



# Port Botany Terminal

## Patrick HSE Management System

### Operation Environmental Management Plan



*Courtesy of Bob Wood - Patrick Port Botany Terminal, December 2017*

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## DOCUMENT CONTROL

Document control shall be in accordance with Patrick's corporate **PAT\_HSE\_PRO\_14\_014 Document Management Procedure**, ensuring:

- The Operation Environmental Management Plan (OEMP or Operation EMP) is maintained and up to date;
- The current version of the OEMP is readily available to managers, employees and key stakeholders; and
- A copy of the OEMP is retained for a minimum of seven years.

Listed below are the four most recent issues for this document.

Document History					
Version No.	Page No.	Issue Date	Description of Amendment(s)	Prepared By	Approved By
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2	Section 6.12	5-Jul-19	Updated with further details related to unpacking (opening) a container.	Marie Gibbs	Bruce Guy

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## Acronyms and Glossary

Term	Definition
ABF	Australian Border Force
AEMR	Annual Environmental Management Report
ARI	Average Recurrence Interval
AOIMP	Aviation Operational Impact Management Plan
AQMP	Air Quality Management Plan
Auto Strad <sup>TM</sup>	Automated Straddle Carrier – a mobile plant remotely controlled
Auto Yard or Automated Yard	Fenced off area where containers are stored during transit. Only Auto Strads and containers occupy this area. When access is required the Auto Strads are noded out.
BC	Bayside Council (formerly Botany Bay City Council)
BHMP	Bird Hazard Management Plan
BIRP	Biosecurity Incident Response Procedure
CCC	Community Consultation Committee
CLM	Contaminated Land Management
Council	Bayside City Council comprises of Botany and Rockdale Councils. Further references to the former Botany and Randwick Councils remain throughout.
CoA	Conditions of Approval – obligations imposed on an activity assessed under Part 5 of the Environmental Planning & Assessment Act 1979
Condition of consent	Obligations imposed on a development assessed under Part 4 of the Environmental Planning & Assessment Act 1979
Cth	Commonwealth
DA	Development Application
DAWR	Department of Agriculture and Water Resources
Development Consents	DA 494-11-2003-i; and DA 453-12-2002-i
DG	Dangerous Goods
DGHCSMP	Dangerous Goods and Hazardous Chemicals / Substances Management Plan
DPE	Department of Planning and Environment (NSW)
DPM	Diesel Particulate Matter
DPW	DP World
EIS	Environmental Impact Statement
EMS	Environmental Management System
EMP	Environmental Management Plans
EMPCR	Environmental Management Plan Compliance Report
Environmental Aspect	Element of an organisation's activities, products or services that can interact with the environment
Environmental Impact	A change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation's activities, products or services

Term	Definition
Environmental Management System	Part of an organisation's overall management system that includes organisational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing and maintaining the environment policy.
Environmental Representative	A suitably qualified and experience person nominated to and approved by the DPE.
EPA	Environment Protection Authority (NSW)
EP&A Act	Environment Planning and Assessment Act 1979 (NSW)
EPL	Environment Protection Licence
EPBC	Environment Protection and Biodiversity Conservation Act 1999
ERMP	Energy and Resources Management Plan
Environmental Representative	A suitably qualified and experience person nominated to and approved by the DPE
ERP	Emergency Response Plan
ESC Manager	Patrick's Environment, Sustainability and Compliance Manager (Port Botany)
FA&BMP	Feral Animal & Biosecurity Management Plan
FPOE	First Port of Entry
GPC	Green Ports Checklist
HAZMAT	Hazardous Materials
HSE	Health, Safety & Environment
HSEMS	Health, Safety & Environment Management System
Hutchison Ports	Sydney International Container Terminal (SICTL)
IMDG	International Maritime Dangerous Goods (Code)
INC	Incident
LEP	Local Environmental Plan
LMS	Learning Management System
MOD	Modification
MSIC	Maritime Security Identification Card
NEPM	National Environmental Protection Measures
NMCR	Noise Monitoring and Compliance Report
NOW	NSW Office of Water
NPI	National Pollution Inventory
NPWS	NSW National Parks & Wildlife Service
OCR	Optical Character Recognition
OEH	Office of Environment and Heritage (NSW)
OEMP	Operation Environmental Management Plan - A site or project specific plan developed to ensure that appropriate environmental management practices are followed during the operation of a project
ONMP	Operational Noise Management Plan
OOG	Out of Gauge
Open a container	Refer to the definition for "Unpacking a container"

Term	Definition
OTMP	Operational Traffic Management Plan
PB	Port Botany
PBCCC	Port Botany Community Consultative Committee
PBE	Port Botany Expansion
PBROG	Port Botany Rail Optimisation Group
PBRP	Port Botany Redevelopment Project
PBT	Port Botany Terminal
PEHEP	Penryhn Estuary Habitat Enhancement Plan
PIRMP	Pollution Incident Response Management Plan
POEO Act	Protection of the Environment Operations Act 1997 (NSW)
Patrick Consent	DA-453-12-2002-i MOD 8 – Port Botany Redevelopment Project
Port Botany Consent	DA-494-11-2003i MOD 16– Port Botany Expansion Project
PBRT	Port Botany Road Taskforce
Quay Crane (ship to shore crane)	Purpose built crane mounted on wharf rails. Used to load or unload containers from vessels onto the wharf or in the back reach of the crane into the Automated Yard.
RCC	Randwick City Council
Reach Stacker	Mobile plant used to pick up and carry containers with its telescopic arm and spreader. Used to handle OOG cargo, rail cargo on and off wagons.
RMS	Roads and Maritime Service
SACL	Sydney Airport Corporation Limited
Secretary	Prior to DA 494 MOD 16 the DPE referred to this position/office as Director-General.
SEPP (Three Ports)	State Environmental Planning Policy
SICTL	Sydney International Container Terminal Limited (Hutchison Ports)
SMP	Sustainability Management Plan
SOP	Standard Operating Procedure
SPARCS	Systematic Planning and Real time Control System
SPC	Sydney Ports Corporation
Spreader	Used on quay cranes, Auto Strads or reach stackers which enables the mobile plant to lift, lock on to and carry containers safely.
SQID	Stormwater Quality Improvement Device
SWMP	Stormwater Management Plan
SWMS	Safe Work Method Statements
TEU	Twenty-foot Equivalent Unit – the acceptable measure of container through-put and equal to 1x 20-foot (6.1m) long container i.e. 1x 40-foot container is equal to 2 TEU.
TOS	Terminal Operating System
TSS	Total Suspended Solids
Unpacking a container	A container is opened, i.e. doors opened, cargo removed/fallen out of an over height container, livestock is moved from a container to a transport vehicle etc
VMP	Vegetation Management Plan
WQMCR	Water Quality Monitoring and Compliance Report
WWMP	Waste and Wastewater Management Plan



## 1. INTRODUCTION

Patrick Terminals' vision is to be an industry leader in the provision of critical logistics services within essential infrastructure-based supply chains. To achieve this vision, Patrick Terminals (i.e. four shipping container terminals based in Sydney, Brisbane, Melbourne and Fremantle) is committed to conducting its business activities in a way that minimises adverse impacts on the environment and community, meets relevant legal requirements, and delivers improvement in environmental performance.

Patrick's largest international shipping container terminal is based at Port Botany (PBT) on NSW Ports land at Brotherson Dock. This Operation Environmental Management Plan (OEMP) for the Port Botany Terminal (PBT or Terminal) outlines the level of environmental management required to ensure that activities undertaken at the Terminal are conducted in accordance with applicable legal requirements and other obligations. This OEMP forms part of PBT's Health, Safety and Environmental Management System (HSEMS) and references to applicable procedures throughout.

### 1.1 Scope

This OEMP applies to all facilities and infrastructure within the Patrick Port Botany Terminal land boundaries (lease area) as identified in **Figure 3.2.1**.

### 1.2 Purpose

The purpose of this OEMP is to fulfil Patrick's legal and other obligations and to prevent and minimise the Terminal's operational impact on the environment. The OEMP has been prepared to document management measures for the Terminal which have been developed following a risk-based approach. The OEMP has been prepared to assist Patrick management in the implementation of these controls to mitigate potential environmental impacts that may be associated with terminal operations.

### 1.3 OEMP Structure and Environmental Issues Overview

The actual and potential environmental issues relevant to the Terminal have been identified. Targeted management of these issues by the OEMP and its management plans provides for a closed-loop management and reporting process. This OEMP and its management plans address:

**Table: 1.3.1: OEMP Layout and Management Plans - PBT**

OEMP – Sections 1 to 5	
Introduction (Section 1)	Implementation and Operation (Section 4)
Planning (Section 2)	Review and Improvement (Section 5)
Terminal (Site) Details (Section 3)	
OEMP Management Plans – Section 6	
Air Quality (6.1)	Aviation Operational Impacts (6.8)
Stormwater (6.2)	Bird hazard (6.9)
Feral Animals (6.3)	Vegetation and Land (6.10)
Waste and Wastewater (6.4)	Energy and Resources (6.11)
DG and Hazardous Chemicals/Substances (6.5)	Biosecurity and Customs (unpack containers) (6.12)
Operational Noise (6.6)	Sustainability (6.13)
Operational Traffic (6.7)	



## 2. PLANNING

### 2.1 Corporate Objectives and Targets

Detailed objectives and targets, including Corporate Objectives and Targets have been documented in the Patrick HSEMS **PAT\_HSE\_PRO\_02\_002 Planning Objectives & Targets Procedure**.

The environmental sustainability objective of the Patrick PBT FY19/20 HSE Strategic Plan is to *“Develop and implement a terminal specific waste reduction and recycling program”*.

### 2.2 Operation Environmental Aspects and Impacts / Risk Assessment

The environmental aspects, impacts and control measures associated with Patrick’s operations at the Port Botany Terminal have been identified and assessed in an Environmental Risk Assessment.

The risk assessment process identifies and ranks the potential environmental impact of activities conducted at the site and the risk evaluation process determines the level of treatment or control to be implemented. The Risk Assessment is conducted in accordance with the Patrick HSEMS **PAT\_HSE\_PRO\_04\_004A Risk Management Procedure** and aligns with the environmental aspects, impacts and control measures documented in this OEMP.

The significant operation environmental aspects (risks) identified at the Terminal are as follows:

- Storage of oil and use in mobile plant and equipment;
- Inbound vessels with leaking hazardous containers aboard;
- Storage of fuel and refuelling operations;
- Storage of Dangerous Goods, and Hazardous Chemicals and Substances;
- Noise generated by Terminal operations;
- Washing of plant and equipment; and
- Hazardous waste management.

## 2.3 Legislative Framework

### 2.3.1 State and Commonwealth Legal Requirements

Patrick's activities at the Port Botany Terminal must comply with relevant Commonwealth, State and NSW Ports environmental legislative and other requirements. **Table 2.3.1** outlines some of the key legal requirements and other obligations that are applicable to Patrick's activities undertaken at PBT:

**Table: 2.3.1: Legal and Other Requirements - PBT**

#	Title	Key Requirements
<b>A</b>	<b>Commonwealth Laws</b>	
A.1	<i>Australian Dangerous Goods Code 7th Edition 2017</i>	Sets out the requirements for transporting dangerous goods by road or rail.
A.2	<i>Customs Act 1901</i>	Regulates the unpacking of goods in containers at a cargo terminal – a cargo handler (terminal) must not allow the container (includes import, export, trans-shipment, flat rack, over height etc) to be unpacked (i.e. opened or the contents removed, emptied, fallen out etc) without written approval of an authorised officer (i.e. Australian Border Force).
A.3	<i>Environment Protection and Biodiversity Conservation Act 1999 and Regulations 2000</i>	Sets out the assessment and approval process for sites that have or are world or national heritage listed, Ramsar Wetlands, threatened species or ecological communities, migratory species, commonwealth marine areas and nuclear sites.
A.4	<i>National Greenhouse and Energy Reporting Act 2007 and Regulations 2008</i>	Describes the requirements for companies to report on energy use and emission of greenhouse gases. Patrick is obligated to report on energy consumption or greenhouse gas emissions.
<b>B</b>	<b>National Codes of Practice</b>	
B.1	National Code of Practice for the Storage and Handling of Workplace Dangerous Goods [NOHSC: 2017 (2001)]	Requirements for the storage and handling of dangerous goods and references applicable Australian Standards, e.g. AS 1940-2017 The storage and handling of flammable and combustible liquids.
B.2	National Code of Practice for the Control of Workplace Hazardous Substances [NOHSC: 2007 (1994)]	Provides practical guidance and advice on how to comply with the National Standard for the Control of Workplace Hazardous Substances.
<b>C</b>	<b>NSW Legislation</b>	
C.1	<i>Contaminated Land Management Act 1997</i>	The Contaminated Land Management (CLM) Act regulates the investigation and remediation of contaminated land and the various instruments the NSW Environmental Protection Authority (EPA) can use to investigate and order the remediation of contamination land. Section 60 imposes a duty on a person who has conducted activities on land that have resulted in contamination to inform the EPA. This duty also applies to the owner of land. Patrick has a duty to inform the EPA of any contamination resulting from activities at their sites.

C	NSW Legislation - continued	
C.2	<i>Dangerous Goods (Road and Rail Transport) Act 2008</i>	<p>This Act aims to regulate the transport of dangerous goods by road and rail in order to promote public safety and protect property and the environment.</p> <p>It is an offence to use, drive or permit a driver to transport dangerous goods if they or the vehicle are not licensed and are required to be licensed under the <i>Dangerous Goods (Road and Rail Transport) Regulation 2014</i>.</p>
C.3	<i>Environmentally Hazardous Chemicals Act 1985</i>	<p>The primary legislation for specifically regulating environmentally hazardous chemicals throughout their life cycle.</p>
C.4	<i>Environmental Planning and Assessment Act 1979 (EP&amp;A Act)</i>	<p>Patrick operates under two consents for State Significant Development under the EP&amp;A Act. (Refer to <b>Section 2.3.2, Conditions of Approval</b> of this OEMP.)</p>
C.5	<i>National Environment Protection Council (NSW) Act 1985</i>	<p>Provides for the establishment of a National Environment Protection Council that has power to make national environment protection measures. The NSW Government will implement national environment protection measures (NEPMs) in NSW in a variety of ways, including via legislation.</p> <ul style="list-style-type: none"> <li>• NEPMs implemented using EPA legislation include those relating to:</li> <li>• monitoring of ambient air quality;</li> <li>• assessment of site contamination;</li> <li>• used packaging materials;</li> <li>• movement of controlled waste; and</li> <li>• national pollutant inventory.</li> </ul>
C.6	<i>Protection of the Environment Operations Act 1997 (POEO Act)</i>	<p>This Act is the key environmental regulatory instrument in NSW and describes requirements for air, noise, water, waste and land pollution. The POEO Act aims to prevent pollution but also provides a two-tiered system to regulate pollution. The EPA is responsible for regulating higher environmental risk activities listed in Schedule 1 by licensing, while local authorities and other public authorities regulate the lower risk non-scheduled activities.</p> <p>Chapter 5 classifies offences into three tiers for water, air, noise and land pollution including waste and litter disposal.</p> <p>Patrick conduct scheduled activities at the Port Botany Terminal and are therefore required to maintain an Environment Protection Licence. Section 148 provides details of the general duty to notify the EPA or the local Council of environmental incidents. This duty applies to any incidents occurring on Patrick land where 'material harm' to the environment is caused or threatened.</p>

3	NSW Legislation - continued	
C.7	<i>Protection of the Environment Operations (Waste) Regulation 2014</i>	<p>The main parts of the Waste Regulation relevant to Patrick activities include:</p> <ul style="list-style-type: none"> <li>• Proximity Principle: Offence for transport of waste;</li> <li>• Prescribed wastes for land pollution offence; and</li> <li>• Reduced licensing thresholds for waste activities.</li> </ul> <p>Patrick has a duty to ensure wastes are disposed of appropriately and records maintained.</p>
C.8	<i>State Environmental Planning Policy (SEPP) (Three Ports) 2013</i>	<p>The Three Ports SEPP commenced on 31 May 2013 and includes the Patrick Port Botany Terminal (also applies to Port Kembla and Port of Newcastle). Part 2 establishes land use zones and permitted and prohibited development within these zones. Zones are categorised as follows:</p> <ul style="list-style-type: none"> <li>• Zone IN1 General Industrial;</li> <li>• Zone IN3 Heavy Industrial;</li> <li>• Zone SP1 Special Activities; &amp;</li> <li>• Zone RE1 Public Recreation.</li> </ul> <p>Part 3 defines exempt and complying development and Part 4 State Significant Development.</p>
C.9	<i>Sydney Water Act 1994</i>	<p>This Act is applicable to the discharge of wastewater to sewer from industrial/commercial premises.</p> <p>Trade wastewater from industrial/commercial premises must not be discharged into a work owned by the Sydney Water Corporation except with the written agreement of the corporation (Section 49) commonly known as a Trade Waste Agreement or Permit.</p> <p>Patrick currently holds a Trade Waste Agreement for the Port Botany Terminal which outline site specific conditions regarding trade waste discharge and pre-treatment equipment.</p>
C.10	<i>Waste Avoidance and Resource Recovery Act 2001</i>	<p>This Act promotes waste avoidance and resource recovery by developing waste avoidance and resource recovery strategies and programs, such as the extended producer responsibility scheme for industry. This Act allows the development and implementation of state-wide waste reduction strategies (Parts 3 and 4) and extended producer responsibility schemes (Section 15).</p> <p>Patrick may choose to follow the following waste hierarchy:</p> <ul style="list-style-type: none"> <li>• Avoidance of unnecessary resource consumption; then</li> <li>• Resource recovery (including reuse, reprocessing, recycling and energy recovery); and then</li> <li>• Disposal.</li> </ul>

D	Local Government Legislation	
D.1	<i>Botany Local Environment Plan 2013</i>	The Port Botany precinct is located within the Bayside Council (BC) (formerly City of Botany Bay) and Randwick City Council (RCC) local government areas. The BC has prepared a Local Environmental Plan (LEP) under the NSW <i>Environmental Planning and Assessment Act 1979</i> , and is a key tool used by Council to implement planning policies and directions. The Botany LEP 2013 however, does not apply to land affected by the provisions of the <i>State Environmental Planning Policy (Three Ports) 2013</i> which commenced on 31 May 2013 and includes the Patrick Port Botany Terminal. Given the BCs role in administering legislation adjacent to the Terminal, it is important to maintain communication and consult with the BC as required by the Consent of Approval (CoA).

### 2.3.2 Conditions of Approval

The Terminal currently operates under two instruments of development consent as identified in **Table 2.3.2**. The development of the Knuckle and Ramp D was completed in accordance with a development consent issued as part of the Port Botany Expansion. The Patrick Terminal redevelopment was completed under a separate development consent specific to the Patrick Terminal.

**Table 2.3.2 – Instruments of Development Consent**

Instrument of Development Consent	Scope
DA 494-11-2003i MOD 16 <sup>Note 1</sup> Port Botany Expansion Project (Port Botany Consent) Applicant – NSW Ports (formerly Sydney Ports Corporation)	<ul style="list-style-type: none"> <li>• Ramp D</li> <li>• The Knuckle</li> <li>• SICTL (Hutchison Ports) - outside scope of Patrick operations</li> </ul>
DA 453-12-2002-i MOD 8 Port Botany Redevelopment Project (Patrick Consent) Applicant – Patrick (formerly Patrick Stevedores)	<ul style="list-style-type: none"> <li>• Existing terminal operations</li> <li>• Terminal works (construction of new maintenance workshop, control tower, administration building, services and change to Auto Strad operation)</li> </ul>

<sup>Note 1</sup> At the time this OEMP was issued, the DPE review of the application for MOD 17 was underway

These documents, which are referred collectively to throughout this OEMP as the CoA, set out the conditions under which the Terminal is permitted to operate and are a major influence on the content of the OEMP and its management plans. Conditions of Approval for DA 494-11-2003 and DA 453-12-2002 are presented in **Appendix A and B** of this OEMP.

More detailed Legal and other requirements with specific applications to the Terminal have been documented in the **Patrick HSEMS Legal Compliance Register (PAT\_HSE\_REG\_03\_003)**, the process for which is set out in the corporate **Patrick HSEMS Legal Compliance Procedure (PAT\_HSE\_PRO\_03\_003)**.

### 2.3.3 Permits, Approvals and Licencing

A number of permits, licences and approvals, issued by various government statutory organisations/authorities are required for Terminal operations as listed below:

- Port Botany Expansion DA 494-11-2003i MOD 16 (The Knuckle and Ramp D) (**Appendix A**);
- Port Botany Container Terminal Upgrade DA 453-12-2002-i MOD 8 (**Appendix B**);
- Environment Protection and Biodiversity Conservation (EPBC) Control Action Approval 2002/543 (**Appendix D**);
- Environment Protection Licence (EPL) No. 6962 (**Appendix E**);
- Consent to Discharge Industrial Trade Wastewater, No. 24990 (**Appendix F**);
- Trade Wastewater Discharge Schedule, Permit No. 40110, Grease Arrestor Pit (**Appendix G**);
- SafeWork Diesel Storage Licence;
- Sydney Ports Corporation Green Port Checklist (2014); and
- Whole lease agreement with Port Botany Lessor Pty Ltd (NSW Ports) – Licence No. 03-09-102, 11 March 2016.

Further details of the requirements contained in the CoA and associated Statement of Commitments are provided in the Management Plans in **Section 6**. Current copies of the above consents are maintained at the Terminal and a copy of EPL No. 6962 is available on the Patrick website <http://www.patrick.com.au/environment-monitoring-reporting>.

Patrick has specific responsibilities regarding approvals and licencing, including:

- Renewal of approvals and licences as appropriate;
- Application for new approvals and licences as appropriate;
- Monitoring legislative changes and ensuring changed requirements are accounted for in updates to management documents;
- Complying with the conditions set forth in the various approvals and licences; and
- Maintaining copies of all licences and approvals on-site at the Terminal.

### 2.3.4 Environmental Impact Statement Obligations and Additional Conditions

Environmental Impact Statement (EIS) obligations stemming from the environmental planning assessments for the Terminal and the Port Botany expansion are provided in **Appendix C** of this OEMP.

## 2.4 Patrick's HSE Policy

This OEMP has been developed in accordance with the commitment in Patrick's HSE Policy which includes the Terminal's environmental risks, defines minimum performance requirements as well as ensuring that relevant regulatory requirements and obligations are met.

Patrick's HSE Policy is documented in the HSEMS **PAT\_HSE\_POL\_01\_001 Health Safety & Environment Policy**.

## 2.5 HSE Framework

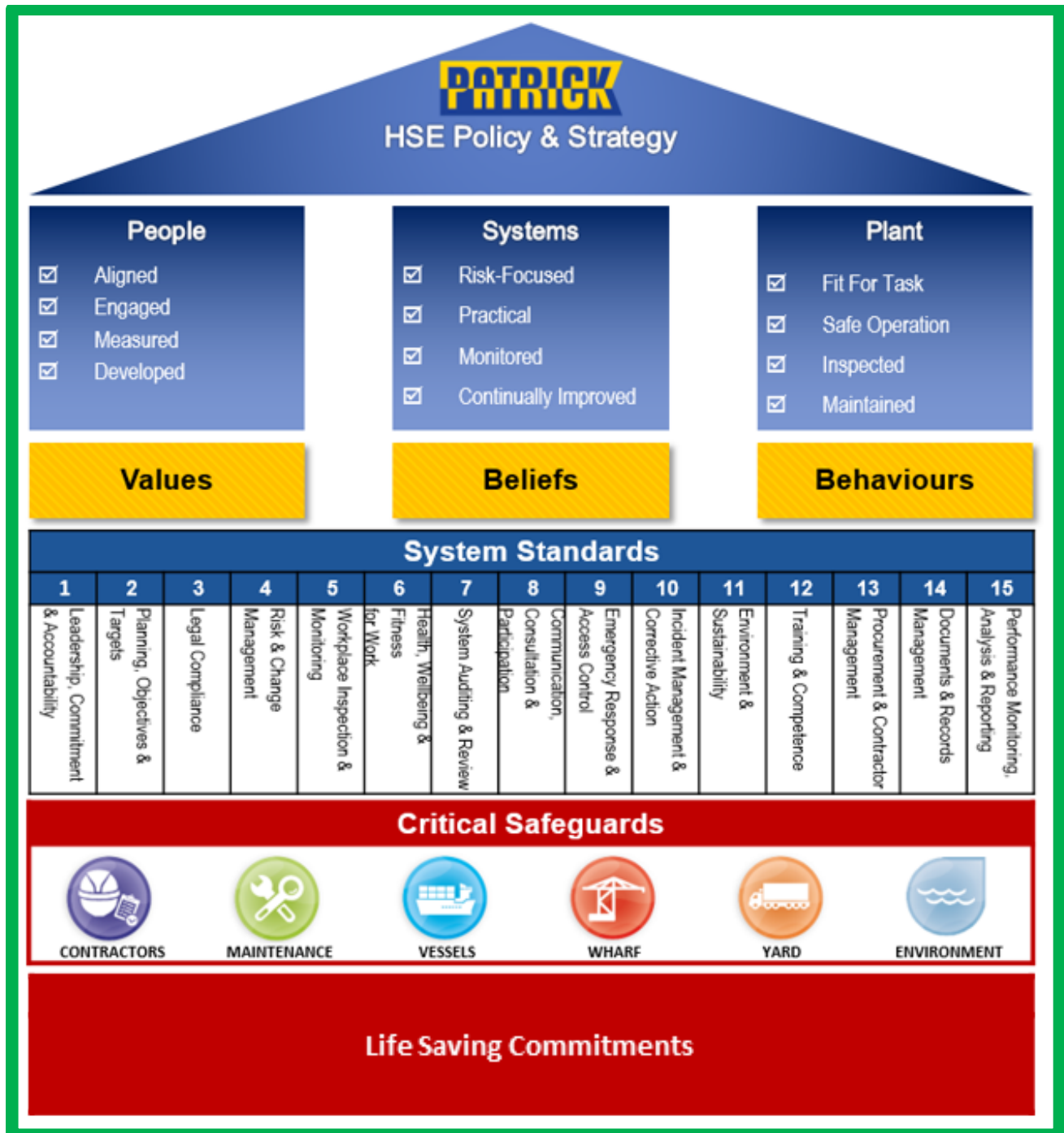
Patrick's HSE framework is based on the company's HSE Policy. The principles of this framework are set out below:

- Comply with statutory and regulatory obligations and pursue continual improvement;
- Implement and maintain the HSEMS consistent with Patrick's 15 HSE Management Standards (comprised of 21 elements);
- Implement strategies to, improve resource efficiency and minimise negative impacts to the environment and communities in which we operate;
- Ensure workplace hazards and risks are systematically identified and controlled;
- Ensure that adequate resources are made available for the implementation and ongoing operation of the HSEMS;
- Provide necessary training for managers and employees to carry out their duties safely and without risks to people, property and the environment;
- Establish measurable objectives, targets and review processes that are consistent with the Patrick HSEMS, to foster review and improvement towards an injury, damage and environmental incident free workplace;
- Ensure that adequate consultation with employees occurs on HSE matters which have the potential to affect them;
- Incorporate safety and environmental considerations into business decision-making processes; and
- Communicate openly with the community, regulators, customers and other stakeholders.

This OEMP has been designed to align with *AS/NZ ISO 14001:2015 Environmental Management Systems – Requirements with guidance for use*, as well as with Patrick's HSE framework illustrated in **Figure 2.5.1** and detailed in **Table 2.5.1**.



Figure: 2.5.1: Patrick's HSE Framework



**Table: 2.5.1 - Patrick's HSEMS - 15 HSE Standards comprised of 21 elements**

Patrick HSEMS – 15 HSE Standards (21 elements)		
Standard No.	Standard Title / Purpose	Patrick HSEMS Procedure No.
1	<b>Leadership, Commitment &amp; Accountability</b>	<b>PAT_HSE_PRO_01_001</b>
	<ul style="list-style-type: none"> <li>Employees at all levels demonstrate a commitment to HSE through leadership actions consistent with Patrick's HSE Beliefs and Behaviours; and</li> <li>Employees and management understand their responsibilities, accountabilities and authorities within the HSE Management System (HSEMS).</li> </ul>	
2	<b>Planning, Objectives &amp; Targets</b>	<b>PAT_HSE_PRO_02_002</b>
	<ul style="list-style-type: none"> <li>A planned and systematic approach is established to fulfil the commitments of the HSE Policy; and</li> <li>HSE objectives are defined and measured by setting and monitoring of targets that support the intent of the HSE Policy, and continual performance improvement.</li> </ul>	
3	<b>Legal Compliance</b>	<b>PAT_HSE_PRO_03_003</b>
	<ul style="list-style-type: none"> <li>Processes are in place to systematically identify legal and other compliance requirements; and</li> <li>Compliance is achieved with legal and other requirements applicable to the activities being performed.</li> </ul>	
4	<b>Risk &amp; Change Management</b>	
4A	<b>Risk Management</b>	<b>PAT_HSE_PRO_04_004A</b>
	<ul style="list-style-type: none"> <li>Establish the Patrick risk management requirements; and to define the system and supporting tools.</li> </ul>	
4B	<b>Change Management</b>	<b>PAT_HSE_PRO_04_004B</b>
	<ul style="list-style-type: none"> <li>The actual or potential impacts of proposed changes to workplace processes and equipment are assessed prior to implementation, with appropriate risk management strategies applied.</li> </ul>	
5	<b>Workplace Inspection &amp; Monitoring</b>	<b>PAT_HSE_PRO_05_005</b>
	<ul style="list-style-type: none"> <li>Operations and activities with the potential to cause HSE harm or damage are identified, and routinely inspected to monitor the effectiveness of risk controls.</li> </ul>	
6	<b>Health, Wellbeing &amp; Fitness for Work</b>	
6A	<b>Health, Wellbeing &amp; Fitness for Work</b>	<b>PAT_HSE_PRO_06_006A</b>
	<ul style="list-style-type: none"> <li>Health and hygiene management programs are consistent with legislation and industry standards and incorporate the assessment and monitoring of fitness for work where HSE risks exist.</li> </ul>	
6B	<b>Injury Management, Compensation and Rehabilitation</b>	<b>PAT_HSE_PRO_06_006B</b>
	<ul style="list-style-type: none"> <li>Rehabilitation programs are implemented in accordance with legislation, insurer requirements and in accordance with good practice injury management principles.</li> </ul>	
7	<b>System Auditing &amp; Management Review</b>	<b>PAT_HSE_PRO_07_007</b>
	<ul style="list-style-type: none"> <li>All operational areas, functions and work processes which may impact on HSE outcomes are audited against HSEMS requirements at specified intervals, based on risk and the results of previous audit findings; and</li> <li>The HSEMS is subject to review to assess its ongoing effectiveness for achieving HSE objectives and identifying opportunities for improvement.</li> </ul>	

Patrick HSEMS – 15 HSE Standards (21 elements) <i>continued</i>		
Standard No.	Standard Title / Purpose	Patrick HSEMS Procedure No.
<b>8</b>	<b>Communication, Consultation &amp; Participation</b>	<b>PAT_HSE_PRO_08_008</b>
	<ul style="list-style-type: none"> <li>Employees actively participate in the identification of HSE hazards and management of risks and are involved in making decisions about issues that may impact their health and safety.</li> <li>Mechanisms are in place to facilitate open communication and consultation with employees and other affected parties regarding HSE matters that are of relevance to them.</li> </ul>	
<b>9</b>	<b>Emergency Response &amp; Site Access Control and Facilities</b>	
<b>9A</b>	<b>Emergency Response</b>	<b>PAT_HSE_PRO_09_009A</b>
	<ul style="list-style-type: none"> <li>Emergency response systems have been developed based on a risk management approach and are continually monitored for effectiveness.</li> </ul>	
<b>9B</b>	<b>Site Access Control and Facilities</b>	<b>PAT_HSE_PRO_09_009B</b>
	<ul style="list-style-type: none"> <li>There are adequate and suitable access controls in place to ensure HSE and business operations are not adversely affected.</li> <li>Access controls have been developed based on a risk management approach and are continually monitored for effectiveness.</li> </ul>	
<b>10</b>	<b>Incident Management &amp; Corrective Action</b>	
<b>10A</b>	<b>Incident Management</b>	<b>PAT_HSE_PRO_10_010A</b>
	<ul style="list-style-type: none"> <li>To ensure a consistent approach to the management of incidents; the reporting, recording and classification of incidents; the internal and external notification requirements; and the incident investigation processes.</li> </ul>	
<b>10B</b>	<b>Corrective Action</b>	<b>PAT_HSE_PRO_10_010B</b>
	<ul style="list-style-type: none"> <li>Corrective actions arising from incident investigations and other sources are developed, implemented, monitored and reviewed for effective risk control.</li> </ul>	
<b>11</b>	<b>Environment &amp; Sustainability</b>	<b>PAT_HSE_PRO_11_011</b>
	<ul style="list-style-type: none"> <li>Patrick complies with its environmental legal requirements, including the performance standards of <i>AS/NZS ISO 14001: 2015 Environmental management systems</i>.</li> <li>Patrick conducts its operations in a manner that minimises environmental and community impacts.</li> <li>Patrick delivers continual improvement in environmental and sustainability management.</li> </ul>	
<b>12</b>	<b>Training &amp; Competence</b>	<b>PAT_HSE_PRO_12_012</b>
	<ul style="list-style-type: none"> <li>Employees and contractors are appropriately skilled, qualified and competent to undertake their work activities, and only conduct authorised tasks that they are capable of completing safely.</li> </ul>	
<b>13</b>	<b>Procurement &amp; Contractor Management</b>	
<b>13A</b>	<b>Procurement</b>	<b>PAT_HSE_PRO_13_013A</b>
	<ul style="list-style-type: none"> <li>HSE is a core consideration in procurement and purchasing of services, plant, equipment (including hire or lease) and materials.</li> </ul>	
<b>13B</b>	<b>Contractor Management</b>	<b>PAT_HSE_PRO_13_013B</b>
	<ul style="list-style-type: none"> <li>HSE risks associated with utilising contractors (including permanent contractors, major project contractors, labour hire personnel, service providers and consultants) are identified and controlled to an acceptable level; and</li> <li>Contractors' behaviour and systems of work align with Patrick's minimum HSE standards and are monitored for conformance.</li> </ul>	

Patrick HSEMS – 15 HSE Standards (21 elements) <i>continued</i>		
Standard No.	Standard Title / Purpose	Patrick HSEMS Procedure No.
14	Document Management	PAT_HSE_PRO_14_014
<ul style="list-style-type: none"> <li>Describes the system for the review, approval, issue, and change to all Patrick documentation. This procedure also provides guidance on how all documents will be formatted, distributed, retained, registered, reviewed, and updated.</li> </ul>		
15	HSE Performance, Monitoring, Analysis & Reporting	PAT_HSE_PRO_15_015
<ul style="list-style-type: none"> <li>HSE performance is monitored, analysed and reported to track performance against objectives and targets, to ensure the ongoing effectiveness of hazard controls, and to provide a basis for continual improvement.</li> </ul>		

### 3. TERMINAL (SITE) DETAILS

#### 3.1 Site Location

Port Botany is located 12 nautical miles south of the entrance to Sydney Harbour and the Sydney Central Business District. Patrick operates a dedicated container facility on NSW Port land located on the northern side of Brotherson Dock at Port Botany.

In 2016, following the Port Botany Expansion Project, the Patrick terminal occupies a total area of 63.2 hectares, with a quay length of 1,450 metres and four berths (numbers 6, 7, 8 and 9). Road and rail access are from the north-eastern end of the Terminal, road access being via Penrhyn Road off Foreshore Road, and rail access via the Botany Freight Rail Line. The Patrick Terminal is the largest of the three container terminals at Port Botany, with two other stevedoring operations, Sydney International Container Terminals (SICTL, Hutchison Ports) and DP World (DPW) also holding leases at the Port Botany.

The land surrounding the site includes:

- Penrhyn Road and the Penrhyn Estuary to the north;
- Various port-related industries, and community areas, to the east;
- The DPW Terminal to the south;
- The Hutchison Ports (SICTL) Terminal to the west; and
- The Sydney Kingsford Smith Airport further afield to the north-west.

The surrounding natural environment consists of Penrhyn Estuary and Botany Bay which are sensitive to environmental impacts from the Port Botany Precinct.

#### 3.2 Site Identification

The site comprises the following property (**Table 3.2.1**) and the site location is illustrated in **Figure 3.2.1**.

**Table 3.2.1: Site Identification**

Site Identification	
Street Address	Brotherson Dock, Penrhyn Road, Port Botany
Lot and Plan/Diagram	Lots 1-6, 8-14 and 16-19 DP 452236; Lot 1 DP 804556; & Lots 1 and 2 DP 1009870, Brotherson Dock, Penrhyn Road, Port Botany in the Botany Bay local government area (Source DA 453)  LOT 202 DP 1183399, LOT 203 DP 1183399 (Source EPL 6962)
Torrens Title	Property leased  Folio Identifiers 202 & 203/1183399
Terminal Area	62 Hectares including 1,450m of quay line
Local Authority	NSW Ports
Land Use / Zoning	Industrial or Special (Port) Uses under the Three Ports SEPP and CBB LEP



Figure: 3.2.1: Location of the Patrick Terminal at Port Botany



### 3.3 Overview of Key Activities

Patrick's approach to risk management is based on the management of risks associated with 10 key activities carried out at the terminal:

- Operation of mobile plant e.g. automated straddles, forklifts, reach stackers and cranes;
- Truck transport;
- Rail transport;
- Transiting refrigerated and non-refrigerated containers;
- Transiting dangerous goods;
- Berthing of ships;
- Maintenance and servicing plant and equipment;
- Storage of fuel, and refuelling mobile plant;
- General operation of the terminal; and
- Office administration.

### 3.4 Site Facilities and Operation

The Terminal loads and unloads containers from ships berthed at the dock and has temporary container storage capabilities for its customers. Road and rail access to the site enables trucks and trains to transport containers to and from the Terminal. The operational capacity of the Terminal is 2.5 million TEU per annum, although current operational levels are approximately 700,000 TEU.

The Terminal operates 24 hours a day, 7 days a week, with a total staff of approximately 350 including operational, maintenance, management and administrative personnel.

A major redevelopment of the Terminal was completed in 2016, including incorporation of the 'Knuckle' area and 'Ramp D' into operations, as well as the procurement of Auto Strads<sup>TM</sup> (Automated Straddle Carriers) and associated infrastructure. The redevelopment increased the total area, quay line and Twenty-Foot Equivalent Unit (TEU) capacity of the Patrick Terminal. The current site layout is shown in **Figure 3.4.1**. The Terminal comprises of the following infrastructure:

#### 3.4.1 Administration Building and Control Tower

A single-storey administration building with a 43-metre high control tower is located in the south-eastern portion of the site closest to NSW Ports' Brotherson House. The administration building occupies of approximately 2,000 m<sup>2</sup> and includes office space, first aid rooms, store rooms, training facilities and amenities.

#### 3.4.2 Maintenance Building – Workshop and Administration

The maintenance area includes:

- an all-weather workshop with service bays designed to house Auto Strads, smaller associated workshops and store rooms;
- a two-storey administration building providing office space for service engineers and technical staff; and
- a single-storey main store building.



**Figure: 3.4.1: Patrick's Terminal Layout at Port Botany**



### **3.4.3 Quay Cranes (Ship to Shore) and Wharf**

The stevedoring operations involve the loading and unloading of shipping containers on and off container ships at any of the four (4) berths (6, 7, 8 and 9) at Brotherson Dock. This task is carried out by up to nine quay (ship to shore) cranes which can move on rails along the wharf.

### **3.4.4 Auto Yard**

The Auto Straddle operating area (or 'Auto Yard') is used for the transport of 'in-transit' containers. This includes loading and unloading containers from vessels, trucks and railway carriages, container stacking (including dangerous goods containers), straddle operations, crane operations, and straddle parking.

Containers are stacked in marked blocks and are then transferred by Auto Strads to and from the truck and rail exchange areas. Approximately 5,500 ground slots are currently available for container stacking and an additional 650 slots provide facilities for refrigerated ('reefer') containers.

Up to 47 Auto Strads operate within the yard, carrying containers between the quay cranes and the container stacking area.

#### 3.4.5 Fuel Storage and Refuelling Bay

A fuel storage area with associated refuelling bays is located to the west of the Maintenance workshop. The refuelling facility stores approximately 130,000 litres of diesel across two self-bunded 'tank-tainers'. The refuelling bay includes appropriate bunding and containment structures, pipework, dispensing points, emergency stop controls, and other aspects of installation which reduce the risk of spills and leaks. Spill kits are available in strategic location across the site and appropriately stocked. All spill response materials are routinely inspected and restocked by contractors/service providers as arranged by the Maintenance Department.

#### 3.4.6 Wash Bay

The single operating Wash Bay is located outside the Maintenance Workshop and is used for cleaning the Auto Strads. Wastewater from this area drains via a floor sump to a grated open concrete pit with an under/over oil water separator. The wastewater is then pumped through an Auto Batch unit to remove solids and directed to sewer under the conditions of a Trade Waste Agreement (TWA) with Sydney Water (Consent No. 24990). A program of monitoring is required under the TWA, details of which are included in **Section 6.4 - Waste and Wastewater Management Plan** of this OEMP.

#### 3.4.7 Grease Trap

Grease Arrester Pit (Trade Wastewater Discharge Schedule, Permit No. 40110) collects greasy wastewater from the Canteen/Kitchen. The Sydney Water Wastesafe barcode is located on the fence post directly behind the Grease Arrester Pit. The grease trap is cleaned 6-monthly by a licensed waste transporter. The grease and sludge are disposed at a suitably licensed waste treatment or disposal facility. Refer to **Section 6.4 - Waste and Wastewater Management Plan** of this OEMP.

#### 3.4.8 Oil and Waste Oil Storage

Oils (hydraulic and lubricating), coolant and greases are stored in the Oil and Grease Store located off the Maintenance Workshop. Liquids (excluding grease) are stored on plastic bunded pallets. Waste oil is stored in 240L drums on bunded pallets in the designated Waste Oil Store. The drummed waste oil is collected on an as-needs basis by an appropriately licensed waste transporter and disposed as regulated waste to an appropriately licensed waste receiving facility.

#### 3.4.9 Truck Grids and Weighbridges

Truck grids and weighbridges are located at the northern portion of the Terminal due south of the rail line. Trucks enter the Terminal from Penrhyn Road via Ramp D at the truck gate and are processed at the OCR Facility for registration. Truck grids provide for the orderly queuing and exchange of containers from cranes to trucks (and vice versa). A maximum of 199 truck parking and / or exchange slots are available within the Terminal. Four weighbridges facilitate the weighing of trucks prior to leaving the Terminal. Trucks are weighed in accordance with the NSW Roads and Maritime Service's (RMS) Chain of Responsibility provisions in the *Road Transport (General) Regulation 2013*.

#### 3.4.10 Rail Siding

The rail siding consists of two 670-metre-long sidings with a manual crossover. All trains are propelled into the siding and are restricted to a length of 600 metres. Split trains are accessed on Number 1 and 2 sidings. Reach stacker access to strip and load trains is restricted to the northern side of the sidings. Approximately 68 train movements occur each week to and from the Patrick Terminal.

Rail Exchange Grids - On the northern side of the rail siding reach stackers access and strip export containers from trains and load designated trucks who transport export containers to the Truck Grid where they are off loaded by an Auto Strad into the Auto Yard for loading onto a vessel. Import containers are discharged from ships into the crane's back reach and relocated by an Auto Strad into the Auto Yard. At the Truck Grid the container is loaded onto a designated rail truck by an Auto Strad, the containers are transported to the rail siding where they are discharged by a reach stacker and placed in the container stack or directly onto a train.

Internal Rail Loop - A rail level crossing is situated at the 320-metre mark, providing access for Patrick personnel to transfer rail containers to and from the rail siding to the Truck Grids (and Auto Yard). Trains greater than 470-metres are split across the Number 1 and 2 sidings. Where a train prevents rail trucks from accessing the rail level crossing to the Truck Grid, trucks are diverted via Ramp C and then Ramp D to access the Truck Grid.

#### 3.4.11 CargoLink

An empty container exchange area is positioned parallel to Penrhyn Road (eastern side of the terminal). Road transport trucks enter the Terminal from Penrhyn Road via Gate B110 and empty shipping containers are unloaded by heavy forklifts and placed into the empty container park. The containers are relocated to the MX Pads, when this staging area is full the gates are transitioned allowing the Auto Strads access to move the containers into the Auto Yard in readiness for moving to the back reach of the crane to be loaded onto the appropriate ship.

#### 3.4.12 Optical Character Recognition (OCR) Facility

The OCR Facility is located at the truck entry point (Ramp D). Six traffic lanes at the truck entry and exit points tie into the OCR Facility, which is used to scan and validate shipping containers.

#### 3.4.13 Customs Building

A single-storey demountable Customs building is located adjacent to the OCR Facility at the truck exit point of the Terminal.

#### 3.4.14 Training Building

Training rooms are located in the building adjacent to former Security Gate House at Gate B110.

#### 3.4.15 Car Park

Car park facilities include a maximum of 333 car parking spaces within two car parks. At least two visitor and one mobility impaired parking space is provided adjacent to the building entries. The number of car parking spaces is sufficient to cater for all employees, contractors/service providers and visitors at the Terminal.

## 4. IMPLEMENTATION AND OPERATION

### 4.1 Stakeholder Identification and Consultation

**Table: 4.1: Patrick PBT Stakeholder Identification and Consultation**

Stakeholder Identification	
<b>Internal Stakeholders</b>	<ul style="list-style-type: none"> <li>Contractors/service providers</li> <li>Non-operational functions e.g. Safety; Human Resources, Finance, etc</li> <li>Operations personnel</li> <li>Engineering &amp; Maintenance Department</li> <li>Terminal Management</li> <li>Patrick Corporate (the Management Team)</li> </ul>
<b>External Stakeholders</b>	<ul style="list-style-type: none"> <li>Customers (shipping lines)</li> <li>Transport carriers</li> <li>DP World Terminal</li> <li>Hutchison Ports (SICTL) Terminal</li> <li>NSW Ports</li> <li>Port Authority of NSW</li> <li>Bayside Council, and Randwick City Council</li> <li>NSW Department of Planning and Environment</li> <li>NSW Office of Environment and Heritage / Environment Protection Authority</li> <li>NSW Roads and Maritime Services</li> <li>Transport for NSW</li> <li>The local community</li> <li>The PBCCC</li> </ul>
<b>Stakeholder Consultation</b>	<p>As required by the CoA, the original OEMP has been developed in consultation (where required) with:</p> <ul style="list-style-type: none"> <li>NSW Ports</li> <li>Bayside Council, and Randwick City Council</li> <li>NSW Department of Planning and Environment</li> <li>NSW Office of Environment and Heritage / Environment Protection Authority</li> <li>NSW Roads and Maritime Service.</li> </ul> <p>This revised OEMP was reviewed by NSW Ports prior to Patrick sending it to the DPE.</p>

### 4.2 Environmental Roles and Responsibilities

A summary of the roles and responsibilities of Patrick employees and contractors/service providers are described below in **Table 4.2.1**. The terminal's key contacts, and a schedule of the environmental related tasks are shown in **Tables 4.2.2 and 4.2.3**.

More detailed roles and responsibilities with respect to environmental management have been documented in the Patrick HSEMS in **PAT\_HSE\_PRO\_01\_001 Leadership Commitment & Accountability Procedure**.

**Table: 4.2.1: Summary of the Terminal's Environmental Duties and Responsibilities**

Terminal Work Group	Summary of Environmental Duties & Responsibilities
<b>Management</b>	<ul style="list-style-type: none"> <li>• Monitor and comply, at a minimum, with applicable environmental legal requirements and conduct activities in accordance with relevant industry codes and standards</li> <li>• Maintain and improve an environmental management system where environmental risks are identified and proactively managed to reduce the potential for environmental harm</li> <li>• Implement systems to prevent pollution, improve resource efficiency and minimise impacts on the community in which the Terminal operates</li> <li>• Report and appropriately manage all environmental hazards, incidents, community complaints and legacy conditions</li> <li>• Incorporate environmental considerations into decision making and procurement processes</li> <li>• Communicate with employees and contractors/service providers, encouraging ideas for improvement</li> <li>• Communicate openly with the community, regulators, customers and other stakeholders</li> <li>• Set and review internal environmental objectives, targets, and implement programmes to achieve these</li> <li>• Measure and report on our environmental performance to our internal and relevant external stakeholders</li> <li>• Implement verification processes to ensure compliance with this policy and to drive improvement of our environmental performance</li> <li>• Deliver induction, training and awareness programs to ensure employees and contractors/service providers understand their environmental obligations and have the necessary skills to minimise the environmental risks of the PBT operations</li> </ul>
<b>Employees &amp; Contractors/Service Providers</b>	<ul style="list-style-type: none"> <li>• Co-operate to the extent necessary to allow Patrick to meet its 'Duty of Care' obligations</li> <li>• Report all environmentally hazardous conditions or practices to PBT's management</li> <li>• Where appropriate, make safe any hazard that could result in an environmental incident before advising Patrick management</li> <li>• Report all environmental incidents and near misses immediately</li> <li>• Undertake training as directed or required</li> <li>• Identify and report opportunities to improve environmental management practices and share with management</li> <li>• Support environmental initiatives to reduce environmental risks/hazards</li> </ul>



The table below sets out key contacts at Patrick PBT.

**Table: 4.2.2: PBT's Key Contacts**

Role	Name	Contact Number
Terminal Manager	Bruce Guy	<b>Patrick Terminal Shift Manager:</b>  (02) 9394 0631 or 0409 914 149  <b>NSW Ports After Hours:</b> 0417 265 672
Operations Manager	Gus May	
Environment, Sustainability & Compliance Manager	Marie Gibbs	
Environmental Representative (DPE approved)	Marie Gibbs	
PBCCC Representative	Marie Gibbs	
Engineering & Maintenance Manager	Maurice Hayes	
Safety, Security and Training Manager	Nathan Beves	

The table below sets out environmental duties to be conducted at the Terminal at defined intervals.

**Table: 4.2.3: PBT's Schedule of Environmental Duties**

Operative	OEMP Component	Terminal Contact	Document / Record
Monthly Duties			
Contractors/ Service Providers	Inspections of oil and waste oil storage Facilities	Maintenance Facilities Manager	Environmental Inspection Checklist
Contractors/ Service Providers	Inspection of Hazchem storage areas and stormwater valves		
Contractors/ Service Providers	Spill kit inspections		
Contractors/ Service Providers	Waste Collection & Disposal (General and Recycling)	Maintenance Purchasing Officer	Waste Docket, Waste Report received from Contractor/ Service Provider
Contractors/ Service Providers	Waste Collection & Disposal (Hazardous)		
Contractors/ Service Providers	Diesel Storage Tank Inspection / Maintenance	Maintenance Planning Manager	Environmental Inspection Checklist
3-Monthly Duties			
Ops Manager, E&M Manager	Site Environmental Inspection	ESC Manager	Environmental Inspection Spreadsheet
Contractors/ Service Providers	Power Bollards & Diesel Generators Inspection	Maintenance Facilities Manager	Contractor's/Service Provider's record
Contractors/ Service Providers	Oil Separator Service		
Six-Monthly Duties			
Acoustics Consultant	Noise Monitoring	ESC Manager	Noise Monitoring Reports

Operative	OEMP Component	Terminal Contact	Document / Record
<b>Annual Duties</b>			
ESC Manager	Environmental Self Audit	ESC Manager	Environmental Self Audit (including EMP component)
Contractor/ Service Providers	Diesel & Refuelling System	Maintenance Planning Manager	6/12-monthly Service
ESC Manager	Licence / Permit Renewal	ESC Manager	DG Licence, Environment Protection Licence, Trade Wastewater Discharge, Grease Arrestor Permit
<b>Occasional Duties</b>			
Contractors/Service Providers appointed by Sydney Water	Wastewater monitoring (wash bay)	Maintenance Facilities Manager	As required by TWA
Contractors/ Service Providers	Diesel Fuel Truck Service	Maintenance Planning Manager	Diesel Fuel Truck 6-monthly Service records (Contractor/Service Provider)
Contractors/ Service Providers	Diesel Generator Service (Reefer area)	Maintenance Facilities Manager	Maximo
Contractors/ Service Providers	Oily Waste Collection & Disposal	Maintenance Purchasing Officer	As required, Purchase Order
ESC Manager	OEMP Review	ESC Manager	OEMP (3 yearly)



## 4.3 Induction and Training

Patrick's Port Botany Terminal is committed to providing appropriate induction and training to its employees, and contractors and service providers to perform their roles without risk to health, safety and the environment by providing special instructions relating to environmental controls such as reducing noise emissions. Records of attendees including induction and training details are maintained by the Training Department.

### 4.3.1 Statutory Requirements and Legislative Framework – Environmental Training

**Table: 4.3.1.1: Statutory Requirements and Legislative Framework specific to Environmental Training**

Statutory Requirements and Legislative Framework	
NA	
Development Consent DA 494	C4.4
Development Consent DA 453	3.62
EPA Licence 6962	NA
Sydney Water Discharge Industrial Wastewater Consent 24990	NA
EIS Prediction & Conclusion	32.2.4

### 4.3.2 Training Framework - Environment Related

**Table: 4.3.2.1: Training Framework – Environmental Related**

#	Training Module	Relevant Work Group	Training Content
1	Site Induction	Employees and contractors / service providers - <ul style="list-style-type: none"> <li>Initial – attend in the first four weeks of commencing work at Patrick</li> <li>Refresher – annually</li> </ul>	Aims to ensure employees and contractors / service providers are aware of: <ul style="list-style-type: none"> <li>The Patrick HSE Policy</li> <li>Environmental risks relevant to the Patrick Port Botany Terminal and how they are managed</li> <li>Evacuation procedures</li> <li>Reporting incidents / hazards to frontline managers</li> </ul>
2	Mobile Plant Operation and Maintenance	Primarily for operational roles (e.g. Team Leaders, drivers/operators of mobile plant, Tech Specialists, Safety Facilitators) and Maintenance contractors / service providers.	Specific training in mobile plant and equipment operation incorporates Standard Operating Procedures or Job Safety Analysis, environmental controls, and emergency and evacuation procedures that Patrick has implemented at the Terminal. Training assessment and Verification of Competency is completed prior to any worker being deemed competent.
3	Refuelling mobile plant	Maintenance personnel	Refer to the relevant Maintenance SOP.

#	Training Module	Relevant Work Group	Training Content
4	Drain Wardens	Maintenance personnel, Shift & Yard Managers, Facilities Manager	Drain wardens are a pollution control system, which is installed on the stormwater drains and are manually closed in the event of a leak/spill incident in the Auto Yard or on the terminal. Stormwater drain containing drain wardens are labelled.
5	Pronal OFR Anti-Pollution Stoppers (plugs)	Technical Specialists	During continuous rainfall, activate the SMC pneumatic control system which deflates the balloons in the trench drain at the Truck Grid. After the extreme rainfall event has concluded deactivate the SMC pneumatic system which reinflates the balloons in the trench drain
6	IMDG Code	Senior Clerks, Rail Coordinators, Shift & Yard Managers, Stevedoring Managers, Landside Manager	Educate relevant employees in the classification and management of dangerous goods and ensure their competence in implementing response plans and coordinating resources to manage dangerous goods incidents. The training is in accordance with the IMDG Code (chapter 1.3). Initial training is 2-days, and every two years following a 1-day refresher course is required to be completed before the 1 <sup>st</sup> January of the year the new edition of the IMDG Code becomes effective.
7	Toolbox Talks	Stevedores, Team leaders, Mobile plant operators / drivers (e.g. crane, forklift, reach stacker), Maintenance personnel, Shift & Yard Manager	Tool box talks with an environmental focus, such as littering, noise management, leaks and spills, are raised at pre-shift tool box talks for Operations personnel by the frontline managers, and for Maintenance personnel by the Technical Specialist and/or contractors/service providers under supervision.
8	Pollution Incident Response Management Plan (PIRMP)	All employees	The PIRMP is contained in the <b>Terminal's Emergency Response Plan (PAT_HSE_PLN_09_01)</b> and includes: <ul style="list-style-type: none"> <li>• Incident response;</li> <li>• Spill/leak control, containment and clean-up;</li> <li>• Close drain wardens to protect the drains;</li> <li>• Use of the spill trailer;</li> <li>• Evacuation procedures</li> <li>• Identify, report and manage leaks / spills from shipping containers, or mobile plant;</li> <li>• Gather information / participate in the investigation</li> </ul>
9	OEMP	Shift & Yard Managers, Technical Specialists, Facilities Manager, Senior managers	Learning Management System (LMS) package is in the process of being developed to provide general awareness of the terminal's operational environmental management plan (OEMP).

