HSEQ MANAGEMENT SYSTEM
Operational Environmental Management Plan (OEMP)

HSEQ5.7

VERSION 08

HUTCHISONPORTS

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- An up to date version of this HSEQ Management System document is maintained;
- Records of superseded versions of the document are retained for a minimum of 7 years; and
- Current version of the document is readily available to all Managers, Employees and Key Stakeholders.

Register of Amendments

Ver No	Page no	Date	Description of amendments	Prepared by	Approved by
DRAFT 0	All	18 April 2013	Consultation Draft – internal	John Ieroklis	Trevor Ballantyne
DRAFT 1	All	13 May 2013	Consultation Draft – external	John Ieroklis	Trevor Ballantyne
1	All	31 July 2013	External stakeholder consultation comments incorporated	John Ieroklis	Trevor Ballantyne
2	All	3 Sept 2013	DPIE comments incorporated	John Ieroklis	Trevor Ballantyne
3	8	12 Sept 2013	Section 1.3.1 rewritten and updated, all page numbers changed	John Ieroklis	Trevor Ballantyne
4	All	04 May 2018 15 Feb 2019	Full review of the OEMP Amended Bayside City Council to Bayside Council. Amended DP&I to DPIE. Included references to Tables 19 and 20 in text for Sections 7.3 Noise Management.	Linthoingambi Ningthoujam Jennifer Stevenson	Blair Moses DPIE approved 19-02-2019
5	10, 28, 57, 59, 64 75, 76	18 Dec 2019	Review of OEMP to update: - the Incident Reporting process to replace paper-based forms with online Incident Reporting software. - the update of Incident Classification definitions; - clarify the process for the land-based supply of hydrocarbons to vessels. - the correction regarding stormwater testing and clean out requirements - minor corrections to descriptions and Pollu-Plug training requirements	Jennifer Stevenson	Dozie Egeonu

		25 August 2020	- Update of OEMP to reflect MOD17 of DA-494-11-2003i approved on 19-09-2019 - Changes to role titles and contact details of managers. - Update to remove references of the sandpiles from OEMP following the disposal of sand pile materials in early 2020. - Update to DG Cargo descriptions in alignment with the Dangerous Goods Management Guidelines for Ports in NSW, dated 27 June 2020		
6	11, 12, 29, 70	22 August 2023	- Update to referenced Environmental Policy - Update to Pollu-plug training list - Update actions to be taken in the event of a stormwater KPI exceedance	Gabrielle Pei Tiatia	Jennifer Stevenson
7	69	25 August 2024	-Update to the frequency of stormwater testing KPI	Lucy Mercer	
8	67, 76.	22 October 2024	-Amendment to the exemption of ASC blocks to include all DG cargo	Lucy Mercer	

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GLOSSARY OF TERMS

ACRONYMS AND GLOSSARY

Term	Description
AEMR	The Annual Environmental Management Report
Automated Stacking Crane (ASC)	The SICTL terminal features Automated Stacking Crane (ASC) blocks where most of the containerised cargo moving between ship and shore will be placed whilst awaiting transit. Each ASC block contains 9 lanes of containers across its width, 68 rows across length and can stack containers 5 high.
Development Consent	Instrument of Development Consent DA-494-11-2003-i
DG	Dangerous Goods
DPIE	NSW Department of Planning, Industry and Environment
EIS	Environmental Impact Statement.
Exchange pad	An area of the terminal where forklifts and reachstackers can manage Out-of-Gauge, Dangerous Goods, non-containerised (break-bulk), rail cargo and empty containers.
HSEQMS	Health, Safety, Environment and Quality Management System.
HSR	Health and Safety Representative
NSWP	New South Wales Ports (NSW Ports)
PBCCC	The Port Botany Community Consultative Committee
OEH	The NSW Office of Environment and Heritage
OEMP	Operational Environmental Management Plan (this document)
PBEAR	Port Botany Emergency Alarm Radio used to alert and disseminate emergency warnings to all Port Botany terminals
Quay crane (QC)	A crane purpose-built for the loading and unloading of cargo from ships which is mounted on rails on the wharf and can move along the wharf on these rails
Reachstacker	An item of plant used to pick up and carry containers with its telescopic arm and spreader. Used to handle OOG cargo, rail cargo and any containers not travelling through the ASC area
TfNSW(RMS)	Transport for NSW (Roads and Maritime Services)
Shuttle carrier (SC)	An item of mobile plant used to transport containers from the quay cranes to the ASC stacks, manual stacks or to the exchange pads
Spreader	A device used by quay cranes, shuttle carriers or reachstackers which enables these machines to lift and carry containers safely
TEU	Twenty-foot Equivalent Unit, the accepted measure of container throughput and equal to one 20-foot (6.1m) long container. One 40-foot container is equals 2 TEU
EPA	Environmental Protection Authority
OLS	Obstacle Limitation Surface – defines the airspace surrounding an airport that must be protected from obstacles to ensure aircraft flying in good weather during the initial and final stages of flight, or in the vicinity of the airport, can do so safely
VTS	Port Authority of NSW – Vessel Traffic Services – provides a continuous service to monitor the movement of participating vessels within the area of Sydney Harbour and Botany Bay

1 INTRODUCTION

1.1 BACKGROUND

In 2009, Hutchison Ports, the world's leading port developer, investor and operator signed an agreement with the New South Wales State Government providing Hutchison Ports with a 30 years lease on newly reclaimed land in Sydney's Port Botany. Sydney International Container Terminals Pty Ltd (SICTL), is the entity that manages the new Port Botany terminal.

The SICTL terminal is located between the existing port and the parallel runway at Sydney International Airport, extending approximately 550 metres west and 1,300 metres north of the existing northern quay of Brotherson Dock container terminal and covering an area of approximately 63 hectares (Refer to Figure 1).

Figure 1 Development Consent Area – leased by Sydney International Container Terminals Pty Ltd

SICTL operates a modern international container terminal on a 45-hectare site, with key features being a 1300 m Quay Line operating four Berths (when complete) and two Rail Sidings equal to 1.6 Km of track. Automated stacking cranes are being introduced into the port for the first time and is a prominent feature of the SICTL terminal. Use of the cranes provides greater on-site container capacity to manage peak demands, improved security and greater employee safety. The terminal is connected to the rail freight network which will greatly reduce the reliance on road transport and help overcome road congestion issues near the port.

The address of SICTL is given below:

SYDNEY INTERNATIONAL CONTAINER TERMINALS PTY LTD

PORT BOTANY GATE, B150-153,

SIRIUS ROAD, OFF FORESHORE ROAD

BOTANY NSW 2019

1.2 OVERVIEW OF OPERATIONS

The SICTL terminal will undergo progressive phases of development in its program to become fully operational, as outlined in Table 1. The commencement process for each phase is volume-driven and will be adjusted to meet operational demands. The current operational area and future development areas are illustrated in Figure 2.

The overview of the SICTL terminal during operation is illustrated in Figure 3.

Table 1 Phases of the SICTL terminal development

Phase No.	Area (ha)	Total Site Area (ha)	Description	Operational Date
1	25	45	• Temporary office sheds established on the North end of the quay until the terminal office building was completed; • Containers stacked on the quay until the Automated Stacking Crane (ASC) stacks were commissioned; • Vessel berths 1 and 2 commissioned and operational; • Quay Cranes (QCs) 1 - 4 installed and commissioned; • ASC blocks 1 – 3 commissioned and operational; – the first shuttle carriers, reachstackers and small plant delivered.	Completed in September 2013
			– vessel and truck container services commenced.	Completed in November 2013
			– the maintenance building and terminal office building completed.	Completed in March 2014
			– the new railway sidings constructed and commissioned; – freight trains begin service to the SICTL terminal.	Completed in July 2014
2	4	45	• ASC blocks 4 – 6 constructed and operational.	Completed in April 2015
3	Future Phases (include the increase of container handling equipment and the development of the berths 3 and 4 to support commercial and operational needs) *This OEMP shall undergo a review once the future operational phases commence.			
4				

The site operates for 24 hours all through seven days in a week. At any given time, the site will potentially accommodate operations and engineering managers, maintenance and stevedoring employees, office administration staff, vessel planners, and security workers.

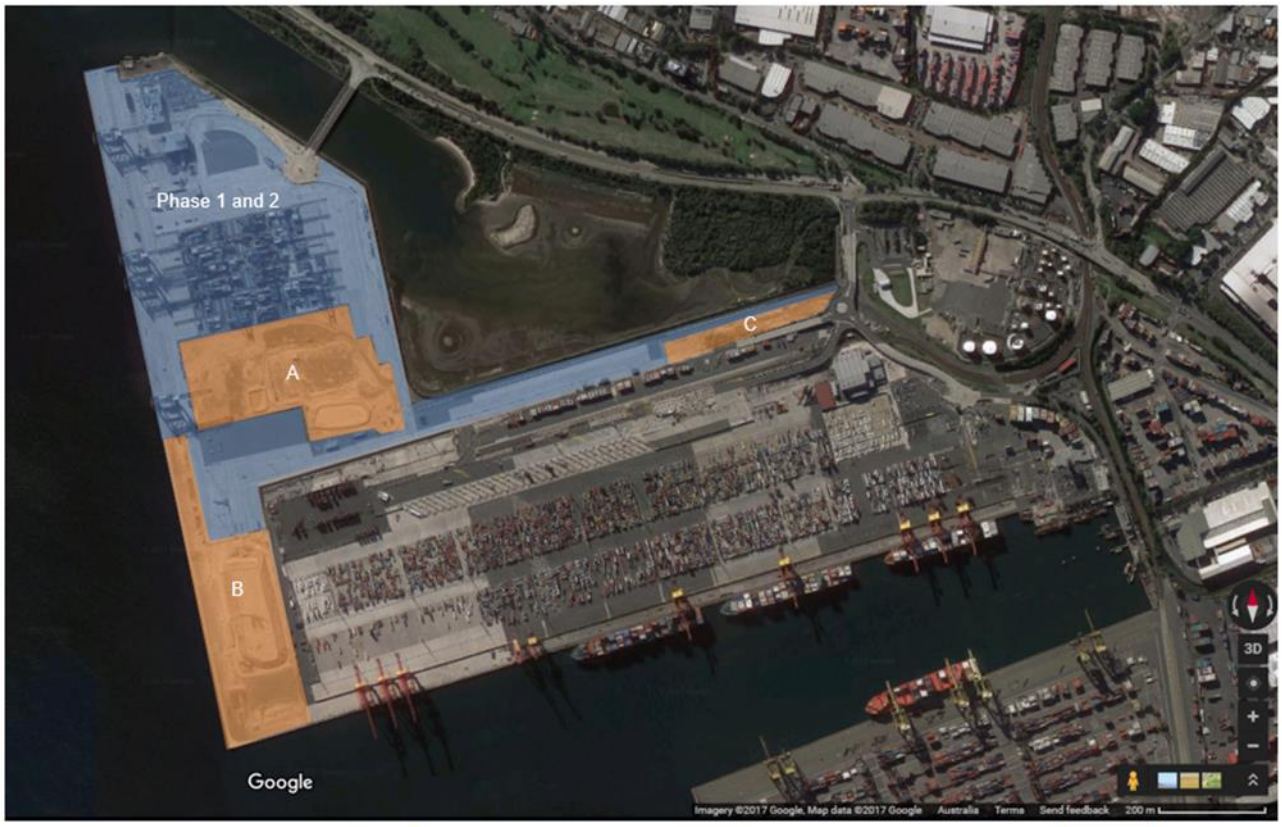


Figure 2 Current Operational Areas Future Construction Areas

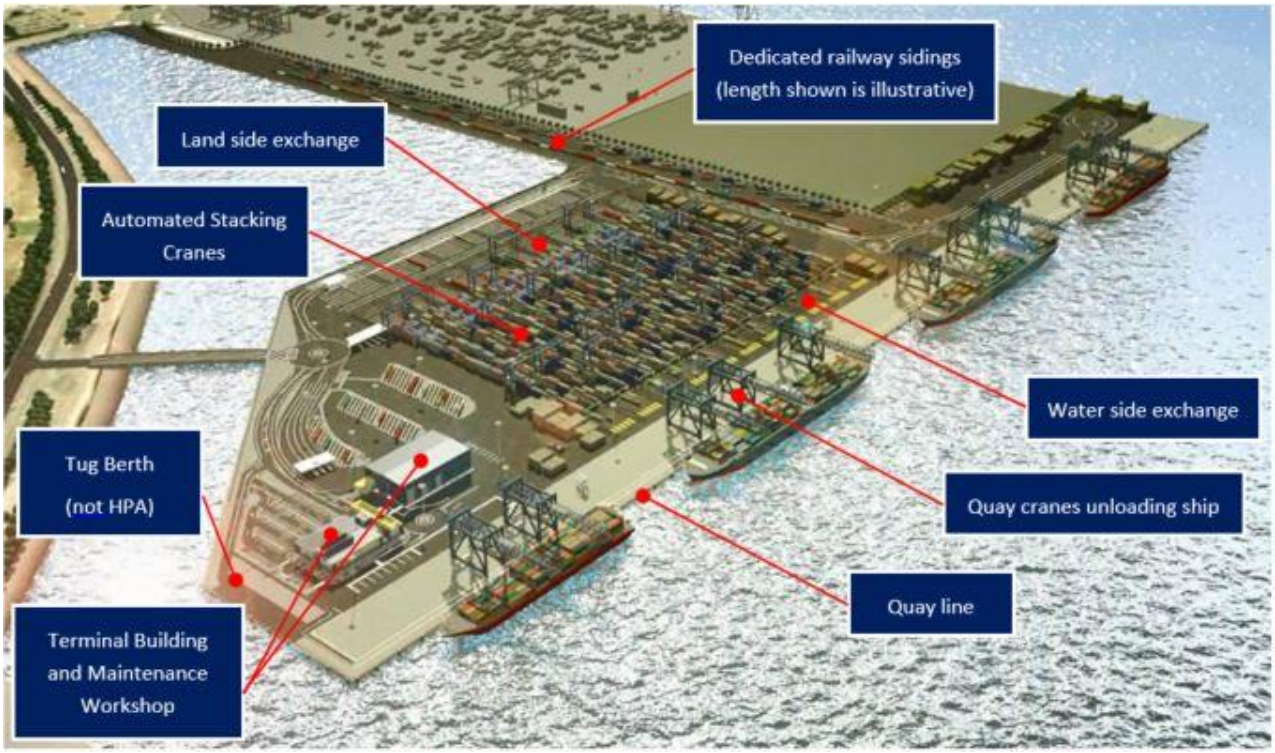


Figure 3 Overview of SICTL Terminal when fully developed

1.3 PURPOSE AND SCOPE OF OEMP

This Operational Environmental Management Plan (OEMP) has been created as a means by which SICTL terminal can manage the environmental risks associated with operating the new terminal. It has been prepared in accordance with conditions stated under Schedule C (Terminal Operations) of DA 494-11-2003-(i) as modified, the SICTL Lease Agreement and the SICTL Environmental Protection License No. #20322.

The OEMP has also been prepared in accordance with relevant legislative and policy requirements in respect of safety and the environment. It defines the organizational strategy of environmental management and the responsibilities of all employees to address the key issues arising from the terminal operations.

The actual and potential environmental issues relevant to the SICTL terminal in both current operational and undeveloped land areas have been identified through the analysis of activities to be undertaken at the terminal and are the issues that will be managed by the OEMP. This OEMP seeks to address:

- environmental management interface with work health and safety;
- training personnel in environmental management;
- quality of stormwater runoff/ separator tank discharges;
- odour and dust management;
- management of existing undeveloped areas;
- noise and traffic management;
- waste management;
- the handling and transit of chemicals and dangerous goods containers;
- storage of fuels on site;
- landside supply of hydrocarbons to vessels (bunkering)
- maintenance activities;
- impacts on Sydney Airport;
- the management of native and feral animals;
- energy usage and
- community & complaints handling.

1.3.1 EXCLUSIONS TO THE SCOPE OF THIS OEMP

Unless noted otherwise, this OEMP does not cover:

- anything not listed in the Development Consent;
- any activities on board vessels;
- any actions by vessels (movements, noise, emissions etc)
- any pollution originating from vessels;
- seaside refuelling (bunkering) of vessels (undertaken via the Port Authority of NSW);
- waste and sullage disposal from vessels;
- any activities in Botany Bay beyond the quay line of the SICTL terminal;
- any activities outside the lease area of the SICTL terminal;
- active construction phases (covered in separate CEMPs), and
- any activities beyond the control or responsibility of SICTL terminal or Hutchison Ports.

1.4 OBJECTIVES OF THE OEMP

This document aims to provide a management framework for SICTL terminal to control the terminal operations to

- Ensure that environmental management is undertaken in accordance with relevant legislative and policy requirements.
- Prevent, reduce and effectively manage potential impacts to the environment resulting from operations at SICTL terminal.
- Identify all appropriate environmental safeguards and demonstrate how they will be implemented on-site.
- Identify suitable emergency preparedness and response procedures.
- Provide details of complaints management procedures.
- Monitor and manage environmental and social impacts.
- Promote environmental awareness amongst employees and contractors to ensure that operation and maintenance carried out do not harm the environment.
- Ensure that the plan is properly implemented by trained staff, identifying persons responsible for implementing it, and ensuring that the plan is regularly tested for accuracy, currency and suitability.

1.5 OEMP CONSULTATION

During the preparation of the OEMP, SICTL has contacted and consulted relevant parties including government agencies and the broader community impacted by the SICTL terminal development and operations. The list of stakeholders who are consulted include:

- NSW Department of Planning, Industry and Environment
- NSW Ports
- NSW Environmental Protection Authority
- Bayside Council
- TfNSW(RMS)
- Randwick City Council
- Sydney Airport
- SafeWork NSW
- Port Botany Community Consultative Committee
- Department of Transport and Regional Services

1.6 HUTCHINSON PORTS HSEQ POLICY

The company is committed towards environmental protection and the commitment is stated in the objectives outlined in the Hutchinson Ports Environmental Policy.

HUTCHISONPORTS

ENVIRONMENTAL POLICY

Hutchison Ports Australia is committed to upholding the highest standards in environmental performance which is significant to the success and sustainability of our business. We recognize how the natural environment intersects with business, and we seek to conduct our operations in an environmentally responsible manner.

Hutchison Ports Australia understands our responsibility to identify any adverse environmental impact associated with our daily operations. We endeavour to implement operational measures to reduce our carbon footprint and prevent pollution as far as reasonably practicable while promoting continual improvement for the benefit of the environment, our employees, stakeholders, and the community.

Hutchison Ports Australia has an obligation to achieve an overall positive environmental outcome within our business, whilst acknowledging that every person working at our terminals is accountable for following best practices and has a shared responsibility for protecting the environment.

Hutchison Ports Australia, in establishing this policy is committed to:

- proactively identify and risk assess environmental hazards inherent to our operation and implement controls to manage those risks;
- ensure that all employees, contractors and visitors understand the shared responsibility to undertake tasks in an environmentally responsible way;
- promote the protection and conservation of natural resources in all our business activities;
- ensure that appropriate investigative, preventative and corrective actions are taken in response to incidents with the aim of preventing re-occurrence;
- handle environmental complaints and respond to environmental inquiries in a timely manner, take necessary actions to resolve any problems or concerns as soon as practicable;
- accurately report incidents and build improvements through lessons learned;
- communicate, consult and promote participation with employees to ensure environmental compliance and integration into operational procedures;
- provide information, instruction and training to develop employee capabilities and competence;
- implement emergency preparedness and response mechanisms;
- develop programs for monitoring and measuring environmental outcomes and controls;
- maintain and continuously seek ways to develop and improve our HSEQ management system, standards and practices;
- comply to all relevant legislation, regulations, codes of practice, licences, and other requirements;
- providing adequate resources to meet these environmental commitments;
- encouraging consultation and co-operation between management and employees in matters which may affect or impact the environment.

John Willy
Chief Executive Officer
Date: 05/05/2024

Document Reference: HSEQ1.1b **Version:** 02

2 APPROVAL AND LICENSING REQUIREMENTS

2.1 DEVELOPMENT CONSENT CONDITIONS

As part of the conditions of development consent, preparation of an OEMP is required. The Instrument of DA 494-11-2003-(i) as modified (referred to throughout this document as the Development Consent) sets out the conditions in Schedule C under which the SICTL terminal is permitted to operate and is a major influence on the content of the OEMP and its management plans.

Table 2 describes the Development Consent's clause numbers and the SICTL terminal's management plans that are implemented to ensure compliance to the stipulated conditions. The section of the development consent pertaining to Terminal Operations is provided in **Appendix A1**.

Table 2 SICT Terminal's Compliance to DC Conditions

Condition	Implementation Evidence
C1 General Requirements	
Application of Schedule	
C1.1	SICTL's activities are outlined in this OEMP.
C1.2	SICTL terminal is a "party undertaking the activities and works referred to under condition C1.1" and thus commits to comply with the conditions, as relevant. A formal commitment is given in section 1.6 of this document.
Interim Uses Port, Maritime and Waterway Related Uses – Hayes Dock Services Area	
C1.2A - F	SICTL will not undertake activities or works associated with Interim Uses within the meaning of this condition.
Operation Environmental Management Plan (OEMP)	
C1.3	The HSEQ 5.7 Operational Environmental Management Plan was prepared based on this condition. The OEMP has been uploaded to the company website at http://www.hutchisonports.com.au/operations/environmental-management-plans/
Compliance Certification	
C1.4	The Pre-Operational Compliance Report was prepared based on this condition. The Pre-Operational Compliance Report (version 02 dated 3 September 2013) was approved by the Director-General on 16 September 2013.and has been uploaded to the company website at http://www.hutchisonports.com.au/operations/environmental-management-plans/
C1.5	SICTL terminal is committed to comply with the Development Conditions, as relevant.
C2 Operational Environmental Performance	
Air Quality Management	
C2.1 – 2.4	Provisions to manage odour and dust emissions are included in the **Air Quality Management Plan** (section 7.1 of the OEMP).

Condition	Implementation Evidence
Noise Management	
C2.5 – 2.11	The **Noise Management Plan** (section 7.3 of the OEMP) was prepared based on and to satisfy this condition through extensive consultation with stakeholders regarding noise management, monitoring and response. The Noise Management Sub-Plan (Version 2 dated 30 August 2013) was approved by the Director-General on 16 September 2013 prior to the commencement of operations at the terminal.
Operational Traffic Management Plan	
C2.12	The **Operational Traffic Management Plan** (section 7.4 of the OEMP), was prepared based on and to satisfy this condition through extensive consultation with stakeholders regarding operational traffic management, monitoring and response. The Operational Traffic Management Sub-Plan (Version 2 dated 30 August 2013) was approved by the Director-General on 16 September 2013 prior to the commencement of operations at the terminal.
Waste Management On-site	
C2.13 and C2.13A	The **Waste Management Plan** (section 7.7 of the OEMP) was prepared based on and in support of this condition. The EPA Licence 20322 has been issued to Sydney International Container Terminals Pty Ltd
Water and Wastewater Management	
C2. 14	The **Water and Wastewater Management Plan** (section 7.8 of the OEMP) was prepared based on and in support of this condition.
C2.15	The SICTL EPA Licence does not specify monitoring of discharge points or concentration limits which must be applied to the terminal operations. Provisions to monitor stormwater quality and SICTL's internal limits are nonetheless included in the **Stormwater Management Plan** (Section 7.5 of the OEMP)
C2.15A	SICTL terminal will not undertake activities or works associated with Interim Uses within the meaning of this condition.
Hazards and Risk Management	
C2.16	The **Dangerous Goods Management Plan** (section 7.6 of the OEMP) was prepared based on and in support of this condition. Prior to the commencement of operations at the terminal, SICTL submitted the Handling of Dangerous Goods and Hazardous Substances Plan (version 2 dated 9 September 2016) for approval. The letter from DPIE dated 25 October 2013 notes that the Department is satisfied that the requirements of condition C2.16 has been adequately addressed.
Hazards and Risk Management – Storage and Handling of Dangerous Goods	
C2.17 and C2.18	The **Dangerous Goods Management Plan** (section 7.6 of the OEMP) was prepared based on and in support of this condition.
C2.19	Deleted

Condition	Implementation Evidence
Emergency Incident Management	
C2.20.	The **HSEQ10.1.3 Emergency Response Plan - SICTL** was prepared to satisfy this condition through extensive consultation with stakeholders regarding terminal emergency response plans. The Emergency Response Plan (Version 3 dated 17 October 2013) was approved by the Director-General on 4 November 2013 prior to the commencement of operations at the terminal.
Aviation Operational Impacts	
C2.21 – 2.24	The **Aviation Operational Impacts Management Plan** (section 7.2 of the OEMP), was prepared on the basis of and in support of this condition. An approval was granted by Aviation Environment, Aviation and Airports Division of the Department of Infrastructure and Transport on 04 September 2013 prior to the commencement of operations for the intrusion of four Quay Cranes into prescribed airspace, subject to conditions of maximum operating height and obstacle lighting at night and during daylight hours.
C2.25.	The **Aviation Operational Impacts Management Plan** (section 7.2 of the OEMP), was prepared on the basis of and to satisfy this condition regarding bird hazard management/ minimisation of bird attractants, monitoring of bird presence on the terminal and response through active management measures. The Bird Hazard Management Plan (Version 2 dated 3 September 2013) was approved by the Director-General on 16 September 2013 prior to the commencement of operations.
C3 Community Information, Involvement and Consultation	
C3.1	The **Complaints Management** (section 3.10 of the OEMP) was prepared on the basis of and in support of this condition.
C3.2 and C3.3	The **Community Consultation** (section 3.9 of the OEMP) was prepared on the basis of and in support of this condition.
C4 Environmental Monitoring and Auditing	
C4.1	Section 3.7 of the OEMP addresses the requirements for **Incident Reporting**
C4.2	Section 3.5 of OEMP addresses the requirements for **Environmental Reporting**
C4.3	Deleted
C4.4	Section 3.6 of the OEMP addresses the requirements for **Environmental Training**
C4.5	Section 6.2 of the OEMP addresses the requirements for **Environmental Auditing**

2.2 LICENSING REQUIREMENTS

SICTL terminal operates under an Environmental Protection Licence (EPL) issued by the *Protection of the Environment Operations Act 1997 (NSW).* The EPL #20322 commenced on 14 October 2013. The current version of the EPL (effective 1 September 2016) is publicly available on the company website.

Table 3 describes the conditions under EPL (effective 1 September 2016) and the SICTL terminal's management plans implemented to ensure compliance.

Table 3 SICTL Terminal's Compliance to EPL Conditions (effective 1 September 2016)

Condition	Implementation Evidence
Limit Conditions	
L1 Pollution of Waters	
L1.1	The **Water & Wastewater Management Plan** (section 7.8 of the OEMP) addresses this requirement.
L2 Waste	
L2.1	The **Waste Management Plan** (section 7.7 of the OEMP) addresses the requirements.
L3 Noise Limits	
L3.1 - 3.2	Details of these operational noise limits are included in the **Noise Management Plan** (section 7.3 of the OEMP).
L3.3	The definitions of day, evening and night are included in the **Noise Management Plan** (section 7.3 of the OEMP).
L3.4 -3.6	Details of the noise monitoring requirements are included in the **Noise Management Plan** (section 7.3 of the OEMP).
L3.7	SICTL terminal submitted a proposed methodology for conducting noise measurements and modelling as an alternative to conducting environmental noise monitoring at all six noise monitoring locations on 5 June 2014. The EPA approved the use of a calibrated noise model on 11 July 2014. Details of the noise monitoring requirements are included in the management plan for **Noise Management** (section 7.3 of the OEMP).
L3.8	Details of the noise monitoring requirements are included in the management plan for **Noise Management** (section 7.3 of the OEMP).
Operating Conditions	
O1 Activities must be carried out in a competent manner	
O1.1	All personnel related to operations undergo defined continuous training. Section 3.6 of the OEMP addresses the requirements for **Induction and Training**.

