any Contaminated Material as per legislative/EPA requirements including the testing and assessment.
	• Protect the environment by implementing control measures to divert surface runoff away from the potentially contaminated ground.
	• Capture and manage any surface runoff contaminated by exposure to contaminated ground.
	It is also noted the only the hazardous and/or industrial and/or Group A waste listed below may be generated and/or stored on site:
	  • waste oil/water, hydrocarbons/water mixtures or emulsions; and
	  • grease trap waste.
	• All material classification documents required to be reviewed and approved prior to the material coming to site. The material acceptance process is outlined in the Project Business Plan quality assurance procedures. Imported material will be VENM, ENM or material that is obtained under the Resource Recovery Exemptions as granted by the Office of Environment and Heritage (OEH).

Timeframe	• During Construction
Monitoring & Reporting	• Environmental Checklist F 1227 • Waste Disposal Register F 1230 or other suitable record for all waste leaving the site

Concrete Washout	
Objective	• To comply with contractual and legislative requirements in relation to the washing out of concrete on the project
Legal, Contractual & Other Requirements	• Port Botany Expansion Planning Approval • Aurecon Framework Construction Environmental Management Plan • Protection of the Environment Operations Act (1997)
Targets	• Zero spills or uncontrolled release of concrete. • No instances of uncontrolled concrete washout
Responsibilities	• The Superintendent will ensure that an approved and prepared area for concrete washout is available. • The Supervisor is responsible for confirming these requirements with the concrete supplier prior to the works.
Controls	• Concrete washout to be constructed with geo-fabric lining and bunded.

Concrete Washout	
(means & resources)	• Location of washout to be at least 20m away from any drainage line or stormwater system. • Washout to be constructed prior to commencement of concrete works. • Washout to be barricaded off on all sides when not in use to prevent unauthorised entry • The location and design of the washout area is to be approved by the Client's Representative prior to implementation. • Washout area is to be inspected daily by the Superintendent to ensure residual water levels don't exceed 75% of capacity. • Record of this daily inspection to be kept in Superintendent's/Supervisor's diary when concrete washout is being undertaken. • Washout area to be cleaned when it's capacity has been reduced by 50%. • Cleaning of washout to involve, removal of spoiled geo-fabric material and disposed off in licensed landfill. Records to be retained. • Waste concrete material from the washout area will be crushed and incorporated into the works • Concrete truck drivers are to be advised of the location of the washout area prior to arrival on site. • The requirements relating to concrete washout on site are to be provided to the supplier prior to the works.
Timeframe	• Duration of concrete works.
Monitoring & Reporting	• Weekly inspections to be recorded on Form F1227. • Daily inspections during concreting activities by the relevant Supervisor • Incidents or spills of concrete to be recorded on form Environmental Incident and Complaint Report (F1222).

Delivery and Storage of Chemicals, Fuels & Oils and including Dangerous Goods requirements	
Objective	• To comply with contractual and legislative requirements in relations to the transport of dangerous goods • To comply with contractual and legislative requirements in relation to the storage of chemicals, fuels and oils on the site. • To ensure contractual and legislative requirements in relation to hazardous substances and dangerous goods are adequately addressed for all operations – there are specific additional requirements relating to the storage and transport of dangerous goods
Legal, Contractual & Other Requirements	• AS/ NZS 1940: 2004 – The Storage and Handling of Flammable and Combustible Liquids • Dangerous goods (Road and Rail Transport) Act 2008 • Dangerous goods (Road and Rail Transport) Regulation 2008 • Australian Dangerous Goods Code, 7th Edition • Contract specification • Port Botany Expansion Planning Approval • Aurecon Framework Construction Environmental Management Plan
Targets	• Zero spills or uncontrolled release of fuel, oils or chemicals associated with Laing O'Rourke's Operations. • Compliance with relevant transport and storage requirements • All vehicles transporting dangerous goods have appropriate placards, licenses and emergency equipment and procedures
Responsibilities	• Engineering personnel are responsible for identification of requirement to transport Dangerous Goods • Relevant Project Leader or Workplace Manager is responsible for ensuring all vehicles carry appropriate placards, licenses, emergency equipment and procedures • The General Superintendent is required to ensure that sufficient bunds are available and that material is stored appropriately. • Engineering personnel are responsible for ensure MSDS and other relevant documentation are

Delivery and Storage of Chemicals, Fuels & Oils and including Dangerous Goods requirements	
	obtained and where required submitted to the Client's Representative prior to the material arriving on site. Relevant documentation also includes appropriate risk assessment. • The Project Safety Advisor is responsible for ensuring the Chemicals, Fuels/Oils & Hazardous Substances register is maintained.

Controls (means & resources)	• The following are the minimum general control measures to be implemented on the project, however additional control measures may be required following the completion of the construction process procedure/work method statement for the proposed activity.
	• The only the hazardous and/or industrial and/or Group A waste listed below may be generated and/or stored on site:
	  • waste oil/water, hydrocarbons/water mixtures or emulsions; and
	  • grease trap waste.
	• Minimise storage of fuel, oil, chemicals or other dangerous goods on site, though efficient and timely ordering.
	• The MSDS and material risk assessment and including any specific control measures are to be submitted where required to the Client's Representative for each and every substance to be brought on to site.
	• A risk assessment relating to the use of these materials is to be completed in accordance with the Construction Health and Safety Plan prior to the arrival of these goods to site.
	• MSDS and associated documentation for each material to be reviewed prior to the completion of the risk assessment for the relevant construction process. A copy to be included with the SWMS.
	• Ensure MSDSs are available on site for all fuels, oils, chemicals and dangerous goods. Suppliers are to provide MSDS prior to dispatch of the material.
	• Chemicals, fuels and oils to be stored in a securely bunded area with appropriate signage, at all times when not specifically in use.
	• Chemicals fuels, oils and chemicals to be stored inside impervious bunds of sufficient capacity to contain 110% of the stored volume. Bunded areas must have sufficient cover to prevent ingress of rain.
	• Materials removed from the bunded storage area for use are to be returned to the bund at the end of each shift
	• Storage sites are to be > 20m away from operational facilities, drainage lines, areas prone to flooding or on slopes > 1V:10H.
	• Driver or Supervisor to be in attendance at all times when unloading of fuel, oil or chemicals takes place on site.
	• No water to be discharged from bunded areas into site drainage system. Contaminated water to be removed by appropriately licensed contractor & discharged to a suitably licensed waste facility.
	• Delivery drivers are to be provided with specific drop off and storage instructions.
	• Spill kits & absorbent material to be located adjacent to storage bunds.
	• Training is to be provided to the workforce in the application of this ERAP and the use of spill kits.
	• Absorbent material used to clean up spills to be disposed of in accordance with the DECCW Waste Classification Guidelines.
	• A register of Chemicals, Fuels/Oils and Hazardous materials is to be kept onsite and maintained for the duration of the project.
	• Each construction method statement or construction process procedure shall identify the use of chemicals, fuels & oils and hazardous materials.
	• SWMSs to address the specific requirements relevant to the work to be undertaken and document relevant site control measures.

	• Dangerous Goods • Ensure transporters of these materials are appropriately licensed. This includes relevant licenses for vehicles and drivers. • Dangerous goods that are to be transported in receptacles greater than 500lt/kg may require specific licenses and shall not be transported by Laing O'Rourke without the Project Leader/Workplace Manager's approval.

Delivery and Storage of Chemicals, Fuels & Oils and including Dangerous Goods requirements

- Dangerous goods transported by external contractors or by Laing O'Rourke must comply with these requirements. The quantities being transported determines the control and management measures required.
- Where dangerous goods are transported by Laing O'Rourke, a specific SWMS must be developed and include dangerous goods requirements.
- Transport information/manifest is required to be included with any quantity of Dangerous Goods transported by Laing O'Rourke – Form XXXX Dangerous Goods Transport Note is to be used unless it can be demonstrated that the activity is exempt.
- The SWMS statement must address the requirement for Licensing, Placards or other specific regulatory requirements
- Transport activities in quantities that trigger the requirements of a "Placard Load" under the regulations require the following:
- Transport vehicle to have appropriate Dangerous Goods Placard
- Transport documents including manifests
- Emergency procedures and information in an appropriate holder
- 30B fire extinguisher
- Double-sided reflectors
- Driver safety equipment and PPE
- Goods must be secured and where required segregated from incompatible goods.
- Dangerous goods must be appropriately marked in accordance with the Australian Dangerous Goods Code

The quantities that trigger the requirements for a Placard Load are as follows:

	Dangerous Goods in Transport Unit	Placard Load Quantity
(a)	Any dangerous goods in a receptacle with a: • capacity > 500 L; or • net mass > 500 kg	One or more such receptacles (i.e. one or more placardable units)
(b)	Includes any quantity of: • Division 2.1 (except Aerosols); or • Division 2.3; or • Packing group I of any Class or Division	Aggregate quantity of all dangerous goods in the transport unit ≥ 250 kg(L)
(c)	Division 6.2 Category A	All quantities
(d)	Division 6.2 (other than Category A)	≥ 10 kg(L)
(e)	All loads where placarding is not required by (a), (b), (c) or (d) above	Aggregate quantity of dangerous goods ≥ 1000 kg(L) —unless the load is: (i) a retail distribution load that complies with 7.3.1 (–see Note 3); or (ii) a Fumigated Unit (UN 3359 –see Note 4),

Typical dangerous goods associated with our operations include the following:

Type of Goods	DG Class
LPG Gas	2.1

Delivery and Storage of Chemicals, Fuels & Oils and including Dangerous Goods requirements	
Open Gear Lubricant	2.1
Marker Paint	2.1
Silicone Lubricant	2.1
Fuel Gas for welding/cutting	2.1
Fuel Gas for welding/cutting	2.2
Air Operated Tool Lubrication	3
Zinc Primer Paint	3
Air tool lubricant - workshop	3
Petrol-Unleaded	3
Sealant	3
Adhesive	3
Plumbing adhesive	3
Diesel	3
Joint/gap sealant	3
Dry Film Lubricating Paint	3
Joint/gap sealant	5.2
Sealant	6.1
Flocculent	8
Epoxy paint including hardener	8
Chemical Anchor - parts A & B	8
Chemical Anchor	8
Chemical Anchor	8
Adhesive Mortar	8
Acid	8
Degreaser (Pile Rigs)	9
Engine Coolant	9
Antifreeze	9
Grout	9
Form Oil	9
Rail Welding Consumables	1.4 S

- Dangerous Goods Storage
- Dangerous goods storage on site must comply with the requirements of AS 1940:2004 including maintaining separation distances for incompatible materials.
- The proposed materials need to be assessed for compatibility and required separation distances or control measures implemented.
- Flammable materials storage is to be >15m from site facilities, officers, amenities or protected places.
- Quantities to be stored must be assessed to determine if they are considered manifest quantities - manifest quantities will require notification to WorkCover.
- A storage location plan is required and needs to include internal layout, location of registers/manifests for the storage location.
- Bunding to be impervious and of sufficient capacity to contain 110% of the stored volume

Delivery and Storage of Chemicals, Fuels & Oils and including Dangerous Goods requirements	
	• Appropriate spill containment material and fire extinguishers are also required.
Timeframe	• Duration of operations. The requirements apply to goods transported by Laing O'Rourke and third parties.
Monitoring & Reporting	• Plant / project risk assessments • Plant register • Weekly inspections to be recorded on Form F1227. • Dangerous Goods Transport Note • Register of Chemicals, Fuels/Oils and Hazardous Materials • Incidents or spills to be recorded on form Environmental Incident and Complaint Report (F1222). • Storage areas are to be inspected by the Supervisory personnel on a weekly basis.

Fuelling of Plant and Equipment	
Objective	• To comply with contractual and legislative requirements fuelling of plant and equipment
Legal, Contractual & Other Requirements	• POEO Act 1997 in particular sections 120 (Water Pollution) and 148 (Duty to notify incidents). • Port Botany Expansion Planning Approval • Aurecon Framework Construction Environmental Management Plan
Targets	• Zero spills or leakage • No impact on land or downstream watercourses
Responsibilities	• The Superintendent and Supervisory Personnel are to ensure that the requirements of this ERAP are implemented for the project.
Controls (means & resources)	• Spill stations to be inspected weekly to confirm all contents are in place. • Spill stations to be located in close proximity to refuelling operations. • All mobile plant and equipment to have small spill stations onboard. • All personnel involved in fuelling operations to be trained in spill response. • Fuelling of mobile land based plant & equipment will occur greater than 20m from the nearest drainage or watercourse • Large plant <20m from shore (cranes, etc) must have a fully kitted spill station at the ready during refuelling operations. • If fuel hose extends >10m from refuelling vehicle than a spotter be station next emergency stop in case of emergency. • Fuelling of large plant and equipment is to be conducted using a double skinned fuel tank having a retractable hose and auto shut off nozzle. • All hoses and fittings on the fuel tank are to be checked prior to fuelling commencing and checks to be recorded on equipment check sheet. • The operator must be in attendance at all times during the fuelling process. Fuelling activities are never to be left unattended. • Storage of small fuel containers is to be in a designated bunded fuel storage area in accordance with the requirements of the ERAP Delivery and Storage of Chemicals, Fuels & Oils and Hazardous Substances • Funnels and filler nozzles must be used to refuel smaller plant and equipment such as pumps, flex drive motors, welders and generators. • Absorbent materials are to be available at all times during any fuelling activity. Materials are to include, at a minimum, absorbent pads and socks. • Should spills to the water occur, the site Emergency and spill response is to be initiated. The Superintendent to be contacted immediately. The Client's Representative is to be contacted immediately
Timeframe	• Duration of site works.

Fuelling of Plant and Equipment	
Monitoring & Reporting	• Weekly inspections to be recorded on Form F 1227. • Environmental incidents to be recorded on form Environmental Incident and Complaint Report (F1222).

Servicing Plant and Equipment	
Objective	• To comply with contractual and legislative requirements relating to servicing of plant and equipment
Legal, Contractual & Other Requirements	• POEO Act 1997 in particular sections 120(Water Pollution) and 148(Duty to notify incidents). • Port Botany Expansion Planning Approval • Aurecon Framework Construction Environmental Management Plan
Targets	• Zero spills or leakage • No impact on downstream watercourses or adjacent land
Responsibilities	• The Superintendent is responsible for ensuring that servicing activities on this project are carried out in accordance with this procedure. • Servicing personnel and/or operators of plant, as applicable, are responsible to observe and implement the requirements of this procedure.
Controls (means & resources)	• Only minor servicing activities are to be undertaken on site. • Approval from Laing O'Rourke is required prior to servicing plant and equipment on site. • Proposed servicing SWMS must include the proposed environmental controls and is to be reviewed and approved by Laing O'Rourke prior to servicing. • For major servicing, plant is to be removed from site. (e.g. 5000hr service) • All plant and equipment must be inspected for fuel, oil or hydraulic fluid leakage on a daily basis. • All leakages must be repaired before the plant or equipment is permitted to be used again on the site. • Servicing of land based plant is to be undertaken greater than 20m from any waterways, flood prone areas or on slopes steeper than 1:10. • Ground protection measures such as drip trays, and plastic sheeting must be installed prior to commencement of servicing • A spill kit is to be readily available adjacent to the service area during the servicing period. • Individual parts or components that require repair are to be removed from site and returned on completion of servicing/repair. • All incidents or uncontrolled spillage is to be reported immediately to the Superintendent and the Project Environmental Representative. The Environmental Manager will inform the Client's Representative.
Timeframe	• Duration of site works for all servicing activities.
Monitoring & Reporting	• Weekly inspections to be recorded on Form F 1227. • Checklist (Form F1230 On-site servicing Checklist) shall be used and completed by the person undertaking the service activities to record the implementation of on-site servicing controls on this project. Completed checklists are filed in accordance with the project filing system. • Environmental incidents to be recorded on form Environmental Incident and Complaint Report (F1222).

Fuelling of Plant and Equipment over Water (including on Barges)	
Objective	• To comply with contractual and legislative requirements fuelling of plant and equipment over water
Legal, Contractual &	• POEO Act 1997 in particular sections 120(Water Pollution) and 148(Duty to notify incidents).