### 4.3.3 Key Tasks and Responsibilities

A comprehensive list of duties and responsibilities is provided in **Section 4.2** of this OEMP. The key responsibilities for the implementation of operational controls for the Terminal are provided below.

**Table: 4.3.3.1: Environmental Training Management – Key Tasks and Responsibilities**

Task		Responsibility
1	Induction and training of employees, contractors/service providers and visitors	Training Coordinator and/or Safety, Security & Training Manager; Facilities Manager
2	Determine environmental training needs and add to training needs analysis	ESC Manager (Environmental Representative)
3	Establish environmental training resources e.g. tool box talks, spill response, IMDG	ESC Manager (Environmental Representative)
4	Conduct tool box talks and record details in shift report	Frontline Managers; Operations - Shift and Yard Managers; Maintenance – Technical Specialists, key contractors/service providers
5	Undertake frontline manager e-learning – <i>General Awareness of PBT's OEMP</i> , complete assessment and record completion	Frontline Managers; Operations - Shift and Yard Managers; Maintenance – Technical Specialists, key contractors/service providers
6	Induction and training records are maintained.	Training Coordinator / HR Advisor; Safety, Security & Training Manager

### 4.3.4 Performance Expectations

The implementation of this section of the OEMP and its effectiveness will be measured by the Key Performance Indicators (KPIs) provided in the table below.

**Table: 4.3.4.1: Environment Induction and Training Management - KPIs**

Key Performance Area		KPI
1	Site induction is completed within the first few weeks of starting at the Terminal, and then annually.	100% completion (excluding employees on long term absences)
2	Leak / spill response training.	Once per year
3	Emergency Response drill carried out including environmental risk.	Once per year
4	Environmental related tool box talks conducted.	At least quarterly (3-monthly)
5	Emergency Response Plan (including PIRMP) is reviewed, updated accordingly and re-issued.	Within the established review period

## 4.4 Environmental Reporting

To ensure the Terminal's environmental reporting requirements and obligations are fulfilled in accordance with development consent and licence conditions.

### 4.4.1 Statutory Requirements and Legislative Framework

The statutory requirements legislation that applies to this section of the OEMP is listed below:

**Table: 4.4.1.1: Statutory Requirements and Legislative Framework**

Statutory Requirements and Legislative Framework	
<ul style="list-style-type: none"> <li><i>Environmental Planning and Assessment Act 1979 (NSW)</i></li> <li><i>National Greenhouse and Energy Reporting Act 2007 (NGER Act) (Cth)</i></li> <li><i>Protection of the Environment (Operations) Act 1997 (NSW)</i></li> </ul>	
Development Consent DA 494	C4.1, and C4.2
Development Consent DA 453	3.52, and 6.6
EPA Licence 6962	R2, and R1
Sydney Water Discharge Industrial Wastewater Consent 24990	NA
EIS Prediction & Conclusion	NA

### 4.4.2 Key Tasks and Responsibilities

A comprehensive list of responsibilities, accountabilities and authorities is provided in **Section 4.2 – Environmental Duties and Responsibilities** of this OEMP. The key responsibilities for the implementation of operational controls are provided in the table below.

**Table: 4.4.2.1: Environmental Reporting – Key Tasks and Responsibilities**

Task		Responsibility
1	<p>Report any leaks, spills or other environmental incidents (e.g. gas leaks from containers).</p> <p><u>Recipient (as a minimum):</u> ESC Manager</p> <p><u>Notification required:</u> Immediately upon becoming aware of an incident.</p>	All site personnel
2	<p>Provide verbal notification of a pollution incident where material harm to the environment is caused or threatened.</p> <p><u>Recipient (as a minimum):</u> EPA, NSW Ports and DPE</p> <p><u>Notification required to be reported by Patrick:</u> Upon becoming aware of an incident:</p> <ul style="list-style-type: none"> <li>Immediately - EPA</li> <li>Within 2 hours – NSW Ports</li> <li>Within 12 hours - DPE</li> </ul>	ESC Manager (Environmental Representative)

Task		Responsibility
3	<p>Submit full written details of the environmental or pollution incident, with actual or potential significant off-site impacts on people or the biophysical environment.</p> <p><u>Recipient (as a minimum):</u> EPA, NSW Ports and DPE</p> <p><u>Notification required to be reported by Patrick:</u> Upon becoming aware of an incident:</p> <ul style="list-style-type: none"> <li>• Within 24 hours – NSW Ports</li> <li>• Within 7 days of the date of incident – EPA, DPE, Port Authority of NSW, Health Department and Bayside Council.</li> </ul>	ESC Manager (Environmental Representative)
4	<p>Provide acknowledgement and initial feedback of an inquiry, comment or complaint.</p> <p><u>Recipient (as a minimum):</u> Complainant, EPA, NSW Ports, DPE &amp; PB CCC</p> <p><u>Notification required to be reported by Patrick:</u> Upon receiving an inquiry, comment or complaint.</p>	ESC Manager (Environmental Representative)
5	<p>Submit the finalised Annual Environmental Management Report (AEMR) (which includes the Annual Compliance Report (DA 453, condition 6.6), and the Environmental Management Compliance Report (EMCR)) to NSW Ports and the DPE within 60 calendar days after the end of the reporting period of the AEMR, i.e. no later than 28 February of the next year. The EMCR details activities at the Terminal and the extent to which Patrick has complied with the OEMP. After approval from DPE, upload to the Patrick website.</p>	ESC Manager (Environmental Representative)
6	<p>Submit the Annual Return (which includes the Statement of Compliance and a Monitoring and Complaints Summary) to the EPA via the eConnect website.</p>	ESC Manager (Environmental Representative)
7	<p>Arrange for a DPE-approved Auditor to conduct an Independent Environmental Audit for the Terminal annually. The objective is to assess environmental performance, compliance with relevant standards, and the adequacy of the OEMP.</p>	ESC Manager (Environmental Representative)
8	<p>Provide all documents and reports required to be submitted to the Secretary in an appropriate electronic format as required under this consent, shall be in a format acceptable to those parties to minimise resource consumption.</p>	ESC Manager (Environmental Representative)
9	<p>Provide Terminal information for emissions generated, primarily due to fuel and energy usage for National Pollutant Inventory (NPI) to the National HSE Manager.</p>	ESC Manager (Environmental Representative)
10	<p>Prepare and submit NPI annually to the EPA as required by the NPI National Environmental Protection Measures (NEPM) and the NSW <i>Protection of the Environment (General) Regulation 2009</i>.</p>	National HSE Manager

Task		Responsibility
11	Prepare and submit NGERs emissions reporting annually to the Regulator in accordance with the NGER Act.	National HSE Manager
12	Prepare dangerous goods (Class 2.3) throughput data for the period 1 September of the previous year to 31 August of the current year, e.g. class, tonnage, number of TEUs and packaging sizes, and provide to NSW Ports for their preparation of the <b>Annual Dangerous Goods Report</b> (DA-494 MOD 16, C2.17).	ESC Manager (Environmental Representative)
13	Prepare and submit to the DPE a combined Annual Dangerous Goods Report for Patrick and Hutchison (SICTL) as per DA-494 MOD 16.	NSW Ports
14	Engage an Acoustic Consultant to prepare a biannual Noise Monitoring and Compliance Report (NMCR) in accordance with DA 494 condition C2.7, DA 453 condition 5.8 and EPL 6962 condition E1, and submit to the EPA, NSW Ports and DPE six-monthly. Upload to the Patrick website.	ESC Manager (Environmental Representative)
15	Environmental Reports to be prepared as required by an authorised officer of the EPA. Submission to the EPA in accordance with EPL Condition R3.3. (Additional environmental reporting may be required when an authorised officer of the EPA requests a report).	ESC Manager (Environmental Representative)
16	Preparation of reports detailing compliance with all or any part of the conditions of consent as may be directed by DPE. To be submitted to the DPE and NSW Ports as required.	ESC Manager (Environmental Representative)

### 4.4.3 Reporting

#### 4.4.3.1 Initial Reporting of Environmental Incidents

The frontline manager will initially report the environmental incident / event into Patrick's Incident Reporting System, SCRIM. If the incident requires to be escalated to others, the frontline manager, or alternatively the ESC Manager, will follow the Terminal's – HSE Incident / Near Miss Escalation Matrix.

#### 4.4.3.2 Environmental Incident Classification and Reporting

The classification and reporting of incidents will be undertaken in accordance with Patrick's **HSE Standard 10 – HSE Incident Management and Corrective Action (PAT\_HSE\_010\_010B)**.

Patrick is obliged to notify and report incidents occurring or originating within the Terminal to the appropriate regulatory organisations within the timeframes prescribed in NSW legislation, EPL, the Conditions of Approval/Consent, and Lease Conditions.

Environmental incidents are to be reported to the EPA in accordance with EPL 6962. Environmental Reports to be prepared as required by an authorised officer of the EPA and submitted to the EPA in accordance with EPL condition R3.3. Copies of the same report will also be sent to the DPE and NSW Ports. (Additional environmental reporting may be required when an authorised officer of the EPA requests a report).

Unless noted otherwise, incidents that occur beyond the limits of the Terminal (including on board ships berthed at the Terminal) are outside the scope of the OEMP.

#### 4.4.3.3 Environmental Incident Investigation

Environmental incidents are to be managed in accordance with Patrick's **HSE Standard 10 – HSE Incident Management and Corrective Action (PAT\_HSE\_010\_010B)** which requires that:

- HSE incidents (including near misses) are promptly reported, including those which are legally notifiable to HSE regulators; and
- HSE incidents (including near misses) are investigated by persons competent in the application of Patrick's procedures for incident investigation and generate corrective actions that focus on identifying system failures and root causes.

#### 4.4.3.4 Public Inquiry, Comment and Complaint Handling

Any environment related inquiries, comments or complaints received from the public or regulatory agency are investigated by the terminal's ESC Manager. Records of the inquiry, comment or complaint and any action taken is kept in Patrick's incident reporting system, SCRIM. Refer to **Section 4.6 – Public Inquiry, Comment and Complaint Handling** in this OEMP.

#### 4.4.3.5 Annual Environmental Audits

Annual Environmental Audits are required to be undertaken by DA 494 and DA 453, and audit reports are to be made publicly available on Patrick's website: <http://www.patrick.com.au/environment-monitoring-reporting>. Refer to **Section 4.5 – Environmental Inspection and Auditing** in this OEMP.

#### 4.4.3.6 Annual Environmental Management Report (AEMR)

Following submission of the AEMR to the DPE and NSW Ports, the finalised AEMR will be posted on the Patrick website – <http://www.patrick.com.au/environment-monitoring-reporting>.

#### 4.4.3.7 Annual Return (Statement of Compliance)

As a licensee Patrick is required to submit an annual return stating its compliance with the licence conditions and report the pollutant loads generated by the premises. The Annual Return is required by EPL 6962 to be completed and submitted to the EPA via the eConnect EPA portal:

[https://apps.epa.nsw.gov.au/profileapp/auth?\\_ga=2.239836163.1097980929.1553133544-1038785920.1508789015](https://apps.epa.nsw.gov.au/profileapp/auth?_ga=2.239836163.1097980929.1553133544-1038785920.1508789015)

### 4.4.4 Performance Expectations

The implementation of this section of the OEMP and its effectiveness will be measured by the Key Performance Indicators (KPIs) provided in the table below.

**Table: 4.4.4.1: Environmental Reporting – KPIs**

Key Performance Area		KPI
1	Ensure the AEMR is completed and issued 60 calendar days after the end of each reporting period.	Due by 28 February of the following year
2	Ensure the Annual Return is completed within 60 days after the EPL anniversary date (1 <sup>st</sup> April).	Due by 30 May of the same year
3	Ensure NPI and NGRs reporting is submitted to the Regulator.	By the due date



## 4.5 Environmental Inspection and Auditing

To ensure that audits required by the development consent, and environmental inspections and audits required by the Patrick HSEMS are scheduled and conducted at the required frequency and by a suitably qualified and/or experienced person/team. The following audits are required to be conducted at the Terminal:

- **Annual Environmental Audit:** *ISO 14010 – Guidelines and General Principles for Environmental Auditing, and ISO 14011 – Procedures for Environmental Auditing*
- **Three-Yearly Hazard Audit:** *DPE's Hazardous Industry Planning Advisory Paper No. 5, "Hazard Audit Guidelines"*
- **Annual HSEMS Surveillance Audit:** *ISO 14001:2015 Environmental Management Systems and ISO 45001:2018 Occupational Health and Safety*

### 4.5.1 Statutory Requirements and Legislative Framework

The statutory requirements legislation that apply to this section of the OEMP is listed below:

**Table: 4.5.1.1: Statutory Requirements and Legislative Framework**

Statutory Requirements and Legislative Framework	
<ul style="list-style-type: none"> <li>• <i>Environmental Planning and Assessment Act 1979 (NSW)</i></li> </ul>	
Development Consent DA 494	C4.5
Development Consent DA 453	3.53 and 6.7
EPA Licence 6962	NA
Sydney Water Discharge Industrial Wastewater Consent 24990	NA
EIS Prediction & Conclusion	NA

### 4.5.2 Key Tasks and Responsibilities

A comprehensive list of responsibilities, accountabilities and authorities is provided in **Section 4.2 – Environmental Duties and Responsibilities** of this OEMP. The key responsibilities for the implementation of operational controls are provided in the table below.

**Table: 4.5.2.1: Environmental Inspection and Auditing – Key Tasks and Responsibilities**

Task		Responsibility
1	Conduct environmental inspections of the Terminal with the functional manager or their representative, at least quarterly.	Operations Manager; Engineering & Maintenance Manager; ESC Manager (Environmental Representative)
2	Engage an Independent Environmental Auditor approved by the DPE to conduct a combined environmental audit covering: <ul style="list-style-type: none"> <li>• DA 494 (C4.5) – Annual independent environmental audit</li> <li>• DA 453 (6.7) – Three-yearly independent hazard audit</li> </ul>	ESC Manager (Environmental Representative)
3	Conduct an Independent Environmental Audit as arranged by Patrick.	Independent Environmental Auditor, approved by DPE
4	Submit the Independent Environmental Audit Report to the DPE and NSW Ports.	ESC Manager (Environmental Representative)

Task		Responsibility
5	Engage an Independent Safety Auditor approved by the DPE to conduct a Hazard Audit every three years as per DA 453, condition 3.53.	ESC Manager (Environmental Representative)
6	Conduct an Independent Hazard Audit as arranged by Patrick.	Independent Safety Auditor, approved by DPE
7	Submit the completed Hazard Audit to the DPE.	ESC Manager (Environmental Representative)
8	Routinely review the OEMP.	ESC Manager (Environmental Representative)
9	Ensure Annual HSEMS Audit is conducted.	National HSE Manager
10	2021, and every five years thereafter conduct an independent audit of compliance for the new port facilities at Port Botany, and the effectiveness of measures to mitigate impacts on listed migratory bird species. Arranged by NSW Ports, and Patrick.	Independent auditor (accredited by the Quality Society of Australasia) approved by DPE ESC Manager

#### 4.5.3 Monitoring and Reporting

Environmental inspection and Audit requirements are documented in **Patrick HSEMS – Workplace Inspection and Monitoring (PAT\_HSE\_PRO\_05\_005)**; and – **System Auditing & Management Review (PAT\_HSE\_PRO\_07\_007)**.

##### 4.5.3.1 Inspections

Patrick conducts inspections in accordance with Patrick HSEMS in **PAT\_HSE\_PRO\_05\_005 HSE Workplace Inspection & Monitoring Procedure**. Findings from environmental inspections are recorded on a rolling spreadsheet and issued to the Department Manager where responsibilities will be assigned, and actions will be followed-up and closed-out in accordance with set time frames.

##### 4.5.3.2 Internal and External Audits

Patrick conducts internal audits on their HSEMS annually. Internal Audit requirements have been documented within the Patrick HSEMS in **PAT\_HSE\_PRO\_07\_007 HSE System Auditing & Management Review Procedure**.

Non-Conformances and Observations/Improvement Opportunities identified during audits will be documented as actions in Patrick's HSE incident management database, SCRIM. Responsibilities will be assigned, and actions will be followed-up and closed-out in accordance with set time frames.

##### 4.5.3.3 Monitoring and Corrective Actions

An important component of the OEMP is the assurance of its implementation and monitoring of the performance of all aspects of the plan. The minimum frequency of performance monitoring and corrective action tasks undertaken at the Terminal are presented in **Table 4.2.1 Environmental Duties and Responsibilities**. Further details of monitoring are provided in each management plan located in Section 6 of this OEMP. These management plans are the primary instruments controlling monitoring and reporting of results. Environmental Incident and Near Miss reporting is electronically entered into the Patrick Terminals incident management Database (SCRIM). Emergency Response actions are contained within **Emergency Response Plan (PBT\_HSE\_PLN\_09\_01)**.

#### 4.5.4 Performance Expectations

The implementation of this section of the OEMP and its effectiveness will be measured by the Key Performance Indicators (KPIs) provided in the table below.

**Table: 4.5.4.1: Environmental Inspection and Auditing – KPIs**

Key Performance Area		KPI
1	Conduct environmental inspections for the Terminal.	Quarterly (3-monthly)
2	Ensure the Annual Independent Environmental Audit is conducted immediately after the end of each reporting period (i.e. calendar year) and the final audit report submitted to NSW Ports and the DPE.	Due by 31 January of the following year
3	Ensure the Annual Environmental Management Report (AEMR) is completed and submitted to NSW Ports and the DPE 60 calendar days after the end of each reporting period (i.e. calendar year).	Due by 28 February of the following year
4	Ensure the three-yearly hazard audit is conducted within the three-yearly period and the final audit report submitted to the DPE.	Within 45 calendar days of the audit having been conducted
5	HSEMS surveillance audit to be conducted for the Terminal by an approved auditor.	One HSEMS Audit per year
6	After construction of the new port facilities at Port Botany has been completed, and every five years thereafter an independent audit of compliance with the conditions of approval for the new port facilities at Port Botany, and the effectiveness of measures to mitigate impacts on listed migratory bird species, is carried out. The independent auditor must be accredited by the Quality Society of Australasia, or such other similar body as the Minister may notify in writing. The audit criteria must be agreed by the Minister within six months of the fifth anniversary of completion of construction of the new port facilities at Port Botany, and within 6-months of every 5 <sup>th</sup> anniversary thereafter.	Due 2021 and every 5 years thereafter

## 4.6 Handling Environment Related Public Inquiries, Comments and Complaints

Patrick operates a 24-hour 7-days a week, free-call environment complaints telephone number (Ph. (02) 9394 0308) with the aim for the public to reach a person who can arrange appropriate corrective action to the complaint within two hours of receiving the call. Patrick is committed to managing inquiries, comments and/or complaints received from the public in such a manner it achieves good outcome community and operational outcomes.

### 4.6.1 Statutory Requirements and Legislative Framework

The legislation that applies to the implementation of this section of the OEMP is listed below:

**Table: 4.6.1.1: Statutory Requirements and Legislative Framework**

Statutory Requirements and Legislative Framework	
<ul style="list-style-type: none"> <li><i>Environmental Planning and Assessment Act 1979 (NSW)</i></li> <li><i>Protection of the Environment (Operations) Act 1997 (NSW)</i></li> <li><i>Protection of the Environment Operations (Clean Air) Regulation 2010 (NSW)</i></li> </ul>	
Development Consent DA 494	C3.1
Development Consent DA 453	3.63 and 3.64
EPA Licence 6962	M2.1, M2.2, M2.3, M2.4, M3.1, M3.2, M3.3
Sydney Water Discharge Industrial Wastewater Consent 24990	NA
EIS Prediction & Conclusion	22.5.2

### 4.6.2 Key Tasks and Responsibilities

A comprehensive list of responsibilities, accountabilities and authorities is provided in in **Section 4.2 – Environmental Duties and Responsibilities** of this OEMP. The key responsibilities for the implementation of operational controls are provided in the table below.

**Table: 4.6.2.1: Public Inquiry, Comment and Complaint Handling – Key Tasks and Responsibilities**

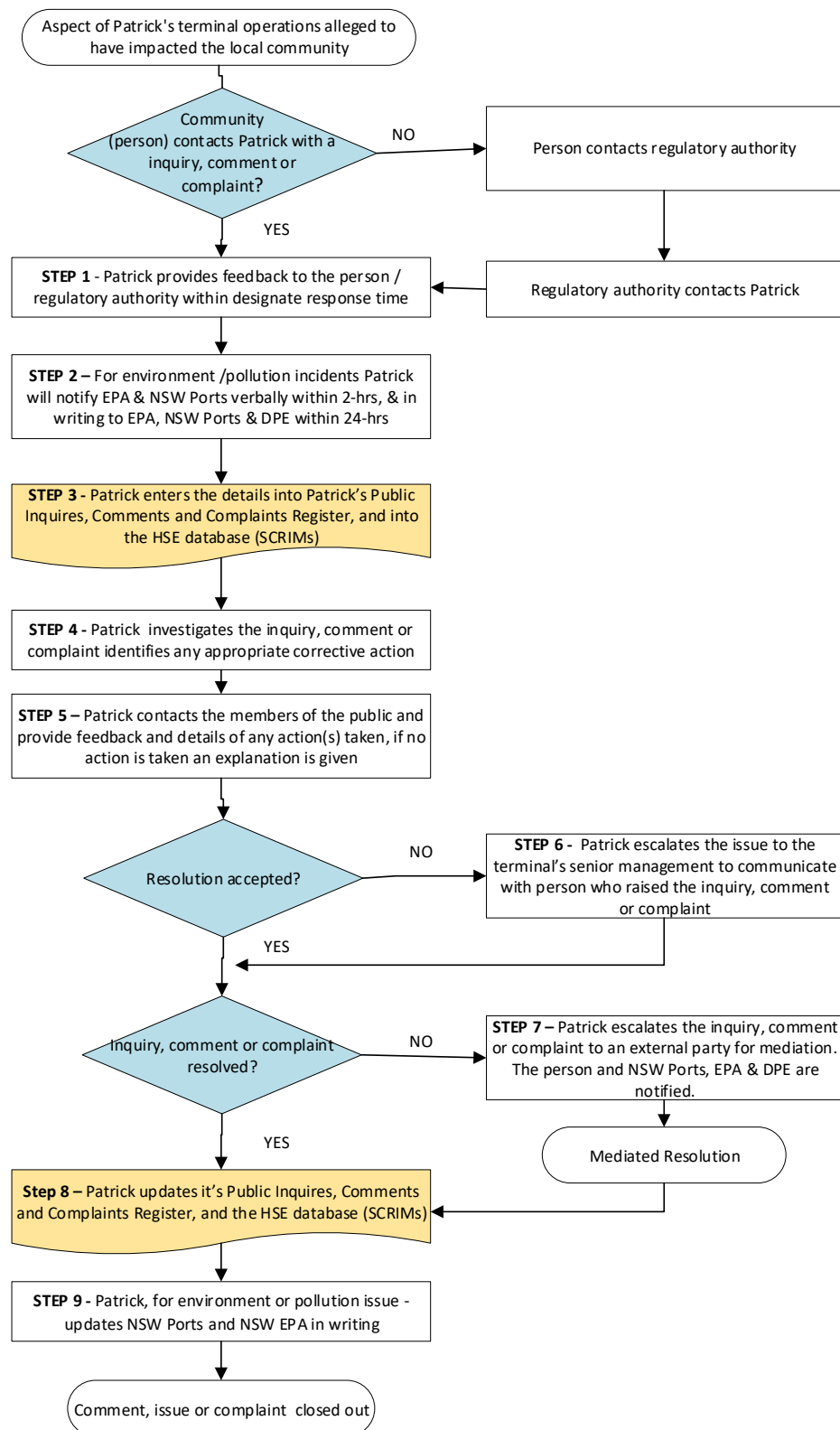
Task		Responsibility
1	Monitor the Terminal's Community Concerns & Enquiries Line (Ph. 9394 0308).	ESC Manager (Environmental Representative)
2	Provide, on request, information specific to operations, and maintenance which may have contributed to the inquiry, comment or complaint received from the public or regulator.	Operations Manager; E&M Manager; Landside Manager
3	Maintain the <b>Public Inquiries, Comments &amp; Complaints Register (PBT_HSE_REG_11_02)</b> .	ESC Manager (Environmental Representative)
4	Provide feedback to the caller e.g. advise of actions taken. Arrange air or noise monitoring, review findings and assess the effectiveness of controls.	ESC Manager (Environmental Representative)
5	Prepare and issue a 3-monthly report – Public Inquiries, Comments and Complaints Handling (formerly Community Complaints Handling) and upload to the Patrick website.	ESC Manager (Environmental Representative)

#### 4.6.3 Potential Sources of Environmental Related Inquiries, Comments or Complaints

**Table: 4.6.3.1: Potential Sources of Environmental Inquiries, Comments or Complaints from the Public**

#	Aspect	Potential Source	Impact	Control Measures (Section of OEMP)
1A	Noise	Mobile plant, machinery and equipment (quay cranes, Auto Strads, reach stackers, forklifts, elevated work platforms) and vehicles (utes, mini-bus, ITV trucks)	Nuisance to nearby residents resulting in an inquiry, comment or complaint from the public directly or indirectly via NSW Ports or the EPA.	4.6, Public Inquiries, Comments or Complaint; 6.6, Operational Noise Management Plan
1B		Landing containers on vessels, hardstand areas, train wagons and/or truck trailers	Nuisance to nearby residents resulting in an inquiry, comment or complaint from the public directly or indirectly via NSW Ports or the EPA.	
1C	Dust or Odours	The risk of dust or odours emanating from the Terminal and affecting offsite receptors is considered low. However, dust or debris may be tracked onto the surrounding road network by waste trucks leaving the site; and odour may be generated by mobile plant and truck exhausts, or potential leaks of stored gas in shipping containers in-transit	Nuisance to nearby residents resulting in an inquiry, comment or complaint from the public directly or indirectly via NSW Ports or the EPA.	4.6, Public Inquiries, Comments or Complaint; 6.1, Air Quality Management Plan
1D		Emissions emanating from another location other than the Terminal	Nuisance to Patrick personnel / operations resulting in complaints; Potential pollution incident	
1E	Pollution incident	Leak or spill to water and/or land	Nuisance to nearby residents resulting in an inquiry, comment or complaint from the public directly or indirectly via NSW Ports or the EPA; Potential pollution incident	4.6, Public Inquiries, Comments or Complaint; 6.2, Stormwater Management Plan

#### 4.6.4 Handling Environmental Related Public Inquiries, Comments or Complaints



**Figure: 4.6.4: Process of Handling Environmental Related Public Inquiries, Comments or Complaints**



#### 4.6.4.1 **Contacting Patrick**

Inquiries, comments and complaints can be received from the public via the following means:

- in person at the Patrick tower/building at Gate B105A, Penrhyn Road (off Foreshore Road), Port Botany;
- by mail, sent to Patrick, PO Box 197, Botany NSW 1455;
- by phone on the Patrick PBT community concerns and enquires 24/7 telephone number (02) 9394 0308, or
- by email via <http://www.patrick.com.au/contact> under the 'Contact Us' page.

#### 4.6.4.2 **Free Call Phone Number**

Patrick operates a toll-free phone number (02) 9304 0308 solely for the public to use to contact Patrick with any comments, inquiries or complaints. The phone number is operational 24 hours 7 days a week and tested weekly to ensure it remains operational. The phone number is displayed at the entry gate to Patrick's Port Botany Terminal B105A and on Patrick's website - <http://www.patrick.com.au/environment-sustainability>.

The Terminal's ESC Manager monitors all calls received on the free call phone number and responds to each caller.

#### 4.6.4.3 **Public Inquiry, Comment and Complaint Register**

All public inquiries, comments and complaints received from the public are logged in the site's **Public Inquiry, Comment and Complaint Register** attached to the site Environmental Register.

#### 4.6.4.4 **Recording and Reporting**

Each event is entered into Patrick's HSE database (SCRIM) and relevant correspondence attached. Any inquiries, comments or complaints received are reported as part of the Terminal's daily, weekly and monthly environmental reports. Refer to **Section 4.4 – Environmental Reporting**, of this OEMP.

### 4.6.5 **Performance Expectations**

The implementation of this section of the OEMP and its effectiveness will be measured by the Key Performance Indicators (KPIs) provided in the table below.

**Table: 4.6.5.1: Environmental Related Public Inquiry, Comment and Complaint – KPIs**

Key Performance Area		KPI
1	Inquiries, comments or complaints received from the public, which can be attributed to Patrick's operations.	Zero (0)

## 4.7 Community Consultation Committee

The primary mechanism used by Patrick to interface with the community is the Port Botany Community Consultative Committee (PBCCC).

The PBCCC was formed by combining the Port Botany Expansion Community Consultative Committee with the Port Botany Neighbourhood Liaison Group following agreement between its members and approval from DPE on 16 September 2013.

As per DA 494 (conditions 3.2 and C3.3) the PBCCC, as a minimum includes the following members:

- two representatives from the Applicant (NSW Ports, Patrick or Hutchison) including the Environmental Representative, approved by DPE;
- one representative from Bayside Council, approved by DPE;
- at least 3 representatives from the local community, approved by DPE, and
- one chairperson approved by DPE.

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

### 4.7.1 Statutory Requirements and Legislative Framework

The legislation that applies to the implementation of this section of this OEMP is listed below:

**Table: 4.7.1.1: Statutory Requirements and Legislative Framework**

Statutory Requirements and Legislative Framework	
<ul style="list-style-type: none"> <li>• <i>Environmental Planning and Assessment Act 1979 (NSW)</i></li> </ul>	
Development Consent DA 494	C3.2 and C3.3, MOD16 – B3.2
Development Consent DA 453	NA
EPA Licence 6962	NA
Sydney Water Discharge Industrial Wastewater Consent 24990	NA
EIS Prediction & Conclusion	NA

### 4.7.2 Key Tasks and Responsibilities

A comprehensive list of responsibilities, accountabilities and authorities is provided in in **Section 4.2 – Environmental Duties and Responsibilities** of this OEMP. The key responsibilities for the implementation of operational controls are provided in the table below.

**Table: 4.7.2.1: Community Consultation Management – Key Tasks and Responsibilities**

Task		Responsibility
1	Attend the quarterly PBCCC meeting as the Patrick Representative.	ESC Manager (Environmental Representative)
2	Provide the PBCCC with regular information on the environmental performance and management of the Patrick Terminal.	ESC Manager (Environmental Representative)
3	Record PBCCC meeting minutes and make available on the NSW Ports website within 14 days of the meeting, or as agreed with the PBCCC.	3 <sup>rd</sup> party, NSW Ports
4	Provide details of any Port rail noise reported within the Port Botany Expansion site for discussion by the PBCCC and relevant stakeholders.	NSW Ports, PBCCC
5	Provide a copy of the PBCCC meeting and any responses to the PBCCC's recommendations to the DPE within one month of each meeting.	NSW Ports

### 4.7.3 Monitoring and Reporting

#### 4.7.3.1 PBCCC Meeting Minutes

NSW Ports displays the minutes of the PBCCC Meeting on the NSW website -

<https://www.nswports.com.au/community-and-environment-hub/consultative-committees/port-botany/>

#### 4.7.3.2 Audit, Monitoring, Management and Reporting Documents

Audit, monitoring, management and reporting documents required under DA 494 and EPL 6962 are made publicly available on the Patrick website.

#### 4.7.3.3 Corporate Procedure

Communication requirements have been documented within the Patrick HSEMS in **PAT\_HSE\_PRO\_08\_008 Communication, Consultation and Participation Procedure**.

### 4.7.4 Performance Expectations

The implementation of this section of this OEMP and its effectiveness will be measured by the Key Performance Indicators (KPIs) provided in the table below.

**Table: 4.7.4.1: Port Botany Community Consultation Committee – KPIs**

Key Performance Area		KPI
1	Patrick's representative responsible for environmental management attend the PBCCC quarterly (3-monthly) meetings.	Quarterly
2	Public comments, inquiries or complaints from the public, which can be attributed to Patrick's operations.	Zero (0)

## 4.8 Emergency Preparedness and Response

### 4.8.1 Causes of Potential Environmental Emergencies

The following emergencies are considered possible at the Terminal:

- Fire where flammable goods are stored on site
- Chemical or hydrocarbon leak or spills
- Flooding

### 4.8.2 Emergency Response Plan

An **Emergency Response Plan (PBT\_HSE\_PLN\_09\_01)** has been developed for the Terminal which addresses the major risks associated with the terminal operations. The Emergency Response Plan (ERP) outlines procedures that should be followed in the case of a number of emergency scenarios. This OEMP includes Section 6.5 – Dangerous Goods and Hazardous Chemical

The ERP includes site maps indicating assembly areas and location of emergency equipment; emergency and after hours contact information; and access to a list of Dangerous Goods stored at the site at any one time.

A copy of the Port Botany Terminal's ERP is available on the Patrick website:

<http://www.patrick.com.au/environment-management>

Emergency management processes are documented in **PAT\_HSE\_PRO\_09\_009A Emergency Management Procedure**.

Included in **Section 6.5 – Dangerous Goods and Hazardous Chemicals/Substances** of this OEMP, are the safe operating procedures for the handling and storage of dangerous goods in shipping containers transiting the terminal.

### 4.8.3 Pollution Incident Response Management Plan (PIRMP)

The requirements of the EPA's Pollution Incident Response Management Plan (PIRMP) have been integrated into the terminal's **Emergency Response Plan (PBT\_HSE\_PLN\_09\_01)**.

## 5. REVIEW AND IMPROVEMENT

### 5.1 Review

Conditions of Approval (DA 453, 6.5) dictate the OEMP and its management plans (Section 6) are required to be formally reviewed three-yearly.

### 5.2 Management Review

As per the **HSE System Auditing & Management Review Procedure (PAT\_HSE\_PRO\_07\_007)** completion of the annual HSE Management System internal audit shall trigger a management review of the Patrick HSESM including **Environment and Sustainability (PAT\_HSE\_PRO\_11\_011)**, in order to determine its continuing suitability, adequacy and effectiveness. The Management Review will include, as a minimum, the Terminal Manager, ESC Manager and National HSE Manager.

### 5.3 Improvement

#### 5.3.1 Alignment to AS/NZ ISO 14001:2015 Environmental Management Systems

This OEMP has been designed to align with *AS/NZ ISO 14001:2015 Environmental Management Systems – Requirements with guidance for use*. **Table 5.2.1** below shows the relationship between AS/NZ ISO 14001:2015 and this OEMP.

**Table: 5.3.1: OEMP Alignment with AS/NZ ISO 14001:2015 Environmental Management Systems**

AS/NZ ISO 14001:2015 Environmental Management System		Patrick Port Botany Terminal OEMP	
Section #	Title	Section #	Title
<b>4.0 CONTEXT OF THE ORGANISATION</b>			
4.1	Understanding the organisation and its context	1	Introduction
4.2	Understanding the needs and expectations of interested parties	4.1	Stakeholder Identification and Consultation
4.3	Determining the scope of the Environmental Management System (EMS)	2.5	HSE Management Framework
4.4	EMS	2	Planning
<b>5.0 LEADERSHIP</b>			
5.1	Leadership and commitment	2.1	Corporate Objectives and Targets
		2.4	HSE Policy
5.2	Environmental policy	2.4	HSE Policy
5.3	Organizational roles, responsibilities and authorities	4.2	Environmental Duties and Responsibilities
<b>6.0 PLANNING</b>			
6.1.1	Actions to address risks and opportunities - General	2.2	Environmental Aspects and Impacts / Risk Assessment

AS/NZ ISO 14001:2015 Environmental Management System		Patrick Port Botany Terminal OEMP	
Section #	Title	Section #	Title
<b>6.0 PLANNING</b> <i>continued</i>			
6.1.2	Actions to address risks and opportunities - Environmental aspects	6	Environmental Management Plans, <b>Environmental Risk Register (PBT_HSE_REG_11_01)</b>
6.1.3	Actions to address risks and opportunities - Compliance obligations	2.3	Legislative Framework, <b>Patrick Corporate Legal Compliance Register (PAT_HSE_REG_03_003)</b>
6.1.4	Actions to address risks and opportunities - Planning action	6	Environmental Management Plans, <b>Environmental Risk Register (PBT_HSE_REG_011_01)</b>
6.2	Environmental objectives and planning to achieve them	2.1	Corporate Objectives and Targets
<b>7.0 SUPPORT</b>			
7.1	Resources	4.2	Environmental Duties and Responsibilities
7.2	Competence	4.3	Environmental Induction and Training
7.3	Support - Awareness		
7.4	Communication	4.7	Community Consultative Committee
7.4.2	Internal communication	5	Review and Continuous Improvement
7.4.3	External communication	4.6	Public Inquiry, Comment and Complaint Handling
7.5	Documented information	4.4	Environmental Reporting
<b>8.0 OPERATION</b>			
8.1	Operational planning and control	6	Environmental Management Plans
8.2	Emergency preparedness and response	4.8	Emergency Preparedness and Response
<b>9.0 OPERATION</b>			
9.1.1	Monitoring, measurement, analysis and evaluation	5	Review and Improvement
9.1.2	Evaluation of compliance	4.5	Environmental Inspection and Auditing
9.20	Internal audit		
9.30	Management review	5.2	Management Review
<b>10.0 IMPROVEMENT</b>			
10.1	General	5	Review and Continuous Improvement
10.2	Nonconformity and corrective action		
10.3	Continual improvement		

### 5.2.2 Inspections and Internal/External Audits

Periodic environmental inspections and internal/external audits will be carried out in accordance with **Section 4.5 - Environmental Inspection and Auditing**, of this OEMP.



## 6. ENVIRONMENTAL MANAGEMENT PLANS

Included in this OEMP are twelve (12) Management Plans (refer to Table 6 below) which address the key environmental issues identified for the site and provides information for managing them effectively. These Management Plans provide operational and maintenance personnel information about the impact their work / tasks may have on the local environment. The Plans address the requirements of legislation, licences and approvals.

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

The environmental management plans address each of the following sections:



- Objective;
- Statutory Requirements and Legislative Framework;
- Responsibilities;
- Operation Environmental Aspects, Impacts and Control Measures;
- Monitoring and Reporting;
- Performance Expectations; and
- Review and Improvement.

**Table: 6: List of Environmental Management Plans**

Section No.	Title	Abbreviation
6.1	Air Quality Management Plan	AQMP
6.2	Stormwater Management Plan	SWMP
6.3	Feral Animal Management Plan	FAMP
6.4	Waste and Wastewater Management Plan	WWMP
6.5	Dangerous Goods and Hazardous Chemicals / Substances Management Plan	DGHCSMP
6.6	Operational Noise Management Plan	ONMP
6.7	Operational Traffic Management Plan	OTMP
6.8	Aviation Operational Impacts Management Plan	AOIMP
6.9	Bird Hazard Management Plan	BHMP
6.10	Vegetation and Land Management Plan	VMP
6.11	Energy and Resources Management Plan	ERMP
6.12	Biosecurity and Customs (unpack containers) Management Plan	BCMP
6.13	Sustainability Management Plan	SMP

## 6.1 Air Quality Management Plan

Objective		
To avoid, control or minimise emissions to the atmosphere caused by rising dust, vehicles/plant, or noxious fumes/odours.		
Statutory Requirements and Legislative Framework		
The legislation and other compliance requirements that apply to the implementation of this management plan are listed below:		
<ul style="list-style-type: none"><li>• <i>Environmental Planning and Assessment Act 1979 (NSW)</i></li><li>• <i>Protection of the Environment (Operations) Act 1997 (NSW)</i></li><li>• <i>Protection of the Environment Operations (Clean Air) Regulation 2010 (NSW)</i></li><li>• <i>NPI National Environment Protection Measure (NPI NEPM)</i></li><li>• <i>National Greenhouse and Energy Reporting Act 2007 (NGERS) (Cth)</i></li></ul>		
Development Consent DA 494	C2.1, C2.2, C2.3 & C2.4	
Development Consent DA 453	3.45, 3.46, 3.47, 3.48 & 7.16	
EPA Licence 6962	O3.1	
Sydney Water Discharge Industrial Wastewater Consent 24990	NA	
Sydney Water Trade Wastewater Discharge Schedule Permit 40110	NA	
EIS Prediction and Conclusion	23.8.2	
Key Tasks and Responsibilities		
A comprehensive list of responsibilities, accountabilities and authorities is provided in section 4.2 of this OEMP. The key responsibilities for the implementation of operational controls are provided in the table below.		
Table: 6.1.1: Air Quality Management – Key Tasks and Responsibilities		
Task		Responsibility
1	Induction and training of Patrick employees, contractors/service provider and visitors.	Training Coordinator and/or Safety, Security & Training Manager, Facilities Manager
2	Maintain operational mobile plant / vehicles	Maintenance personnel - Technical Specialists, Relevant contractors/service providers
3	Check each item of mobile plant prior to use.	Mobile Plant Operators / employees
4	Arrange air monitoring and a review of the effectiveness of controls.	ESC Manager (Environmental Representative)
5	Monitor air quality, and report results.	Independent external air quality consultant
6	Analyse air quality samples and provide data to client.	NATA accredited third-party laboratory
7	Manage corrective actions.	ESC Manager (Environmental Representative)

Examples of Operational Activities & Controls		
#	Description	Photo
1	Two 65,000 L diesel trans-tanks inside a bunded area	
2	Diesel trans-tanks – relief valves and filters	

### Operation Environmental Aspects and Impacts, and Control Measures

Emissions to atmosphere are generated from the following sources:

1	Emissions from plant, machinery and equipment
2	Spray painting
3	Fugitive emissions and odours from on-site diesel fuel storage
4	Fugitive emissions and odours from hazardous/DG shipping containers / tank-tainers
5	Dust from unsealed areas of the site
6	Odours / dust from unsealed areas surrounding the site (e.g. sandpiles)

**Table: 6.1.2: Air Quality - Operational Environmental Aspects and Impacts, and Control Measures**

#### 1 Emissions from operational mobile plant, machinery and equipment

##### Operation Environmental

Aspect	Impacts	Control Measures
The general operation of the Terminal includes the use of mobile plant (quay cranes, Auto Strads, reach stackers, forklifts, elevated work platforms) and vehicles (utes, mini bus, ITV trucks)	Emissions to air causing pollution; Health issues	Emission control devices are fitted by the manufacturer to mobile plant and vehicles.
		Ongoing use of these devices are checked by the person operating the mobile plant as part of the pre-start check and if found to be inoperable reported to Maintenance who will arrange inspection / repairs accordingly.
		Preventative maintenance is carried out at scheduled intervals (via Maximo) to ensure the manufacturer-fitted emission control devices or systems are working adequately.
		The site is predominantly covered with hardstand, reducing the risk of dust impacts.
		Mobile plant, vehicles and machinery are operated efficiently in accordance with their specifications. Unnecessary idling will be minimised.
		Periodic air monitoring for diesel particulate matter (DPM) and gaseous by-product (fume) is conducted by a certified Occupational Hygienist.

#### 2 Spray painting

##### Operation Environmental

No spray painting is conducted on site, the upgraded Maintenance workshop does not include a spray booth.

Aspect	Impact	Control Measures
Spread of paint	Emissions to air causing pollution; Health issues including visual impairment	Painting will be conducted with a paint brush or roller. Alternatively, the equipment will be removed from the terminal and spray painted at an offsite location. On the rare occasion spray painting is required a contractor will be engaged to perform the task and a job specific (risk) assessment will be conducted to identify the risks and the controls to mitigate the risks.

3	Fugitive emission and odours from on-site diesel fuel storage		
Operation Environmental			
Two adjacent above ground diesel tanks have a vent system to allow diesel fumes to vent from the tank, these odours are not expected to impact the local air quality.			
Aspect	Impact	Control Measures	
Fugitive emissions and odours from on-site diesel fuel storage	Emissions to air causing pollution; Potential health impacts.	Vents/breather pipes are positioned at the top of the diesel storage tanks, away from workers, and fitted with filters to prevent contamination of the fuel. These filters also help to minimise odour impacts.	
		Diesel storage tanks are fully contained, reducing potential impacts related to fugitive emissions.	
		Diesel tanks are located within the Terminal away from the site boundary allowing for any diesel odours vented from the tank(s) time to have dissipated before they are carried beyond the boundaries of the Terminal.	
4	Fugitive emissions and odours from hazardous / dangerous goods containers / tank-tainers (i.e. relief valves)		
Operation Environmental			
Hazardous substances and Dangerous Goods (DGs) are usually shipped in sealed shipping containers. Some are stored in vented tank-tainers with relief valves so that fumes do not accumulate and over pressurise the storage vessel.			
Aspect	Impact	Control Measures	
Fugitive emissions and odours from hazardous / dangerous goods containers / tank-tainers (i.e. relief valves)	Emissions to air causing pollution; Potential health impacts, Property damage	Aboard vessels, shipping containers / tank-tainers containing hazardous/dangerous goods are placed in designated locations. Routine inspections are carried out by the ship’s crew.	
		In the Auto Yard, shipping containers / tank-tainers containing hazardous/dangerous goods are placed in the Auto Yard located in the centre of the Terminal, separated from the boundary by internal roads, Maintenance workshop and the quay line / Brotherson Dock.	
		In the event of a spill/leak of hazardous substances or dangerous goods, odours may be controlled by the application of absorbent materials which stabilise the leaked/spilled liquid. The Terminal has a spill trailer onto which a leaking container can be placed and relocated to an area providing the necessary exclusion zone, away from workers and residential receptors.	

5	Dust from unsealed areas of the site		
Operation Environmental			
Dust emissions are not anticipated from operational activities; however, controls have been identified to mitigate risks from trucks exiting the site with debris from Maintenance operations (e.g. resurfacing the Auto Yard surface).			
Aspect	Impact	Control Measures	
Spread of debris and dust from trucks exiting the site	Emissions to air causing pollution;  Health issues including visual impairment	Sweeping the quay line/wharf, Truck Grid and roadways are routinely carried out on the Terminal to reduce build-up of debris and dust. The Facilities Manager arranges a road sweeper to regularly sweep these work areas.	
		Material that is excavated is managed by the assigned Project Manager to ensure it is covered and remove from site as soon as practicable. Use a dust suppressant if necessary. Routinely inspect the area and where required engage a road sweeper to clean the area.	
		Regular visual environmental inspections 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 / debris.	
		Specific trucks removing debris from site are covered prior to exiting the Terminal. The Project Manager will check the internal and external roadways (e.g. Ramp A) to ensure if any debris on the roadway(s) to arrange a road sweeper to clean up immediately.	
6	Odours / dust from unsealed areas surrounding the site (e.g. sandpiles)		
Operation Environmental			
Dust / odour emissions are not anticipated from operational activities. However there have been occasions whereby Patrick workers have raised dust at the truck grids and an unpleasant odour has been reported.			
Aspect	Impact	Control Measures	
Odours / dust from unsealed areas surrounding the site (e.g. sandpiles)	Emissions to air causing pollution;  Health issues including visual impairment	Hutchison Ports sandpile behind The Knuckle will be managed by SCTIL. While dust is not anticipated from operational activities, dust may be generated through the actions of wind erosion on the sandpile (located at the rear of Berth 6). Hutchison applies a dust suppressant to the sandpile. Where applicable, the ESC Manager will report any concerns about dust to the Senior HSEQ Manager at Hutchison.	
		Where an odour is located and unidentifiable, Maintenance is to be contacted and ask to investigate. If the source of the odour is unable to be located on site, contact Sydney Water and/or NSW Ports.	



## Monitoring and Reporting

Given Patrick's location surrounded by other industrial and port industries, roadworks, and construction areas, it is difficult to isolate Patrick's contribution to air emissions from other local sources.

Routine monitoring relies on regular visual inspections and the diligence of all employees and contractors to identify odours and dust sources within the terminal and report them to their frontline manager who will raise an event in the Patrick's HSE reporting database (SCRIM). Details of these events will be entered into the site's **Public Comments/Inquiries/Complaints Register (PBT\_HSE\_REG\_11\_02)**, the results analysed and where necessary subsequent corrective actions proposed by the ESC Manager.

Events are reported at least weekly by the ESC Manager who will periodically report on any trends. The results will be used for various reporting obligations - refer to **Section 4.4 - Environmental Reporting**, of this OEMP.

Air monitoring will be carried out using an independent external air quality consultant if and when required.

## Performance Expectations

The implementation of this management plan and its effectiveness will be measured by the Key Performance Indicators (KPIs) provided in the table below.

**Table: 6.1.3: Air Quality Management – KPIs**

Key Performance Area		KPI
1	Public comments, inquiries and complaints from residents or members of the community – which can be attributed to Patrick's operations.	Zero (0) complaints
2	Routine visual inspections of the terminal to verify control measures are in place and functioning correctly and to identify any air quality issues of the presence of any deposited dust.	Monthly visual inspection (12 annually)
3	Implementation of corrective actions following a non-conformance in relation to dust/debris mitigation controls.	Road sweeping to be carried out within 2 weeks
4	Air monitoring carried out as per HSE monitoring program.	As per schedule
5	Dust and odour complaints expressed as the number of community complaints per 100,000 TEU.	Zero per 100,000 TEU

## Review and Improvement

The review and amendment of this management plan will be in accordance with **Section 5 – Review and Improvement** of this OEMP.

Any inquiries, comments and/or complaints directly or indirectly received from the public shall be managed in accordance with the **Public Inquiries, Comments and Complaints Handling, Section 4.6** and reported in accordance with the **Environmental Reporting, Section 4.4** of this OEMP.

Periodic environmental inspections and audits will be carried out in accordance with **Section 4.5 - Environmental Inspection and Auditing**, of the OEMP.

## 6.2 Stormwater Management Plan

Objective		
To minimise the potential for activities conducted at the Terminal to negatively impact the local stormwater system and receiving waters, i.e. Botany Bay or Penrhyn Estuary; and to facilitate compliance with Conditions of Approval related to stormwater management.		
Note: Waste from ships, and wastewater (i.e. industrial (trade) waste) is managed separately, refer to <b>Section 6.4 - Waste and Wastewater Management Plan</b> of this OEMP.		
Statutory Requirements and Legislative Framework		
The legislation and other compliance requirements that apply to the implementation of this management plan are listed below:		
<ul style="list-style-type: none"><li><i>Environmental Planning and Assessment Act 1979 (NSW);</i></li><li><i>Protection of the Environment (Operations) Act 1997 (NSW), Section 120 Prohibition of pollution of waters</i></li></ul>		
Development Consent DA 494	C2.14 and C2.15	
Development Consent DA 453	3.26, 3.27, 3.28, 3.29, 3.30, 3.31, 3.32, 3.33, 3.34, 3.35 <sup>Note1</sup> , 3.36 <sup>Note1</sup> , 3.37, 5.1, 5.2, 5.3, 5.4 <sup>Note1</sup> , 5.5, 5.6, 5.7 <sup>Note1</sup> , 6.2 (a) & 6.4 (a) ( <sup>Note1</sup> MOD-7 issued 26 September 2013 includes the specific details of the EPL applicable at the time, since then the EPL has had several revisions and changed.)	
EPA Licence 6962	L1.1	
Sydney Water Discharge Industrial Wastewater Consent 24990	NA	
Sydney Water Trade Wastewater Discharge Schedule Permit 40110	NA	
EIS Prediction and Conclusion	16.4.2, 17.6.2, 18.4.2, 18.4.3, 18.5.2, 33.2.2, 33.3.2 & 33.5	
Key Tasks and Responsibilities		
A comprehensive list of responsibilities, accountabilities and authorities is provided in <b>Section 4.2 - Environmental Duties and Responsibilities</b> of this OEMP.		
The key responsibilities for the implementation of operational controls are provided in the table below.		
<b>Table: 6.2.1: Stormwater Management – Key Tasks and Responsibilities</b>		
Task		Responsibility
1	Induction and training of Patrick employees, contractors and visitors.	Training Coordinator, and/or Safety, Security & Training Manager; Facilities Manager
2	Maintenance of operational mobile plant / vehicles.	Technical Specialists; Relevant contractors/service providers
3	Check each item of mobile plant prior to use	Mobile Plant Operators / employees

Task		Responsibility
4	Maintain of stormwater drains, Stormwater Quality Improvement Devices (SQIDs) i.e. Drain Wardens, Pronal OFR Anti-Pollution stoppers (plugs), Gross Pollution Traps (GPTs) and Puraceptors	Facilities Manager; Technical Specialists; Relevant contractors/service providers
5	Clean up after a leak/spill event.	Technical Specialists; Facilities Manager; Relevant contractors/service providers
6	Engage appropriate person to conduct rehabilitation of affected and/surrounding area in response to pollution incident, and ensure appropriate records are maintained on site.	ESC Manager (Environmental Representative)
7	Leak or Fire event – direct designated personnel to CLOSE drain wardens located in stormwater drains.	Shift Manager (Chief Warden) – direct Technical Specialists; Facilities Manager; Relevant contractors/service providers; ESC Manager
8	Post Leak or Fire event after clean-up – OPEN drain wardens located in stormwater drains, report status to Chief Warden.	Shift Manager (Chief Warden); Technical Specialists; Facilities Manager; Relevant contractors/service providers
<b>Stormwater Quality Improvement Devices (SQIDs)</b>		
<p>As part of the Port Botany Expansion, and Redevelopment Projects – stormwater quality improvement devices (SQIDs) including, drain wardens (also known as drain safe units or pollution control baskets), Pronal OFR anti-pollution devices and gross pollution traps (GPTs) were installed in-situ according to the manufacturer's specifications. The following SQIDs are used at the site:</p> <ul style="list-style-type: none"> <li>• Drain wardens (also known as drain safe units, pollution control baskets);</li> <li>• Pronal OFR Anti-Pollution stoppers (plugs);</li> <li>• Puraceptors; and</li> <li>• Gross Pollution Traps (GPTs)</li> </ul>		

## Stormwater Quality Improvement Devices (SQIDs) *continued*

### **Drain Wardens** (i.e. drain safe units or pollution control baskets)

On site there is a first flush / containment system consisting of – eleven (11) north – south drains with grated pits at low points.

There are 29 drain warden units installed on site – in areas where there is a risk of contaminants entering the stormwater drains. Drain wardens help prevent contaminants from entering the waterway whilst still allowing water to flow through.



The drain warden operates in a similar fashion to a gross pollutant trap to effectively removes coarse sediments, litter, oil and debris from run off and from entering the storm water system.

Any particulate greater than \*90microns will be trapped by the geotextile fabric prior to entering the stormwater drain. Runoff water entering the drain will tend to 'swirl' inside the drain warden, with hydrocarbons attracted to the hydrophobic boom made of polypropylene absorbent suspended beneath the grate to provide stormwater drain protection.

### **Pronal OFR Anti-Pollution Stoppers**

Pronal OFR Anti-Pollution stoppers (plug) have been installed and fitted inside the trench drain along the front of the Truck Grids (lanes 1 to 31) with a SMC pneumatic control system located adjacent to Truck Grid Lane 1.

These plugs will be normally inflated within the trench stormwater drains to block stormwater flow away from the drains to Port Botany Bay. During periods with no or little rainfall (i.e. other than large rainfall events) the plugs are permanently inflated to redirect the stormwater along with any manage potential contaminates from spills into stormwater through the drainage system to the Puraceptors.