Condition	Implementation Evidence
O2 Maintenance of Plant and Equipment	
O2.1	All plant and equipment undergo scheduled preventive maintenance and are maintained in good condition. The procedures given in the O & M manuals are followed.
O3 Emergency Response	
O3.1	**Emergency Response Plan HSEQ 10.1.3** addresses the requirements.
O3.2	**Emergency Response Plan HSEQ 10.1.3** addresses the requirements.
4 Monitoring and Recording Conditions	
M1 Monitoring Records	
M1.1	Each management plan of OEMP addresses the requirements of Monitoring.
M1.2	Section 3.5 of OEMP addresses the requirements for Reporting and Records.
M1.3	The monitoring results are recorded containing the information listed out.
M2 Recording of Pollution Complaints	
M2.1 – M2.4	Section 3.10 of OEMP addresses the requirements for Complaints Management.
M3 Telephone Complaints Line	
M3.1 – M3.3	Section 3.10 of OEMP addresses the requirements for Complaints Management.
5 Reporting Conditions	
R1 Annual Return documents	
R1.1 – R1.2	Section 3.5 of OEMP addresses the requirements for Reporting and Records.
R1.3	Not applicable in the current status
R1.4	Not applicable in the current status
R1.5	Section 3.5 of OEMP addresses the requirements for Reporting and Records.
R1.6	Section 3.5 of OEMP and HSEQ 9.1 Document Control and Records Management Policy fulfil the requirements for Reporting and Records.
R1.7	Section 3.5 of OEMP fulfil the requirements for Reporting and Records.
R2 Notification of Environmental Harm	
R2.1– R2.2	Section 3.7 of OEMP fulfil the requirements for Incident Reporting and Management.
R3 Written Report	
R3.1-R3.4	Section 3.5 fulfils the requirements for Reporting and Records

Condition	Implementation Evidence
6 General Conditions	
G1 Copy of licence kept at the premises or plant	
G1.1-G1.3	Copy of licence is available at the site
7 Special Conditions	
E1 Noise Monitoring and Compliance Reporting	
E1.1	Noise monitoring was conducted
E1.2	Details of the noise monitoring requirements are included in the **Noise Management Plan** (section 7.3 of the OEMP).

2.3 LEGISLATIVE REQUIREMENTS

Legislation that may apply to the operation of the SICTL terminal is listed below in Table 4. These should be consulted regarding the need for additional approvals if the conditions or operations change at SICTL terminal.

Table 4 List of Applicable Legislation

Protection of the Environment (Operations) Act 1997 (NSW)	Protection of the Environment Operations Act 1997 (NSW), Section 120 Prohibition of pollution of waters
Environmental Planning and Assessment Act, 1979 (NSW)	Work Health and Safety Act 2011 (NSW)
Civil Aviation Regulations, 1988 (Cth)	Work Health and Safety Regulation 2017 (NSW)
Civil Aviation Safety Regulations, 1998 (Cth)	Dangerous Goods (Road and Rail Transport) Regulation 2014 (NSW)
Airports Act 1996 (Cth)	Ports Assets (Authorised Transactions) Act 2012 (NSW)
Airports (Protection of Airspace) Regulations 1996 (Cth)	State Environmental Planning Policy (Three Ports), 2013 (NSW)
Marine Order 32 (Cargo Handling Equipment) 2011 (AMSA)	Waste Avoidance and Resource Recovery Act 2001 (NSW)
Environment Protection and Biodiversity Conservation Act 1999 (Cth)	Water Act 1912 (NSW)
Threatened Species Conservation Act 1995 (NSW)	Water Efficiency Labelling and Standards Act 2005 (Cth)
National Parks and Wildlife Act 1974 (NSW)	Biodiversity Conservation Act 2016 (NSW)
Ports and Maritime Administration Act 1995 (in particular Schedule 4)	Local Land Services Act 2013 (NSW)
Ports and Maritime Administration Regulation 2012 (in particular Part 3) Port Authority —Land Traffic Control Regulations—N.S.W.	Biosecurity Act 2015 (NSW)
Port Botany Landside Operations, Mandatory standards under Part 3 of the Ports and Maritime Administration Regulation 2012	Agricultural and Veterinary Chemicals Code Regulations 1995 – specifically schedule 4 – Restricted Pesticides
Pesticide Regulation 1999 (NSW)	Greater Sydney Regional Strategic Pest Animal Management
Pesticide Control Order	

2.4 ADDITIONAL CONDITIONS

Addition to the conditions stipulated in the Development Consent and the EPL, there are obligations and additional conditions related to protection of environment in the Deed of Agreement for Lease, Annexure I, Part 2. These requirements have been evaluated by SICTL terminal and the compliance is ensured through the implementation of SICTL's environmental management plans. The details of the requirements and compliances achieved are provided in **Appendix A2**.

3 ENVIRONMENTAL MANAGEMENT

3.1 COMPONENTS OF OEMP

Based on the operations of the terminal, the actual or potential issues have been identified. The OEMP has been prepared keeping each issue in the focus and the various activities that are required to be addressed during the terminal operations. The OEMP will cover the following components addressed throughout the entire document:

- Identification of environmental issues
- Performance Indicators
- Responsibilities
- Control measures
- Reporting and Records
- Induction & Training
- Incident Management
- Emergency Controls measures
- Monitoring and Corrective Action
- Community Consultation
- Complaints Management

An overview of the above components is presented in the following sections.

3.2 ACTUAL OR POTENTIAL ENVIRONMENTAL ISSUES

The actual and potential environmental issues relevant to the operations of the SICTL terminal have been identified through the analysis of available documents including SICTL terminal's Environmental Risk Assessment. The identified issues are listed below.

- odour, dust and air quality management;
- impacts on Sydney Airport;
- noise and traffic management;
- quality of stormwater runoff/ separator tank discharges;
- the handling and transit of chemicals and dangerous goods containers;
- storage of fuels on site;
- waste management;
- the management of native and feral animals; and
- energy usage

A management plan has been developed for each of these identified issues and follows in Section 7 of this OEMP. Targeted management of these issues by the OEMP and controls combined with objective measurement of its effectiveness by the KPI's provides for a closed-loop management and reporting process.

3.3 OPERATIONAL KEY PERFORMANCE AREAS AND INDICATORS

A Key Performance Indicator (KPI) is a measurable value that demonstrates how effectively a company is achieving key business objectives. SICTL will use KPI's to evaluate their success at reaching targets and communicate a concise measurement of compliance to the OEMP and to the conditions of the Development Consent, the SICTL Environmental Licence and the relevant environmental legislation.

i. KPIs should be quantitative in nature, for example, targets can be set to reduce a particular emission or to reach a certain goal. In this way the effectiveness of environmental policies and management systems can be substantiated.

ii. KPIs should also seek to provide comparable, comprehensive and quantitative data. As far as possible SICTL shall report data in a comparable format, so the performance may be assessed over time, and relative to its competitors.

To quantify the KPIs of the stevedore industry, KPIs are often expressed in terms of units of production output – i.e., in the number of containers handled in one year. A universal unit of measurement within the stevedore industry that is applied to different sizes of intermodal container is the 'TEU' or Twenty-foot Equivalent Unit – corresponding to one 20-foot (6m) container. This unit (rather than tonnage) is the preferred basis for shipping and logistics calculations and descriptions worldwide because it relates to tangible container 'traffic'. Measuring KPIs against throughput gives SICTL the opportunity to integrate environmental obligations with operational and business performance and growth.

In terms of the environmental KPIs outlined in this OEMP, SICTL terminal has utilised a number of different types of performance indicators to provide information about the management efforts to influence the organisation's environmental performance, for example:

- numbers of inspections;
- numbers of complaints;
- handling or consumption per TEU; and
- specific environmental goals driven by the various compliance requirements.

For every environmental issue identified, a KPI has been identified in the corresponding management Plan which is provided in Section 7.

3.4 ENVIRONMENTAL MANAGEMENT STRUCTURE AND RESPONSIBILITIES

Roles and responsibilities for personnel relevant to the implementation of this OEMP are detailed in this section.

3.4.1 ORGANISATION STRUCTURE

The organisational chart below (Figure 4) illustrates the structure and relationships between key roles that provide support to achieve effective implementation of the OEMP.

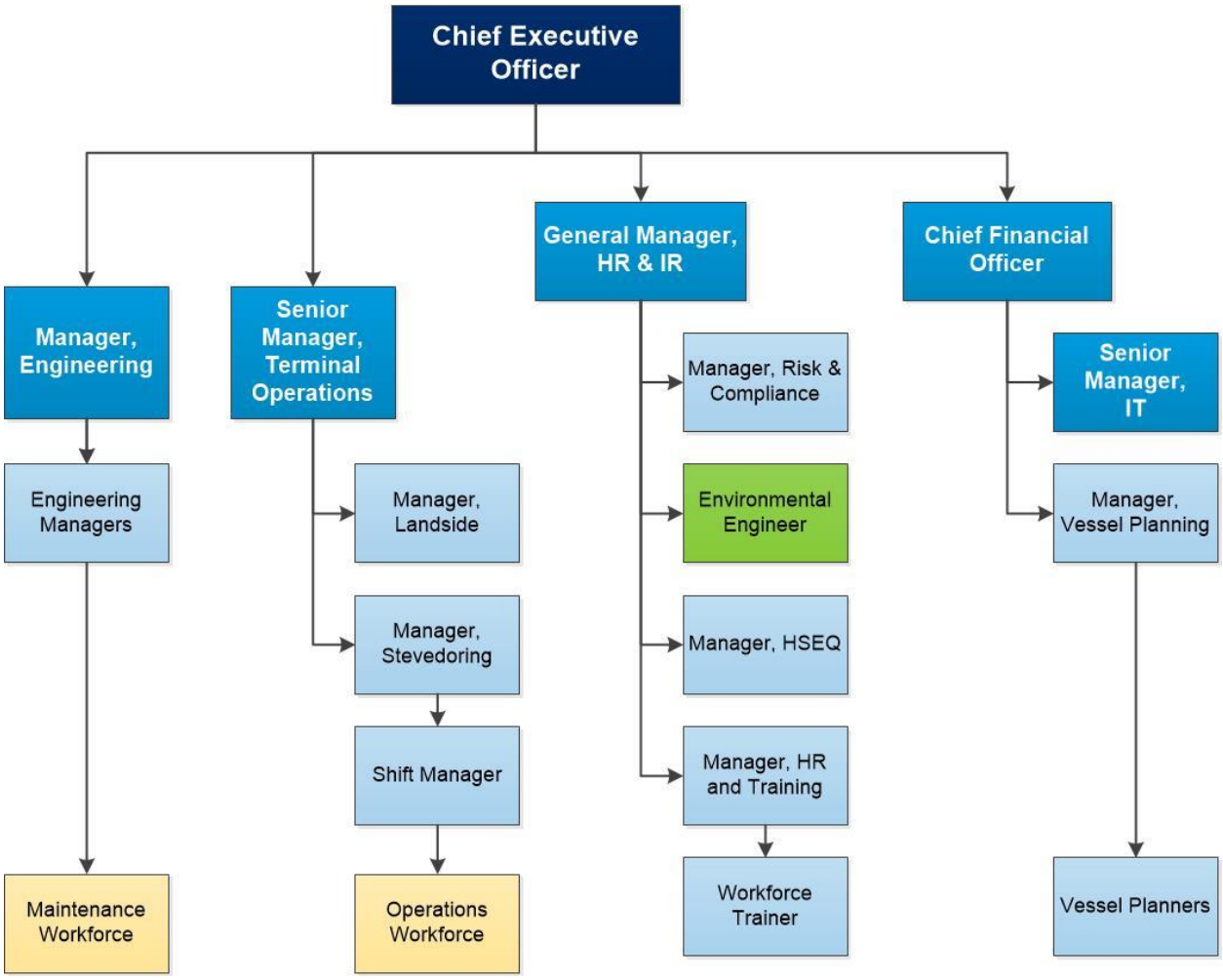


Figure 4 Organisational Structure

3.4.2 KEY RESPONSIBILITIES

The successful implementation of this OEMP is reliant on clearly defined responsibilities, accountabilities and authorities. This system of delegation ensures the objectives of this OEMP are achieved through a collaborative approach.

This section details the responsibilities, accountabilities and authorities of the operational management team.

Table 5 Roles and Responsibilities for OEMP Implementation

Role	Responsibilities
Chief Executive Officer **(02) 9578 8500**	• Provide overall direction on HPA's policies to achieve compliance with the Development Consent; • Liaison with SICTL managers on environmental matters as required, and • Annual review of all operating environmental data, improvement opportunities and subsequent remedial action and the corrective and preventative actions.

Role	Responsibilities
Environmental Engineer **(02) 9578 8417**	• Ensuring the implementation of the OEMP on a day to day basis; • Monitor operations against the OEMP to evaluate compliance with the Development Consent, EPA Licence, environmental legislation and environmental KPI's; • Monitoring deficiencies in environmental control strategies and implementation of controls, managing their resolution and controlling further work activities until deficiencies are rectified; • Undertaking regular reviews of all operating environmental data, improvement opportunities and subsequent remedial action and the corrective and preventative actions; • Considering and advising on matters specified in the Development Consent and all other licenses and approvals relating to the environmental performance and impacts of the terminal operations; • Organising audits and to assist in ensuring that any issues found as a result of an audit are dealt with in an appropriate and timely manner; • Maintenance of register of environmental complaints and the subsequent remedial action; • Compile and provide quarterly reports to DPIE, where relevant, outlining details of complaints received; • Reporting on environmental incidents; undertaking investigations of environmental incidents and providing recommendations for corrective and preventative actions and the review of these actions; • Compiling and submitting the Annual Environmental Management Report; Acting as the primary 24-hour contact point in relation to environmental performance of the terminal operations; • Attending the Port Botany Community Consultative Committee Meetings as a representative of HPA.

Role	Responsibilities
Manager, Risk & Compliance **(02) 9578 8528**	• Supporting the Environmental Engineer, Manager - HSEQ and terminal management by advising on the legislative and Development Consent requirements applicable to operations; • Measuring operational data, assessing trends and KPI's and facilitating reviews; • Review of the environmental audits and reports outlined in this OEMP; • Providing assistance in the assessment of environmental improvement opportunities, including recommendations for corrective and preventative actions and the review of these actions; • Managing the internal audit program and conducting audits; • Reporting on non-conformances, improvement opportunities, and subsequent corrective actions from audits; • Assisting with the review and amending the OEMP and management plans, and • Liaising with SICTL management and external stakeholders to determine compliance requirements.
Workforce Trainer **(02) 9578 8502**	• Working together with the Environmental Engineer to develop appropriate environmental training for operations personnel; • Assisting in the delivery of the environmental awareness training program; • Ensuring training/induction of personnel is carried out and that staff operate in an environmentally responsible manner, and • Keeping training records for all personnel having completed the environmental awareness training program and induction.

Role	Responsibilities
Senior Manager, Terminal Operations **(02) 9578 8513,** **Shift Manager** **(02) 9578 8592** **and** **Manager - Engineering** **(02) 9578 8559**	• Liaison with the Environmental Engineer and Manager, Risk & Compliance on environmental matters as required; • Undertaking regular reviews of all operating environmental data, improvement opportunities and subsequent remedial action and the corrective and preventative actions; • Promoting HPA's policies and be responsible for their implementation; • Monitoring daily work routines so that environmental protection requirements are communicated to all personnel and contractors working within the SICTL terminal; • Providing toolbox talks on environmental issues to personnel under their supervision; • Ensuring that the workforce understands and implements the requirements of the OEMP during operations; • Ensuring that preventative maintenance and pre-start checks on equipment is carried out; • Has the authority to stop work processes to prevent environmental non-conformances from occurring; • Ensuring all incidents are reported to the Environmental Engineer via the Rapid Incident online portal in accordance with the company policies and OEMP.

3.5 REPORTING AND RECORDS

3.5.1 REPORTING TIMELINE

During the operation of the SICTL terminal, it is necessary to record and communicate key data to various stakeholders at various time intervals through the year in line with the conditions stipulated by different agencies. The following Table 6 summarises the different types of environmental reporting that are stipulated under the Development Consent and EPL.

Table 6 Reporting Obligations

Report Type	Report Description	Timeframe	Recipient
Annual Environmental Management Report (AEMR)	In compliance with the Development Consent (C4.2), an Annual Environmental Management Report (AEMR) comprising a review of all OEMP, EPL and Development Consent conditions and KPIs shall be prepared and submitted to DPIE	Yearly	DPIE, NSW Ports, SICTL website
Environmental Protection Licence (EPL)	Annual Return Documents to the EPA no later than 60 days after the end of each reporting period. The Annual Return Documents will comprise: • a statement of compliance, and • a monitoring and complaints summary	Yearly	EPA

Report Type	Report Description	Timeframe	Recipient
Actual Dangerous Goods Movement Report (Development Consent - C2.17)	Twelve months after the determination of DA-494-11-2003-I MOD 16, SICTL shall submit an annual report to the DPIE (via NSW Ports) which provides details on actual Dangerous Goods movements listed in the Table 1 provided in Schedule 4 of the Development Consent.	Yearly	DPIE, NSW Ports
Independent Environmental Audit Report	Annual audit report conducted within 12 months from the previous audit	Yearly	NSW Ports, DPIE, SICTL website
Community Consultative Committee Meeting	Minutes of the PBCCC meeting	14 days	NSW Ports website, DPIE
	Responses to the PBCCC recommendations	1 month	
Pollution Incident	Verbal notification of a pollution incident where material harm to the environment is caused or threatened	Immediately	EPA, NSW Ports, VTS
	Notification of an incident with actual or potential significant off-site impacts on people or the biophysical environment	12 hours	DPIE
	Full written details of the environmental or pollution incident	24 hours	NSW Ports
	Full written details of the incident with actual or potential significant off-site impacts on people or the biophysical environment	7 days	DPIE
Community Complaint & Feedback	Provide initial feedback and acknowledgement for complaints lodged by phone or in person	Immediately	Complainant
	Provide initial feedback and acknowledgement for complaints received by other means	24 hours	Complainant
	Verbal notification that a complaint has been lodged with SICTL about any environmental issue (including pollution)	2 hours	NSW Ports
	A written report detailing the complaint and action taken to investigate, alleviate or rectify the problem and the timing of such actions	24 hours	NSW Ports
	Quarterly Complaints Report outlining details of Complaints received	3 monthly	DPIE, EPA, NSW Ports, SICTL website
Update Report	An Update Report detailing compliance with all or any part of the conditions of consent	As directed by DPIE	DPIE, NSW Ports
Internal Reporting	The internal reporting documents provided for the monthly, quarterly and annual review	Monthly Quarterly Yearly	HPA Managers

3.5.2 COLLECTION OF OPERATIONAL DATA

Various information is collected for inclusion into the different reports that are required to be submitted to different agencies namely EPA and DPIE. The information that are collected include:

- a general overview of terminal operations including;
  - recorded TEU throughput including DG cargo throughput;
  - the proportions of different classes of DG cargo handled by SICTL terminal and the breakdown in tonnages, TEU and DG cargo weight for the previous five years;
  - the number of vessels loaded/ unloaded;
  - the proportions of cargo moved by rail or road;
  - the status and numbers of operational plant in service;
- results of monitoring of noise and stormwater;
- performance of operational traffic management, waste and waste water management, dangerous goods management and aviation operational management
- reports of any actual or potential environmental incidents, and the recommendations for corrective and preventative actions and the review of these actions;
- results of any environmental audits;
- any general enquiries/ complaints/ comments received from the public; and
- the performance of environmental KPIs, and the EPL and Development Consent conditions

The collected information are graphed (wherever possible) so that trends and proportions can be identified and understood in the appropriate context. Most of the above information are collected from the Network Control System for the terminal infrastructure and the 'nGen' Terminal Operating System for all freight. These two sources of information will be supplemented by other sources including logbooks, utility bills, meter readings, invoices and register entries. The data collection and reporting of information is presented in Figure 5.

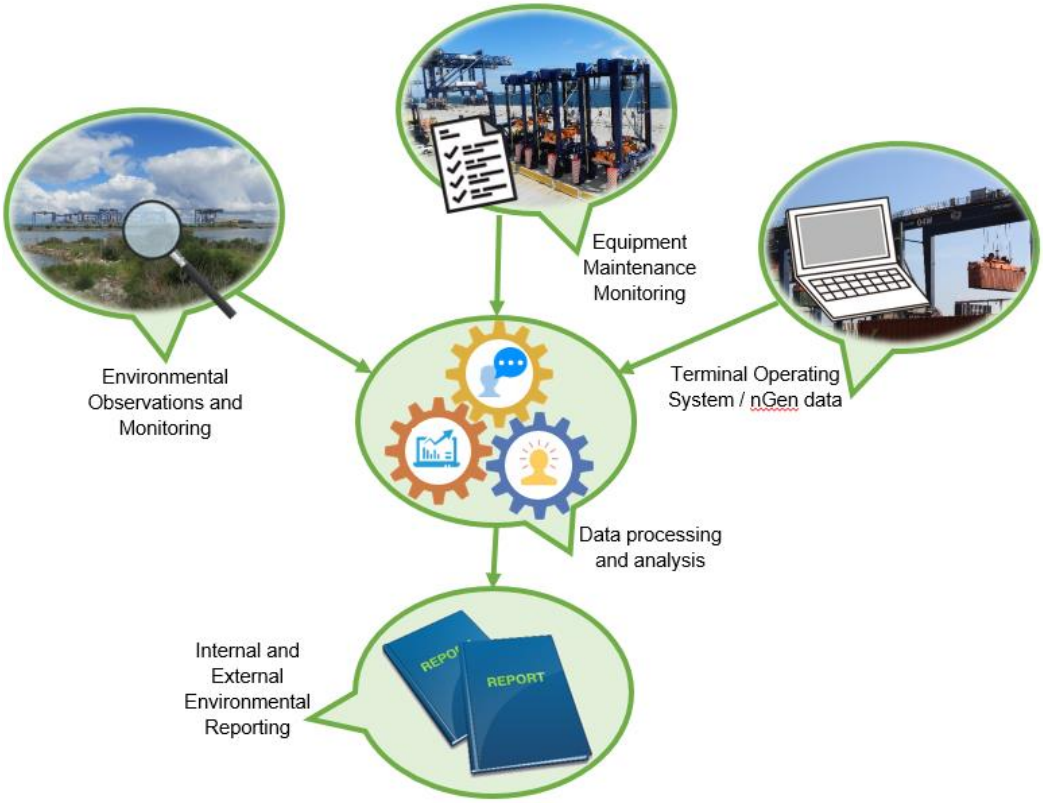


Figure 5 Data Collection and Reporting Flowchart

3.6 INDUCTION AND TRAINING

SICTL terminal is committed to providing appropriate training to all its employees to enable them to perform their roles without risks to health, safety and the environment. All operating and maintenance personnel are required to be suitably qualified and trained before handling the tasks. Records of all induction and training details and attendees are maintained within the induction system.

3.6.1 TRAINING FRAMEWORK

SICTL terminal has developed a training framework that is based on a role-specific training system. This structure allows for different types of training to be provided to relevant employees in different roles. The amount of exposure to environmental hazards and the involvement in environmental management is the criteria for selecting the training.

Table 7 Environmental Training Framework

Training Module	Relevant Employees	Training Content
Employee Induction	All SICTL staff attend the induction, which takes place in the first week of commencing work at SICTL.	Aims to ensure employees are aware of the OEMP and can recognise and communicate environmental incidents and hazards to relevant personnel. This training includes: • the HPA HSEQ Policy; • the environmental issues relevant to the SICTL terminal and how they are managed; • evacuation procedures; • recognising actual or potential incidents, and • reporting of incidents to the relevant personnel.
Equipment Operation and Stevedore Roles	Primarily for stevedore roles and operators of plant. Training takes place as part of the employee development program and based on operational requirements.	Aims to make relevant employees competent in identifying, reporting and managing environmental incidents such as spills from containers or leaking plant. This training includes: • plant refuelling operations; • incident response; • spill control, containment and clean up; • protection of the terminal's drainage systems; • the use of specialised spill equipment such as the bunded trailer; • evacuation procedures; • communication of actual or potential incidents to the relevant personnel, and • investigation and information gathering for notification and reporting.

Training Module	Relevant Employees	Training Content
Pollu-Plug	Maintenance personnel, Engineering Managers, Environmental Engineer and HSEQ Manager shall be trained and refreshed every 2 years.	The Pollu-Plug is a pollution control system which is installed in the drainage outlets facing the Penrhyn Estuary and deployed in the event of a spill incident in the ASC or rail siding. This is a specialised training module comprising of in-situ instruction in how to deploy the Pollu-plug and advice on when to deploy the Pollu-plug.
IMDG Code	Planners, Shift Managers and other operational supervisors shall be trained in accordance with the IMDG Code.	Aims to educate relevant employees in the classification and management of dangerous goods and ensure their competence in implementing response plans and co-ordinating resources to manage dangerous goods incidents. The training is in accordance with the IMDG Code (chapter 1.3) and includes both General Awareness/Familiarization training and Function-Specific training. The IMDG Code is an advanced training module which will be completed and assessed online.

Based on the exposure to environmental hazards and levels of accountability, the training needs for targeted personnel will be analysed by the Workplace Trainer in consultation with the Environmental Engineer. The training will focus on environmental compliance during general operations in accordance with the OEMP and anticipated incidents. The targeted training topics include:

- Quay Crane Program
- Shuttle Program
- Reachstacker
- Team Leader Programs

3.7 INCIDENT REPORTING AND MANAGEMENT

All environmental incidents during the operational period of the SICTL terminal will be reported and investigated in accordance with the **HSEQ8.1 Incident Management and Investigation Policy**. A copy of the Incident Management and Investigation Policy is available at all times to all staff via the SharePoint document management system that is the repository for all HSEQ policies, procedures, plans and templates. The record of a complaint in relation to pollution arising from SICTL terminal's activities will be retained for at least four years after the complaint is reported.

Incidents are categorised into two groups based on their severity:

- Incident – Low severity
- Serious Incident – Medium to High severity

3.7.1 DEFINITIONS

Incidents
An incident which causes either minor or no injury with no apparent complications; minor damage or disruption to operations; environmental spills which are contained. Examples are: – An incident that results in on site first aid treatment being provided by a first aider or an emergency services paramedic; – An incident that results in medical treatment provided by an offsite medical facility, hospital or doctor; – An incident that results in damage to HPA assets or property (less than $10,000); – An incident relating to damage to or caused by third party trucks on the terminal; – A security related incident which is not notifiable to Authorities; – An information security incident resulting in the release of sensitive internal company information to external parties; – Loss or damage of HPA Information Technology hardware or IT systems (ie mobile phones, laptop, radio, internet outage, system failure, etc) – Environmental incidents which are not notifiable to Authorities – eg, insignificant spill to land that is contained using the company spill kits or spill trailer, with little or no harm to local environment; It also includes a near miss, which could have led to an incident.

Serious Incidents
Serious Incidents are categorised in 3 ways:
Fatality
Major Incident Admittance to, and treatment in, hospital for more than 24 hours, irrespective of injury type, OR at least 1 of the following: – full or partial amputation of an arm, hand, finger, thumb, leg, foot or toe; – dislocation of shoulder, hip knee or spine; – any injury likely to cause permanent blinding or reduction in sight in one or both eyes; – any burn injury which covers more than 10% of the body's surface area, or causes significant damage to the eyes, respiratory system or other vital organs; – electric shock or burn from explosion or fire caused by an electrical short circuit or overload; – any bone fracture, other than to a finger, thumb or toe; – any crush injury to the head or torso causing damage to the brain or internal organs; – any degree of scalping; – loss of consciousness caused by head injury or asphyxia; – any injury arising from working which leads to hypothermia or heat-induced illness, or requires resuscitation.