Fuelling of Plant and Equipment over Water (including on Barges)	
Other Requirements	• Port Botany Expansion Planning Approval • Aurecon Framework Construction Environmental Management Plan
Targets	• Zero spills or leakage • No impact on downstream watercourses or adjacent land
Responsibilities	• The Superintendent is responsible for ensuring that servicing activities on this project are carried out in accordance with this procedure. • Servicing personnel and/or operators of plant, as applicable, are responsible to observe and implement the requirements of this procedure.
Controls (means & resources)	• All marine booms to be inspected prior to fuelling. • Spill stations to be inspected weekly to confirm all contents are in place. • Inspection to be recorded in supervisors daily diary • All personnel involved in fuelling operations to be trained in spill response. • Fuelling of wharf based plant & equipment will occur with a bunded spill container and drip tray, with absorbent pads positioned beneath the fuel tank. The fuel tank nozzle to have an absorbent sock surrounding it. • Fuelling of all plant and equipment is to be conducted using a double skinned fuel tank having a retractable hose and auto shut off nozzle. • All hoses and fittings to be checked prior to fuelling commencing and checks to be recorded on equipment check sheet. • The operator must be in attendance at all times during the fuelling process. Fuelling activities are never to be left unattended. • Storage of fuel containers is to be in a designated bunded fuel storage area in accordance with the requirements of the ERAP Delivery and Storage of Chemicals, Fuels & Oils. • Absorbent materials are to be available at all times during any fuelling activity. Materials are to include, at a minimum, absorbent pads and floating booms. • Refuelling of barges to be undertaken by an appropriately equipped vessel and during calm weather conditions Operators to be in attendance at all times on both vessels. • Should spills to the water occur, the site Emergency and spill response is to be initiated. The General Superintendent to be contacted immediately. The Client's Representative is to be contacted.
Timeframe	• Duration of site works for all servicing activities.
Monitoring & Reporting	• Weekly inspections to be recorded on Form F 1227. • Environmental incidents to be recorded on form Environmental Incident and Complaint Report (F1222).

Working with Barges and Hydraulic Plant and Equipment over Water	
Objective	• To comply with contractual and legislative requirements using hydraulic equipment over water of plant and equipment over water
Legal, Contractual & Other Requirements	• POEO Act 1997 in particular sections 120(Water Pollution) and 148(Duty to notify incidents). • Port Botany Expansion Planning Approval • Aurecon Framework Construction Environmental Management Plan
Targets	• Zero spills or leakage • No impact on downstream watercourses or adjacent land
Responsibilities	• The Superintendent is responsible for ensuring that servicing activities on this project are carried out in accordance with this procedure. • Servicing personnel and/or operators of plant, as applicable, are responsible to observe and implement the requirements of this procedure.

Working with Barges and Hydraulic Plant and Equipment over Water	
Controls (means & resources)	• Appropriate maritime approvals in place for operating vessels and barges; Vessel Occupation Licence • All marine booms to be inspected prior to works; Silt boom to be provided around the works, Oil socks to be provided around operating plant and equipment on barges over water • Spill stations to be inspected weekly to confirm all contents are in place and recorded in supervisors daily diary. • All personnel to be briefed on reporting requirements for spills • All personnel involved in operating, attending or supervising hydraulic works to be trained in spill response prior to working with hydraulics over water. • Hydraulic hoses running from remote hydraulic pumps to hydraulic piling hammer and vibrator hammer to be sheathed with lay-flat hose or similar. • Secure bunds to be provided for other equipment as appropriate. • Use of Panolin Oil for hydraulic equipment where possible. • All hoses and fittings to be inspected for wear and tear daily and replaced as required. • All fittings to have daily 100% visual inspection for tightness of connectors and leaks. • Daily equipment inspections to include inspecting for leaks • Absorbent materials are to be available at all times during any hydraulic activity. Materials are to include, at a minimum, absorbent pads and floating booms. These items are to be in place on the wharf and or barges. • Absorbent materials including mats, drysorb and floating booms are to be kept on vessels and barges. • Only small quantities of fuels, oils and chemicals essential for daily operations will be stored on vessels and barges in securely bunded containers. • Any hazardous materials to be stored on vessels or barges will be contained within a securely bunded area. • There will be no washing or cleaning of barges where surface hydrocarbon contamination is evident. • Any contamination identified on barges shall be cleaned up immediately with absorbent material and disposed of in accordance with the Waste ERAP. • There will be no bulk external storage of fuels and oils on vessels or barges. • There will be no wastewater disposed of from vessels or barges to the marine environment. Any wastewater systems shall be of a self-contained proprietary pump out design. • Rubbish or other waste materials to be stored within secured areas on barges and removed on a weekly basis or as required when the receptacle is approaching capacity. Rubbish containers are to be provided with lids • Where significant weather events appear likely hazardous materials are to be removed to a secure location on land all remaining stored construction materials shall be secured. • Should spills to the water occur, the site Emergency and Spill response is to be initiated. The General Superintendent to be contacted immediately. The Client's Representative is to be contacted immediately. • No transportation of hazardous waste will be undertaken via barges.
Timeframe	• Duration of site works for all servicing activities.
Monitoring & Reporting	• Weekly inspections to be recorded on Form F 1227. • Daily Plant inspection Checksheets • Environmental incidents to be recorded on form Environmental Incident and Complaint Report (F1222).

Spill Prevention and Control	
Objective	• To comply with contractual and legislative requirements relating to spill prevention and control
Legal,	• POEO Act 1997 in particular sections 120(Water Pollution) and 148(Duty to notify incidents).

Spill Prevention and Control	
Contractual & Other Requirements	• Contract Specifications • Port Botany Expansion Planning Approval • Aurecon Framework Construction Environmental Management Plan
Targets	• Zero spills or leakage • No impact on downstream watercourses or adjacent land
Responsibilities	• All personnel are responsible for the implementation of this ERAP. The Superintendent and Supervisory Personnel are to ensure that the required material resources are available to implement this ERAP.
Controls (means & resources)	• All marine booms to be inspected on a daily basis. • Spill stations to be inspected weekly to confirm all contents are in place. • All personnel to be trained in spill response. • Storage of fuels, chemicals and oils shall be within a securely bunded container with the bunded capacity sufficient to contain 110% of the stored material. • The correct storage separation distances are to be maintained. • Absorbent materials are to be available for all major operations involving plant and equipment. Materials are to include, at a minimum, absorbent pads and floating booms. • Use of biodegradable Panolin oils were possible on plant and machinery working near waterways / marine environments. • Immediate actions in the event of a spill is to include the following: • Attempt to control the spill, attempt to stop at the source, isolation from the spilled material should be maintained prior to undertaking a Risk Assessment • Contain the spill by constructing temporary bunds with available material. Spill needs to be prevented from entering waterways or site drainage systems • Implement clean up measures with the absorbent material from spill kits • Disposal of the material, ensure the material is classified under the NSW Waste Classification Guidelines • Emergency response procedures to be trained to personnel including deployment of marine booms and use of marine absorbent materials • Should spills occur, the site Emergency and spill response is to be initiated. • The Superintendent to be contacted immediately. • The Client's Representative is to be contacted immediately. • Undertake emergency drills at 6 monthly intervals.
Timeframe	• Duration of site works.
Monitoring & Reporting	• Weekly inspections to be recorded on Form F 1227. • Environmental incidents to be recorded on form Environmental Incident and Complaint Report (F1222).

Archaeology and Heritage	
Objective	• To comply with contractual and legislative requirements and ensure that existing and undiscovered heritage and archaeological items are protected from construction activities.
Legal, Contractual & Other Requirements	• Port Botany Expansion Planning Approval • Aurecon Framework Construction Environmental Management Plan Works Agreement – Scope of Works • Heritage Act 1977 • National Parks and Wildlife Act 1974
Targets	• No damage to Government Pier • No unnecessary construction personnel or equipment within the Government Pier Exclusion Zone

Archaeology and Heritage	
	• No disturbance or damage to existing known heritage sites or items. • Unknown or undocumented heritage sites are not knowingly destroyed, defaced or damaged. • Identify and protect any new artefacts or heritage sites before any harm can take place. • Any relics found on site will be kept safe for consideration of incorporation into site fixtures
Responsibilities	• The Project Leader and Environment Manager will ensure that archaeological and heritage items are protected from damage or disturbance, unless approved by the site archaeologists • The EM will monitor the works • The EM will ensure all site personnel undertake toolbox talks in relation to protection of nominated items that previously unknown items.
Controls (means & resources)	• Set exclusion zone for Government Pier as outlined by the red hatched area below;  • Awareness training on the need for the preservation of artefacts & items of heritage value to be provided during the site induction. • Awareness training on the need to stop work & report new sites, artefacts & item of heritage value. • Should any new items suspected of being of heritage significance either indigenous or European, be discovered, work in the specific area would cease and the OEH and the Client's Representative will be consulted immediately. The appropriate actions will be undertaken in accordance with a heritage specialist and the OEH.
Timeframe	Throughout construction activities
Monitoring & Reporting	• Visually monitored daily • Weekly environmental inspection report F 1227. • Daily environmental and safety checklist F 0908 detailing any issues will be completed by Site Supervision.