In an extreme rainfall event, the rainwater continues to flow into and along the trench drainage system to the Puraceptor, where it is treated as the first flush. After approximately 60 to 90 minutes of continuous rain Patrick's Technical Specialist will activate the SMC pneumatic control system, which deflate the balloons in the trench drain. The rainwater will flow along the drain passed the deflated balloon and is forced (redirected) along the stormwater drains to the wharf edge and into Port Botany Bay. After the extreme rainfall event has concluded the Technical Specialist returns to Lane 1 and deactivates the SMC pneumatic control system, which reinflates the balloons in the trench drain allowing the rainwater to flow along the trench drain to the Puraceptor.

## Stormwater Quality Improvement Devices (SQIDs) *continued*

### Puraceptors

Stormwater from the truck grid, AutoStrad parking area and fuel farm discharges to trench drains, in which are three (3) Puraceptor stormwater storage and treatment devices. Stormwater from the following three (3) areas flows from the trench drain into one of the three Puraceptors:

- **Refuelling Bay #1:** Stormwater from the diesel trans-tank bunded area drains to Puraceptor #1;
- **Refuelling Bay #2:** Stormwater from the four (4) refuelling bays (1, 2 3 and 4) drains to Puraceptor #2.
- **Launch Pad #1:** Stormwater from the Truck Grids trench drains to Puraceptor #3.

Stormwater flows into the Puraceptor through two horizontal treatment chambers, using the underflow principle light liquids such as oils are retained in all flow conditions. The containment chamber traps total suspended solids (TSS), sludge and gross pollutants and settle on the chamber floor and where liquid liquids are contained. The second chamber is where the light liquids separation is enhanced reducing it to 5 mg/litre or less prior to discharge. The water flows from the Puraceptor to the wharf edge and into Botany Bay.



### Gross Pollution Traps (GPTs)

- **Berth 6 (The Knuckle)** - has a containment system consisting of - seven (7) east-west trench drains at pavement valley lines.
  - Each strip trench drain has four (4) low points which drain into the underground stormwater drainage system.
  - One (1) north-south trench drains along the western boundary. Stormwater drains connect into two (2) main 1800 mm north-south drains connected to the gross pollutant traps (GPT) which contain ECOSOL RSF 41800 Treatment Units.
- **Northern side of the SICTL site adjacent to Penrhyn Estuary** - includes outlets from six (6) stormwater drains from the Patrick site (i.e. Rail siding northern side of the rail line) have been fitted with a gross pollution trap (GPT). Patrick will liaise with SICTL to gain access to repair and maintain the gross pollution traps and stormwater drain pipes.





### HumeCeptor® Stormwater Treatment System

There are approximately 5 to 7 HumeCeptor® stormwater treatment system located outside of the terminal's boundary to the North of the Patrick Rail Siding, and on land leased by Hutchison Ports.

The HumeCeptor® stormwater treatment system slows incoming stormwater to create a non-turbulent treatment environment, allow free oils and debris to rise and sediment to settle. The system maintains a continuous positive treatment of total suspended solids (TSS), regardless of the flow rate, treating a wide range of particle sizes, as well as free oils, heavy metals and nutrients that attach to fine sediment.





Examples of Operational Activities & Controls		
#	Description	Photo
1	Drain warden device (under grate) at stormwater inlets	
2	Spill response kits	
2	Spill trailer - for the placement of a leaking shipping container	
3	Diesel trans tanks – receiving a delivery of diesel from a road tanker parked inside the bunded area	



### Operation Environmental Aspects, Impacts and Controls

Discharge to stormwater can occur from the following activities:

1	Leaks from mobile plant, equipment and vehicles
2	Leaks from shipping containers (non-hazardous and/or hazardous/dangerous goods)
3	Leak/spill inside workshop
4	Leaks from diesel refuelling areas and/or tanks
5	Leaks from visiting trucks
6	Spill from a receptacle being transported on a Maintenance vehicle
7	Site runoff containing pollutants entering Botany Bay or Penrhyn Estuary
8	Spills/leaks from the workshop and maintenance area, including the wash bay

**Table: 6.2.2: Stormwater - Operation Environmental Aspects, Impacts and Control Measures**

1	Leaks from mobile plant, equipment and vehicles	
Operation Environmental		
The Terminal features a combination of mobile plant (quay cranes, Auto Strads, reach stackers, forklifts, elevated work platforms) and vehicles (utes, mini bus, ITV trucks. Leaks of fuel (diesel, ULP) or spills attributed the use of these assets at the Terminal can be expected to negatively impact the quality of nearby waterbodies unless adequate controls are in place.		
Aspect	Impact	Control Measures
Leaks from mobile plant, equipment and vehicles	Pollution of water and/or sediment within Botany Bay or Penrhyn Estuary;  Negative impacts on marine species;  Reputational harm.	Prior to operating an asset, the operator checks that mobile plant is working correctly and not leaking as part of a pre-start checking procedure. If found to be leaking it is reported to Maintenance who will arrange inspection / repairs accordingly and deploy immediate clean up.  Pre-start checks are recorded on a pre-start checklist and any rectifications are managed and recorded by the maintenance department in a timely manner.
		Stormwater control devices are located across the Terminal to reduce the risk of contaminated runoff entering Botany Bay or Penrhyn Estuary.  Refer to, in this table, <b>Aspect 7 - Site runoff containing pollutants entering Botany Bay or Penrhyn Estuary</b> for details on these controls.
		Manual straddles no longer in use at the Terminal. The few that remain are parked in a bunded area behind the Maintenance workshop.

1 Leaks from plant, equipment and vehicles <i>continued</i>		
Aspect	Impact	Control Measures
Leaks from plant, equipment and vehicles	Pollution of water and/or sediment within Botany Bay or Penrhyn Estuary; Negative impacts on marine species; Reputational harm.	All stormwater treatment devices (including drainage systems, sumps and traps) are routinely inspected and maintained to ensure they remain in effective working order. The inspection and maintenance of stormwater quality improvement devices (SQIDs) such as drain wardens, Pronal OFR Anti-Pollution stoppers (plugs), gross pollution traps (GPTs) and Puraceptors is scheduled in the Maintenance scheduling system (Maximo) and the responsibility of the Maintenance Department.
		Stormwater treatment devices located outside the terminal's boundary i.e. 5 to 7 HumeCeptor® stormwater treatment systems have been located to the north of the Patrick rail siding on the Hutchison Ports side of the fence. These are been recently identified, a sampling and testing program is being established to determine if and what servicing is required by Patrick's Maintenance Department of these stormwater treatment devices.
		Any leaks or spills are reported immediately to Maintenance in accordance with Emergency Response Plan (PBT_HSE_PLN_09_01) and associated spill response procedures. Controls in place to reduce environmental impact from leaks/spills include: <ul style="list-style-type: none"> <li>• Use of absorbent materials to stabilise the leaked/spilled liquid.</li> <li>• Drain wardens installed in stormwater drains are turned from the OPEN to the CLOSED position.</li> </ul> Clean up of the affected area may include using either dry, or wet road sweepers with a high-pressure vacuum system to clean roadway and/or storage area surfaces.
		Spill kits are situated in key locations around the terminal and Patrick employees have been trained in the use of spill kits and incident response. Leaks/spills are quickly identified, contained and reported. A spill trailer is also available at the Terminal.

2 Leaks from shipping containers (non-hazardous and/or hazardous/dangerous goods)		
Operation Environmental		
Shipping containers are located in the container storage area, the wharf apron (during unloading), and aboard vessels. Shipping containers can sometimes contain dangerous goods in liquid form, which pose a risk of stormwater contamination in the event the container is compromised.		
Aspect	Impact	Control Measures
Leaks from shipping containers (non-hazardous and/or hazardous/dangerous goods) entering Botany Bay	Pollution of water and/or sediment within Botany Bay; Negative impacts on marine species; Reputational harm.	In the event a shipping container is found leaking aboard a vessel, the Duty Shift Manager will enact the <b>Emergency Response Plan (PBT_HSE_PLN_09_01)</b> . This may involve contacting NSW Fire & Rescue Hazmat to attend site. If the container is to be discharged and can be safely done the container will be transferred directly to the spill trailer. If the container is a through container (i.e. not to be discharged), it will remain on board.
		Terminal infrastructure includes provision of a first flush/containment system consisting of: <ul style="list-style-type: none"> <li>11 north – south stormwater drains with grated entry pits.</li> <li>Drain warden devices (i.e. pollution control baskets) fitted inside the stormwater drain under the grates.</li> </ul>
		The following controls are in place at Berth 6 (the Knuckle). First flush / containment system consisting of: <ul style="list-style-type: none"> <li>Seven east-west trench drains at pavement valley lines. Each trench drain has four low points which drain into the underground stormwater drainage system.</li> <li>One north-south trench drain, along the western boundary.</li> <li>Stormwater drains connect into two main 1800 mm north-south drains connected to the gross pollutant traps (GPT).</li> <li>GPTs contain ECOSOL RSF 41800 Treatment Units.</li> </ul>
		Use of Pronal OFR Anti-Pollution stoppers (plugs) fitted with a SMC pneumatic control system is used along the trench stormwater drain in front of the truck lanes at the Truck Grid. These plugs will be normally inflated within nominated stormwater drains to block stormwater flow and therefore manage potential leaks/spills into stormwater. Prior to large rainfall events, the plugs will be deflated to facilitate flow through the system.

2 Leaks from shipping containers (non-hazardous and/or hazardous/dangerous goods) <i>continued</i>		
Aspect	Impact	Control Measures
Leaks from shipping containers (non-hazardous and/or hazardous/dangerous goods) entering Botany Bay	Pollution of water and/or sediment within Botany Bay; Negative impacts on marine species; Reputational harm.	In the event of a leak or spill Maintenance personnel attend and apply absorbent materials which stabilise the leaked/spilled liquid. The Terminal has a spill trailer onto which a leaking container can be placed and relocated to an area providing the necessary exclusion zone, away from workers and residential receptors. Clean up of the affected area may include using a wet road sweeper with a high-pressure vacuum system. Before a leaking container is placed in the spill trailer the bottom valve is closed. After the leak has stopped or been controlled, and the container is removed from the spill trailer, any liquid or solid collected in the bottom of the spill trailer is emptied, cleaned and the wastewater disposed of via a licensed waste collector and disposed of appropriately ( <b>Section 6.4 – Waste and Wastewater Management Plan</b> ). Following the clean out the spill trailer is returned to service and the bottom valve opened to allow any rainwater to disperse.
3 Leaks/spill inside the workshop		
Operation Environmental		
Maintenance activities carried outside the workshop often involve filling reservoirs of oil etc which involve the risk of overflowing onto the ground and flowing outside of the workshop and into stormwater drain.		
Aspect	Impact	Control Measures
Spills of hydrocarbons from refilling operations inside the workshop entering the receiving environment – Botany Bay	Pollution of water and/or sediment within Botany Bay Negative impacts on marine species within Botany Bay; Reputational harm.	The drains inside the workshop (with the exception of the wash bay sump) are all blind i.e. closed off and do not drain outside of the workshop.
		The workshop is designed with a bunded wall, and at the doorways where there is no bunded wall the floor slopes towards the centre of the workshop.
		Drain wardens are installed in stormwater drains around the external perimeter of the Maintenance workshop.
		Spills/leaks are cleaned up immediately using absorbent material.

4 Leaks from diesel refuelling areas and/or tanks		
Operation Environmental		
Two 65,000 L diesel 'trans-tanks' (Fuel Farm) are located at the site behind the Maintenance workshop. The trans-tanks are self-bunded with two separate, internally bunded compartments. An external bund has also been constructed around the tanks and is connected to a Puraceptor 50, capable of treating stormwater at a rate of 50L/sec. The Puraceptor discharges directly to existing stormwater and through to Botany Bay.		
Aspect	Impact	Control Measures
Spills of hydrocarbons from fuel storage and refuelling areas entering the receiving environment – Botany Bay	Pollution of water and/or sediment within Botany Bay  Negative impacts on marine species within Botany Bay;  Reputational harm.	Whilst refuelling Maintenance personnel or contractors are required to remain with the job until it is completed.
		Preventative maintenance is carried out at scheduled intervals (via Maximo) to ensure the diesel refuelling equipment is operating adequately.
		An automatic cut-off is activated when the bowser is released, shutting off the flow of diesel.
		The diesel trans-tanks area is fully bunded with discharge directed to a separate drain with an associated SPEL Puraceptor to contain and filter any leaks/spills that may occur.
		Runoff from the four refuelling bays is directed to Refuelling Bay #2 where another underground SPEL Puraceptor is located. A third SPEL Puraceptor is located in the Auto Strad Launch Pad.
		All stormwater treatment devices (including drainage systems, sumps and traps) are regularly maintained in order to remain effective. The inspection, service and maintenance of stormwater drain wardens, Pronal OFR Anti-Pollution stoppers (plugs), Puraceptors and GPTs are scheduled in Maximo and the responsibility of the Maintenance Department. Hard copy records are kept by the Maintenance Department.
		In the event of a leak or spill Maintenance will be alerted and attend to apply absorbent materials which will stabilise the leaked/spilled liquid. If required absorbent material will be placed around any nearby stormwater drains which if fitted with a Drain Warden, the grate will be lifted, and the device handle turned to closed. Clean up of the affected area may include using a dry or wet road sweeper with a high-pressure vacuum system.

5 Leaks from visiting trucks		
Operation Environmental		
Aspect	Impact	Control Measures
Spills/leaks of hydrocarbons from the truck grid or straddle park entering Botany Bay or Penrhyn Estuary; Grit and rubber from vehicle tyres entering Penrhyn Estuary or Botany Bay	Pollution of water and/or sediment within Botany Bay or Penrhyn Estuary;  Negative impacts on marine species within Botany Bay or Penrhyn Estuary;  Reputational harm	Patrick employees (e.g. Tele-Op, reach stacker driver) to ask the truck driver to stop and turn off the vehicle (so as not to spread the leaking material), contact the Yard or Shift Manager, or Maintenance's Technical Specialist.
		Spills or leaks that may enter stormwater drains are controlled via discharged to trench drains with stormwater treatment devices. In the event of the spill or leak has the potential to impact nearby waterbodies the nearby drain warden devices can be accessed by lifting the drain grate and the device handle turned to closed.
		Three Purceptor stormwater storage and treatment devices are in place in the pavement area south of the rail siding and north of the container storage area including the truck grid, straddle park and fuel farm.
		The truck grid and straddle park are fully bunded and bunds maintained as part of the maintenance inspection program.
		All stormwater treatment devices (including drainage systems, sumps and traps) are regularly maintained in order to remain effective. The inspection, servicing and maintenance of drain wardens, Pronal OFR anti-pollution devices, Purceptors and GPTs are scheduled in Maximo and the responsibility of the Maintenance Department.
		In the event of a leak or spill Maintenance will be alerted and attend to apply absorbent materials which will stabilise the leaked/spilled liquid. If required absorbent material will be placed around any nearby stormwater drains which if fitted with a Drain Warden, the grate will be lifted up and the device handle turned to closed. Clean up of the affected area may include using a dry or wet road sweeper with a high-pressure vacuum system. Following clean up any Drain Wardens which were closed, are returned to service and opened.

<b>6</b>	<b>Spill from a receptacle containing liquid on a Maintenance vehicle</b>
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<b>Operation Environmental</b>
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Chemicals and fuel are sometimes required to be transported across the Terminal by Maintenance personnel. For example, fuel or oil may be transported to service non-operational mobile plant. This movement of containers across the Terminal may or may not contain liquids which are classified as dangerous goods.

Aspect	Impact	Control Measures
Spill from a container on a maintenance vehicle entering Botany Bay or Penrhyn Estuary	Pollution of water and/or sediment within Botany Bay or Penrhyn Estuary; and	Chemical or fuel containers requiring transport to non-workshop locations on the Terminal must be placed on the back tray of a light vehicle and adequately secured so that they cannot move or fall off the vehicle.
	Negative impacts on marine species within Botany Bay or Penrhyn Estuary; Reputational harm.	In the event of a leak or spill Maintenance will be alerted and attend to apply absorbent materials which will stabilise the leaked/spilled liquid. If required absorbent material will be placed around any nearby stormwater drains which if fitted with a Drain Warden, the grate will be lifted up and the device handle turned to closed. Clean up of the affected area may include using a dry or wet road sweeper with a high-pressure vacuum system. Following clean up any Drain Wardens which were closed, are returned to service and opened.

<b>7</b>	<b>Site runoff containing pollutants entering Botany Bay or Penrhyn Estuary</b>
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<b>Operation Environmental</b>
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Stormwater flows for up to a 1 in 100 ARI (Average Recurrence Interval) storm event, are prevented from entering adjoining premises by the creation of flow paths along grated trench drains. The roadway along the western boundary of the Terminal area provides an overland flow path at the western end of the trench drains to the quay line. The overland flow path at the eastern end of the trench drains is directed through the existing Cargolink Terminal to the quay line.

**Stormwater Catchment areas – refer to Figure 6.2.1**

There are five (5) catchment areas on the Terminal with different types of stormwater management systems:

1. Pavement area north of the rail siding – drains to Penrhyn Estuary;
2. Pavement area south of the rail siding and north of the container storage area including the truck grid, AutoStrad parking area and diesel trans-tanks – drains to Botany Bay;
3. Pavement area west of the Maintenance area, including the AutoStrad parking area – drains Botany Bay
4. Container storage area, staff car parks and Tower/administration buildings – drains to Botany Bay; and
5. The Knuckle container storage area – drains to Botany Bay.



Aspect	Impact	Control Measures
Malfunction of the stormwater treatment system causing untreated stormwater to enter Botany Bay or Penrhyn Estuary	Pollution of water and/or sediment within Botany Bay or Penrhyn Estuary; and Negative impacts on marine species within Botany Bay or Penrhyn Estuary; Reputational harm.	Site runoff is directed to trench drains with associated SQIDs, including Drain Warden devices, SPEL Puraceptors and GPTs, where stormwater is treated prior to discharge to Botany Bay or Penrhyn Estuary.
		Stormwater treatment systems at the site include first flush / containment system consisting of: <ul style="list-style-type: none"> <li>11 drains with grated stormwater pits at low points.</li> <li>Drain Wardens (drains safe units / pollution control baskets) within the stormwater drains.</li> </ul>
		First flush / containment system consisting of: <ul style="list-style-type: none"> <li>Seven trench drains at pavement valley lines.</li> <li>One trench drain along the western boundary.</li> <li>Stormwater drains connect into two main 1800 mm north-south drains (Botany Bay) connected to the gross pollutant traps (GPT) which contain ECOSOL RSF 41800 Treatment Units.</li> <li>Stormwater drains connected to south-north drains (Penrhyn Estuary) connected to the gross pollution traps which contain ECOSOL RSF 41800 Treatment Units.</li> </ul>
		Stormwater drains are marked with "Clean Rainwater Only".
		Stormwater drains with Drain Warden devices installed under the grate are marked with which direction to open or close the device.
		All stormwater treatment devices (including drainage systems, sumps and traps) are regularly serviced and maintained in order to remain effective. The inspection and maintenance of stormwater drain wardens, Pronal OFR anti-pollution devices, Puraceptors and GPTs are scheduled in Maximo and the responsibility of the Maintenance Department. Hard copies of the inspection, servicing and any repairs are kept by the Maintenance Department.
		In the event of a leak or spill Maintenance will be alerted and attend to apply absorbent materials which will stabilise the leaked/spilled liquid. If required absorbent material will be placed around any nearby stormwater drains which if fitted with a Drain Warden, the grate will be lifted up and the device handle turned to closed. Clean up of the affected area may include using a dry or wet road sweeper with a high-pressure vacuum system. Following clean up any Drain Wardens which were closed, are returned to service and opened.

Figure: 6.2.1: Patrick Terminal Stormwater Catchment Areas

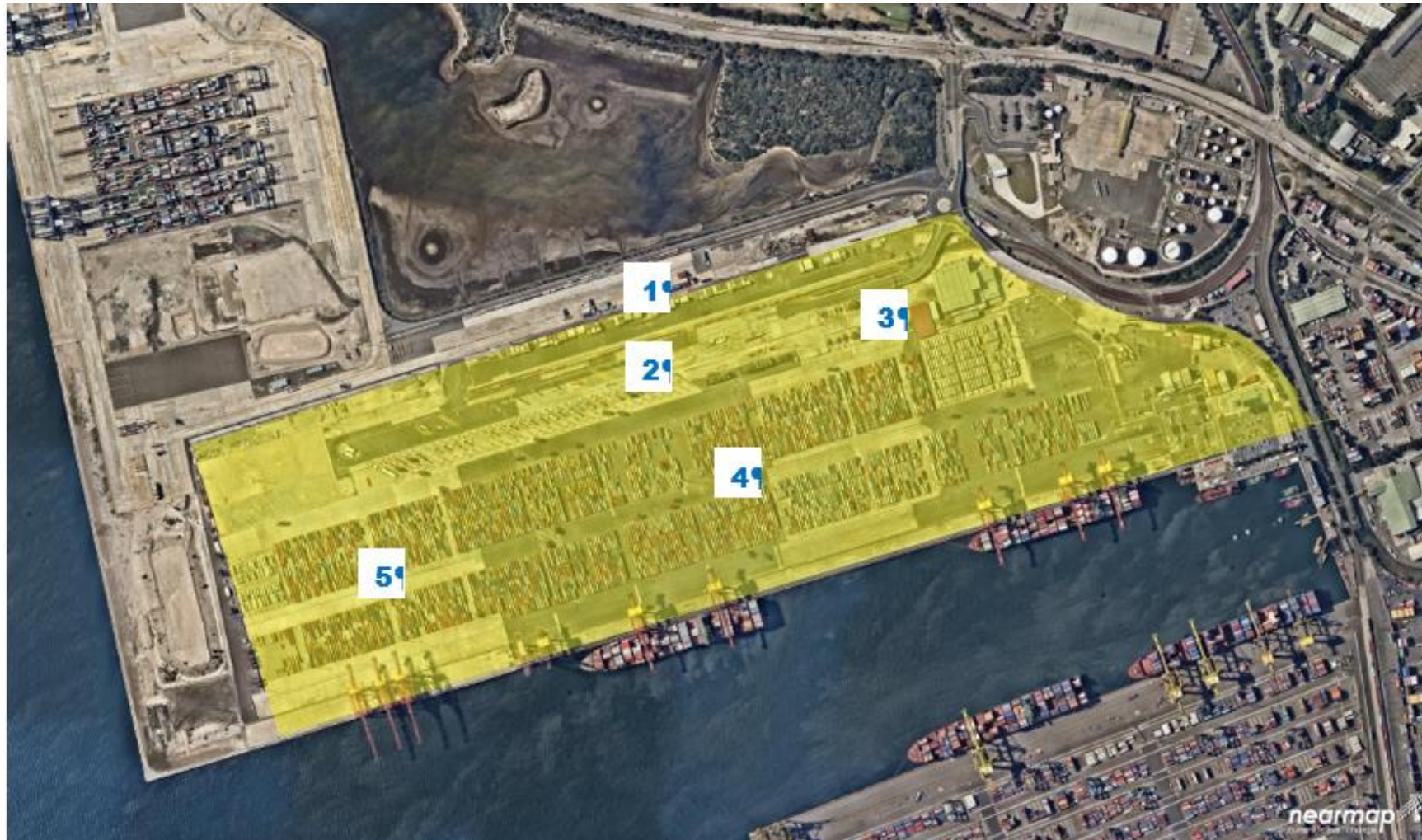
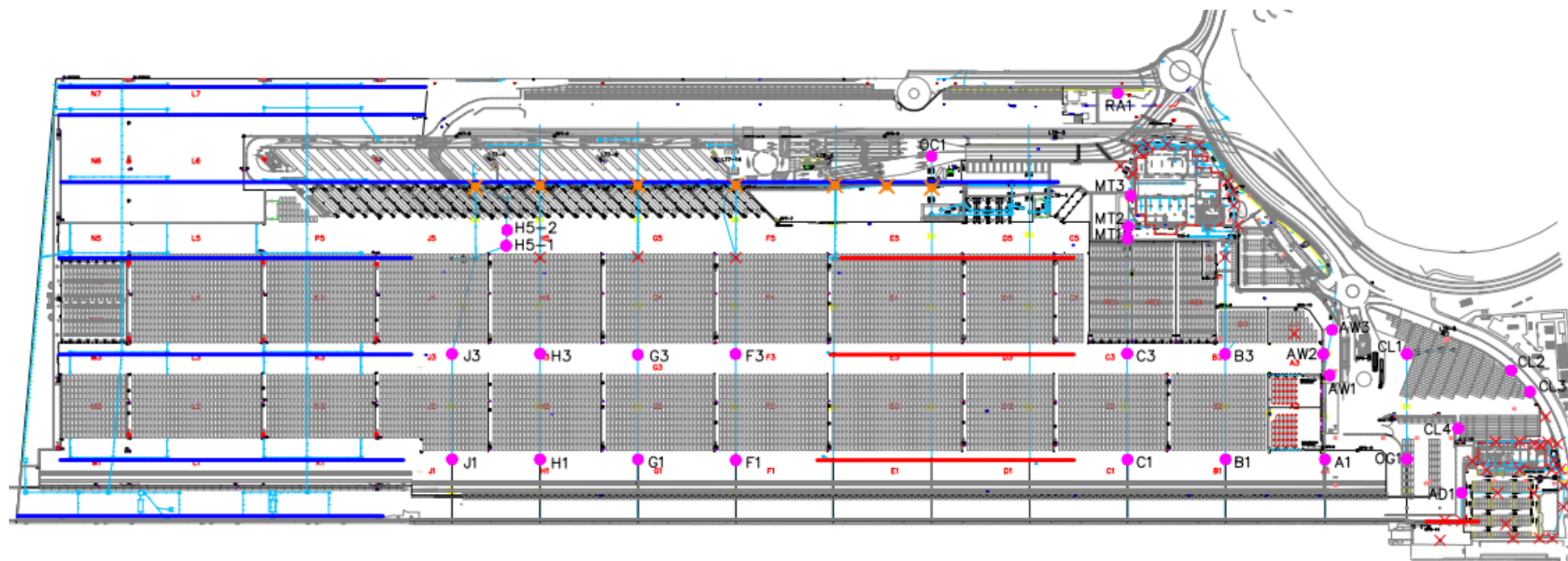




Figure: 6.2.2: Patrick Terminal Stormwater Drainage System



Drain Legend:

- Strip drain – Protected by GPT or Puraceptor
- Strip drain – Unprotected
- Grate drain – Fitted with Drain Safe
- × Grate drain – Unprotected
- × Enviro balloon shut off valve

### Monitoring and Reporting

Stormwater treatment devices are monitored by the Engineering and Maintenance Department according to testing and inspection schedules in Maximo. Implementation of this program helps to ensure the ongoing operation and effectiveness of these devices in protection against stormwater pollution.

Patrick will ensure appropriate persons are engaged to conduct remediation and rehabilitation works if required in response to a pollution incident. Monitoring of the effectiveness of rehabilitation programs will be conducted as required by specialist recommendations. Records of clean up and rehabilitation activities in response to a pollution incident will be maintained on site and available for review by regulatory bodies if and when required.

### Performance Expectations

The implementation of this management plan and its effectiveness will be measured by the Key Performance Indicators (KPIs) provided in the table below.

**Table: 6.2.3: Stormwater Management – KPIs**

Key Performance Area		KPI
1	An incident on site where a pollutant has entered water.	Zero (0)
2	Public inquiries, comments and complaints from residents or members of the community – which can be attributed to Patrick's operations.	Zero (0)
3	Routine visual inspections of the terminal to verify control measures are in place and functioning correctly and to identify any potential sources of stormwater contamination.	At least quarterly visual inspection (4 annually)
4	Implementation of corrective actions following a non-conformance in relation to dust/debris mitigation controls.	Water and high-pressure vacuum cleaning arranged promptly

### Review and Improvement



The review and amendment of this management plan will be in accordance with **Section 5 – Review and Improvement** of this OEMP.

Inquiries, comments and/or complaints directly or indirectly received from the public shall be managed in accordance with the **Public Inquiries, Comments and Complaints Handling, Section 4.6** and reported in accordance with the **Environmental Reporting, Section 4.4** of this OEMP.

Periodic environmental inspections and audits will be carried out in accordance with **Section 4.5 - Environmental Inspection and Auditing**, of this OEMP.

## 6.3 Feral Animal Management Plan

Objective	
To reduce the risk of attracting feral animals to the Terminal by the implementation of appropriate controls.	
Statutory Requirements and Legislative Framework	
<p>The legislation and other compliance requirements that apply to the implementation of this management plan are listed below:</p> <ul style="list-style-type: none"> <li>NA</li> </ul>	
Development Consent DA 494	NA
Development Consent DA 453	NA
EPA Licence 6962	NA
Sydney Water Discharge Industrial Wastewater Consent 24990	NA
Sydney Water Trade Wastewater Discharge Schedule Permit 40110	NA
EIS Prediction and Conclusion	20.8.4
Key Tasks and Responsibilities	
<p>A comprehensive list of responsibilities, accountabilities and authorities is provided in <b>Section 4.2 - Environmental Duties and Responsibilities</b> of this OEMP. The key responsibilities for the implementation of operational controls are provided in the table below.</p> <p><b>Table: 6.3.1: Feral Animal Management – Key Tasks and Responsibilities</b></p>	
Task	Responsibility
1 Induction and training of Patrick employees, contractors and visitors.	Training Coordinator and/or Safety, Security & Training Manager; Facilities Manager
2 Maintain good housekeeping within the Terminal.	All Patrick personnel; Truck drivers; Relevant contractors/service providers; Facilities Manager
3 Monitoring of feral animal management impacts and their effectiveness.	ESC Manager (Environmental Representative)
4 Liaise with NSW Ports, Port Authority NSW and other port operators for feral animal management.	ESC Manager (Environmental Representative)

Examples of Operational Activities & Controls		
#	Description	Photo
1	Litter bins are placed around the site - along the truck grid at each of the bus shelters, and at the Operations vehicle parking area	
2	Rodent trap located around the site	

**Operation Environmental Aspects and Impacts, and Control Measures**

1	Feral Animal attractants
2	Pest control at the terminal e.g. rodents, insects, pigeons

**Table: 6.3.2: Feral Animal Operation Environmental Aspects, Impacts and Control Measures**

1	Feral Animal Attractants		
Operation Environmental			
Aspect	Impact	Control Measures	
Feral Animal attractants	Health; Nuisance; Property damage	Rubbish bins are in placed across the Terminal and appropriately covered at all times.	
		Rubbish bins are regularly emptied, and the waste disposed of by approved contractors/service providers.	
		Security personnel conduct regular patrols of the Terminal boundary and fencing.	
		Employees/contractors directed not to feed stray/feral animals.	
		Should shorebird monitoring reveal feral cat and fox predation (on shorebirds) to be an ongoing issue, a 1080 fox baiting program should be initiated in consultation with NPWS and an expert shorebird ecologist.	
2	Pest Control		
Operation Environmental			
Aspect	Impact	Control Measures	
Pest control e.g. rodents, insects, pigeons	Health; Nuisance; Property damage	Rubbish bins are in placed across the Terminal and appropriately covered at all times.	
		Rubbish bins are regularly emptied, and the waste disposed of by approved contractors/service providers.	
		Security personnel conduct regular patrols of the Terminal boundary and fencing, report any holes to the Safety, Security & Training Manager and Facilities Manager to arrange repairs.	
		Pest control practices carried out by approved contractors/service providers e.g. rodent baits, pigeon deterrents.	
		Arrange immediate clean-up of any spills of grains (i.e. leaking container).	



### Monitoring and Reporting

Routine monitoring relies on visual inspections and the diligence of all employees and contractors to report any feral animals found within the Terminal and report them to their frontline manager who will raise an event in the Patrick's HSE reporting database.

Events are reported at weekly by the ESC Manager who will report monthly on any trends. The results will be used for various reporting obligations refer to **Section 4.4 - Environmental Reporting**, of this OEMP.

### Performance Expectations

The implementation of this management plan and its effectiveness will be measured by the Key Performance Indicators (KPIs) provided in the table below.

**Table: 6.3.3: Feral Animal and Biosecurity Management – KPIs**

Key Performance Area		KPI
1	An incident on site where a feral animal is found.	Zero (0) complaints
2	Public comments, inquiries and complaints from residents or members of the community related to feral animals or a biosecurity threat – which can be attributed to the Terminal.	Zero (0) complaints
3	Routine visual inspections of the terminal to verify control measures are in place and functioning correctly and to identify housekeeping practices which may attract feral animals.	At least quarterly visual inspection (4 annually)
4	The number of feral animal management events per 100,000 TEU.	Zero per 100,000 TEU

### Review and Improvement

The review and amendment of this management plan will be in accordance with **Section 5 – Review and Improvement** of this OEMP.





Any inquiries, comments and/or complaints directly or indirectly received from the public shall be managed in accordance with the **Public Inquiries, Comments and Complaints Handling, Section 4.6** and reported in accordance with the **Environmental Reporting, Section 4.4** of this OEMP.

Periodic environmental inspections and audits will be carried out in accordance with **Section 4.5 - Environmental Inspection and Auditing**, of this OEMP.




## 6.4 Waste and Wastewater Management Plan




Objective	
To effectively manage waste and wastewater (industrial trade waste) at the Terminal in accordance with the waste hierarchy and the site's Trade Waste Agreement (TWA) and Trade Wastewater Discharge Schedule; and to ensure hazardous waste is managed in accordance with legislative requirements.	
Statutory Requirements and Legislative Framework	
<p>The legislation and other compliance requirements that apply to the implementation of this management plan are listed below:</p> <ul style="list-style-type: none"> <li>• <i>Environmental Planning and Assessment Act 1979 (NSW)</i></li> <li>• EPA Waste Classification Guidelines Part 1 Classifying Waste (2014)</li> <li>• <i>Marine Pollution Act 2012 (NSW)</i></li> <li>• <i>Protection of the Environment Operations Act 1997 (NSW)</i></li> <li>• <i>Protection of the Environment Operations (Waste) Regulation 2014 (NSW)</i></li> <li>• <i>Sydney Water Act 1994 (NSW)</i></li> <li>• <i>Waste Avoidance and Resource Recovery Act 2001 (NSW)</i></li> <li>• Waste Classification Guidelines, Part 1: Classifying Waste 2014 (NSW EPA)</li> </ul>	
Development Consent DA 494	C2.13, C2.13A, C2.14 & C2.15
Development Consent DA 453	3.38, 3.39, 3.40, 3.41, 3.42, 3.43, 3.44, 6.4 (d), 7.5, 7.21, 7.22, 7.23 & 7.24
EPA Licence 6962	L2.1, L2.1, L2.3 & L2.4; & O1.1, O4.1 O4.2
Sydney Water Discharge Industrial Wastewater Consent 24990	Schedule 1
Sydney Water Trade Wastewater Discharge Schedule Permit 40110	Items 1 to 13
EIS Prediction and Conclusion	33.2, 33.3, 33.5 & 33.4
Key Tasks and Responsibilities	
<p>A comprehensive list of responsibilities, accountabilities and authorities is provided in <b>Section 4.2 – Environmental Duties and Responsibilities</b> of this OEMP. The key responsibilities for the implementation of operational controls are provided in the table below.</p> <p><b>Table: 6.4.1: Waste and Wastewater Management – Key Tasks and Responsibilities</b></p>	
Task	Responsibility
1 Induction and training of Patrick employees, contractors and visitors	Training Coordinator and/or Safety, Security & Training Manager; Facilities Manager
2 Use licenced waste transporters to collect waste and dispose at appropriately licenced disposal facilities.	Facilities Manager; Relevant contractors/service providers
3 Maintain a list of approved waste transporters and disposal facilities.	ESC Manager (Environmental Representative)
4 Routinely inspect waste storage areas at the Terminal.	ESC Manager (Environmental Representative)
5 Maintain the waste register and analyse waste generation and recycling data.	ESC Manager (Environmental Representative)

Examples of Operational Activities & Controls		
#	Description	Photo
1	<p>Grease Arrester Pit (Trade Wastewater Discharge Schedule, Permit No. 40110) collects greasy wastewater from the Canteen/Kitchen – the Sydney Water Wastesafe barcode is located on the post above the pit.</p> <p>The grease trap is cleaned 6-monthly by a licensed waste transporter. The grease and sludge are disposed at a suitably licensed waste treatment or disposal facility.</p>	
2	General waste bin, Maintenance workshop	

#	Description	Photo
3	Waste bins for used oil rags, Maintenance workshop	
4	Used batteries, collected at Maintenance for recycling	
5	General waste bins	
		



#	Description	Photo
6	Paper and cardboard recycle bins in office areas	
7.1	<p>Wastewater from the wash bay drains into a sump located in the centre of the wash bay floor.</p> <p>Any collected oil and debris are pumped out and placed into a 200L drum for ultimate disposal at a licenced disposal facility.</p>	
7.2	<p>Wastewater from the wash bay is piped across to the concrete storage pit where the wastewater is passed through an under and overs oil separator.</p> <p>A licenced contractor pumps the sludge from the pit into a tanker where it is transported to a licensed treatment or disposal facility.</p>	

#	Description	Photo
7.3	<p>Wastewater is pumped from the concrete storage pit to the Auto Batch unit and treated with a flocculent to reduce suspended solids. Filter paper laid on a moving conveyor belt aids in further removal of fine particles.</p> <p>The used flocculent and filter paper is collected in a undercover waste bin, and the filtered wastewater is collected in a 1000L tank.</p>	 
7.4	<p>Filtered wastewater is pumped from the 1000L tank through a flow meter transducer to measure the volume of water discharged to sewer.</p> <p>The flowmeter is calibrated annually.</p>	



### Identification of Waste Streams

The table below provides a summary of the types of wastes generated at the Terminal. All waste at the Terminal is classified into one of five categories according to guidance provided in the NSW EPA Waste Classification Guidelines, Part 1: Classifying Waste 2014. The majority of waste is classified as General Solid Waste (non-putrescible) and General Solid Waste (putrescible). Smaller quantities of 'Special Waste', Liquid Waste' and 'Hazardous Waste' are generated.

**Table 6.4.2: Summary of the Types of Waste Generated at the Terminal**

Waste Classification	Description
<b>Liquid Waste</b>	Wastewater sludge is collected in a sump located in the centre of the wash bay floor
	Wastewater from the wash bay passes through an under/overs separator, and the wastewater is filtered prior to discharge to sewer under licence (Trade Waste Agreement)
	Grease Arrester Pit i.e. waste oil (Canteen / Kitchen cooking oil) (Trade Wastewater Discharge Schedule)
	Liquid waste from stormwater drain warden devices
	Liquid waste collected in the spill trailer from leaking DG containers
<b>General Solid Waste (putrescible)</b>	Kitchen waste (food scraps, wrappers, paper towels etc.)
<b>General Solid Waste (non-putrescible)</b>	Glass and plastic containers
	Paper and cardboard
	Scrap metal
	Used parts with non-recyclable content (maintenance)
	Timber pallets / crates
	Solid waste from stormwater drain warden devices (grit, sediment, litter)
	Green waste (vegetation)
<b>Hazardous waste</b>	Waste oil (Maintenance)
	Oily rags
	Used oil filters
	Used absorbent material to clean up leaks/spills
	Ink/toner cartridges, fluorescent light tubes
	Used cleaning chemicals, paints, thinners, pest control chemicals, and their empty containers
	Waste fuel and empty fuel drums
	Used absorbent material (ex-leak/spill clean-up)
	Lead-acid / nickel cadmium batteries
	Ink/toner cartridge (ex-printers)
<b>Special waste</b>	Asbestos
	Waste tyres (ex-mobile plant or vehicles)
	Clinical waste (sharps etc.) from First Aid Room

Operation Environmental Aspects and Control Measures	
1	Generation of waste across the Terminal
2	Grease/oil from Canteen/Kitchen collected in a Grease Arrester Pit
3	Maintenance wash bays and a manually operated sump to remove sludge
4	Hazardous and Liquid Waste Management
5	Handling of solids / liquid wastes collected from Stormwater Quality Improvement Devices (SQIDs)
6	Special waste and biohazard waste
7	Waste from ships berthed alongside the Patrick Terminal (not applicable to Patrick)

**Table: 6.4.3: Waste and Wastewater - Operation Environmental Aspects, Impacts and Control Measures**

1	Generation of waste across the Terminal	
Operation Environmental		
Aspect	Impact	Control Measures
Generation of waste across the Terminal; Failure to implement the waste hierarchy; Inappropriate disposal methods	Depletion of natural resources; Reduction in available landfill space; Litter; Pollution of stormwater or nearby waterbodies; Land contamination; Reputational harm; Breach of waste legislation	Patrick will endeavour to manage the waste generated on site by following the best practises - <i>Waste Avoidance and Resource Recovery Act 2001</i> : Avoid, Reduce, Reuse, Recycle, Recover, Treat; and Dispose. Patrick’s preference is to avoid/reduce waste wherever possible, the waste minimisation program includes where possible: <ul style="list-style-type: none"><li>tracking waste to identify trends and where set reduction targets;</li><li>incorporate information on waste classification and disposal into personnel training and communication material;</li><li>provide clear identification of separate waste stream disposal bins and/or locations; and</li><li>discuss waste minimisation during staff and contractor meetings.</li></ul>
		Before waste is removed from site, it is assessed by the waste contractor for suitability for the intended destination. Waste will be classified into the groups in Table 6.4.2 as per the EPA Waste Classification Guidelines.
		Designated waste storage areas are provided in and adjacent to the Maintenance workshop and building and the Tower/Administration Building. Wastes are stored according to their classification.
		Outdoor litter bins are designed as per - <b>Bird Hazard Management Plan, Section 6.9</b> of this OEMP.
		Recycling facilities are provided at the Terminal to maximise recycling of waste materials such as paper and cardboard, scrap metal, timber pallets, oily rags, waste oil, printer cartridges, batteries, tyres etc.
		Domestic waste is collected on a regular basis and transported off site for disposal to a licensed landfill.
		Patrick can accept a maximum of 5000 kL of in-transit waste generated outside the premises for storage only (EPL 6962, A1.1).
		Scrap metal, used parts, components and machinery from the maintenance workshop are recycled where practicable.

2 Generation of grease/oil from Canteen/Kitchen collected in a Grease Arrester Pit		
Operation Environmental		
A grease arrestor pit (grease trap) is located near the canteen and treats wastewater from the canteen kitchen prior to discharge to sewer under the conditions of a Trade Wastewater Discharge Schedule (Permit No. 40110) with Sydney Water.		
Aspect	Impact	Control Measures
Generation of grease/oil from Canteen/Kitchen – inappropriate disposal	Negative impact to sewerage system; Reputational harm; Breach of Trade Wastewater Discharge Schedule	The grease trap is emptied and cleaned six-monthly by an approved contractor and licensed waste transporter in accordance with the conditions of the Trade Wastewater Discharge Schedule (Permit 40110). The waste transporter reports activity associated with the grease trap to Sydney Water on behalf of Patrick. The contractor scans the Wastesafe barcode before transporting the liquid waste for disposal at a licenced facility.

3	Maintenance wash bays and manually operated sump to remove sludge		
Operation Environmental			
<p>Two wash bays are located within a roofed and bunded area within the maintenance workshop with one wash bay connected via the Auto Batch unit to trade waste. The workshop floor is sealed and graded toward an internal drainage point into a sump which is periodically pumped out of sludge into 200L metal drums and disposed of using a licensed waste transporter, and disposal facility. This single wash bay is operated under the conditions of Sydney Water’s Consent to Discharge Industrial Trade Wastewater No. 24990 (TWA). The second wash bay is not connected to the trade waste and has not been used since it was installed.</p> <p>A program of routine monitoring, sampling and testing is required under the TWA and arranged by Sydney Water directly with a third-party environmental testing laboratory.</p> <p>Maintenance personnel in the workshop use oils, lubricants, coolants, grease, fuel (diesel), paint (road marking and rust protectant), thinners and pest control chemicals which could find their way into the drainage system. Chemicals are also used for cleaning plant and equipment in the wash bay.</p>			
Aspect	Impact	Control Measures	
Generation of wastewater from the single wash bay discharged to sewer; Spills/leaks from the workshop and maintenance area, entering Botany Bay or Penrhyn Estuary (e.g. hydrocarbons, grit and rubber from vehicle tyres, waste oil sludge)	Breach of the Trade Waste Agreement; Pollution of stormwater or nearby waterbodies; e.g. Botany Bay or Penrhyn Estuary; Negative impacts on marine species within Botany Bay or Penrhyn Estuary; Impacts on Sydney Water Trade Waste system; Reputational harm.	Wastewater from the wash bay drains through sump in the floor where sludge is collected. Periodically the sump is pumped out and appropriately disposed of using a licenced disposal facility.	
		The wastewater from the wash bay flows into a concrete open tank where any oil is separated from the wastewater using an under/over separator. Any oil is separated and is ultimately removed using a licensed waste contractor. The wastewater is pumped up the Auto Batch unit and passed thru a powdered filter aid material on top of disposable filter paper on a moving conveyor belt. After the filtered wastewater is then collected in a 1000L batch tank prior to passing through the flowmeter transducer to the sewer (as per the conditions of a Trade Waste Agreement (TWA) with Sydney Water Consent No. 24990).	
		The sump in the wash bay and the Auto Batch unit are inspected and maintained according to the maintenance schedule in Maximo and the responsibility of the Engineering & Maintenance Department. The thickness of sediment and oil in the collection pit is periodically monitored and is pumped out at least annually.	
		Sludge generated from the washing process in the wash bay is collected in the sump where it is pumped into 200L drums and disposed of by a licenced liquid waste contractor to a facility licenced to accept the waste. Waste transport and disposal records are maintained for a minimum of <b>five years</b> .	
		The wash bay and workshop are roofed and bunded so that all uncontaminated stormwater from the roof areas is collected in 3x 20,000L tanks located on the northern side of the workshop.	

3 Maintenance wash bays and manually operated sump to remove sludge - <i>continued</i>		
Generation of wastewater from the single wash bay discharged to sewer; Spills/leaks from the workshop and maintenance area, entering Botany Bay or Penrhyn Estuary (e.g. hydrocarbons, grit and rubber from vehicle tyres, waste oil sludge)	Breach of the Trade Waste Agreement; Pollution of stormwater or nearby waterbodies; e.g. Botany Bay or Penrhyn Estuary; Negative impacts on marine species within Botany Bay or Penrhyn Estuary; Impacts on Sydney Water Trade Waste system; Reputational harm.	<p>The wash bays were designed and installed in accordance with Sydney Water's requirements, the most recently installed wash bay is non-operation and the operational wash bay is regularly cleaned and maintained. Design features include:</p> <ul style="list-style-type: none"> <li>• The floor of the wash bay is sealed and graded to the collection pit so that all wastewater and surface spillage is directed and drains to the centre pit or strip drain.</li> <li>• The wash bay is constructed with a minimum 20 mm bund around the perimeter;</li> <li>• The wash bay is protected from the entry of external surface waters, by either; a minimum 2% change in grade; or combination of a minimum 2% grade change and a grated drainage system; and</li> <li>• Roof with minimum height of 2.5m.</li> </ul> <p>The drains in the Maintenance workshop are blind and therefore isolated from stormwater drains. Wastewater collected within blind drains in the workshop is pumped out by a licensed waste contractor and transported for disposal at a licensed liquid waste treatment facility.</p>

4 Hazardous and Liquid Waste Management		
Operation Environmental		
A number of hazardous waste streams are generated at the Terminal, predominantly from the Maintenance workshop. These include (but are not limited to): waste oil, fuel, cleaning chemicals, paints, thinners, pest control chemicals, and their empty containers, batteries, fluorescent light tubes, used absorbent materials (leak/spill response).		
Aspect	Impact	Control Measures
Generation of hazardous waste; Generation of liquid waste; Inappropriate disposal of hazardous waste	Breach of waste legislation (tracking, disposal); Land contamination	In accordance with development conditions of consent and the EPL, only the hazardous and/or industrial and/or Group A wastes listed below may be generated and/or stored at the Terminal (Condition C3.39, CoA 453): <ul style="list-style-type: none"> <li>Waste oil/water, hydrocarbons/water mixtures or emulsions; and</li> <li>Grease trap waste.</li> </ul> Patrick will not <b>generate</b> more than 200 tonnes per year, or <b>store</b> more than 70 tonnes per year of the above-listed wastes.
		Waste oil is stored in 240L drums on bunded pallets in the roofed designated Waste Oil Store.
		Hazardous wastes are collected on an as-needs basis by an appropriately licensed waste transporter, classified in accordance with the NSW EPA Waste Classification Guidelines 2014, and directed to a waste management facility lawfully permitted to accept the waste.
		Records of hazardous waste removal are retained in accordance with the <i>Protection of the Environment Operations (Waste) Regulation 2014</i> . Records (i.e. transport and waste facility dockets, and Waste Transport Certificates) are maintained on site and available for inspection upon request.
		A Waste Register is maintained on site and includes information provided by the waste contractor such as waste classification, volume, and disposal facility.
		Sufficient supplies of appropriate absorbent materials are kept on site to recover any leaks/spills of liquid. Liquid spills are cleaned up using dry methods, by placing absorbent material on the leak/spill, and sweeping or shovelling the material into a secure bin. Absorbent materials used to clean up spills is disposed of to an appropriately licensed waste facility. A dry or wet road sweeper may also be used where necessary.



5	Handling of solids / liquid wastes collected from Stormwater Quality Improvement Devices (SQIDs)		
Operation Environmental			
Aspect	Impact	Control Measures	
Storage and handling of solid and liquid wastes collected from SQIDs	Breach of waste legislation; Land contamination; Pollution of stormwater or nearby waterbodies	All solid and liquid wastes collected from stormwater treatment devices are disposed of in a manner that does not pollute waters (in accordance with Condition 7.20 of DA 453).	
		Waste is not stored at the Terminal in quantities exceeding any licensing threshold under Schedule 1 of the <i>Protection of the Environment Operations Act 1997</i> .	
6	Special Waste and Biohazard Waste		
Operation Environmental			
Special waste is sometime generated at the Terminal and includes clinical waste, waste tyres and asbestos. Biohazard waste contains or potentially contains pest species and presents a biosecurity risk.			
Aspect	Impact	Control Measures	
Inappropriate disposal of special waste; Inappropriate management of quarantine waste	Breach of legislation; Land contamination; Pollution of stormwater or nearby waterbodies	Special wastes are classified in accordance with the NSW EPA Waste Classification Guidelines and disposed offsite to an appropriately licensed waste handling facility.	
		Licensed asbestos removalists and/or Occupational Hygienists are engaged to provide advice and manage any potential items containing asbestos at the Terminal.	
		Special wastes are stored in a designated area prior to collection by an appropriately licensed waste transporter.	
		A clinical waste bin and sharps container is available in the First Aid Room. Clinical waste is removed by contracted clinical waste service providers.	
		Biosecurity/Quarantine waste is disposed of in accordance with the requirements of NSW Ports, EPA, and Biosecurity and Customs.  Shipping lines engage licensed external contractors to collect and remove quarantine waste from ships when in port.  Additionally, slops from ships (for example, oily water and sludge) are disposed by the same process where EPA licensed contractors to the shipping line visit the ship whilst in port and pump out and remove these wastes to a licensed disposal facility.	

7	Waste from ships berthed alongside the Patrick Terminal (Not applicable to Patrick)	
Operation Environmental		
<p>Although this is not applicable to Patrick, it is worth Patrick personnel being aware of who is responsible for what. Including Patrick reporting any waste suspect from a vessel.</p> <p>While ships are permitted to dispose some types of waste at sea, there are strict requirements relating to the type of waste and the distance from land where the disposal may take place. The following pollution activity should be reported:</p> <ul style="list-style-type: none"><li>• discharge of oil from a vessel.</li><li>• any discharge from a ship involving washings of chemical or dry cargoes</li><li>• any plastic material</li><li>• garbage disposed of in the sea within 12nm of land (garbage includes food, paper, bottles etc.)</li></ul> <p>In NSW, the primary legislation affecting marine pollution is the <i>Marine Pollution Act 2012</i> which implements the International Convention for the Prevention of Pollution from Ships 1973 (known as MARPOL).</p>		
Aspect	Impact	Control Measures
Waste discharged from a vessel entering Botany Bay while berthed	Breach of the <i>Marine Pollution Act 2012</i> ;	Patrick is responsible for reporting any spills or incidents involving ships to the Port Authority of NSW and AMSA, including unauthorised waste discharged from ships berthed at the Terminal.
	Pollution of Botany Bay	In the event of any spill or emission from any vessel berthed at Patrick’s Terminal, clean up responsibility is taken by the Port Authority of NSW, and the Australian Maritime Safety Authority (AMSA).

## Monitoring and Reporting

### Inspections

Inspection of waste storage facilities are undertaken as part of quarterly environmental inspections, including:

- office bin areas;
- skip bins;
- waste oil storage areas;
- stormwater management devices; and
- silt arresters and oil interceptors.

### Waste tracking

Waste generated by Patrick is weighed by Patrick's waste disposal contractor when collected from the terminal, Patrick is advised of the:

- amount and classification of waste transported;
- name and license number of transporter;
- date transported;
- name and location of the receiving waste facility;
- waste Transfer Certificate (when appropriate); and
- processing (whether disposed or recycled).

On a regular basis, the waste disposal contractor will submit the waste data to Patrick who records it as part of the site Waste Register.

The ESC Manager analyses and graphs the results showing trends over time. This graph will be reviewed regularly by the HSEQ department and will be distributed in accordance with the below diagram:

Patrick will undertake an annual review of the ongoing monitoring and discuss justification in each Annual Environmental Management Report (AEMR).

### Waste monitoring

Waste generation and recycling data for the Terminal is recorded and analysed by the Patrick ESC Manager (Environmental Representative). Data gathered includes the volume of solid waste generated and recycled, and the amount of liquid waste generated and recycled. These results will form KPIs (see below).

### Trade wastewater sampling and monitoring

The trade waste agreement identifies substances and discharge concentrations which must not be exceeded. Wastewater is monitored by an appointed contractor for Biochemical Oxygen Demand (BOD), Suspended Solids, Grease, and Volatile Hydrocarbons. Prior to discharge, the wastewater must also have the following properties:

- **Temperature:** Not to exceed 38 degrees Celsius;
- **Colour:** Determined on a system specific basis
- **pH:** Within the range 7.0 -10.0
- **Fibrous material:** None which could cause an obstruction to Sydney Water's sewerage system
- **Gross solids (other than faecal):** A maximum linear dimension of less than 20mm, a maximum cross section dimension of 6mm and a quiescent settling velocity of less than 3m/h

### Monitoring and Reporting - *continued*

- **Flammability:** Where flammable and/or explosive substances may be present, Patrick must demonstrate that there is no possibility of explosions or fires occurring in the sewerage system, to the satisfaction of Sydney Water. The flammability of the discharge must never exceed 5% of the Lower Explosive Limit (LEL) at 25 degrees Celsius.

The TWA also sets limits for the rates of discharge of wastewater to sewer, which are measured and recorded during monitoring events.

#### **Documentation and record keeping**

Patrick retains all records of waste measurement for traceability, including:

- Waste receipts; and
- Waste transfer certificates.

The details of these documents will be entered into the Terminal's Waste Register and summarised and included in the Annual Environmental Management Report (AEMR) issued by the ESC Manager and uploaded onto the Patrick website.

Records relating to waste disposal are maintained for a period of **five years**.

### Performance Expectations

The implementation of this management plan and its effectiveness will be measured by the Key Performance Indicators (KPIs) provided in the table below.

**Table: 6.4.4: Waste and Wastewater Management – KPIs**

Key Performance Area		KPI
1	Amount of solid waste generated, and the amount of waste recycled expressed as cubic metres of solid waste generated per TEU and cubic metres of solid waste recycled per TEU.	Trending downwards
2	Amount of liquid waste generated, and the amount of liquid waste recycled expressed as litres of liquid waste generated per TEU and litres of liquid waste recycled per TEU.	Trending downwards
3	Compliance with the conditions of the Discharge Industrial Trade Wastewater consent (No. 24490).	Zero (0) non-compliances
4	Compliance with the conditions of the Trade Wastewater Discharge Schedule (Permit No. 40110).	Zero (0) non-compliances
5	Compliance with Condition L2.3 of EPL 6962 re in-transit wastes (200 tonnes pa generation and 70 tonnes storage).	Zero (0) non-compliances

### Review and Improvement

The review and amendment of this management plan will be in accordance with **Section 5 - Review and Improvement** of this OEMP.