Dangerous Occurrence Incident

Any incident that has the potential for serious injury or loss of life, OR at least 1 of the following:

- collapse, overturning, or failure of any load bearing part of any lift, hoist, crane, mobile elevating work platform or forklift truck;
- IMDG Dangerous Goods incident (eg fire, uncontrolled release, serious damage) either inside the terminal or on a vessel alongside;
- any fall of a person into water;
- explosion or fire inside the terminal which results in operations stoppage for more than 6 hours;
- vessel/quay crane collision, regardless of cause;
- vessel hit the terminal quay deck;
- cranes blown down by strong wind;
- falling wire rope and/or associated parts from a crane without any injury;
- the unintentional collapse or partial collapse of any structure, including temporary works;
- other incidents having potential for serious injury or loss of life, material environmental harm, or which are otherwise notifiable incidents under the respective legislation.

3.7.2 EXTERNAL REPORTING OF INCIDENTS

SICTL terminal is obliged to notify and report incidents occurring or originating within the terminal to the appropriate regulatory organisations within the timeframes prescribed in legislation, EPL, Lease Conditions and the Development Consent. Unless noted otherwise, incidents that occur beyond the limits of the SICTL Terminal (including on board ships berthed at the SICTL terminal) are outside the scope of the OEMP. SICTL terminal's protocol for external notifications is described in the document **HSEQ8.1 Incident Management and Investigation Policy**.

3.8 EMERGENCY CONTROL AND RESPONSE

Broadly the potential emergencies that can be identified include but not limited to:

- Pollution incident within the terminal on land;
- Containers damaged by plant then leaking gases, fluids or solids;
- Containers arriving damaged then leaking gases, fluids or solids;
- Managed substances overwhelming bunding;
- Pollution incident originating from the terminal affecting the water of Botany Bay;
- Any pollution runoff from within the terminal;
- Discharges above specified limits, and
- Any solids or waste originating from the terminal entering the water.

3.8.1 EMERGENCY RESPONSE ACTION

The emergency control and response required to deal with the types of environmental incident is generally co-ordinated through the Chief Warden with the assistance of members of the Emergency Control Organisation and/or the Environmental Engineer or Manager - HSEQ.

Each emergency is actioned as deemed required in accordance to the **HSEQ10.1.3 Emergency Response Plan - SICTL**. A copy of the Emergency Response Plan is available at all times to all staff via the SharePoint document management system that is the repository for all HSEQ policies,

procedures, plans and templates. The Emergency Response Plan is also available on the company website at: http://www.hutchisonports.com.au/hutchisonports-sydney/

The general method for emergency response that applies to environmental incidents involving compliance or pollution is given below:

1. Danger - Perform a Quick Assessment
2. Rescue – If safe to do so
3. Alarm - Alert all Persons in the Immediate Area
4. Contain – If safe and trained to do so
5. Evacuate

All terminals at Port Botany have been provided with a common frequency Radio and Alarm System, (PBEAR), which is owned and maintained by NSW Ports. The system is intended to provide a quick method of alerting and advising and then updating all the other terminals at Port Botany of any event /incident / accident / emergency in the port area. Due to the sensitivity of the port area this system shall be used to communicate to all other terminals the reason for attendance of any of the emergency services (i.e. Police, Fire Brigade and Ambulance) at the port. The Radio and Alarm System has been installed at the location on each site which is continuously manned, typically the Security Office.

3.8.2 EMERGENCY CONTACT NUMBERS

The details for the 24-hour contact personnel and other contact numbers that should be called in the event of an emergency or incident are given in Table 8 below.

Table 8 SICTL Emergency Contact Numbers

SICTL Contacts		
Chief Warden	Shift Manager	Phone: 9578 8592
Communications Officer	Security Supervisor	Phone: 9578 8505

For details on Emergency Response external contacts and notification requirements, please refer to the **HSEQ10.1.3 Emergency Response Plan – SICTL**.

3.9 COMMUNITY CONSULTATION

3.9.1 THE OPERATIONAL COMMUNITY CONSULTATIVE COMMITTEE

The primary mechanism used by SICTL to interface with the community is the Port Botany Community Consultative Committee (PBCCC). Following agreement between its members and approval from DPIE on 16 September 2013, the Port Botany Expansion Community Consultative Committee combined with the Port Botany Neighbourhood Liaison Group to form the Port Botany Community Consultative Committee (PBCCC). The PBCCC, as a minimum includes the following members:

- two representatives from the Applicant (NSW Ports or SICTL or Patrick) including the person(s) responsible for environmental management;
- one representative from Bayside Council, approved by DPIE;

- at least 3 representatives from the local community, approved by DPIE, and
- one chairperson approved by DPIE.

The PBCCC meets at least four times each year to review and provide advice on the environmental performance of the SICTL terminal, including any construction or environmental management plans, monitoring results, audit reports or complaints.

3.9.2 OBLIGATIONS OF SICTL AT THE PBCCC MEETINGS

Meetings are held in a meeting room of the SICTL terminal building or a facility provided by NSW Ports. The –Environmental Engineer (or delegate), will attend and provide the PBCCC with regular information on the environmental performance and management of the SICTL terminal. Site inspections of the SICTL terminal may be organised through these meetings if required. Minutes of these meetings are recorded by NSW Ports, and these minutes are made available on the NSW Ports website within 14 days of the meeting, or as agreed with the PBCCC. A copy of the minutes of each PBCCC meeting and any responses to the PBCCC's recommendations will be forwarded to the DPIE within one month of each meeting by NSW Ports.

3.9.3 PUBLICLY AVAILABLE INFORMATION AND COMPLAINTS LODGEMENT

All audit, monitoring, management and reporting documents required under the Development Consent and EPL are made publicly available on the SICTL website.

Public comments, inquiries and complaints can be received by the following means:

- in person at the SICTL terminal building at Gate 150-153, Sirius Road (off Foreshore Rd) Botany;
- by mail, sent to Sydney International Container Terminals, PO Box 734, Botany NSW;
- by phone on the HPA complaints 1800 telephone number 1800 472 888, or
- by email, communityfeedback@hutchisonports.com.au

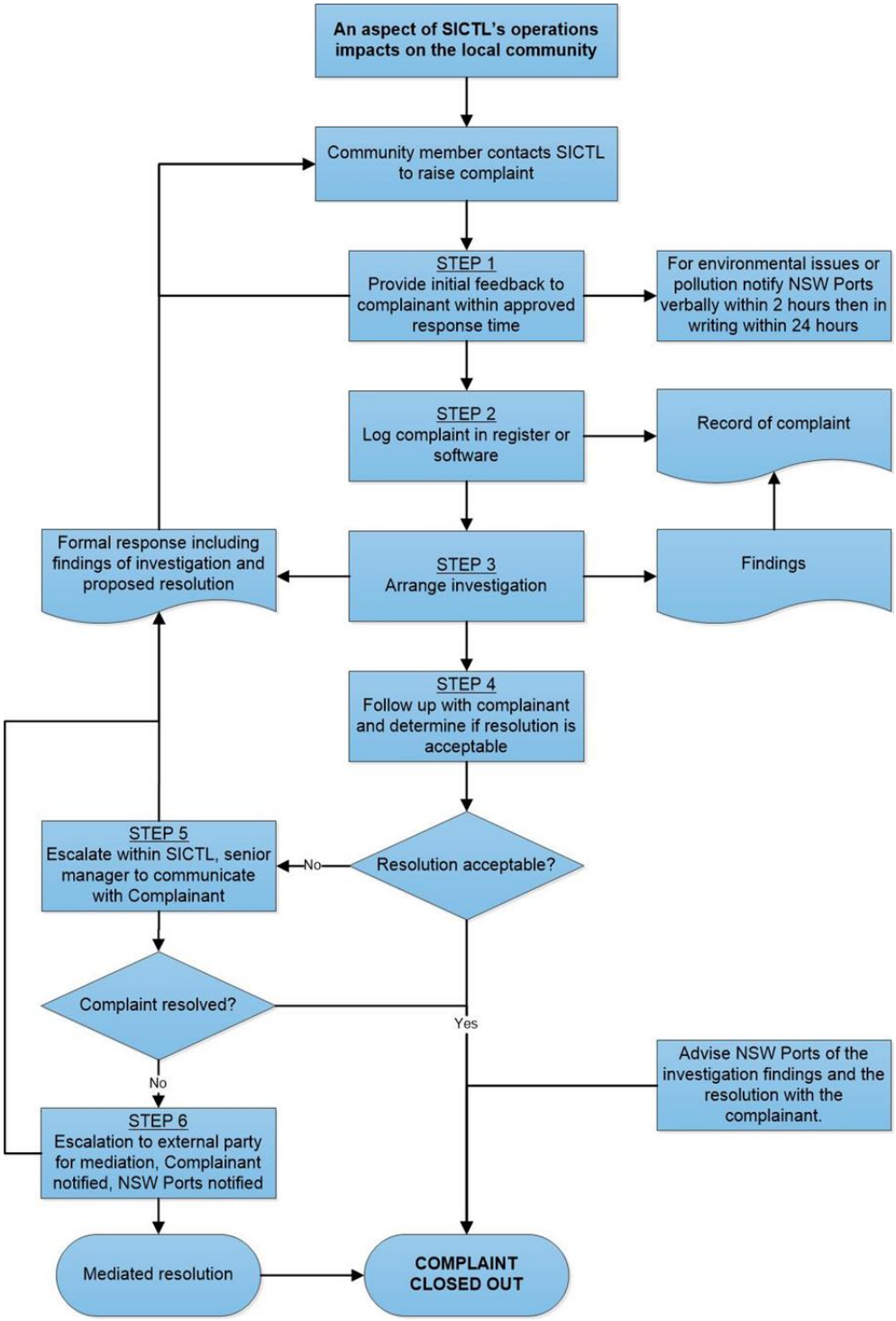
The above details will be publicised on the HPA website http://www.hutchisonports.com.au/ under the 'Contact Us' page.

3.10 COMPLAINTS MANAGEMENT

SICTL terminal is committed to managing community feedback in a manner that achieves good operational and community outcomes. SICTL operates a toll-free community complaints and feedback line (1800 472 888) which operates on a 24/7 basis. In addition, the SICTL website also has a "Contact Us" feature allowing the community to report complaints and provide feedback via email. SICTL continues to monitor all community feedback and complaints and responds promptly to all parties.

An overview of the complaints management and investigation process is outlined below:

Figure 6 Complaint Management Process



The complaints management process is comprised of six steps which aim to ensure beneficial resolution following a complaint lodged with SICTL. Other stakeholders can also lodge complaints with SICTL, the process followed will be the same:

Step 1: SICTL will receive the complaint and provide initial feedback and acknowledgement to the Complainant. This initial feedback will be within the following timeframes:

- (verbal) immediately for complaints lodged by phone or in person with a written follow-up within 2 hours (email or fax);

- (in writing) within 24 hours for complaints received by other means, and
- In the event of a complaint about an environmental issue or pollution, SICTL will verbally notify NSW Ports within 2 hours of receiving the complaint and then in writing within 24 hours.

Step 2: SICTL will log the complaint in the Community Feedback and Enquiries register. Complaint information shall include:

- the date and time of the comment, enquiry or complaint;
- the means by which the comment, inquiry or complaint was made (telephone, fax, mail, email or in person);
- any personal details of the commenter, enquirer or complainant that were provided, if no details were provided a note to that effect;
- the nature of the complaint;
- any actions taken by SICTL in relation to the comment, inquiry or complaint;
- If no action was taken by SICTL in relation to the comment, inquiry or complaint, the reasons why no action was taken, and
- any follow up actions with the date and time of follow up communications to the commenter, enquirer or complainant.

Step 3: SICTL will arrange an investigation to determine the cause of the complaint and if this cause is a product of SICTL's actions or under SICTL's responsibility. The Environmental Engineer will investigate in conjunction with terminal operations management. The operations underway at the time of the complaint will be reviewed to identify the cause. The findings, proposals and the resolution (including any resolutions already implemented) will be communicated to the complainant and NSW Ports in writing. The investigation may collect information through the following sources:

- Speaking with the workforce, plant operators, shift managers and yard managers about the activities underway at the time of the complaint;
- Review of shift manager's diary entries or prestart forms for information;
- Review of operations against the documented and approved work methods to be followed:
- Review of work records/ logged entries within the Terminal Operating System which controls the movement of freight within the terminal;
- Review of records of when trucks or ships were being serviced at the time of the complaint;
- Review of any relevant maintenance records for plant;
- Review of environmental conditions at the time of the complaint from weather records online;
- Review of monitoring data, if available, and
- Advice from independent consultants, if required

Step 4: Where a resolution was proposed to be implemented, SICTL will arrange for follow up with the complainant within an agreed timeframe (relative to the complaint and the resolution) to collect feedback on the effectiveness of the resolution.

Step 5: If the resolution is not acceptable to the complainant, SICTL will escalate the matter internally whereby a senior-level manager will contact the complainant and discuss the issue including existing or further resolution options. At this stage:

- a negotiated resolution which will satisfy the complainant and SICTL's operational needs can be implemented;
- if the senior manager and the complainant do not agree on a negotiated resolution, the senior manager will offer the Complainant the opportunity for external mediation, and
- if the Complainant elects mediation, SICTL will respond to the Complainant in writing advising them of the details of the mediation venue and appointment.

Step 6: SICTL will arrange mediation by an impartial external party. SICTL will fund the mediation process and accept the mediated solution. The outcome of the mediation will be communicated to the Complainant in writing by SICTL. The mediation will be documented and all documents from this and the previous five steps will be included in the record of the complaint.

4 IMPLEMENTATION

4.1 RISK ASSESSMENT

Risk management is a continuous, forward-looking process that is an important part of corporate, operational and technical engineering management processes. Risk management should address issues that could endanger achievement of critical objectives. A continuous risk management approach is applied to effectively anticipate and mitigate foreseeable risks that have critical impact on organisational success.

As part of this OEMP, a risk assessment has been undertaken to ensure that the outcomes of the environmental assessment, conditions of approval, and any other site investigations are effectively translated into operation at SICTL. The identified risks and the corresponding controls are documented in the RA0025 Environmental Risk Assessment.

The risk assessment uses qualitative measures to estimate the consequence or impact of an event, along with the estimate of likelihood. Each risk was assessed as being low (L), medium (M) or high (H) in terms of both consequence and likelihood. The Risk Assessment Matrix is provided in **Appendix B**.

4.2 ENVIRONMENTAL MANAGEMENT PLANS

The environmental management plans have been prepared for the environmental issues identified under section 3.2 of this OEMP. The environmental management activities and management measures are undertaken or complied with during operations of SICTL and it is ensured that the personnel responsible for implementing the OEMP are aware of their roles and responsibilities.

Environmental management plans have been presented separately under Section 7 of the OEMP. Each management plan will specify:

- the objective and the regulatory requirements that need to be complied with;
- the impacts and operational controls identified from the risk assessment;
  - the monitoring measures and the performance indicators;
  - the review mechanism; and
  - the responsibility necessary for the implementation of the control measures.

5 ENVIRONMENTAL FORMS, RECORDS AND REGISTERS

Environmental forms, records and registers used to document compliance with the OEMP. Provided below is a summary listing of these schedules.

A copy of all documents is always available to all staff via the SharePoint document management system that is the repository for all HSEQ policies, procedures, plans and templates.

Table 9 Environmental Documentation

Record No.	Record Title
HSEQ2.1.1.4	Risk Assessment Register
HSEQ2.1.1.2	Risk Assessment Tool
HSEQ11.2.1.2	Environmental Workplace Inspection Checklist - Sydney
HSEQ8.1	Incident Management and Investigation Policy
HSEQ8.1.1.5	Incident Notice Form
HSEQ10.1.3	Emergency Response Plan - SICTL
HSEQ10.1.1.1	Emergency Report
NA	Community Feedback and Complaints Register
NA	PBCCC Meetings Minutes
NA	Training Matrix
NA	Rapid Incident - online incident reporting software

6 MONITORING, AUDIT AND REVIEW

6.1 MONITORING

The environmental monitoring of the SICTL terminal operations will be carried out by the Environmental Engineer in conjunction with the Manager, Risk & Compliance, and relevant management representatives from Operations and Engineering through regular terminal inspections, monitoring programs and general surveillance of operations. Further details of monitoring are provided in each management plan. The OEMP management plans are the primary instruments controlling monitoring and reporting of results.

6.2 AUDITING

Auditing of the OEMP will be undertaken to ensure its implementation and effectiveness. Both internal audits and external audits shall be the instruments to determine whether the OEMP is properly implemented and maintained.

6.2.1 INTERNAL AUDITS

Internal audits are used as an in-house check of compliance as outlined in the **HSEQ11.4.1 Internal Audit Plan**, the report of which is submitted to the Executive Management Team for review and tabled in the Weekly Management Meeting. The records and processes relating to the environmental management of the SICTL terminal are assessed in the **Annual Environmental Management**

Report (AEMR), which is required in condition C4.2 of the Development Consent. The AEMR is prepared every twelve months and is made publicly available on the SICTL website.

6.2.2 EXTERNAL AUDITS

An external audit (as required by condition C4.5 of the Development Consent) is conducted every twelve months to check HPA's operational compliance with the Development Consent conditions. The audit is conducted by an auditor who is appointed by HPA and approved by the DPIE.

External audits involve a review of all environmental documents, records, and reports to ensure compliance with the requirements of the Conditions of Consent and OEMP. The audit reports are made publicly available on the SICTL website and also provided to the Secretary-General of the Department of Planning.

6.3 REVIEW AND CONTINUOUS IMPROVEMENT

The OEMP is a 'live' document and will be constantly reviewed and updated as required. Continuous improvement of the OEMP and the management plans aims to ensure that the OEMP remains current with SICTL's operations.

The factors that will necessitate the review of OEMP are listed below:

- Any changes to the operations and thereby change in the environmental risk assessment
- Where there is a need to improve the environmental performance
- As a result of changes to applicable legislation applicable to the SICTL terminal
- Incident or complaint that requires review of the management plans.
- Review opportunities identified through audits
- Any changes to the EPL and Development Consent conditions

Minor changes including but not limited to grammar, spelling, legislative references, contact details or changes in document titles, etc will be made to the OEMP as required and the new version provided to NSW Ports, DPIE and published on the website.

Major changes to the OEMP will require a re-submission process and incorporate stakeholder consultation.

Any update made will be recorded on the Revision History record (Page 2 of this OEMP) with the reasons for the update recorded along with a summary of the changes made.

The various instruments that are adopted by SICTL to continually improve the OEMP and the management plans are summarised in the below Table.

Table 10 Instruments for OEMP Review

Workplace Inspections	• Shall be conducted primarily by the Environmental Engineer assisted by SICTL Operations and Maintenance personnel (including HSRs). • Shall scrutinise the environmental impacts of the general running of the terminal and issues identified will be documented, photographed and discussed with members of the HSEQ team, terminal management and WHS Committee. Improvements can then be developed and implemented. • Inspections of the terminal will be conducted at least monthly.

Documenting opportunities for Improvement	• Document the opportunities for improvement in accordance with the **HSEQ2.2 Hazard and Improvement Opportunity Reporting Policy** • The control of non-conformities arising from audits, incidents or routine inspections will be documented in full to comply with legal and procedural requirements. • This documentation can be used in future scenarios such as training or decision-making
Auditing	• SICTL will use the results to drive the continuous improvement process with the goal of total compliance
Management Review	• All operating and environmental data collected during the operation of the SICTL terminal, including information on current activities, incident investigations and root causes, operational Environmental Data, AEMRs and KPIs will be reviewed by the HSEQ department and HPA Executive Management Team so that all levels of management are aware of the ongoing environmental performance of the terminal.

7 ENVIRONMENTAL MANAGEMENT PLANS

This section details the environmental management plans for each of the identified actual/potential issues identified that are associated with SICTL's operations.

- Objective
- Statutory Requirements and Legislative framework
- Responsibilities
- Operational Impacts and Control Measures
- Monitoring and Reporting
- Performance Expectations
- Review and Improvement

7.1 AIR QUALITY MANAGEMENT PLAN

OBJECTIVE

The objective of this management plan is to guide the direction of SICTL's operations so that operational staff can carry out their duties whilst remaining aware that their work may impact local air quality. Through this awareness, SICTL can best manage foreseeable impacts successfully and minimise emissions to atmosphere using efficient plant and equipment and through efficient operations always.

STATUTORY REQUIREMENTS AND LEGISLATIVE FRAMEWORK

This management plan has been prepared to fulfil the requirements defined under Development conditions C2.1, C2.2, C2.3 and C2.4 (Refer to **Appendix A1**).

The legislation that applies to the implementation of this management plan is listed below:

- Protection of the Environment (Operations) Act 1997 (NSW)
- Environmental Planning and Assessment Act, 1979 (NSW)

RESPONSIBILITIES

A comprehensive list of responsibilities, accountabilities and authorities is provided in section 3.4 of this OEMP. The key responsibilities for the implementation of this management plan is provided below.

Table 11 Tasks and Responsibilities (Air Quality Management)

Task	Responsibility
Induction and training of SICTL staff, contractors and visitors	Workforce Trainer
Maintenance of operational plant and vehicles	Maintenance Department and relevant service providers/contractors.
Checking each item of plant prior to use	Plant Operators
Monitoring of air quality impacts and effectiveness of controls	Operations staff / HSRs
Compile and analyse air quality monitoring results	Environmental Engineer
Management of Corrective Actions	Environmental Engineer

OPERATIONAL IMPACTS AND CONTROL MEASURES

The various operational impacts that have the potential to affect the air quality due to SICTL terminal and the details of the overall management methods and procedures that are implemented to control odour and dust are listed in the table below:

Table 12 Operational Impacts and Controls Measures (Air Quality Management)

Operational Impact	Operational Control Measures
Odours from the On-Site Fuel Storage Tank	
Breather pipes to allow for the ventilation of diesel fumes.	The diesel odours originating from the on-site fuel storage tank are not expected to impact the local air quality. Notwithstanding, the on-site fuel storage tank is situated far from the boundaries of the SICTL Terminal. The intent of this control is for the concentration of any diesel odours to have dissipated before they are carried beyond the boundaries of the terminal. Breather pipes of the fuel storage tank are positioned on the top of the tank, away from workers, and fitted with filters to prevent contamination of the fuel. These filters also help to minimise odour impacts.
Odours from Hazardous Freight/Dangerous Goods	
Most Dangerous Goods are usually shipped in sealed containers however some are in ventilated containers so that fumes do not accumulate and over pressurise the container	There are designated Dangerous Goods storage areas within the SICTL Terminal where spill containment systems are fitted. These areas are separated from the boundary of the terminal by the internal service roads and the landside exchange which allow for any odours to dissipate before they reach the boundary. In the event of dangerous goods being spilled, odours may be controlled by the application of absorbent materials which stabilise the spilled liquid. Additionally, the Dangerous Goods spill containment area is located on the far end of the SICTL Terminal, away from residential receptors.
Emissions from Operational Plant, Machinery and Equipment to Air	
The general operation of the terminal and for maintenance activities including site vehicles (utes, yard trucks, bus); reach stackers; shuttle carriers, and small plant (forklifts, elevated work platforms).	The necessary emission control devices are fitted to the operational plant and vehicles used by SICTL by the manufacturers. The continued operation of these devices are checked by every plant operator as part of the pre-start check for each item of plant and referred to the SICTL maintenance personnel if repairs or replacements are required. The SICTL maintenance department services operational plant and vehicles at scheduled intervals to ensure that manufacturer-fitted emission control devices or systems are working adequately. All vehicles, plant and machinery are operated efficiently in accordance with their specifications and instances of unnecessary idling will be minimised.
Dust	
Dust emissions are not anticipated from any operational activities; however, controls have been identified to mitigate risks from the undeveloped areas.	Although dust is not anticipated from operational activities, dust may be generated through the actions of wind on the undeveloped areas or by traffic on the terminal. Current control measures for the mitigation of dust disturbance on the terminal include the isolation of all undeveloped land areas from any container traffic or vehicle access, and the application of a dust suppressant to the affected areas when required.

	SICTL will monitor any airborne or accumulation of dust on the terminal and arrange for the suppression of dust by the following methods: • Cleaning of internal roads and sealed areas using road sweeper trucks; • The stabilisation of existing undeveloped areas on the terminal which will include the application (and reapplication when necessary) of an appropriate sealant, including polymer emulsions, bituminous emulsions, wood fibre mulch binders and other suitable synthetic products. The terminal will select the appropriate sealant on the basis of the environmental impact, water conservation, cost-effectiveness and longevity of the suppression; • Other dust mitigation activities. NOTE: Future stages of the SICTL terminal will be under construction adjacent to the operational areas. The control of dust in construction areas is managed by the Construction Environmental Management Plans relevant to those areas and is outside the scope of this document.

MONITORING AND REPORTING

Except for the undeveloped areas, the overall opportunity for odour and dust generation from the operational areas of the SICTL terminal is very low. In addition, the potential for surrounding roadworks and other construction areas, neighbouring stevedores and nearby industry each emitting their own odours and dust in a variety of environmental conditions make the isolation of SICTL's contribution difficult.

The method of monitoring adopted by SICTL is in the diligence of all operational staff and operators to identify odour and dust sources within the terminal, and the regular monthly terminal inspections conducted by the Environmental Engineer.

These monitoring records, observations and inspections will be documented and reported by the Environmental Engineer who will analyse the results and propose subsequent rectification actions. The results will be reviewed by the HSEQ department on an ongoing basis and will be used for various reporting obligations provided in Section 3.5.

PERFORMANCE EXPECTATIONS

The measure of how well this management plan is implemented and the effectiveness of the control measures described above shall be identified in the monthly monitoring and in any complaints returned by residents or other stakeholders.

The details of the overall management methods and procedures that are implemented to control odour and dust are listed in the table below:

Table 13 KPI's (Air Quality Management)

Key Performance Area	KPI
Air quality complaints received from residents or other members of the community.	Zero
Regular visual inspection of the terminal to verify that control measures are in place and functioning correctly and to identify any air quality issues or the presence of any deposited dust/sand.	Monthly visual inspection – 12 annually
Implementation of appropriate corrective actions following a non-conformance in relation to air quality controls.	Within 8 weeks of the identified non-conformance.

REVIEW AND IMPROVEMENT

The review and amendment of this management plan will be in accordance with section 6 of the OEMP. The management of complaints pertaining to the air quality due to SICTL shall be in accordance with Section 3.10 of this OEMP.

7.2 AVIATION OPERATIONAL IMPACTS MANAGEMENT PLAN

OBJECTIVE

The potential/actual environmental issues are already discussed under Section 3.2 of this OEMP. The objective of this management plan is to guide the direction of SICTL's operations so that operational staff can carry out their duties whilst remaining aware that their work may impact Sydney Airport. Through this awareness, SICTL can best manage foreseeable impacts successfully. Ultimately, awareness and management of impacts will lead to compliance with the Development Consent.

The implementation of this management plan will help SICTL in the following ways:

- Provides a basis for consultation with Sydney Airport Corporation Limited (Sydney Airport) regarding minimising or eliminating light-spill effects on pilots;
- Acts as a tool for promoting an ongoing relationship between Sydney Airport and SICTL so that any operational problems can quickly be solved directly between the two organisations, and
- Provides a basis for consultation with Airservices regarding all the SICTL terminal equipment being within the Obstacle Limitation Surface (OLS) for Sydney Airport and the quay line being within the CASA Lighting Control Zone D.

STATUTORY REQUIREMENTS AND LEGISLATIVE FRAMEWORK

The Conditions of Development Consent pertaining to managing impacts on aviation operations can be found in the clauses C2.21, C2.22, C2.23, C2.24 and C2.25 (Refer to **Appendix A1**).