Flora and Fauna	
Objective	• To comply with contractual and legislative requirements, adhere with the project CEMP and ensure that native fauna and flora are protected from construction activities.
Legal, Contractual & Other Requirements	• Threatened Species Conservation Act • EPBC Act • PEHEP • Aurecon FCEMP

Flora and Fauna	
Targets	• No clearing to occur beyond the required limits for construction • Management of shorebird habitat • No unapproved destruction of flora • No roosting birds on site
Responsibilities	• The Project Leader will ensure native vegetation is protected from injury or disturbance, unless approved. • The Project Leader will ensure native fauna are protected from injury. • The Environment Manager will monitor the removal of any restricted item including flora and ensure appropriate documents have been obtained • The Environment Manager will ensure all site personnel undertake toolbox talks in relation to the reporting process for injury/ death to fauna or clearing of flora occurring beyond the required limits for construction. • The Environment Manager will monitor the presence of all weeds and pests on site and ensure appropriate removal of such species in consultation with the SICTL Project Manager.
Controls (means & resources)	• Develop specific Construction Method Statements for any works in Penrhyn Estuary and have them reviewed by an appropriate ecologist prior to works. • Any works within the Penrhyn Estuary are to comply with requirements given in the Penrhyn Estuary Habitat Enhancement Plan. • Design rubbish bins to be bird and animal proofed. • Utilise appropriate lights at construction sites to minimise attraction of insects, to reduce risk of attracting target birds. • Preclearance surveys for resident fauna would be undertaken and any fauna sheltering within the construction footprint would be relocated to the nearest area of 'safe' habitat. • Collect and dispose of litter daily to reduce attraction of target bird species • Cover sediment basins and other temporary construction-related ponds with a net to minimise attraction of birds. • If target birds are attracted to construction sites, including rooves of construction buildings, trial and operate bird deterrents such as bunting, tape, sirens, scare guns, mock hawks, or bio-acoustics (natural predator and distress calls) to reduce attraction • In the event that all deterrents are trialled and prove to be ineffective, apply for a license to harm from OEH and engage a qualified pest controller to remove birds under this license. It is not envisaged that this response will be required given the range of proposed housekeeping measures • If required, trial and operate pest control measures involving animal trapping or other methods to control domestic and feral animals on site. • If required, prior to any use of 1080 poison to control foxes consult with OEH, EPA, DPI Fisheries and the Rural Lands Protection Board, and undertake control works in accordance with National Registration Authority conditions of use. • Should shorebird monitoring during construction and operation of the Port Botany Expansion reveal feral cat and fox predation (on shorebirds) to be an ongoing issue, a 1080 fox baiting program should be initiated in consultation with NPWS and an expert shorebird ecologist. • Mature trees and other native vegetation to be retained would be clearly delineated, with all construction activities excluded from these areas. • Vegetation to be retained shall be protected. • Construction works will only be undertaken in designated areas with the minimum feasible amount of clearing undertaken • Vegetation to be retained shall be clearing marked with bunting or other suitable alternative. • The need for protection of these species is to be included in the site induction. • Any weeds removed during clearing are to be destroyed or disposed of by suitable means that do not allow weeds to spread to other areas. • Plant and equipment brought on to site must be cleaned and free of deleterious material, mud and other material that may harbour weed seeds

Flora and Fauna	
	• Excavation works, parking of trucks, vehicles, plant and storage of equipment and materials will be conducted outside the drip line of native trees to be retained. • No personnel on site, either Laing O'Rourke or subcontractors are permitted to hunt, fish, feed, capture, extract, or otherwise disturb any fauna species while performing any tasks in performance of the Work. • Complete contractual revegetation or re-establishment works as soon as practical following final area land forming and in accordance with the requirements of the contract. • Ensure approval is provided to remove trees/vegetation not previously nominated in the EIS • Minimum feasible trees and vegetation would be removed for the works including ground-layer vegetation. • Accurately set out the clearing limits prior to commencement of works including signage, fencing, tree tagging, etc • Appropriately trained and qualified tree removal contractors to be used. • Awareness training in the need to preserve and retain vegetation to be undertaken. • Do not stockpile material within the drip line of trees. • Implement revegetation and erosion control measures where trees are removed in the vicinity of waterways to minimise impacts on bank stability and water quality
Timeframe	• During construction.
Monitoring & Reporting	• Visually monitored daily • Weekly environmental inspection report F 1227 detailing any flora and fauna issues will be completed by the Environment Manager. • Daily environmental and safety checklist F 0908 detailing any flora and fauna issues will be completed by the site supervision. • If any wildlife is injured on the site contact WIRES on 1300 094 737.

Community Relations, Stakeholder Consultation and Complaint Response	
Objective	• To comply with contractual and legislative requirements and adhere with the project CEMP in relation to the community relations and complaints handling on the project
Legal, Contractual & Other Requirements	• Contract Specification
Targets	• Zero verifiable complaints relating to construction activities. • Keep the community and adjacent residents adequately informed of construction activities.
Responsibilities	• The Project Leader is required to ensure that the requirements of this ERAP are implemented for their operations.

Controls (means & resources)	• All communications, complaints from the adjacent community shall be directed to the Project Leader.
	• Laing O'Rourke will be appropriately involved with the project Community Consultative Committee in accordance with SICTL and Sydney Ports Corporation.
	• Provide the project CCC with monthly construction updates and notifications of new works.
	• When dealing with the community:
	  • Be polite.
	  • Provide the Community Information Hotline Contact.
	• Matters relating to stakeholder consultation will be referred to Project Leader.
	• All personnel shall remain polite and courteous when interacting with the community and stakeholders.
	• Provide notification to the community in the form of a letterbox drop and/or consultation prior to construction.

Community Relations, Stakeholder Consultation and Complaint Response	
	• Notify potentially affected residences where out of hours activities are proposed. • Complaints and enquiries shall be recorded on form F1222 Environmental Incident and Complaint Form and issued to the Client. • Provide notification to the nearest affected residents, for any proposed works outside of normal construction hours and as directed by the Client. • All media inquiries regarding the Project must be directed to Project Leader immediately. The Client will also be notified of any media inquiries immediately.
Timeframe	• Duration of site works.
Monitoring & Reporting	• Weekly inspections to be recorded on Form F1227. • Complaints to be recorded on form Environmental Incident and Complaint Report (F1222).

Traffic Management	
Objective	• To comply with contractual requirements, adhere with the project CEMP and ensure that noise and additional traffic from construction activities does not cause an environmental nuisance
Legal, Contractual & Other Requirements	• Roads Act 1993 • Requirements of the Botany City Council Traffic Committee
Targets	• No valid complaints resulting from congestion from construction traffic outside the approved Traffic Management Plan • Comply with traffic management standards • No visible cueing in streets surrounding the site
Responsibilities	• Permission shall be obtained to deliver materials outside approved hours

Controls (means & resources)	• A Traffic Management Plan shall be developed detailing the route to the site, times of activity, types of machinery, signage, traffic control measures, etc.
	• There will be no cueing of vehicles on any roads adjacent to the site
	• There will be no construction parking in non approved zones or parking areas
	• Ensure pedestrian access ways are clearly defined and maintained
	• Regular checks are to be undertaken to ensure all equipment and vehicles are in good working order and are operated correctly. Checking should include:
	  • defective silencing equipment;
	  • rattling components
	  • no activities, including deliveries, are to impede traffic flows on roads and highways
	• The Site Speed Limit is 20km/hr and is to be adhered to during the project.

Timeframe	• Duration of site works.
Monitoring & Reporting	• F 1222 to be used to document complaints. • Daily inspection, checks and regular maintenance to traffic control measures.

Acid Sulphate Soils	
Objective	• Ensure that the management of Acid Sulphate Soils (ASS) on the site is undertaken to prevent to prevent any negative environmental impact on the surrounding watercourses and systems
Legal, Contractual & Other Requirements	• Contract Specifications • Planning Approval Conditions

Acid Sulphate Soils	
Targets	• Prevent or minimise the exposure of ASS and PASS • Collect, divert and control runoff water from exposed ASS and PASS • Prevent contamination of off-site areas and Botany Bay waterways • Treat ASS and PASS to appropriate standards to allow reuse or disposal • Monitor and promptly maintain controls through the project
Responsibilities	• The Project Leader is required to ensure that the requirements of this ERAP are implemented for their operations.
Controls (means & resources)	• Provision of environmental awareness training relating to the identification and management of acid sulphate soils to be provided to all site personnel including subcontractors involved in earthworks, excavation or drainage construction activities. • Excavations and excavated material to be inspected for the presence of dark grey, greenish material, Jarosite (yellow streaks or mottles) or odours (ASS or PASS) • The Client's Representative shall be notified upon discovery of suspected ASS or PASS. • Where ASS are suspected or identified, a testing regime compliant with the requirements of the ASSMAC Acid Sulphate Soil Manual will be established to assess and determine the extent of the ASS • Where ASS are found to be in excess of the criteria for reuse on site an excavation and transport protocol will be developed. Control measures for the transport of ASS soil material to the offsite land for treatment will be established • Minimise the actual disturbance of contaminated material • Stockpile of suspect material above groundwater table and away from waterways with appropriate bunding and erosion and sediment control measures • Records of transport including individual truck details and quantity transport will be retained
Timeframe	• Duration of site works.
Monitoring & Reporting	• Weekly inspections to be recorded on Form F1227