Any inquiries, comments and/or complaints directly or indirectly received from the public shall be managed in accordance with the **Public Inquiries, Comments and Complaints Handling, Section 4.6** and reported in accordance with the **Environmental Reporting, Section 4.4** of this OEMP.

Periodic environmental inspections and audits will be carried out in accordance with **Section 4.5 - Environmental Inspection and Auditing** of the OEMP.

## 6.5 Dangerous Goods and Hazardous Chemicals/Substances Management Plan




Objective	
To provide direction for the storage and handling of dangerous goods (DGs) and hazardous chemicals/substances in accordance with environmental legislative and other requirements, thereby reducing the likelihood of environmental harm.	
Statutory Requirements and Legislative Framework	
The legislation and other compliance requirements that apply to the implementation of this management plan are listed below:	
<ul style="list-style-type: none"> <li>Australian Dangerous Goods Code 7th Edition, 2007 (ADG7)</li> <li><i>Environmentally Hazardous Chemicals Regulation 2017 (NSW)</i></li> <li><i>Environmental Planning and Assessment Act 1979 (NSW)</i></li> <li>International Maritime Dangerous Goods Code (IMDG Code) 2016</li> <li>National Code of Practice for the Storage and Handling of Workplace Dangerous Goods [NOHSC: 2017 (2001)]</li> <li>Port Authority of New South Wales – Dangerous Goods Management Guidelines for Patrick Terminal Port Botany, 27 March 2015</li> <li><i>Work Health and Safety Act 2011 (NSW)</i></li> <li><i>Work Health and Safety Regulation 2017 (NSW)</i></li> </ul>	
Development Consent DA 494	C2.16, C2.17 & C2.18
Development Consent DA 453	7.4, 7.6, 7.7, 7.8, 7.9 & 7.10
EPA Licence 6962	A1 Scheduled Activity (Chemical storage); & O1.1
Sydney Water Discharge Industrial Wastewater Consent 24990	NA
Sydney Water Trade Wastewater Discharge Schedule Permit 40110	NA
EIS Prediction and Conclusion	18.5.2, 28.10.1 & 32.2.4
Key Tasks and Responsibilities	
A comprehensive list of responsibilities, accountabilities and authorities is provided in <b>Section 4.2 - Environmental Duties and Responsibilities</b> of this OEMP. The key responsibilities for the implementation of operational controls are provided in the table below.	
<b>Table: 6.5.1: Dangerous Goods and Hazardous Chemicals/Substances – Key Tasks and Responsibilities</b>	
Task	Responsibility
1 Induction and training of Patrick employees, contractors and visitors	Training Coordinator and/or Safety, Security & Training Manager; Facilities Manager
2 Temporary storage of dangerous goods and/or hazardous substances in shipping containers (in transit) at the Terminal	Landside Manager
3 Storage and handling of hazardous chemicals in the Maintenance workshop	Facilities Manager; Maintenance personnel; Relevant contractors/service providers



Task		Responsibility
4	Review of DG information (including the MO41 declaration) submitted by Carriers and Shipping Lines.	National Operating Centre (NOC) Planners
5	Implementation of spill response procedures, including reporting.	Plant Operators; Technical Specialists; Relevant contractors/service providers
6	Prior to bringing dangerous goods and/or hazardous chemicals on site obtain approval.	Relevant contractors/service providers; Engineering & Maintenance Manager
7	Obtain the Safety Data Sheet (SDS) for hazardous chemicals purchased.	Maintenance Purchasing Officer; Facilities Manager; Relevant contractors/service providers
8	Investigation of leaks (e.g. oil), from mobile plant and equipment at the Terminal.	Engineering & Maintenance Manager; ESC Manager (Environmental Representative)
9	Investigation of leaks from DG and/or hazardous substances containers stored (in-transit) at the Terminal	Operations Manager; ESC Manager (Environmental Representative)
10	Monitoring of DG and Hazardous Substances throughput in compliance with the consents, this OEMP and analysis of results.	Landside or Operations Managers; ESC Manager (Environmental Representative)

#### Examples of Operational Activities & Controls

#	Description	Photo
1	Oxygen and acetylene cylinders - properly stored in an upright position and adequately restrained away from heat sources	

#	Description	Photo
2	Spill response kits	
3	Spill trailer - for the placement of a leaking shipping container	
4	Flammable chemical storage cabinet	

### Operation Environmental Aspects and Impacts, and Control Measures

1	Maintenance Department storage of hazardous chemicals (excluding fuel)	
2	Temporary storage of dangerous goods and hazardous substances in transit (shipping containers)	
Table: 6.5.2: DGs and Hazardous Chemicals/Substances - Operation Environmental Aspects, Impacts and Control Measures		
1	Maintenance Department storage of hazardous chemicals (excluding fuel)	
Operation Environmental		
A number of hazardous chemicals used at the Terminal are stored and handled in the Maintenance Department. Products include (but are not limited to): oils, solvents, and gases.		
Aspect	Impact	Control Measures
Maintenance Department storage and handling of hazardous chemicals (excluding fuel) resulting in a leak or spill	Pollution of water and/or sediment within Penrhyn Estuary or Botany Bay	Hazardous Chemicals stored and handled by Maintenance at the Terminal must be accompanied by a Safety Data Sheet (SDS) and details included in the site Hazardous Chemical Register.  SDSs older than 5 years old will be replaced.
		Hazardous chemicals must be stored in compliance with the manufacturer’s recommendations and in accordance with Australian Standards. When not in use, all workplace hazardous chemicals will be stored in designated storage cabinets.
		The quantities of hazardous chemicals stored at Maintenance shall be minimised. Quantities, and storage and handling arrangements are monitored daily.
		Oxygen and acetylene cylinders are properly stored in an upright position and adequately restrained away from heat sources.
		Stormwater control devices are located across the Terminal to reduce the risk of contaminated runoff entering Botany Bay or Penrhyn Estuary.  Refer to the <b>Stormwater Management Plan, Section 6.2</b> of this OEMP for detail of environmental risks and controls associated with fuel storage and refuelling.

1	Maintenance Department storage of hazardous chemicals (excluding fuel) continued		
Operation Environmental			
Aspect		Impact	Control Measures
Maintenance Department storage and handling of hazardous chemicals (excluding fuel) resulting in a leak or spill		Pollution of water and/or sediment within Penrhyn Estuary or Botany Bay	Spill response kits are situated in key locations around the Terminal and Patrick’s Maintenance employees have been trained in the use of spill response kits and incident response. Leaks/spills are quickly identified, contained and reported. A spill trailer for the placement of a leaking shipping container is also available at the Terminal.
2	Temporary storage of dangerous goods (DGs) and Hazardous Substances in-transit (shipping containers)		
Operation Environmental			
<p>The Terminal has the capacity to store DGs in shipping containers in potentially large volumes prior to collection for transport by road or rail. DGs stored at the site can be in solid, liquid or gaseous form. The handling of DG cargo poses a specific threat to the surrounding environment because of the consequences and possibility of pollution incidents.</p> <p>A detailed assessment of risks associated with the storage and handling of DGs at the Terminal has been conducted and documented in a Preliminary Hazard Analysis (Sydney Ports Corporation, Port Botany Expansion Preliminary Hazard Analysis, Qest Consulting, 9 June 2004). The DG classes posing a significant risk are Classes 1.1, 1.2, 2.3 and 8.</p>			
Aspect		Impact	Control Measures
Leaks of DGs from shipping containers stored at the Terminal; Inadequate separation or segregation of incompatible DGs resulting in a reaction		Pollution of water and/or sediment within Botany Bay or Penrhyn Estuary; Air pollution and associated ecological impacts; Exceedance of annual threshold limits in the development consent	Patrick will comply with the Dangerous Goods Management Guidelines for Patrick Terminal Port Botany, prepared by the Port Authority of NSW, dated 27 March 2015. These guidelines categorise DGs into Red Line and Green Line cargoes and set time limits for the cargo to be stored at the Terminal. Compliance with these time limits is continually monitored by Terminal Operating System (TOS).
			The storage location of DGs at the Terminal is considered based on segregation rules for different classes of DGs. Data entered into the TOS ensures incompatible DGs are not stored within a certain distance of each other, as specified in the DG Management Guidelines.
			Patrick implement measures to reduce the annual DG throughput to quantities listed in the development consent. This in turn reduces potential offsite risks associated with the storage of large volumes of DGs in transit at the Terminal.

3	Temporary storage of dangerous goods (DGs) and Hazardous Substances in-transit (shipping containers)		
Operation Environmental			
Aspect	Impact	Control Measures	
Leaks of DGs from shipping containers stored at the Terminal; Inadequate separation or segregation of incompatible DGs resulting in a reaction	Pollution of water and/or sediment within Botany Bay or Penrhyn Estuary; Air pollution and associated ecological impacts; Exceedance of annual threshold limits in the development consent	A DG Manifest is prepared daily by the Shipping Lines to record the volume and type of in-transit DGs stored at the Terminal.	
		Stack reports are prepared to confirm DG storage locations. Patrick can use these reports to regulate the arrival of DG containers so that the annual threshold limits in the development consent are not exceeded.	
		Dangerous goods (i.e. shipping containers) are routinely spot checked by the Dangerous Goods Inspector/Officer from the Port Authority NSW to ensure red line cargo does not stay on the Terminal past its allowable dwell time limit.	
		Designated storage areas are provided for DGs in transit. These areas are bunded to contain spills/leaks and prevent potential environmental impacts.	
		Stormwater control devices are located across the Terminal to reduce the risk of contaminated runoff entering Botany Bay or Penrhyn Estuary. See the Stormwater Management Plan for more detail on environmental risks and controls associated with the storage of containerised DGs at the Terminal.	
		Spill kits are situated in key locations around the Terminal and Patrick employees have been trained in the use of spill kits and incident response. Leaks/spills are quickly identified, contained and reported. A spill trailer is also available at the Terminal.	
		Patrick employees involved with handling DGs are required to complete a two-day Maritime General Awareness & Maritime Function Specific training course. Refresher training is required to be completed annually. All new Patrick employees involved in the handling of DGs are required to complete the initial two-day training course.	

## Monitoring and Reporting

With reference to:

- Dangerous Goods Management Guidelines for Patrick Terminal Port Botany, 27 March 2015, Port Authority of NSW; and
- Patrick Port Botany Terminal Standard Operating Procedure – **Storage and Handling of Hazardous and Dangerous Goods, PBT\_OPS\_SOP\_04\_03**

There are limits on the quantities of certain dangerous goods permitted on a vessel 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 or Green Line). Patrick's TOS has the ability to identify and monitor the types and quantities of DGs and hazardous substances transiting through the Terminal. This data is used to ensure DGs stored in transit on site remain below threshold limits.

### **Lodging DGs with Port Authority of NSW via SHIPS electronic booking and approval system:**

The Port Authority of NSW must be advised of all DGs to be imported or exported by vessel, including transhipments and/or goods transiting the ports. The method of notification of the DGs 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 or Green line is an automated process within ShiPS once a lodgement has been made. Lodgement of DGs must be made at least 24 hours prior to the vessel entering port (at least 48 hours for Class 1 DGs).

A red coloured "L" is displayed in the SHIPS screen if limitations for a vessel or berth are exceeded. The vessel operator is responsible for the management and removal of the limitation exceedance at least 24 hours prior to the vessel entering port waters. Depending on the circumstances, the vessel may have to be redirected, or entry of the vessel into port may be refused.

When an application for exemption has been entered on the SHIPS system, a red coloured "X" is displayed when the exemption is entered. The Port Authority of NSW may approve the application for exemption with certain conditions imposed or may reject it. When the exemption is processed the "X" it turns a light shade of grey.

### **Permitted Time Periods at the Terminal:**

The requirements below for Red Line and Green Line cargoes apply to imports, exports, transhipments, including transit cargoes which are being re-stowed.

#### **Red Line Cargo:**

**2-hour, time maximum** – All Class 1 and Class 7, except Class 1.4 and Class 7 Low Specific Activity (LSA) cargo, shall:

- a) be removed from the Terminal within 2 hours of being unloaded from a vessel, and
- b) be delivered to the Terminal within the 2-hour period prior to the cargo being loaded onto a vessel.
- c) transhipment cargo must comply with (a) and be removed from the Terminal within 2 hours of being unloaded from a vessel. However, they may remain on the terminal in excess of 2 hours only when they have a valid exemption in place issued by Port Authority of NSW.



### Monitoring and Reporting *continued*

**12-hour, time maximum** - Containers with Class 1.4 and Class 7 LSA DGs; all DGs in break bulk; and cargo (refer to Table 1 <sup>Note 1</sup>).

<sup>Note 1</sup> - Port Authority of New South Wales – Dangerous Goods Management Guidelines for Patrick Terminal Port Botany, 27 March 2015

#### Green Line Cargo:

**5-days, time maximum** - Green Line cargoes are permitted to remain on the Terminal for a time period of up to 5 days only including weekends and/or public holidays. Green Line cargoes are:

- a) All containers with DGs Class 2, 3, 4, 5, 6, 8 or 9, other than those in Table 1. <sup>Note 1</sup>
- b) Cargoes listed in Table 1 <sup>Note 1</sup> not exceeding 500kg mass.
  - i) be removed from the Terminal within 5 days of being unloaded from a vessel, and
  - ii) be delivered to the Terminal within the 5 days prior to their being loaded onto a vessel.
  - iii) transshipment cargo must comply with (i) and be removed from the Terminal within 5 days of being unloaded from a vessel. However, they may remain on the terminal in excess of 5 days only when they have a valid exemption in place issued by Port Authority of New South Wales.

#### Class 5.1 Packaging Group 1 (PG 1) Dangerous Cargoes <sup>Note 1</sup>

Quantities of Class 5.1 PG 1 dangerous cargoes exceeding 400 tonnes shall only be handled on a berth with the consent of the Regulatory Authority.

#### Prohibited Dangerous Goods <sup>Note 1</sup>

The following DGs are prohibited from entering port waters:

- **UN 3342, XANTHATES, Class 4.2 – Packaging Group II or III**

These DGs are prohibited for the following cargo movements: “Imports, Transit (stay on board) and Export” cargo movements.

#### Stacking and Segregation

TOS contains segregation rules that conform to the IMDG Code. Designated hazardous / DG Yard position slots have been established at the end of container rows within the Terminal’s Auto Strad Yard. The following general considerations will apply:

- DGs / hazardous containers (required to be labelled under the IMDG Code) are to be stacked in the Yard and where possible, with the doors accessible at the end of designated rows of the DGs stowage slots;
- Stacking is to be at ground level where possible, however multi-tier stacking is permitted if necessary;
- Designated DGs / hazardous stowage slots may be used for general containerised cargo when not required for DGs / hazardous containers. However, DGs / hazardous containers are not to be stacked above general cargo containers in a multi-tier stack situation; and
- DGs / hazardous containers are to be separated in accordance with the table provided in Appendix 2 of the DG Guidelines, titled: Separation Distances Between Closed Containers Carrying Dangerous Goods.

## Monitoring and Reporting *continued*

### **Routine Auditing by Port Authority of NSW**

DG officers from the Port Authority of NSW periodically attend the Terminal and conduct an inspection of the red line and green line cargo on the Terminal.

### **Dangerous goods data**

DG data from reports generated from TOS is included in the Annual Environmental Management Report (AEMR) which is submitted by Patrick to NSW Ports and DPE.

### **Maintenance storage and handling of hazardous chemicals**

Chemical storage audits are also conducted by the Maintenance Department (annually). Details of these events will be entered into the site's Environmental Register, the results analysed and where necessary subsequent corrective actions proposed by the ESC Manager.

### **Dangerous Goods Training**

Patrick personnel involved in the handling of DGs (i.e. Shift and Yard Managers, Stevedoring Managers, Rail Coordinators and Tower and Senior Clerks) will complete the initial two-day Maritime General Awareness & Maritime Function Specific training course (AMSA accepted DG Training Course based on based on the current IMDG Code Amendment for the next two years).

All new Patrick employees involved in the handling of DGs are required to complete the initial 2-day training course. Refresher training in the IMDG Code Amendment 39-18 is effective from January 1, 2019 and mandatory from January 1, 2020). The 1-day refresher training is planned in the next reporting period for all Patrick employees involved with handling dangerous goods and who have completed the initial 2-day training course.

Based on the training completed the Terminal issues an annual Statement of Compliance to the Port Authority of NSW (Dangerous Goods Unit). Training records are to be kept and made available for the Port Authority of NSW to inspect upon request.

### **Leak/spill response**

In the event of a leak or spill of DGs or Hazardous Chemicals/Substances, and depending on the quantity involved, required response is addressed via the **Emergency Response Plan (PBT\_HSE\_PLN\_09\_01)** spill response procedure.

### **Dangerous Goods Movements – Classes 1.1, 1.2, 2.3 and 8**

On annual basis the dangerous goods (Classes 1.1, 1.2, 2.3 and 8) throughput data for the period 1 September to 31 August, e.g. class, tonnage, number of TEUs and packaging sizes, is provided to NSW Ports for their preparation of the **Annual Dangerous Goods Report** (DA-494 MOD 16 C2.17).

### Performance Expectations

The implementation of this management plan and its effectiveness will be measured by the Key Performance Indicators (KPIs) provided in the table below.

**Table: 6.5.3: DGs and Hazardous Chemicals/Substances Management – KPIs**

Key Performance Area		KPI
1	Number of pollution incidents involving liquid spills or gas leaks during the handling of dangerous goods or hazardous chemicals / substances.	Zero
2	Number of exceedances of the dangerous goods classes (1.1, 1.2, 2.3 and 8) throughput limits specified in Development Consent DA 494 MOD 16, condition C 2.17 (i.e. Berth 6).	Zero exceedances
3	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 5 – Review and Improvement** of this OEMP.

Any inquiries, comments and/or complaints directly or indirectly received from the public shall be managed in accordance with the **Public Inquiries, Comments and Complaints Handling, Section 4.6** and reported in accordance with the **Environmental Reporting, Section 4.4** of this OEMP.


Periodic environmental inspections and audits will be carried out in accordance with **Section 4.5 - Environmental Inspection and Auditing** of this OEMP.

## 6.6 Operational Noise Management Plan

Objective	
To identify and document potential noise related risks and develop appropriate mitigation measures to facilitate compliance with the development consents with regard to noise (and vibration) management; and to provide a basis for consultation with relevant stakeholders in regard to minimising or eliminating noise impacts.	
Statutory Requirements and Legislative Framework	
The legislation and other compliance requirements that apply to the implementation of this management plan are listed below:	
<ul style="list-style-type: none"> <li>Environmental Planning and Assessment Act 1979 (NSW)</li> <li>Industrial Noise Policy 2000 (NSW)</li> <li>International Regulation for the Prevention of Collisions at Sea</li> <li>Noise Policy for Industry 2017 (NSW)</li> <li>Protection of the Environment Operations Act 1997 (POEO Act) (NSW)</li> <li>Protection of the Environment Operations (General) Regulation 2009 (NSW)</li> <li>Protection of the Environment Operations (Noise Control) Regulation 2017 (NSW)</li> </ul>	
Development Consent DA 494	C2.5, C2.6, C2.7, C2.8, C2.9, C2.10 & C2.11
Development Consent DA 453	Noise - 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 5.8 & 6.4 (e); Vibration - 7.1, 7.2 & 7.3
EPA Licence 6962	L3.1, L3.2, L3.3, L3.4, L3.5, L3.6 & L3.7; Special Condition E1.1 & E1.2
Sydney Water Discharge Industrial Wastewater Consent 24990	NA
Sydney Water Trade Wastewater Discharge Schedule Permit 40110	NA
EIS Prediction and Conclusion	22.4.2 & 22.5.2
Key Tasks and Responsibilities	
A comprehensive list of responsibilities, accountabilities and authorities is provided in <b>Section 4.2 – Environmental Duties and Responsibilities</b> of this OEMP. The key responsibilities for the implementation of operational controls are provided in the table below.	
<b>Table: 6.6.1: Operational Noise (and vibration) Management – Key Tasks and Responsibilities</b>	
Task	Responsibility
1 Induction and training of Patrick employees, contractors and visitors.	Training Coordinator and/or Safety, Security & Training Manager; Facilities Manager
2 Maintenance of plant / equipment to ensure noise control devices are in optimal working order.	Maintenance Department; Relevant contractors/service providers
3 Proper landing of containers.	Plant (quay crane) Operators; Shift Managers
4 Arrange 6-monthly noise monitoring with Acoustics Consultant.	ESC Manager (Environmental Representative)

Task		Responsibility
5	Conduct 6-monthly noise monitoring.	3 <sup>rd</sup> party Acoustics Consultant/Engineer
6	Review and report 6-monthly noise monitoring to stakeholders and carry out improvement initiatives where practicable.	ESC Manager (Environmental Representative)
7	Ensure all machinery is installed and/or housed to minimise the emission of noise and transmission of vibration outside of the premises.	Engineering & Maintenance Manager; Relevant contractors/service providers; ESC Manager (Environmental Representative)
8	Ensure vibration levels induced by the use of the premises or any equipment/service associated with the Terminal does not exceed 1mm/sec peak particle velocity when measured at the footing of the any adjoining occupied building.	Engineering & Maintenance Manager; Relevant contractors/service providers; ESC Manager (Environmental Representative)

#### Examples of Operational Activities & Controls

#	Description	Photo
1	Noise attenuation wall positioned on the Northern side of the Patrick terminal, between Hutchison's rail siding and the Penrhyn Estuary	

### Operation Environmental Aspects, Impacts and Controls

1	Use of plant and equipment within the Terminal
2	Containers landing on vessels, hardstand areas, train wagons and truck trailers
3	Freight trains and rail activities
4	Noise from ships

### Operation Environmental

Sensitive receivers and land uses, which have the potential to be impacted by noise associated with the Terminal operations include:

ID	Sensitive Receivers	Approximate distance from the Terminal (m)	Direction
a.	Botany residential area	750	North
b.	Matraville residential area	700	East
c.	Port Phillip residential area	1900	South east
d.	Banksmeadow Public School	1300	North
e.	Matraville Public School	1500	North east
f.	Sir Joseph Banks Park	1000	North
g.	Botany Golf Course	350	North
h.	Purcell Park	700	East
i.	Women's Athletic Field	1750	South east
j.	Yarra Bay Bicentennial Park	1300	South east
k.	Yarra Recreation Reserve	1600	South east
l.	Botany Cemetery	1000	South east

**Table: 6.6.2: Operational Noise - Operation Environmental Aspects, Impacts and Control Measures**

1	Use of plant and equipment within the Terminal
<b>Operation Environmental</b>	
<p>The Terminal features a combination of electric and diesel plant, machinery and equipment used in the general operation of the Terminal and for maintenance activities. It can be 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 (e.g. quay cranes, Auto Strads, Reach stackers, Elevated Work Platforms, forklifts, light vehicles, ITV trucks and customer trucks).</p> <p>Under the requirements for safe work, all mobile plant within the Terminal are fitted with audible motion and low tonal ('quacker') reversing alarms. The noise from high pitched 'beeper' type reversing alarms is known to carry for long distances and may present a nuisance to nearby residents.</p> <p>Auto Strads are fitted with noise reduction kits with sound attenuation material on the side and top plates of the power unit cover and acoustic louvers on the outlet ventilation system. The Section 75W Modification - Port Botany Container Terminal Project (DA-453-12-2002-i MOD 8) Environmental Assessment assessed Auto Strads to have lower operational noise than the previous manual straddle carriers (117 dB(A) vs 127 (dB(A))).</p>	



1	Use of plant and equipment within the Terminal <i>continued</i>		
Aspect	Impact	Control Measures	
Noise (and vibration) emitted from plant and equipment used at the Terminal (e.g. reversing alarms)	Nuisance to nearby residents resulting in complaints; Breach of EPL; Reputational harm	Where it is safe and practicable to do so Patrick has initiated a noise reduction project to reduce noise emissions:	
		<ul style="list-style-type: none"><li>Reversing beepers on reach stackers and forklifts have been replaced with low tonal reversing alarms ('quackers').</li><li>Connecting and moving alarms on the Auto Strad fleet (44) are being replaced with LED blue flashing lights.</li></ul>	
		Patrick will work with transport carriers to encourage the use of 'quacker' alarms, however the responsibility for installing these alarms rests with the transport carriers.	
		Patrick have modified the lid alarms on cranes to standardise the sound emitted from the alarms and to direct the lids down. Noise monitoring has been undertaken following the modifications and results confirm that the crane lid alarms comply with the Terminal noise limits. Warning lights (visual alarms) are also used at night.	
		Prior to operating an asset, the operator checks that fitted noise control devices and reversing alarms are adequate and working correctly as part of a pre-start checking procedure. These pre-start checks are recorded on a pre-start checklist and any rectifications are managed and recorded by the maintenance department in a timely manner.	
		Assets are operated by trained operators in a way which minimises noise impacts. Furthermore, idle time is minimised through throttling down and switching off assets when possible.	
		Operational inspections and asset break-down, regular scheduled maintenance by the Maintenance Department includes inspection of noise control devices such as mufflers and insulating panels and the repair or replacement of defective units.	
		As part of the purchasing process of new plant and equipment the Engineering & Maintenance Department consider noise (and vibration) levels and controls.	
		Machinery is installed and/or housed to minimise the emission of noise and transmission of vibration outside of the Terminal does not exceed 1mm/sec peak particle velocity when measured at the footing of the any adjoining occupied building.	
Noise mitigation is covered in the Site Induction which includes the requirements to minimise noise from operations and cargo handling; noise also forms part of routine tool box talks.			

2	Containers landing on vessels, hardstand areas, train wagons and truck trailers		
Operation Environmental			
The noise from containers landings on hard surfaces occasionally impacts nearby receivers in certain wind conditions. 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.			
Aspect	Impact	Control Measures	
Noise emitted containers landing on vessels, hardstand areas, train wagons and truck trailers	Nuisance to nearby residents resulting in complaints; Breach of EPL; Reputational harm	Quay cranes have inbuilt mechanisms to land containers and vessel hatch lids slowly to avoid banging that are complimented by plant operator awareness and training.	
		Quay crane operators are trained to line up containers and vessel hatch lids with insertion guides on the ship’s hold carefully to avoid banging.	
		Auto Strads have inbuilt mechanisms to land containers slowly to avoid banging that are complimented by Tele-Op Operator awareness and training.	
		Auto Strads are guided by laser systems and are programmed to land containers slowly to avoid banging.	
		Reach stacker operators are trained to land containers slowly so as to line up containers with the twist locks on rail cars thus avoiding banging.	

3 Freight trains and rail activities		
Operation Environmental		
<p>Patrick moves a percentage of its throughput using the NSW rail network. Patrick manages a parallel rail siding (each track is 0.745 m) providing 1.490 km of track in total. During train entry and exit to the Terminal, a sliding access gate must be opened. Under the requirement for safe work operating procedures, opening the siding gate activates flashing lights and audible alarms which remain activated until the gate is closed.</p> <p>Idling freight trains during loading and unloading can be expected to contribute to noise emissions from the Terminal. Additionally, freight trains longer than 600 metres need to use the two sidings simultaneously. This is achieved by marshalling the train into one siding until it reaches the end, then uncoupling (splitting) and moving the remainder of the wagons into the adjacent siding. This marshalling process and the locomotives themselves create some noise that may impact sensitive receivers.</p>		
Aspect	Impact	Control Measures
Noise emitted from freight trains and rail activities (e.g. rail siding gate alarm, idling freight trains and trucks), splitting rolling stock between 2 rail lines	Nuisance to nearby residents resulting in complaints; Breach of EPL; Reputational harm	A noise attenuation wall is positioned on the Northern side of the Patrick Terminal, between Hutchison's rail siding and the Penrhyn Estuary. The wall is 3 metres high when parallel to the railway siding, and 4 metres high along the northern and eastern sides of the Hutchison Terminal.  The noise attenuation wall is expected to minimise the noise emanating from Port Botany.
		When open, the safety alarm for the rail terminal gate is activated for a continuous period. Rail operations are planned and controlled so that the siding gate is not opened for longer than necessary.
		Locomotives are 'powered down' during idle periods to attenuate noise impacts.
		Patrick staff working within the rail siding undergo training on the correct marshalling of trains within these sidings to foster awareness of noise issues.
		The unnecessary use of whistles or horns by trains on the rail siding is not permitted, to prevent disturbances to shorebirds in Penrhyn Estuary and other sensitive receivers. Under the requirements for safe work, the use of train horns will prevail when necessary.

4 Noise from ships		
Operation Environmental		
<p>Although noise emanating from ships is outside the control of Patrick, it is noted that noise may be generated due to:</p> <ul style="list-style-type: none"><li>• Operation of engines for the purposes of electricity; and</li><li>• Use of ship’s horn in order to communicate movement intentions. This is a requirement under the International Regulation for the Prevention of Collisions at Sea and NSW Maritime Law</li></ul>		
Aspect	Impact	Control Measures
Noise emitted from berthed ships (e.g. engines)	Nuisance to nearby residents resulting in complaints; Breach of EPL; Reputational harm	Patrick liaises 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 / NSW Ports may be contacted, and port officers can be dispatched to the ship to attempt to identify and remedy the noise issues.
		Controls to reduce noise from ships whilst berthed include shutting off the main engine(s) and running smaller engines to drive 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.
Monitoring and Reporting		
<p>The ESC Manager monitors the implementation and effectiveness of the controls within this operational noise management plan (ONMP) during regular terminal inspections.</p> <p>Noise monitoring is conducted 6-monthly by a 3<sup>rd</sup> party acoustics engineer as per the conditions of EPL 6962 and development consents. Noise monitoring reports are publicly available on Patrick’s website:</p> <p><a href="http://www.patrick.com.au/environment-monitoring-reporting">http://www.patrick.com.au/environment-monitoring-reporting</a></p> <p>At the 3-monthly Port Botany Consultative Community Committee (PBCCC), there is a fixed agenda item where NSW Ports raises any noise related inquiries, comments or complaints received from the public and/or EPA. Refer to <b>Section 4.7 - Community Consultation Committee</b>, of this OEMP.</p>		

### Performance Expectations

The implementation of this management plan and its effectiveness will be measured by the Key Performance Indicators (KPIs) provided in the table below.

**Table: 6.6.3: Operational Noise Management – KPIs**

Key Performance Area		KPI
1	Noise disturbances expressed as the number of public inquiries, comments or complaints either from the community and/or EPA	Zero (0) complaints
2	Noise from the premises must not exceed EPL noise limits	Zero (0)
3	Noise monitoring must be conducted every 6 months and a report provided to the EPA, NSW Ports and the DPE	Six-monthly
4	A copy of the noise monitoring report is uploaded onto the Patrick website	Within 2 weeks of receiving the final report

### Review and Improvement

The review and amendment of this management plan will be in accordance with **Section 5 – Review and Improvement** of this OEMP.

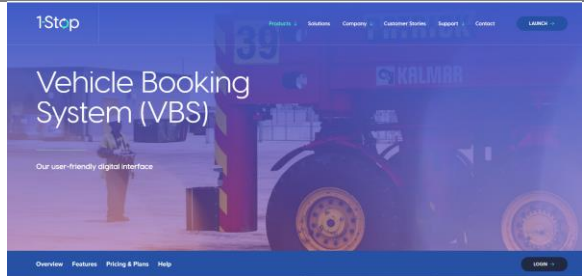


Any inquiries, comments and/or complaints directly or indirectly received from the public shall be managed in accordance with the **Public Inquiries, Comments and Complaints Handling, Section 4.6** and reported in accordance with the **Environmental Reporting, Section 4.4** of this OEMP.

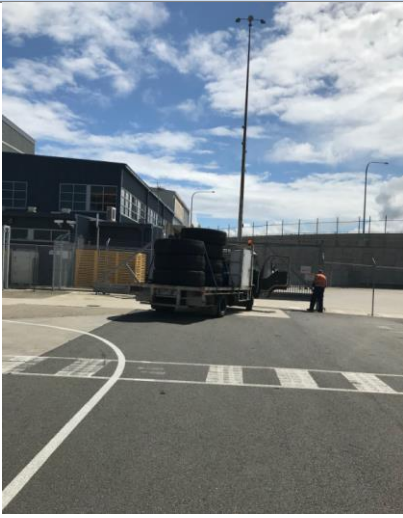


Periodic environmental inspections and audits will be carried out in accordance with **Section 4.5 - Environmental Inspection and Auditing** of this OEMP.

## 6.7 Operational Traffic Management Plan

Objective	
To provide direction to Patrick's routine operations (including Maintenance) to mitigate the impact of operational traffic on the surrounding road network.	
<b>NB:</b> This OTMP does not include any construction activities or construction traffic management, or the management of over-weight trucks etc.	
Statutory Requirements and Legislative Framework	
The legislation and other compliance requirements that apply to the implementation of this management plan are listed below:	
<ul style="list-style-type: none"> <li><i>Environmental Planning and Assessment Act 1979 (NSW)</i></li> <li><i>Ports and Maritime Administration Act 1995 (NSW)</i></li> <li><i>Ports and Maritime Administration Regulation 2012 (NSW)</i></li> <li><i>Protection of the Environment Operations Act 1997 (NSW)</i></li> </ul>	
Development Consent DA 494	C2.12
Development Consent DA 453	3.9, 3.10, 3.11, 3.12, 3.13, 3.14, 3.15, 3.16, 3.17, 3.18, 3.19, 3.20, 3.21, 3.22, 3.23, 3.24, 3.25 & 6.4 (c)
EPA Licence 6962	NA
Sydney Water Discharge Industrial Wastewater Consent 24990	NA
Sydney Water Trade Wastewater Discharge Schedule Permit 40110	NA
EIS Prediction and Conclusion	21.10
Key Tasks and Responsibilities	
A comprehensive list of responsibilities, accountabilities and authorities is provided in <b>Section 4.2 – Environmental Duties and Responsibilities</b> of this OEMP. The key responsibilities for the implementation of operational controls are provided in the table below.	
<b>Table: 6.7.1: Operational Traffic Management – Key Tasks and Responsibilities</b>	
Task	Responsibility
1 Induction and training of Patrick employees, contractors and visitors.	Training Coordinator, or Safety, Security & Training Manager; Facilities Manager; Landside Manager
2 Adhere to internal (Terminal) and external (road network) traffic routes and controls.	Heavy vehicle drivers; and light vehicle drivers
3 Communicate with heavy vehicle drivers and transport carriers.	Landside Manager
4 Communicate with light vehicle drivers.	Operations Manager; Engineering & Maintenance Manager
5 Review traffic monitoring and analysis of data, identify any trends.	Safety, Security & Training Manager; ESC Manager (Environmental Representative)
6 Review any findings with stakeholders and carry out any improvement initiatives where possible.	Safety, Security & Training Manager; ESC Manager (Environmental Representative)



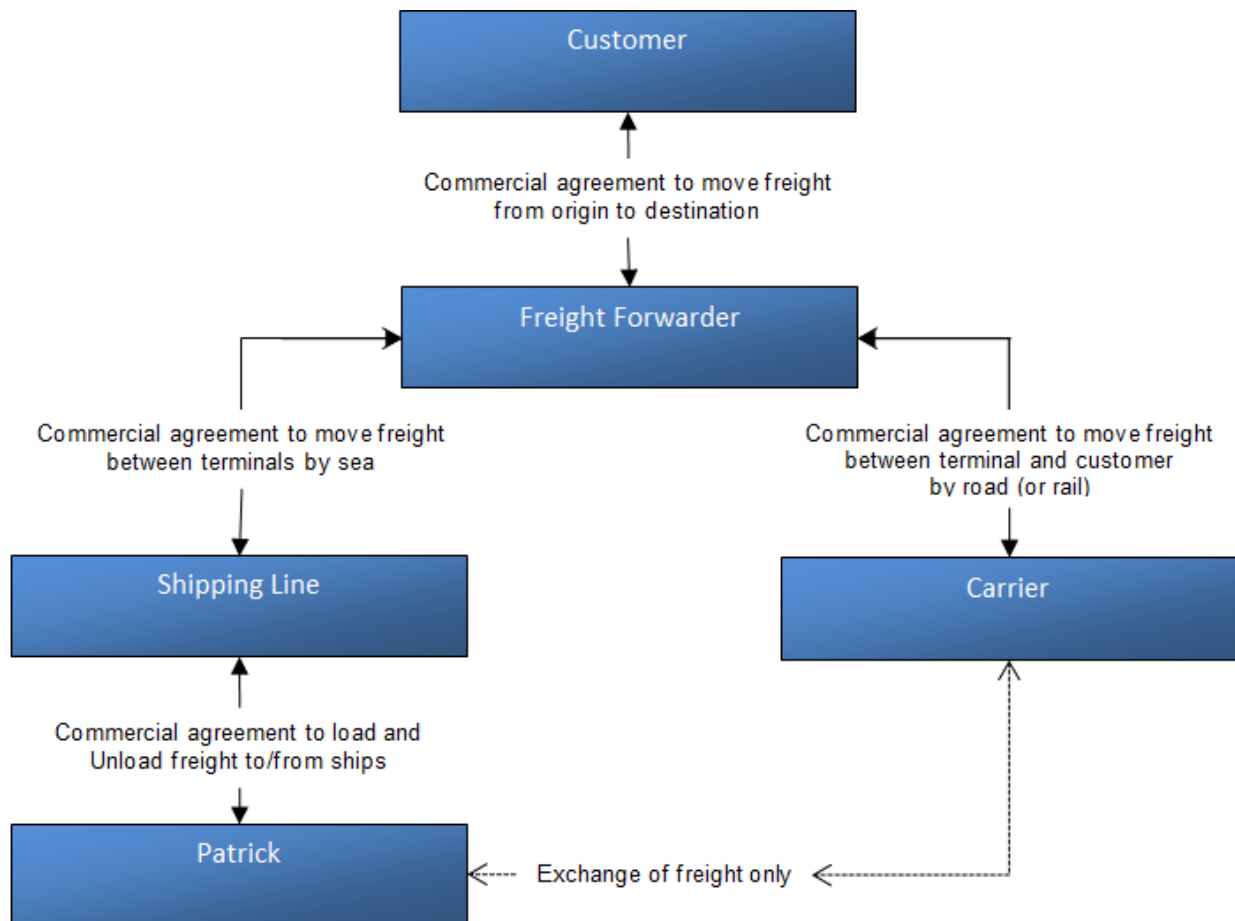
Examples of Operational Activities & Controls		
#	Description	Photo
1	<p>1-Stop time slot booking system -</p> <p>Allows transport carriers to book a time slot on-line, trucks must turn up within their allocated time slot or they are fined regardless of being early or late.</p>	
2	<p>Driving on Penrhyn Road to or from the Terminal</p>	
3	<p>Controlled swipe access for truck drivers to gain access to the Truck Grids</p>	

#	Description	Photo
4	<p>Driving on the Terminal</p> <ul style="list-style-type: none"> <li>- road line markings and pedestrian crossings</li> <li>- speed display board</li> <li>- sign posts</li> </ul>	  

## Operational Traffic Processes

### 1. Process overview of import and export shipping containers movements

The process of importing and exporting involves a variety of participants, from the Customer, the Freight Forwarder, the Shipping Line, Carrier and Patrick. Figure 6.7.1 provides an overview of the relationships between the participants.



**Figure: 6.7.1: Process overview of import and export shipping container movements**

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 (Patrick) 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 (road or rail) as both parties have commercial agreements with their own respective clients.

With no formal agreement between the Terminal and the Carrier, the Terminal has no direct control over the actions of the Carrier. Where practicable, Patrick will influence and encourage Carriers to operate responsibly and will promote considerate truck / train driver habits to minimise potential noise and traffic issues.

## Operational Traffic Processes

### 2. Process overview of trucks entering and exiting the Terminal

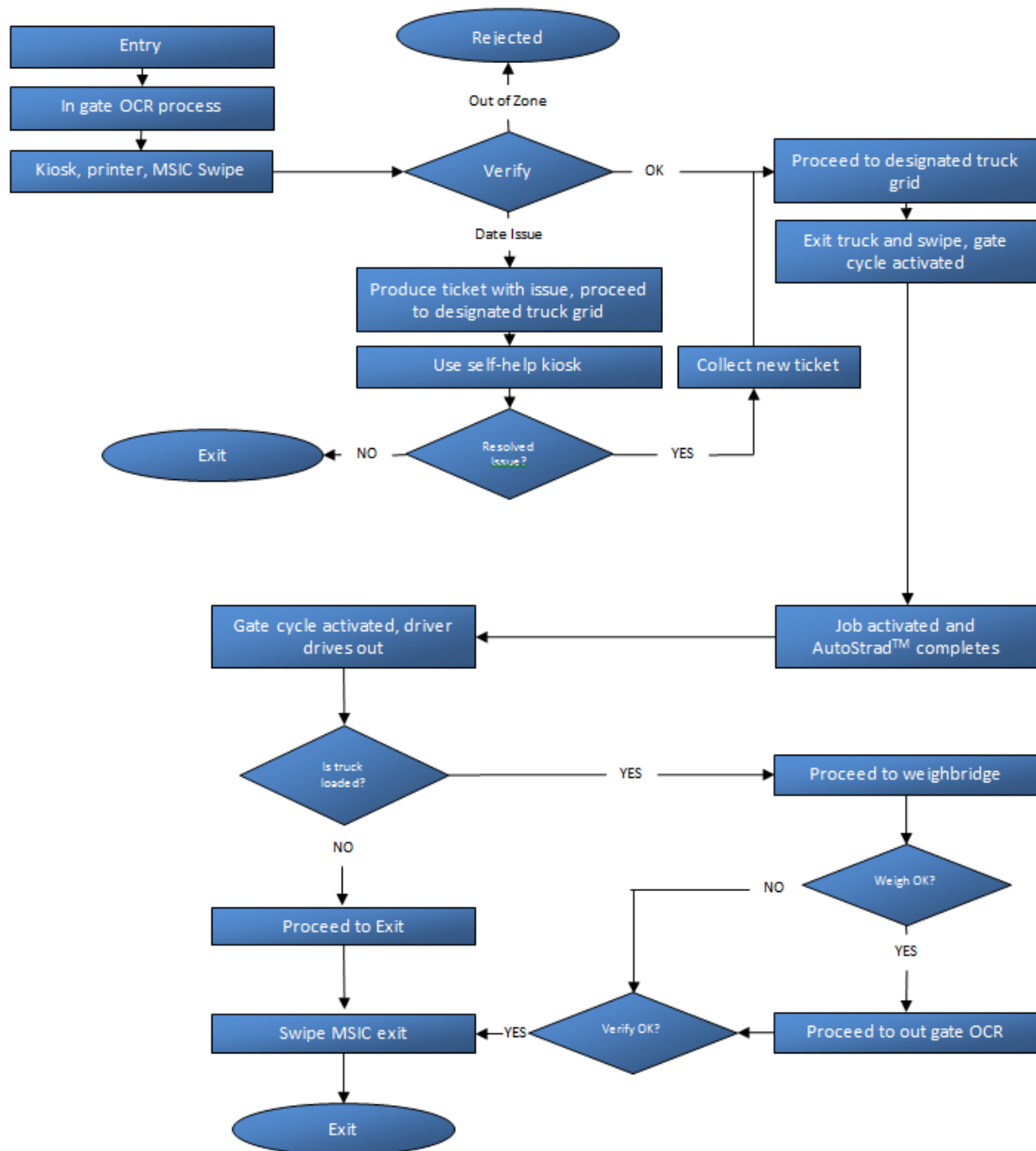


Figure: 6.7.2: Process overview of trucks entering and exiting the Terminal

### Operation Environmental Aspects, Impacts and Controls

1	Noise impacts to the surrounding community from truck movements
2	Terminal congestion related to throughput and scheduling
3	Traffic impacts to the road network from queuing of trucks at the terminal entry
4	Noise and traffic impacts from trucks using non-preferred routes

**Table: 6.7.2: Operational Traffic - Operation Environmental Impacts, Aspects and Control Measures**

1	Noise impacts to the surrounding community from truck movements	
Operation Environmental		
Engine noise from loaded trucks is generally louder than for unloaded trucks when accelerating. Truck drivers are also more likely to use compression brakes when slowing a fully loaded vehicle. The trailers of unloaded trucks entering or leaving the Terminal may rattle as their moving parts are not secured by a container. This noise generated by truck movements could impact nearby residents.		
Aspect	Impact	Control Measures
Noise impacts to the community from truck movements	Noise pollution; Annoyance; Generation of complaints; Reputational harm	Patrick uses the 1-Stop scheduling system which spreads the volume of trucks evenly throughout the day. Fines apply to heavy vehicle operators for non-arrival within the allocated time slot.
		Amenities are provided for truck drivers within the Terminal. This removes any need for drivers to use amenities in surrounding local areas via local road networks.
		Transport for NSW (TfNSW) Cargo Movement Coordination Centre (CMCC) operates the Operational Performance System (OPS) to assist in increasing the efficiency, consistency and transparency of road carrier movements servicing the PBT.
		Heavy vehicle access outside of the Port Botany precinct is managed through the National Heavy Vehicle Regulator (NHVR) and the NSW Roads and Maritime Service (RMS). RMS manage compliance and enforcement, vehicle standards, road access and permits on behalf of the NHVR and have direct contact with road carriers in relation to these matters.
		TfNSW holds two formal forums for PB rail/ road operations. <ul style="list-style-type: none"><li>• <b>Port Botany Rail Optimisation Group (PBROG):</b> Established in 2015 to help drive improved rail network utilisation and efficiency at the port. A monthly meeting is held with representatives from Patrick, ARTC, stevedore operators, rail operators, 1-Stop, NSW Ports, Transport for NSW, freight and logistics operators, etc.; and</li><li>• <b>Port Botany Road Taskforce (PBRT):</b> Provides advice to TfNSW on strategies and actions to optimise the movements of containers by road to and from the container terminals at PB.</li></ul>

2	Terminal congestion related to throughput and scheduling		
Operation Environmental			
The Terminal operates a scheduling system which aims to eliminate waiting times and improve the efficiency of trucks accessing the Terminal. However, it is possible that truck traffic can still impact the surrounding local area by parking along local streets until the allocated access time booked through 1-Stop.			
Aspect	Impact	Control Measures	
Non-adherence to throughput and scheduling requirements	Terminal congestion resulting in potential safety impacts; Impact to residents by trucks parking on nearby streets	The interface between pedestrians and vehicles is managed through the implementation of controls that manage the zones where pedestrians can access the site and how mobile plant and/or vehicles can operate near pedestrians: <ul style="list-style-type: none"><li>• Pedestrian walkways are painted and/or delineated with jersey kerb barriers to prevent access outside of designated pedestrian pathways.</li><li>• Signage is present on designated pedestrian walkways e.g., at Cargolink, the Maintenance building and the vehicle parking area.</li><li>• Access to the yard is controlled by Maintenance and using a lock out tag out system. In the event that people need to access areas of the Auto Yard where Auto Strads are operating the specific area is ‘noded out’ and Auto Strads are prevented from accessing the area.</li><li>• New employees are inducted to the site and advised which areas of the Terminal can be accessed by pedestrians.</li></ul>	
		All Patrick personal and contractors/service providers must successfully complete the Patrick site induction prior to being granted access to the Terminal. All short-term visitors must also be provided with a safety induction briefing relevant to the purpose of their visit and be escorted by Patrick Personnel for the duration of their visit.	
		Truck drivers will be advised to use designated heavy vehicle routes through the site induction and MSIC requirement.	
		Routine inspections of markings on internal roadways are included in the quarterly environmental inspections of the Terminal.	
		B-Double trucks must utilise designated routes from the Rail Yard. In the event the length of the train blocks the level crossing to the north of the Truck Grid internal roundabout – trucks will access the designated truck lanes at the Truck Grid via Ramp C followed by Ramp D.	



3	Traffic impacts to the road network from queuing of trucks at the Terminal entry		
Operation Environmental			
Aspect	Impact	Control Measures	
Trucks queuing at the Terminal entry	Traffic impacts to the road network; Road accident	A digital display board at the roundabout on Penrhyn Road can direct heavy vehicles to Ramp C to comply with the 1-Stop scheduling system.	
		Heavy vehicles can be turned away via the roundabout at Ramp D in overflow or emergency situations that could otherwise result in queuing at the Terminal entry.	
		Road carriers are required to register with the TfNSW Cargo Movement Coordination Centre (CMCC) and are provided with a radio frequency identification (RFID) truck tracking tag. The tag captures the movements of trucks when in the Port Botany precinct and records arrival time, queue time, truck turnaround times and the time taken to be serviced by Patrick (and other stevedores).	
4	Noise and traffic impacts from trucks using non-preferred routes		
Operation Environmental			
When trucks have left the Terminal, they are expected to follow designated heavy vehicle routes. These routes are regulated by the Roads and Maritime Services (RMS) in conjunction with the NSW Police. Truck drivers may be fined by NSW Police for deviating from these designated routes unless they hold a permit to do so.			
Aspect	Impact	Control Measures	
Trucks using non-preferred routes	Noise pollution, annoyance; Increase in traffic on the road network; Generation of complaints; Reputational harm	Patrick are required to comply with the Port Botany Landside Improvement Strategy (PBLIS), established by the NSW Government to manage heavy vehicle movement within Port Botany. Operational performance measures associated with the PBLIS for road include late arrival, early arrival, no show, cancellation of bookings, Truck Turnaround Time (TTT), minimum slots offered, truck non-servicing, and cancellation times.	
		Mandatory standards for carriers and stevedores are set out in Part B and C under Part 3 of the <i>Ports and Maritime Administration Regulation 2012</i> . Operational performance measures for road include late arrival, early arrival, no show, cancellation of bookings, Truck Turnaround Time (TTT), minimum slots offered, truck non-servicing and cancellation times.	
		All internal roadways are wide enough to accommodate through traffic and turning two-way traffic where required.	
		Driveways are clearly signposted and designed to accommodate the largest vehicle likely to use the site.	
		Directional pavement arrows are installed on the bends of internal roads.	

## Monitoring and Reporting

The following controls form part of the traffic monitoring system at the Terminal:

- Conduct monitoring of traffic and noise impacts due to queuing at the Terminal entrance as required (e.g. in the event of a complaint);
- Personnel to report actual or potential traffic and related noise impacts to Patrick management;
- All public inquiries, comments or complaints related to traffic or associated noise impacts will be investigated as per **Section 4.6 - Public Inquiries, Comments and Complaints Handling** of this OEMP; and
- Port Botany traffic issues will be discussed at regular meetings held with NSW Ports, Roads and Maritime Service, NSW Police, other stevedores, and other Port Botany lessees.

### Monitoring of road traffic

Road carriers are required to register with the NSW Cargo Movement Coordination Centre (CMCC) and are provided with a RFID truck tracking tag. The tag captures the movements of trucks when in the Port Botany precinct and records arrival time, queue time, truck turnaround times and the time taken to be serviced by the stevedore.

The CMCC also operates a Port Botany Truck Camera which is available at:

<http://freight.transport.nsw.gov.au/network/cmcc/truckcam/index.html>

The operational performance measure (OPM) standards measured for truck carriers and stevedores include:

Road Carriers	Stevedores
Early arrivals	Minimum number of slots offered per hour
Later arrivals	Truck turnaround time
No shows	Truck non-service
Cancellation of bookings (listings)	Time zone cancellations

The CMCC publishes weekly data on penalty trends, throughput volume and truck turnaround time, truck spread, truck trip arrival, truck density and truck turnaround and slot performance. The reports are available at

<http://freight.transport.nsw.gov.au/network/cmcc/pblis-performance-reporting.html>.

### Monitoring of truck traffic

The CMCC operates the Operational Performance System (OPS) to support the operational performance measures and to assist in increasing the efficiency, consistency and transparency of landside operations at Port Botany. The OPS is accessed via the Transport for NSW Freight website:

<http://freight.transport.nsw.gov.au/network/cmcc/pblis-ops.html>

### Financial Penalties for non-compliance with OPM

Road carriers and stevedores are penalised financially if their performance fails to meet the OPM and may be liable to pay the penalty to the other party. Road carriers are also required to comply with the requirements of the Regulation.