The legislation that applies to the implementation of this management plan is listed below:

- Civil Aviation Regulations, 1988 (Cth)
- Civil Aviation Safety Regulations, 1998 (Cth)
- Airports Act 1996 (Cth)
- Airports (Protection of Airspace) Regulations 1996 (Cth)
- Environmental Planning and Assessment Act, 1979 (NSW)
- Marine Order 32 (Cargo Handling Equipment) 2011 (AMSA)
- Environment Protection and Biodiversity Conservation Act 1999 (Cth)
- Threatened Species Conservation Act 1995 (NSW)
- National Parks and Wildlife Act 1974 (NSW)

SICTL shall also have regard to the National Airports Safeguarding Framework (NASF) and its guidelines, when considering any aviation operational impacts or implementing any controls.

RESPONSIBILITIES

A comprehensive list of responsibilities, accountabilities and authorities is provided in section 3.4 of this OEMP. The key responsibilities for the implementation of this management plan is provided below.

Table 14 Tasks and Responsibilities (Aviation Operational Impacts Management)

Task	Responsibility
Induction and Training of SICTL staff, contractors and visitors	Workforce Trainer
Manage the controls on OLS and maintenance of Terminal Lighting	Operations and Engineering Managers, Maintenance department and relevant service providers/contractors
Monitoring of aviation impacts and effectiveness of controls	Operations staff / HSRs
Monitor light spill from ships and liaison with Ship Master	Shift Manager
Compile and analyse aviation monitoring results	Environmental Engineer
Point of contact for Sydney Airport and has the authority to direct a corrective action be implemented within the SICTL terminal.	Environmental Engineer and Engineering Manager

OPERATIONAL IMPACTS AND CONTROL MEASURES

The various operational impacts that have the potential to affect the aviation operations at Sydney Airport due to SICTL terminal and the details of the overall management methods and procedures that are implemented are listed in the table below:

Table 15 Operational Impacts and Control Measures (Aviation Operational Impacts Management)

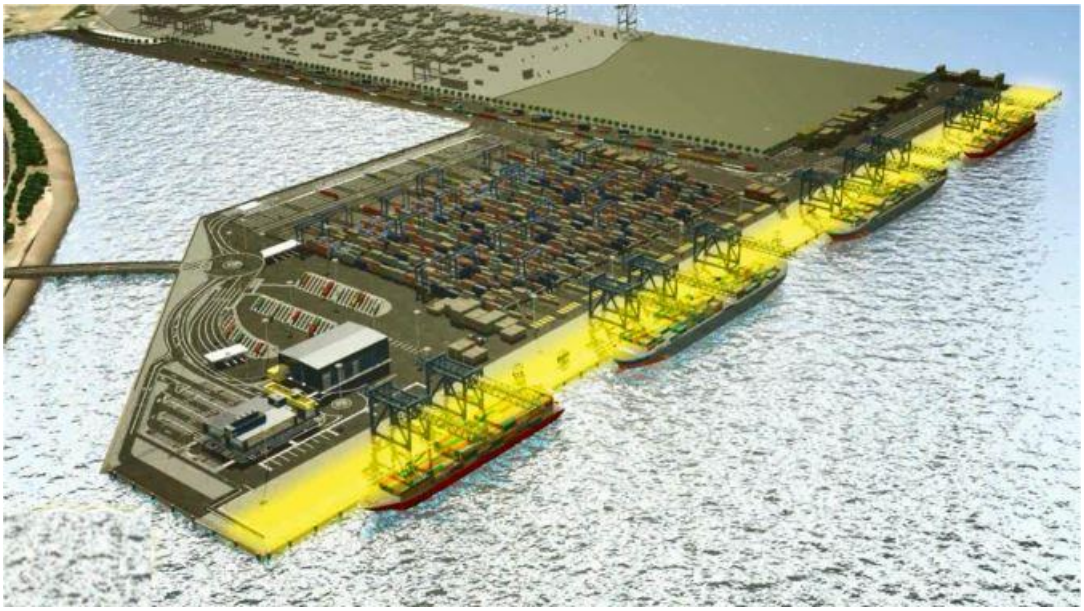
Operational Impact	Operational Control Measures
Fixed operating infrastructure	
The fixed operating infrastructure for the SICTL terminal may have a constant offset from the Parallel Runway however the Quay Cranes will have movable booms and may also move along the wharf to accommodate ships of different sizes, the large aperture of the design of the cranes is not expected to pose a problem for the Airport radar. Cargo ships moored alongside the wharf are expected to have some impact on the Sydney Airport Radar.	SICTL has undertaken the following measures: • location of the fixed terminal operating infrastructure adequately considers the required lateral separation distances to minimise the interference to Sydney Airport's radar and navigational systems. • it selects quay cranes with a reach that satisfies the lateral separation requirement • it selects appropriately sized low-profile cranes • it consults with Airservices and co-ordinating with NSW Ports so that the airport radar and navigational systems can be tested when the fixed terminal operating infrastructure is in place and recalibrated if necessary. • it establishes a system of interface and cooperation for ongoing monitoring by Sydney Airport. The Environmental Engineer and Engineering Manager are the main points of contact for Sydney Airport and have the authority to direct corrective action be implemented within the SICTL terminal.

Obstacle Limitation Surface	
The Obstacle Limitation Surface (OLS is a flat plane with a height of 51m above the Australian Height Datum (AHD). This acts as a ceiling for the height of the quay cranes and the ships to be serviced at the SICTL terminal. Under the Airports (Protection of Airspace) Regulations 1996, all penetrations of the OLS are classified as obstacles. No penetrations of the OLS are allowed under the legislation without the approval of the Australian Department of Infrastructure and Transport. The height of ships is a separate issue to the height of the fixed terminal equipment and is not specified in the Development Consent.	Large ships with tall masts or antennae penetrating the Obstacle Limitation Surface (OLS) are required to be managed. Approval by the Australian Department of Infrastructure and Transport are required prior to any ships operating at the SICTL terminal. Any conditions specified by CASA must be complied with by Sydney Ports. SICTL has selected low profile cranes for stevedoring ships. In the case of large ships that have masts or antennae which penetrate the OLS, SICTL will collaborate with NSW Ports, the Port Authority of NSW and the Shipping Line in the submission of an application to Sydney Airport, CASA and the Australian Department of Infrastructure, Regional Development and Cities for approval to penetrate the OLS. Any conditions specified by the authorities must be complied with by the Shipping Line, the Port Authority of NSW, NSW Ports and SICTL.
Terminal Lighting and Light Spill	
Pilots are reliant on the specific patterns of aeronautical ground lights during inclement weather and outside daylight hours. These aeronautical ground lights, such as runway lights and approach lights, play a vital role in enabling pilots to align their aircraft with the runway in use. They also enable the pilot to land the aircraft at the appropriate part of the runway. It is therefore important that lighting in the vicinity of airports is not configured or is of such a pattern that pilots could either be distracted or mistake such lighting as being ground lighting from the airport. The design of the terminal lighting complies with CASA's Manual of Standards Part 139 – Aerodromes, section 9.21; Lighting in the vicinity of Aerodromes. The design of the lighting of the SICTL terminal will be primarily horizontally mounted and facing downwards. The quay cranes have lighting installed on each crane boom to illuminate the area of the container ship they are working. These lights will face	The terminal lighting has been designed to primarily support terminal operations and allow safe work at night for stevedoring in accordance with Marine Order 32 (Cargo handling equipment). The design specifications of the terminal lighting conforms to the requirements of: • Schedule 1, Section 2 of Marine Order 32 (Cargo Handling Equipment): 2016. • Regulation 94 of the Civil Aviation Regulations 1988 regarding 'Dangerous lights' in the neighbourhood of aerodromes'. • CASA's Manual of Standards Part 139 – Aerodromes, section 9.21; Lighting in the Vicinity of Aerodromes • The quay line of the SICTL terminal is situated 732 metres from the centreline of the Parallel Runway placing it 18 metres inside Lighting Control Zone D of the Primary Runway Area as defined in the Civil Aviation Safety Authority's Manual of Standards Part 139 – Aerodromes (shown as the area shaded yellow in Figure 7 below). The maximum intensity of light sources inside Zone D (measured at 3° above the horizontal plane) permitted under this Manual is 450 candela. The lighting specifications for the SICTL terminal is communicated to the SICTL Maintenance department so that replacement light bulbs will have the same intensity as those specified in the design and controls.

downwards. The lights from vehicles and plant operating on the wharf will be shielded by the berthed vessels.	When undertaking significant lighting changes at the terminal, SICTL shall first consult with Sydney Airport and seek advice from CASA where required.
Light Spill	
It is anticipated that light spill from the SICTL terminal would not adversely impact operations at Sydney Airport due to the lighting design measures considered in the project.	The transfer of goods to or from vessels, including the use of cranes must comply with Marine Order 32 (Cargo Handling Equipment) 2016 issued by the Australian Maritime Safety Authority. In complying with MO32 SICTL adopts the below measures as far as reasonably practical: • minimising ship board lighting while berthed, and/ or • providing temporary shielding on the ship mounted floodlights while berthed. SICTL will liaise with vessels and ensure non-essential lighting on board is extinguished and essential lighting is screened or shielded where necessary. These controls are facilitated through SICTL's service agreement with each Shipping Line and supported through the Ship Booklet provided to the Ship Master on arrival to the SICTL terminal.
Bird Attraction to the Terminal	
The estuary area adjacent to the SICTL terminal provides feeding and nesting opportunities for local and migratory species of birds. However, the risk of collisions between birds and aircraft at or near airports, many be increased by the presence of a number of bird attractants that such as: • open rubbish bins where birds can pick food scraps opportunistically, • littering by the staff of the terminal, • ponding of surface water, • the structure of cranes, light poles and buildings providing an opportunity for birds to make nests, and • the terminal lighting attracting insects which are food for birds. Birds attracted to the estuary or SICTL terminal can migrate onto the airport or across flight paths, increasing the risk of strikes.	SICTL will use a number of means to control bird attraction. The below list is by no means an exhaustive list, but it gives an indication of the many measures undertaken: • enclosure of rubbish collection areas/ use of closed bins and regular collection of bins; • control of littering and bird feeding through inductions and toolbox talks; • control of littering by erecting signage within the terminal; • surveillance of litter and surface water ponding through workplace inspections; • SICTL personnel to strictly eat meals in the terminal – no food to be consumed outside of the terminal buildings; • monthly inspections of the terminal structures by SICTL employees and Environmental Engineer to check for nest formation. If any nests discovered, SICTL will apply to the National Parks and Wildlife Service for permission to destroy any eggs; • the design of rooves and gutters of terminal buildings to prevent formation of birds' nests; • installation of bird deterrents such as predator mannequins, netting, tape, bio-acoustics (natural

	predator calls) in quiet areas of the terminal at strategic locations (when required); • the engagement of a specialist lighting consultant to provide advice on terminal lighting to deter insects which are food for birds; • the engagement of a consulting avian ecologist to provide advice to SICTL on active management methods such as flock dispersal, nest removal, use of trained predators etc; • no bird-attracting cargo (such as livestock or bulk grain) handled at the SICTL Terminal; • liaison between the SICTL Environmental Engineer and the Sydney Airport Wildlife Management Group for implementation of any dispersal or harassment protocols (or any other method of bird removal). Management of Penrhyn Estuary bird populations falls outside the scope of SICTL operations and this OEMP.
Bird Attraction to Container Ships	
When disoriented or tired, birds may land on ships at sea to recover. There is a small risk of ships bringing birds into Botany Bay that have remained on board in large numbers (especially after bad weather). The risks include: • large groups of birds may remain on board ships until berthing, then fly off; • the attraction of birds to the rubbish disposal areas on ships; • littering into Botany Bay by ships crews presenting a food opportunity for fish and therefore birds; • shipboard lighting (deck lights) attracting insects which are food for birds, and • the structure of ships, i.e., mast arms and handrails.	SICTL liaises with the Shipping Line/ Ship Master of each vessel so that: • there are no large groups of birds present on board ships before berthing; • ships' crew do not feed birds or engage in fishing activities from the vessel while berthed, and • minimising ship board lighting while berthed to the amount required to allow safe work. These controls are facilitated through SICTL's service agreement with each Shipping Line and supported through the Ship Booklet provided to the Ship Master on arrival to the SICTL terminal.

Figure 7 Area of the quay line within Sydney Airport's Lighting Control Zone D.



MONITORING AND REPORTING

Monitoring of the potential impacts arising from operations at the terminal and the effectiveness of the controls implemented by SICTL is generally carried out by the Environmental Engineer. Additionally, the following sources of information are monitored:

- SICTL personnel reporting aviation impacts (including detection of roosting birds) to the Environmental Engineer;
- Complaints from pilots or Airservices relayed through Sydney Airport, and
- Maintenance monitoring of the Aviation Obstacle Lights installed at the top of the Quay Cranes and when changes to equipment occur.

SICTL will interface with the Sydney Airport Airfield Operations Co-ordinator to manage any bird hazards originating from the SICTL terminal with the potential to affect Sydney Airport.

The results of monitoring will be compiled by the Environmental Engineer who will analyse the results. The results will be reviewed by the HSEQ department on an ongoing basis and will be used for various reporting obligations as discussed in Section 3.5 of this OEMP.

PERFORMANCE EXPECTATIONS

The measure of how well this management plan is implemented and the effectiveness of the control measures described above shall be identified in the monthly monitoring and in any complaints returned by residents or other stakeholders.

Table 16 KPI's (Aviation Operational Impacts Management)

Key Performance Area	KPI
Airport-related complaints including light-spill, bird hazards received from Sydney Airport or other members of the community.	Zero
Regular visual inspection of the terminal to verify that control measures are in place and functioning correctly and to identify the presence of any bird hazards.	Monthly visual inspections – 12 annually

Note:

* Implementation of Corrective Actions in relation to terminal lighting, light spill or bird hazards shall be undertaken following consultation with Sydney Airport officers who have the authority to enforce compliance of specific aviation-safety related breaches.

REVIEW AND IMPROVEMENT

The review and amendment of this management plan will be in accordance with section 6 of the OEMP. The management of complaints pertaining to impacts on operations of Sydney Airport shall be in accordance with Section 3.10.

7.3 NOISE MANAGEMENT PLAN

OBJECTIVE

The objective of this management plan is to guide the direction of SICTL's operations so that operational staff can carry out their duties whilst remaining aware that their work may impact nearby residents. Using this management plan will help SICTL:

- as a basis for consultation with relevant stakeholders regarding minimising or eliminating noise impacts,
- as a tool for promoting an ongoing relationship between the relevant stakeholders and SICTL so that any operational problems can quickly be solved and
- in providing compliance to environmental legislation.

STATUTORY REQUIREMENTS AND LEGISLATIVE FRAMEWORK

The Conditions of Development Consent pertaining to managing noise from SICTL's operations can be found in the clause C2.5 to C2.11 (Refer to **Appendix A1**). This management plan also addresses the conditions of L3.1 to L3.8 and E1.1 to E1.2 under EPL #20322 issued to SICTL (**Appendix A3**).

The legislation that applies to the implementation of this management plan is listed below:

- Protection of the Environment (Operations) Act 1997 (NSW)
- Environmental Planning and Assessment Act, 1979 (NSW)

RESPONSIBILITIES

A comprehensive list of responsibilities, accountabilities and authorities is provided in section 3.4 of this OEMP. The key responsibilities for the implementation of this management plan is provided below:

Table 17 Tasks and Responsibilities (Noise Management)

Task	Responsibility
Induction and Training of SICTL staff, contractors and visitors	Workforce Trainer
Maintenance of operational plant and vehicles to ensure the noise control devices such as reversing quackers, alarms, mufflers and insulated panels are always working and are set to comply with noise limits.	Maintenance Department and relevant service providers/contractors
Proper landing of containers from operational plants	Plant Operators
Monitoring of noise impacts and effectiveness of controls	Operations staff / HSRs
Six monthly noise monitoring	Independent Noise Consultant
Analyse the noise monitoring results	Environmental Engineer

OPERATIONAL IMPACTS AND CONTROL MEASURES

Details of the overall management methods and procedures that will be implemented to control noise from the SICTL Terminal are explained in the below Table.

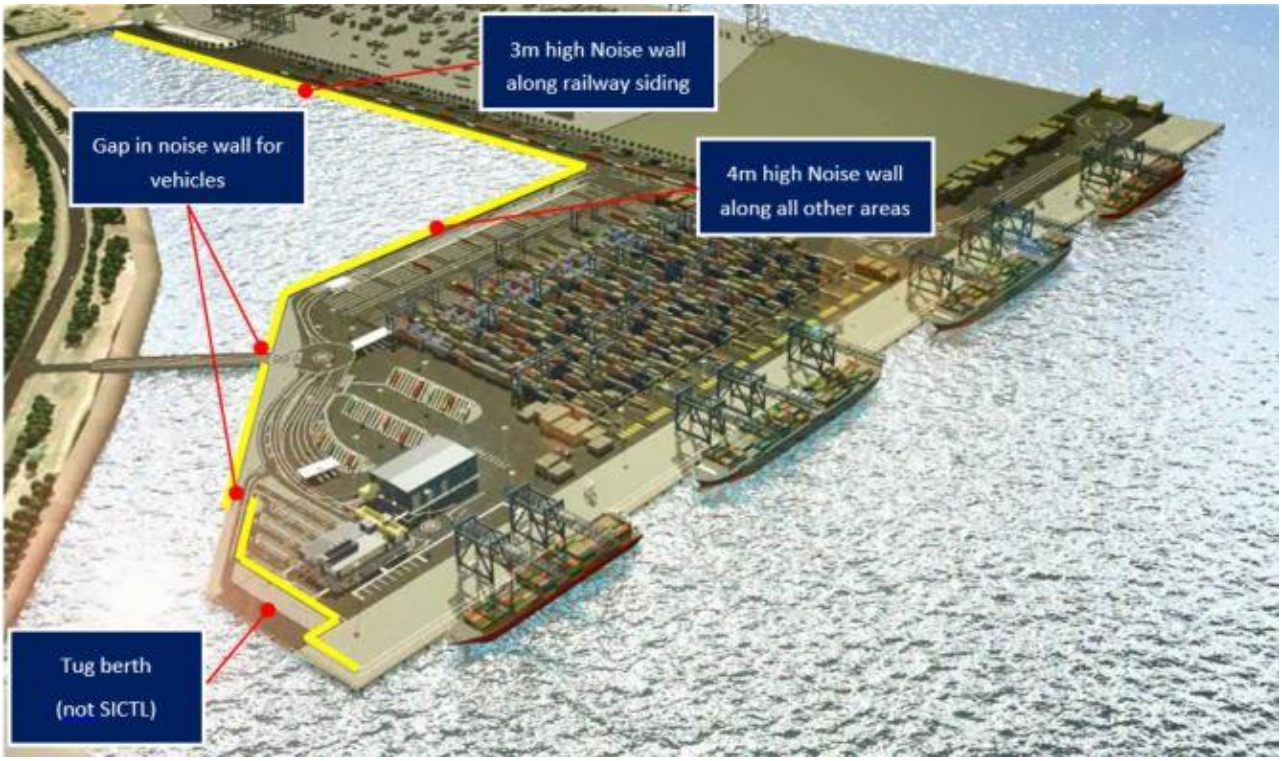
Table 18 Operational Impacts and Control Measures (Noise Management)

Operational Impact	Operational Control Measures
Noise from SICTL terminal	
General terminal operation activities generate noise that has the potential to disturb shorebirds in the Penrhyn Estuary, local residents and other stakeholders.	The terminal is built with a noise wall along its northern edge as depicted in Figure 8. The noise wall is designed in accordance with the acoustic modelling detailed in chapter 22 of the Port Botany Expansion Environmental Impact Statement (EIS) and is: • 3 metres high when parallel to the railway siding, and • 4 metres high along other areas of the terminal. A key assumption in the modelling was the absence of stacked containers within the terminal. During operation, containers will be stacked up to five high in the ASC blocks thus further shielding noise sources and minimising the impact beyond the modelling.
Noise from Operational Plant, Machinery and Equipment	
The SICTL Terminal will feature a combination of electric and diesel plant, machinery and equipment (assets) used in the general operation of the terminal and for maintenance activities. It is expected that noise from these assets will have some impact on nearby residents unless adequately managed. The main areas of concern are engine noise and reversing alarms.	• The plant selected for use at the Terminal are fitted with the manufacturer's noise control devices. • SICTL in-house maintenance personnel will ensure the noise control devices such as mufflers and insulated panels are always working adequately or that defective units are replaced. • All plant owned or operated by SICTL must be fitted with reversing alarms. The type of alarms fitted will be the broadband 'quacker' type as opposed to the alternative tonal 'beeper' type. • Prior to operating an item of plant, the operator will check the fitted noise control devices and reversing alarms are adequate and are working correctly as part of the pre-start checking procedure for each machine. • Equipment found to be producing excessive noise will be identified to Maintenance and taken out of use and repaired. • Carrier's trucks will arrive at the terminal to load or unload containers and will be fitted with a variety of reversing alarms (broadband and tonal types). SICTL will encourage its customers to fit broadband type reversing alarms to their trucks. • Management methods for minimising the noise will be communicated to visitors, operators and contractors through the SICTL induction program.

Operational Impact	Operational Control Measures
	• Equipment idle time will be minimised through throttling down and switching off idle equipment. • Operators and truck drivers will be encouraged to identify practices and opportunities to reduce operational noise emanating from plant. • Plant or vehicles that have malfunctioning or damaged noise control devices will be removed from service, documented and referred to the SICTL maintenance department for repairs. • Generally, the SICTL operational noise will be assessed by the Environmental Engineer or the Manager, Engineering during regular terminal inspections and internal process audits.
Noise from Container Landing	
The noise from containers landing on hard surfaces is expected to occasionally impact nearby residents in certain environmental conditions such as wind direction and high speeds. SICTL anticipates the noise levels from container handling to be lower than existing terminals because most of the handling will be done by the Automated Stacking Cranes (ASCs) which have more control than a manual operation.	The majority of the controls to minimise noise from containers landing on hard surfaces are built into the machines that lift them. Soft landings are achieved by programming the machine control systems to slowly lower containers when approaching ground level. The Automated Stacking Cranes will do this as they are guided by laser systems which track the progress of a container being lowered. Similarly, the Quay Crane enters 'slow mode' when approaching the level of the quay apron.
Noise from Freight Train and Rail Activities	
SICTL shall move a percentage of cargo using the rail network. Marshalling of locomotives and train wagons through the rail siding (including uncoupling processes) are expected to create some noise that may impact nearby residents.	The noise wall erected alongside the entire length of the rail sidings is the main management measure that will attenuate most noise emanating from trains and rail activities. SICTL has not implemented a gate alarm system – instead the Rail Team Leader will communicate with ARTC and the Train Operator via mobile phone to arrange for the rail gate to be opened when the train is at the final approach to the SICTL terminal. The unnecessary use of whistles or horns by trains on the SICTL rail siding is not permitted, to prevent disturbances to shorebirds in Penrhyn Estuary and local residents. Under the requirements for safe work, the use of train horns (where necessary) will prevail.
Noise from Ships	
Noise emanating from ships is outside the control of SICTL. When underway, the vessel Master is required to sound the ship's horn to communicate his intentions to other vessels under NSW maritime law	SICTL will liaise with the Shipping Lines so that noise emanating from ships deemed to have adverse impacts on nearby residents is mitigated as much as practicable. If a ship is identified as particularly noisy, the Port Authority of NSW, VTS Centre may be contacted and port officers can

Operational Impact	Operational Control Measures
and the International Regulation for the Prevention of Collisions at Sea. When berthed, the usual practice is for crews to shut down their main engines and run smaller engines powering generators for the operation of the ship's systems and the preservation of refrigerated cargo. This practice generates significantly less noise than using the main engines.	be dispatched to the ship to attempt to identify and remedy the noise issues. Proposed controls on noise from ships whilst berthed include shutting off the main engine(s) and running smaller engines to drive generators or the (future) use of Shore Based Power. Although the infrastructure has been installed during construction of the Terminal, Shore Based Power is not immediately available for use as a noise mitigation measure upon commencement. SICTL will commission Shore Based Power at all berths in future construction phases which will compliment other controls for noise mitigation.

Figure 8 Diagram showing the extent of the noise wall.



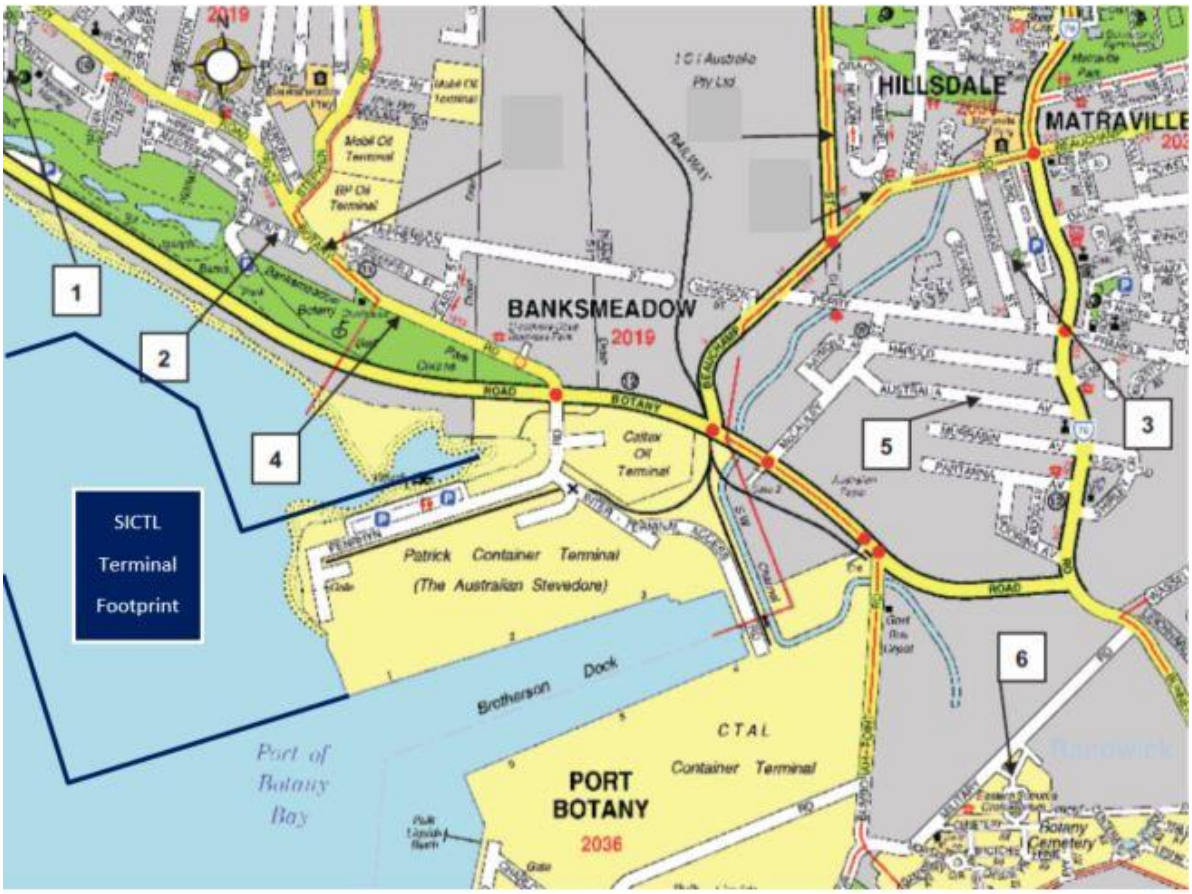
MONITORING AND REPORTING

In accordance with SICTL's EPA Licence and the Consent Conditions, SICTL will engage acoustic consultants accredited by the Association of Australian Acoustical Consultants (AAAC) for the monitoring of noise from the SICTL Terminal.