Project Approvals and Licensing	
Objective	• To comply with contractual requirements, adhere with the project CEMP, project approvals and other relevant legislation.
Legal, Contractual & Other Requirements	• Contract Specifications • SPBT3 Planning Approval • Protection of the Environment Operations Act 1997 • Other Relevant NSW legislation
Targets	• No breach of planning approval conditions • No breach of relevant legislation
Responsibilities	• The Project Leader will ensure construction activities comply with these requirements and implement the control measures.
Controls (means & resources)	• Review the project EIS for required statutory documentation, licenses and approvals. • Review project contract documentation. • Document requirement in EMP. • Establish a register of approvals, licenses, permits. • Review construction method plans for any required approvals or licenses associated with specific construction methods and equipment • Review construction methods/scope against Schedule 1 of the POEO Act, 1997

Project Approvals and Licensing	
Timeframe	• Ongoing throughout construction
Monitoring & Reporting	• Review of site plans as stated above • Monthly compliance tracking

Appendix 11 Statement of Commitments Tracking

Condition No.	Condition	Action	CEMP Ref	Status	Responsibility
A3.1	Commencement of the construction of terminal operations infrastructure on the area of the Stage 1 port footprint shown hatched in Schedule 3, shall not occur until such time as the Sydney Ports Corporation has submitted documentation, to the satisfaction of the Minister, by way of a copy of a contract(s) or agreement(s), by way of lease(s) or similar arrangement, between the Sydney Ports Corporation and any other party or parties, in respect of the construction and operation of new terminal facilities on that area that demonstrate that the area shall operate as a standalone terminal. The Minister may exempt areas of the approved footprint from the requirements of this condition where it can be demonstrated that option agreements relating to such areas were in force prior to consent being granted	Sydney Ports has leased the Project site to Sydney International Container Terminals Limited (SICTL) for the duration of the civil construction phase.	Nil	Closed	SPC SICTL
B1.3	The Applicant shall prepare a Construction Environmental Management Plan (CEMP) which, must be approved by the Director-General prior to the commencement of any site preparation or construction works. The CEMP must: - Describe all activities to be undertaken on the site during site establishment and construction of the development; - Describe the relevant stages/phases of construction, including a work program outlining relevant timeframes for each stage/phase. - clearly outline stages/phases of construction that require on-going environmental management monitoring and reporting up to and beyond the commencement of operations of the terminal; - detail statutory and other obligations that the Applicant is required to fulfil during site establishment and construction, including all approvals, consultations and agreements required from authorities and other stakeholders, and key legislation and policies; - include specific consideration of measures to address any requirements of the Department, DEC, DNR and the Council during site establishment and construction; - describe the roles and responsibilities for all relevant employees involved in the site establishment or construction of the development; - detail how the environmental performance of the site preparation and construction works will be monitored, and what actions will be taken to address identified adverse environmental impacts; - include all Management Plans/Studies and Monitoring Programs required in this schedule;	Development of a CEMP has been undertaken to submit to Department of Planning to allow the main construction works to proceed.	Main Works CEMP	Closed	EM

Condition No.	Condition	Action	CEMP Ref	Status	Responsibility
	- include arrangements for community consultation and complaints handling procedures during construction; and - be made available for public inspection after approval of the Director General. Separate CEMPs may be prepared and submitted for works associated with the construction of the terminal footprint.				
B.1.4	Prior to each of the events listed from a) to c) below, or within such period otherwise agreed by the Director-General, documentation certifying that all conditions of this consent applicable prior to that event have been complied with shall be submitted to the satisfaction of the Director-General. Where an event is to be undertaken in stages, submission of compliance certification may be staged consistent with the staging of activities relating to that event, subject to the prior agreement of the Director-General. (a) commencement of construction works associated with the development; (b) commencement of each phase of construction works established under the program required under condition B1.3; and (c) completion of each phase of construction works established under the program required by condition B1.3. The certifying documentation shall clearly outline any on-going environmental management, monitoring or reporting requirements associated with the concluded construction works phase.	A Compliance Certificate Report has been developed for the works to fulfil requirements of this condition. Program and environmental management is detailed in the CEMP and associated sub plans.	MCoA Tracking App 11	Closed	EM
B2.1	Unless otherwise permitted by an Environment Protection Licence applicable to the development, the Applicant shall ensure that construction works are undertaken in compliance with section 129 of the Protection of the Environment Operations Act 1997.	Review all project activities and ensure they are in line with the POEO Act. Provide awareness training to site personnel in environmental requirements via inductions, toolbox talks, targeted training and other forms.	Appendix 2	Ongoing	EM PL
B2.4	The Applicant shall prepare a Dust Management Plan in consultation with DEC, RTA, DOP, Botany and Randwick Councils. The Applicant shall address the requirements of these organisations in the Plan. The Applicant shall also consult with the Community Consultative Committee in preparation of the Plan.	Develop appropriate documentation and implement on the project site	Appendix 10 - Dust and Air Quality ERAP and Management Plan. Submit the Air Quality Managemen	Closed	EM

Condition No.	Condition	Action	CEMP Ref	Status	Responsibility
			t Plan to appropriate stakeholders for review and comment		
B2.5	The Applicant shall prepare a Soil and Water Management Plan in consultation with DEC, RTA, DOP, DNR, Botany and Randwick Councils. The Applicant shall address the requirements of these organisations in the Plan. The Applicant shall also consult with the Community Consultative Committee in preparation of the Plan. The Plan must detail erosion and sediment controls, prepared in accordance with Managing Urban Stormwater: Soils and Construction (available from the Department of Housing)	Develop appropriate documentation and implement on the project site	Appendix 10 - Water Quality, Site Drainage and Erosion and Sediment Control ERAP and Soil and Water Quality Management Plan	Closed	EM
B2.6	Prior to the commencement of construction activities, the Applicant must prepare an Acid Sulphate Soils Management Plan to assess and manage any Acid Sulphate Soils (ASS) or potential ASS (PASS). The Plan shall be prepared in accordance with the Acid Sulphate Soils Manual 1998 published by the NSW Acid Sulphate Soil Management Advisory Committee. In the event that ASS are encountered during the works, the Applicant shall notify the NSW Maritime Authority immediately.	Develop appropriate documentation and implement on the project site	Appendix 10 - Acid Sulphate Soils ERAP and Management plan	Closed	EM
B2.7	Unless permitted through an environment protection licence applicable to the development, the Applicant must comply with section 120 of the Protection of the Environment Operations Act 1997, which prohibits the pollution of waters.	No pollution of waters permitted All environmental controls required prior to construction	Appendix 2 Appendix 10 Water Quality, Site Drainage and Erosion and Sediment Control ERAP and Soil and Water Quality Management plan	Ongoing	EM
B2.13	Prior to commencement of construction, the Applicant is required to consult with Sydney Water regarding the likely requirements from Sydney Water to obtain a section 73 Compliance Certificate.	Consultation to be undertaken with Sydney Water by Project design team	Project Approval in Compliance Certificate Report	Closed	Aurecon SICTL
B2.14	Prior to the commencement of any construction works, the applicant must prepare a Construction Traffic Management Plan in consultation with RTA, DOP, Botany and Randwick Councils and SSROC. The Applicant shall address the requirements of	Develop Traffic Management Procedures to allow site establishment and environmental	TMP will be stand alone document	Closed	PL EM