**Figure: 6.7.3 - Patrick, PBT – Vehicle Management Plan, overall**

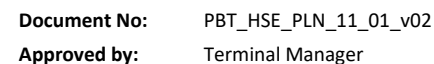




Figure: 6.7.4: Patrick, PBT – Vehicle Management Plan, Rail Siding and Truck Grid

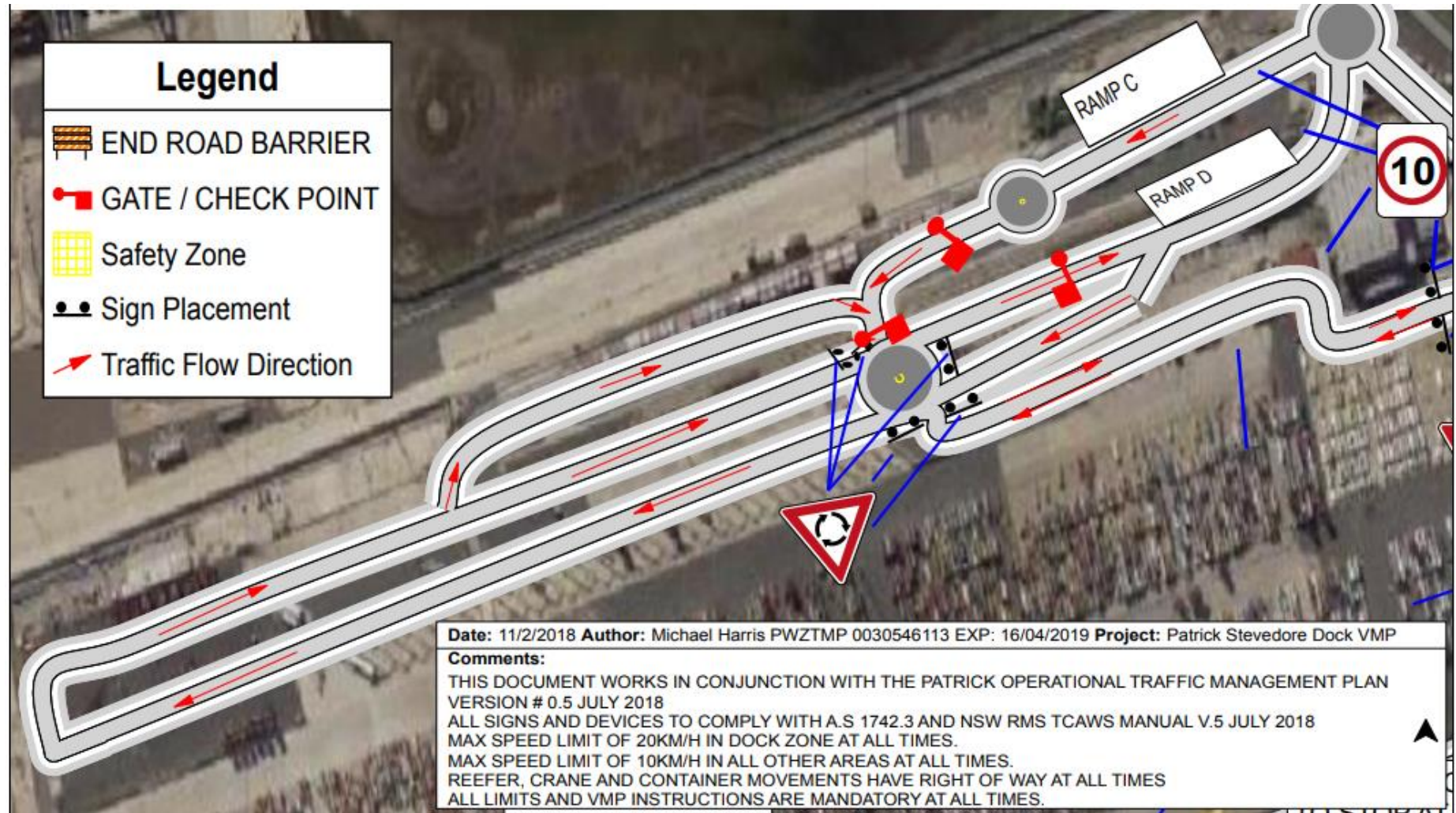




Figure: 6.7.5: Patrick, PBT – Vehicle Management Plan, mid-section

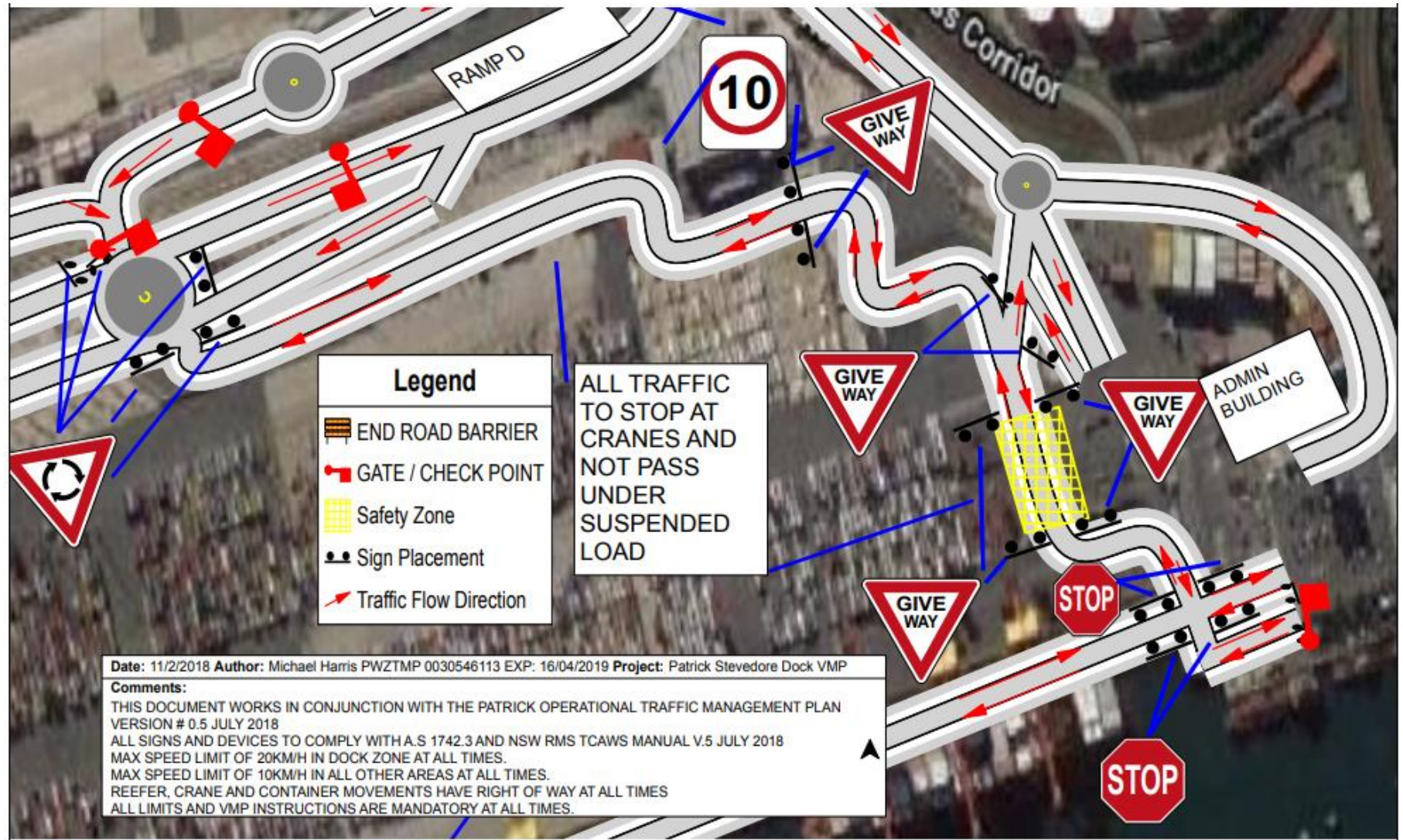
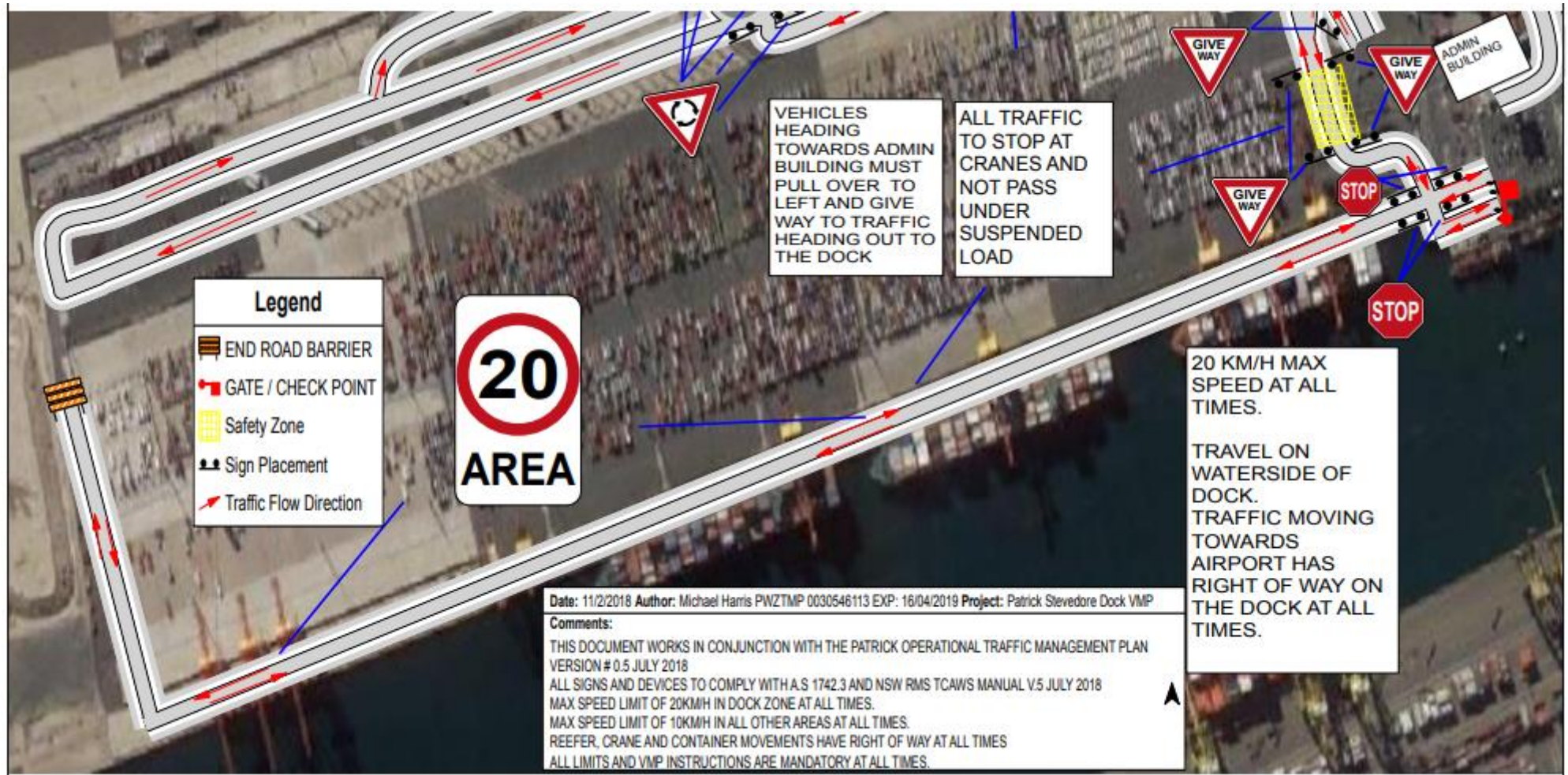




Figure: 6.7.6: Patrick, PBT – Vehicle Management Plan, Wharf





### Performance Expectations

The implementation of this management plan and its effectiveness will be measured by the Key Performance Indicators (KPIs) provided in the table below.

**Table: 6.7.3: Operational Traffic Management – KPIs**

Key Performance Area		KPI
1	Traffic noise disturbance and traffic impacts such as congestion or trucks parking in residential streets, expressed as the number of <b>traffic-related community complaints</b> .	Zero (0) complaints
2	Average Truck Turnaround Time (PBLIS Compliance Requirement).	45 minutes or less (for the first container); and A further 20 mins for every additional container a further 20 mins for every additional container
3	Number of slots available per hour.	54 slots (minimum)

### Review and Improvement

The review and amendment of this management plan will be in accordance with **Section 5 – Review and Improvement** of this OEMP.



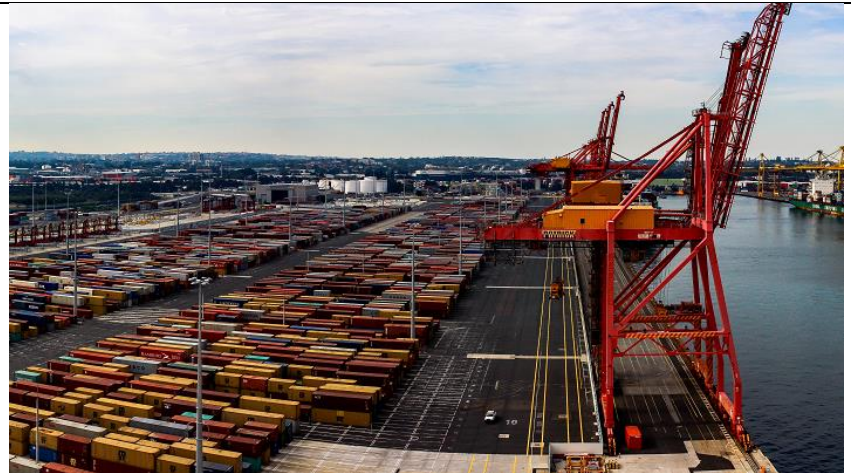
Any inquiries, comments and/or complaints directly or indirectly received from the public shall be managed in accordance with the **Public Inquiries, Comments and Complaints Handling, Section 4.6** and reported in accordance with the **Environmental Reporting, Section 4.4** of this OEMP.

Periodic environmental inspections and audits will be carried out in accordance with **Section 4.5 - Environmental Inspection and Auditing** of this OEMP.

## 6.8 Aviation Operational Impacts Management Plan

Objective	
To reduce the potential for impacts to aviation and the neighbouring Sydney Airport Corporation Limited (Sydney Airport) from Terminal operations; and to aid in meeting compliance with the conditions of the Development Consents.	
Statutory Requirements and Legislative Framework	
<p>The legislation and other compliance requirements that apply to the implementation of this management plan are listed below:</p> <ul style="list-style-type: none"> <li><i>Airports Act 1996 (Cth)</i></li> <li><i>Airports (Protection of Airspace) Regulations 1996 (Cth)</i></li> <li><i>Civil Aviation Regulations 1988 (Cth)</i></li> <li><i>Civil Aviation Safety Regulations 1998 (Cth)</i></li> <li><i>Environmental Planning and Assessment Act, 1979 (NSW)</i></li> <li><i>Marine Order 32 (Cargo Handling Equipment) 2011 (AMSA)</i></li> <li><i>National Parks and Wildlife Act 1974 (NSW)</i></li> </ul>	
Development Consent DA 494	C2.21, C2.22, C2.23 & C2.24
Development Consent DA 453	3.61
EPA Licence 6962	NA
Sydney Water Discharge Industrial Wastewater Consent 24990	NA
Sydney Water Trade Wastewater Discharge Schedule Permit 40110	NA
EIS Prediction and Conclusion	25.5, 29.3.3, 29.4 & 30.4.2
Key Tasks and Responsibilities	
<p>A comprehensive list of responsibilities, accountabilities and authorities is provided in <b>Section 4.2 – Environmental Duties and Responsibilities</b> of this OEMP. The key responsibilities for the implementation of operational controls are provided in the table below.</p> <p><b>Table: 6.8.1: Aviation Operational Impacts Management – Key Tasks and Responsibilities</b></p>	
Task	Responsibility
1 Induction and training of Patrick employees, contractors and visitors.	Training Coordinator and/or Safety, Security & Training Manager; Facilities Manager
2 Manage the controls on obstacle limitation surface (OLS) and maintenance of Terminal lighting.	Maintenance Department; Relevant contractors/service providers
3 Monitor light spill from ships and liaise with Ship Master as required.	Shift Manager

### Examples of Operational Activities & Controls

#	Description	Photo
1	Ship to shore (quay) cranes 12, 13 and 14 located at Berth 6 (closest to Sydney airport) are low profile quay cranes with a knuckle or articulated boom with a boom/beam hinge point design (i.e. the boom does not raise)	
2	Quay crane lights placed on booms and face downwards providing lighting to the stevedore operations below. By design there is limited potential for light to spill upwards. Patrick will continue to trial LED lights on the underside of the quay cranes boom/beams with the aim to improve efficiency.	
3	When vessels are not under stevedore operations, the quay cranes will be boomed up and the lights will be switched off (except the red flashing beacon lights) in order to minimise the light glare or distraction to aircraft pilots.	

**Operation Environmental Aspects, Impacts and Control Measures**

1	Terminal lighting and light spill
2	Obstacle Limitation Surface
3	Fixed Terminal infrastructure
4	Bird attraction – Refer to Section 8.9, Bird Hazard Management Plan

**Table: 6.8.2: Aviation Operational Impacts - Operation Environment Aspects, Impacts and Control Measures**

1	Terminal Lighting and Light Spill	
Operation Environmental		
Maritime Order 32 Schedule 1 (2) Lighting requires adequate lighting during loading and unloading activities.		
Aspect	Impact	Control Measures
Lighting during ship loading and unloading activities	Distraction to aircraft pilots	Minimise ship board lighting while berthed and/or provide temporary shielding on the ship mounted floodlights while berthed.  These controls are facilitated through Patrick’s service agreement with each Shipping Line and supported through the Ship Booklet provided to the Ship Master on arrival to the Terminal.
		Vessels are generally berthed facing south, unless otherwise directed to face north by the harbour pilot reducing the light to surrounding residents and nearby aircraft.
		When vessels are not under stevedore operations, the quay crane lights (except the beacon lights) will be switched off in order to minimise the light glare or distraction to aircraft pilots.
		Quay crane lights placed on booms and face downwards.
		Patrick will continue to trial LED lights on the underside of the quay cranes boom/beams with the aim to improve efficiency.

2	Obstacle Limitation Surface		
Operation Environmental			
<p>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 Terminal. Under the <i>Airports (Protection of Airspace) Regulations 1996</i>, 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.</p> <p>The height of ships is a separate issue to the height of the fixed terminal equipment and is not specified in the Development Consent.</p>			
Aspect	Impact	Control Measures	
Breach of the OLS by quay cranes and ships at the Terminal	Distraction to aircraft pilots; Potential physical impact with aircraft	Approval by the Australian Department of Infrastructure and Transport is required prior to any ships operating at the Terminal. Any conditions specified by CASA must be complied with by NSW Ports.	
		The three ship to shore (quay) cranes 12, 13 and 14 located at Berth 6 (closest to Sydney airport) are low profile quay cranes with a knuckle or articulated boom with a boom/beam hinge point design (i.e. the boom does not raise).	
		Approval to penetrate the OLS will be sought from Sydney Airport, CASA and the Australian Department of Infrastructure, Regional Development and Cities, in consultation with NSW Ports, the Port Authority of NSW and the Shipping Line prior to permitting large ships (with masts or antennae which penetrate the OLS) to berth.	
Conditions relevant to the approval would be implemented.			
3	Fixed Terminal Infrastructure		
Operation Environment			
Aspect	Impact	Control Measures	
Breach of lateral separation requirement by fixed Terminal infrastructure	Interference with Sydney Airport Radar and navigational system	Lateral separation requirement is considered in quay crane selection and other fixed terminal infrastructure.	
		The three ship to shore (quay) cranes 12, 13 and 14 located at Berth 6 (closest to Sydney airport) are low profile quay cranes with a knuckle or articulated boom with a boom/beam hinge point design (i.e. the boom does not raise).	
		Cooperation with NSW Ports and Airservices during testing and recalibration of airport radar and navigational systems when fixed terminal operating infrastructure is in place.	



### Monitoring and Reporting

Routine monitoring relies on visual inspections and the diligence of all employees and contractors/service providers to identify any potential aviation impacts at the Terminal and report them to their frontline manager who will raise an event in the Patrick's HSE reporting database. Details of these events will also be entered into the Terminal Environmental, and Public Comments/Inquiries/Complaints Register, the results analysed and where necessary, subsequent corrective actions proposed by the ESC Manager and Operations and/or Engineering & Maintenance Manager (or representative).

Events are reported at least weekly by the ESC Manager who will periodically report on any trends. The results will be used for various reporting obligations - refer to the **Environmental Reporting, Section 4.4** of this OEMP.

### Performance Expectations

The implementation of this management plan and its effectiveness will be measured by the Key Performance Indicators (KPIs) provided in the table below.

**Table: 6.8.3: Aviation Operational Impacts Management – KPIs**

Key Performance Area		KPI
1	Regular visual inspection of the Terminal to verify that control measures are in place and to identify and potential aviation hazards (including nests or large number of birds).	Zero (0) hazards
2	Airport-related complaints including light-spill, radar interference; expressed as the number of aviation complaints.	Zero (0) complaints

### Review and Improvement

The review and amendment of this management plan will be in accordance with **Section 5 – Review and Improvement** of this OEMP.




Any inquiries, comments and/or complaints directly or indirectly received from the public shall be managed in accordance with the **Public Inquiries, Comments and Complaints Handling, Section 4.6** and reported in accordance with the **Environmental Reporting, Section 4.4** of this OEMP.

Periodic environmental inspections and audits will be carried out in accordance with **Section 4.5 - Environmental Inspection and Auditing** of this OEMP.



## 6.9 Bird Hazard Management Plan

Objective	
To minimise the attraction of bird species that pose a risk to aircraft movements, or nuisance at the Terminal; and to aid compliance in meeting the conditions of the Development Consents.	
Statutory Requirements and Legislative Framework	
<p>The legislation and other compliance requirements that apply to the implementation of this management plan are listed below:</p> <ul style="list-style-type: none"> <li>• <i>Biodiversity Conservation Act 2016 (Cth)</i></li> <li>• <i>Civil Aviation Regulations 1988 (Cth)</i></li> <li>• <i>Environmental Planning and Assessment Act, 1979 (NSW)</i></li> <li>• <i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i></li> <li>• <i>National Parks and Wildlife Act 1974 (NSW)</i></li> </ul>	
Development Consent DA 494	C2.25
Development Consent DA 453	NA
EPA Licence 6962	NA
Sydney Water Discharge Industrial Wastewater Consent 24990	NA
Sydney Water Trade Wastewater Discharge Schedule Permit 40110	NA
EIS Prediction and Conclusion	Chapter 29 Bird Hazard, Section 34.4 Waste disposal
Key Tasks and Responsibilities	
<p>A comprehensive list of responsibilities, accountabilities and authorities is provided in <b>Section 4.2 – Environmental Duties and Responsibilities</b> of this OEMP. The key responsibilities for the implementation of operational controls are provided in the table below.</p> <p><b>Table: 6.9.1: Bird Hazard Management – Key Tasks and Responsibilities</b></p>	
Task	Responsibility
1 Induction and training of Patrick employees, contractors and visitors	Training Coordinator and/or Safety, Security & Training Manager; Facilities Manager
2 Regular inspection of any bird hazards and maintenance of controls.	Facilities Manager; ESC Manager (Environmental Representative)
3 Report on any identified bird hazard at least weekly and periodically report on any trends.	Facilities Manager; ESC Manager (Environmental Representative)

Examples of Operational Activities & Controls		
#	Description	Photo
1	Maintenance workshop entrance open for movement of mobile plant in/out – installation of bird control measures (perch spikes) to minimise the available surfaces for birds for roost along the top of beams.	
	Use netting to limit access into the Workshop.	
2	Visual inspection of light poles for nests.	

### Operation Environmental Aspects, Impacts and Control Measures

1	Bird attraction to the Terminal
2	Attraction of birds to berthed vessels, container storage areas and Maintenance workshop

**Table: 6.9.2: Bird Hazard - Operation Environment Aspects, Impacts and Control Measures**

1	Bird attraction to the Terminal	
Operation Environmental		
<p>Large numbers of birds, or any number of large birds, flying close to or across an airport on a regular basis are considered to be a bird hazard because of the potential for “bird strike”, defined as a collision between a bird and an aircraft and is referred to as an air safety incident under the <i>Civil Aviation Regulation 1988 (Cth)</i>. While most bird strikes cause little or no damage to aircraft, some incidents can be fatal or very costly in terms of aircraft damage and aircraft downtime. Statistics show that 90% of bird strikes occur at or near airports.</p> <p>The most common species involved in bird strike at Sydney Airport are Silver Gull (43%), Nankeen Kestrel (19%), Feral Pigeon (6%), Galah (4%) and Fruit Bat (4%) based on Hutchinson (1999) who estimated 356 bird strikes at Sydney Airport between 1988 and 1999. Other species account for the rest of the incidents, including Black Swan, Australian Pelican, Australian White Ibis, Black-Shouldered Kite, White-Bellied Sea Eagle, and a range of species associated with grasslands and/or buildings.</p> <p>Silver Gulls have been a notable hazard at Sydney Airport since the first north-south runway was constructed across the shoreline into Botany Bay (between 1965 and 1972). A primary reason for this is that the runway lies across major flight paths of Silver Gulls foraging along the shoreline or moving between roost sites in Botany Bay and foraging sites in metropolitan Sydney.</p> <p>Nankeen Kestrels account for a significant portion of bird strikes because the species nests and forages in the grasslands at Sydney Airport.</p>		
Aspect	Impact	Control Measures
Attraction of birds to the Terminal by wind-blown litter, ponded surface water, structures and lighting	Distraction to aircraft pilots; Birds in aircraft flight paths; Bird strike; Nuisance	No eating is permitted outside of the building.
		Use of enclosed rubbish bins.
		Control of littering through signage, induction training and regular tool box talks.
		No bird feeding permitted.
		Regular collection of waste to reduce overflow and wind-blown litter.
		The design of rooves and guttering of terminal buildings to deny birds the opportunities to roost and make nests.
		Remove ponded water from site as soon as practicable and reasonable.
		Patrick personnel are required to report any aviation hazards or the presence of nesting or injured wildlife, including any eggs.

1 Bird attraction to the Terminal ( <i>continued</i> )		
Operation Environmental		
Aspect	Impact	Control Measures
Attraction of birds to the Terminal by wind-blown litter, ponded surface water, structures and lighting	Distraction to aircraft pilots; Birds in aircraft flight paths; Bird strike; Nuisance	If proved necessary, engage a specialist lighting consultant to provide advice on terminal lighting to deter insects which are food for birds.
		Patrick will consult with the Sydney Airport Wildlife Management Group for implementation of any dispersal or harassment protocols (or any other method of bird removal).
		<p>If required, deterrent systems would be employed to prevent the build-up of birds at the Terminal, e.g.:</p> <ul style="list-style-type: none"> <li>• Flagging or streamers – material flapping in the wind; can be effective in deterring birds from landing close by;</li> <li>• Perch spikes – can be installed on structures such as posts which provide roosts for species such as Cormorants, Australian Pelicans and Silver Gulls;</li> <li>• Netting and/or fishing lines strung across bird landing paths – the lines frighten birds when they attempt to land and come into contact with the “invisible” line;</li> <li>• Distress calls – designed to scare birds away;</li> <li>• Cracker shells – are cartridges fired from a shotgun causing an explosion in mid-air to frighten birds. Known to be effective in most situations when used at random, but may need to be used in combination with other devices as a long-term solution; and</li> <li>• Strobes or moving spotlights – work best in a dark environment and may be less effective where there is a lot of light from other sources, for example wharf areas which are illuminated at night.</li> <li>• D-Ter Insect &amp; Bird Repellent – regular application required as the birds will disappear almost immediately for several months and come back again.</li> </ul> <p>Bird deterrent methods like cracker shells, which are likely to have a significant deterrent impact on migratory shorebirds using Penrhyn Estuary, should only be used during periods when most migratory species are absent (i.e. from early May to late June), and only on advice from a shorebird ecologist.</p> <p>At the first signs of a deterrent system failing to work, alternative methods would be used to supplement or replace the existing bird deterrent system.</p>

2	Bird attraction to berthed vessels, container storage areas and Maintenance workshop	
Operation Environmental		
Aspect	Impact	Control Measures
Attraction of birds to berthed vessels, container storage areas and Maintenance workshop	Distraction to aircraft pilots; Birds in aircraft flight paths; Bird strike; Nuisance	Where containers have leaked grain, the area where the grain has leaked onto is swept up as soon as practicable.
		Liaise with vessels on arrival to ensure there are no birds on board.
		Bird feeding or fishing not allowed from the vessel while berthed.
		Bird control measures include: <ul style="list-style-type: none"><li>Perch spikes to minimise the available surfaces for birds for roost along the top of beams; and</li><li>Netting strung across bird landing paths – the lines frighten birds when they attempt to land and come into contact with the “invisible” line.</li></ul>
		Use of minimal ship lighting while berthed.
Bird hazard management strategies to be undertaken in consultation with the Department of Transport and Regional Services, Sydney Airport Corporation and Botany and Randwick Councils.		
Monitoring and Reporting		
<p>The purpose of monitoring is to determine whether birds are starting to habituate or build up in large numbers so that this can be addressed at a very early stage rather than later when remedial action may be more difficult.</p> <p>Routine monitoring relies on visual inspections and the diligence of all employees and contractors/service providers to identify any potential bird hazards at the Terminal and report them to their frontline manager who will raise an event in the Patrick’s HSE reporting database. This includes monitoring after nightfall to determine whether birds are attracted to the site to roost. Immediate bird deterrent action is to be implemented if roosting birds are observed on site.</p> <p>Details of these events will also be entered into the Terminal Environmental, and Public Comments/Inquiries/Complaints Register, the results analysed and where necessary subsequent corrective actions proposed by the ESC Manager and Operations and/or Engineering &amp; Maintenance Manager (or representative).</p> <p>Events are reported at least weekly by the ESC Manager who will periodically report on any trends. The results will be used for various reporting obligations refer to <b>Section 4.4 - Environmental Reporting</b> of this OEMP.</p>		

### Performance Expectations

The implementation of this management plan and its effectiveness will be measured by the Key Performance Indicators (KPIs) provided in the table below.

**Table: 6.9.3: Bird Hazard Management – KPIs**

Key Performance Area		KPI
1	Regular visual inspection of the Terminal to identify bird hazards (e.g. nests or large number of birds), and to verify that control measures are in place to deter birds from the site.	Zero (0)
2	The number of times problem birds need to be actively managed at the Patrick's terminal, expressed as the number of bird hazard management events per 100,000 TEU.	Zero per 100,000 TEU
3	The number of shorebird management events per 100,000 TEU.	Zero per 100,000 TEU

### Review and Improvement

The review and amendment of this management plan will be in accordance with **Section 5 – Review and Improvement** of this OEMP.

Any inquiries, comments and/or complaints directly or indirectly received from the public shall be managed in accordance with the **Public Inquiries, Comments and Complaints Handling, Section 4.6** and reported in accordance with the **Environmental Reporting, Section 4.4** of this OEMP.

Periodic environmental inspections and audits will be carried out in accordance with **Section 4.5 - Environmental Inspection and Auditing** of this OEMP.



## 6.10 Vegetation and Land Management Plan

Objective	
<p>To ensure that all landscaped and revegetated areas are maintained in a tidy and healthy state, preventing the spread of potentially invasive weeds. In addition, to ensure trees do not obscure road signs.</p> <p>To ensure sealed surfaces are maintained and repaired promptly to reduce the risk of land being contaminated in the event of a leak or spill.</p>	
Statutory Requirements and Legislative Framework	
<p>The legislation and other compliance requirements that apply to the implementation of this management plan are listed below:</p> <ul style="list-style-type: none"> <li>• <i>Biodiversity Conservation Act 2016 (NSW)</i></li> <li>• <i>Biosecurity Act 2015 (NSW)</i></li> <li>• <i>Environmental Planning and Assessment Act 1979 (NSW)</i></li> <li>• <i>Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) (Cth)</i></li> <li>• <i>Contaminated Land Management Act 1997</i></li> </ul>	
Development Consent DA 494	NA
Development Consent DA 453	3.57, 3.58, 3.59, 3.60 & 6.4(b)
EPA Licence 6962	NA
Sydney Water Discharge Industrial Wastewater Consent 24990	NA
Sydney Water Trade Wastewater Discharge Schedule Permit 40110	NA
EIS Prediction and Conclusion	Ch. 19 – Aquatic ecology, & Ch. 20 – Terrestrial ecology
Key Tasks and Responsibilities	
<p>A comprehensive list of responsibilities, accountabilities and authorities is provided in <b>Section 4.2 – Environmental Duties and Responsibilities</b> of this OEMP. The key responsibilities for the implementation of operational controls are provided in the table below.</p> <p><b>Table: 6.10.1: Vegetation and Land Management – Key Tasks and Responsibilities</b></p>	
Task	Responsibility
1 Induction and training of Patrick employees, contractors and visitors	Training Coordinator and/or Safety, Security & Training Manager; Facilities Manager
2 Maintenance of landscaped areas, including watering and weed management	Facilities Manager; Relevant contractors/service providers
3 Conduct quarterly site environmental inspections, which include review of weed management programs, view condition of sealed surfaces.	Facilities Manager; ESC Manager (Environmental Representative)
4 Conduct safety inspections, which include the condition of sealed road surface	Safety, Security & Training Manager; Facilities Manager

Examples of Operational Activities & Controls		
#	Description	Photo
1	<p>Tower / Administration Building car park</p> <ul style="list-style-type: none"> <li>- Landscaping</li> <li>- Sealed surface</li> </ul>	
2	<p>Maintenance car park</p> <ul style="list-style-type: none"> <li>- Landscaping</li> <li>- Sealed surface</li> </ul>	

### Operation Environmental Aspects, Impacts, and Control Measures

1	Threatened Ecological Communities (TECs) and species, and other matters of National Environmental Significance (NES)
2	Inadequate weed control, unapproved herbicide use
3	Lack of water to landscaped areas
4	Poorly maintained landscaping
5	Sealed ground surface exposing soil

**Table: 6.10.2: Vegetation and Land - Operation Environmental Aspects, Impacts and Control Measures**

1	Threatened Ecological Communities (TECs) and species, and other matters of National Environmental Significance (NES)	
Operation Environmental		
<p>There are three TECs listed under the EPBC Act as potentially occurring in the region. Prior to the development consent for the PBT terminal upgrade, the Atlas of NSW Wildlife database identified 24 TECs listed under the <i>Threatened Species Conservation Act 1995</i> (now superseded by the <i>Biodiversity Conservation Act 2016</i>) that have been mapped in the region. No TECs were mapped within the site.</p> <p>There are 13 threatened flora species listed under the EPBC Act as potentially occurring in the region. Prior to development consent for the PBT upgrade, the Atlas of NSW Wildlife database identified 14 threatened flora species listed under the repealed <i>Threatened Species Conservation Act 1995</i> previously recorded in the region. Of these, one threatened flora species, <i>Acacia terminalis subsp. terminalis</i> (Sunshine Wattle), has previously been recorded within close proximity to the site. No potential habitat for threatened flora species is known to occur on the site.</p> <p>There is one wetland of international significance (Ramsar Wetland), the Towra Point Aquatic Reserve, within the vicinity of the site. The Towra Point Aquatic Reserve is situated on the southern shores of Botany Bay, approximately 2.5 kilometres south of the site. This reserve contains most of the seagrass, mangroves and saltmarshes within Botany Bay and contains refuge areas from fishing (URS, 2003). No matters of NES are known to occur within the site.</p>		
Aspect	Impact	Control Measures
Presence of threatened ecological communities and species at the Terminal	Loss of threatened ecological communities and/or species	There are no threatened ecological communities known to be mapped within the Patrick site.
		There is no known potential habitat for threatened flora species within the site.
		One threatened flora species, <i>Acacia terminalis subsp. terminalis</i> (Sunshine Wattle), has previously been recorded within close proximity to the site, but is not known to occur on the site.

2	Inadequate weed control, unapproved herbicide use		
Operation Environmental			
Landscaping within the Terminal is limited to shrubs and plantings associated with staff car parks, and on the perimeter of the site along the access road to the Administration Building, along the Cargo Link car park (Gate B110) and at the entrance to the Maintenance car park.			
Aspect	Impact	Control Measures	
Little or no weed control, unapproved herbicide used	Spread of weeds (including potentially invasive species); Water contamination	Ensure only approved herbicides (i.e. Glyphosate) are used for the control of weeds on site to ensure harmful contaminants are not present in site runoff.	
		Application for new herbicides must be completed using the Change Management form and approved by the ESC Manager prior to use.	
		Record dates of herbicide applications in the Terminal maintenance and scheduling system, Maximo.	
		Use experienced landscaping contractors with training in correct application and use of herbicides.	

3	Lack of water to landscaped areas		
Operation Environment			
Aspect	Impact	Control Measures	
Lack of water to landscaped areas	Shrubs and plantings die	Plant drought tolerant species.	
		Landscaped areas watered by hand as required.	
		Replace any dead or missing shrubs or plantings.	

4	Poorly maintained landscaping		
Operation Environment			
Aspect	Impact	Control Measures	
Poorly maintained landscaping	Negative response from stakeholders, including NSW Ports; Shrubs and plantings die	Ensure landscaped areas are regularly maintained and trimmed back.	
		Ensure weed management activities are conducted regularly to controls the spread of weeds (including potentially invasive species).	
		Replace dead or missing shrubs and plantings where required.	

5	Seal ground surface exposing soil		
Operation Environment			
Aspect	Impact	Control Measures	
Sealed ground surface affected by weather and traffic exposing soil	Leaked or spilt chemicals / fuel / oil contaminate the soil / land	Conduct regular inspections of the terminal’s sealed ground surfaces.	
		Arrange for sealed surfaces have areas of exposed soil/land to be promptly sealed.	
		Under the Contaminated Land Management Act, Patrick has a duty to inform the EPA of any contamination resulting from activities at the terminal.	
Monitoring and Reporting			
<u>Initial landscaping</u>			
Landscaping details for the development include – soil and mulch, hand watering, retaining wall, fencing, and hard surfaces. Includes details of car parking and measures to prevent vehicles from encroaching onto landscaped areas.			
<u>Maintenance of landscaped areas</u>			
A program is in place to ensure that all landscaped and revegetated areas are maintained in a tidy, healthy state.			
<u>Invasive weeds</u>			
All invasive weeds, as listed under the NSW <i>Biosecurity Act 2015</i> (previously legislated by the <i>Noxious Weeds Act 1993</i> ), are removed from site. Appropriate management of weeds on site is carried out:			
<ul style="list-style-type: none"><li>• where practicable, weed infested areas will be sprayed with a herbicide and left in situ;<ul style="list-style-type: none"><li>- Glyphosate based herbicides (non-selective post emergent) are the most commonly used herbicide in natural environments and is the assumed herbicide type unless otherwise stated.</li></ul></li><li>• where it has not been practical to spray weeds, they will be removed from the site and disposed of as green waste. Invasive weeds will be removed to landfill; and</li><li>• any use of herbicides will be strictly in accordance with the label directions and the Safety Data Sheet.</li></ul>			
<u>Watering plantings</u>			
Hand watering is carried out on a routine basis by contractors who tend and maintain the vegetation at the Terminal.			
<u>Biosecurity – quarantine controls</u>			
The Australian Government Department of Agriculture and Water Resources (DAWR), through Biosecurity manages quarantine controls at Australian borders, including Port Botany, to prevent, respond to and recover from pests and diseases that threaten the economy and environment. Patrick provides assistance to DAWR when they attend site to conduct regular inspections as required. (Refer to <b>Section 6.3, Feral Animals and Biosecurity Management Plan</b> of this OEMP.)			
<u>Environmental Monitoring</u>			
Due to the limited vegetation on site, monitoring activities are undertaken during quarterly environmental inspections that include a review of the presence/growth weed species and effectiveness of weed control.			

## Monitoring and Reporting *continued*

### **Aquatic Ecology**

The management and monitoring of the effects of port development on specific aquatic ecology of Foreshore Beach and Penrhyn Estuary is covered in section 3 of the Penrhyn Estuary Habitat Enhancement Plan (PEHEP) (March 2007) located on the Port Authority of NSW website:

[https://www.portauthoritynsw.com.au/media/1084/pehep\\_report\\_execsummary.pdf](https://www.portauthoritynsw.com.au/media/1084/pehep_report_execsummary.pdf).

Monitoring of the PEHEP is managed by Cardno on behalf of the Port Authority of NSW – refer to:

<https://www.portauthoritynsw.com.au/sustainability-and-environment/penrhyn-estuary-rehabilitation/>

The results are summarised in the Port Botany Post-Construction Environmental Monitoring – Annual Report 2016, 20 February 2018 located on the Port Authority of NSW website:

<https://www.portauthoritynsw.com.au/media/2968/el1112046-port-botany-annual-report-2016-v2.pdf>

### **Terrestrial Ecology**

The habitat management and maintenance of saltmarsh is covered in Appendix C of the Penrhyn Estuary Habitat Enhancement Plan (March 2007) located on the Port Authority of NSW website:

[https://www.portauthoritynsw.com.au/media/1084/pehep\\_report\\_execsummary.pdf](https://www.portauthoritynsw.com.au/media/1084/pehep_report_execsummary.pdf).

The results are summarised in the Port Botany Post-Construction Environmental Monitoring – Saltmarsh Summary Report April 2016, 11 August 2016 located on the Port Authority of NSW website:

<https://www.portauthoritynsw.com.au/media/2830/el1112046-port-botany-saltmarsh-summary-report-april-2016-final-v2.pdf>

The habitat management and maintenance of mangroves is addressed in section 3.1.3 of the Penrhyn Estuary Habitat Enhancement Plan (March 2007) located on the Port Authority of NSW website:

[https://www.portauthoritynsw.com.au/media/1084/pehep\\_report\\_execsummary.pdf](https://www.portauthoritynsw.com.au/media/1084/pehep_report_execsummary.pdf).

The results are summarised in the Port Botany Post-Construction Environmental Monitoring – Annual Report 2016, 20 February 2018 located on the Port Authority of NSW website:

[www.portauthoritynsw.com.au/media/2968/el1112046-port-botany-annual-report-2016-v2.pdf](https://www.portauthoritynsw.com.au/media/2968/el1112046-port-botany-annual-report-2016-v2.pdf)

### **Records**

The Facilities Manager will maintain records of herbicide use, and the ESC Manager will record the site environmental inspections.



### Performance Expectations

The implementation of this management plan and its effectiveness will be measured by the Key Performance Indicators (KPIs) provided in the table below.

**Table: 6.10.3: Vegetation and Land Management – KPIs**

Key Performance Area		KPI
1	Received vegetation and/or land-related complaints attributed to the terminal operation.	Zero (0) complaints
2	Review Vegetation and Land Management Plan and records with Facilities Manager.	Once per year
3	Weed management achieved using designated chemical control. (Note: No other herbicides permitted to be used without a change management form raised and approved)	Glyphosate herbicide (nil use of any other herbicide)
4	Conduct site environmental inspections which include weed management control.	Four times per year (quarterly)
5	Landscaping in a healthy state, routinely maintained and vegetation replaced where required.	Part of the site inspection – four times per year (quarterly)
6	Conduct safety inspections which includes sealed surfaces.	Two times per year (6-monthly)

### Review and Improvement

The review and amendment of this management plan will be in accordance with **Section 5 – Review and Improvement** of this OEMP.

Any inquiries, comments and/or complaints directly or indirectly received from the public shall be managed in accordance with the **Public Inquiries, Comments and Complaints Handling, Section 4.6** and reported in accordance with the **Environmental Reporting, Section 4.4** of this OEMP.

Periodic environmental inspections and audits will be carried out in accordance with **Section 4.5 - Environmental Inspection and Auditing** of this OEMP.

## 6.11 Energy and Resources Management Plan




Objective	
To minimise the use of natural resources and increase efficiencies in energy use at the Terminal; and to ensure Patrick meet their NPI and NGERs reporting obligations under the <i>Protection of the Environment (General) Regulation 2009 (NSW)</i> and the <i>National Greenhouse and Energy Reporting Act 2007</i> respectively.	
Statutory Requirements and Legislative Framework	
<p>The legislation and other compliance requirements that apply to the implementation of this management plan are listed below:</p> <ul style="list-style-type: none"> <li>• <i>Botany Bay Council Development Control Plan – Energy Efficiency 2000</i></li> <li>• <i>Environmental Planning and Assessment Act 1979 (NSW)</i></li> <li>• <i>National Greenhouse and Energy Reporting Act 2007 (NGER Act) (Cth)</i></li> <li>• <i>National Pollutant Inventory National Environment Protection Measure (NPI NEPM) (Cth)</i></li> <li>• <i>Protection of the Environment (General) Regulation 2009 (NSW)</i></li> <li>• <i>Protection of the Environment Operations Act 1997 (NSW)</i></li> </ul> <p>The NPI NEPM provides the framework for the development and establishment of the NPI, which is an internet database designed to provide publicly available information on the types and amounts of certain substances being emitted to the air, land and water. The NPI is implemented cooperatively by the Federal Government, the EPA and other state and territory governments. All facilities that use NPI substances at levels above certain thresholds must report any emissions of those NPI substances. Patrick are required to report on fuel and energy use across all operational activities.</p> <p>In NSW the requirement to report emissions through the NPI is enforced through the <i>Protection of the Environment Operations (General) Regulation 2009</i>.</p> <p>Patrick is also obligated to report on operational greenhouse gas emissions, and energy and water consumption under section 19 of the NGER Act using the Emission and Energy Reporting System (EERS). This data is collected at the end of the financial year for each of the four Patrick Terminals and reported as one set of data to the Regulator.</p>	
Development Consent DA 494	NA
Development Consent DA 453	7.25
EPA Licence 6962	NA
Sydney Water Discharge Industrial Wastewater Consent 24990	NA
Sydney Water Trade Wastewater Discharge Schedule Permit 40110	NA
EIS Prediction and Conclusion	Chapter 35 – Energy

### Key Tasks and Responsibilities

A comprehensive list of responsibilities, accountabilities and authorities is provided in **Section 4.2 – Environmental Duties and Responsibilities** of this OEMP. The key responsibilities for the implementation of operational controls are provided in the table below.

**Table: 6.11.1: Energy and Resources Management – Key Tasks and Responsibilities**

Task		Responsibility
1	Induction and training of Patrick employees, contractors and visitors.	Training Coordinator and/or Safety, Security & Training Manager; Facilities Manager
2	Maintenance of operational plant and equipment.	Maintenance Department; Relevant contractors/service providers
3	Implementation of energy and water savings initiatives.	Plant Operators; Operations Department; Engineering & Maintenance Department; ESC Manager (Environmental Representative)
4	Evaluation and purchase of energy and water efficient equipment.	Engineering & Maintenance Department
5	Prepare and submit to the EPA Annual NPI Reports on fuel and energy use under the NPI NEPM and the <i>Protection of the Environment (General) Regulation 2009</i> .	National HSE Manager
6	Preparation and submission of the Energy Efficiency Compliance Report in accordance with CoA 7.25, DA 453. The Report shall certify that energy efficiency measures have been installed and verify that the building's energy performance complies with Councils Energy Efficiency DCP. A copy of the Report shall be made available to Council on request.	ESC Manager (Environmental Representative)
7	Prepare an Energy Action Plan in accordance with EIS Prediction 35.4.	ESC Manager (Environmental Representative)
8	Prepare and submit to the Regulator annual reports on operational greenhouse gas emissions, and energy and water consumption under the NGER Act using the Emission and Energy Reporting System (EERS).	National HSE Manager

Examples of Operational Activities & Controls		
#	Description	Photo
1	Solar Panels on the roof of Engineering & Maintenance Building for heating hot water.	
2	Solar Panels on the roof of the Amenities attached to the Tower/Administration Building for heating hot water.	
4	LED lights on power poles	

#	Description	Photo
5	In 2015 manually operated straddles which were solely fuelled by diesel were replaced with Auto Strads which are powered using diesel and electricity.	
6	Rainwater is collected from the rooves of the Maintenance Buildings and Workshop in 3 x 20,000L plastic tanks.  This water is used for flushing toilets and urinals in the building.	
7	Rainwater collected from the rooves of the Tower/Administration Building is collected in 2 x 20,000L plastic tanks.  This water is used for flushing toilets and urinals in the building.	



**Operation Environmental Aspects, Impacts, and Control Measures**

1	Use of electricity and natural gas
2	Rainwater collection and use
3	Fuel use at the Terminal
4	Fuel use for transport

**Table: 6.11.2: Energy and Resources - Operation Environmental Aspects, Impacts & Control Measures**

1 Use of electricity and natural gas		
Operation Environmental		
Aspect	Impact	Control Measures
Use of electricity and gas for lighting, heating and cooling, appliances etc.	Depletion of natural resources; Air pollution	Patrick has installed energy efficient systems in new buildings including low energy lighting, climate control air-conditioning with sensors in zones on each floor. External walls in the Tower/Administration and Engineering & Maintenance Buildings are predominately fitted with large glass windows allowing additional light into the buildings (these glass windows are tinted and fitted with block-out blinds to control heat and light).
		LED lights are fitted on crane booms and on power poles at the Terminal, replacing less energy efficient lighting systems.  Patrick will review internal and external lighting and upgrade to more efficient lighting types where practicable.
		Ensure all appliances, electronics, refrigeration and air-conditioning units, lighting and power units are certified energy efficient.
		Utilise lighting that efficiently directs the light into the area required, thereby minimising energy consumption and waste light.
		Promote energy savings: <ul style="list-style-type: none"> <li>• Use efficient electrical installations with sensor switching.</li> <li>• Use timer switches for high voltage security lighting.</li> <li>• Use natural lighting where practicable.</li> <li>• Switch off all stand-by equipment and office lighting at the end of each day.</li> </ul>
		Prepare an Energy Efficiency Compliance Report certifying that energy efficiency measures have been installed and verify that the building's energy performance complies with Councils Energy Efficiency DCP (Per DA 453 condition 7.25 - a copy to be made available to Council on request.)
		Use of renewable energy sources, e.g.: <ul style="list-style-type: none"> <li>• Solar power panels on the Engineering &amp; Maintenance Building, and Amenities Building.</li> </ul> Patrick will investigate the purchase of electricity from local renewable sources.



2	Rainwater collection and use		
Operation Environmental			
Aspect	Impact	Control Measures	
Rainwater is collected from the rooves in two separate locations – Maintenance Building and Workshop; and Tower/Administration Building (includes Amenities)	Depletion of natural resources	There are 3x 20,000L rainwater storage tanks along the northern side of the Maintenance workshop. The water collected is used for flushing toilets and urinals.	
		There are 2x 20,000L rainwater storage tanks behind the Tower/Administration building. The water collected is used for flushing toilets and urinals.	
		Water usage is monitored by the ESC Manager to track trends. Water use at the Terminal is reported annually to the Regulator as part of NGERs requirements.	
		Water use at the Terminal is reported annually to the Regulator as part of NGERs requirements.	
3	Fuel use at the Terminal		
Operation Environmental			
Aspect	Impact	Control Measures	
Use of fuel (e.g. LPG, diesel, ULP) for vehicles, Auto Strads, mobile plant and equipment, generators etc.	Depletion of natural resources; Air pollution	Plant and equipment are operated and maintained in accordance with acceptable industry standards and will be turned off when not in use.	
		The Auto Strads are powered using diesel and electricity and replaced manually operated straddles which were solely fuelled by diesel.	
		Truck drivers are encouraged to switch off their engines when waiting in the truck grid or holding areas.	
		The increase in rail mode share of container freight movement is promoted at the Terminal and a condition of the lease agreement.	
		Regular inspections, maintenance and servicing of plant and equipment is conducted to ensure optimal running performance and reduce fuel wastage.	

4	Fuel use for transport	
Operation Environmental		
<p>NSW Ports reports the investment in rail infrastructure will reduce the growth in truck movements around the port. When fully operational this investment will reduce truck-kilometres travelled in Sydney by at least 10 million per year. This is estimated to save over 2 million litres of diesel per year which is the equivalent to a net reduction in CO<sub>2</sub> emissions of more than 5,400 tonnes a year. Patrick’s agreement with NSW Ports will significantly increase the terminal’s rail capacity and enhance efficiency in container movements at the port.</p> <p>Patrick’s investment with NSW Ports in rail infrastructure will significantly increase the Terminal’s rail capacity and enhance efficiency in container movements at the port; this in turn will reduce the number of trucks required to visit the Terminal.</p>		
Aspect	Impact	Control Measures
Use of fuel (e.g. diesel, ULP) by Qube owned transport fleet leased to Patrick	Depletion of natural resources; Air pollution	When there is no rolling stock across the rail line, Qube owned and operated trucks can drive across the rail empty track and transport shipping containers from rail to the Truck Grid / Yard. The alternative route is up Ramp C, around the roundabout and down Ramp D onto the Truck Grid. Access from the Truck Grid to the Rail Siding is via an entry point at the end of the rail siding.
		Qube’s induction and training of heavy vehicle operators, including driving techniques to reduce fuel consumption.
		Qube’s regular inspections, maintenance and servicing of heavy vehicles to ensure optimal running performance and reduce fuel wastage.

### Monitoring and Reporting

NPI Reporting is required to be submitted to the EPA for emissions generated, primarily due to fuel and energy use. Fuel and energy use data is submitted to the National HSE Manager by the Environment Manager from each Patrick Terminal. The National HSE Manager compiles this information and reports to the EPA annually as required in accordance with provided guidelines.

NGERs Reporting is required to be submitted to the Clean Energy Regulator. Greenhouse gas emissions, and energy and water consumption data will be submitted to the National HSE Manager by the Environment Manager from each Patrick Terminal. The National HSE Manager compiles this information and reports to the Regulator annually as required. To monitor KPIs, the following information will be recorded:

- Total fuel purchased by Patrick;
- Fuel used by site vehicles, operational plant and equipment; and
- Total electricity and natural gas consumption including plant, buildings and structures.

An Energy Efficiency Compliance Report is required to be prepared certifying that energy efficiency measures have been installed and verifying that the building's energy performance complies with Councils Energy Efficiency DCP. An Energy Management Action Plan will be developed in accordance with EIS Prediction 35.4. Actions to reduce energy use and improve the energy performance of the Terminal will be documented, implemented and closed-out as appropriate.

### Performance Expectations

The implementation of this management plan and its effectiveness will be measured by the Key Performance Indicators (KPIs) provided in the table below.

**Table: 6.11.3: Energy and Resource Management – KPIs**

Key Performance Area		KPI
1	Fuel consumption expressed in litres per TEU	Downward trend
2	Electricity Consumption expressed in kilowatt hours per TEU	Downward trend
3	Water Consumption expressed in litres per TEU	Downward trend
4	Submission of NPI and NGERs Reports to the Regulator by the due date	Annual submission
5	Close-out of Actions from the Energy Management Action Plan by due date	Close-out of 100% of actions by due date

### Review and Improvement

The review and amendment of this management plan will be in accordance with **Section 5 - Review and Improvement** of this OEMP.


Any inquiries, comments and/or complaints directly or indirectly received from the public shall be managed in accordance with the **Public Inquiries, Comments and Complaints Handling, Section 4.6** and reported in accordance with the **Environmental Reporting, Section 4.4** of this OEMP.

Periodic environmental inspections and audits will be carried out in accordance with **Section 4.5 - Environmental Inspection and Auditing** of this OEMP.

## 6.12 Biosecurity and Customs (unpack containers) Management Plan

Objective		
To manage biosecurity risks through the implementation of the appropriate controls; an obtain written approval from Australia Border Force (Customs) to open (i.e. unpack) any container(s) on the terminal.		
Statutory Requirements and Legislative Framework		
The legislation and other compliance requirements that apply to the implementation of this management plan are listed below:		
<ul style="list-style-type: none"><li>• <i>Biosecurity Regulation 2016 (C. 58 First point of entry biosecurity standards (ports)) (Cth)</i></li><li>• <i>Customs Act 1901 (s. 102DA Unpacking of goods in container at cargo terminal) (Cth)</i></li></ul>		
Development Consent DA 494	NA	
Development Consent DA 453	NA	
EPA Licence 6962	NA	
Sydney Water Discharge Industrial Wastewater Consent 24990	NA	
Sydney Water Trade Wastewater Discharge Schedule Permit 40110	NA	
EIS Prediction and Conclusion	NA	
Key Tasks and Responsibilities		
A comprehensive list of responsibilities, accountabilities and authorities is provided in <b>Section 4.2 - Environmental Duties and Responsibilities</b> of this OEMP. The key responsibilities for the implementation of operational controls are provided in the table below.		
<b>Table: 6.12.1: Biosecurity and Customs (unpack containers) Management – Key Tasks and Responsibilities</b>		
Task		Responsibility
1	Induction and training of Patrick employees, contractors and visitors.	Training Coordinator and/or Safety, Security & Training Manager; Facilities Manager
2	Liaise with NSW Ports, Port Authority NSW and other port operators for biosecurity management.	ESC Manager (Environmental Representative)
3	Establish a First Point of Entry (FPOE) Biosecurity Incident Response Procedure (BIRP) for the terminal and obtain Department of Agriculture and Water Resources approval (DAWR) and integrate into the terminal’s ERP.	ESC Manager (Environmental Representative)
4	Obtain written approval from an Australian Border Force (ABF) officer prior to opening any container on the terminal (including – import, export full or empty, transshipment, Customs cleared).	ESC Manager (Environmental Representative)
5	Ensure all containers remain closed and if are required to be opened (i.e. unpacked) this is not done so until Patrick receives written approval from ABF.	Yard Managers, Shift Managers, Landside Manager, Stevedoring Manager, Operations Manager

### Example of Operational Activities & Controls

#	Description	Photo
1	Biosecurity posters are displayed on site	

### Operation Environmental Aspects and Impacts, and Control Measures

1	Biosecurity risk on an arriving vessel e.g. hitchhiker pest, ant nests in the port precinct, soil contamination on exterior of container
2	Unpacking (i.e. opening) a container without obtaining written approval from an ABF officer.