For the operational noise monitoring, the six locations identified in SICTL's EPA Licence and the Development Consent (Figure 9) will be used.

- Chelmsford Avenues, Botany
- Dent Street, Botany
- Jennings Street, Matraville
- Botany Road, Banksmeadow (North of Golf Club)
- Australia Avenue, Matraville
- Military Road, Matraville

Figure 9 Noise Monitoring Locations (numbers 1 to 6, adapted from EIS figure 22.1).



To isolate the noise contribution by SICTL as much as is possible and to measure in accordance with SICTL's EPA Licence and the Consent Conditions, additional noise monitoring locations may be included, or residential receiver locations adjusted based on the Assessment of Operational Noise Impacts (described in Table 19) and in consultation with the noise consultant (but still in compliance with conditions).

Table 19 Assessment of Noise Impacts

Relevant Receiver	No. on Map	Assessment of Operational Noise Impacts
Chelmsford Avenues	1	The location is not expected to be impacted as there are many roads, residences and industrial sites between this location and the SICTL Terminal. This location is also close to Sydney Airport.
Dent Street	2	This location is expected to be the most impacted because it is the closest residential receiver to the SICTL Terminal. This area is the most suitable for operational noise monitoring and will be treated as representative of other locations.
Jennings Street	3	This location is not expected to be impacted as there are many roads, residences and industrial sites between this location and the SICTL Terminal.
Botany Road (North of Golf Club)	4	This location is expected to be impacted due to the proximity to the SICTL Terminal.
Australia Avenue	5	This location is not expected to be impacted as there are many roads, residences and industrial sites between this location and the SICTL Terminal.
Military Road	6	This area is not expected to be impacted as there are two other stevedores and various industrial sites between this location and the SICTL Terminal.

During operations, SICTL will undertake periodic attended and unattended noise monitoring to develop a representation of the terminal noise received by residential receivers. The operational noise monitoring program will:

- Continuously record for a duration of two weeks at a time;
- Take place at a frequency of every six months;
- Additionally, take place at the commencement of a new phase of operations or at appropriate operational milestones;
- Take place in support of any application made by NSW Ports to increase the throughput at the terminal;
- Take place at any other additional time as determined by SICTL for example, in relation to noise complaints or the introduction of different equipment, and
- Be used to verify the noise contribution of the terminal against the noise modelling predictions stated in the EIS and investigate and explain differences.

The results of noise monitoring will be compiled by the acoustic consultant into the Noise Compliance Assessment Report and reviewed by the Environmental Engineer. The Noise Compliance Assessment shall be submitted to NSW Ports and uploaded to the HPA website within 14 days of receipt as per SICTL's environmental protection licence conditions.

The results of the Noise Compliance Assessment Report will be included in the AEMR along with any trends, key management implications and proposed management actions.

The raw data that is captured on the complaints register will go directly into the AEMR together with copies of the complaint reports including times, dates, photos and follow up.

PERFORMANCE EXPECTATIONS

The measure of how well this management plan is implemented and the effectiveness of the control measures described above shall be identified in the 6 monthly noise monitoring and in any complaints returned by residents or other stakeholders.

The details of the management methods and conditions that are implemented to monitor and control noise are listed in the table below.

Table 20 KPI's (Noise Management)

<table>
<tr><th>Key Performance Indicators</th><th>Goal</th></tr>
<tr><td>Noise complaints received from residents or other members of the community.</td><td>Zero</td></tr>
<tr><td>EPA Licence condition L3.1
<table>
<tr><th>Most Affected Residential Location</th><th>Day</th><th>Evening</th><th>Night</th><th>Night</th></tr>
<tr><td>-</td><td>LAeq(15minute)</td><td>LAeq(15minute)</td><td>LAeq(15minute)</td><td>LAeq(9 hrs)</td></tr>
<tr><td>Chelmsford Avenue</td><td>40</td><td>40</td><td>40</td><td>38</td></tr>
<tr><td>Dent Street</td><td>45</td><td>45</td><td>45</td><td>43</td></tr>
<tr><td>Jennings Street</td><td>36</td><td>36</td><td>36</td><td>35</td></tr>
<tr><td>Botany Road (north of Golf Club)</td><td>47</td><td>47</td><td>47</td><td>45</td></tr>
<tr><td>Australia Avenue</td><td>35</td><td>35</td><td>35</td><td>35</td></tr>
<tr><td>Military Road</td><td>42</td><td>42</td><td>42</td><td>40</td></tr>
</table></td><td>Noise from the premises must not exceed the noise limits presented in the adjacent table.

(additional EPA Licence conditions L3.3, L3.4, L3.5, L3.6, L3.7, L3.8 apply to noise monitoring specifications)</td></tr>
<tr><td>EPA Licence condition L3.2.
<table>
<tr><th>Most Affected Residential Location</th><th>Night</th></tr>
<tr><td>-</td><td>LA1(1 minute)</td></tr>
<tr><td>Chelmsford Avenue</td><td>53</td></tr>
<tr><td>Dent Street</td><td>59</td></tr>
<tr><td>Jennings Street</td><td>55</td></tr>
<tr><td>Botany Road (north of Golf Club)</td><td>59</td></tr>
<tr><td>Australia Avenue</td><td>57</td></tr>
<tr><td>Military Road</td><td>60</td></tr>
</table></td><td>Noise from the premises must not exceed the noise limits presented in the adjacent table.

(additional EPA Licence conditions L3.3, L3.4, L3.5, L3.6, L3.7, L3.8 apply to noise monitoring specifications)</td></tr>
<tr><td>EPA Licence condition E1.2
Every 6 months, the Licensee must undertake a periodic noise monitoring program consisting of attended and unattended monitoring and provide a report within one month after completion of monitoring to the EPA's Manager, Sydney Industry at PO Box 668 Parramatta NSW 2124 containing the following information:
(a) unattended monitoring data for a continuous period of no less than 2 weeks;
(b) attended monitoring data during the period outlined in subsection (a);
(b) monitoring data from a minimum of 3 locations;
(c) an assessment of the noise levels against Condition L3 including a trend analysis;
(d) details of any feasible and reasonable noise mitigation measures that have been or are proposed to be implemented to further reduce noise levels below the limits prescribed in this licence.</td><td>Every 6 months</td></tr>
</table>

If SICTL anticipates operational activities likely to affect the noise amenity of nearby residents a suitable notification will be selected from the following methods:

- Messages communicated to passing motorists on VMS boards located on Foreshore Rd and/ or near Botany shops on Botany Rd
- Broadcasting notification emails to the addresses on the SICTL community mailing list (visitors to the company website can register their email address)
- Letterbox drops through the surrounding areas of Banksmeadow and Botany
- Attaching a notification to the Community notice boards at Botany Shops
- Advertising notifications on the company website
- Advertising notifications in the local newspapers
- Door knocks for the residents likely to be most affected

REVIEW AND IMPROVEMENT

The review and amendment of this management plan will be in accordance with section 6 of the OEMP. The management of complaints pertaining to the noise levels due to SICTL operations shall be in accordance with Section 3.10 of this OEMP.

7.4 OPERATIONAL TRAFFIC MANAGEMENT PLAN

OBJECTIVE

The objective of this management plan is to guide the direction of SICTL's operations so that the effects of operational traffic on the surrounding area and local community are mitigated as far as reasonably practicable. This plan will help in providing a basis for consultation with relevant stakeholders regarding minimising traffic impacts.

STATUTORY REQUIREMENTS AND LEGISLATIVE FRAMEWORK

The Conditions of Development Consent pertaining to managing noise from SICTL's operations can be found in the clause C2.12 (Refer to **Appendix A1**).

The legislation that applies to the implementation of this management plan is listed below:

- Environmental Planning and Assessment Act, 1979 (NSW)
- Ports and Maritime Administration Act 1995 (in particular Schedule 4)
- Ports and Maritime Administration Regulation 2012 (in particular Part 3) Port Authority—Land Traffic Control Regulations—N.S.W.
- Protection of the Environment Operations Act 1997 (NSW)
- Port Botany Landside Operations, Mandatory standards under Part 3 of the Ports and Maritime Administration Regulation 2012

RESPONSIBILITIES

A comprehensive list of responsibilities, accountabilities and authorities is provided in section 3.4 of this OEMP. The key responsibilities for the implementation of this management plan is provided below:

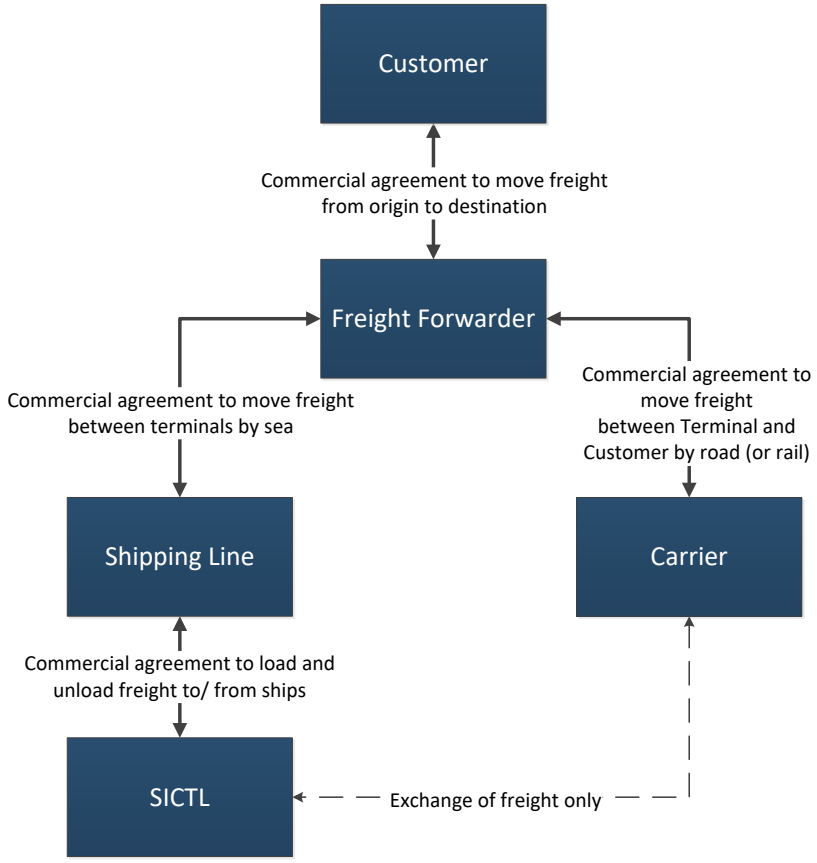
Table 21 Tasks and Responsibilities (Operational Traffic Management)

Task	Responsibility
Induction and Training of SICTL staff, contractors and visitors	Workforce Trainer
Adhere to the traffic controls at terminal	Truck drivers
Communication with Carriers and Truck Drivers	Operations Shift Leader and Yard Team Leader
Inspection and Monitoring of traffic outside the terminal	Operations managers
Analyse the truck noise and congestion observations	Environmental Engineer

OPERATIONAL IMPACTS AND CONTROL MEASURES

The importing and exporting process involves a variety of participants connected through different mechanisms. The explanation of these mechanisms helps to understand the involvement of SICTL within the context of the supply chain. The overall relationships between the different participants are explained in Figure 10:

Figure 10 Supply Chain Relationship



The Freight Forwarder is at the centre of the supply chain process connecting the sea and land components of the transport system. There is no relationship between the Terminal (SICTL) and the Freight Forwarder because the Shipping Line controls this part of the process. Similarly, there is no relationship between the Terminal and the Carrier as both parties have commercial agreements with their respective clients. The absence of a formal agreement between the Terminal and the Carrier means that the Terminal does not have direct control over the actions of the Carrier. To the extent possible, SICTL will influence and encourage Carriers to be environmentally responsible and will educate carriers to promote good driver habits to minimise potential noise and traffic issues.

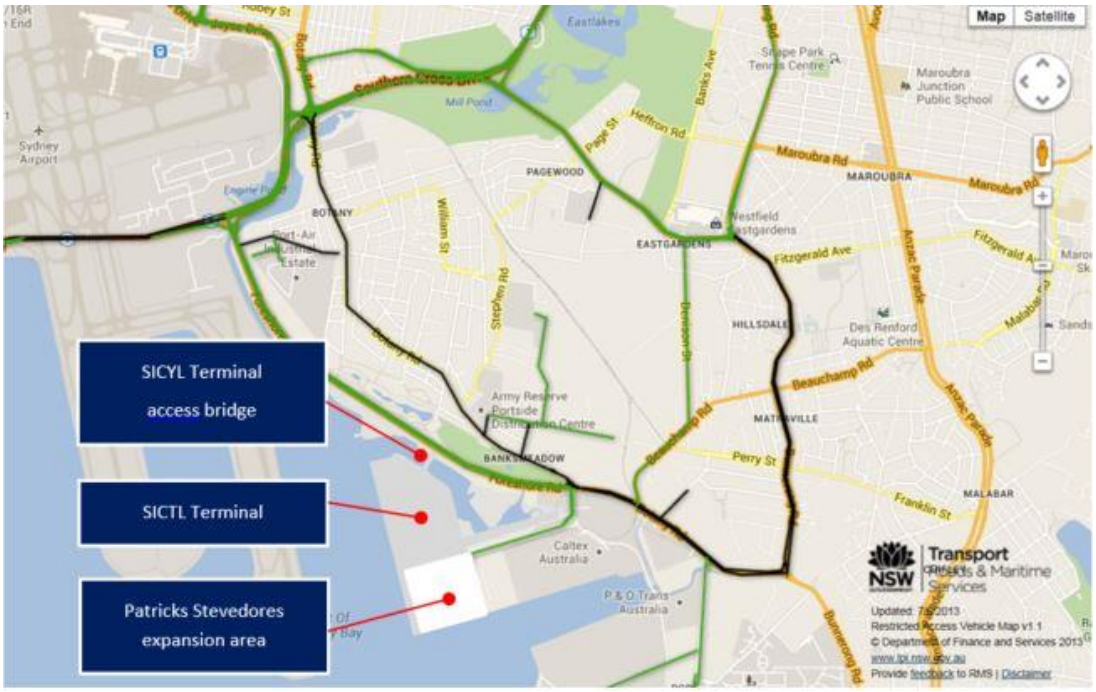
The operational impacts of truck traffic originating from the 24/7 operations of SICTL Terminal will be similar to the impacts arising from neighbouring stevedores. These impacts are listed below:

- Noise emanating from trucks such as engine noise, compression braking and rattling of unloaded trailers affecting resident
- The SICTL Terminal will be accessed by a dedicated road bridge crossing the Penrhyn Estuary which will intersect with Foreshore Rd and be managed by traffic signals. This is expected to cause minor delays to through traffic using Foreshore Road during peaks as the phasing of the traffic signals allows vehicles to turn into and out of the SICTL Terminal.
- SICTL will have an on-site diesel storage tank for the refuelling of plant and terminal vehicles. Fuel deliveries to the terminal will be by truck but are envisaged to be a small proportion of the overall truck traffic.

Operational Impact	Operational Control Measures
Noise caused by trucks entering or leaving SICTL terminal	
Loaded trucks naturally emanate more engine noise when setting off and drivers are more likely to use compression braking when slowing. The trailers of unloaded trucks entering or leaving the SICTL Terminal may rattle as their moving parts are not secured by a container. This noise may impact nearby residents.	• Educate drivers through the online driver's induction (completed by drivers before they arrive at the SICTL Terminal and part of the Maritime Security Identification Card control mechanism). • Awareness on 'Restricted Access Vehicles Routes' endorsed by the Roads and Maritime Services (refer to Figure 11) • Broadcasts to drivers via the Truck Appointment System. • Erect conspicuous signage before the exit of the terminal advising drivers to minimise their noise impacts such as compression braking and avoid using residential roads. • Encourage Carriers to fit broadband 'quacker' type reversing alarms by communicating this requirement to Shipping Lines and Freight Forwarders who service the SICTL terminal. • Refer to Noise Management Plan for more noise mitigation measures.
Traffic impacts caused by trucks entering or leaving the SICTL terminal	
The SICTL Terminal will be accessed by a dedicated road bridge crossing the Penrhyn Estuary which will intersect with Foreshore Rd and be managed by traffic signals. This is expected to cause minor delays to through traffic using Foreshore Road during peaks as the phasing of the traffic signals allows vehicles to turn into and out of the SICTL Terminal.	• Compulsory use of the Port Botany Landside Improvement Strategy (PBLIS) and the Truck Appointment System, thus spreading the traffic load evenly throughout the day. • Storage capacity for trucks within the SICTL terminal, thus avoiding queues. • Use of the roundabout near the terminal access bridge to turn away trucks in overflow situations that would otherwise queue. • Drivers Amenities Building to be used by drivers, thus negating the need to use local amenities in surrounding areas. • Encouragement of back loading. • Increase in the rail modal share (lease condition). • SICTL Truck Management (Explained below)
Fuel consumed by Operational vehicles	
The amount of fuel consumed by the operational vehicles and plant is a function of the Terminal's throughput (which dictates how	• Fuel efficiency is one of the selection criteria before purchasing any operational plant.

Operational Impact	Operational Control Measures
many items of plant are needed to throughput). SICTL will have an on-site diesel storage tank for the refuelling of plant and terminal vehicles. Fuel deliveries to the terminal will be by truck but are envisaged to be a small proportion of the overall truck traffic.	• Monitor the fuel usage by operational plant and vehicles by the SICTL operational staff and the plant operators. • Maintenance personnel will check the fuel usage during servicing of the vehicles on-site or whenever fuel system problems are encountered. • The fuel delivery system will meter and log the quantities of fuel delivered to each vehicle. • Maintenance personnel will monitor these trends as part of their normal fleet management processes. Quantities of fuel pumped will be correlated with invoice information from the fuel supplier.

Figure 11 RMS' Restricted Access Vehicles Map: B-Doubles are permitted (green) and permit conditions apply (black), Port Botany Expansion area included



SICTL Trucks Management

All Stevedores in the Port Botany area are obliged to comply with the Port Botany Landside Operations, Mandatory standards under Part 3 of the Ports and Maritime Administration Regulation 2012 as a condition of their lease. This legislation supports the Port Botany Landside Improvement Strategy (PBLIS) administered by Transport for NSW. The PBLIS and the Mandatory Standards set a framework and protocols where the scheduling of trucks is controlled to guarantee reliability and minimise waiting times and truck queues.

The process introduced by the Mandatory Standards is for each terminal to operate a Truck Appointment System (TAS) and for each Carrier to book an available 'Slot' through this TAS.

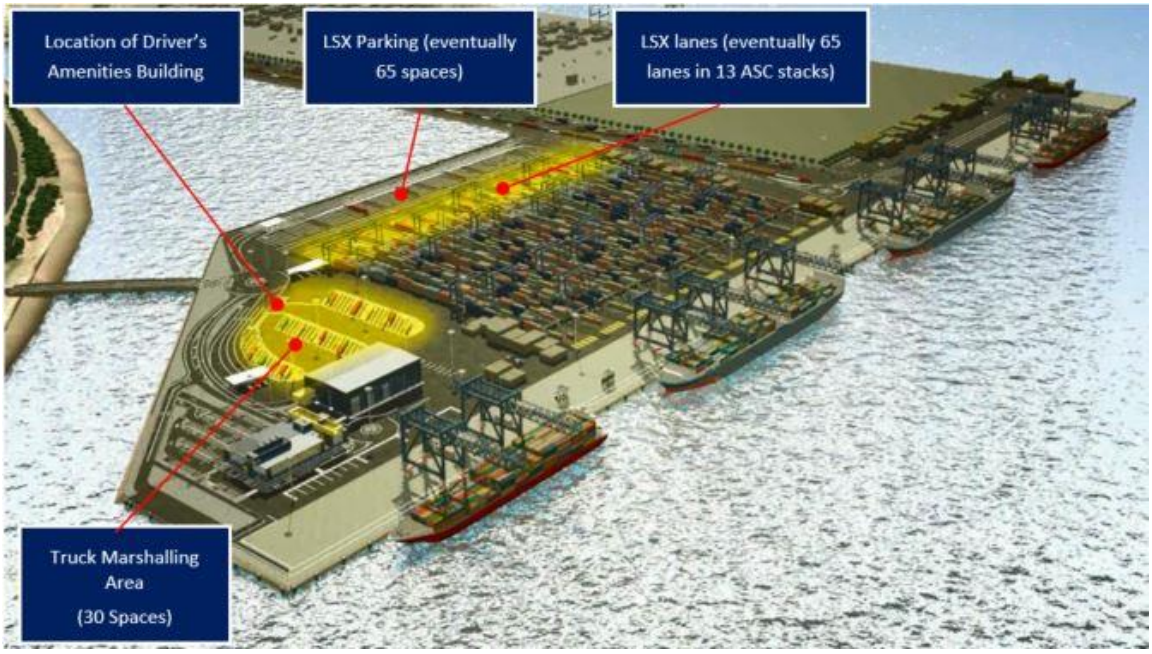
Within the PBLIS/ Mandatory Standards framework there are incentives for arriving on time and financial penalties for arriving early or late (there are also financial penalties to Stevedores if they

load or unload a truck late). The TAS ensures that truck traffic is distributed throughout the day, waiting times are minimised and turnaround is regular.

The Mandatory Standards specify that Stevedores must service at least 55 Slots each hour, 24 hours a day. SICTL will encourage the booking of Slots outside the daytime and business hours periods with the aim of further spreading the demand (and therefore truck traffic impacts on the surrounding road network) throughout the whole 24-hour period.

In the unlikely event that SICTL reaches its capacity of trucks (this may occur due to a Truck Appointment System failure or other emergency), additional trucks arriving at the terminal can be turned away at the entrance roundabout so as not to queue back onto Foreshore Road.

Figure 12 - Trucks Movement Area



The layout of the SICTL Terminal has been designed to minimise truck reversing as much as possible whilst achieving the best productivity and use of available land. Reversing is necessary at only one point in the truck loading/ unloading process where trucks must reverse into the LSX lanes to be serviced.

The truck marshalling area will contain the Driver's Amenities Building which will lessen the truck traffic impacts on the surrounding area in the following ways:

- By featuring dedicated toilet facilities for drivers so that they do not have to park in local or community areas to use toilets in shopping centres;
- Fitted with computer terminals allowing truck drivers to query the status of their import (pickup) if there are any delays such as quarantine inspection or customs hold.

SICTL will encourage Carriers to use higher productivity vehicles such as B-Doubles as much as possible. These vehicles have the capacity to carry more containers than a standard semi-trailer and operate more efficiently. The choice of vehicles sent by the Carriers to service SICTL will depend entirely upon the Carrier's fleet and the End Customer's operational requirements; SICTL has no direct control over the types of vehicles used.

It is also beneficial for Carriers to back-load their trucks as this is more profitable than one-way freight. SICTL will identify opportunities for back-loading and encourage Carriers to back-load as much as possible. Ultimately, back-loading depends on the availability of containers destined for End Customers who may be serviced by different Carriers or Freight Forwarders and as such SICTL does not control this process directly.

There is an intention by the NSW State Government to increase the proportion of freight moved by rail to 28% of all freight originating from Port Botany to minimise the proportion of truck traffic and truck-related noise impacts. Also, as mandated in SICTL's lease agreement, SICTL will endeavour to move as much freight as practicable using the dedicated rail sidings at the SICTL Terminal.

The decision to utilise rail or road transport remains with the shipper (Shipping Line, importer or exporter) however improvements in the rail network (including the Port Botany Freight Line duplication) and the growth of intermodal terminals servicing Port Botany will help to grow the rail transport component of landside operations.

Transport for NSW (TfNSW) holds the Port Botany Rail Optimisation Group (PBROG) meeting each quarter with representatives from SICTL and other stevedore operators, ARTC, rail providers, 1-Stop, NSW Ports and freight and logistics operators. The purpose of the meeting is to discuss rail operational targets and performance, and work on actions to improve container movement efficiency.

MONITORING AND REPORTING

SICTL will monitor the congestion and noise impacts from its operations through the following ways:

- Monitor the congestion and noise impacts on the Foreshore Rd intersection immediately outside the terminal if required, by Environmental Engineer or Manager - Landside.
- SICTL personnel reporting impacts to the Environmental Engineer or Manager - Landside;
- Complaints from the local community or other stakeholders investigated by SICTL;
- Consultation and co-ordination of port traffic issues with NSW Ports, Roads and Maritime Service, NSW Police, other stevedores, and other Port Botany lessees, and
- Feedback from carriers and truck drivers on the congestion impacts.

Additional to the above, SICTL would monitor parameters such as:

- The spread of truck loading/ unloading across the 24-hour and 7-day week;
- Number of slots available per hour per day;
- PBLIS penalties;
- Percentage of trucks back loaded;
- Percentage of trucks that are high-productivity vehicles (B-Doubles and Super B-Doubles);
- Proportional split between road and rail modes of transport, and
- Percentage of days where traffic congestion affects terminal operations.

The truck noise and congestion observations will be compiled by the Manager - Landside, with analysis of the results by the Environmental Engineer. This analysis will be reviewed by the HSEQ department on an ongoing basis and will be used in various reporting obligations as explained in Section 3.5.

PERFORMANCE EXPECTATIONS

The measure of how well this management plan is implemented and the effectiveness of the control measures described above shall be identified in the TAS monitoring and in any complaints returned by residents or other stakeholders.

SICTL aims to meet this KPI goal to the extent possible by influencing and encouraging Carriers to be environmentally responsible and educating carriers to promote good driver habits to minimise potential noise and traffic issues.

Table 22 KPI's (Traffic Management)

Key Performance Indicators	Goal
Number of complaints related to traffic noise disturbance and traffic impacts such as congestion or trucks parking in residential streets.	Zero
Average Truck Turnaround Time (PBLIS Compliance Requirement)	45 minutes or less
Number of slots available per hour	55 slots (minimum)

REVIEW AND IMPROVEMENT

The review and amendment of this management plan will be in accordance with section 6 of the OEMP. The management of complaints pertaining to the traffic congestion and noise levels due to SICTL operations shall be in accordance with Section 3.10 of this OEMP.

7.5 STORMWATER MANAGEMENT PLAN

OBJECTIVE

The objective of this management plan is to guide the direction of operations so that site stormwater can be managed to regulatory standards and minimise off-site environmental impacts, in particular the Penrhyn Estuary and Botany Bay. Through this process, SICTL can best manage foreseeable impacts successfully. Ultimately, awareness and management of impacts will lead to compliance with legislation, the EPA Licence and Development Consent.

STATUTORY REQUIREMENTS AND LEGISLATIVE FRAMEWORK

The Conditions of Development Consent pertaining to managing water and waste water generation due to SICTL's operations can be found in the clause C2.14 and C2.15(Refer to **Appendix A1**) and L1.1 under the EPL #20322 issued to SICTL (**Appendix A3**).

The legislation that applies to the implementation of this management plan is given below:

- Protection of the Environment Operations Act 1997 (NSW), Section 120 Prohibition of pollution of waters

RESPONSIBILITIES

A comprehensive list of responsibilities, accountabilities and authorities is provided in section 3.4 of this OEMP. The key responsibilities for the implementation of operational controls are provided below.