Condition No.	Condition	Action	CEMP Ref	Status	Responsibility
	these organisations in the Plan. The Applicant shall also consult with the Community Consultative Committee in preparation of the Plan.	control installation. Develop a more detailed management plan for more comprehensive main works, including further scope and stakeholder consultation.			
B2.15	The Applicant must undertake a safety audit in accordance with RTA guidelines upon completion of works but prior to operation to ensure the safety of any road works, traffic management facilities, cycling and pedestrian provisions undertaken as part of the proposed works.	To be undertaken at completion of construction	Future Requirement	Open	PL
B2.16	Prior to construction the Applicant must prepare a handbook and distribute it to drivers of construction related vehicles providing information on accepted routes, constraints to traffic and preferred hours of use and amenities on such routes to ensure that the impact of traffic growth on local traffic is minimised.	Develop Traffic Management Procedures to allow site establishment and environmental control installation.	TMP and related procedures will be stand alone document and send to relevant stakeholders for review and comment	Closed	PL EM
B2.19	The Applicant shall only undertake construction activities associated with the project (with the exception of dredging construction activities) that would generate an audible noise at any residential premises during the following hours: a) 7:00 am to 6:00 pm, Mondays to Fridays, inclusive; b) 8:00 am to 1:00 pm on Saturdays; and c) at no time on Sundays or public holidays. Audible noise is defined as “noise that can be heard at the receiver”. This condition does not apply in the event of a direction from police or other relevant authority for safety or emergency reasons.	Adhere to approved hours. No works outside these hours without prior approval from DoP.	Appendix 10 Noise and Vibration ERAP and Management Plan	Ongoing	EM PL
B2.19A	The Applicant must seek the Director-General’s approval to conduct construction activities audible at residential premises (with the exception of dredging construction activities) outside the hours specified under condition B2.19 on a caseby- case basis. In seeking the Director-General’s approval, the Applicant shall demonstrate a need for activities to be conducted during varied hours and how local acoustic amenity will be protected, as well as details of how the EPA’s requirements with respect to the	Adhere to approved hours. No works outside these hours without prior approval from DoP. A modification will be sought for working hours during the pavement works. A	Appendix 10 Noise and Vibration ERAP and Management Plan	Ongoing	EM PL

Condition No.	Condition	Action	CEMP Ref	Status	Responsibility
	variation of hours have been addressed.	Construction Noise and Vibration Impact Statement will be developed and submitted with the proposed modification.			
B2.20	Prior to the commencement of construction, the Applicant must prepare a Construction Noise Management Plan in consultation with DEC, DOP, Botany and Randwick Councils. The Plan shall include noise mitigation for piling works for diesel powered machinery, provision of training to ensure that construction workers are aware of the noise created during construction and are appropriately trained to minimise noise where possible.	Develop a Construction Noise and Vibration Management Plan. Send to relevant stakeholders for review and comment.	Appendix 10 Noise and Vibration ERAP and Management Plan	Closed	EM
B2.21	The goal for noise from construction activities as the LA10 (15 minute) should not exceed the Rating Background Level (RBL) plus 5dB(A) at sensitive receivers.	Undertake noise monitoring during construction as per the Noise and Vibration ERAP and Management Plan. Develop protocols for any monitoring exceedances or complaints	Section 17 Noise and Vibration Management Plan	Ongoing	EM
B2.23	To help minimise the impact of operational noise on the surrounding area, a noise barrier shall be constructed by the Applicant along northern and eastern boundaries of the site prior to the commencement of operations. The applicant must seek appropriate independent expert advice to ensure the design of the noise barrier has regard to the flight path requirements of bird species using the area.	Complete noise barrier construction as early as possible during construction. This requires site drainage to be installed prior.	Appendix 10 Noise and Vibration ERAP Construction Noise and Vibration Management Plan	Ongoing	PL EM
B2.23A	Subject to the alternative rail option being implemented as described within the report listed in condition A1.1l), the Applicant shall construct a three metre high noise barrier along the northern edge of the Inter-terminal Access Road Corridor prior to the commencement of operations. The bottom two metres of the barrier shall be opaque and the top one metre shall be of transparent material sufficiently patterned to minimise impacts to bird species utilising the adjacent Penrhyn Estuary.	Final design authorised by SICTL	Design outside CEMP scope Installation of this section of noise wall during main works	Ongoing	SICTL PL
B2.24	The Applicant is required to identify measures to be implemented to ensure that where movement alarms are fitted to vehicles, plant or equipment entering or operating on the site, such alarms are of a type that minimises noise at noise sensitive receivers.	Non-tonal reverse alarms on site based plant and equipment	Appendix 10 Noise and Vibration ERAP and Management Plan	Ongoing	EM PL CM
B2.25	The Applicant must install all physical noise management measures as early as is practicable during construction of the Port Botany Expansion	Controls as per Noise and Vibration ERAP and	Appendix 10 Noise and Vibration	Ongoing	EM PL

Condition No.	Condition	Action	CEMP Ref	Status	Responsibility
	project.	Management Plan	ERAP and Management Plan		CM
B2.26	The Applicant must not undertake any blasting on the premises	No blasting required	Nil	Closed	PL
B2.33	Prior to the commencement of construction, the Applicant is required to prepare a Construction Waste Management Plan in consultation with Botany Council and DEC. The Plan must provide details of proposed waste management measures to minimise production and impact of wastes generated at the site	Develop Waste ERAP and Management Plan and send to relevant stakeholders for review and comment.	Appendix 10 Waste ERAP	Closed	EM
B2.34	Management of waste must be in accordance with the environment protection licence issued by EPA under the Protection of the Environment Operations Act 1997	No EPL issued	Appendix 10 Waste ERAP and Management Plan	Closed	EM
B2.35	All wastes and material generated on the site during construction and operation shall be classified in accordance with the DEC's Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes prior to transporting the waste off site and be disposed of to a facility that may lawfully accept the waste.	Develop Waste ERAP and Management Plan and send to relevant stakeholders for review and comment.	Appendix 10 Waste ERAP and Management Plan	Closed Noted	EM
B2.36	Except as expressly permitted by a licence issued by the EPA under the Protection of the Environment Operations Act 1997, only the hazardous and/or industrial and/or Group A waste listed below may be generated and/or stored at the premises: - waste oil/water, hydrocarbons/water mixtures or emulsions; and - grease trap waste.	Develop Waste ERAP and Management Plan and send to relevant stakeholders for review and comment.	Appendix 10 Waste ERAP and Management Plan	Closed Noted	EM
B2.38	The Applicant shall develop measures to protect remains of Government Pier in consultation with the NSW heritage Office and incorporate those measures into Construction Environmental Management Plan.	No impact on the Government Pier area Exclusion zone will be set	Appendix 10 Archaeology and Heritage ERAP	Ongoing	EM
B2.39	If an Aboriginal object is discovered during the construction of the development , works should cease in the subject area and the Applicant shall notify DEC immediately.	Stop works protocols in place	Appendix 10 Archaeology and Heritage ERAP	Ongoing	EM
B2.41	The Applicant shall prepare a Construction Safety Study prior to the commencement of construction of the terminal operations infrastructure, in accordance with Hazardous Industry Planning Advisory Paper No. 7 – Construction Safety Study Guidelines (DoP, 1992). The commissioning portion of the Construction Safety Study may be submitted two months prior to the commencement of	Construction aspect to be completed by LOR	Outside CEMP scope. This will be submitted to the Director General	Closed	PL

Condition No.	Condition	Action	CEMP Ref	Status	Responsibility
	commissioning. The Study shall be submitted for the approval of the Director-General prior to the commencement of construction of the terminal operations infrastructure.				
B2.42	The Applicant shall prepare a Fire Safety Study prior to the commencement of construction of the terminal operations infrastructure, in accordance with Hazardous Industry Planning Advisory Paper No. 2 – Fire Safety Study Guidelines (DoP, 1993). The Study shall be submitted for the approval of the Director-General and the Commissioner of the NSW Fire Brigades prior to the commencement of construction of the terminal operations infrastructure.	Design aspect study to be completed by project designers Aurecon	Outside CEMP scope	Open	SICTL
B2.43	The Applicant shall develop an Emergency Response and Incident Management Plan in consultation with DEC, DOP, Council and the Community Consultative Committee. The Plan must be approved by the Director-General prior to the commencement of construction	Develop emergency preparedness and responses plan	Section 16 Appendix 5 Emergency Response and Incident Management Plan	Closed	EM PL
B2.44	The Applicant shall ensure that all aspects associated with the construction of the development considers the required lateral separation distances to minimise the interference to Sydney Airport radar and navigational systems.	Ensure construction equipment is under the OLS SACL have been consulted on the civil works package and provided approval. SACL have referred the use of a 350T crane used for substation installation to Air Services Australia for further review. These works will not commence until approval is granted.	Appendix 2 Compliance Certificate Report	Ongoing	PL CM
B2.46	The Applicant shall ensure that all construction equipment is below the obstacle limitation surface, unless otherwise permitted by an approval under the Airports (Protection of Airspace) Regulation 1996 and following consultation with the Department of Infrastructure, Transport, Regional Development and Local Government, Civil Aviation Safety Authority and Sydney Airport Corporation Limited.	Ensure construction equipment is under the OLS See above condition	Appendix 2 Compliance Certificate Report	Ongoing	PL CM
B2.47	The Applicant shall ensure design specifications of any construction lighting conform to the requirements of Regulation 94 of the Civil Aviation Regulations 1988.	Ensure all construction lighting is minimal and facing downwards.	Section 2	Ongoing	PL CM
B2.48	Construction may not commence until details regarding the steps and timeframes for resolution of aviation issues, including certification, has been endorsed by Air Services Australia and to the	Completed previously by others. Letter from SPC to DoP regarding this	Outside CEMP scope	Closed	PL