**Table: 6.12.2: Biosecurity & Customs Operation Environmental Aspects, Impacts and Control Measures**

1	Biosecurity risk on an arriving vessel		
Operation Environmental			
Aspect	Impact	Control Measures	
Biosecurity risk on an arriving vessel e.g. hitchhiker pests, ant nests in the port precinct, soil contamination on exterior of container	Biosecurity risk; Potential health impacts; Nuisance; Property damage	Site induction includes biosecurity risks.	
		Posters displayed across the Terminal.	
		Biosecurity Bin established containing necessary equipment. Routinely inspected and maintained accordingly.	
		First Point of Entry (FPOE) Biosecurity Incident Response Procedure (BIRP) approved by DAWR, has been integrated into the terminal's <b>Emergency Response Plan (PBT_HSE_PLN_09_01)</b> . <ul style="list-style-type: none"><li>- Awareness</li><li>- Isolate</li><li>- Contain</li><li>- Report</li><li>- Treat</li></ul>	

2	Unpacking (i.e. opening) a container without obtaining written approval from Australian Border Force	
Operation Environmental		
Aspect	Impact	Control Measures
Cargo supply chain risk - organised crime and criminal infiltration	Customs risk; Potential health impacts; Nuisance; Property damage	Site induction includes Customs risk.
		Make application to ABF for approval to unpack (i.e. open) a container, until which time the container remains intact and unopened.
		Shift and Yard Managers are aware of the procedural requirements and will only unpack (i.e. open) the container on receipt of written approval from an ABF officer.
Monitoring and Reporting		
<p>Routine monitoring relies on visual inspections and the diligence of all employees and contractors to report any biosecurity threats found within the Terminal, and ensure written approval is received from an ABF officer prior to opening (i.e. unpacking) any container on the terminal and report them to their frontline manager who will raise an event in the Patrick’s HSE reporting database.</p> <p>Events are reported at weekly by the ESC Manager who will report monthly on any trends. The results will be used for various reporting obligations refer to <b>Section 4.4 - Environmental Reporting</b>, of this OEMP.</p>		
<p>With reference to: <i>Australia Government Customs Act 1901 – Section 102DA</i></p> <p>Cargo handlers working at cargo terminals on wharves and at airports handling international cargo have obligations under Part VAAA of the Customs Act 1901 (Customs Act) to ensure the security of goods under customs control. These obligations strengthen the cargo supply chain against organised crime and criminal infiltration.</p> <p>They are statutory obligations and non-compliance is a strict liability offence under the Customs Act. Cargo terminal operators also have obligations under the Customs Act and may share some of the same obligations as cargo handlers (refer to Factsheet: Cargo terminal operator obligations under the Customs Act 1901).</p> <p><b>A. <u>Cargo terminal cannot open a container without written ABF approval:</u></b></p> <p>Goods in a container at a cargo terminal must not be unpacked (i.e. opened) unless the cargo handler (i.e. Patrick) has written approval from an Australian Border Force (ABF) officer. As the cargo handler, Patrick can request the local ABF office for approval to open (i.e. unpack) the container. This approval is intended for exceptional circumstances, for example, where cargo has been damaged in transit and requires repacking. Approvals to unpack are conditional and granted for a specified time, location and container.</p> <p><b><u>Definition of a container:</u></b></p> <ul style="list-style-type: none"><li>Types of Containers – Full, empty, refrigerated, flat rack, out of gauge i.e. over height, over width etc</li><li>Category of Container – import, export, restow, trans-shipment, Customs cleared</li></ul> <p><b><u>Definition of unpacking a container:</u></b></p> <p>Unpacking a container includes opening the container doors to check/inspect, the container floor bowing, and/or the cargo of the container breaching, falling out of or being emptied out of the container.</p>		



**B. Patrick's obligation:**

Patrick (cargo handler) must not allow the container (includes import, export full or empty, trans-shipment, out of gauge and/or Customs cleared etc) to be opened (i.e. unpacked) for inspection, or the contents removed, emptied, fallen out etc) without written approval of the local ABF officer.

**Potential circumstances where unpacking/opening a container may be required:**

- Live animal cargo e.g. transferring a horse from a container to a horse float/transporter etc
- Damage or suspected damage to the inside of a type of container and/or the cargo/contents require inspection to determine if the container is safe to transport (i.e. chain of responsibility) or if the cargo needs to be repacked into a new container.

**Note:** In the event the cargo is required to be removed from a damaged container and repacked into a new container, Patrick must report the new container number to ABF.

**C. Making application to Australian Border Force (ABF) for approval to unpack (open) a container:**

Create an email to ABF, such as:

**Subject:** Patrick Port Botany making application under section 102DA (Customs Act 1901) for Customs clearance to open/unpack containers (in specific) circumstances

Under section 102DA of the Customs Act 1901, Patrick is seeking approval to open/unpack <insert number> containers <insert container numbers>, which arrived on Import Vessel <insert name> - Voyage Number <insert>, at Patrick's Port Botany Terminal (s15 wharf), Penryhn Road, Port Botany.

The purpose of opening these containers is to: <select whichever is applicable, or add in an appropriate explanation>

- Check if the container(s) can be safely transported by road.
- Check if the contents of the container has been damaged and/or caused the cargo to leak from the container.
- In a controlled manner allow the live animals to disembark from the container and be loaded onto a horse float / road transport vehicle to be transported from the terminal.

Send the email to:

- Australian Border Force Supply Chain Operations - [SupplyChainOpsNSW@abf.gov.au](mailto:SupplyChainOpsNSW@abf.gov.au)

Record application details in the PBT's Register: Applications Made to ABF (Customs) for written approval 102DA (Customs Act) to – open-Unpack a container

- Update the terminal Register recording the details of the application to the ABF (including any details related to repacking the container etc)
- File approval letter / correspondence from ABF

**D. On receipt of written approval from ABF**

- Forward onto the duty Yard / Shift Manager, Landside Manager and Stevedoring Manager
- File the written approval
- Update the terminal's Application to ABF Register

### Performance Expectations

The implementation of this management plan and its effectiveness will be measured by the Key Performance Indicators (KPIs) provided in the table below.

**Table: 6.12.3: Biosecurity and Customs (unpack containers) Management – KPIs**

Key Performance Area		KPI
1	Review the Biosecurity Incident Response Plan (as part of the terminal's Emergency Response Plan).	Every 3 years
2	Inspection of the Biosecurity Bin, and items replaced promptly.	Every 2 <sup>nd</sup> month
3	Compliance with section 102DA of the Customs Act 1901 i.e. obtained written approval from ABF prior to opening (i.e. unpacking) any container on the terminal.	Zero (0) non-compliances
4	Monitor performance and report trends.	Annually

### Review and Improvement

The review and amendment of this management plan will be in accordance with **Section 5 – Review and Improvement** of this OEMP.

Any inquiries, comments and/or complaints directly or indirectly received from the public shall be managed in accordance with the **Public Inquiries, Comments and Complaints Handling, Section 4.6** and reported in accordance with the **Environmental Reporting, Section 4.4** of this OEMP.

Periodic environmental inspections and audits will be carried out in accordance with **Section 4.5 - Environmental Inspection and Auditing**, of this OEMP.

## 6.13 Sustainability Management Plan

Objective	
<p>Consistent with the intent of Patrick's Environmental Policy, Patrick has a commitment to the NSW Ports Green Ports Checklist (GPC) published by NSW Ports. These guidelines encourage port developers and operators to adopt sustainable business approaches and encourage innovation in design and operation through resource selection and environmental quality.</p> <p>The sustainability objective of the Patrick 2019 HSE Strategic Plan is to: <i>"Introduce a waste management system that measures waste produced at the Terminal with a focus on maximising recycling opportunities and recording, reporting and responding to data so that a plan can be introduced to reduce waste"</i>.</p>	
Statutory Requirements and Legislative Framework	
<p>The legislation and other compliance requirements that apply to the implementation of this management plan are listed below:</p> <ul style="list-style-type: none"> <li>Environmental Planning and Assessment Act 1979 (NSW)</li> <li>NSW Ports Green Ports Checklist (GPC), undated</li> </ul>	
Development Consent DA 494	NA
Development Consent DA 453	NA
EPA Licence 6962	NA
Sydney Water Discharge Industrial Wastewater Consent 24990	NA
Sydney Water Trade Wastewater Discharge Schedule Permit 40110	NA
EIS Prediction and Conclusion	NA
Key Tasks and Responsibilities	
<p>A comprehensive list of responsibilities, accountabilities and authorities is provided in <b>Section 4.2 – Environmental Duties and Responsibilities</b> of this OEMP. The key responsibilities for the implementation of operational controls are provided in the table below.</p> <p><b>Table: 6.13.1: Sustainability Management – Key Tasks and Responsibilities</b></p>	
Task	Responsibility
1 Complete the Green Port Checklist.	ESC Manager (Environmental Representative)
2 Monitor resource selection and environmental quality.	ESC Manager (Environmental Representative)
3 Report performance based on resource selection and environmental quality.	ESC Manager (Environmental Representative)

### Monitoring and Reporting

In the Green Ports Checklist each of the environmental issues contains a series of goals in the form of criteria to be considered or addressed. NSW Ports requires demonstration of implementation of the Green Port Checklist during the design, construction and operation of Port facilities.

- Resource selection (materials selection, waste management, water consumption, energy use, and transportation); and
- Environmental quality (indoor environment; emissions, water quality, land use and environmental management).

### Performance Expectations

The implementation of this management plan and its effectiveness will be measured by the Key Performance Indicators (KPIs) provided in the table below.

**Table: 6.13.2: Sustainability Management – KPIs**

Key Performance Area		KPI
1	Complete the Green Port Checklist.	Annually
2	Monitor performance and report trends.	Annually

### Review and Improvement

The review and amendment of this management plan will be in accordance with **Section 5 – Review and Improvement** of this OEMP.

Any inquiries, comments and/or complaints directly or indirectly received from the public shall be managed in accordance with the **Public Inquiries, Comments and Complaints Handling, Section 4.6** and reported in accordance with the **Environmental Reporting, Section 4.4** of this OEMP.

Periodic environmental inspections and audits will be carried out in accordance with **Section 4.5 - Environmental Inspection and Auditing** of this OEMP.

## APPENDICES

### Appendix A: Port Botany Expansion – CoA: DA 494-11-2003-i MOD 15 & MOD 16

**Table A: CoA 494-11-2003-i – Port Botany Expansion** (Applicant – Sydney Ports Corporation, transferred to NSW Ports)

No.	Condition of Approval 494 - Detail	OEMP Section
	<b>SCHEDULE A: TERMINAL OPERATIONS</b>	
<b>A1</b>	<b>General</b>	
	<b>Scope of Development</b>	
	<p>The approved aspects of the development shall be carried out generally in accordance with:</p> <ul style="list-style-type: none"> <li>a) Development Application DA 494-11-2003-i, lodged with Department on 26 November 2003.</li> <li>b) Port Botany Expansion: Environmental Impact Statement (ten volumes), prepared by URS and dated Nov 2003;</li> <li>c) Port Botany Expansion Commission of Inquiry – Primary Submission (two volumes), prepared by URS dated May 2004</li> <li>d) Port Botany Expansion Commission of Inquiry – Supplementary Submission to Environmental Impact Statement, prepared by URS and dated August 2004</li> <li>e) Port Botany Expansion Environmental Impact Statement – Supplementary Submission (two volumes), prepared by URS and dated October 2004;</li> <li>f) modification application MOD-107-9-2006-i, accompanied by <i>Port Botany Expansion, Section 96(1A) Application: Modification of Consent Conditions</i>, prepared by SPC and dated September 2006;</li> <li>g) modification application MOD-134-11-2006-i, accompanied by <i>Port Botany Expansion, Section 96(1A) Modification – Wharf Structure Design</i>, prepared by SPC and dated November 2006;</li> <li>h) modification application MOD-149-12-2006-i, accompanied by <i>Port Botany Expansion, Section 96(1A) Modification – Application to Modify Conditions B2.9 and B2.22 of the Port Botany Consent</i>, prepared by SPC and dated 1 December 2006;</li> <li>i) modification application MOD-78-9-2007-i, accompanied by <i>Port Botany Expansion – Modification of Conditions C2.20 &amp; C2.25</i>, prepared by SPC, dated July 2007;</li> <li>j) modification application MOD-60-9-2008, accompanied by <i>Port Botany Expansion – Modification of Conditions B2.46 &amp; C2.25</i>, prepared by SPC, dated 27 August 2008;</li> <li>k) modification application MOD-68-12-2008, accompanied by a letter from SPC dated December 2008;</li> <li>l) modification application MOD-08-03-2009, accompanied by a letter from Sydney Ports Corporation dated 16 February 2009 and assessment report titled <i>Port Botany Expansion – Rail Operations Section 96(1A) Modification</i> dated February 2009</li> </ul>	<b>2.3</b>

No.	Condition of Approval 494 - Detail	OEMP Section
	<p>m) modification application DA-494-11-2003-I MOD 8, accompanied by an assessment report titled <i>"Port Botany Expansion – Ship Turning Area Dredging Section 96 (1A) Modification"</i> dated May 2009;</p> <p>n) modification application DA-494-11-2003-I MOD 9 accompanied by an assessment report titled <i>"Port Botany Expansion – Additional High Spot Dredging off Molineux Point Section 96 (1A) Modification"</i> dated May 2009.</p> <p>o) modification application DA-494-11-2003-I MOD 10, accompanied by an assessment within the letter titled <i>"Port Botany Expansion – Section 96(1A) Modification – Additional Ship Turning Area Dredging"</i> dated 8 July 2009;</p> <p>p) modification application DA-494-11-2003-i MOD 11, accompanied by an assessment report titled <i>"Sydney Port Botany Terminal No. 3 PKG-17.1 Planning Section 75W Modification Operations Building and Maintenance Building"</i> dated 14 September 2011; and</p> <p>q) modification application DA-494-11-2003-i MOD 12, accompanied by an assessment report titled <i>"Sydney Port Botany Terminal No. 3 PKG-17.1 Planning Section 75W Modification to Stormwater First Flush System"</i> dated 15 February 2012 and supplementary advice provided on 6 June 2012 in relation to other proprietary SQID devices; and</p> <p>r) modification application DA-494-11-2003-i MOD 13, accompanied by an assessment report titled <i>"Project No. 231658 Section 75W Modification to Stormwater Management System for Southern Expansion Area"</i> dated 31 October 2012; and</p> <p>s) modification application DA-494-11-2003-i MOD 14, accompanied by assessment reports titled <i>"Port Botany Expansion – Section 75W Modification 14 to DA-494-11-2003i for Port and Maritime Related Interim Uses at northern tip of Hayes Dock"</i>, dated January 2013; and <i>"Port Botany Expansion, Cumulative Construction Traffic Impact Assessment, Terminal Operations Infrastructure (Mar-13 – Mar-14)"</i>, dated Apr-13;</p> <p>t) modification application DA-494-11-2003-i MOD 15, accompanied by assessment report titled <i>'SICTL Quay Crane Operations'</i>, prepared by HPH and dated 20 March 2013; and</p> <p>u) modification application DA-494-11-2003-I MOD 16, accompanied by assessment report titled <i>'Port Botany Expansion Modification Application 16 to DA-494-11-2003i Permanent Uses Hayes Dock Services Area and Administrative Changes to Some Conditions'</i>, prepared by Lend Lease for NSW Ports and dated September 2016; and</p> <p>v) the conditions of this consent.</p> <p>Insofar as they relate to the approved development.</p>	
<b>Statutory Requirements</b>		
A1.3	All licences, permits and approvals shall be obtained and maintained as required throughout the life of the development. No condition of this consent removes the obligation to obtain, renew or comply with such licences, permits or approvals.	<b>2.3</b>
A1.4	Port throughput capacity generated by operations in accordance with this consent shall be consistent with the limits specified in the EIS, that is, a maximum throughput capacity at the terminal of 1.6 million TEUs per annum and a total throughput at Port Botany of 3.2 million TEUs. These limits may not be exceeded by the development without further environmental assessment and approval. Sydney Ports Corporation shall prepare, or have prepared on its behalf, such further environmental assessment for the determination of the Minister.	<b>3.4</b>



No.	Condition of Approval 494 - Detail	OEMP Section
	<b>SCHEDULE C: TERMINAL OPERATIONS</b>	
<b>C1</b>	<b>General Requirement</b>	
	<b>Application of Schedule</b>	
C1.1	The conditions in this Schedule of the consent relate to all the development and activities associated with the operation of the container terminal and associated infrastructure.	Entire OEMP
C1.2	The conditions in this sub-schedule of the consent must be complied with by the Applicant, or any party undertaking the activities and works referred to under condition C1.1, with the exception of the undertaking of Port, Maritime and Waterway Related Interim Uses at Hayes Dock Services Area, which are subject to condition C1.2A – C1.2F. Should more than one terminal operator undertake operations within the terminal area.	Not Applicable
	<b>Port and Maritime Related Interim Uses</b>	
C1.2A	The conditions in this sub-schedule of the consent must be complied with by the Applicant, or any party undertaking activities and works associated with Port, Maritime and Waterways Related Use Interim Uses, except conditions C1.3, C1.4, C1.5, C2.5, C2.12, C2.16, C2.17, C2.18, C2.20, C2.25, C3.2, C3.3, C4.2, C4.3, C4.4 and C4.5.	Not Applicable
	<b>Operation Environment Management Plan – Port, Maritime and Waterway Related Interim Uses Hayes Dock Services Area</b>	
C1.2B	<p>The Applicant shall prepare an Operation Environmental Management Plan (OEMP) – Port, Maritime and Waterway Related Interim Uses prior to the commencement of Port, Maritime and Waterways Related Interim Uses on site. The Plan shall include details of how environmental performance would be managed and monitoring to meet acceptable environmental outcomes, including what actions will be taken to address potential adverse environmental impacts. In particular, the following environmental issues shall be addressed in the Plan:</p> <ul style="list-style-type: none"> <li>- Odour and Air Quality;</li> <li>- Noise Management;</li> <li>- Waste Management;</li> <li>- Water and Wastewater Management;</li> <li>- Hazard and Risk Management;</li> <li>- Amenity, including lighting; and</li> <li>- Incident Reporting</li> </ul> <p>The OEMP shall also address:</p> <ul style="list-style-type: none"> <li>- Details of operation activities including key noise and/or vibrations generating activities and machinery that have the potential to generate noise and/or vibration impacts on surrounding sensitive receivers;</li> <li>- Identification of feasible and reasonable measures proposed to be implemented to minimise and manage operation noise and vibration impacts, especially during sleep disturbance;</li> <li>- A description of how the effectiveness of mitigation and management measures would be maintained.</li> </ul>	Not Applicable

No.	Condition of Approval 494 - Detail	OEMP Section
C1.2B	<p>Noise management shall include:</p> <ul style="list-style-type: none"> <li>- Hours in which particular activities are undertaken;</li> <li>- Use of shore power where available;</li> <li>- Restrictions on notably noisy vehicles and vessels from the site;</li> <li>- Use of building and vehicle alarms and/or alternatives available.</li> </ul> <p>The plan shall also</p> <ul style="list-style-type: none"> <li>- Identify all stator obligations that the applicant is required to fulfil in relation to operation of the development, including all consents, licences, approvals and consultations;</li> <li>- Include a description of the roles and responsibilities of all key employees involved in the operation of the development.</li> <li>- Include overall environmental policies and principles to be applied to the operation of the facility.</li> <li>- A copy of the updated OEMP shall be submitted for approval by the Secretary within three (3) months of the date of approval of Modification 16, unless otherwise agreed by the Secretary;</li> </ul>	Not Applicable
<b>Noise Management Plan – Interim Uses Hayes Dock Area Operation</b>		
C1.2C	<p>The noise management plan shall include, but not necessarily be limited to:</p> <ul style="list-style-type: none"> <li>- compliance standards,</li> <li>- community consultation,</li> <li>- compliant handling monitoring system,</li> <li>- site contact person to follow up complaints,</li> <li>- mitigation measures,</li> <li>- the design/orientation of the proposed mitigation methods demonstrating best practice,</li> <li>- operation times,</li> <li>- contingency measures where noise complaints are received, and</li> <li>- monitoring methods and program.</li> </ul>	Not Applicable
<b>Noise Compliance Assessment - Interim Uses Hayes Dock Area Operation</b>		
C1.2D	<p>Noise from the Hayes Dock Service Area must not exceed the Leq (15 minute) noise limits presented in Table at C2.6 by more than 5d(B)A between 10:00pm and 7:00am. The Secretary must require a detailed noise compliance assessment, prepared by a qualified acoustic consultant. The noise compliance assessment shall meet the requirements of the Environment Protection Authority.</p> <p>The noise compliance assessment shall include the representative residential receiver locations identified in the Table in C2.6.</p>	Not Applicable

No.	Condition of Approval 494 - Detail	OEMP Section
C1.2E	<p>A complaint handling procedure shall be implemented for the Hayes Dock Service Area. Annual reports shall be provided to the Department, outlining details of the complaints received. A register of complaints shall be kept and include the following:</p> <ul style="list-style-type: none"> <li>- date and time, where relevant, of the comment, inquiry or complaint,</li> <li>- how the comment, inquiry or complaint was communicated,</li> <li>- any personal details of the commenter, inquirer or complainant that were provided. If no details were provided this should be recorded,</li> <li>- the nature of the comment, inquiry or complaint,</li> <li>- any actions taken by the Applicant in relation to the comment, inquiry or complaint, including any follow-up contact, and</li> <li>- if no action was taken, record the reason(s) why.</li> </ul>	Not Applicable
C12F	Reporting on the compliance of the Hayes Dock Services Area within the OEMP shall be conducted annual. Reports shall be provided to the Department within twelve (12) months of this modification unless otherwise agreed.	Not Applicable
<b>Operation Environmental Management Plan (OEMP)</b>		
C1.3	<p>The Applicant shall prepare an Operation Environmental Management Plan (OEMP) which must be approved by the Secretary prior to commencement of any operations at the terminal. The OEMP must:</p> <ul style="list-style-type: none"> <li>- identify all statutory obligations that the Applicant is required to fulfil in relation to operation of the development, including all consents, licences, approvals and consultations;</li> <li>- describe any relevant staging or phasing of the commencement of operations within the terminal envelope and any relevant timeframes;</li> <li>- clearly outline what aspects of environmental management, monitoring and reporting would be undertaken by the Applicant or jointly with other operators within the terminal area;</li> <li>- include a description of the roles and responsibilities for all key employees involved in the operation of the development;</li> <li>- include overall environment policies and principles to be applied to the operation of the facility;</li> <li>- include specific consideration of measures to address any requirements of DOP, EPA, and the Council during operation;</li> <li>- detail standards and performance measures to be applied to the development, and a means by which environmental performance can be periodically reviewed and improved, where appropriate;</li> <li>- detail management policies to ensure that environmental performance goals are met and to comply with the conditions of this consent;</li> <li>- include the Management Plans relevant to operation, include the environmental monitoring requirements relevant to operation; and</li> <li>- be made available for public inspection after approval of the Secretary.</li> </ul>	Entire OEMP

No.	Condition of Approval 494 - Detail	OEMP Section
<b>Compliance Certification</b>		
C1.4	<p>Prior to each of the events listed from a) to c) below, or within such period otherwise agreed by the Secretary, documentation certifying that all conditions of this consent applicable prior to that event have been complied with shall be submitted to the satisfaction of the Secretary. Where an event is to be undertaken in stages, submission of compliance certification may be staged consistent with the staging of activities relating to that event, subject to the prior agreement of the Secretary.</p> <p>a) commencement of any operations within the terminal area; and</p> <p>b) commencement of each stage or phase of operations.</p> <p>*Note: (c) is not listed on the DA</p>	Refer to - Pre-Operational Compliance Report (December 2015)
C1.5	Notwithstanding condition C1.4 of this consent, the Secretary may require an update report on compliance with all, or any part, of the conditions of this consent. Any such update shall meet the requirements of the Secretary and be submitted within such period as the Secretary may agree.	As required
<b>C2 Operational Environmental Performance</b>		
<b>Air Quality Management – Odour</b>		
C2.1	The development shall be undertaken so as not to permit any offensive odour, as defined under section 129 of the <i>Protection of the Environment Operations Act 1997</i> , to be emitted beyond the boundary of the site.	6.1
<b>Air Quality Management - Dust Emissions</b>		
C2.2	All activities shall be undertaken in a manner that minimises or prevents dust emissions from the site, including wind-blown and traffic-generated dust. All activities undertaken on the site shall be undertaken with the objective of preventing visible emissions of dust from the site. Should such visible dust emissions occur at any time, all practicable dust mitigation measures, including cessation of relevant works, as appropriate, shall be identified and implemented such that emissions of visible dust cease.	6.1
C2.3	All trafficable and vehicle manoeuvring areas shall be maintained at all times in a condition that minimises the generation and emission of dust.	6.1
C2.4	All vehicles entering or leaving the site carrying a load must be covered or otherwise enclosed at all times, except during loading and unloading, to minimise the generation and emission of dust.	6.1

No.	Condition of Approval 494 - Detail	OEMP Section
	<b>Noise Management - Operation Noise Management Plan</b>	
C2.5	<p>Prior to the commencement of operations, the Applicant must prepare an Operation Noise Management Plan in consultation with EPA, DOP, Botany and Randwick Councils. The Plan shall include noise management, mitigation monitoring and reporting to ensure that local acoustic amenity is not adversely impacted. In addition, the Operational Noise Management Plan must:</p> <ul style="list-style-type: none"> <li>- identify general activities that will be carried out and associated noise sources;</li> <li>- assess operation noise impacts at the relevant receivers;</li> <li>- a primary objective of achieving the operational noise limits outlined in this consent;</li> <li>- provide details of overall management methods and procedures that will be implemented to control noise from the development;</li> <li>- include a pro-active and reactive strategy for dealing with complaints including achieving the operation noise limits, particularly with regard to verbal and written responses;</li> <li>- detail noise monitoring, reporting and response procedures consistent with the requirements of EPA;</li> <li>- provide for internal audits of compliance of all plant and equipment;</li> <li>- indicate site establishment timetabling to minimise noise impacts;</li> <li>- include procedures for notifying residents of operation activities likely to affect their noise amenity;</li> <li>- address the requirements of EPA;</li> <li>- a strategy to identify operational practices and noise controls that can minimise/or reduce noise levels from container impacts, audible alarms and other short duration high level noise events;</li> <li>- identify opportunities to reduce operational noise levels including, but not necessarily limited to, selection of equipment, engineering noise controls and shore-based power; and,</li> <li>- be approved by the Secretary prior to the commencement of operation.</li> </ul>	6.6

No.	Condition of Approval 494 - Detail	OEMP Section																																															
	<b>Noise Management – Noise Limits</b>																																																
C2.6	<p>Noise from the premises must not exceed the sound pressure level (noise) limits presented in the Table below. Note the limits represent the sound pressure level (noise) contribution, at the nominated receiver locations in the table.</p> <table><tr><th rowspan="2">Most affected residential Location</th><th>Day</th><th>Evening</th><th colspan="3">Night</th></tr><tr><th>L<sub>Aeq</sub>(15 min)</th><th>L<sub>Aeq</sub>(15 min)</th><th>L<sub>Aeq</sub>(15 min)</th><th>L<sub>Aeq</sub>, 9hrs</th><th>L<sub>Aeq</sub>(1 min)</th></tr><tr><td>Chelmsford Avenues</td><td>40</td><td>40</td><td>40</td><td>38</td><td>53</td></tr><tr><td>Dent Street</td><td>45</td><td>45</td><td>45</td><td>43</td><td>59</td></tr><tr><td>Jennings Street</td><td>36</td><td>36</td><td>36</td><td>35</td><td>55</td></tr><tr><td>Botany Road (north of Golf Club)</td><td>47</td><td>47</td><td>47</td><td>45</td><td>59</td></tr><tr><td>Australia Avenue</td><td>35</td><td>35</td><td>35</td><td>35</td><td>57</td></tr><tr><td>Military Road</td><td>42</td><td>42</td><td>42</td><td>40</td><td>60</td></tr></table> <p>For the purpose of this condition;</p> <ul style="list-style-type: none"><li>• Day is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sundays and Public Holidays,</li><li>• Evening is defined as the period from 6pm to 10pm</li><li>• Night is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sundays and Public Holidays</li></ul>	Most affected residential Location	Day	Evening	Night			L <sub>Aeq</sub> (15 min)	L <sub>Aeq</sub> (15 min)	L <sub>Aeq</sub> (15 min)	L <sub>Aeq</sub> , 9hrs	L <sub>Aeq</sub> (1 min)	Chelmsford Avenues	40	40	40	38	53	Dent Street	45	45	45	43	59	Jennings Street	36	36	36	35	55	Botany Road (north of Golf Club)	47	47	47	45	59	Australia Avenue	35	35	35	35	57	Military Road	42	42	42	40	60	6.6
Most affected residential Location	Day		Evening	Night																																													
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Australia Avenue	35	35	35	35	57																																												
Military Road	42	42	42	40	60																																												
C2.7	Noise from the premises is to be measured at the most affected point within the residential boundary, or at the most affected point within 30 metres of the dwelling where the dwelling is more than 30 metres from the boundary, to determine compliance with the noise level limits in Condition C2.6 unless otherwise stated.	6.6																																															
C2.8	Noise from the premises is to be measured at 1m from the dwelling façade to determine compliance with the LA1 (1 minute) noise level in Condition C2.6.	6.6																																															
C2.9	Where it can be demonstrated that direct measurement of noise from the premises is impractical, the DEC may accept alternative means of determining compliance. See Chapter 11 of the NSW Industrial Noise Policy.	6.6																																															
C2.10	The modification factors presented in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise levels where applicable.	6.6																																															
C2.11	The noise emission limits identified in Condition C2.6 apply under meteorological conditions of wind speed up to 3 metres per second at 10 metres above ground level, and temperature inversion conditions up to 1.50C/100m positive lapse rate.	6.6																																															



No.	Condition of Approval 494 - Detail	OEMP Section
<b>Operational Traffic Management Plan</b>		
C2.12	<p>Prior to the commencement of terminal operations, the applicant must prepare an Operational Traffic Management Plan in consultation with RTA, DOP, Botany and Randwick Councils and SSROC. The Applicant shall address the requirements of these organisations in the Plan. The Applicant shall also consult with the Community Consultative Committee in preparation of the Plan. The plan must include, but not be confined to, mitigation measures identified in EIS such as:</p> <ul style="list-style-type: none"> <li>- identification of preferred routes to minimise noise impacts on the surrounding community;</li> <li>- physical and operational measures (including signage) to mitigate noise impacts from vehicles accessing and leaving the terminal;</li> <li>- measures to limit the impact of traffic noise on Foreshore Road and Botany Road;</li> <li>- driver education and information to promote driver habits to minimise noise; and</li> <li>- timetabling, scheduling and details of vehicle booking systems.</li> </ul> <p>The plan must be submitted and approved by the Secretary prior to the commencement of operations.</p>	6.7
<b>Waste Management On-Site</b>		
C2.13	Management of waste must be in accordance with the environment protection licence issued by EPA under the <i>Protection of the Environment Operations Act 1997</i> .	6.4
C2.13A	The management of waste for uses and activities not subject to an Environmental Protection Licence, shall be managed and disposed of in accordance with the <i>Protection of the Environment Operation (Waste) Regulation 2005</i> and the <i>Waste Classification Guidelines (DECCW 2009)</i> , or any future guideline that may supersede that document. All waste materials removed from the site shall only be directed to a waste management facility lawfully permitted to accept the materials.	6.4
<b>Water and Wastewater Management</b>		
C2.14	Except as may be expressly permitted by a licence under the <i>Protection of the Environment Operations Act 1997</i> in relation to the development, section 120 of that Act (prohibition of the pollution of waters) shall be complied with in connection to the development.	6.4
C2.15	Condition deleted from Development Consent.	Not Applicable
<b>Hazards and Risk Management – Hayes Dock Interim Uses</b>		
C2.15A	Port, maritime and waterways related interim uses with in Hayes Dock may involve the loading, unloading and storage of minor volumes of dangerous goods (DGs) for the sole purpose of minor site maintenance; line boat, barge and tug maintenance; related service activities and boat refuelling.	Not Applicable
<b>Hazards and Risk Management - Storage and Handling of Dangerous Goods</b>		
C2.16	Prior to the commencement of operation, the Applicant shall develop management measures in consultation with the Major Hazards Unit of DOP regarding the use of the new terminal for loading, unloading and storage of dangerous goods of Classes 2.3 and 6.	6.5

No.	Condition of Approval 494 - Detail	OEMP Section
C2.17	<p>Twelve months after the determination of DA-494-11-2003-I MOD 6, the Proponent shall submit an annual report to the Secretary which provides details on actual Dangerous Goods movements listed in Table 1 provided in Schedule 4.</p> <p>Should the threshold limits listed in Table 2 in Schedule 4 be exceeded for three consecutive annual reporting years, or if the maximum limits are reached in a single 12 months reporting, the Applicant shall prepare an updated hazard analysis for the PBR operations. The hazard analysis shall:</p> <ul style="list-style-type: none"> <li>- Be prepared in consultation with the Department;</li> <li>- Be prepared in accordance with Hazardous Industry Planning Paper No. 6, 'Hazard Analysis';</li> <li>- Assess compliance against the land use safety planning risk criteria (including individual fatality risk, injury/irritation risk and societal risk), as outlined in Hazardous Industry Planning Advisory Paper No. 4, 'Risk Criteria for Land Use Safety Planning'; and</li> <li>- Assess whether the risks from PBE operations will significantly impact on the cumulative risk contour of <math>1 \times 10^{-6}</math> per annum, contained in Figure 2 of the Port Botany Land Use Safety Study Overview Report 1996, or any other revised land use safety study for the Port that supersedes the 1996 study.</li> </ul> <p>The report shall be prepared to the satisfaction of the Secretary.</p> <p>The hazard analysis is to be submitted to the Secretary within 6 months of an identified threshold exceedance, or as agreed to by the Secretary.</p> <p>The information provided shall cover all stevedores in the PBE area. The information may be provided separately by each stevedore to the Department or in total for the PBE by the Applicant.</p>	4.4 and 6.5

No.	Condition of Approval 494 - Detail			OEMP Section	
	Table 1 Dangerous Goods Reporting Threshold			4.4 and 6.5	
	DG Class	Basis – Unit Type and number of shipping containers through PBE <small>Note 1</small> per year containing DG Class			Comments
		From 2 te up to 12 te NEQ <small>Note 2</small>	≥ 12 te NEQ <small>Note 2</small>		
	Total Class 1.1 & 1.2	83	63		Number as per PHA (rev. 7) Table 6.8
		Containers of packaged material	Tanktainers (Bulk) (<= 20 m³)		
	Class 2.3	157	-		Packaged material is total of Class 2.3 as per PHA Table 6.8
	Toxic gases DG Class 2.3	-	26		Class 2.3 Tanktainers (bulk) – new figure developed from Technical Note Section 2.5 <small>Note 3</small>
	Very Toxic gases, DG Class 2.3 substances including Chlorine (1017), Sulphur Dioxide (1079) and Methyl Bromide (1062) or any Class 2.3 substance meeting GHS <small>Note 4</small> Acute Toxicity Category 1	-	1		
	Class 8 only Hydrogen Fluoride (1051)	11	23		HF numbers as per PHA (rev. 7) Table 6.8
	Notes: (1) PBE (Port Botany Expansion), numbers are inclusive of all stevedores operating under this consent. (2) Contents weight can be used to assign container numbers to a Net Explosive Quantity (NEQ) range. 1 te NEQ can be assumed to equal 1 te contents weight in a container. (3) Technical Note, PBE Proposed revision of Condition of Consent in relation to DGs prepared by Sherpa Consulting Pty Ltd, Document No. 21137-TN-001 Rev 0 22 Mar 2017. (4) UN chemical classification, Globalised Harmonised System (GHS)				
C2.18	The Applicant shall not store or handle or permit to be stored or handled, dangerous goods of 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).			6.5	
C2.19	Condition deleted from Development Consent			Not Applicable	

No.	Condition of Approval 494 - Detail	OEMP Section
<b>Emergency Incident Management - Emergency Response and Incident Management Plan</b>		
C2.20	<p>The Applicant shall develop an Emergency Response and Incident Management Plan in consultation with EPA, DOP, Council and the Community Consultative Committee. The Plan must be approved by the Secretary prior to the commencement of operations and shall detail:</p> <ul style="list-style-type: none"> <li>- terminal security and public safety issues;</li> <li>- effective spill containment and management;</li> <li>- effective firefighting capabilities;</li> <li>- effective response to emergencies and critical incidents; and</li> <li>- a single set of emergency procedures, consistent with the existing Port Botany Emergency Plan, should be developed that be scaled as appropriate for any incident or emergency.</li> </ul>	4.8
<b>Aviation Operational Impacts - Impact on Aviation Operations at Sydney Airport</b>		
C2.21	The Applicant shall ensure that the location of fixed terminal operating infrastructure adequately takes into account the required lateral separation distances to minimise the interference to Sydney Airport radar and navigational systems.	6.8
<b>Aviation Operational Impacts - Obstacle Limitation Surface</b>		
C2.22	The Applicant shall ensure that all operation equipment is below the obstacle limitation surface, unless otherwise permitted by an approval under the <i>Airports Act 1999 and Airports (Protection of Airspace) Regulation 1966</i> .	6.8
<b>Aviation Operational Impacts - Terminal Lighting</b>		
C2.23	The Applicant shall ensure design specifications of the terminal lighting conform to the requirements of Regulation 94 of the Civil Aviation regulations 1988.	6.8
<b>Aviation Operational Impacts - Light Spill</b>		
C2.24	<p>The Applicant shall adopt measures to ensure that there is minimal light spill from ships which may cause distraction, confusion or glare to pilots. These may include:</p> <ul style="list-style-type: none"> <li>- minimising ship board lighting while berthed;</li> <li>- orientating ships in a specific direction; and or</li> <li>- providing temporary shielding on the ship mounted floodlights while docked.</li> </ul>	6.8
<b>Aviation Operational Impacts - Bird Hazard Management Plan</b>		
C2.25	Prior to operations, the Applicant shall develop a Bird Hazard Management Plan to minimise the attraction of bird species that pose a risk to aircraft movements. The Plan is to be prepared in consultation with the Department of Transport and Regional Services, Sydney Airport Corporation and Botany and Randwick Councils. The Plan must be approved by the Secretary prior to the commencement of operations.	6.9

No.	Condition of Approval 494 - Detail	OEMP Section
<b>C3</b>	<b>Community Information, Involvement and Consultation</b>	
	<b>Community Information Complaints Handling</b>	
C3.1	<p>The Applicant must meet the following requirements in relation to community consultation and complaints management:</p> <ul style="list-style-type: none"> <li>- all monitoring, management and reporting documents required under the development consent shall be made publicly available;</li> <li>- provide means by which public comments, inquiries and complaints can be received, and ensure that those means are adequately publicised; and</li> <li>- includes details of a register to be kept of all comments, inquiries and complaint received by the above means, including the following register fields: <ul style="list-style-type: none"> <li>- the date and time, where relevant, of the comment, inquiry or complaint;</li> <li>- the means by which the comment, inquiry or complaint was made (telephone, fax, mail, email or in person);</li> <li>- any personal details of the commenter, inquirer or complainant that were provide, or if no details were provided, a note to that effect;</li> <li>- the nature of the complaint;</li> <li>- any actions(s) taken by the Applicant in relation to the comment, inquiry or complaint, including any follow-up contact with the commenter, inquirer or complainant;</li> <li>- if no action was taken by the Applicant in relation to the comment, inquiry or complaint, the reason(s) why no action was taken;</li> </ul> </li> <li>- Provide quarterly reports to the Department and EPA, unless otherwise agreed by the Secretary, outline details of complaints received.</li> </ul>	<b>4.6</b>

No.	Condition of Approval 494 - Detail	OEMP Section
C3.2	<p>At least 6 months prior to commencement of operations, the Applicant shall establish a Community Consultative Committee to oversee the environmental performance of the development. This committee shall:</p> <p>(a) be comprised of:</p> <ul style="list-style-type: none"> <li>- 2 representatives from the Applicant, including the person responsible for environmental management;</li> <li>- 1 representative from Botany Bay City Council; and</li> <li>- at least 3 representatives from the local community, whose appointment has been approved by the Secretary in consultation with the Council;</li> </ul> <p>(b) be chaired by an independent party approved by the Secretary;</p> <p>(c) meet at least four times a year, or as otherwise agreed by the CCC;</p> <p>(d) review and provide advice on the environmental performance of the development, including any construction or environmental management plans, monitoring results, audit reports, or complaints; and</p> <p>Note: The Applicant may, with the approval of the Secretary, combine the function of this CCC with the function of other existing Community Consultative mechanisms the area, including the construction phase CCC (Condition B3.2) however, if it does this it must ensure that the above obligations are fully met in the combined process.</p> <p>(e) port rail noise within the Port Botany Expansion site is to be an ongoing agenda item to be discussed by the CCC and relevant stakeholders; and</p> <p>(f) within 12 months of the commencement of MOD 16, an advertisement must be placed for new members to join the CCC, given that the other working groups such as the RNWG are no longer present.</p>	4.7
C3.3	<p>The Applicant shall, at its own expense:</p> <ol style="list-style-type: none"> <li>ensure that 2 of its representatives attend the Committee's meetings;</li> <li>provide the Committee with regular information on the environmental performance and management of the development;</li> <li>provide meeting facilities for the Committee;</li> <li>arrange site inspections for the Committee, if necessary;</li> <li>take minutes of the Committee's meetings;</li> <li>make these minutes available on the Applicant's website within 14 days of the Committee meeting, or as agreed to by the Committee;</li> <li>respond to any advice or recommendations the Committee may have in relation to the environmental management or performance of the development; and</li> <li>forward a copy of the minutes of each Committee meeting, and any responses to the Committee's recommendations to the Secretary within a month of the Committee meeting.</li> </ol>	4.7



No.	Condition of Approval 494 - Detail	OEMP Section
<b>C4</b>	<b>Environmental Monitoring and Auditing</b>	
	<b>Incident Reporting</b>	
C4.1	The Secretary shall be notified of any incident with actual or potential significant off-site impacts on people or the biophysical environment within 12 hours of the Applicant, or other relevant party undertaking the development, becoming aware of the incident. Full written details of the incident shall be provided to the Secretary within seven days of the date on which the incident occurred. The Secretary may require additional measures to be implemented to address the cause or impact of any incident, as it relates to this consent, reported in accordance with this condition, within such period as the Secretary may require.	<b>4.4</b>
	<b>Annual Environmental Management Report (AEMR)</b>	
C4.2	<p>The Applicant must prepare an Annual Environmental Management Report for the development. The Annual Environmental Management Report must:</p> <ul style="list-style-type: none"> <li>- detail compliance with the conditions of this consent;</li> <li>- contain a copy of the Complaints Register (for the preceding twelve-month period, exclusive of personal details) and details of how these complaints were addressed and resolved;</li> <li>- include a comparison of the environmental impacts and performance predicted in the EIS and additional information documents provided to the Department and Commission of Inquiry;</li> <li>- detail results of all environmental monitoring required under the development consent and other approvals, including interpretations and discussion by a suitably qualified person;</li> <li>- contain a list of occasions in the preceding twelve-month period when environmental performance goals have not been achieved, indicating the reason for the failure to meet the goals and the actions taken to prevent recurrence of that type of incident;</li> <li>- be prepared within twelve months of commencement of operation, and every twelve months thereafter;</li> <li>- to the satisfaction of the Secretary for approval; and</li> <li>- be made available for public inspection.</li> </ul>	<b>4.4</b>

No.	Condition of Approval 494 - Detail	OEMP Section
	<b>Environmental Representative</b>	
C4.3	<p>Prior to the commencement of operations, a suitably qualified and experienced Environmental Representative(s) shall be nominated to and approved by the Secretary. The Environmental Representative(s) shall be employed for the duration of operations, or as otherwise agreed by the Secretary. The Environmental Representative shall be:</p> <ul style="list-style-type: none"> <li>- the primary contact point in relation to the environmental performance of the terminal operations;</li> <li>- responsible for all Management Plans and Monitoring Programs required under this consent, in relation to the terminal operations;</li> <li>- responsible for considering and advising on matters specified in the conditions of this consent, and all other licences and approvals relating to the environmental performance and impacts of the terminal operations;</li> <li>- responsible for the management of procedures and practices for receiving and responding to complaints and inquiries in relation to the environmental performance of the terminal operations;</li> <li>- required to facilitate an induction and training program for relevant persons involved with the terminal operations; and</li> <li>- given the authority and independence to require reasonable steps be taken to avoid or minimise unintended or adverse environmental impacts, and failing the effectiveness of such steps, to direct that relevant actions be ceased immediately should an adverse impact on the environment be likely to occur.</li> </ul>	<b>4.2</b>
	<b>Environmental Training</b>	
C4.4	<p>Prior to the commencement of operations an Environmental Training Program shall be developed and implemented to establish a framework in which relevant employees will be trained in environmental management and the operation of plant and equipment, including pollution control equipment, where relevant. The Program shall include, but not necessarily be limited to:</p> <ol style="list-style-type: none"> <li>identification of relevant employment positions associated with the development that have an operational or management role related to environmental performance;</li> <li>details of appropriate training requirements for relevant employees;</li> <li>a program for training relevant employees in operational and/ or management issues associated with environmental performance; and</li> <li>a program to confirm and update environmental training and knowledge during employment of relevant persons.</li> </ol>	<b>4.3</b>

No.	Condition of Approval 494 - Detail	OEMP Section
	<b>Environmental Auditing</b>	
C4.5	<p>Within one year of the commencement of operations and every year thereafter, the Applicant shall fund a full independent environmental audit. The audit must be undertaken by a suitably qualified person/team approved by the Secretary.</p> <p>The audits would be made publicly available and would:</p> <ul style="list-style-type: none"> <li>- be carried out in accordance with ISO 14010 – Guidelines and General Principles for Environmental Auditing and ISO 14011 – Procedures for Environmental Auditing;</li> <li>- assess compliance with the requirements of this consent, and other licences and approvals that apply to the development;</li> <li>- assess the construction against the predictions made and conclusions drawn in the development application, EIS, additional information and Commission of Inquiry material; and</li> <li>- review the effectiveness of the environmental management of the development, including any environmental impact mitigation works.</li> </ul> <p>Note: An independent and transparent environmental audit can verify compliance (or otherwise) with the Minister’s consent and various approvals. Auditing also provides an opportunity for continued improvement in environmental performance.</p>	<b>4.5</b>

## Appendix B: Patrick Redevelopment - CoA: DA 453-12-2002-i MOD 7

Table B: CoA-453, Schedule 3 - Compliance

No.	Condition of Approval 453 - Detail	OEMP Section
1	<b>General</b>	
	<b>Obligation to Minimise Harm to the Environment)</b>	
1.1	The Applicant shall implement all practicable measures to prevent or minimise any harm to the environment that may result from the construction and operation of the development.	Entire OEMP
1	<b>General</b>	
	<b>Scope of Development</b>	
1.2	<p><sup>1</sup> The Applicant shall carry out the development generally in accordance with:</p> <ul style="list-style-type: none"> <li>a. Development application DA-453-12-2002-i by, lodged with the Department on 16 December 2002, accompanied <i>Patrick Port Botany Container Terminal Upgrade, Environmental Impact Statement</i> (three volumes), dated November 2002 and prepared by Parsons Brinckerhoff;</li> <li>b. Additional information provided in respect of development application DA-453-12-2002-i, including: <ul style="list-style-type: none"> <li>i. The letter from Parsons Brinckerhoff to Planning NSW dated 17 April 2003 titled <i>Patrick Port Botany EIS – Response to Hazard and Risk Issues</i>;</li> <li>ii. Upgrade of <i>Port Botany Container Terminal, Revised Noise Assessment</i>, dated May 2003 and prepared by Wilkinson Murray Pty Ltd;</li> <li>iii. <i>Supplementary Avifauna Survey &amp; Assessment of Impacts</i>, dated 26 May 2003 and prepared by AMBS Consulting;</li> <li>iv. The memorandum from Parsons Brinckerhoff dated 30 May 2003 and titled <i>Patrick Water Quality Assessment</i>;</li> <li>v. The amended development application submitted to the Department on 30 May 2003 and associated drawings;</li> <li>vi. The letter from Patrick Terminals to Planning NSW dated 11 June 2003 titled <i>Patrick Port Botany EIS</i>;</li> <li>vii. The memorandum from Fielders Engineers Pty Ltd to Parsons Brinckerhoff dated 20 June 2003 titled <i>Transport NSW's Comments</i>;</li> <li>viii. The letter from Qest Consulting Group to Parsons Brinckerhoff dated 3 July 2003 titled <i>Preliminary Hazard Analysis for Patrick Stevedores</i>;</li> </ul> </li> <li>c. Modification application MOD-56-6-2004-i, lodged with the Department on 28 May 2004 and accompanied by the supplementary document titled <i>Application to Modify Development Consent</i>, dated 19 May 2004;</li> <li>d. Modification application MOD-83-8-2004-i, lodged with the Department on 16 August 2004, accompanied by four plans titled <i>Proposed Staff Amenities</i> (Job No. 0400107, Revision C) numbered 01 to 04 respectively;</li> </ul>	2.3

<sup>1</sup> Incorporates EPA General Terms of Approval – A1.1

No.	Condition of Approval 453 - Detail	OEMP Section
	<b>Scope of Development (continued)</b>	
1.2	<p>e. Modification application MOD-83-8-2004-i, lodged with the Department on 16 August 2004, accompanied by four plans titled <i>Proposed Staff Amenities</i> (Job No. 0400107, Revision C) numbered 01 to 04 respectively;</p> <p>f. Modification application MOD-156-10-2005-i, lodged with the Department on 6 October 2005, accompanied correspondence dated 6 October 2005 and titled <i>S96(1A) Application: Patrick Corporation – Port Botany Terminal</i> and plan titled <i>Proposed Administration Building</i> (Job No. PDS-06-38, Revision A).</p> <p>g. Modification application MOD-38-3-2006-i, lodged with the Department on 2 March 2006, accompanied correspondence dated 1 March 2006 and titled <i>S96(1A) Application: Patrick Corporation – Port Botany Terminal</i>, and plans titled <i>Proposed Administration Building</i> (Job No. PDS-06-38, Revision D);</p> <p>h. Modification application MOD-38-4-2007-i, lodged with the Department on 11 April 2007, accompanied correspondence dated 10 April 2007 and titled <i>S.96(1A) Application, Patrick Corporation – Port Botany Terminal</i>, and plans titled <i>Proposed Additional Staff Amenities</i> (Job No. PDS-07-81, Issue E);</p> <p>i. Modification application MOD-76-9-2007-i, lodged with the Department on 24 August 2007, accompanied correspondence dated 19 June 2007 and 5 November 2007 titled <i>S.96(1A) Application, Patrick Corporation – Port Botany Terminal</i>, and the following plans:</p> <ul style="list-style-type: none"> <li>i. Proposed <i>Camco Trafficgate</i> (Job No. PDS-07-84, Issue: B, Drg. No.: 01);</li> <li>ii. Proposed <i>Camco Trafficgate</i> (Job No. PDS-07-84, Issue: B, Drg. No.: 02);</li> <li>iii. Proposed <i>Camco Trafficgate</i> (Job No. PDS-07-84, Issue: B, Drg. No.: 01);</li> <li>iv. <i>Truck Portal Gate Frame Arrangement and Details</i> (Project No. SY070313, Dwg No. S5.00, Issue A);</li> <li>v. <i>Train Portal gate Frame Arrangement and Details</i> (Project No. SY070313m Dwg No. S4.00, Issue E)</li> <li>vi. <i>Train Portal Gate Frame Footing Plan and Details</i> (Project No. SY070313, Dwg No. S4.00, Issue D)</li> <li>vii. <i>Structural Notes</i> (Project No. SY070313, Dwg No. S1.00, Issue D)</li> </ul> <p>j. Modification application DA-453-12-2002-i, MOD 7, accompanied by an assessment report titled <i>Section 75W Modification Port Botany Container Terminal Environmental Assessment</i> prepared by GHD and dated June 2013; and</p> <p>k. The conditions of this consent. In the event of an inconsistency between a condition of this consent and the documents listed under (a) to (i) above, the conditions of consent shall prevail to the extent of the inconsistency.</p>	

No.	Condition of Approval 453 - Detail	OEMP Section
<b>1</b>	<b>General</b>	
	<b>Staged Development</b>	
1.3	Under Section 80(4) of the Act, this consent applies to the development, as described in Schedule 1, only.	Not Applicable
1.4	Deleted	Not Applicable
	<b>Temporary Structures</b>	
1.4A	This consent permits the erection and use of temporary staff accommodation as described in the documents listed under condition 1.2(c) of this consent.	Not Applicable
1.4B	All temporary staff accommodation erected and utilised on the site shall be completely removed from the site once the permanent accommodation is completed.	Not Applicable
	<b>Exceptions</b>	
1.5	The Applicant shall delete the proposed revegetation and/or rehabilitation landscaping works in the eastern portion of the boat ramp carpark, marked in red, on the Proposed Landscape Layout (Figure A9 Rev C).	Not Applicable
	<b>Provision of Documents</b>	
1.6	Where applicable, the Applicant shall provide all documents and reports required to be submitted to the Secretary under this consent in an appropriate electronic format. Provision of documents and reports to other parties, as required under this consent, shall be in a format acceptable to those parties and shall aim to minimise resource consumption. Note: At the date of this consent, an appropriate electronic format for submission to the Director-General is the "portable document format" (pdf) or another format that may be readily converted to pdf.	4.4.2
	<b>Statutory Requirements</b>	
1.7	The Applicant shall ensure that all licences, permits and approvals are obtained and kept up-to-date as required throughout the life of the development. No condition of this consent removes the obligation for the Applicant to obtain, renew or comply with such licences, permits or approvals.	2.3
	<b>Integrated Approvals</b>	
1.8	No works are to commence at the site prior to a Part 3A Permit under the <i>Rivers and Foreshores Improvement Act 1948</i> being obtained from the Waterways Authority and a Licence under the <i>Protection of the Environment Operations Act 1997</i> being obtained from the EPA. A copy of these approvals shall be submitted to the Secretary prior to the issue of the construction certificate by the Principal Certifying Authority.	Not Applicable



No.	Condition of Approval 453 - Detail	OEMP Section
<b>Compliance</b>		
1.9	The Applicant shall ensure that all employees, contractors and sub-contractors are aware of, and comply with, the conditions of this consent.	<b>4.3</b>
1.10	The Applicant shall be responsible for the environmental impacts resulting from the actions of all persons on the site, including any visitors.	<b>6</b>
1.11	Prior to the commencement of construction of the development, the Applicant shall certify in writing, to the satisfaction of the Director-General, that it has obtained all the necessary statutory approvals for the construction works and complied with all relevant conditions of this consent and/or any other statutory requirements of this development pertaining to that aspect of the development to be constructed.	<b>Not Applicable</b>
1.12	Prior to the commencement of operation of the development, the Applicant shall certify in writing, to the satisfaction of the Director-General that it has obtained all the necessary statutory approvals for operations and complied with all relevant conditions of this consent and/or any other statutory requirements for this development.	<b>Not Applicable</b>
1.13	Notwithstanding conditions 1.11 and 1.12 of this consent, the Director-General may require an update on compliance with all, or any part, of the conditions of this consent. Any such update shall meet the reasonable requirements of the Director-General and be submitted within such period as the Director-General may agree.	<b>As required</b>
1.14	The Applicant shall meet the requirements of the Director-General in respect of the implementation of any measure necessary to ensure compliance with the conditions of this consent, and general consistency with the EIS and those documents listed under condition 1.2 of this consent. The Director-General may direct that such a measure be implemented in response to the information contained within any report, plan, correspondence or other document submitted in accordance with the conditions of this consent, within such time as the Director-General may agree.	<b>Appendix C</b>
<b>Dispute Resolution</b>		
1.15	<p>In the event that a dispute arises between the Applicant and Council or a public authority other than the Department, in relation to a specification or requirement applicable under this consent, the matter shall be referred by either party to the Director-General, or if not resolved, to the Minister, whose determination of the dispute shall be final and binding on all parties. For the purpose of this condition, "public authority" has the same meaning as provided under Section 4 of the Act.</p> <p>Note: Section 121 of the <i>Environmental Planning and Assessment Act 1979</i> provides mechanisms for resolution of disputes between the Department, the Director-General, councils and public authorities.</p>	<b>Not Applicable</b>

No.	Condition of Approval 453 - Detail	OEMP Section
<b>2</b>	<b>Construction Certification</b>	
2.1	In relation to the construction an occupation of the development, the Applicant shall provide to the Director-General and Council the following: (a) Written notification of the appointment of a Principal Certifying Authority prior to the commencement of construction; (b) Copies of all Construction Certificates issued for the development prior to the commencement of construction; (c) Written notification of the intention to commence construction work, to be received at least two working days prior to the commencement construction. In the event that more than one Construction Certificate is issued, notification shall be provided prior to the commencement of construction the subject of each Certificate; (d) Copies of all Occupation Certificates issued for the development prior to occupation; and (e) Written notification of the intention to occupy the development, to be received at least two working days prior to occupation. In the event that more than Occupation Certificate is issued, notification shall be provided prior to the occupation the subject of each Certificate.	Not Applicable
2.2	The Application shall provide all information necessary for the Principal Certifying Authority to determine that the development will comply with: (a) The Building Code of Australia; and (b) All relevant provisions of the Act, including the payment of a long service levy under Section 34 of the <i>Building and Construction Industry Long Service Payments Act 1986</i> .	Not Applicable
<b>3</b>	<b>Environmental Performance</b>	
	<b>Demolition</b>	
3.1	All demolition work shall be carried out in accordance with <i>AS2601-2001 The Demolition of Structures</i> .	Not Applicable
	<b>Hours of Operation - Construction</b>	
3.2	<sup>2</sup> Construction activities associated with the development, including the delivery of material to and from the site, shall only be carried out between the following hours: (a) Between 7:00am and 6:00pm Monday to Friday inclusive; (b) Between 8:00am to 2:00pm Saturdays; and (c) At no time on a Sunday or a public holiday.	Not Applicable
3.2A	Notwithstanding condition 3.2 of this consent, the Applicant may undertake construction of road pavement works required under this consent between 7:00am and 10:00pm Mondays to Fridays' and between 8:00am and 2:00pm on Saturdays. No pavement works shall be conducted on Sundays or public holidays. All pavement works shall be undertaken to strictly comply with the noise limits specified under condition 3.3 of this consent.	Not Applicable