Table 22 Tasks and Responsibilities (Stormwater Management)

Task	Responsibility
Induction and Training of SICTL staff, contractors and visitors Pollu-Plug	Workforce Trainer
Maintenance of Stormwater drains, SQIDs and Pollu-Plug	Maintenance Department and relevant service providers/contractors
Regular cleaning and housekeeping of the terminal	Through relevant service providers/contractors
Directing the designated personnel to activate specific Pollu-Plug units in the event of an emergency such as a Dangerous Goods spill or fire within areas draining to Penrhyn Estuary.	Chief Warden or Environmental Engineer
Correct activation or deactivation of the Pollu-Plug system Communicating the status of the Pollu-Plug system to the Chief Warden or Environmental Engineer during operation	Designated Personnel (Operations Managers, Security and Maintenance Personnel)
Monitoring the effectiveness of stormwater management controls – SQIDs – through water sampling and testing	Environmental Engineer
Analyse the stormwater monitoring results	Environmental Engineer

OPERATIONAL IMPACTS AND CONTROL MEASURES

SICTL anticipates the operation of the terminal could impact local water quality. Discharging stormwater into a natural waterbody (see Figure 13) introduces a change in the local water quality because stormwater carries with it many pollutants that may accumulate within urban catchments. Unmitigated, the impacts on the local waters have the potential to:

- alter the pH;
- increase turbidity;
- increase toxicity;
- introduce an excess of nutrients, and/ or
- alter the concentration of dissolved oxygen in the water.

These changes can affect all levels of marine life present in the local waters and may become complex problems affecting bird species and other compounded ecological effects. The waters surrounding the SICTL terminal are also heavily used by recreational boaters who will notice the effects of any pollution first hand.

Table 23 Operational Impacts and Control Measures (Stormwater Management)

Operational Impact	Operational Control Measures
Site runoff containing pollutants entering the Penrhyn Estuary or Botany Bay	
The terminal's stormwater drainage system captures water from the following sources: • roadways and marshalling areas for container trucks; • parking areas for employee's cars; • internal terminal access roads for container handling equipment and general vehicles; • quay areas where cargo is landed to and from vessels; • container stacking areas including the Dangerous Goods stacking areas; • spill containment area; • diesel refuelling area; • rail siding area; • roof drainage from terminal buildings; and • other sources of dissolved metals on site, including buildings, fencing and other equipment.	The potential for contaminants to enter the waterways is controlled at the SICTL terminal through: • the construction of the terminal is almost entirely comprised of concrete hardstand areas. Other areas that are not concrete are likely to be gravel or ballast (ASC yard/ rail siding), asphalt (vehicle areas) or sprayed seal. These areas do not erode; • the design of the SICTL drainage system incorporates 36 operational Stormwater Quality Improvement Devices (SQID) made by two manufacturers, SPEL and Humes. These units continually separate sediments and heavy metals from stormwater flows and trap these pollutants so they are not discharged into Botany Bay or the Penrhyn Estuary (see **Appendix C** for more details); • regular cleaning of hardstand areas by sweeper truck to remove dust and debris; • special sweeper/scrubber services for the Maintenance Workshop, equipment wash-bay and equipment parking areas; • pump out and removal of catchment waste water occurring in the workshop and equipment wash-bay and Dangerous Goods spill containment traps; and • waste removal services.

Operational Impact	Operational Control Measures
Leaking or damaged containers	
Approximately 4% of all containers handled by SICTL hold Dangerous Goods. Dangerous Goods are subject to special work practices that govern their movement, separation and handling	The SICTL terminal operating system manages the storage of dangerous goods in the following way: • DG cargo is destined for ASC blocks 1, 3, and 5. Other types of cargo can still be placed in these ASC blocks, so long as they are compatible DGs, non-DGs and empties, and the correct separation and segregation rules apply. The stormwater drainage system servicing ASC blocks 1, 3 and 5 have been fitted with a Liquid Detention Unit (LDU) which has been designed to protect the health of the adjoining Penrhyn Estuary habitat (see Appendix C for more details). The LDU uses a combination of physical, biological and chemical processes to analyse, classify and isolate stormwater and possible contaminated spill materials. The LDU has been designed to continually monitor the stormwater flows in order to detect contaminants which cannot be treated by the SQID units - upon detection an alarm is generated, and the contaminated stormwater is isolated and contained within the stormwater collection network. A notification will be sent from the LDU PLC to the terminal's Network Control System indicating that the valves are closed and that pollutants have been caught in the system. SICTL can then arrange for the drainage lines to be pumped out, cleaned and pollutants disposed by an approved licenced contractor. The procedure for cleaning and draining any contaminated drainage line after a spill or leak will be determined by assessing the nature and classification of the Dangerous Goods or pollutant. The servicing of the system will be done, and the sensors will be recalibrated after each event of necessity. Additional to the LDU system described above, stormwater drainage outlets leading onto the Penrhyn Estuary from the ASC landside and Rail Operations areas are also fitted with a manually controlled stop valve in the form of an inflatable bladder within each drainage pipe called 'Pollu-Plug' (see **Appendix C** for more details). These Pollu-Plugs are situated downstream of the SQID unit and provide a further safeguard against pollutants entering the Penrhyn Estuary as they can be manually closed (inflated) by terminal staff in the event of a chemical spill or an alarm raised by the LDU system. Closing these valves would ensure that all pollutants are trapped within the drainage lines, SICTL can arrange a licenced contractor to pump out the trapped pollutants and dispose accordingly. SICTL terminal also operates a Dangerous Goods spill containment area located on the far end of the SICTL Terminal. Leaking or damaged containers will be

Operational Impact	Operational Control Measures
	transported to the spill containment area via a dedicated spill trailer operated by SICTL employees (see **Appendix C** for more details).
Onsite use of chemicals for cleaning and maintenance	
Engineering and Maintenance departments at Hutchison Ports Sydney use chemicals for cleaning, as well as oils, lubricants, coolant, grease, fuel (diesel), paint (road-marking and rust protectant), thinners and pest control substances which will find way into the drainage system.	Drains in the Maintenance Workshop and cleaning bay are isolated from all other stormwater drainage systems. Removal of waste water from the Maintenance catchment will be arranged with a licenced contractor to pump out the trapped pollutants and dispose accordingly.

MONITORING AND REPORTING

Ongoing monitoring of the terminal's separator units shall be undertaken by SICTL, to ensure that the units operate effectively and to provide ongoing assessment as to the effectiveness of the operational environmental management controls implemented by the terminal.

Samples shall be collected at the outlet of the separator units so that it is representative of the stormwater being released from the terminal into Botany Bay and the Penrhyn Estuary. The method shall be consistent with the collection, handling and preservation principles enunciated in Standards Association of Australia (1998) AS/NZS 5667.1:1998, and APHA (1998) section 1060. If there is any inconsistency between these references, Standards Association of Australia (1998) prevails. Separator unit clean out records shall be maintained and reviewed in case of issue with the desired output of water quality.

The water monitoring program implemented at SICTL is designed to test for those key elements which would have the greatest effect on the Penrhyn Estuary and Botany Bay waterways.

- Total Nitrogen (TN)
- Total Phosphorous (TP)
- Turbidity (NTU)
- Total Suspended Solids (TSS)
- pH
- heavy metals – Copper (Cu), Lead (PB), Zinc (Zn)
- Oil and Grease

The water testing shall be undertaken by suitable consultants and laboratories accredited by the National Association of Testing Authorities, Australia (NATA) using methods approved in the document Approved Methods for the Sampling and Analysis of Water Pollutants in New South Wales (March 2004). The monitoring results be used for various reporting obligations explained in section 3.5 of this OEMP.

PERFORMANCE EXPECTATIONS

The effectiveness of this management plan will be measured through the performance measures given below.

Table 24 KPI's (Stormwater Management)

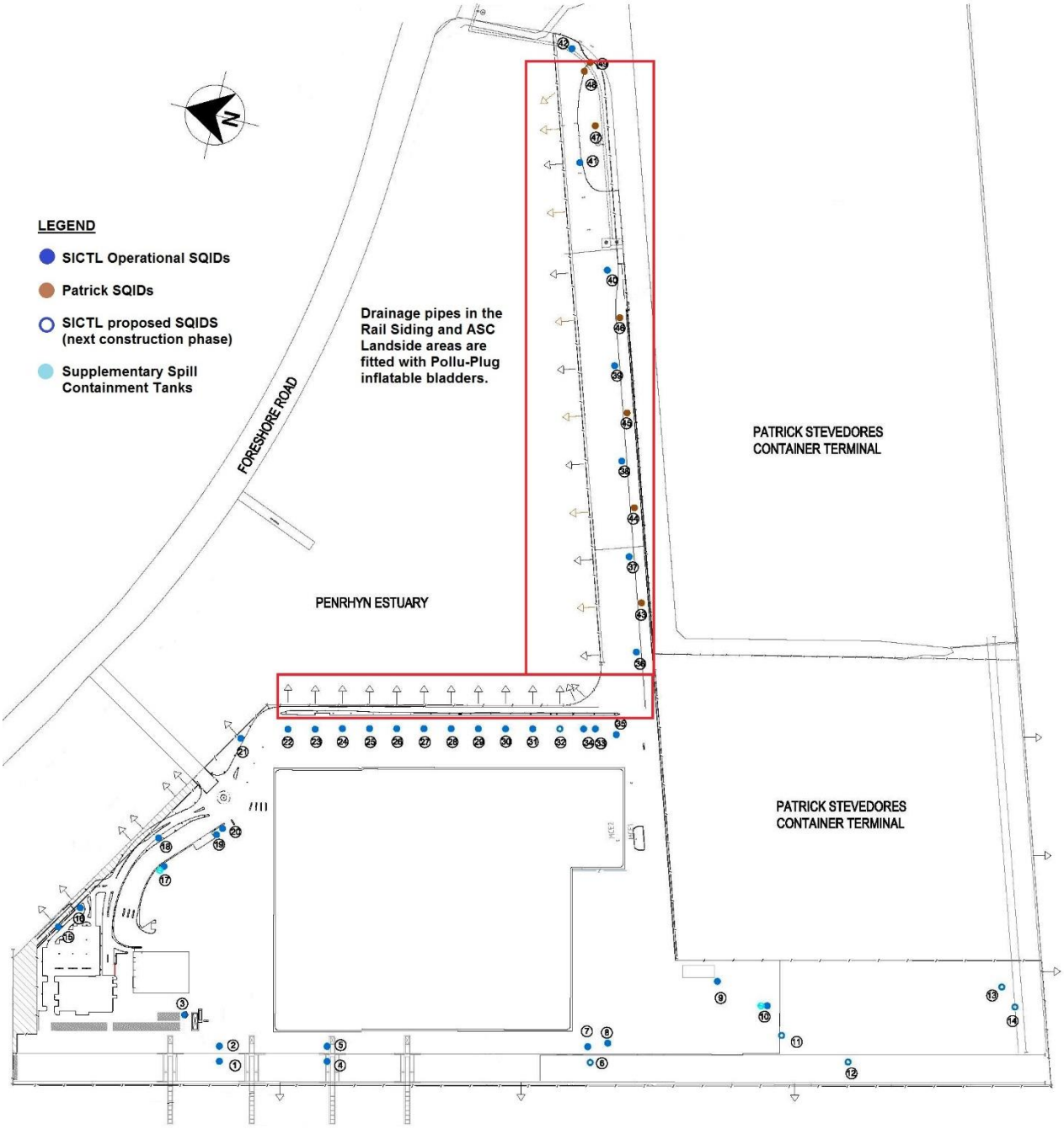
<table>
<tr><th>Key Performance Area</th><th>KPI</th></tr>
<tr><td>The effectiveness of the separator units to be assessed through the testing and analysis of outlet sampling on an annual basis.
<table>
<tr><th>Key Performance Area</th><th>Goal</th><th>Acceptable Limit</th></tr>
<tr><td>Total Nitrogen (TN)</td><td>120 - 300 µg/L [2]</td><td>5 mg/L [3]</td></tr>
<tr><td>Total Phosphorous (TP)</td><td>< 30 µg/L [2]</td><td>0.1 mg/L [3]</td></tr>
<tr><td>Turbidity (NTU)</td><td>2.2 – 3.3 NTU [1]</td><td>0.5 – 10 NTU [2]</td></tr>
<tr><td>Total Suspended Solids (TSS)</td><td>< 30 mg/L [3]</td><td>50 mg/L [3]</td></tr>
<tr><td>pH</td><td>7.0 – 8.5 [2]</td><td>6.5 – 8.5 [3]</td></tr>
<tr><td>Copper (Cu)</td><td>< 1.3 µg/L [2]</td><td>10 µg/L [3]</td></tr>
<tr><td>Lead (Pb)</td><td>< 4.4 µg/L [2]</td><td>< 4.4 µg/L [2]</td></tr>
<tr><td>Zinc (Zn)</td><td>< 15 µg/L [2]</td><td>< 15 µg/L [2]</td></tr>
<tr><td>Oil & Grease</td><td>< 5 mg/L [3]</td><td>10 mg/L [3]</td></tr>
</table>
[1] Botany Bay & Catchment Water Quality Improvement Plan 2011, prepared by the Sydney Metropolitan Catchment Management Authority
[2] Marine Water Quality Objectives for NSW Ocean Waters – Sydney Metropolitan and Hawkesbury-Nepean (October 2005) published by Department of Environment and Conservation NSW, and Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000), Australian and New Zealand Environment Conservation Council (ANZECC)
[3] Developed based on local conditions and previous water quality test results.</td><td>6 units tested per annum</td></tr>
<tr><td>Cleanout will be undertaken where the water quality results indicate an Acceptable Limit exceedance.</td><td>Cleanout within 6 weeks of Acceptable Limit exceedance</td></tr>
<tr><td>An investigation will be conducted where the water quality results exceed the Acceptable Limit exceedance</td><td>After lab results have been received</td></tr>
<tr><td>After every spill event where it is reasonable to assume that pollutants have entered the stormwater system units.</td><td>After Spill Event</td></tr>
</table>

REVIEW AND IMPROVEMENT

The review and amendment of this management plan will be in accordance with section 6 of the OEMP. The management of complaints pertaining to water quality due to SICTL operations shall be in accordance with Section 3.10 of this OEMP.

The review and amendment of this management plan will be in accordance with section 6 of the OEMP. The management of complaints pertaining to the traffic congestion and noise levels due to SICTL operations shall be in accordance with Section 3.10 of this OEMP.

Figure 13 Illustration showing the locations of SQID separator units, and drainage outlets fitted with the "Pollu-Plug' inflatable bladders



7.6 DANGEROUS GOODS MANAGEMENT PLAN

OBJECTIVE

The objective of this management plan is to guide the direction of SICTL's operations so that operational staff can carry out their duties whilst remaining aware of the possible dangers of handling Dangerous Goods (DG) and Hazardous Substances (HS). This management plan will help in addressing the environmental issues while handling the dangerous goods. For the purposes of this management plan, Hazardous Substances are taken to be included in all descriptions of Dangerous Goods.

STATUTORY REQUIREMENTS AND LEGISLATIVE FRAMEWORK

The Conditions of Development Consent pertaining to Storage and Handling of Dangerous Goods during SICTL's operations can be found in the clauses C2.16, C2.17 and C2.18 (Refer to **Appendix A1**) and L1.1 under the EPL #20322 issued to SICTL (**Appendix A3**). Under the EPL #20322, SICTL is permitted to store chemical up to 5000 KL within its premises.

Additionally, SICTL has identified the legislation that applies to the implementation of this management plan:

- Protection of the Environment (Operations) Act 1997 (NSW)
- Environmental Planning and Assessment Act, 1979 (NSW)
- Work Health and Safety Act 2011 (NSW)
- Work Health and Safety Regulation 2017 (NSW)
- Dangerous Goods (Road and Rail Transport) Regulation 2014 (NSW)
- Ports Assets (Authorised Transactions) Act 2012 (NSW)
- State Environmental Planning Policy (Three Ports), 2013 (NSW)

This management plan also aims to achieve outcomes consistent with the intent of:

- The International Maritime Dangerous Goods (IMDG) Code current Edition; Incorporating current amendments;
- IMO Recommendations on the Safe Transport of Dangerous Cargoes and Related Activities in Port Areas (IMO Recommendations)
- AS 3846- 2005, The Handling and Transport of Dangerous Cargoes in Port Areas
- The Port Authority of New South Wales *Dangerous Goods Management Guidelines for Ports in NSW* (27 June 2020);
- The Australian Dangerous Goods Code (ADG) Edition 7.6, 2018 and
- Port Botany Precinct Emergency Sub Plan.

RESPONSIBILITIES

A comprehensive list of responsibilities, accountabilities and authorities is provided in section 3.4 of this OEMP. The key responsibilities for the implementation of operational controls are provided below.

Table 25 Tasks and Responsibilities (Dangerous Goods Management)

Task	Responsibility
Induction and Training of SICTL staff, contractors and visitors	Workforce Trainer
Management of dangerous goods used during plant and equipment maintenance and servicing	Maintenance Department and relevant service providers/contractors
Obtain the SDS for dangerous goods purchased	Purchasing Officer and Storeman
Review of dangerous goods information (including the MO41 declaration) submitted by Carriers and Shipping Lines	SICTL Landside Co-ordinator and Planners
Reporting of all spills, and the clean-up of all non-hazardous spills on the terminal	Plant Operators and Maintenance Department
Investigation of leaks detected or suspected to originate from dangerous goods containers	Operations managers Environmental Engineer
Monitoring of dangerous goods throughput in compliance to OEMP	Manager, Risk & Compliance Environmental Engineer
Analyse the dangerous goods monitoring results	Environmental Engineer

OPERATIONAL IMPACTS AND CONTROL MEASURES

The handling of DG cargo poses a specific threat to the surrounding environment because of the consequences and possibility of pollution incidents. The quantities involved are also relatively large (being shipping containers) which highlights the scale of the impact. The principle of containment is the basis for most risk management methodologies related to DGs. However, in situations where containment is lost or compromised, leaks of liquid or gas are likely to affect the environment through alteration of ecosystems by acute and/ or persistent pollution. This raises the need for adequate handling methods and response protocols to be developed and implemented by SICTL.

The context of potential operational impacts has been restricted to Dangerous Goods containers on the quay apron and within the terminal footprint only. Management of DG cargo or DG emergencies outside the terminal will be undertaken by others.

Table 26 Operational Impacts and Control Measures (Dangerous Goods Management)

Operational Impact	Operational Control Measures
Off-site Risks arising from Dangerous Goods within the SICTL terminal	
The off-site risks arising from the handling of DGs within the SICTL terminal have been assessed in the Port Botany Expansion Preliminary Hazard Analysis authored by Qest Consulting - Revision 7, June 2004 (PHA). The DG classes identified in	SICTL shall comply to the ***Dangerous Goods Management Guidelines for Ports in NSW*** (27 June 2020) published by the Port Authority of New South Wales in which the various classes are categorised into Red, Amber and Green Line cargoes. These divisions specify permissible time limits for the cargo to remain within the terminal. This system is consistent with the aims of the

Operational Impact	Operational Control Measures
the PHA as posing an elevated risk are Class 2.3 Toxic Gas and Class 6 Toxic Substances. In the event of an incident, these two classes of DG are likely to affect the surrounding area as they may be spread by wind. The off-site risks calculated in the PHA are based on the quantities of DGs transited through the terminal annually. The detail of the PHA risk analysis and types of risk scenarios are beyond the scope of this management plan.	IMDG, the IMO Recommendations and AS 3846. The residence time limits stipulated in the Port Authority of NSW ***Dangerous Goods Management Guidelines for Ports in NSW*** are programmed into the SICTL Terminal Operating System so that cargo would be moved in accordance with these time limits. The ***Dangerous Goods Management Guidelines for Ports in NSW*** also mandate separation and segregation rules for different classes of DGs as they may not be compatible, these requirements are also programmed into the SICTL Terminal Operating System to guide the placement of Dangerous Goods within the ASC blocks. The off-site risks arising from Dangerous Goods handled within the terminal were assessed in revision 7 of the Preliminary Hazard Analysis (PHA) authored by Qest Consulting in 2004 (Appendix W of the EIS). The PHA determined that the off-site risks associated with the operation of the Port Botany Expansion were primarily dependent upon the actual quantities of Dangerous Goods present. SICTL is obliged to limit the annual DG throughput to quantities listed in the Table 1 and 2 of Schedule 4 of the Development Consent. SICTL manages compliance to these conditions through the analysis of data in the SICTL Terminal Operating System (TOS). The TOS is the control mechanism governing all container movements within the SICTL terminal and can recognise classes and UN numbers of Dangerous Goods in containers as manifested by the Shipping Lines (any information not manifested by the shipping line or the sender of the goods would not be known to SICTL). The TOS can when required produce stack reports as to current locations of DGs; the Port Authority of NSW DG Regulator has access to these reports through the weekly inspection of the terminal SICTL management can use these stack reports to regulate the arrival of DG containers so that the annual threshold limits in the Development Consent are not exceeded.
Damage to containers carrying Dangerous Goods by SICTL Operational Plant	
Although shipping containers are designed to withstand the mechanical stresses involved in transport and handling, they remain vulnerable to damage from a variety of causes. Most cases of container damage arise from incorrectly packed or inadequately braced goods shifting during transport or handling (this is beyond the control of SICTL).	DG containers shall not be handled by forklift because of the risk of the forklift tines potentially creating a leak by piercing the sides and even the inner packaging of the container. DG containers are only handled by top-lift systems called spreaders fitted to all plant and cranes. The majority of container handling within the terminal is performed by the Automated Stacking Cranes. These cranes are guided by laser systems and programmed to soft-land containers to avoid noise and damage. Manual plant such as Quay Cranes and Shuttle Carriers are fitted with governors that regulate the speed of a descending container, thus lessening the risk of damage from a hard

Operational Impact	Operational Control Measures
There is the low possibility that containers carrying Dangerous Goods may be damaged by SICTL plant if they are landed abruptly, stacked incorrectly or collided. Damage to the outside of the container will not usually result in a leak or spill of product as most DG cargo is packaged cargo – meaning that the dangerous materials are contained in packages within the shipping container (such as drums or aerosol cans).	landing. All spreader units (the implement that engages the top of a container) are designed with safety mechanisms that do not permit the four twistlocks to release during hoisting.
Spills or leaks of Dangerous Goods	
In the unlikely event that the shipping container body and the inner packaging are compromised during handling, a container may leak its contents within the SICTL lease area.	All SICTL plant operators will be trained to handle Dangerous Goods with care and in a manner where the risk of damage is as low as reasonably practicable. All leaks detected or suspected to originate from Dangerous Goods containers (or containers with suspected damage) will be investigated by Operations managers and the Environmental Engineer to pre-empt any spills or leaks. Such investigations may require the involvement of the Consignee / Consignor, Shipping Agent, Port Authority of NSW or other third parties. In all cases, the Port Authority of NSW (Sydney VTS) will be notified of any damage to or deterioration of containers carrying Dangerous Goods as soon as practicable. The management of containers carrying Dangerous Goods leaking on board ships (berthed or not) is outside the scope of this management plan as there are a multitude of factors and decisions that are not under the control or responsibility of SICTL. These incidents are managed by the Shipping Line through the ship's own Vessel Management Plan and may require the involvement of the terminal (SICTL), the Port Authority of NSW, HAZMAT, EPA and/ or the Consignee. SICTL will identify how each occurrence is likely to affect the terminal and accordingly respond as described in Section 3.7 of this OEMP. The SICTL management process for spills or leaks is shown in *Figure 14*. In the case of a Dangerous Goods container leaking liquid, SICTL may move the container from the quay apron to the spill containment area (see *Figure 15*). This is a purpose-built area capable of containing the volume of a leaking container in a collection trench. In cases where the wind direction at the time of the emergency could cause off-site impacts by gases originating from the designated Spill Containment Area, the leaking container will stay on board the bunded Spill Trailer and be moved to an area of the terminal where off-site effects would be mitigated.

Operational Impact	Operational Control Measures
	Dangerous Goods (Especially of Class 2.3 Toxic Gas and Class 6 Toxic Substances) that emit vapours or are in a gaseous form pose a unique risk to SICTL personnel in addition to off-site receivers in the surrounding area. In the event a gas or vapour leak from any cargo is detected or suspected by SICTL then the cargo should not be moved or approached. The process in Figure 13 should be followed and the incident should be managed under the **HSEQ10.1.3 Emergency Response Plan – SICTL**. SICTL personnel can isolate the leaking container by communicating to all personnel, vehicles and plant operators to remain away from the leaking container. Quay cranes can also be moved away from the leaking container if the leak occurs on the Quay apron. If warranted in consultation with Emergency Services and the SICTL Chief Warden, evacuation can be organised in accordance with **HSEQ10.1.3 Emergency Response Plan – SICTL**. SICTL will notify the consignee/ consignor and also notify neighbouring stevedores if any exclusion zones affect their operations. At its own discretion or upon the advice of the consignee/ consignor, SICTL may call Fire Brigade HAZMAT who is properly equipped to deal with Dangerous Goods. In the event of a liquid spill involving non-hazardous or hydrocarbons SICTL will deploy spill control measures to bund, absorb, stabilise and remove the liquids spilt within the terminal. Emergency Spill Kits and Fire Fighting equipment will be situated in key locations at the terminal and SICTL staff have been trained in its use. Regular workplace Inspections of the terminal including checks of the Fire Extinguishers and Spills Kit will be undertaken by HSRs and HSEQ Department members. If liquids are spilled on the ballast in the rail siding area, conventional spill kit absorbent granules or powders may not be effective as the spilled liquid would have percolated through the ballast. In these situations, SICTL may use an oil dispersant liquid such as ‘OilGone’ (or some other product recommended by the Consignee) to clean up the spill.
Site Runoff containing Pollutants	
Any DG substances spilt have the potential to contaminate stormwater runoff and therefore impact upon the ecology of Penrhyn Estuary and/ or Botany Bay	The SICTL terminal features three Automated Stacking Crane (ASC) areas called ‘blocks’ where most of the containerised cargo moving between ship and shore will be placed whilst awaiting transit. The ASC blocks are the dominant area where Dangerous Goods may be placed while on their journey from ship to Consignee and are used as follows:

Operational Impact	Operational Control Measures
	Each ASC block contains nine (9) lanes of containers across its width, 68 rows across length and can stack containers 5 high. DG cargo is destined for ASC blocks 1, 3, and 5. Other types of cargo can still be placed in these ASC Blocks, so long as they are compatible DGs, non-DGs and empties and the correct separation and segregation rules apply. A stormwater drainage system has been installed under each ASC block leading to a heavy-metals separator unit (SQID). To control the risk of spilled DG pollutants entering the drainage system from ASC blocks 1, 3 and 5 and being discharged into the surrounding waters, these ASC blocks have an additional semi-automatic shut off system installed called the Liquid Detention Unit or LDU. The LDU works by using a suite of sensors to constantly monitor and detect pollutants within the stormwater flow and a microprocessor controlling a valve within the drainage line. If the criteria for pollutants are met the unit closes the valve within the drainage line, trapping the polluted water within. Trapped pollutants can then be pumped out and disposed by a contractor. Additional to the LDU system described above, all drainage outlets facing the Penrhyn Estuary (draining the ASC area and the rail siding) are also fitted with a manually controlled stop valve in the form of an inflatable bladder within each drainage pipe called '**Pollu-Plug**' (see **Appendix C** for more details). These bladders are situated downstream of each separator unit and provide a further safeguard against pollutants from spills or firewater entering Penrhyn Estuary as they can be manually closed (inflated) by SICTL personnel in the event of a chemical spill or fire within the ASCs or rail sidings. SICTL would arrange a contractor to pump out the trapped pollutants and dispose accordingly. The ASC Blocks are the default priority destination for DG cargo handled within SICTL however there may be circumstances where SICTL will need to adopt a flexible approach to yard planning to meet operational needs. This would be achieved by temporarily transiting DG cargo in the designated 'overflow' area (next to the DG Spill Containment Area). The anticipated situations would include but not be limited to: • If the DG locations within the operational ASC Blocks are fully occupied; • If the Automated Stacking Cranes are operating at capacity or the landside or waterside exchanges are congested; • If the Automated Stacking Cranes have suffered a malfunction;

Operational Impact	Operational Control Measures
	• If the DG Cargo arrives in break-bulk or if the DG cargo is in tanks that are loaded onto 'Flat-Rack' containers or is otherwise considered out-of-gauge; • If the DG cargo is in a 'frameless' type of Tanktainer; • If the DG container needs to be set aside for any reason (including damage) or inspection.
On-site Dangerous Goods used for Maintenance	
Dangerous Goods are used in maintenance activities for the servicing of plant and equipment and for painting/road marking on the terminal.	SICTL's maintenance department is the primary custodian of the workplace dangerous goods used during the servicing of plant and equipment. The SICTL purchasing personnel shall obtain the relevant Safety Data Sheets (SDS) for workplace dangerous goods purchased through that department. All SDS will be entered into the SDS register kept by Maintenance and will be audited by the HSEQ Department. SDSs older than 5 years old will be replaced. When not in use, all workplace dangerous goods will be stored in a bunded container capable of holding 120% of the volume of the largest container stored therein. Minimum requirement for all contractors undertaking any work relating to hazardous substances or chemicals within the terminal include the following documents: Safe Work Method Statements, SDS and Permit to Work.
On-site Diesel Storage and Refuelling	
The potential operational impacts are fuel spills from the refuelling of SICTL container handling and other light vehicles - a spill during replenishment or a spill from failure of the storage tank itself. The potential for a system or equipment failure during the provision of hydrocarbons (including lube oils and fuels) by fuel suppliers to berthed vessels - hydrocarbon liquids may spill onto the wharf or water.	Bunding for the on-site diesel storage and refuelling area is achieved through two methods: • Bunding of the actual storage tank to contain spills or leaks in the event of tank failure, and • Bunding of the refuelling area to contain spills from refuelling vehicles and plant. The system chosen for the SICTL terminal is a proprietary system incorporating integrated fuel storage and delivery manufactured by TransTank. This unit is a double-walled, self-bunded tank with capacity of up to 67,120L (safe fill volume). The refuelling areas adjacent to the diesel tank will also be bunded to contain any spills from plant or light vehicles during refuelling (for instance in the case of over-fills or leaking bowser guns/ hoses). The light vehicle refuelling side will feature prefabricated trays with grates fitted on top that are cast into the concrete slab to be flush with the finished surface level. The heavy plant refuelling side will feature a 'speed-hump' style perimeter bund with a central drainage pit. This area can be isolated by closing the stop valve fitted to the drainage junction pit. Any fluids caught in these bunds will be pumped out and disposed by an approved contractor. The TransTank

Operational Impact	Operational Control Measures
	system will also feature a leak detection capability connected to the fuel management system with alerts. Landside supply of hydrocarbons to berthed vessels is undertaken by the Shipping Line/Vessel Master in accordance with their contractual arrangements with the hydrocarbon supplier. SICTL reviews all requests for landside 'bunkering' and ensures that the supplier Permits, Safe Work Method Statements, Emergency and Spill Control Procedures and Safety Data Sheets are in order prior to granting approval and access to the terminal.