Condition No.	Condition	Action	CEMP Ref	Status	Responsibility
	Minister for and Planning.	condition dated 25 June 2007, documents that an agreement establishes that Sydney Port Authority will provide funding to Airservices Australia regarding resolution of radar and air navigation issues. Response from DoP had confirmed that the agreement satisfied the requirements of the Condition of Consent B2.48 dated 14 August 2007			
B3.1	The Applicant must meet the following requirements in relation to community consultation and complaints management: - all monitoring, management and reporting documents required under the development consent shall be made publicly available; - provide means by which public comments, inquiries and complaints can be received, and ensure that those means are adequately publicised; and - includes details of a register to be kept of all comments, inquiries and complaints received by the above means	Implement community management measures in conjunction with SICTL and SPC	Section 17 Section 18	Ongoing	EM PL
B3.2	Within 6 months of this consent or prior to commencement of construction, whichever is earlier, the Applicant shall establish a Committee to oversee the environmental performance of the development.	Committee established prior to LORAC involvement LORAC to assist where required	Nil	Closed	EM
B3.3	The Applicant shall, at its own expense: (a) ensure that 2 of its representatives attend the Committee's meetings; (b) provide the Committee with regular information on the environmental performance and management of the development; (c) provide meeting facilities for the Committee; (d) arrange site inspections for the Committee, if necessary; (e) take minutes of the Committee's meetings; (f) make these minutes available on the Applicant's	Ensure correct personnel involved in committee proceedings in conjunction with SICTL	Section 17.1	Ongoing	EM PL

Condition No.	Condition	Action	CEMP Ref	Status	Responsibility
	website within 14 days of the Committee meeting, or as agreed to by the Committee; (g) respond to any advice or recommendations the Committee may have in relation to the environmental management or performance of the development; and (h) forward a copy of the minutes of each Committee meeting, and any responses to the Committee's recommendations to the Director-General within a month of the Committee meeting.				
B4.1	The Director-General shall be notified of any incident with actual or potential significant off-site impacts on people or the biophysical environment within 12 hours of the Applicant, or other relevant party undertaking the development, becoming aware of the incident. Full written details of the incident shall be provided to the Director-General within seven days of the date on which the incident occurred. The Director-General may require additional measures to be implemented to address the cause or impact of any incident, as it relates to this consent, reported in accordance with this condition, within such period as the Director-General may require.	Establish incident response procedures	Section 18	Ongoing	EM PL
B4.2	The Applicant must prepare an Annual Environmental Management Report for the development. The Annual Environmental Management Report must: - detail compliance with the conditions of this consent; - contain a copy of the Complaints Register (for the preceding twelve-month period, exclusive of personal details) and details of how these complaints were addressed and resolved; - include a comparison of the environmental impacts and performance predicted in the EIS and additional information documents provided to the Department and Commission of Inquiry; - detail results of all environmental monitoring required under the development consent and other approvals, including interpretations and discussion by a suitably qualified person; - contain a list of all occasions in the preceding twelve-month period when environmental performance goals have not been achieved, indicating the reason for failure to meet the goals and the action taken to prevent recurrence of that type of incident; - be prepared within twelve months of the commencement of construction, and every twelve months thereafter; - be approved by the Director-General; and	Relevant information to be provided by due date Liaise with SICTL and SPC	Section 12.2	Ongoing	EM

Condition No.	Condition	Action	CEMP Ref	Status	Responsibility
	- be made available for public inspection.				
B4.3	Prior to the commencement of construction, a suitably qualified and experienced Environmental Representative(s) shall be nominated and approved by the Director- General. The Environmental Representative(s) shall be employed for the duration of the construction and the on-going management, mitigation and monitoring associated with the development, excluding direct terminal operation matters subject to the conditions in Schedule C, or as otherwise agreed by the Director-General	ER has been nominated for the project	Nil	Closed	SICTL
B4.4	Prior to the commencement of any dredging, reclamation and construction an Environmental Training Program shall be developed and implemented to establish a framework in which relevant employees will be trained in environmental NSW Government Department of Planning 24 management and the operation of plant and equipment, including pollution control equipment, where relevant.	Implement appropriate environmental training	Section 11	Ongoing	EM CM
B4.5	Within one year of the commencement of construction and every year thereafter for the duration of construction a full independent environmental audit shall be undertaken by a suitably qualified person/team approved by the Director-General.	Auditor nominated by client	Outside CEMP scope	Ongoing	SICTL

PL - Laing O'Rourke Project Leader

EM - Laing O'Rourke Environment Manager

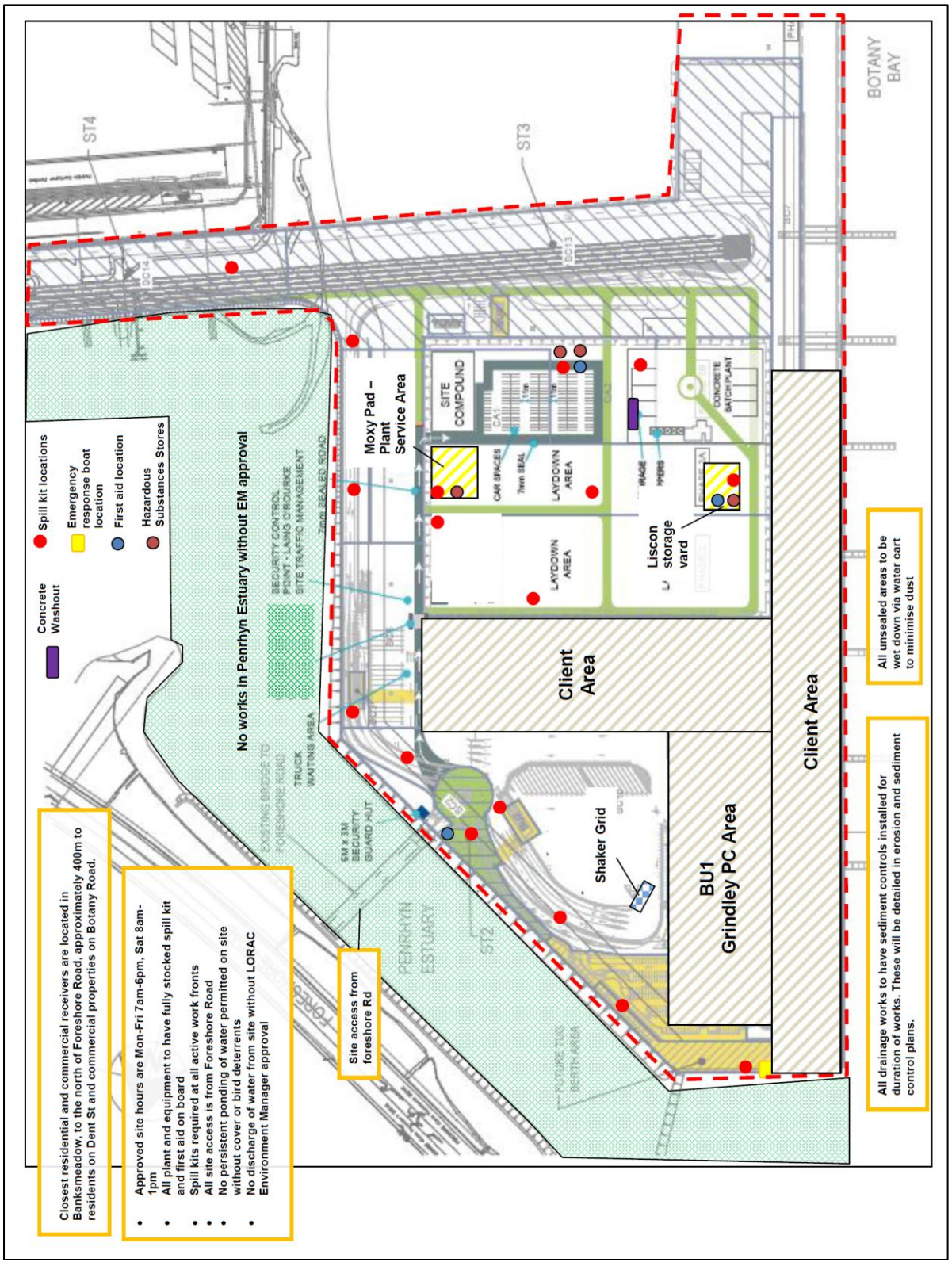
CM - Laing O'Rourke Construction Manager