No.	Condition of Approval 453 - Detail						OEMP Section
	Noise Limits						
3.3	<sup>3</sup> Noise generated by the development shall not exceed the noise limits presented in the table below, unless otherwise agreed by the Director-General:						6.6
	Location	Day		Evening		Night	
		L <sub>Aeq</sub> (15 min)	L <sub>A1</sub> (1 min)	L <sub>Aeq</sub> (15 min)	L <sub>A1</sub> (1 min)	L <sub>Aeq</sub> ( 15 min)	L <sub>A1</sub> (1 min)
		Most affected residential premises	55	55	43	55	43
	Noise Assessment Report						
3.4	<sup>4</sup> For the purpose of condition 3.3 of this consent: (a) Day is defined as the period from 7.00am to 6.00pm Monday to Saturday and 8.00am to 6.00pm Sundays and Public Holidays; (b) Evening is defined as the period from 6.00pm to 10.00pm; and (c) Night is defined as the period from 10.00pm to 7.00am Monday to Saturday and 10.00pm to 8.00am Sundays and Public Holidays.						6.6
3.5	<sup>5</sup> Within six (6) months of the date of this consent, the Applicant shall submit a Noise Assessment Report to the Director-General and the EPA for approval. The report shall be prepared by a suitably qualified and experienced specialist in the field of acoustics. The report shall contain the following information: (a) A critical review of all measures capable of achieving a reduction in noise emitted by operation of the facility during and upon completion of the development phase including the timetable for implementation of each measure. The report shall contain sufficient information to justify the claim that all reasonable and feasible noise control measures have been incorporated into the redevelopment of the facility so that the noise limits specified in condition 3.3 of this consent, have been achieved as early as possible prior to that date; (b) A timetable specifying dates by which all reasonable and feasible measures will be implemented as identified in (a) above; and (c) Identification and timetabling of noise control measures to reduce noise from existing plant and equipment.						6.6
3.6	<sup>6</sup> Noise from the site shall be measured at the most affected point on or within the residential boundary, to determine compliance with the noise limits in condition 3.3 of this consent. Where it can be demonstrated that direct measurement of noise from the site is impractical, the EPA may accept alternative means of determining compliance. See Chapter 11 of the <i>NSW Industrial Noise Policy</i> . The modification factors provided in Section 4 of the <i>NSW Industrial Noise Policy</i> shall be applied to the measured noise levels where applicable.						6.6

<sup>2</sup> Incorporates EPA General Terms of Approval – L6.6;

<sup>3</sup> EPA General Terms of Approval – L6.1;

<sup>4</sup> EPA General Terms of Approval – L6.2;

<sup>5</sup> EPA General Term of Approval – E3.1;

<sup>6</sup> EPA General Term of Approval – L6.3

No.	Condition of Approval 453 - Detail	OEMP Section
3.7	<sup>7</sup> Noise from the site shall be measured at 1 metre from the bedroom window to determine compliance with the LA1 (1 minute) and LA MAX noise limits in condition 3.3 of this consent.	6.6
3.8	<sup>8</sup> The noise emission limits identified in condition 3.3 of this consent apply under meteorological conditions of: (a) wind speeds of up to 3 m/s at 10 metres above ground level; and (b) temperature inversion conditions of up to 3°C/100 metres.	6.6
<b>Traffic and Transport Impacts</b>		
<b>Road Improvements</b>		
3.9	The Applicant shall fund and construct the following road works to the satisfaction of the Council and the Roads and Maritime Service: (a) Upgrade of the Botany Road / Foreshore Road / Penrhyn Road intersections to provide: i. Dual eastbound right turn lanes or a lengthened single right turn lane from Foreshore Road to Penrhyn Road; and (b) A westbound continuous slip left turn lane from Penrhyn Road to Foreshore Road. (c) Construction of a roundabout intersection at Penrhyn Road / Boat Ramp Access Road / Inter terminal Access Road. The roundabout shall be designed to accommodate a u-turn manoeuvre by a single B-double vehicle. (d) Construction of a new access road to the Penrhyn Boat Ramp.	Not Applicable
3.10	The Applicant shall complete the upgrade of the Foreshore Road / Penrhyn Road / Botany Road intersection within two (2) years of the date of this consent, unless otherwise agreed by the Director-General. Commencement of road construction works required under this consent shall not commence until the Applicant has consulted with the owner / occupier of the Caltex (within access from Penrhyn Road) and demonstrated to the satisfaction of the Director-General that the median strip closure on Penrhyn Road will not cause an access conflict at that development.	Not Applicable
3.11	The roadworkers in condition 3.9 of this consent shall be designed and constructed in accordance with RMS requirements and standards. Detailed design plans of the proposed road works shall be submitted to the RMS for approval prior to construction. Note: A plan checking fee and lodgement of a performance bond may be required from the Applicant prior to the release of the approved road design plans by the RMS.	Not Applicable
3.12	The shoulders of the new boat ramp access road shall be constructed with concrete edge strips.	Not Applicable
3.13	The new boat ramp access road shall be completed prior to the closure of the existing Penrhyn Road access to the boat ramp.	Not Applicable

<sup>7</sup> EPA General Term of Approval – L6.4;

<sup>8</sup> EPA General Term of Approval – L6.5

No.	Condition of Approval 453 - Detail	OEMP Section
<b>Transport Code of Conduct</b>		
3.14	Prior to the commencement of operations, the Applicant shall submit for the Director-General's approval a Transport Code of Conduct for the development. The Code shall outline the management of traffic impacts associated with the development and minimum requirements for the movement of heavy vehicles to and from the site. The Code shall address the requirements of Council and shall include, but not limited to: (a) restrictions to routes, where relevant; (b) restrictions to the hours of transport operations to avoid travelling through built-up areas late at night or at times of high traffic flows in those areas; and (c) minimum requirements for vehicle maintenance to address noise and exhaust emissions.	Not Applicable
<b>Parking</b>		
3.15	The Applicant shall ensure that any parking spaces within the boat ramp parking area, that are required for the construction of the new access road shall be replaced with an equivalent number and size of parking spaces.	Not Applicable
3.15A	All parking associated with construction shall be temporary, provided within construction compounds and located wholly within the site.	Not Applicable
3.15B	The site shall provide a maximum of 333 car parking spaces within two new carparks, of the total number of spaces, at least two shall be for visitors parking and one mobility impaired space provided, located adjacent to building entries and clearly delineated. All car parking, landscaping and bicycle parking shall be provided and designed in accordance with the <i>Port Botany Development Code 2012</i> .	Not Applicable
3.16	The staff and visitor's carpark shall be designed to comply with <i>AS2890.1 1993 Parking Facilities – Off-Street Car Parking</i> .	Not Applicable
3.17	Disable, visitor and service vehicle parking spaces shall be clearly signposted and designated in accordance with relevant Australian Standards.	Not Applicable
<b>Access and Internal Road Works</b>		
3.18	All driveways shall be clearly signposted and designed to accommodate the largest vehicle likely to use the site.	Not Applicable
3.19	Directional pavement arrows shall be installed on all internal roads.	6.7
3.20	The design of all internal roadways shall be wide enough to accommodate through traffic and turning two-way traffic.	6.7
3.21	The design of the truck marshalling areas, driveways, and sight distances shall comply with <i>AS 2890.2-2002 Parking Facilities – Off-Street Commercial Vehicle Facilities</i> .	Not Applicable
3.22	Vehicles associated with the development are not permitted to park, queue or stand on Penrhyn Road, Foreshore Road or the boat ramp car park and access road at any time.	Not Applicable
3.23	No parking shall be permitted on the internal roadways outside the designated parking areas.	6.7
3.24	All trucks entering the development shall be wholly contained within the site before being required to stop.	6.7
3.25	The use of landscaping shall not affect driver sight distance for vehicles entering or exiting the site.	6.10

No.	Condition of Approval 453 - Detail	OEMP Section
	<b>Water Quality Impacts</b>	
	<b>Erosion and Sediment Control</b>	
3.26	<sup>9</sup> The proposed works shall be carried out so that: (a) No materials are eroded, or likely to be eroded, are deposited, or likely to be deposited, on the bed or shore or into the waters of Botany Bay; and (b) No materials are likely to be carried by natural forces to the bed or shore or into the waters of Botany Bay.	Not Applicable
3.27	<sup>10</sup> Any material that does enter Botany Bay shall be removed immediately.	Not Applicable
3.28	<sup>11</sup> The Applicant shall prepare and implement a Soil and Water Management Plan, as required by condition 6.2 (a) of this consent, to manage erosion, sedimentation and other pollutants during construction of the proposed works. The plan shall be prepared by a suitably qualified person(s). Best practice methods shall be adopted for the on-site control of runoff, sediment and other pollutants during, and post, construction. The methods employed shall be in accordance with the relevant specifications and standards contained in the Department of Housing's Managing Urban Stormwater: Soils and Construction" Manual (1998) and any other relevant Council requirements.	Not Applicable
3.29	<sup>12</sup> Any material that is to be stockpiled on site shall be stabilised to prevent contamination, erosion or dispersal of the material. Consideration should be given to covering stockpiles when not in use. The erosion, sediment and pollution control system shall be effectively maintained at or above design capacity for the duration of the works and until such time as all ground disturbed by the works has been stabilised and rehabilitated so that it no longer acts as a source of sediment.	Not Applicable
3.30	<sup>13</sup> Demolition and construction works shall be carried out in a manner that minimises the potential for materials, including sediment and other pollutants to enter Botany Bay. In this regard, a combination of temporary measures such as tarpaulins, booms, silt screens and barriers may be required when carrying out particular works.	Not Applicable
3.31	All soil and/or vegetation disturbed or removed from the site shall be disposed of to, or stored at, an appropriate location where it cannot be washed off the site.	Not Applicable
3.32	All construction vehicles exiting the site, having had access to unpaved areas, shall depart via a wheel wash facility. Note: Under section 13TA of the Maritime Services Act, 1935, the Applicant is required to obtain the prior written approval of the Waterways Authority to pipe stormwater, excavate or remove soil, sand or other material from land within a distance of 10 metres from the mean highwater mark. Further details regarding this approval can be obtained from the Property Services Branch (Phone 9563 8808).	Not Applicable

<sup>9</sup> Waterways Authority General Terms of Approval;

<sup>10</sup> Waterways Authority General Terms of Approval;

<sup>11</sup> Incorporates Waterways Authority and EPA General Terms of Approval - O 4.1;

<sup>12</sup> & <sup>13</sup> Waterways Authority General Terms of Approval



No.	Condition of Approval 453 - Detail	OEMP Section												
<b>3</b>	<b>Environmental Performance</b>													
	<b>Pollution of Waters</b>													
3.33	<sup>14</sup> Except as may be expressly provided by a licence issued under the <i>Protection of the Environment Operations Act 1997</i> in relation of the development, section 120 of the <i>Protection of the Environment Operations Act 1997</i> shall be complied with and in connection with the carrying out of the development.	<b>6.2</b>												
	<b>Concentration Limits</b>													
3.34	<sup>15</sup> The concentration limit of a pollutant discharged at Point 1 of the existing licence, shall not exceed the concentration limits specified for that pollutant in the table in condition 3.36 of this consent.	<b>Not Applicable</b>												
3.35	<sup>16</sup> Where a pH quantity limit is specified in the table in condition 3.36 of this consent, the specified percentage of samples shall be within the specified ranges.	<b>Not Applicable</b>												
3.36	<sup>17</sup> To avoid any doubt, this condition does not authorise the discharge or emission of any other pollutants. <b>Discharge Location - Point 1</b> <table border="1"> <thead> <tr> <th>Pollutant</th><th>Unit of Measure</th><th>100% Concentration Limit</th></tr> </thead> <tbody> <tr> <td>Oil and Grease</td><td>mg/L</td><td>10</td></tr> <tr> <td>Total Suspended Solids</td><td>mg/L</td><td>30</td></tr> <tr> <td>pH</td><td>pH</td><td>6.5 – 8.5</td></tr> </tbody> </table>	Pollutant	Unit of Measure	100% Concentration Limit	Oil and Grease	mg/L	10	Total Suspended Solids	mg/L	30	pH	pH	6.5 – 8.5	<b>Not Applicable</b>
Pollutant	Unit of Measure	100% Concentration Limit												
Oil and Grease	mg/L	10												
Total Suspended Solids	mg/L	30												
pH	pH	6.5 – 8.5												
	<b>Acid Sulfate Solids</b>													
3.37	<sup>18</sup> In the event that acid sulfate soils are encountered during the works, all works with the potential to disturb the material are to cease. The Applicant shall notify the Waterways Authority immediately and prepare and submit an acid sulfate soils management plan to the Waterways Authority for approval prior to any work re-commencing. The management plan shall be prepared in accordance with the NSW Acid Sulfate Soils Manual.	<b>Not Applicable</b>												

<sup>14</sup> EPA General Terms of Approval - L 1.1 and A 2.1;

<sup>15</sup> EPA General Terms of Approval - L 3.1

<sup>16</sup> EPA General Terms of Approval - L 3.2,

<sup>17</sup> EPA General Terms of Approval - L 3.3;

<sup>18</sup> Waterways Authority - General Terms of Approval;

No.	Condition of Approval 453 - Detail	OEMP Section
3.38	<sup>19</sup> The Applicant shall not cause, permit, or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, reprocessing, or disposal; or any waste generated at the premises to be disposed at the premises, except as expressly permitted by a licence issued by the EPA under the <i>Protection of the Environment Operations Act 1997</i> . This condition only applies to the storage, treatment, processing, reprocessing, or disposal; or any waste generated at the premises if it requires an environment protection licence under the <i>Protection of the Environment Operations Act 1997</i> .	6.4
3.39	<sup>20</sup> Except as expressly permitted by a licence issued by the EPA under the <i>Protection of the Environment Operations Act 1997</i> , only the hazardous and/or industrial and/or Group A waste listed below may be generated and/or stored at the premises: (a) waste oil/water, hydrocarbons/water mixtures or emulsions; and (b) grease trap waste.	6.4
3.40	<sup>21</sup> The quantity of hazardous and/or industrial and/or Group A waste generated on the premises shall not exceed 200 tonnes per year.	6.4
3.41	<sup>22</sup> The quantity of hazardous and/or industrial and/or Group A waste stored on the premises shall not exceed 70 tonnes at any one time.	6.4
3.42	A designated area for the storage and collection of waste and recyclable materials shall be provided on the site. Details of this shall be provided in the Waste Management Plan required under condition 6.4 (d) of this consent.	6.4
3.43	All wastes and material generated on the site during construction and operation shall be classified in accordance with the EPA's <i>Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes</i> and be disposed of to a facility that may lawfully accept the waste.	6.4
3.44	The Applicant shall be responsible for involving and encouraging employees and contractors to minimise domestic waste production on site and to reuse/recycle where possible.	6.4
<b>Air Quality Impacts</b>		
<b>Dust Emissions</b>		
3.45	<sup>23</sup> The Applicant shall design, construct, operate and maintain the development in a manner which minimises or prevents the emission of dust from the site.	6.1
3.46	All trafficable areas and vehicle manoeuvring areas in or on the premises shall be maintained, at all times, in a condition that will minimise the generation, or emission from the premises, of windblown or traffic generated dust.	6.1

<sup>19</sup> EPA General Terms of Approval - L 5.1 and L 5.2

<sup>20</sup> EPA General Terms of Approval - L 5.3;

<sup>21</sup> EPA General Terms of Approval - L 5.4;

<sup>22</sup> EPA General Terms of Approval - L 5.5

<sup>23</sup> EPA General Terms of Approval - O 3.1

No.	Condition of Approval 453 - Detail	OEMP Section
3.47	During construction of the development, the Applicant shall ensure that all vehicles entering or leaving the site, carrying a load that may generate dust, are covered at all times, except during loading and unloading. Any such vehicles shall be covered or enclosed in a manner that will prevent emissions of dust from the vehicle.	Not Applicable
	<b>Ventilation</b>	
3.48	The details of any mechanical ventilation and/or air conditioning for the development must be certified by a competent person, in accordance with Council's requirements, the BCA and relevant Australian Standards, and to the satisfaction of the PCA prior to commencement of any work related to those activities.	Not Applicable
	<b>Hazard and Risk Impact</b>	
3.49	The Applicant shall not store or handle Dangerous Goods of 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).	6.5
3.50	At least two months prior to the commencement of the proposed development or within such further period as the Director-General may agree, the Applicant shall prepare and submit for the approval of the Director-General the studies set out under (a) to (d) below. (a) FINAL HAZARD ANALYSIS - A final hazard analysis (FHA) of the proposed development. The analysis should be prepared in accordance with the Department's Hazardous Industry Planning Advisory Paper No. 6, "Guidelines for Hazard Analysis"; (b) TRANSPORT OF HAZARDOUS MATERIALS -Arrangements covering the transport of hazardous materials including details of routes to be used for the movement of vehicles carrying hazardous materials to or from the proposed development. The study shall be carried out in accordance with the Department's draft "Route Selection Guidelines". Suitable routes identified in the study shall be used except where departures are necessary for local deliveries or emergencies. The study shall use the actual and projected dangerous goods movements from 1996/96 to 2016 to and from the site. In this regard particular attention is required to the future Class 2.3 toxic gases quantities, as detailed under condition 3.49 of this consent. (c) EMERGENCY PLAN - A comprehensive emergency plan and detailed emergency procedures for the proposed development. This plan shall include detailed procedures for the safety of all people inside and outside the development who may be at risk from the development. The plan shall be in accordance with the Department's Department of Infrastructure, Planning and Natural Resources Page 19 of 39 DA-453-12-2002-i Hazardous Industry Planning Advisory Paper No. 1, "Industry Emergency Planning Guidelines"; and (d) SAFETY MANAGEMENT SYSTEM - A document setting out a comprehensive safety management system, covering all operations on-site and associated transport activities involving hazardous materials. The document shall clearly specify all safety related procedures, responsibilities and policies, along with details of mechanisms for ensuring adherence to procedures. Records shall be kept on-site and shall be available for inspection by the Director-General upon request. The Safety Management System shall be developed in accordance with the Department's Hazardous Industry Planning Advisory Paper No. 9, "Safety Management".	2, 4.8, 6.5 and 6.7

No.	Condition of Approval 453 - Detail	OEMP Section
3.51	One month prior to the commencement of operation of the development, the applicant shall submit to the Director-General, a compliance report detailing compliance with conditions 3.49 and 3.50 of this consent, including: (a) dates of study submission, approval, and commencement of operations; (b) actions taken or proposed, to implement recommendations made in the studies; and (c) responses to each requirement imposed by the Director-General under condition 3.54 of this consent.	<b>Refer to - Pre-Operational Compliance Report (December 2015)</b>
	<b>Incident Report</b>	
3.52	Within 24 hours of any incident or potential incident with actual or potential significant off-site impacts on people or the biophysical environment, a report shall be supplied to the Department outlining the basic facts. A further detailed report shall be prepared and submitted following investigations of the causes and identification of necessary additional preventive measures. That report must be submitted to the Director-General no later than 14 days after the incident or potential incident. The Applicant shall maintain a register of accidents, incidents and potential incidents. The register shall be made available for inspection at any time by the independent hazard auditor, the Director-General and Council.	<b>4.4</b>
	<b>Hazard Audit</b>	
3.53	Twelve months after the commencement of operations of the proposed development or within such further period as the Director-General may agree, the Applicant shall carry out a comprehensive hazard audit of the proposed development and within one month of the audit submit a report to the Director-General. The audit shall be carried out at the Applicant's expense by a duly qualified independent person or team approved by the Director-General prior to commencement of the audit. Further audits shall be carried out every three years or as determined by the Director-General and a report of each audit shall be submitted to the Director-General within one month of the audit. Hazard audits shall be carried out in accordance with the Department's Hazardous Industry Planning Advisory Paper No. 5, "Hazard Audit Guidelines". The audit shall include a review of the site safety management system and a review of all entries made in the incident register since the previous audit.	<b>4.5</b>
	<b>Further Requirements</b>	
3.54	The Applicant shall comply with all reasonable requirements of the Director-General in respect of the implementation of any measures arising from the reports submitted in respect of conditions 3.50 (a) to (d) inclusive, within such time as the Director-General may agree.	<b>Not Applicable</b>
3.55	<sup>24</sup> Foreshore landscaping shall be comprised of locally indigenous species, which represents the original plant communities that would have been found along the foreshore in the vicinity of the site.	<b>Not Applicable</b>
3.56	<sup>25</sup> A suitably detailed landscape plan shall be provided to the Waterways Authority prior to a Part 3A Permit being issued. The plan shall identify the location and species of trees at the site, measures to protect them from damage during the works and specific details of additional landscaping to be carried out including location and numbers of species to be planted.	<b>Not Applicable</b>

<sup>24</sup> & <sup>25</sup> Waterways Authority General Terms of Approval

No.	Condition of Approval 453 - Detail	OEMP Section
3.57	<sup>26</sup> A Vegetation Management Plan shall be prepared in accordance with condition 6.4 (b) of this consent. The Plan shall detail the proposed methods to be used to maintain the revegetated areas after completion of the works. The Plan shall be submitted to the Waterways Authority prior to a Part 3A Permit being issued.	6.10
3.58	All noxious weeds, as listed under the NSW Noxious Weed Act 1993, on site shall be removed during construction and operation of the development.	6.10
3.59	Appropriate weed management for the site, especially landscaped areas, shall be undertaken for the life of the development. Details of this shall be included in the Vegetation Management Plan required under condition 6.4 (b).	6.10
3.60	The Applicant shall install, operate and maintain an irrigation system throughout all landscaped areas. Such a system shall provide full coverage to all landscaped areas with no overspray onto hard surfaces. Details of the irrigation system proposed shall be included in the Vegetation Management Plan required under condition 6.4(b) of this consent. The system shall comply with all relevant Australian Standards. Note: It is recognised that some irrigation is necessary, however, the Applicant is encouraged to reduce the dependence on irrigation by planting trees and shrubs that are endemic to the area and capable of withstanding low levels of water as reflected in condition 3.60 of this consent.	Not Applicable
3.61	The Applicant must ensure that all external lighting associated with the development is mounted, screened, and directed in such a manner so as not to create a nuisance to surrounding properties or roadways. The lighting shall be the minimum level of illumination necessary and shall comply with <i>AS 4282 1997 - Control of the Obtrusive Effects of Outdoor Lighting</i> .	6.10
<b>Staff Induction</b>		
3.62	The development's staff induction program shall incorporate special instructions relating to noise control and related "on the job" training, as deemed appropriate. Such training shall ensure that all staff involved in the operation of the terminal's mobile equipment, such as the straddle carriers, reach stackers and forklift trucks, and the gantry cranes and quay cranes, are aware of the need to ensure the following: (a) The correct placement and/or lowering of containers to minimise potential adverse noise impacts and specifically the control of transient impact noise; (b) The site's environment officer shall carry out routine inspections during the day, evening and night. Individual operations staff shall be assessed to determine the performance rating on each staff member and his or her duties; and (c) That each employee is made aware that one of the conditions of his or her continued employment shall be compliance with the site's noise emission goals and guidelines relating to the operational impact noise reduction. Those documented conditions will form an integral part of the project's Environmental Quality Assurance Program.	4.3

<sup>26</sup> Waterways Authority General Terms of Approval

No.	Condition of Approval 453 - Detail	OEMP Section
	<b>Telephone Hotline</b>	
3.63	<p>Prior to the commencement of construction, the Applicant shall establish and list with the telephone company a 24-hour free call complaints contact telephone number. The Applicant shall provide the telephone number to the Department, EPA and Council and written notification shall be given to the surrounding residents.</p> <p>The aim of the complaints line is to enable any member of the action to the complaint within two hours, 24 hours per day for the duration of construction and operation of the development.</p>	4.6
	<b>Complaints Register</b>	
3.64	<p>The Applicant shall record details of all complaints received in an up-to-date Complaints Register. The Register shall record, but not necessarily be limited to:</p> <ul style="list-style-type: none"> <li>(a) the date and time of the complaint;</li> <li>(b) the means by which the complaint was made;</li> <li>(c) any personal details of the complainant that were provided, or if no details were provided, a note to that effect;</li> <li>(d) the nature of the complaints;</li> <li>(e) any action(s) taken by the Applicant in relation to the complaint, including any follow-up contact with the complainant; and</li> <li>(f) if no action was taken by the Applicant in relation to the complaint, the reason(s) why no action was taken.</li> </ul> <p>The Complaints Register shall be made available for inspection by the Director-General, EPA and Council upon request. The Applicant shall also make summaries of the register, without details of the complainants, available for public inspection.</p>	4.6
3.65	The payment of a Development Control fee to Council in accordance with Council's Management Plan, prior to the issue of the Construction Certificate. Development Control \$660.00	Not Applicable
<b>4</b>	<b>Utilities and Public Works</b>	
4.1	The Applicant shall, prior to construction commencing, identify (including, but not limited to the position and level of service) all public utility services on the site, roadway, nature strip, footpath, public reserve or any public areas that are associated with, and/or adjacent to the site, and/or are likely to be affected by the construction and operation of the development.	Not Applicable
4.2	The Applicant shall, prior to construction commencing, consult with the relevant provider of the utilities identified in condition 4.1 of this consent and make arrangements to adjust and/or relocate their services as required. The cost of any such adjustment and/or relocation of services shall be borne by the Applicant.	Not Applicable
4.3	Prior to commencement of construction, the Applicant shall provide documentary evidence from the utility providers identified in condition 4.1 of this consent, to the Director-General, confirming that their requirements have been satisfied.	Not Applicable
4.4	All external work carried out on public property shall be in accordance with Council's requirements, except as otherwise permitted by this consent.	Not Applicable



No.	Condition of Approval 453 - Detail	OEMP Section
4.5	Prior to the issue of an Occupation Certificate, the Applicant shall obtain from Sydney Water a Section 73 Compliance Certificate under the Sydney Water Act 1994.	Not Applicable
<b>5</b>	<b>Environmental Monitoring</b>	
	<b>General Monitoring Requirements</b>	
5.1	The results of any monitoring required to be conducted by the EPA's general terms of approval, or a licence under the <i>Protection of the Environment Operations Act 1997</i> , in relation to the development or in order to comply with the load calculation protocol shall be recorded and retained as set out in conditions 5.2 and 5.3 of this consent.	6
5.2	All records required to be kept by the licence shall be: (a) In a legible form, or in a form that can readily be reduced to a legible form (b) Kept for at least four years after the monitoring or event to which they relate took place; and (c) Produced in a legible form to any authorised officer of the EPA who asks to see them.	6
5.3	The following records shall be kept in respect of any samples required to be collected: (a) The date(s) on which the sample was collected; (b) The time(s) at which the sample was collected; (c) The point at which the sample was taken; and (d) The name of the person who collected the sample.	6

No.	Condition of Approval 453 - Detail	OEMP Section																																								
	Requirement to Monitor Concentrations of Pollutants Discharged																																									
5.4	<p>The Applicant shall monitor the discharge of pollutants at monitoring location Point 2. The Applicant shall monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in column 1 of the Table below. The Applicant shall use the sampling methods, units of measure, and sample at the frequency, specified in the columns of the Table below.</p> <p><b>Monitoring Location - Point 2: Water and Land</b></p> <table><tr><th>POLLUTANT</th><th>UNITS OF MEASURE</th><th>FREQUENCY</th><th>SAMPLING METHOD</th></tr><tr><td>Oil and Grease</td><td>mg/L</td><td>Special Frequency 1</td><td>Representative</td></tr><tr><td>Total Suspended Solids</td><td>mg/L</td><td>Special Frequency 1</td><td>Representative</td></tr><tr><td>Turbidity</td><td>NTU</td><td>Special Frequency 1</td><td>Representative</td></tr><tr><td>Chemical Oxygen Demand</td><td>mg/L</td><td>Special Frequency 1</td><td>Representative</td></tr><tr><td>Total Organic Carbon</td><td>mg/L</td><td>Special Frequency 1</td><td>Representative</td></tr><tr><td>Total Petroleum Hydrocarbons</td><td>mg/L</td><td>Special Frequency 1</td><td>Representative</td></tr><tr><td>Lead</td><td>mg/L</td><td>Special Frequency 1</td><td>Representative</td></tr><tr><td>Zinc</td><td>mg/L</td><td>Special Frequency 1</td><td>Representative</td></tr><tr><td>pH</td><td>pH</td><td>Special Frequency 1</td><td>Representative</td></tr></table> <p>Special Frequency 1 means a sample must be collected and analysed not more than one hour before the commencement of any discharge on any day and a further sample of the wastes being discharged not more than one hour after the commencement of the discharge on that day.</p> <p>Note: The monitoring results collected in compliance with condition 5.4 for Point 2 can be used to determine compliance with the concentration limit specified in Condition 3.36 for discharge from Point 1.</p>	POLLUTANT	UNITS OF MEASURE	FREQUENCY	SAMPLING METHOD	Oil and Grease	mg/L	Special Frequency 1	Representative	Total Suspended Solids	mg/L	Special Frequency 1	Representative	Turbidity	NTU	Special Frequency 1	Representative	Chemical Oxygen Demand	mg/L	Special Frequency 1	Representative	Total Organic Carbon	mg/L	Special Frequency 1	Representative	Total Petroleum Hydrocarbons	mg/L	Special Frequency 1	Representative	Lead	mg/L	Special Frequency 1	Representative	Zinc	mg/L	Special Frequency 1	Representative	pH	pH	Special Frequency 1	Representative	Not Applicable
POLLUTANT	UNITS OF MEASURE	FREQUENCY	SAMPLING METHOD																																							
Oil and Grease	mg/L	Special Frequency 1	Representative																																							
Total Suspended Solids	mg/L	Special Frequency 1	Representative																																							
Turbidity	NTU	Special Frequency 1	Representative																																							
Chemical Oxygen Demand	mg/L	Special Frequency 1	Representative																																							
Total Organic Carbon	mg/L	Special Frequency 1	Representative																																							
Total Petroleum Hydrocarbons	mg/L	Special Frequency 1	Representative																																							
Lead	mg/L	Special Frequency 1	Representative																																							
Zinc	mg/L	Special Frequency 1	Representative																																							
pH	pH	Special Frequency 1	Representative																																							

No.	Condition of Approval 453 - Detail	OEMP Section
5.5	<p>Monitoring for the concentration of a pollutant emitted to the air required to be conducted by the EPA's general terms of approval, or a licence under the <i>Protection of the Environment Operations Act 1997</i>, in relation to the development or in order to comply with the load calculation protocol shall be done in accordance with:</p> <ul style="list-style-type: none"> <li>(a) Any methodology which is required by or under the POEO Act 1997 to be used for the testing of the concentration of the pollutant; or</li> <li>(b) If no such requirement is imposed by or under the POEO Act 1997, any methodology which the general terms of approval or a condition of the licence or the protocol (as the case may be) requires to be used for that testing; or</li> <li>(c) If no such requirement is imposed by or under the POEO Act 1997 or by the general terms of approval or a condition of the licence or the protocol (as the case may be), any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place.</li> </ul> <p>Note: The <i>Clean Air (Plant and Equipment) Regulation, 1997</i> requires testing for certain purposes to be conducted in accordance with test methods contained in the publication "<i>Approved Methods for the sampling and Analysis of Air Pollutants in NSW</i>".</p>	Not Applicable
5.6	<sup>32</sup> For each discharge point or utilisation area specified in condition 3.34 of this consent, the Applicant shall monitor the volume of liquids discharged to water or applied to the area.	Not Applicable
<b>Water Quality Monitoring and Compliance Reporting</b>		
5.7	<p><sup>33</sup> Within 6 months of consent being granted and every 6 months thereafter, the Applicant shall submit a report to the EPA containing the following information:</p> <ul style="list-style-type: none"> <li>(a) A pollutant inventory that qualifies waters discharged from the site. This shall include identification of all water pollutants likely to be discharged from each final stormwater pit on the 11 stormwater lines serving the container handling operation area within the site. The water pollutants shall include but are not limited to: total phenolics, polycyclic aromatic hydrocarbons, oil and grease, total petroleum hydrocarbons, total organic carbon, biochemical oxygen demand, chemical oxygen demand, pH, zinc, copper, lead, cobalt, chromium, manganese, cobalt, nickel and iron;</li> <li>(b) Identify all existing and potential sources of water pollutants from the areas that drain into the 11 stormwater lines serving the container handling operation area within the site;</li> <li>(c) Quantify the concentration of pollutant types identified as part of the pollutant inventory as prescribed in subclause (a) of this condition. The quantification of pollutants shall be undertaken by collecting a grab sample within the first hour of a discharge and at hourly intervals after the commencement of that discharge for at least three hours after the initial sample was taken; and</li> <li>(d) A statement of whether identification and quantification of pollutants in stormwater discharges that have been developed in accordance with the water quality objectives as specified in the Water Quality Guidelines for Fresh and Marine Waters published by Australian and New Zealand Environment and Conservation Council.</li> </ul>	Not Applicable

<sup>32</sup> EPA General Terms of Approval – M6.1; <sup>33</sup> EPA General Terms of Approval – E1.1

No.	Condition of Approval 453 - Detail	OEMP Section
	<b>Noise Monitoring and Compliance Reporting</b>	
5.8	<p><sup>34</sup> Within 6 months of consent being granted and every 6 months thereafter, the Applicant shall submit a report to the EPA containing the following information:</p> <ul style="list-style-type: none"> <li>(a) Identification and ranking by sound power level (in 1/3 octave bands for any source with potentially undesirable noise character) all significant noise sources on site. This is to include container impact noise(s), audible alarms, all significant plant and equipment;</li> <li>(b) Identification of all noise sensitive receivers that may be affected by the operation, and select an appropriate number of representative receiver locations to represent all sensitive receivers;</li> <li>(c) The results of all noise measurements undertaken to assess compliance with condition 3.3 of this consent;</li> <li>(d) A statement of whether noise levels from all activities at the site comply with the specified noise limits at the representative receiver locations. The statement shall take into account tonal, impulsive and short duration noises originating from the facility;</li> <li>(e) Where noise levels have been assessed to exceed licence limits, a statement explaining the reason why this has taken place; and</li> </ul> <p>A statement of what feasible and reasonable additional measures may be implemented to further reduce noise levels below that specified in the licence.</p>	6.6

<sup>34</sup> EPA General Terms of Approval – E1.1

No.	Condition of Approval 453 - Detail	OEMP Section
<b>6</b>	<b>Environmental Management</b>	
	<b>Construction Environmental Management Plan (CEMP)</b>	
6.1	<p>The Applicant shall prepare and implement a Construction Environmental Management Plan (CEMP) to outline environmental management practices and procedures to be followed during the construction of the development. The Plan shall include, but not necessarily be limited to:</p> <ul style="list-style-type: none"> <li>(a) a description of all activities to be undertaken on the site during construction of the development, including an indication of stages of construction, where relevant;</li> <li>(b) statutory and other obligations that the Applicant is required to fulfil during construction, including all approvals, consultations and agreements required from authorities and other stakeholders, and key legislation and policies;</li> <li>(c) specific consideration of measures to address any requirements of the Department, EPA, Waterways Authority and Council during construction;</li> <li>(d) details of how the environmental performance of the construction works will be monitored, and what actions will be taken to address identified adverse environmental impacts;</li> <li>(e) a description of the roles and responsibilities for all relevant employees involved in the construction of the development;</li> <li>(f) the Management Plans listed under condition 6.2 of this consent.</li> </ul> <p>The CEMP shall be submitted for the approval of the Director-General prior to the commencement of construction of the development. Construction shall not commence until written approval has been received from the Director-General. Upon receipt of the Director-General's approval, the Applicant shall supply a copy of the CEMP to the EPA, Waterways Authority and Council as soon as practicable.</p>	<b>Not Applicable</b>
	<b>Soil and Water Management Plan</b>	
6.2a	A Soil and Water Management Plan to detail measures to minimise erosion during construction of the development. The Plan shall include, but not necessarily be limited to...:	<b>Not Applicable</b>
	<b>Construction Noise Management Plan</b>	
6.2b	A Construction Noise Management Plan to outline measures to minimise impacts from the construction of the development on local noise levels. The Plan shall include, but not necessarily be limited to...:	<b>Not Applicable</b>
	<b>Traffic Management Plan</b>	
6.2c	A Traffic Management Plan (TMP) shall be prepared to the satisfaction of the Director-General and submitted at least two weeks prior to the commencement of construction of, or the modification to, of the truck and rail portals. The TMP shall specifically address the management of construction traffic and the alternate arrangements for truck/rail movements around the Terminal during construction.	<b>Not Applicable</b>

No.	Condition of Approval 453 - Detail	OEMP Section
<b>Operation Environmental Management Plan (OEMP or Operational EMP)</b>		
6.3	<p>The Applicant shall prepare and implement an Operation Environmental Management Plan (OEMP) to detail an environmental management framework, practices and procedures to be followed during the operation of the development. The Plan shall include, but not necessarily be limited to:</p> <ul style="list-style-type: none"> <li>i. identification of all statutory and other obligations that the Applicant is required to fulfil in relation to operation of the development, including all consents, licences, approvals and consultations;</li> <li>ii. a description of the roles and responsibilities for all relevant employees involved in the operation of the development;</li> <li>iii. overall environmental policies and principles to be applied to the operation of the development;</li> <li>iv. standards and performance measures to be applied to the development, and a means by which environmental performance can be periodically reviewed and improved;</li> <li>v. management policies to ensure that environmental performance goals are met and to comply with the conditions of this consent;</li> <li>vi. the Management Plans listed under condition 6.4 of this consent; and</li> <li>vii. the environmental monitoring requirements outlined under section 5 (Environmental Monitoring) of this consent, inclusive.</li> </ul> <p>The OEMP shall be submitted for the approval of the Director-General no later than one month prior to the commencement of operation of the development, or within such period as otherwise agreed by the Director-General. Operation shall not commence until written approval has been received from the Director-General. Upon receipt of the Director-General's approval, the Applicant shall supply a copy of the OEMP to the EPA, Waterways Authority and Council as soon as practicable.</p>	Entire OEMP
6.4	As part of the OEMP for the development, required under condition 6.3 of this consent, the Applicant shall prepare and implement the following Management Plans:	6
<b>Stormwater Management Plan</b>		
6.4a	<p>A Stormwater Management Plan to outline environmental management practices and procedures to be followed during the operation of the development in order to control and manage site drainage and stormwater. The Plan shall include, but not necessarily be limited to:</p> <ul style="list-style-type: none"> <li>i. detailed plans showing the design of the stormwater control infrastructure;</li> <li>ii. demonstration that the stormwater control infrastructure will conform with, or exceed all relevant Council requirements and guidelines;</li> <li>iii. description of the procedures for the installation, inspection and maintenance of the stormwater control infrastructure, including stormwater pollution control devices; and</li> <li>iv. description of the procedures to be undertaken if any non-compliance is detected.</li> </ul>	6.2



No.	Condition of Approval 453 - Detail	OEMP Section
<b>Vegetation Management Plan</b>		
6.4b	<p>A Vegetation Management Plan to outline measures to ensure appropriate development and maintenance of landscaping on the site and revegetation in the vicinity of the boat ramp access road. The Plan shall include, but not necessarily be limited to:</p> <ul style="list-style-type: none"> <li>i. details of all landscaping to be undertaken on the site and revegetation in the boat ramp access road area, including details of additional features such as soil and mulch details, irrigation details, retaining wall details, fencing details, details of hard surfaces, and any other landscape elements in sufficient detail to fully describe the proposed landscape works;</li> <li>ii. details of existing and proposed utilities, as they relate to the development;</li> <li>iii. maximisation of flora species endemic to the locality in landscaping the site;</li> <li>iv. details of existing and proposed utilities, as they relate to the development;</li> <li>v. maximisation of flora species endemic to the locality in landscaping the site;</li> <li>vi. details of the proposed weed management system;</li> <li>vii. identification and details of staff recreation areas;</li> <li>viii. details of car parking and measures to prevent vehicle encroachment onto landscaped areas; and</li> <li>ix. a program to ensure that all landscaped and revegetated areas are maintained in a tidy, healthy state.</li> </ul>	6.10
<b>Transport Management Plan</b>		
6.4c	<p>A Transport Management Plan to outline management of traffic conflicts associated with the operation of the development. The Plan shall include, but not necessarily be limited to:</p> <ul style="list-style-type: none"> <li>i. details of measures that would be implemented to minimise noise and amenity impacts on residential areas resulting from heavy vehicle movements;</li> <li>ii. outlines the monitoring procedures for major truck routes inbound and outbound from the site through the City of Botany Bay, as well as destinations within the City of Botany Bay;</li> <li>iii. procedures for monitoring the effectiveness and suitability of these measures, particularly the periodic and random monitoring of heavy vehicle routes; and</li> <li>iv. details of additional measures that would be implemented should non-compliance be detected.</li> </ul>	6.7

No.	Condition of Approval 453 - Detail	OEMP Section
<b>Waste Management Plan</b>		
6.4d	<p>A Waste Management Plan to outline measures to manage resource consumption resulting from the operation of the development. The Plan shall meet the requirements of Council, should there be any. The Plan shall include, but not necessarily be limited to:</p> <ul style="list-style-type: none"> <li>i. identification of the type and quantities of waste that would be generated;</li> <li>ii. description of measures and actions to be taken to minimise waste generated by the operation of the development;</li> <li>iii. description of how waste would be handled and stored during operation, and reused, recycled and, if necessary, appropriately treated and disposed of in accordance with the EPA's guidelines Assessment, Classification and Management of Liquid and Non-Liquid Waste; and</li> <li>iv. details of programs for involving and encouraging employees and contractors to minimise domestic waste production on the site and reuse/recycle where possible.</li> </ul>	6.4
<b>Operational Noise Management Plan</b>		
6.4e	<p>An Operational Noise Management Plan to outline measures to minimise impacts from the operation of the development on local noise levels. The Plan shall include, but not necessarily be limited to:</p> <ul style="list-style-type: none"> <li>i. identification of all major sources of noise that may be emitted as a result of the operation of the development;</li> <li>ii. specification of the noise criteria as it applies to the particular activity;</li> <li>iii. procedures for the monitoring of noise emissions;</li> <li>iv. protocols for the minimisation of noise emissions;</li> <li>v. description of procedures to be undertaken if any non-compliance is detected;</li> <li>vi. application of appropriate noise control measures to all the lifting equipment (gantry cranes, forklift trucks, etc.) that are proposed to be used on the site; and</li> <li>vii. the powering-down of locomotives standing on the rail sidings on the site until such time as the train is about to depart the site.</li> </ul>	6.6
6.5	<p>Within three years of the commencement of operation, and at least every three years thereafter, the Applicant shall undertake a formal review of the OEMP required under condition 6.3 of this consent. The review shall ensure that the OEMP is up-to-date and all changes to procedures and practices since the previous review have been fully incorporated into the OEMP. The Applicant shall notify the Director-General of completion of each review, and shall supply a copy of the updated OEMP to the Director-General, EPA, Waterways Authority and Council on request.</p>	5

No.	Condition of Approval 453 - Detail	OEMP Section
	<b>Annual Compliance Report</b>	
6.6	<p>Within twelve months of the date of this consent, and annually thereafter, unless the Director-General directs otherwise, the Applicant shall submit a Compliance Report to the Director-General. The Compliance Report shall:</p> <ul style="list-style-type: none"> <li>(a) Identify all the standards, performance measures, and statutory requirements the development is required to comply with, including the conditions of this consent;</li> <li>(b) Review the environmental performance of the development to determine whether it is complying with these standards, performance measures, and statutory requirements.</li> <li>(c) Identify all the occasions during the previous year when these standards, performance measures, and statutory requirements have not been complied with;</li> <li>(d) Include a copy of the Complaints Register for the preceding twelve month period and indicate what actions were taken (or are being taken) to address complaints;</li> <li>(e) Include the detailed reporting from any monitoring requirements, and identify any trends in the monitoring over the life of the project; and</li> <li>(f) Where non-compliance is occurring, describe what actions will be taken to ensure compliance, who will be responsible for carrying out these actions, and when these actions will be implemented.</li> </ul> <p>(c) The Director-General may require the Applicant to address certain matters identified in the Annual Compliance Report. Any action required to be undertaken shall be completed within such period as the Director-General may agree. The Applicant shall provide a copy of the Annual Compliance Report to the EPA and Council. The report shall be made available to the public on request.</p>	4.4

No.	Condition of Approval 453 - Detail	OEMP Section
<b>Independent Environmental Audit</b>		
6.7	<p>Within 12 months of commissioning the development and every three years thereafter, unless the Director-General directs otherwise, the Applicant must commission and pay the full cost of an Independent Environmental Audit. The Independent Environmental Audit shall:</p> <ul style="list-style-type: none"> <li>(a) Be conducted by a suitably qualified, experienced, and independent person whose appointment has been endorsed by the Director-General;</li> <li>(b) Be consistent with ISO 14010 – Guidelines and General Principles for Environmental Auditing, and ISO 14011 – Procedures for Environmental Auditing, or updated versions of these guidelines/manuals;</li> <li>(c) Assess the environmental performance of the development, and its effects on the surrounding environment;</li> <li>(d) Assess whether the development is complying with the relevant standards, performance measures, and statutory requirements;</li> <li>(e) Review the adequacy of the Applicant’s Environmental Management Plan, and Environmental Monitoring Program; and, if necessary</li> <li>(f) Recommend measures or actions to improve the environmental performance of the plant, and/or the environmental management and monitoring systems.</li> </ul>	4.5
6.8	<p>Within 2 months of commissioning the audit, the Applicant must submit a copy of the audit report to the Director-General. After reviewing the report, the Director-General may require the Applicant to address certain matters identified in the report. The Applicant must comply with any reasonable requirements of the Director-General.</p>	4.5
<b>EPA Annual Return</b>		
6.9	<p>The Applicant shall provide an annual return to the EPA in relation to the development as required by any licence under the <i>Protection of the Environment Operations Act 1997</i> in relation to the development. In the return the Applicant shall:</p> <ul style="list-style-type: none"> <li>(a) report on the annual monitoring undertaken (where the activity results in pollutant discharges);</li> <li>(b) provide a summary of complaints relating to the development;</li> <li>(c) report on compliance with licence conditions; and</li> <li>(d) provide a calculation of licence fees (administrative fees and, where relevant, load based fees) that are payable.</li> </ul> <p>If load-based fees apply to the activity the Applicant will be required to submit load based fee calculation worksheets with the return.</p>	4.4
6.10	<p>Where standards, guidelines or other documents are referred to in the conditions, the latest version of these standards, guidelines or documents shall apply, unless otherwise agreed by the Director-General.</p>	4.4

No.	Condition of Approval 453 - Detail	OEMP Section
<b>7</b>	<b>Requirements of Botany Bay Council</b>	
	<b>Vibration</b>	
7.1	The construction and use of the premises shall not give rise to transmission of vibration at any affected premises that exceeds the vibration in buildings criteria outlined in the NSW EPA Environmental Noise Control Manual.	<b>6.6</b>
7.2	All machinery shall be installed and/or housed in such a manner as to minimise the emission of noise and transmission of vibration outside the premises.	<b>6.6</b>
7.3	Vibration levels induced by the use of the premises or any equipment or service associated with the premises shall not exceed 1mm/sec peak particle velocity when measured at the footing of any adjoining occupied building.	<b>6.6</b>
	<b>Storage of Chemicals / Dangerous Goods (Other than Shipping Containers)</b>	
7.4	The storage and handling of flammable and combustible liquids for use on the site (other than shipping containers) shall be in accordance with <i>Australian Standard AS1940-1993 The Storage and Handling of Flammable and Combustible Liquids</i> .	<b>6.5</b>
	<b>Storage of Waste Oil</b>	
7.5	Waste oil shall be stored in a covered and bunded area prior to offsite recycling/disposal. Copies of receipts for the recycling of oil shall be kept onsite and made available to Council on request.	<b>6.4</b>
	<b>Fuel Tanks and Fuel Filling Areas</b>	
7.6	The fuel tank and fuel filling area shall be designed and operated in accordance with the Code of Practice for the Design, Installation and Operation of Underground Petroleum Storage Systems by the Australian Institute of Petroleum (CP4-1998) and <i>AS1940: 1993 The Storage and Handling of Flammable and Combustible Liquids</i> .	<b>6.5</b>
	<b>Fuel Bowsers</b>	
7.7	Fuel bowsers and service areas shall comply with the EPA's Environmental Guideline: Surface Water Management on the Covered Forecourt Areas of Service Stations.	<b>6.2</b>
	<b>Bunding – Multiple Containers (Excluding Shipping Containers)</b>	
7.8	The area used for the storage of chemicals/liquids in containers (other than shipping containers) shall be bunded. The bund (walls and floor) shall be constructed of impervious materials. The bund walls shall be a minimum of 100 mm high and be of a sufficient volume to contain 25% of the maximum volume of liquids likely to be stored within the bund. The bund shall be designed and installed in accordance with <i>AS1940-1993 The Storage and Handling of Flammable and Combustible Liquids</i> .	<b>6.2</b>

No.	Condition of Approval 453 - Detail	OEMP Section
	<b>Bunding - Tank</b>	
7.9	The area used for the storage of chemicals/liquids in tanks shall be bunded. The bund (walls and floor) shall be constructed of impervious materials and shall be of sufficient volume to contain at least 110% of the volume of the tank(s). The bund shall be designed and installed in accordance with <i>AS1940-1993 The Storage and Handling of Flammable and Combustible Liquids</i> .	6.2
	<b>Maintenance of Bunded Areas</b>	
7.10	Bunded areas shall be properly maintained and all spillages and/or wastes within the bunded areas cleaned up as soon as practicable and disposed of in a manner that does not pollute waters.	6.2
	<b>Traffic Bund</b>	
7.11	All service entries to workshop areas shall be provided with a trafficable bund with a minimum height of 100 mm to prevent any spillage exiting the workshop area and entering the stormwater system.	6.2
	<b>Spill Clean-up</b>	
7.12	Sufficient supplies of appropriate absorbent materials shall be kept on site to recover any liquid spillage. Liquid spills shall be cleaned up using dry methods, by placing absorbent material on the spill, and sweeping or shovelling the material into a secure bin. Absorbent materials used to clean up spills shall be disposed of to an appropriately licensed waste facility.	6.2
	<b>Emergency Spill Response Management Plan</b>	
7.13	The Applicant shall develop an Emergency Response and Incident Management Plan in consultation with the EPA and Council. The Plan must be approved by the Director-General prior to the commencement of operations and shall include the following: (a) list of chemicals and maximum quantities to be stored at the site; (b) identification of potentially hazardous situations; (c) procedure for incident reporting; (d) details of spill stations and signage; (e) containment and clean-up facilities and procedures; and (f) the roles of all staff in the Plan and details of staff training.	4.8



No.	Condition of Approval 453 - Detail	OEMP Section
<b>Automotive / Workshop</b>		
7.14	All servicing, mechanical repairs and detailing shall be conducted in a covered, bunded work area. All work areas, including workshops and lube bays, shall be graded into collection sumps and/or grated drains such that surface effluent generated within the workshop area is directed into a dedicated drainage system and disposed of to sewer in accordance with a Trade Waste Agreement from Sydney Water or collected for reuse/disposal by an EPA licensed waste contractor.	6.2
<b>Storage of Mechanical Parts</b>		
7.15	Automotive parts in contact with any automotive fluid shall be stored in a covered, bunded area that is graded into collection sumps and/or grated drains which are directed into a dedicated drainage system and disposed to sewer in accordance with a Trade Waste Agreement from Sydney Water or collected for reuse/disposal by an EPA licensed waste contractor.	6.2
<b>Spray Painting</b>		
7.16	All spray painting is to be carried out in a spray booth constructed and ventilated in accordance with AS 1668.2-2002 – <i>The Use of Mechanical Ventilation and Air-Conditioning</i> in Buildings. Exhausts from the spray booth shall be discharged through a single stack with a minimum height of 3 metres above the ridge of the building. The stack shall be located not less than 6 metres from any fresh air intake or openable window. Disposal of waste water from wet scrubbing shall be disposed of in accordance with Sydney Water's Trade Waste Policy and Management Plan.	6.1
<b>Maintenance of Filters</b>		
7.17	All spray booth filters shall be regularly maintained to ensure emissions of air pollutants are minimised.	Not Applicable
<b>Stormwater</b>		
<b>Vehicle Wash Bay</b>		
7.18	Washing of vehicles shall be conducted in a wash bay that is roofed and bunded to exclude rainwater. The wash bay shall be installed in accordance with Sydney Water's requirements. A Permission to Discharge Trade Wastewater permit shall be obtained from Sydney Water before discharge to sewer commences. The wash bay shall be regularly cleaned and maintained. Alternative water management and disposal options may be appropriate where water is recycled, minimised or re-used on the site.	6.4
<b>Signage on Stormwater Drains</b>		
7.19	Signs shall be displayed adjacent to all stormwater drains on the premises indicating that only clean water is allowed to enter these drains. Examples of possible signage include: 'Clean Rainwater Only', 'Clean water only - NO waste' or 'H <sub>2</sub> O only'.	6.2

No.	Condition of Approval 453 - Detail	OEMP Section
	<b>Maintenance of Stormwater Treatment Devices</b>	
7.20	All wastewater and stormwater treatment devices (including drainage systems, sumps and traps) shall be regularly maintained in order to remain effective. All solid and liquid wastes collected from the devices shall be disposed of in a manner that does not pollute waters.	6.2
	<b>Wastewater Recycling for Vehicle Washing</b>	
7.21	<p>All vehicle washing bays that recycle filtered and treated wastewater for re-use for vehicle washing shall meet the following requirements:</p> <ul style="list-style-type: none"> <li>(a) Have an appropriate method for the removal of contaminants such as grease, oil, sediment and cleaning agents before reuse of the wastewater and have an appropriate method for the disposal of wastewater contaminants. Have a floor that is sealed and graded to an internal drainage point, so that all wastewater and surface spillage is directed and drains to the approved treatment point;</li> <li>(b) Is roofed and bunded so that all uncontaminated stormwater from the roof areas and uncovered areas, are directed away from the bay;</li> <li>(c) At a minimum the bay constructed with a minimum 20 mm bund around the perimeter of the bay;</li> <li>(d) At a minimum the bay should be protected from the entry of external surface waters, by either; a minimum 2% change in grade; or combination of a minimum 2% grade change and a grated drainage system;</li> <li>(e) At a minimum the bay should have a roof that has a minimum height of 2.5m;</li> <li>(f) All uncontaminated stormwater/rainwater must be directed to the dedicated stormwater drainage systems;</li> <li>(g) Ensure all contaminants removed from the recycled wastewater are disposed of appropriately;</li> <li>(h) Have an appropriately designed wastewater/recycled water storage tank;</li> <li>(i) All contaminants and gross solids removed from the recycled water are disposed of appropriately;</li> <li>(j) Ensure that the wastewater recycling system is functioning as intended; and</li> <li>(k) Ensure that all wastewater is retained within the recycling system.</li> </ul>	6.4