Figure 14 – Spill management process

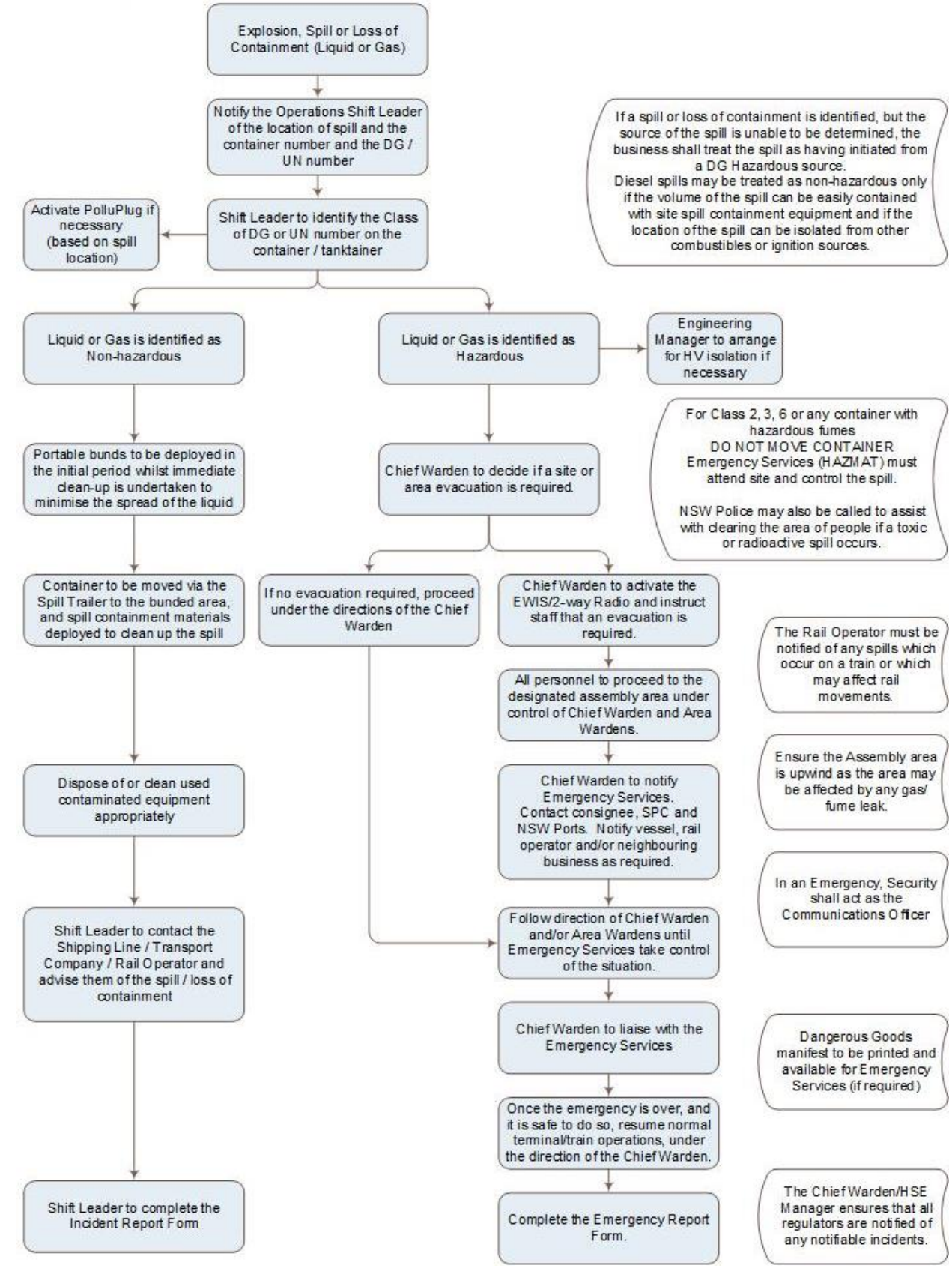


Figure 15 Location of Spill containment area

MONITORING AND REPORTING

The SICTL Terminal Operating System (TOS) can recognise and monitor the classes of dangerous goods transiting through the terminal and can monitor at any given time the DGs that are currently within the block. This information will be used to ensure SICTL remains below the threshold limits specified in the Development Consent.

The TOS can generate reports showing actual tonnages, numbers of TEUs for each class of Dangerous Goods handled at the terminal. This information will be included in the AEMR and submitted to the DPIE through NSW Ports. In addition, the TOS threshold measurements and the DG incident KPI data will be collected, analysed and included in the various SICTL reporting obligations as explained in Section 3.5 of this OEMP.

There are limits on the quantities of certain dangerous goods permitted on a vessel and at the various berths in Botany Bay. In addition, dangerous cargo shall have a set time permitted to remain on a terminal (classified as either Red (2 hour limit), Amber (12 hour limit) or Green (5 day limit) line cargo). The Port Authority of NSW must be advised of all dangerous goods to be imported or exported by vessel, including transhipments and/or goods transiting the ports. The method of notification of the dangerous goods is through electronic lodgement in Sydney's Integrated Port System (ShIPS). ShIPS is an electronic booking and approval system which is accessed through the internet.

Classifying the cargo as Red, Amber or Green line cargo is an automated process within ShiPS once a lodgement has been made. Lodgement of dangerous goods must be made at least 24 hours prior to the vessel entering port (at least 48 hours for class 1 dangerous goods).

If, during advance notification of the DG cargoes, it is determined that the quantity of DGs on a vessel or berth will exceed the corresponding quantity limit specified in the ***Dangerous Goods Management Guidelines for Ports in NSW***, then the Port Authority of NSW should be contacted immediately by the consignor or agent for the DG cargo (Note: a warning that the quantity limits will be exceeded may be flagged in the ShiPS system). Depending on the circumstances, entry of the vessel into Port Botany may be refused and the vessel may have to be redirected.

The Port Authority of NSW is the approving authority for DGs in a Port Operational Area. Therefore DG exemptions are ONLY valid when confirmation has been obtained from the Port Authority of NSW in writing. Currently, exemptions are not issued for Red or Amber line cargoes in Port Botany.

The Transport Company and Rail Operator is responsible for ensuring the declaration of the correct dangerous goods information to SICTL and to ensure their respective drivers are correctly qualified to transport dangerous goods to or from the terminal. Each Transport Company and Rail Operator is asked to declare this when booking a truck timeslot or rail window and emailing it to the SICTL Landside Co-ordinator or Rail Manager.

It is the responsibility of the Transport Company/Rail Operator to ensure the driver/operator complies with

- Part 11 of the ADG,
- segregation requirements (also in the ADG)
- the Dangerous Goods (Road and Rail transport) Act 2008 and Regulation 2014,
- Marine Orders 41 and
- any other law or regulation requiring documentation to be carried.

SICTL has implemented processes to verify:

- The accuracy of the dangerous goods import, and export information received by SICTL from the Shipping Agent/Transport Company and the DG manifest information lodged with the Port Authority of NSW.
- Compliance to Dangerous Goods (Road and Rail Transport) Regulations 2014 (NSW) and the Australian Dangerous Goods Code v7.4. On a random basis, before leaving the terminal, SICTL will conduct an out-gate audit to ensure that the information declared is valid including a check that the correct placards are on the container(s) being transported and the correct trailers are being used. The **HSEQ5.2.1.1 Import DG Truck Checklist** shall be used to verify this process.

These processes are explained in the flowcharts on the following pages.

SICTL DANGEROUS GOODS CHECKING PROCESS

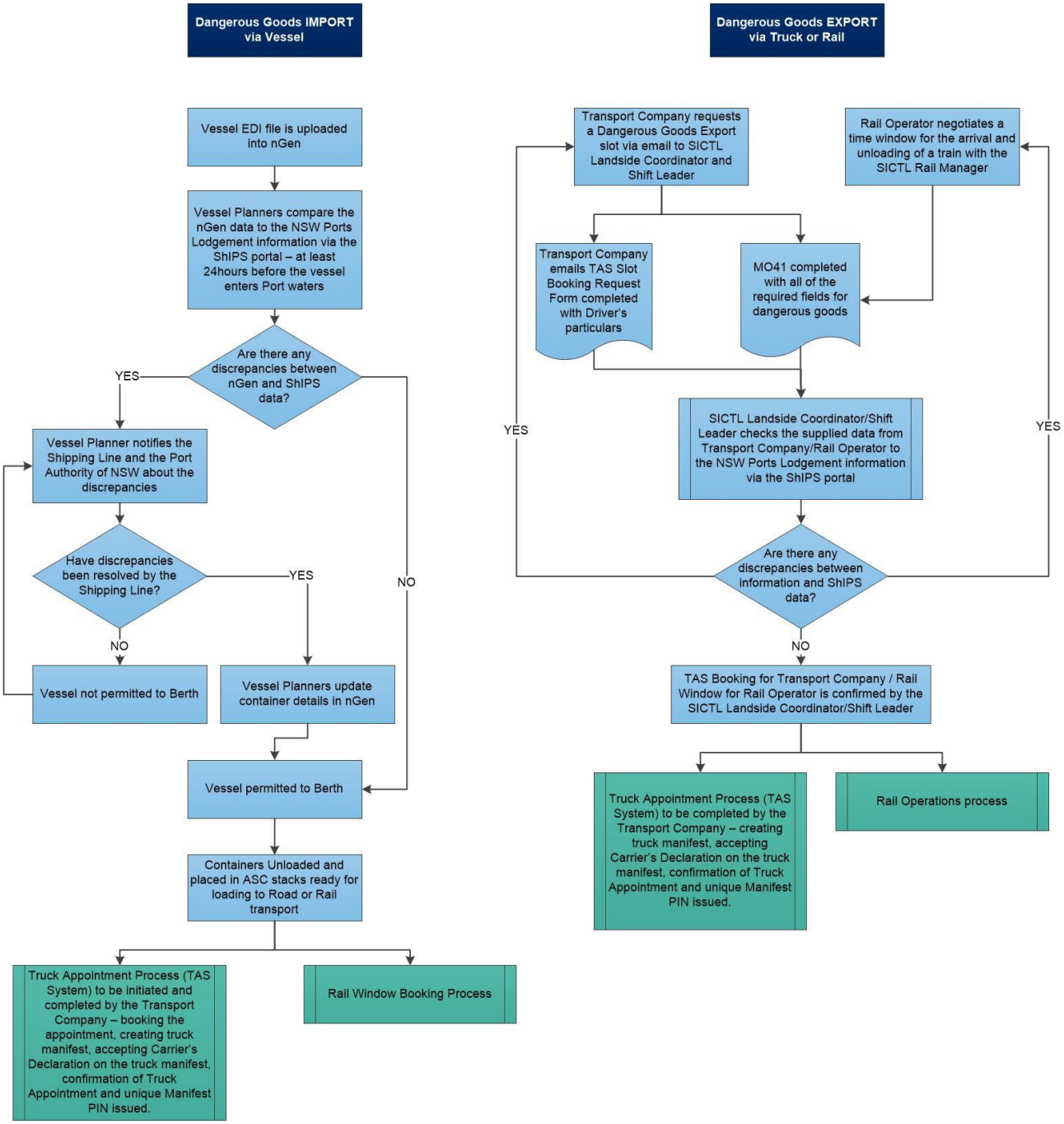


Figure 16 Process used by SICTL to verify dangerous goods information before containers are brought onto the terminal

Compliance to Dangerous Goods (Road and Rail Transport) Regulations 2014 (NSW) and the Australian Dangerous Goods Code v7.5 2017.

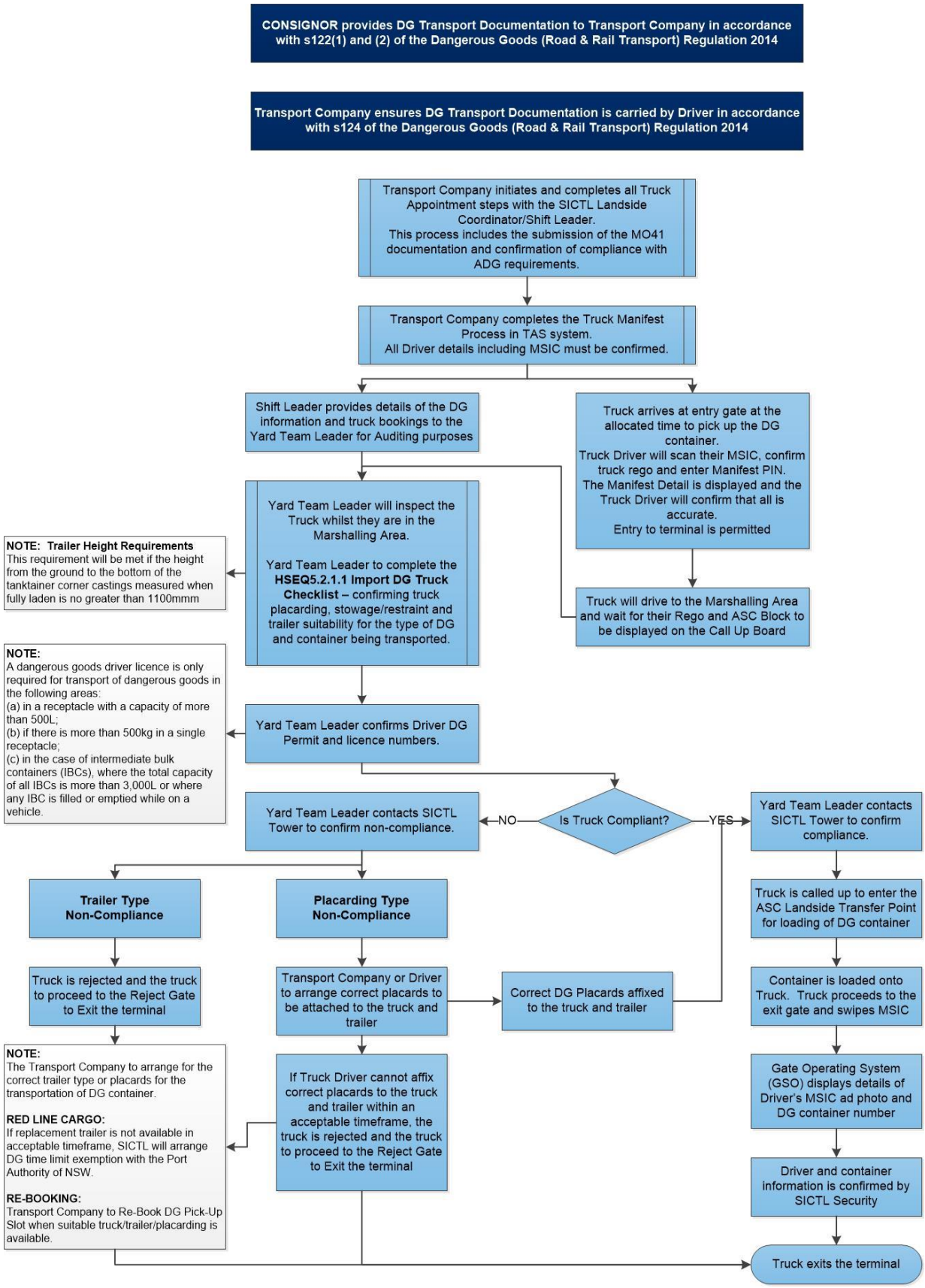


Figure 17 Audit Process used by SICTL to verify compliance to ADG and legislative requirements

PERFORMANCE EXPECTATIONS

The measure of how well this management plan is implemented and the effectiveness of the control measures described above shall be identified in the DG monitoring and the instances of any DG incidents.

Table 27 KPIs (Dangerous Goods Management)

Key Performance Indicators	Goal
Number of Pollution Incidents involving solid or liquid spills or gas leaks during the handling of dangerous goods and hazardous substances on the terminal.	Zero
Analysis of DG throughput limits specified in **Development Consent Condition C 2.17** (Table 1 in Schedule 4 of the Development Consent)).	Zero exceedances
The amount specified in **Development Consent Condition C 2.18** (storage or handling of Dangerous Goods Class 2.3, toxic compressed or liquefied gases above the quantities stored or handled in 1995/96 except in accordance with recommendations 1.1 and 1.2 in the Port Botany Land Use Safety Study (1996)) shall not be exceeded.	Zero exceedances

REVIEW AND IMPROVEMENT

The review and amendment of this management plan will be in accordance with section 6 of the OEMP. The findings from incidents, monitoring results and inspections shall drive the continual improvement of this management plan.

7.7 WASTE MANAGEMENT PLAN

OBJECTIVE

The objective of this management plan is to guide the direction of SICTL's operations and promote awareness of management methods so that waste from the terminal can be minimised and managed appropriately to control the impacts on the environment.

STATUTORY REQUIREMENTS AND LEGISLATIVE FRAMEWORK

The Conditions of Development Consent which states the requirements of managing wastes generated due to SICTL's operations can be found in the clause C2.13 and C2.13A (Refer to **Appendix A1**) and L2.1 under the EPL #20322 issued to SICTL (**Appendix A3**).

The legislation that applies to the implementation of this management plan is listed below:

- Protection of the Environment (Operations) Act 1997 (NSW)
- Waste Avoidance and Resource Recovery Act 2001 (NSW)
- Environmental Planning and Assessment Act, 1979 (NSW)

RESPONSIBILITIES

A comprehensive list of responsibilities, accountabilities and authorities is provided in section 3.4 of this OEMP. The key responsibilities for the implementation of operational controls are provided in the below figure.

Table 28 Tasks and Responsibilities (Waste Management)

Task	Responsibility
Induction and Training of SICTL staff, contractors and visitors	Workforce Trainer
Management of waste from the SICTL terminal	Through licensed waste operator
Upholding recycling initiatives and maintaining good housekeeping within the terminal	All SICTL staff and contractors
Analyse the waste and recycling monitoring results	Environmental Engineer

OPERATIONAL IMPACTS AND CONTROLS

In accordance with the Waste Classification Guidelines, Part 1: Classifying Waste 2008 published by the NSW Environment Protection Authority (November 2014), waste will be classified into one of five groups in the table below.

At SICTL, most of the waste generated on site are 'General Solid Waste (non-putrescible)' and 'General Solid Waste (putrescible)'. A small proportion of waste is expected to be 'Special Waste', 'Liquid Waste' or 'Hazardous Waste'.

Table 29 Waste Classification

Waste Classification	Description
Special Waste	• Waste tyres (any used, rejected or unwanted tyres including shredded or tyre pieces). • Clinical and related wastes (e.g., sharps waste, blood and blood-stained materials or equipment) from First Aid treatments.
Liquid Waste	• Waste oil • Grease trap sludge
General Solid Waste (Putrescible)	• Food waste • Waste wrappers • Waste paper towels
General Solid Waste (Non-Putrescible)	• Glass, plastic, rubber, concrete or metal • Paper or cardboard • Grit, sediment, litter and gross pollutants from stormwater treatment devices, stormwater management systems that has no free liquids • Containers previously containing dangerous goods, where residues have been appropriately removed by washing or vacuum drained • Oil filters (mechanically crushed), rags and oil-absorbent materials that only contain non-volatile petroleum hydrocarbons and have no free liquids • Drained motor oil containers that do not contain free liquids • Synthetic fibre waste from fibreglass, polyesters and other plastics and is packaged securely to prevent dust emissions, that is confirmed as not being asbestos waste • Glues, paints, coatings and inks • Drained and crushed oil filters and grease tubes • Used and defective parts • Oil soaked rags • Used oil absorbent materials
Hazardous Waste	• Waste with pH ≤ 2.0 or ≥ pH 12.5 • Containers, having previously contained a substance of Class 1, 3, 4, 5 or 8 within the meaning of the Transport of Dangerous Goods Code, or a substance to which Division 6.1 of the Transport of Dangerous Goods Code applies, from which residues have not been removed by washing or vacuuming • Waste lead-acid or nickel-cadmium batteries, being waste generated or separately collected by activities carried out for business

Following the best practises as set out in the Waste Avoidance and Resource Recovery Act 2001, SICTL's preference will be to avoid and reduce waste wherever possible. Where feasible, recycling or recovery through contractors shall be followed. Induction training and tool box talks will be held with SICTL personnel to promote best practises for reducing waste.

Collection and disposal of waste from the terminal will be by a licensed contractor and disposed of at a licensed waste disposal facility.

All waste and rubbish at the terminal is contained in bins or other appropriate containers. Receptacles for all types of waste at the terminal is clearly labelled and sign posted, and waste storage areas are designed so that wind and pests including birds and other animals cannot spread waste. Recycling facilities have been provided for the recycling of paper, glass, aluminium, plastic, steel, batteries, electrical devices, waste oil, oily rags, mechanical parts and fluorescent tubes.

Quarantine wastes from vessels entering the port will not be disposed of or managed onsite. The SICTL terminal does operate a quarantine waste bin which is used to dispose of any foreign material that may be identified on the terminal as potentially originating offshore (such as waste found on top of containers) and any materials found on the terminal which have been identified by Biosecurity Officers as quarantine waste.

Information on the correct use of each waste storage facility is displayed on the Noticeboards and included in the site Induction training.

Details of the overall management methods and procedures that will be implemented to control waste management on site at the SICTL Terminal are explained in the below table

Table 30 Operational Impacts and Control Measures (Waste Management)

Operational Impact	Operational Control Measures
Office Waste	
Glass, aluminium cans, paper and cardboard, plastic milk bottles, soft drink bottles and food waste from lunchroom facilities.	• Separate bins will be provided in the lunchroom facilities in all terminal buildings for the disposal of domestic waste and separation of recyclable waste. • The bins wills be regularly emptied into industrial skip bins near the maintenance and operations building. The industrial bins will be kept closed and will not be overfilled. • Separate bins will be maintained for recyclables and non-recyclable items. • A licensed waste operator (SUEZ Recycling & Recovery Pty Ltd) has been contracted to remove the waste from the terminal regularly to an approved waste facility.
Workshop waste from the Maintenance Building	
Waste items such as: • disused parts and components, machinery and scrap metal; • waste oil and oily rags; • grease trap sludge from the workshop and washing bay.	• Old parts will be reused or repaired where possible. A separate scrap metal bin has been installed at the rear of the Maintenance building to collect all ferrous waste items from the terminal. • Waste oils and oily rags will be kept in approved containers. • The grease trap sludge shall be pumped out when required.

Operational Impact	Operational Control Measures
	• All Workshop waste is removed by specialist licensed waste operators under the terms of SICTL's contract with SUEZ.
Hazardous Waste	
Waste items such as: • Waste lead-acid or nickel-cadmium batteries; • Fluorescent tubes, HID, CFL and LED light globes	• Waste batteries are stored on a bunded pallet in the DG area of the Maintenance Yard. Removal is by specialist licensed waste operators under the terms of SICTL's contract with SUEZ. • All fluorescent tubes, HID, CFL and LED light globes are collected and recycled by specialist licensed waste operators under the terms of SICTL's contract with SUEZ.
Special Waste	
Waste items such as: • waste tyres; • clinical waste arising from First Aid Treatment (blood-stained materials or equipment, and sharps waste). • Quarantine waste	• Waste tyres are removed from the terminal under the terms and conditions of SICTL's Tyre Goods and Services Contract with Bridgestone Earthmover Tyres Pty Ltd. • A clinical waste bin and sharps container has been placed in the terminal First Aid Room. The removal of all clinical waste is by specialist licensed waste operators under the terms of SICTL's contract with SUEZ. • All quarantine and ship waste from the vessel is managed by the Shipping Line (not dealt with by SICTL). Specialised waste removalists contracted by the Shipping Lines will remove and dispose of this waste. • SICTL does maintain a dedicated Quarantine waste bin for the purposes of holding any materials found on the terminal which have been identified by Biosecurity Officers as quarantine waste. The removal of all quarantine waste is by specialist licensed waste operators under the terms of SICTL's contract with SUEZ.

MONITORING AND REPORTING

Housekeeping within the terminal will be monitored by the Environmental Engineer and Manager, Risk & Compliance both supported by the Operations and Engineering managers and the SICTL workforce who will arrange for the clean-up of any litter within the terminal. Attention will be paid to the hazardous and special waste removal process.

The waste generated by SICTL will be weighed by SICTL's waste disposal contractor when collected from the terminal.

On a monthly basis, the waste disposal contractor will submit the waste data to SICTL who will analyse the results showing trends over time. These trends will be reviewed regularly by the HSEQ department and included in the various SICTL reporting obligations as explained in Section 3.5 of this OEMP.

PERFORMANCE EXPECTATION

The measure of how well this management plan is implemented and the effectiveness of the waste management control measures described is monitored through the KPI.