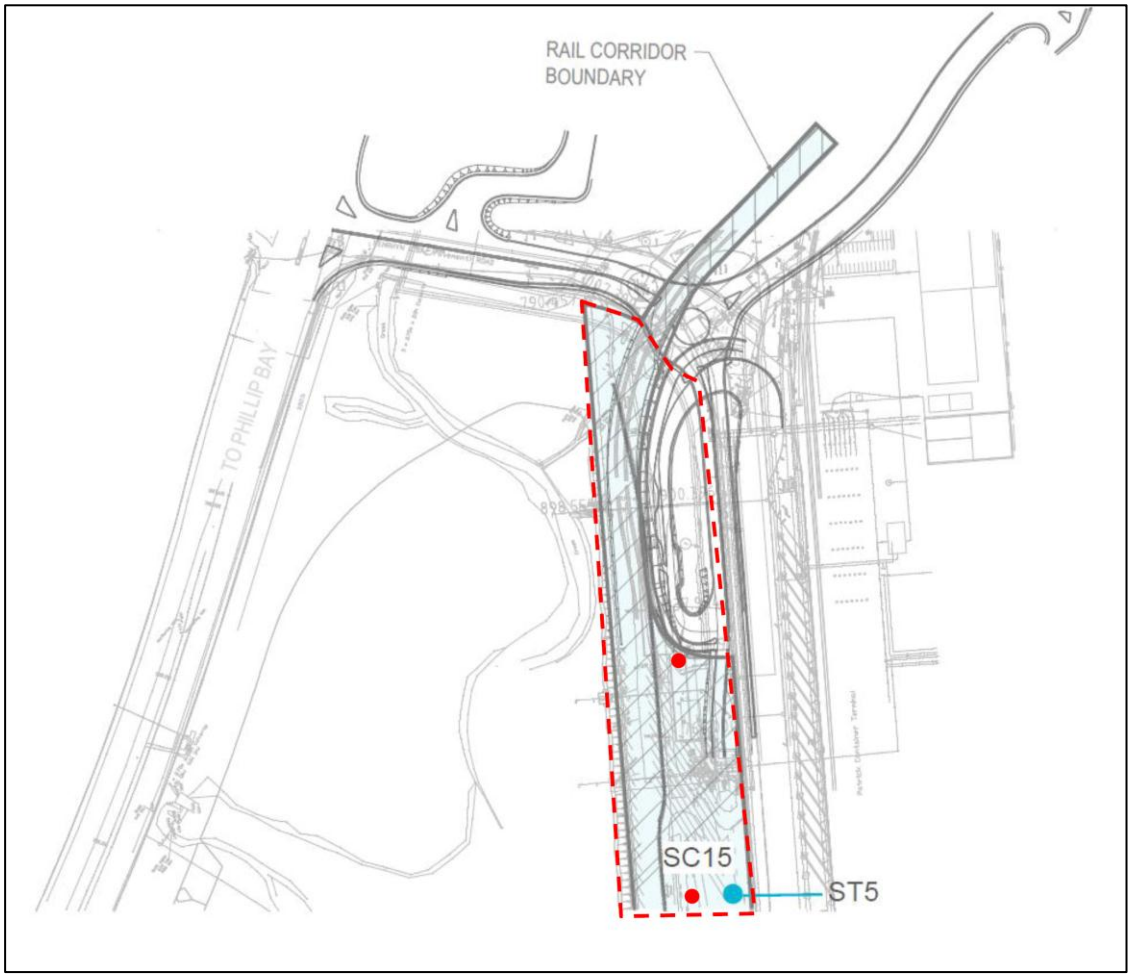
SICTL - Sydney International Container Terminals Ltd

Aurecon - Project Designer

Appendix 12 Environmental Control Map

Environmental control maps (ECMs) will be progressively updated during the project to reflect the current stage of works. Below is an indication of the initial ECM during the main works stage.





Appendix 13 Sub-plans

- Soil and Water Quality Management Plan
- Air Quality and Dust Management Plan
- Construction Noise and Vibration Management Plan
- Waste Management Plan
- Emergency Response and Incident Management Plan
- Out of Hours Works Protocol
- Hazardous Material and Asbestos Management Plan
- Acid Sulphate Soils Management plan
- Bird Hazard Management plan
- Energy Management Action Plan
- Feral Animal Management Plan
- Shorebird Management Plan
- Water Resource Management Plan

Appendix 14 Other Attachments

F 0418 Potential Supplier / Subcontractor Questionnaire

F 0908 Safety and Environment Checklist

F 1221 Management Review of the Environmental System

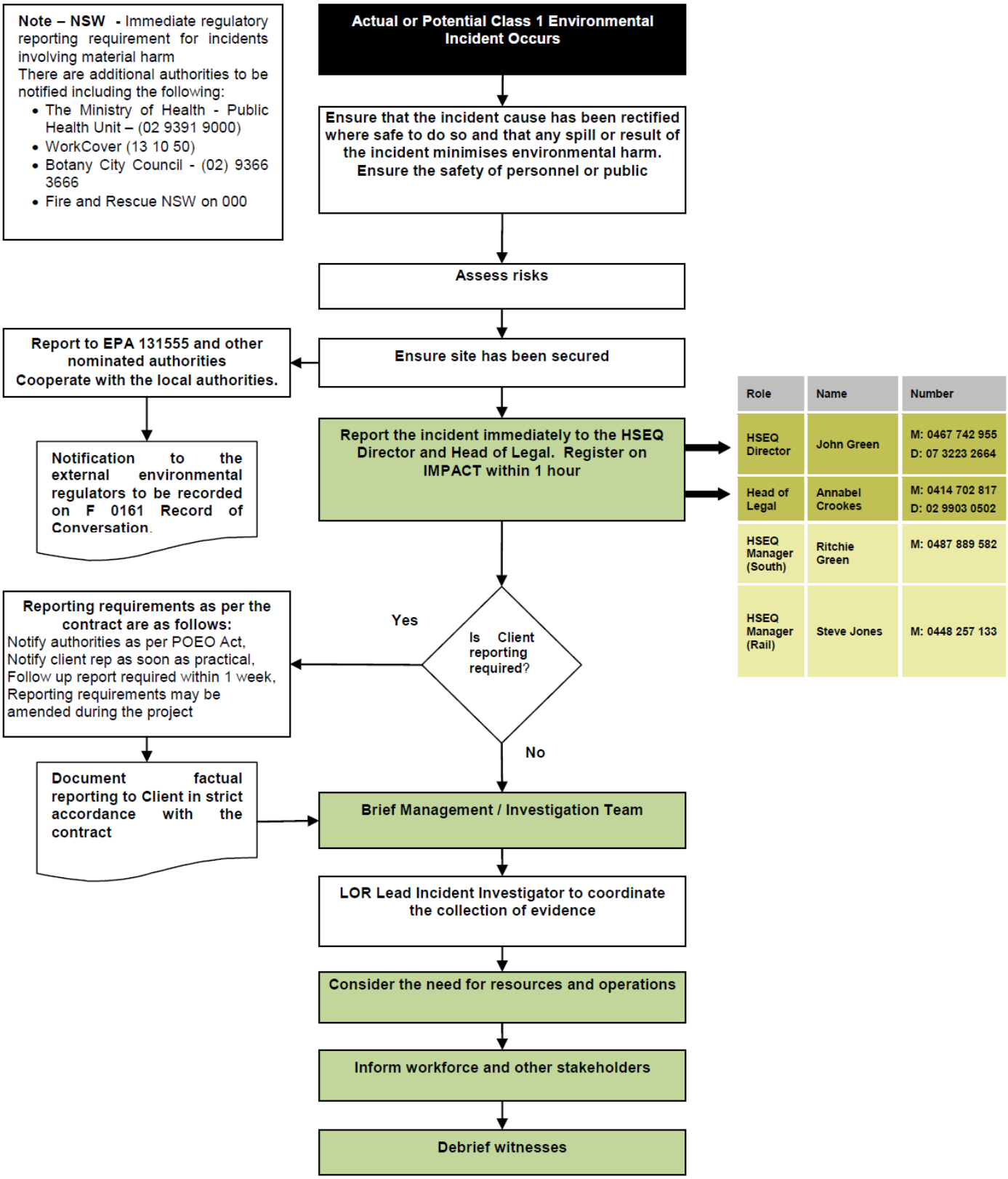
F 1222 Environmental Incident Complaint Report

F 1224 Environmental Incident Complaint Report Register

F 1298 Water Sampling Record

F 1232 Dangerous Goods Transport Note

Appendix 15 Class 1 Incident Management Flow Chart



Appendix 16 Penrhyn Estuary Construction Method Statements

Appendix 17 Staff Acknowledgement Register

Name	Position	Signature	Date