Table 31 KPIs (Waste Management)

Key Performance Indicators	Goal
The amount of waste generated is analogous to the amount of operations, personnel and maintenance activities conducted on the terminal. The KPIs below have been developed so that that they are in accordance with the expected changes in the level of operations at the terminal.	
Amount of waste recycled expressed as a % compared to the total waste generated.	50% or better
No reports of hazardous or special waste being mixed with general waste.	Zero

REVIEW AND IMPROVEMENT

The review and amendment of this management plan will be in accordance with section 6 of the OEMP. The findings from incidents, monitoring results and inspections shall drive the continual improvement of this management plan.

7.8 WATER AND WASTE WATER MANAGEMENT PLAN

OBJECTIVE

The objective of this management plan is to assist SICTL in sustainably managing its water use and wastewater discharges to sewer from the Terminal. This sustainable management will lead to compliance with the conditions under Development Consent and EPL.

STATUTORY REQUIREMENTS AND LEGISLATIVE FRAMEWORK

The Conditions of Development Consent stipulating the management of water and wastewater from the Terminal are given under clause C2.14 in Development Consent and L1.1 in EPL #20322 (Refer to **Appendix A1**).

Additionally, the legislation that applies to the implementation of this management plan is listed below:

- Protection of the Environment (Operations) Act 1997 (NSW)
- Environmental Planning and Assessment Act, 1979 (NSW)
- Water Act 1912 (NSW)
- Water Efficiency Labelling and Standards Act 2005 (Cth)

RESPONSIBILITIES

A comprehensive list of responsibilities, accountabilities and authorities is provided in section 3.4 of this OEMP. The key responsibilities for the implementation of operational controls are provided in the below figure.

Table 32 Tasks and Responsibilities (Water and Wastewater Management)

Task	Responsibility
Induction and training of SICTL staff, contractors and visitors	Workforce Trainer
Regular maintenance of water pipes, fittings and rainwater tanks	Maintenance Department and relevant service providers/contractors
Monitor the wastewater from maintenance Areas	Maintenance Department
Quantify and analyse the water consumption through water service meter records	Environmental Engineer

OPERATIONAL IMPACTS AND CONTROL MEASURES

Table 33 Operational Impacts and Control Measures (Water and Waste Water)

Operational Impact	Operational Control Measures
Potable water used on site	
Resource depletion and wastewater from the buildings and maintenance areas causing water contamination. Use of potable water in the Operation and Maintenance buildings for: • drinking; • washing of hands; • showering and change rooms; • cleaning; • washing of machine parts; • servicing of machines; • fire water in the fire hydrant system	All SICTL terminal kitchen and toilet areas will be fitted with water efficient fittings compliant with the Water Efficiency Labelling and Standards (WELS) scheme as follows: • Taps - – minimum 4-star (preferably 5 star) WELS water rating and timed flow taps where required • Toilets – 4-star WELS water rating/ dual flush • Urinals – 6-star WELS water rating, and • Shower heads – minimum 4-star WELS water rating • regular maintenance to identify leaking or dripping taps and pipes. SICTL has installed 3 x 30,000L rain water storage tanks beneath the Operations Building. The stored water will be used to flush toilets/urinals and for plant wash down in the Maintenance Wash Bay.
Waste water generated on site	

Wastewater generated by the SICTL Terminal office building will be disposed to sewer, including all sewage from toilets, hand basins, shows and kitchens.	• All wastewater from maintenance areas used for washing of machine parts, washing of plant, or servicing of plant will be collected within the maintenance shed and disposed to sewer after being processed to remove pollutants.
	• The wash bay will feature a settling tank and oil separator system which will remove solid and oil pollutants prior to discharge. The system is comprised of:
	  ○ grated drains in the wash and service bays and under slab drainage;
	  ○ silt arrestor and settling tank for the wash bay for the removal of settable pollutants;
	  ○ Coalescing Plate Separator (CPS) for the removal or oil, and
	  ○ a 600mm diameter sewer pipe.
	• The CPS and the separator tank will be serviced according to the manufacturer's guidelines and will be cleaned out whenever the pollutant load requires it. The pollutant loading is proportional to the amount of workshop activating, the number of plants that are operating and other cleaning treatments undertaken in the workshop area.
	• By design, no solid waste or stormwater will be disposed through the sewerage system.
	• SICTL operates under a Commercial Trade Wastewater Permit #37958.

MONITORING AND REPORTING

The data necessary to quantify the water consumption KPI will be obtained from the water service meter for the SICTL Terminal. The meter readings will be obtained from NSW Ports (the Landlord) regularly by the Manager, Risk & Compliance and readings will be entered the KPI spread sheet which will graph usage over time.

The quantities of liquid waste removed from the Coalescing Plate Separator and disposed will be recorded as given under the section **7.7 Waste Management**. The analysis results will be reviewed regularly by the HSEQ department and will be included in the various SICTL reporting obligations as explained in Section 3.5 of this OEMP.

PERFORMANCE EXPECTATIONS

The singular measure of how well this management plan is implemented and the effectiveness of the control measures described above is the amount of potable water used per TEU.

Table 34 KPI's (Water and Wastewater Management)

Key Performance Indicators	Goal
The amount of potable water used is analogous to the amount of operations, personnel and maintenance activities conducted on the terminal. The KPI's below have been developed so that that they are in accordance with the expected changes in the level of operations at the terminal	
The amount of potable water used per TEU per month.	Not to exceed 9L per TEU per month

REVIEW AND IMPROVEMENT

The review and amendment of this management plan will be in accordance with section 6 of the OEMP. The findings from incidents, monitoring results and inspections shall drive the continual improvement of this management plan.

7.9 SHOREBIRD MANAGEMENT PLAN

OBJECTIVE

The objective of this management plan is to guide the direction of SICTL's operations so that operational staff can carry out their duties whilst remaining aware that their work may impact native shorebirds using Penrhyn Estuary. Through this awareness, SICTL can best manage foreseeable impacts successfully.

STATUTORY REQUIREMENTS AND LEGISLATIVE FRAMEWORK

Although there are no Schedule C (Terminal Operations) conditions explicitly calling for the preparation of a Shorebird Management Plan, condition A 1.1 in the Development Consent decrees that the requirements of the EIS shall be complied with. In addition to condition A 1.1, Part 2 of Annexure I in the Agreement for Lease lists the EIS requirements (under the heading Terrestrial Ecology) that SICTL is obliged to comply with. These details of the EIS requirements can be referred to **Appendix A2**.

Additionally, SICTL has identified the legislation that applies to the implementation of this management plan:

- Environment Protection and Biodiversity Conservation Act 1999 (Cth)
- Threatened Species Conservation Act 1995 (NSW)
- National Parks and Wildlife Act 1974 (NSW)
- Environmental Planning and Assessment Act, 1979 (NSW)

RESPONSIBILITIES

A comprehensive list of responsibilities, accountabilities and authorities is provided in section 3.4 of this OEMP. The key responsibilities for the implementation of operational controls are provided in the below figure.

Table 35 Tasks and Responsibilities (Shorebird Management)

Task	Responsibility
Induction and training of SICTL staff, contractors and visitors	Workforce Trainer
Maintenance activities related to terminal assets in Penrhyn Estuary such as drainage outlets or the noise wall to not affect the migratory birds	Maintenance Department and relevant service providers/contractors
Monitoring of shorebird management impacts and the effectiveness of controls	Environmental Engineer
Contacting Avian Ecologist in case of injured or juvenile shorebirds	Environmental Engineer

OPERATIONAL IMPACTS AND CONTROL MEASURES

Section **7.3 Noise Management** already discusses the controls for Noise Management on the terminal. The terminal is built with a noise wall along its norther and edge. The noise wall was designed in accordance with the acoustic modelling detailed in chapter 22 of the Port Botany Expansion Environmental Impact Statement (EIS) and is:

- 3 metres high when parallel to the railway siding, and
- 4 metres high along other areas of the terminal.

In accordance with the EIS:

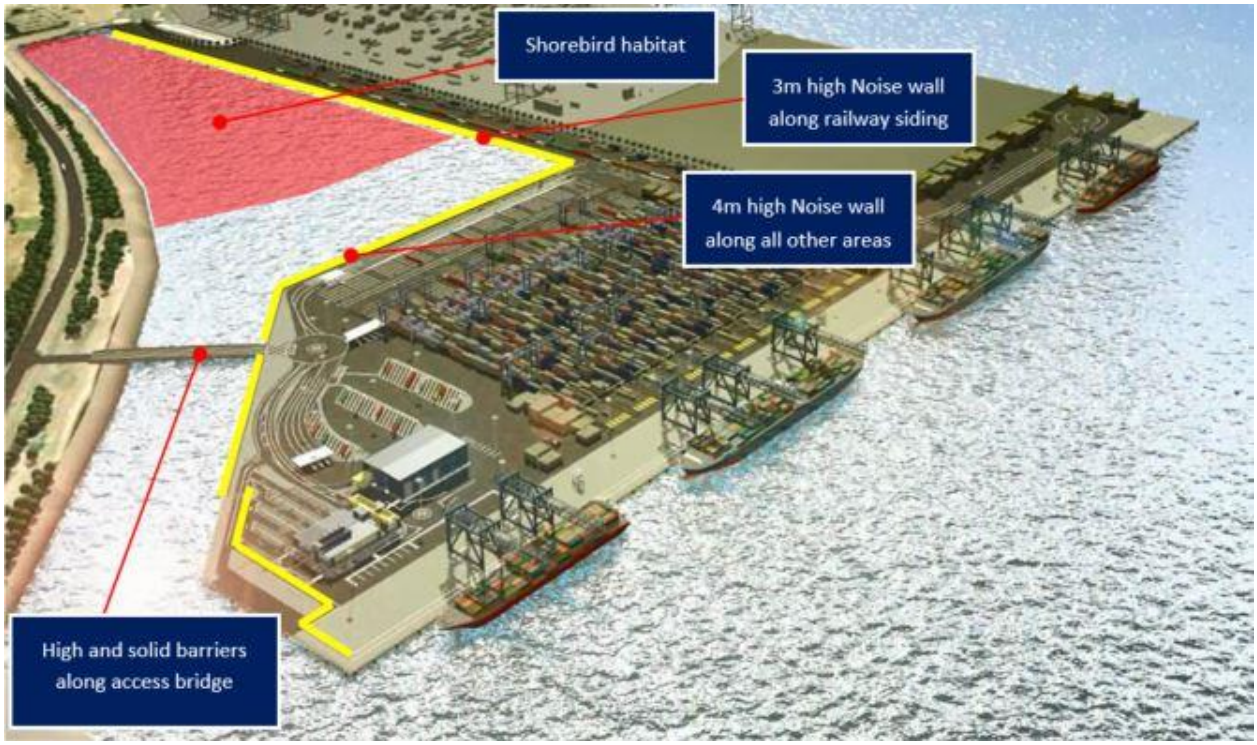
- For the 4-metre-high noise wall, the bottom 2 metres is solid (aerated concrete) and the upper 2 metres is translucent panels, and
- For the 3-metre-high noise wall, the bottom 2 metres is solid (aerated concrete) and the upper 1 metre is translucent panels.

Table 36 Operational Impacts and Control Measures (Shorebird Management)

Operational Impact	Operational Control Measures
Disturbance of Shorebirds by Light Impacts	
Potential sources of disturbance may originate from: • moving lights such as vehicle headlights from vehicles entering, exiting and moving around the terminal, and • high mast lighting immediately adjacent to or spilling light into shorebird habitat	The noise wall is to work in conjunction with the solid concrete barriers along each side of the access bridge. Owing to this construction, the noise wall and bridge barriers are expected to: • block light from moving vehicles entering, exiting and moving around the terminal; • block and attenuate the majority of light spill from mast lighting within the terminal. High mast lighting adjacent to the Penrhyn Estuary may be directed to shine away from the Estuary to further avoid light spill.
Disturbance of Shorebirds by Noise Impacts	
Transient loud noise originating from the terminal may frighten shorebirds and discourage the use of the Penrhyn Estuary habitat.	The noise wall is to work in conjunction with the solid concrete barriers along each side of the access bridge. Owing to this construction, the noise wall and bridge barriers are expected to: • attenuate noise from vehicles and operations within the terminal; • attenuate noise from trains, shunting and train loading activities.
Disturbance of Shorebirds by Flight Path Barriers	
Flight barriers to shorebirds may act to confine their movements and stress the animals, flight barriers such as: • Crane structures and container stacks, and • Terminal buildings.	The noise wall is not expected to become a flight path barrier as it is shorter (3m as opposed to 4m) nearest to the shorebird habitat. The design layout of the terminal has allowed for adequate set back between structures such as buildings and container stacks from the terminal boundary where it adjoins Penrhyn Estuary. Terminal buildings are a maximum of 3 storeys and are located at the North-western corner of the new terminal in accordance with

Operational Impact	Operational Control Measures
	the EIS to be less of a flyway barrier to shorebirds than if located closer to the Estuary. Container stacking areas are set back more than 100m from the edge of the Estuary and can only be stacked a maximum of five containers high (one less than the EIS provisions).
Disturbance of Shorebirds by Terminal Operations	
The movements of terminal mobile plant and trucks close to the Estuary may serve to frighten shorebirds and discourage the use of the Penrhyn Estuary habitat.	A suitable buffer zone between operations areas and the Estuary has been designed into the layout of the terminal to separate the two and lessen the shorebird disturbance potential, consistent with the intent of the Penrhyn Estuary Habitat Enhancement Plan and 5-year monitoring program carried out by the Port Authority of NSW. Terminal operations are carried out more than 20 metres from the Estuary. Road access/egress and truck movements are permitted within the 20m buffer zone. In conjunction with NSW Ports, SICTL will schedule maintenance activities related to terminal assets in Penrhyn Estuary such as drainage outlets or the noise wall to take place according to shorebird breeding and migratory seasonal habits such as between late March and early August to correspond with the period when most migratory shorebirds are on migration or at their northern hemisphere breeding grounds.
Disturbance of Shorebirds by Predators	
There is a potential for feeding and roosting shorebirds to be prey for predator birds. NOTE: section 7.10 discusses the Feral Animal Management Plan	SICTL has previously been a site for predator bird nesting (a lightpole in the landside area was used as an Osprey nest for at least 2 consecutive years). SICTL undertook to remove the nesting material and thereby deter the Osprey from returning to the area. This action was completed by SICTL on 26 July 2016 and since that time the Osprey has not returned to nest at the terminal. SICTL will continue to monitor any nests on the terminal and will participate and liaise with the Port Authority of NSW in predator reduction campaigns.

Figure 18 – Extent of Noise Wall



MONITORING AND REPORTING

The Environmental Engineer supported by the general SICTL workforce will be responsible to conduct routine monitoring of the potential impacts on shorebirds arising from operations at the terminal and the effectiveness of the controls implemented by SICTL.

If roosting, injured or juvenile shorebirds are found within the terminal alive, SICTL may engage an avian ecologist who can provide advice where required.

The results of monitoring will be logged and actioned (including implementing light spill mitigation such as shielding or screening or engaging an avian ecologist) by the Environmental Engineer in accordance with this management plan.

The analysis results will be reviewed regularly by the HSEQ department and will be included in the various SICTL reporting obligations as explained in Section 3.5 of this OEMP.

PERFORMANCE EXPECTATIONS

The singular measure of how well this management plan is implemented and the effectiveness of the control measures described above is the number of shorebird management events involving SICTL.

Table 37 KPIs (Shorebird Management)

Key Performance Area	KPI
Regular monitoring of the terminal to identify the presence of any roosting, injured or juvenile shorebirds.	Monthly monitoring – 12 annually
Regular monitoring of the terminal to identify the presence of any predatory birds	Monthly monitoring – 12 annually

REVIEW AND IMPROVEMENT

Under this management plan opportunities for improvement will be identified by the Environmental Engineer during general inspections of the terminal and inspections of the implemented controls. Additionally, stakeholders can raise issues directly with SICTL where the disturbance or disruption of shorebird movements has been observed or is expected. These will be treated as opportunities for improvement by the Environmental Engineer and rectified within agreed timeframes. The management of complaints pertaining to disturbance to shorebirds management due to SICTL operations shall be in accordance with Section 3.10 of this OEMP.

7.10 FERAL ANIMAL MANAGEMENT PLAN

OBJECTIVE

The objective of this management plan is to guide the direction of SICTL's operations so that operational staff can carry out their duties whilst remaining aware that their work may attract feral animals. Through this awareness, SICTL can best manage foreseeable impacts successfully.

STATUTORY REQUIREMENTS AND LEGISLATIVE FRAMEWORK

Although there are no Schedule C (Terminal Operations) conditions explicitly calling for the preparation of a Feral Management Plan, condition A 1.1 in the Development Consent decrees that the requirements of the EIS shall be complied with. In addition to condition A 1.1, Part 2 of Annexure I in the Agreement for Lease lists the EIS requirements (under the heading Terrestrial Ecology) that SICTL is obliged to comply with. These details of the EIS requirements can be referred to **Appendix A2**.

Additionally, SICTL has identified the legislation that applies to the implementation of this management plan:

- Environment Protection and Biodiversity Conservation Act 1999 (Cth)
- Biodiversity Conservation Act 2016 (NSW)
- National Parks and Wildlife Act 1974 (NSW)
- Environmental Planning and Assessment Act, 1979 (NSW)
- Local Land Services Act 2013 (NSW)
- Biosecurity Act 2015 (NSW)
- Agricultural and Veterinary Chemicals Code Regulations 1995 – specifically schedule 4 – Restricted Pesticides
- Pesticide Regulation 1999 (NSW)
- Pesticide Control Order
- Greater Sydney Regional Strategic Pest Animal Management

RESPONSIBILITIES

A comprehensive list of responsibilities, accountabilities and authorities is provided in section 3.4 of this OEMP. The key responsibilities for the implementation of operational controls are provided in the below figure.

Table 38 Tasks and Responsibilities (Feral Animal Management)

Task	Responsibility
Induction and Training of SICTL staff, contractors and visitors	Workforce Trainer
Maintaining good housekeeping within the terminal	All SICTL staff and contractors
Monitoring of feral animal management impacts and the effectiveness of controls	Environmental Engineer
Liaison with NSW Ports, the Port Authority of NSW and other stevedores etc for feral animal management	Environmental Engineer

OPERATIONAL IMPACTS AND CONTROL MEASURES

There is the potential for disturbance or even predation of shorebirds using Penrhyn Estuary by feral animals such as foxes, rats, mice, and feral or stray cats or dogs. Local vegetation may potentially be damaged or destroyed by feral animals such as rabbits. The primary attraction for feral animals at the SICTL terminal is the opportunity of food present as discarded litter or in rubbish collection areas.

Table 39 Operational Impacts and Control Measures (Feral Animal Management)

Operational Impact	Operational Control Measures
Feral Animal Attractants	
The primary attraction for feral animals at the SICTL terminal is the opportunity of food present as discarded litter or in rubbish collection areas.	• The noise wall along the Northern boundary of the terminal acts as a separation fence • control of waste collection areas to discourage feral animals picking at waste; • the use of covered or closed bins so that feral animals cannot pick food scraps opportunistically; • education of SICTL employees, contractors and visitors through inductions and toolbox talks on feral animal feeding, waste management and housekeeping • surveillance of poor housekeeping by all SICTL employees; • waste management control through the installation of adequate waste bins. SICTL will engage specialist pest control contractors following consultation with OEH, DPI Fisheries, Local Land Services, NSW Ports, the Port Authority of NSW, local council and Sydney Airport. The following methods will be considered: • Baiting/ poisoning; • Trapping (soft jaw trapping); • Netting or waste collection areas; • den fumigation; • use of trained predators; • biological control, and • exclusion fencing
Pest Controls at the terminal	
Pests may be attracted to the terminal due to the presence of any discarded litter or in rubbish collection areas. Pests may also nest in quiet areas of the terminal, or during seasonal nesting periods.	Pest management programs will be tailored to the type and scale of feral animal problem and will vary. The application of pesticides will generally be undertaken by licensed contractors. SICTL will manages these contractors to ensure their work complies with the regulations set by the EPA and is managed in accordance with the EPA's Pesticide Control Orders including any notification or training requirements. The SICTL Environmental Engineer may interface with and coordinate the SICTL pest management program

Operational Impact	Operational Control Measures
	with neighbouring stevedores, NSW Ports and the Port Authority of NSW on predator reduction campaigns so that a holistic approach can be achieved.

MONITORING AND REPORTING

The Environmental Engineer supported by the general SICTL workforce will be responsible to conduct routine inspections of the terminal and the implemented controls.

PERFORMANCE EXPECTATIONS

The singular measure of how well this management plan is implemented and the effectiveness of the control measures described above is the number of feral animal management events involving SICTL.

Table 40 KP's (Feral Animal Management)

Key Performance Area	KPI
Feral Animal complaints received from NSW Ports, the Port Authority of NSW, adjoining stevedores or other members of the community.	Zero
Regular monitoring of the terminal to identify the presence of any feral animal hazards.	Monthly monitoring – 12 annually

REVIEW AND IMPROVEMENT

Under this management plan opportunities for improvement will be identified by the Environmental Engineer during general inspections of the terminal and inspections of the implemented controls. Additionally, stakeholders can raise issues directly with SICTL where the disturbance or disruption from feral animals has been observed or is expected. These will be treated as opportunities for improvement by the Environmental Engineer and rectified within agreed timeframes. The management of complaints pertaining to the observation, increase or spread of feral animals due to SICTL operations shall be in accordance with Section 3.10 of this OEMP.

7.11 ENERGY MANAGEMENT PLAN

OBJECTIVE

Many of the site operations at the terminal are powered by electricity or diesel. The objective of this management plan is to guide the direction of SICTL's operations so that operational staff can carry out their duties whilst remaining aware that their work is a demand on energy and resources. Through this awareness, SICTL can best manage foreseeable impacts successfully.

STATUTORY REQUIREMENTS AND LEGISLATIVE FRAMEWORK

Although there are no Schedule C (Terminal Operations) conditions explicitly calling for the preparation of Energy Management Plan, condition A 1.1 in the Development Consent decrees that the requirements of the EIS shall be complied with. In addition to condition A 1.1, Part 2 of Annexure I in the Agreement for Lease lists the EIS requirements (under the heading Energy) that SICTL is obliged to comply with. These details of the EIS requirements can be referred to **Appendix A2**.

Additionally, SICTL has identified the legislation that applies to the implementation of this management plan:

- Protection of the Environment (Operations) Act 1997 (NSW)
- Environmental Planning and Assessment Act, 1979 (NSW)

RESPONSIBILITIES

A comprehensive list of responsibilities, accountabilities and authorities is provided in section 3.4 of this OEMP. The key responsibilities for the implementation of operational controls are provided in the below figure.

Table 41 Tasks and Responsibilities (Energy Management)

Task	Responsibility
Induction and Training of SICTL staff, contractors and visitors	Workforce Trainer
Maintenance of operational plant and vehicles	Maintenance Department and relevant service providers/contractors
Upholding energy saving initiatives such as switching off equipment when not in use	Plant Operators
Purchase of energy efficient equipment	Manager, Engineering
Monitoring of the energy consumption data	Manager, Engineering Environmental Engineer

OPERATIONAL IMPACT AND CONTROL MEASURES

The potential for wastage of energy is a major concern for SICTL as this wastage decreases the efficiency of the terminal and does not contribute to SICTL's pursuit of environmentally sustainable operations.

The various energy management controls which will be implemented to manage energy use at SICTL Terminal are given below:

Table 42 – Operational Impacts and Control Measures (Energy Management)

Operational Impact	Operational Control Measures
Waste of diesel fuel	
Diesel fuel wasted through engine idling when trucks, plant or other vehicles are not in operational use. Poor maintenance of engines or machinery leading to inefficiencies in operation, inefficient fuel consumption or breakdowns.	• Training operators to throttle down or switch off terminal equipment/vehicles when waiting or not in use for extended periods of time; • Encouraging Truck drivers to switch off truck engines while they are waiting to be called up for container loading/unloading; • Truck drivers to switch off truck engines while they are waiting to be loaded or unloaded in the ASC; • Regular inspection and maintenance of plant, machinery and equipment (assets) to ensure optimum operations and fuel efficiency
Waste of electricity	
Poor energy management by SICTL personnel – such as leaving lights and computers switched on outside of normal business hours or when not in use.	SICTL terminal building and layout has been designed to achieve: • a reduction of lighting loads through building design to make best use of natural light and shade; and the fitting of large glass windows on the majority of all external walls; • a reduction of heating and cooling loads through the installation of blinds and block-out blinds on all windows; • using optimum lighting intensity for security and safety purposes; • specification of energy efficient terminal equipment considered during procurement; • motion-sensors in the internal rooms and corridors to turn lights on and off; • climate control air-conditioning with sensors in zones on each floor. SICTL has installed a Grid Connected Photovoltaic Solar Power System for the heating of water for showers. SICTL employees are encouraged to switch off site office equipment and lights when not in use.
Operational inefficiencies	
Poor or no planning of work activities involving double handling, inefficient travel, stop/ start	• The use of modern container yard management systems for the efficient stacking and retrieval of containers and to minimise truck marshalling times and ship working windows; • Promoting the increase in rail mode share of container freight movement (a condition of the lease agreement); • Regular operational reviews to improve efficiencies in plant/equipment and work procedures.

MONITORING AND REPORTING

SICTL will monitor the use of diesel fuel and electricity, analyse trends and respond to inefficiencies.

SICTL plant and site vehicles will refuel on site at the on-site diesel storage tank. The tank will be replenished regularly by a contract fuel supplier and feature a dedicated fuel metering and management system. The fuel supplier will provide monthly invoices to SICTL stating the quantity of fuel provided in each month.

All high voltage used by SICTL will be metered at the High Voltage substations constructed within the SICTL lease Area.

To measure the KPIs, the following information will be recorded:

- Total fuel bought by SICTL;
- Fuel used by site vehicles;
- Total SICTL Electricity consumption including plant, buildings and structures.

PERFORMANCE EXPECTATIONS

The measures of how well this management plan is implemented and the effectiveness of the control measures described above are expressed by the performance indicators as given in able:

Table 43 KPIs (Energy Management)

Key Performance Indicators	Goal
The amount of diesel and electricity used is analogous to the amount of operations, personnel and maintenance activities conducted on the terminal. The KPI's below have been developed so that that they are in accordance with the expected changes in the level of operations at the terminal.	
The amount of diesel expressed in litres used per TEU.	2.5L per TEU
The amount of electricity expressed in kilowatt hours used per TEU	25kWh per TEU

NOTE: The historical data of electricity usage at the terminal suggests a greater energy efficiency at higher numbers of TEU handled by the terminal. The KPI above has been set at the current TEU volumes predicted; changes in commercial and operational strategy will have a direct impact on energy efficiency and electricity consumption.

REVIEW AND IMPROVEMENT

The review and amendment of this management plan will be in accordance with section 6 of the OEMP. The findings from incidents, monitoring results and inspections shall drive the continual improvement of this management plan.

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32 - Task and Responsibilities (Water and Wastewater Management)

33 - Operational Impacts and Control Measures (Water and Waste Water)

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35 - Tasks and Responsibilities (Shorebird Management)

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15 – Location of Spill Containment Area

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17 – Audit Process used by SICTL to verify compliance to ADG and legislative requirements

18 – Extent of Noise Wall

10 REFERENCES

Guideline for the Preparation of Environmental Management Plans, Department of Infrastructure, Planning and Natural Resources, 2004

Annual Independent Environmental Compliance Audit, SICTL Terminal 3, Port Botany Expansion Project, November 2019

Dangerous Goods Management Guidelines for Ports in NSW, 27 June 2020

Development Consent MOD 17 – DA-494-11-2003-i MOD 17 approved 19 September 2019

Environmental Protection License No. #20322, 1 September 2016

SICTL Deed of Agreement for Lease, Annexure I, Compliance Schedule Part 2

HSEQ10.1.3 Emergency Response Plan SICTL, Version 6, March 2018

HSEQ8.1 Incident Management and Investigation Policy, Version 5, August 2020

11 APPENDICES