No.	Condition of Approval 453 - Detail	OEMP Section
	<b>Removal Off-Site by an Authorised Liquid Waste Disposal Contractor</b>	
7.22	<p>All vehicle washing bays that will have all wastewater removed off site shall meet the following requirements:</p> <ul style="list-style-type: none"> <li>(a) Have a floor that is sealed and graded to an internal drainage point, so that all wastewater and surface spillage is directed and drains to the approved treatment and disposal point;</li> <li>(b) Roofed and bunded so that all uncontaminated stormwater from the roof areas and uncovered areas, are directed away from the bay;</li> <li>(c) At a minimum the bay should be constructed with a minimum 20 mm bund around the perimeter of the bay;</li> <li>(d) At a minimum the bay should be protected from the entry of external surface waters, by either; a minimum 2% change in grade; or combination of a minimum 2% grade change and a grated drainage system;</li> <li>(e) At a minimum the bay should have a roof that has a minimum height of 2.5 m;</li> <li>(f) All uncontaminated stormwater/rainwater must be directed to the dedicated stormwater drainage systems;</li> <li>(g) Have an appropriate capacity storage tank designed to hold all wastewater;</li> <li>(h) Keep and retain records for a period of five years, of when and how much water was removed by the authorised liquid waste disposal contractor when this occurs, on an annual basis. Provide a copy of the records to Council on request; and</li> <li>(i) That the water storage tank is maintained so that there are no leaks and is functioning as intended.</li> </ul>	6.2

No.	Condition of Approval 453 - Detail	OEMP Section
<b>7</b>	<b>Requirements of Botany Bay Council</b>	
	<b>Discharge to the Sewer via Appropriate Pre-Treatment</b>	
7.23	<p>All vehicle washing bays that discharge to sewer shall meet the following requirements:</p> <ul style="list-style-type: none"> <li>(a) Discharges into the sewer requires a Permission to Discharge Trade Wastewater certificate issued by Sydney Water;</li> <li>(b) Have a floor that is sealed and graded to an internal drainage point, so that all wastewater and surface spillage is directed and drains to the approved treatment and disposal point;</li> <li>(c) Is roofed and bunded so that all uncontaminated stormwater from the roof areas and uncovered areas, are directed away from the bay;</li> <li>(d) At a minimum the bay should have a roof that has a minimum height of 2.5 m;</li> <li>(e) Have a roof that has a minimum height of 2.5 m;</li> <li>(f) Be constructed with a minimum 20 mm bund around the perimeter of the bay;</li> <li>(g) Be protected from the entry of external surface waters, by either; a minimum 2% change in grade; or combination of a minimum 2% grade change and a grated drainage system;</li> <li>(h) All uncontaminated stormwater/rainwater must be directed to the dedicated stormwater drainage systems;</li> <li>(i) Have a 1000 L general purpose pit; and</li> <li>(j) Carry out appropriate inspections and maintenance of the General Purpose Pit. The thickness of the sediment and oil levels, and outflow oil concentrations to be logged quarterly and submitted to Council. The pit is to be pumped out at least every 12 months or at more frequent interval as nominated by Council.</li> </ul>	<b>6.4</b>
	<b>Disposal of Wastewater to Land Incorporating Appropriate Treatment Devices</b>	
7.24	<p>All vehicle washing bays that discharge wastewater shall meet the following requirements:</p> <ul style="list-style-type: none"> <li>(a) The Applicant shall prove that the environmental conditions of the site are appropriate and provide appropriate professional site assessment information on the presence of environmentally sensitive areas on the building site, in the adjoining areas or within the downstream catchment;</li> <li>(b) Soil characteristics including soil permeability, depth to bedrock/hardpan, depth to high episodic water table, % coarse fragments; electrical conductivity; sodicity, cation exchange capacity, phosphorous absorption and any other Council requirement;</li> <li>(c) Site flood potential, exposure to sun and wind, slope, erosion potential, drainage, plant growth conditions;</li> <li>(d) Buffer distances from permanent surface waters, domestic groundwater wells, other waters, property boundaries, driveways, swimming pools and buildings; and</li> <li>(e) (e) Other site assessment details as required by Council.</li> </ul>	<b>6.4</b>

No.	Condition of Approval 453 - Detail	OEMP Section
	<b>Energy Efficiency Report</b>	
7.25	An Energy Efficiency Compliance Report shall be prepared within 15 months of the issuing of the occupation certificate. The Report shall certify that energy efficiency measures have been installed and verify that the building's energy performance complies with Councils Energy Efficiency DCP. A copy of the Report shall be made available to Council on request.	<b>6.11</b>

## Appendix C: Port Botany Expansion - Environmental Impact Statement (EIS)

Table C: PBE Environmental Impact Statement (EIS) - Assessment Predicted Rating

Section	PBE Environment Impact Statement - Prediction / Conclusion	OEMP Section
<b>Chapter 16 - Hydrology and Water Quality</b>		
16.4.2	<b>Surface Water Quality</b>	
	<b>Dredging and Reclamation</b> Initial consolidation of material in the reclaimed area is expected to take up to two years. During this time the surface of the reclamation, if not protected, may be subject to erosion. To control erosion, the surface of the newly reclaimed area would be stabilised and profiled to form sediment detention basins to contain sediment runoff until the reclaimed area is covered with an impervious surface. These control measures would be documented as part of the Construction EMP for the project.	<b>6.2</b>
	<b>Erosion and Sedimentation</b> Dredged or construction material stockpiles and active construction areas may be subject to erosion and sedimentation from surface runoff.	<b>6.1</b>
<b>Chapter 17 - Groundwater</b>		
17.6.2	<b>Groundwater Quality</b>	
	The operation of the new terminal is expected to have minimal effect on groundwater quality. Once operational, all terminal activities would be conducted in a manner to prevent contamination of surface or groundwater from operational activities. An Operational EMP would be developed in the detailed design phase to ensure an adequate standard is applied to contamination control for the operation of the new terminal.	<b>6.2 and 6.4</b>
<b>Chapter 18 - Geology, Soils and Geotechnical</b>		
18.4.2	<b>Soil Erosion</b>	
	The operations at the new terminal would take place on reclaimed and hard surfaced pavement. There is no requirement for soil removal or disturbance during operation of the terminal. Stormwater collection and treatment systems would be designed to capture surface water runoff from all impervious surfaces. Therefore, the operation of the new terminal is expected to have minimal effects on soil erosion.  Soil in the vicinity of facilities outside the new terminal area, such as the proposed railway, boat ramp and car park, would be stabilised and erosion in these areas would be low.	<b>6.2</b>



Section	PBE Environment Impact Statement - Prediction / Conclusion	OEMP Section
18.4.3	<b>Sediment Contamination</b>	
	Leaks and spills from operations at the new container terminal would be contained by the proposed stormwater detention and treatment system. There is low potential for leaching of contaminants through the hard stand areas. Environmental management measures would be included in the Operational EMP	4.4 and 6.2
18.5.2	<b>Operation</b>	
	<p>The operation of the new terminal would have minimal effects on geology, soils and geotechnical issues. Once operational, all terminal activities would be conducted in a manner to prevent soil erosion and contamination from operational activities.</p> <p>A SWMP would be developed as part of an Operational EMP to ensure an adequate standard is applied to sediment control for the operation of new terminal. This plan would also address stormwater management and be prepared in accordance with NSW EPA requirements. The SWMP for operations would be incorporated in the Operational EMP. Management measures would include:</p> <ul style="list-style-type: none"> <li>• a first flush system to capture sediment and contaminants from surface water runoff from the new terminal;</li> <li>• treatment of surface water runoff from potential pollutant areas on the new terminal by a wastewater treatment system prior to discharge to sewer;</li> <li>• investigation of the feasibility of installation of sediment traps on Floodvale and Springvale Drains to reduce influx of sediment to Penrhyn Estuary;</li> <li>• emergency response plan for fuel, oil and chemical spills; and</li> <li>• storage and handling of all dangerous goods in accordance with Australian Standards, Dangerous Goods Regulations and NSW EPA requirements.</li> </ul>	6.4
<b>Chapter 19 – Aquatic Ecology</b>		
19.6.1	<b>Potential Physical, Chemical and Biological Stressors</b>	
	<p><b>Noise, Vibration and Light</b></p> <p>Vibration would occur as a result of construction and operation of the new terminal. Most aquatic animals would tend to habituate to the changes in noise and vibration, therefore, impacts could be considered as low.</p>	6.6 and 6.8
	<p><b>Introduced Species</b></p> <p>There appear to be no aspects of the proposal likely to enhance the risk of the introduction of exotic species, other than an increase in risk associated with greater numbers of vessels using Port Botany. In terms of introduced species already in Botany Bay, there is some risk of changes in distribution associated with the proposed port expansion for:</p> <ul style="list-style-type: none"> <li>• <i>Caulerpa taxifolia</i> presently occurring along Foreshore Beach.</li> </ul>	6.10

Section	PBE Environment Impact Statement - Prediction / Conclusion	OEMP Section
19.6.2	Management of the possible spread of <i>Caulerpa Taxifolia</i> would form part of a Construction and Operational EMP.	6.10
19.7.2	<b>Marine Mammals</b> With the current operation of the port it appears that marine mammals are able to co-exist with the port operations. A Marine Mammal Management Plan would, however, be prepared to ensure that the occurrence of marine mammals in the vicinity of the port during operations is appropriately managed. This would form part of the Operational EMP and would be prepared in consultation with NPWS.	TBA
<b>Chapter 19 – Aquatic Ecology</b>		
19.7.4	<b>Monitoring and Feedback</b>  <b>Baseline Monitoring</b> - Monitoring of the effects of the proposed port expansion on aquatic ecology would require investigation during construction and operation. Monitoring would be required before construction begins to compile appropriate baseline data. The proposed monitoring would be described in the Construction and Operational EMPs for the project and would include the measures described below:  <b>The Water Column</b> – Following construction, water quality would be measured on a regular basis within Penrhyn Estuary. Indicators would include turbidity, dissolved oxygen, temperature, salinity, pH, nutrients, heavy metals and organic contaminants. In particular, organic contaminants (e.g. VHCs) would be measured in relation to an influx of contaminated groundwater into Penrhyn Estuary.  <b>Seagrass, Algae and Associated Fauna</b> - Monitoring programs would be designed and implemented for seagrass during the construction and operational phases of the project. The seagrass indicators that would be considered include extent and coherence of beds (i.e. patchiness) and morphological characteristics, including shoot density, leaf length and width and extent of epiphytic growth.  The occurrence and persistence of nuisance algae within Penrhyn Estuary as a result of nutrients from the catchments of Floodvale and Springvale Drains would be monitored to enable an appropriate management response. Finally, organisms utilising the compensatory seagrass beds would be monitored to evaluate diversity and abundance. It is suggested that a good indicator of this would be fish and mobile invertebrates (e.g. prawns) which can be readily collected using standard sampling procedures (e.g. seine nets).	6.2
<b>Chapter 20 - Terrestrial Ecology</b>		
20.8.4	<b>Habitat Enhancement</b>  <b>Saltmarsh Protection and Transplantation / Re-establishment</b> A Vegetation Management Plan (VMP) detailing methodologies for saltmarsh excavation, storage, propagation and transplantation would be prepared and would be incorporated as part of the Construction and Operational EMPs for the project.	6.10
	<b>Mangrove Removal and Control</b> A Vegetation Management Plan (VMP) detailing methodologies for mangrove removal and control would be prepared and would be incorporated as part of the Construction and Operational EMPs for the project.	6.10

Section	PBE Environment Impact Statement - Prediction / Conclusion	OEMP Section
	<b>Control of Feral Animals</b> The following two measures would assist in the control of feral animals at Penrhyn Estuary, these include: <ul style="list-style-type: none"> <li>• ensure rubbish is placed in appropriately covered bins at all times.</li> <li>• ensure rubbish is regularly disposed; and</li> <li>• should shorebird monitoring during construction and operation of the Port Botany Expansion reveal feral cat and fox predation (on shorebirds) to be an ongoing issue, a 1080 fox baiting program should be initiated in consultation with NPWS and an expert shorebird ecologist.</li> </ul> A Feral Animal Management Plan (FAMP) would be prepared as part of the Construction and Operational EMP for the Port Botany Expansion. The FAMP would address fencing and the management of garbage, particularly in the habitat enhancement areas, and the viability of a baiting program to be initiated in conjunction with NPWS.	<b>6.3</b>
20.10	<b>Conclusion</b>	
	Key impacts from the proposal on the 23 shore bird and one seabird species considered as regular or occasional visitors to Penrhyn Estuary could include disturbance to feeding and roosting from a change in lighting regime, increased movement, noise from construction and operation of the port (and associated infrastructure such as railway lines) and potential entry/exit flyway barriers due to the enclosure of Penrhyn Estuary.	<b>6.3</b>
<b>Chapter 21 - Traffic and Transportation</b>		
21.10	<b>Conclusion</b>	
	It has been assumed that the volume moved by rail would be 30% of container throughput by 2006 and 40% by 2011.	<b>6.7</b>
<b>Chapter 22 - Noise</b>		
22.4.2	<b>Operation Noise Impacts – Sleep Disturbance Impacts</b>	
	All predicted noise levels would be below the external level of 65 dBA which some researchers consider would not result in awakening reactions.	<b>6.6</b>

Section	PBE Environment Impact Statement - Prediction / Conclusion	OEMP Section
22.5.2	<b>Operation</b>	
	<p>A Noise Management Plan containing environmental management measures to assess and minimise noise from the operation of the new terminal would be developed. The Noise Management Plan would be included in the Operational EMP for the new terminal.</p> <p><b>Machinery Noise Control</b> - Noise level emissions would be a criteria for selection of new plant for the site. The quietest possible plant that satisfied the operational performance specifications would be selected and noise control kits fitted where required. Regular maintenance of machinery would be carried out to ensure optimal and efficient operation.</p> <p><b>Equipment Alarms</b> - Audible safety alarms on some terminal equipment would be turned off during night hours (between 10.00 pm and 6.00 am) and replaced with visual alarms. It is understood that for certain types of equipment e.g. quay cranes (long travel alarm and high wind alarm) alarms are required to remain for safety reasons. In respect of other items of equipment, a safety assessment would be undertaken to identify where the audible alarms could be replaced with visual alarms without affecting safety.</p> <p><b>Operator Awareness and Training</b> - Operator awareness and training would be regularly conducted. Good training and awareness of noise issues would be implemented to minimise poor cargo handling practices.</p> <p><b>Complaints</b> - Complaints would be assessed and responded to in a quick and efficient manner.</p> <p><b>Noise monitoring</b> – Noise monitoring would be conducted to assess impacts from the operation of the new terminal at locations most likely to be affected by the new terminal operations. The results of this monitoring would be discussed with the EPA and Planning NSW to identify any responses required, although the predicted noise levels would not be expected to occur for some years after the commencement of operations in about 2010. By this time, technological and operational changes are likely to be available which would reduce operational noise levels at the new terminal.</p>	6.6
	<p>The Noise Management Plan would also contain the option for shore power to be provided to ships in the future.</p> <p>A Traffic Noise Management Plan would be developed for the new terminal. This plan would consider traffic route selection, traffic clustering and traffic rescheduling.</p>	6.6
<b>Chapter 23 - Air Quality</b>		
23.8.2	<b>Operation</b>	
	<p>Notwithstanding the fact that the proposed expansion is shown to result in acceptable impacts, the new terminal would be designed and constructed such that it could support the use of alternative energy for ships at berth (i.e. shore power), should ships be able to accept such power in the future. This would reduce ship emissions in the local area.</p>	6.1

Section	PBE Environment Impact Statement - Prediction / Conclusion	OEMP Section
<b>Chapter 24 - Cultural Heritage</b>		
24.8	<b>Assessment of Impacts During Operation</b>	
	During the operational phase of the Port Botany Expansion there would be no impacts on Aboriginal, European or maritime heritage resources in the primary or secondary study area	None reported
<b>Chapter 25 - Visual Impact Assessment</b>		
25.5	<b>Mitigation Measures</b>	
	<p><b>Quay Crane specification</b> – quay cranes for the new terminal would be approximately 50 m high.</p> <p><b>Container Stacking height</b> – containers would not be stacked more than six high (18 m) and would typically be only three high (9 m), as is the case with the existing terminals.</p> <p><b>Noise Wall</b> – the proposed noise wall near the edge of the new terminal would be approximately 4 m in height and would partially screen the operations of the new terminal when viewed from foreshore areas near the port.</p>	6.6
<b>Chapter 26 - Social Impact Assessment</b>		
26.5.5	<b>Waste</b>	
	<p><b>Operation</b></p> <p>A Waste Management Plan (WMP) would be prepared and implemented by the terminal operator(s) as part of the Operational EMP for the new terminal and would include initiatives for sustainable waste management.</p> <p>All waste discharged by ships at the new terminal would be managed through established waste management practices.</p>	6.4

Section	PBE Environment Impact Statement - Prediction / Conclusion	OEMP Section
<b>Chapter 28 – Preliminary Hazard Analysis</b>		
28.10.1	<b>Mitigation Measures</b>	
	<p>The following mitigation measures would be implemented to manage the hazards and risks described above:</p> <ul style="list-style-type: none"> <li>i. containers with dangerous goods would be handled and transported in accordance with the <i>Australian Standard 3846 (1998): The Handling and Transport of Dangerous Goods in Port Areas</i> and the <i>NSW Dangerous Goods (General) Regulation 1999</i>;</li> <li>ii. an Occupational Health and Safety Plan would be developed by the terminal operator(s) to address the handling and transport of dangerous goods during the operation of the new terminal;</li> <li>iii. a notification system for the arrival or delivery of dangerous goods would be implemented;</li> <li>iv. restrictions on the time dangerous goods are allowed to be held within the port would be applied, supported by a loading/unloading plan and arrangement of transport to/from the berths;</li> <li>v. various classes of dangerous goods would be separated by safe distances on the berth;</li> <li>vi. suitable container handling equipment would be used to minimise risk of dropped containers;</li> <li>vii. suitable container loading/unloading, handling and stacking systems would be employed to minimise double handling and attendant risk of damaging containers;</li> <li>viii. the facility would be fitted with adequate yard signage and warning systems for mobile equipment;</li> <li>ix. there would be adequate warning systems for ships moving in the vicinity of the facility;</li> <li>x. a first flush drainage system would be installed and maintained to contain spills and contaminated runoff;</li> <li>xi. bunds would be constructed around diesel storage tanks;</li> <li>xii. fire fighting equipment would be provided and personnel trained in fire fighting and evacuation procedures; and</li> <li>xiii. emergency and incident management procedures would be developed (refer to <i>Chapter 32 Emergency and Incident Management</i>).</li> </ul>	<b>4, 5 &amp; 6</b>



Section	PBE Environment Impact Statement - Prediction / Conclusion	OEMP Section
<b>Chapter 29 - Bird Hazard</b>		
29.3.3	<b>Operation</b>	
	<p>Sealed surfaces often provide ideal roost sites for large numbers of birds especially Silver Gulls. Bitumen surfaces provide a warm surface for roosting and are particularly attractive where areas are not subject to regular disturbance. These undisturbed open spaces have the potential to attract significant numbers of birds to the site, thereby potentially increasing the risk of bird strike at Sydney Airport.</p> <p>Areas illuminated at night are also likely to attract birds, especially Silver Gulls, as they provide a secure roosting environment and attract insects which birds feed upon.</p> <p>The additional port land may provide large areas of suitable roosting habitat for the Silver Gull. Flat surfaces of buildings, such as roofs, may provide suitable places for Silver Gulls to roost. Openings and ledges may provide roosting and nesting habitat for Feral Pigeons, Common Starlings, Common Mynas and other bird species associated with buildings.</p> <p>The pavements and buildings associated with the new terminal have the potential to attract significant numbers of birds to the site, thereby potentially increasing the risk of bird strike at Sydney Airport. It is therefore important to initiate deterrent strategies.</p>	6.9
29.4	<b>Mitigation Measures</b>	
	<p>A Bird Hazard Management Plan would be prepared for the construction and operation of the Port Botany Expansion to reduce the risk of increasing bird hazards arising from the proposal. The plan would be incorporated in the Construction and Operational EMP and would include:</p> <ul style="list-style-type: none"> <li>• measures to minimise the attraction of birds, especially high-risk species such as Silver Gulls, Australian Pelicans and Australian White Ibises;</li> <li>• use of deterrents to prevent the build-up of birds;</li> <li>• exclusion of activities that attract birds in certain areas;</li> <li>• measures to minimise disturbance of birds at Penrhyn Estuary;</li> <li>• education about bird hazards; and</li> <li>• monitoring.</li> </ul>	6.9

Section	PBE Environment Impact Statement - Prediction / Conclusion	OEMP Section
<b>Chapter 30 - Operational Aviation Issues</b>		
30.4.2	<b>Assessment of Impacts – Operation</b>	
	<p><b>Air Space</b> There would be no fixed or mobile structures in the new terminal that would intrude into the OLS.</p> <p><b>Light Spill</b> It is anticipated that light spill from the Port Botany Expansion would not adversely impact operations at Sydney Airport due to the following lighting design measures:</p> <ul style="list-style-type: none"> <li>• <b>High masts</b> - lighting would be directed down to the intended application area with minimal light spill outside the area boundaries, by using asymmetric distribution horizontal flat glass floodlights, and would comply with CASA requirements</li> <li>• <b>Quay cranes</b> - lighting of shuttle boom quay cranes would be specified as downlight type to meet civil aviation regulations. Lighting elements for access/egress stairs and gangways would be mounted horizontal (no tilt) and have internal shielding of the lamps to ensure correct cut off. Obstruction lights would be placed on cranes to mark these in accordance with civil aviation regulations (CAR Regulation 95).</li> <li>• <b>Buildings and associated areas</b> – buildings and other external areas would be lit with floodlights that have a similar cut off lighting performance to those mounted on high masts. Internal building lighting would be similar to that used at the airport terminal and at the existing port facilities. Therefore, these areas would have a negligible impact on operations at Sydney Airport.</li> <li>• <b>Roads</b> – cut off type road lighting and low level lighting elements would be used wherever possible to minimise light spill.</li> </ul>	<b>6.8</b>
30.5.2	<b>Mitigation Measures – Light Spill</b>	
	<ul style="list-style-type: none"> <li>• lighting on board ships whilst berthed to be provided primarily by the shuttle boom quay cranes with supplementary lighting on board only being provided where necessary;</li> <li>• ships to be berthed facing a specific direction (e.g. north or south) and to only use floodlights mounted on the bridge. The appropriateness of this option could be tested by CASA through a fly-over of the existing Brotherson Dock; and</li> <li>• provide restrictive temporary shielding to any permanent ship mounted floodlights whilst the ship was docked.</li> </ul>	<b>6.8</b>
<b>Chapter 32 - Emergency and Incident Management</b>		
32.2.4	<b>Specific Sub-Plans</b>	
	<p><b>Spill Containment and Management</b> The proposed new terminal would be equipped with emergency response equipment typically comprising absorbent materials, absorbent pads to block drainage points and protective equipment consisting of gloves, rubber boots, eye protection etc.</p>	<b>4.8 &amp; 6.2</b>

Section	PBE Environment Impact Statement - Prediction / Conclusion	OEMP Section
<b>Chapter 32 - Emergency and Incident Management</b>		
32.1	<b>Introduction</b>	
	The future operator(s) of the new terminal, with advice from Sydney Ports Corporation, would prepare an ERIMP to manage these potential emergencies prior to the new terminal commencing operations. The purpose of the ERIMP would be to provide an organised and practised response to incidents and emergency situations to protect employees, the public and the environment.	<b>4.8</b>
<b>Chapter 33 - Water and Wastewater</b>		
33.2	<b>Water Usage</b>	
33.2.1	<b>Operation</b> Water used for operational activities that do not require potable water, would be sourced from treated surface water runoff stored in two 10,000 L tanks at the northern end of the new terminal. Operational reuse of this water would include maintenance activities, wash down and irrigation.	<b>6.4</b>
<b>Chapter 33 - Water and Wastewater</b>		
33.3	<b>Wastewater</b>	
33.3.2	<b>Operation</b> All trade waste generated during the operation of the new terminal would discharge to the Sydney Water Corporation sewerage system under a Trade Waste Agreement. The Trade Waste Agreement would determine the level of treatment required prior to discharge.  All areas where wash down or maintenance activities are to be undertaken would be bunded and provided with sump pits, grit traps and oil/water separators. This would also be the case for any additional bunded storage areas, such as those used for refuelling and fuel storage. Water collected in these areas would be tested and disposed to the sewerage system, or if unsuitable for disposal to sewer would be disposed offsite by a licensed waste disposal contractor.	<b>6.4</b>

Section	PBE Environment Impact Statement - Prediction / Conclusion	OEMP Section
33.5	<b>Water and Wastewater Management</b>	
33.5	<p>The following mitigation measures would be adopted for the proposed Port Botany Expansion:</p> <ul style="list-style-type: none"> <li>• water use and wastewater discharge at the site would be subject to a Water Resources Management Plan (WRMP), which would form part of the construction and operational EMPs. These plans would include water minimisation strategies as well as monitoring and testing schedules for wastewater as required;</li> <li>• clean, treated stormwater would be collected in two 10,000 L water storage tanks at the northern end of the new terminal to allow reuse for maintenance, wash down and irrigation;</li> <li>• dual flushing toilets, minimal flow shower heads and regular maintenance to identify leaking or dripping taps and pipes would be implemented during construction and operation;</li> <li>• monitoring and testing would be undertaken prior to discharge of treated wastewater, to ensure compliance with the site Trade Waste Agreement.</li> </ul>	6.4
<b>Chapter 34 - Waste</b>		
34.4	<b>Waste Management and Disposal</b>	
34.4.2	<p><b>Operational Waste</b></p> <p>An Operational WMP would be developed and implemented for the new terminal in accordance with the requirements of the <i>Waste Avoidance and Resource Recovery Act 2001</i>, the <i>Protection of the Environment Operations Act 1997</i>, the EPA's <i>Environmental Guidelines: Assessment, Classification &amp; Management of Liquid &amp; Non-Liquid Wastes</i> (1999), the <i>Botany Bay DCP 29</i> and the <i>National Minimisation and Recycling Strategy</i>. The plan would be incorporated into the Operational EMP for the terminal.</p> <p><b>Domestic Waste</b></p> <p>Recycling facilities would be provided at the new terminal and in public recreation areas to maximise recycling of waste materials such as plastic and glass bottles/containers, aluminium cans and paper/cardboard. Separate bins would be provided for food waste and fish remains from fish cleaning facilities in the public recreation area. All domestic waste would be collected on a regular basis and transported off site for disposal to a licensed landfill or recycling facility as appropriate. Litter bins would be designed in accordance with the bird hazard guidelines.</p> <p><b>Maintenance Material</b></p> <p>Waste oils and fluids from maintenance activities may be classified under the POEO Act as being Hazardous, Industrial or Group A Waste. The management of these substances may need to be regulated by an EPA Environment Protection Licence which would be obtained by the terminal operator(s). It is expected that these materials would be collected and stored in proprietary facilities and either be reused onsite or removed by a licensed waste contractor. Scrap metal, used parts, components and machinery would be recycled where practicable.</p>	6.4

Section	PBE Environment Impact Statement - Prediction / Conclusion				OEMP Section	
Chapter 35 - Energy						
35.3	Operational Phase					
	The estimated annual energy consumption over the operational life of the project is presented in Table 35.2:				6.11	
		2010	2015	2020		2025
	Projected Throughput (TEUs)	320,000	800,000	1,000,000		1,200,000
	Estimated consumption of electricity (MWh)	10,000	17,000	21,000		25,000
	Estimated consumption of diesel fuel (litres)	1,462,400	3,656,000	4,570,000		5,484,000
35.4	Energy Conservation and Management					
	A key component of achieving energy conservation would be the development of an Energy Management Action Plan. This plan would be included as part of the Construction and Operational EMPs.				6.11	
35.4.2	Operational Phase The following mitigation measures would be implemented during site operations and would be detailed in the Operational EMP to achieve energy efficiencies: <ul style="list-style-type: none"><li>Energy Efficient Design</li><li>Energy Efficient Equipment</li><li>Energy Efficient Work Scheduling and Practice</li></ul>				6.11	

## Appendix D: Environment Protection and Biodiversity Conservation Act 1999

**Table D: Assessment Predicted Ratings and Compliance with EPBC 2002/543**

Annexure 1 Item	EPBC - Approval Requirement	OEMP Section
1	The person taking the action must construct the port expansion involving the creation of the four additional shipping berths, the provision of road, rail and terminal infrastructure and the enhancement of public and ecologically significant areas, in accordance with the site plan shown at ANNEXURE 2 of this approval.	Entire OEMP
2	Prior to the commencement of construction, the person taking the action must inform the Minister how radar and air navigation issues associated with the port expansion has have been resolved to the satisfaction of Airservices Australia.	6.8
3	<p>The person taking the action must be prepare and submit for the Minister's approval a habitat enhancement plan for Penrhyn Estuary to manage impacts on listed migratory bird species during the construction and operation of the new port facilities at Port Botany. The plan must address the matters listed below and state the environmental objectives, performance criteria, monitoring, reporting, corrective action, responsibility and timing for each of these matters:</p> <ul style="list-style-type: none"> <li>a) A detailed description of habitat enhancement works including methodology and staging of works;</li> <li>b) Habitat management and maintenance measures;</li> <li>c) A habitat monitoring programme;</li> <li>d) Measures to detect and respond to issues identified in the habitat monitoring programme; and</li> <li>e) Reporting requirements that include protocols to inform the Minister of relevant issues, milestones, and the results of surveys and studies.</li> </ul> <p>The action must not commence until the plan has been approved. The approved plan must be implemented.</p>	6.10
4	Should the person taking the action wish to amend or change the habitat enhancement plan approved under paragraph 3, a revised version of the plan must be submitted to the Minister for approval. If the Minister approves such a revised plan, the plan must be implemented in place of the plan as originally approved.	6.10
5	If the Minister believes that it is necessary or desirable for the better protection of the environment to do so, the Minister may request the person taking the action to make specified revisions to a plan or plans approved pursuant to paragraphs 3 or 4, and to submit the revised plan for the Minister's approval. The person taking the action must comply with any such request. If the Minister approves a revised plan pursuant to this condition, the person taking the action must implement that plan instead of the plan as originally approved.	As required



Annexure 1 Item	EPBC - Approval Requirement	OEMP Section
6	The habitat enhancement plan required under paragraph 3 must be reviewed and resubmitted to the Minister for approval every five years or as otherwise agreed by the Minister. The resubmitted plan must incorporate the relevant results of the independent audit report required under paragraph 7.	6.10
7	After construction of the new port facilities at Port Botany has been completed, and every five years thereafter or as otherwise agreed by the Minister, the person taking the action must ensure that an independent audit of compliance with the conditions of approval for the new port facilities at Port Botany, and the effectiveness of measures to mitigate impacts on listed migratory bird species, is carried out. The independent auditor must be accredited by the Quality Society of Australasia, or such other similar body as the Minister may notify in writing. The audit criteria must be agreed by the Minister within six months of the fifth anniversary of completion of construction of the new port facilities at Port Botany, and within 6-months of every 5 <sup>th</sup> anniversary thereafter.	4.5
8	By 1 July of each year after the date of this approval or otherwise agreed by the Minister, the Chief Executive Officer of Sydney Ports Corporation must provide written certification that Sydney Ports Corporation has complied with the conditions of this approval.	Not Applicable
9	If, at any time after 5 years from the date of this approval, the Minister notifies Sydney Ports Corporation in writing that the Minister is not satisfied that there has been substantial commencement of construction of the action, construction of the action must not thereafter be commenced.	Not Applicable

## Appendix E: Environmental Protection Licence – EPL 6962

Table E: EPL, Assessment Rating

Condition No.	EPL 6962 Conditions - Detail	OEMP Section												
<b>1</b>	<b>Administrative Conditions</b>													
<b>A1</b>	<b>What the licence authorises and regulates</b>													
A1.1	<p>This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.</p> <p>Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.</p> <table border="1"> <thead> <tr> <th>Schedule Activity</th><th>Fee Based Activity</th><th>Scale</th></tr> </thead> <tbody> <tr> <td>Chemical Storage</td><td>General chemicals storage</td><td>0-5000 kL storage capacity</td></tr> <tr> <td>Waste storage</td><td>Waste storage – hazardous, restricted solid, liquid, clinical and related waste and asbestos waste</td><td>Any listed waste type stored</td></tr> <tr> <td>Waste storage</td><td>Waste storage – other types of waste</td><td>Any other types of waste stored</td></tr> </tbody> </table>	Schedule Activity	Fee Based Activity	Scale	Chemical Storage	General chemicals storage	0-5000 kL storage capacity	Waste storage	Waste storage – hazardous, restricted solid, liquid, clinical and related waste and asbestos waste	Any listed waste type stored	Waste storage	Waste storage – other types of waste	Any other types of waste stored	<b>2 &amp; 6.4</b>
Schedule Activity	Fee Based Activity	Scale												
Chemical Storage	General chemicals storage	0-5000 kL storage capacity												
Waste storage	Waste storage – hazardous, restricted solid, liquid, clinical and related waste and asbestos waste	Any listed waste type stored												
Waste storage	Waste storage – other types of waste	Any other types of waste stored												
A2.2	<p>The licence applies to the following premises: Patrick Port Botany Container Terminal, Penrhyn Road, Randwick NSW 2031 (LOT 202 DP 1183399, LOT 203 DP 1183399)</p>	<b>2</b>												
<b>A3</b>	<b>Other activities</b>													
A3.1	<p>This licence applies to all other activities carried on at the premises, including:</p> <ul style="list-style-type: none"> <li>Ancillary Activities: Shipping Facilities</li> </ul>	<b>Entire OEMP</b>												
<b>A4</b>	<b>Information supplied to the EPA</b>													
A4.1	<p>Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence. In this condition the reference to "the licence application" includes a reference to:</p> <p>a) the applications for any licences (including former pollution control approvals) which this licence replaces under the <i>Protection of the Environment Operations (Savings and Transitional) Regulation 1998</i>; and</p> <p>b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.</p>	<b>2</b>												

Condition No.	EPL 6962 Conditions - Detail				OEMP Section																				
2	Discharges to Air and Water and Applicable Land																								
P1	Location of monitoring / discharge points and areas																								
P1.1	The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.				Not Applicable																				
3	Limit Conditions																								
L1	Pollution of waters																								
L1.1	Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the <i>Protection of the Environment Operations Act 1997</i> .				6.2																				
L2	Waste																								
L2.1	<p>The licensee must not cause, permit or allow any waste to be received at the premises, except the wastes expressly referred to in the column titled “Waste” and meeting the definition, if any, in the column titled “Description” in the table below.</p> <p>Any waste received at the premises must only be used for the activities referred to in relation to that waste in the column titled “Activity” in the table below. Any waste received at the premises is subject to those limits or conditions, if any, referred to in relation to that waste contained in the column titled “Other Limits” in the table below. This condition does not limit any other conditions in this licence.</p> <table><tr><th>Code</th><th>Waste</th><th>Description</th><th>Activity</th><th>Other Limits</th></tr><tr><td>NA</td><td>Any waste type over the threshold of Schedule 1 pf the POEO Act that is not otherwise listed in this table</td><td></td><td>Waste storage</td><td></td></tr><tr><td>NA</td><td>General or Specific exempted waste</td><td>Waste that meets all the conditions of a resource recovery exemption under Clause 92 of the <i>Protection of the Environment Operations (Waste) Regulation 2014</i></td><td>As specified in each particular resource recovery exemption</td><td>NA</td></tr><tr><td>NA</td><td>Waste</td><td>Any waste received on site that is below licensing thresholds in Schedule 1 of the <i>Protection of the Environment Operations Act 1997</i>, as in force from time to time</td><td>-</td><td>NA</td></tr></table>				Code	Waste	Description	Activity	Other Limits	NA	Any waste type over the threshold of Schedule 1 pf the POEO Act that is not otherwise listed in this table		Waste storage		NA	General or Specific exempted waste	Waste that meets all the conditions of a resource recovery exemption under Clause 92 of the <i>Protection of the Environment Operations (Waste) Regulation 2014</i>	As specified in each particular resource recovery exemption	NA	NA	Waste	Any waste received on site that is below licensing thresholds in Schedule 1 of the <i>Protection of the Environment Operations Act 1997</i> , as in force from time to time	-	NA	6.4
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NA	Waste	Any waste received on site that is below licensing thresholds in Schedule 1 of the <i>Protection of the Environment Operations Act 1997</i> , as in force from time to time	-	NA																					
L2.2	Waste must not be stored on the premises in quantities exceeding any licensing threshold under Schedule 1 of the <i>Protection of the Environment Operations Act 1997</i> , except for the purposes of transfer through the premises’ shipping facilities.				6.4																				

Condition No.	EPL 6962 Conditions - Detail	OEMP Section
L2.3	<p>If any waste in quantities above licensing thresholds listed under Schedule 1 of the <i>Protection of the Environment Operations Act 1997</i> is</p> <p>(a) predicted to be stored on the premises for more than 7 days, or</p> <p>(b) has been stored on the premises for more than 7 days; then</p> <p>The licensee must provide a written notification to the EPA that includes the following information, where available:</p> <ol style="list-style-type: none"> <li>1) the dangerous goods class and NSW waste classification of the waste that is the subject of the notification;</li> <li>2) the total quantity of the waste;</li> <li>3) details of why the waste has been or is predicted to be stored on the premises for more than 7 days;</li> <li>4) details of when the waste is expected to be removed from the premises; and</li> <li>5) how the environmental risks associated with storage of the waste will be managed by the licensee.</li> </ol>	6.4
L2.4	<p>a) A notification for the purposes of complying with Condition L2.3 must be made within 48 hours of the licensee becoming aware of L2.3 (a) or (b).</p> <p>b) Notifications must be provided to the EPA via email at <a href="mailto:metro.regulation@epa.nsw.gov.au">metro.regulation@epa.nsw.gov.au</a></p> <p>Note: The export, transit and import of hazardous wastes (as defined under the Hazardous Waste (Regulations of Exports and Imports) Act 1989) is subject to regulation by the Commonwealth Government.</p> <p>For further information, please see the Commonwealth Government's website at: <a href="https://www.environment.gov.au/protection/hazardous-waste">https://www.environment.gov.au/protection/hazardous-waste</a></p>	6.4

Condition No.	EPL 6962 Conditions - Detail				OEMP Section																																						
3	Limit Conditions																																										
L3	Noise Limits																																										
L3.1	Noise from the premises must not exceed the noise limits presented in the Table below. Note the limits represent the noise contribution at the nominated receiver locations in the table.				6.6																																						
<table><tr><th rowspan="2">Most affected residential Location</th><th>Day</th><th>Evening</th><th colspan="2">Night</th></tr><tr><th>L<sub>Aeq</sub> (15 min)</th><th>L<sub>Aeq</sub> (15 min)</th><th>L<sub>Aeq</sub> (15 min)</th><th>L<sub>Aeq</sub> 9hrs</th></tr><tr><td>Chelmsford Av</td><td>40</td><td>40</td><td>40</td><td>38</td></tr><tr><td>Dent St</td><td>45</td><td>43</td><td>43</td><td>43</td></tr><tr><td>Jennings St</td><td>36</td><td>36</td><td>36</td><td>35</td></tr><tr><td>Botany Rd (North of golf club)</td><td>47</td><td>43</td><td>43</td><td>45</td></tr><tr><td>Australia Av</td><td>35</td><td>35</td><td>35</td><td>35</td></tr><tr><td>Military Rd</td><td>42</td><td>42</td><td>42</td><td>40</td></tr></table>				Most affected residential Location		Day	Evening	Night		L <sub>Aeq</sub> (15 min)	L <sub>Aeq</sub> (15 min)	L <sub>Aeq</sub> (15 min)	L <sub>Aeq</sub> 9hrs	Chelmsford Av	40	40	40	38	Dent St	45	43	43	43	Jennings St	36	36	36	35	Botany Rd (North of golf club)	47	43	43	45	Australia Av	35	35	35	35	Military Rd	42	42	42	40
Most affected residential Location	Day	Evening	Night																																								
	L <sub>Aeq</sub> (15 min)	L <sub>Aeq</sub> (15 min)	L <sub>Aeq</sub> (15 min)	L <sub>Aeq</sub> 9hrs																																							
Chelmsford Av	40	40	40	38																																							
Dent St	45	43	43	43																																							
Jennings St	36	36	36	35																																							
Botany Rd (North of golf club)	47	43	43	45																																							
Australia Av	35	35	35	35																																							
Military Rd	42	42	42	40																																							
L <sub>Aeq</sub> = equivalent continuous (energy average) A-weighted sound pressure level																																											
L3.2	Noise from the premises must not exceed the noise limits presented in the Table below. Note the limits represent the noise contribution at the nominated receiver locations in the table.				6.6																																						
<table><tr><th>Most Affected Residential Location</th><th>Night L<sub>A1</sub> (1 minute)</th></tr><tr><td>Chelmsford Avenue</td><td>53</td></tr><tr><td>Dent Street</td><td>55</td></tr><tr><td>Jennings Street</td><td>55</td></tr><tr><td>Botany Road (North of golf club)</td><td>55</td></tr><tr><td>Australia Avenue</td><td>55</td></tr><tr><td>Military Road</td><td>55</td></tr></table>				Most Affected Residential Location		Night L <sub>A1</sub> (1 minute)	Chelmsford Avenue	53	Dent Street	55	Jennings Street	55	Botany Road (North of golf club)	55	Australia Avenue	55	Military Road	55																									
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L <sub>A1</sub> = A-weighted sound pressure level exceeded for 1% of the time																																											
L3.3	For the purposes of Conditions L3.1 and L3.2: <ul style="list-style-type: none"><li>- Day is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sundays and Public Holidays.</li><li>- Evening is defined as the period from 6pm to 10pm on any day.</li><li>- Night is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sundays and Public Holidays.</li></ul>				6.6																																						

Condition No.	EPL 6962 Conditions - Detail	OEMP Section
L3.4	For the purposes of Condition L3.1, noise from the premises must be measured or computed at the most affected point on or within the residential boundary.	6.6
L3.5	For the purposes of Condition L3.1, if a residential dwelling is located more than 30m from the residential boundary, noise from the premises must be measured or computed at the most affected point within 30m of the dwelling.	6.6
L3.6	Noise from the premises must be measured at 1m from the dwelling façade to determine compliance with the LA1 (1minute) noise limits at Condition L3.2.	6.6
L3.7	The noise limits specified at Condition L3.1 and L3.2 apply under the following meteorological conditions: a) wind speeds up to 3 m/s at 10 metres above ground level; and b) temperature inversion conditions of up to 1.5 degrees C/100m.	6.6
<b>4</b>	<b>Operating Conditions</b>	
<b>O1</b>	<b>Activities must be carried out in a competent manner</b>	
O1.1	Licensed activities must be carried out in a competent manner. This includes: a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.	Entire OEMP
<b>O2</b>	<b>Maintenance of plant and equipment</b>	
O2.1	All plant and equipment installed at the premises or used in connection with the licensed activity: a) must be maintained in a proper and efficient condition; and b) must be operated in a proper and efficient manner.	Entire OEMP
<b>O3</b>	<b>Dust</b>	
O3.1	The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.	6.1
<b>O4</b>	<b>Processes and management</b>	
O4.1	The licensee must ensure that any liquid and/or non-liquid waste generated at the premises is assessed and classified in accordance with the EPA Waste Classification Guidelines as in force from time to time.	6.4
O4.2	The licensee must ensure that waste identified for recycling is stored separately from other waste.	6.4

Condition No.	EPL 6962 Conditions - Detail	OEMP Section
<b>5</b>	<b>Monitoring and Recording Conditions</b>	
<b>M1</b>	<b>Monitoring records</b>	
M1.1	The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.	<b>4.4</b>
M1.2	All records required to be kept by this licence must be: a) in a legible form, or in a form that can readily be reduced to a legible form; b) kept for at least 4 years after the monitoring or event to which they relate took place; and c) produced in a legible form to any authorised officer of the EPA who asks to see them.	<b>4.4</b>
M1.3	The following records must be kept in respect of any samples required to be collected for the purposes of this licence: a) the date(s) on which the sample was taken; b) the time(s) at which the sample was collected; c) the point at which the sample was taken; and d) the name of the person who collected the sample.	<b>4.4</b>
<b>M2</b>	<b>Recording of pollution complaints</b>	
M2.1	The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.	<b>4.6</b>
M2.2	The record must include details of the following: a) the date and time of the complaint; b) the method by which the complaint was made; c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect; d) the nature of the complaint; e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and f) if no action was taken by the licensee, the reasons why no action was taken.	<b>4.6</b>
M2.3	The record of a complaint must be kept for at least 4 years after the complaint was made.	<b>4.6</b>
M2.4	The record must be produced to any authorised officer of the EPA who asks to see them.	<b>4.6</b>



Condition No.	EPL 6962 Conditions - Detail	OEMP Section
<b>M3</b>	<b>Telephone complaints line</b>	
M3.1	The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.	4.6
M3.2	The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.	4.6
M3.3	The preceding two conditions do not apply until 3 months after: the date of the issue of this licence.	4.6
<b>6</b>	<b>Reporting Conditions</b>	
<b>R1</b>	<b>Annual returns documents</b>	
R1.1	<p>The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:</p> <ol style="list-style-type: none"> <li>1. a Statement of Compliance,</li> <li>2. a Monitoring and Complaints Summary,</li> <li>3. a Statement of Compliance – Licence Conditions,</li> <li>4. a Statement of Compliance – Load based Fee,</li> <li>5. a Statement of Compliance – Requirement to Prepare Pollution Incident Response Management Plan</li> <li>6. a Statement of Compliance – Requirement to Publish Pollution Monitoring Data; and</li> <li>7. a Statement of Compliance – Environmental Management Systems and Practices.</li> </ol> <p>At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.</p>	4.4
R1.2	An Annual Return must be prepared in respect of each reporting period, except as provided below.	4.4
R1.3	<p>Where this licence is transferred from the licensee to a new licensee:</p> <ol style="list-style-type: none"> <li>a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and</li> <li>b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.</li> </ol>	4.4

Condition No.	EPL 6962 Conditions - Detail	OEMP Section
R1.4	Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on: a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.	4.4
R1.5	The Annual Return for the reporting period must be supplied to the EPA via eConnect EPA or by registered post no later than 60 days after the end of each reporting period or in the case of a transferring licence no later than 60 days after the date the transfer was granted (the 'due date').	4.4
R1.6	The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.	4.4
R1.7	Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by: a) the licence holder; or b) by a person approved in writing by the EPA to sign on behalf of the licence holder. Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period. Note: An application to transfer a licence must be made in the approved form for this purpose.	4.4
<b>R2</b>	<b>Notification of environmental harm</b>	
R2.1	Notifications must be made by telephoning the Environment Line service on 131 555.	4.4
R2.2	The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred. Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.	4.4
<b>R3</b>	<b>Written report</b>	
R3.1	Where an authorised officer of the EPA suspects on reasonable grounds that: a) where this licence applies to premises, an event has occurred at the premises; or b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence, and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.	4.4
R3.2	The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.	4.4

Condition No.	EPL 6962 Conditions - Detail	OEMP Section															
R3.3	<p>The request may require a report which includes any or all of the following information:</p> <ul style="list-style-type: none"> <li>a) the cause, time and duration of the event;</li> <li>b) the type, volume and concentration of every pollutant discharged as a result of the event;</li> <li>c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;</li> <li>d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;</li> <li>e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;</li> <li>f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and</li> <li>g) any other relevant matters.</li> </ul>	4.4															
R3.4	The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.	4.4															
<b>7</b>	<b>General Conditions</b>																
<b>G1</b>	<b>Copy of licence kept at the premises or plant</b>																
G1.1	A copy of this licence must be kept at the premises to which the licence applies.	Patrick intranet															
G1.2	The licence must be produced to any authorised officer of the EPA who asks to see it.	Patrick intranet															
G1.3	The licence must be available for inspection by any employee or agent of the licensee working at the premises.	Patrick intranet															
<b>G2</b>	<b>Other general conditions</b>																
G2.1	<p><b>Completed Pollution Studies and Reduction Programs (PRPs)</b></p> <table border="1"> <thead> <tr> <th>PRP</th><th>Description</th><th>Completed Date</th></tr> </thead> <tbody> <tr> <td>Submit detailed report proposing options and a pre</td><td>Submit to the EPA a detailed report proposing options and a preferred option to prevent pollution of waters from activities undertaken on the site.</td><td>15-Oct-01</td></tr> <tr> <td>Stormwater Risk Assessment</td><td>To identify any potential risks to stormwater or local marine receiving environments posed by operation of the premises and provide recommendations for addressing any such identified risks.</td><td>01-Apr-13</td></tr> <tr> <td>Stormwater Improvement Action Plan</td><td>Prepare a plan detailing the actions and timeframes that will be undertaken by the licensee to improve the quality of stormwater discharges to meet licence conditions.</td><td>23-May-13</td></tr> <tr> <td>Stormwater Improvement</td><td>Provide a report outlining the stormwater improvements undertaken by the licensee.</td><td>31-Dec-13</td></tr> </tbody> </table>	PRP	Description	Completed Date	Submit detailed report proposing options and a pre	Submit to the EPA a detailed report proposing options and a preferred option to prevent pollution of waters from activities undertaken on the site.	15-Oct-01	Stormwater Risk Assessment	To identify any potential risks to stormwater or local marine receiving environments posed by operation of the premises and provide recommendations for addressing any such identified risks.	01-Apr-13	Stormwater Improvement Action Plan	Prepare a plan detailing the actions and timeframes that will be undertaken by the licensee to improve the quality of stormwater discharges to meet licence conditions.	23-May-13	Stormwater Improvement	Provide a report outlining the stormwater improvements undertaken by the licensee.	31-Dec-13	Not Applicable
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Condition No.	EPL 6962 Conditions - Detail	OEMP Section
<b>8</b>	<b>Special Conditions</b>	
<b>E1</b>	<b>Noise Monitoring and Compliance Reporting</b>	
E1.1	<p>The licensee must undertake noise monitoring as follows:</p> <ul style="list-style-type: none"> <li>a) The noise monitoring must be undertaken within 6 months of the commencement of operations on the new extension - Lot 202, DP 1183399; and</li> <li>b) The noise monitoring must verify the assumptions and the noise limits as outlined in the Port Botany Container Terminal Expansion Noise Assessment (2003), part of the Environment Impact Assessment submitted in accordance with the Environmental Planning and Assessment Act 1979 for the approved container terminal development.</li> </ul>	<b>6.6</b>
E1.2	<p>Every 6 months after the commencement of operations of the new extension - Lot 202, DP 1183399, the Licensee must undertake a periodic noise monitoring program consisting of the attended and unattended monitoring and provide a report within one month after the completion of the monitoring to the EPA's Manager, Sydney Industry at PO Box 668 Parramatta NSW 2124 containing the following information:</p> <ul style="list-style-type: none"> <li>a) Unattended monitoring data for a continuous period of no less than two weeks;</li> <li>b) Attended monitoring data during the period outlined in subsection (a);</li> <li>c) Monitoring data from locations specified in Conditions L3.1 and L3.2;</li> <li>d) An assessment of the noise levels against Condition L3 including trend analysis; and</li> <li>e) Details of any feasible and reasonable noise mitigation measures that have been or are proposed to be implemented further reduce noise levels below the limits prescribed in this licence.</li> </ul>	<b>6.6</b>

## Appendix F: Consent to Discharge Industrial Trade Wastewater – No. 24990

Table F: Trade Wastewater Consent, Assessment Rating

No.	TW Consent 24990 Conditions - Detail	OEMP Section
	<b>SCHEDULE 1 - Trade Wastewater which May be Discharged</b>	
<b>1</b>	<b>Trade wastewater substances</b>	
	<p>(a) The Customer may discharge trade wastewater into the sewer in a manner whereby the substance characteristics of the trade wastewater are of a type and discharged at a rate, level or concentration equal to or less than that described in this schedule.</p> <p>(b) The Customer must not discharge trade wastewater into the Sewer in a manner whereby the trade wastewater discharged;</p> <p>i. contains, possesses or produces a substance characteristic not provided in, or which may be determined as being contrary to that described in this schedule.</p> <p>ii. is at or of a rate, level, or concentration not provided in, or which may be determined as being contrary to, that described in this schedule.</p> <ul style="list-style-type: none"> <li>• BOD: LTADM: 15kg/day, MDM: 27kg/day (Standard: -)</li> <li>• Suspended Solids: LTADM: 1.4kg/day, MDM: 4.8kg/day (Standard: 600kg/day)</li> <li>• Grease: LTADM: 0.8kg/day, MDM: 3.5kg/day (Standard: 110kg/day)</li> <li>• Volatile Halocarbons: LTADM: 0.00265kg/day, MDM: 0.014kg/day (Standard: 1kg/day)</li> <li>• Petroleum Hydrocarbons (Flammable C6-C9): (Standard: 10kg/day)</li> </ul>	<b>6.4</b>
	<p><b>RECONCILIATION PROCEDURES:</b></p> <p><b>LONG TERM AVERAGE DAILY MASS:</b></p> <p>The Long Term Average Daily Mass is a 12 month arithmetic average of ALL daily mass discharges as calculated for each composite sample. The Daily Mass discharges is to be calculated for each of the above substances and checked against the Long Term Average Daily Mass (kg/day) on the basis of average concentrations of substances discharges (mg/L) over any 24 hour period as determined from composite samples, obtained by either the Customer (in accordance with Schedule 2) or Sydney Water, or a combination of sample results by both.</p> <p>This average concentration (mg/L) is to be multiplied by the total discharge (kL) as recorded by the Customer's discharge flow meter over the 24 hour period in order to calculate the Daily Mass of substances discharged (kg). Exceeding the Long Term Average Daily Mass does not constitute a Breach.</p>	<b>6.4</b>
	<p><b>ACCEPTANCE STANDARD:</b></p> <p>The Composite Sample Concentration is to be determined for each of the above substances and checked against the above Acceptance Standard (mg/L) for each sample obtained. Exceeding the Acceptance Standard constitutes a breach and will also incur an increased Quality Charge as detailed in Schedule 3.</p> <p>The Discrete Sample Concentration is to be determined for each of the substances identified at Schedule 2, 2(b) and checked against the above Acceptance Standard (mg/L) for each sample obtained. Exceeding the Acceptance Standard constitutes a Breach.</p>	<b>6.4</b>

No.	TW Consent 24990 Conditions - Detail		OEMP Section											
	<p><b>MAXIMIM DAILY MASS:</b></p> <p>The Daily Mass discharged is to be calculated for each of the above substances and checked against the above Maximum Daily Mass (kg/day) on the basis of average concentrations of substances discharged (mg/L) over any 24 hour period as determined from composite samples, obtained by either the Customer (in accordance with Schedule 2) or Sydney Water, or a combination of sample results by both.</p> <p>This average concentration (mg/L) is to be multiplied by the total discharge (kL) as recorded by the Customer's discharge flow meter over the 24 hour period in order to calculate the Daily Mass of substances discharged (kg). Exceeding the Maximum Daily Mass constitutes a Breach.</p>		6.4											
2	The trade wastewater discharge must at all times have the following properties													
	<table><tr><td>Temperature:</td><td>Not to exceed 38 degrees Celsius</td></tr><tr><td>Colour:</td><td>Determined on a system specific basis</td></tr><tr><td>pH:</td><td>Within the range 7.0 -10.0</td></tr><tr><td>Fibrous material:</td><td>None which could cause an obstruction to Sydney Water’s sewerage system</td></tr><tr><td>Gross solids (other than faecal):</td><td>A maximum linear dimension of less than 20mm, a maximum cross section dimension of 6mm and a quiescent settling velocity of less than 3m/h</td></tr><tr><td>Flammability:</td><td>Where flammable and/or explosive substances may be present, Patrick must demonstrate that there is no possibility of explosions or fires occurring in the sewerage system, to the satisfaction of Sydney Water. The flammability of the discharge must never exceed 5% of the Lower Explosive Limit (LEL) at 25 degrees Celsius.</td></tr></table>	Temperature:	Not to exceed 38 degrees Celsius	Colour:	Determined on a system specific basis	pH:	Within the range 7.0 -10.0	Fibrous material:	None which could cause an obstruction to Sydney Water’s sewerage system	Gross solids (other than faecal):	A maximum linear dimension of less than 20mm, a maximum cross section dimension of 6mm and a quiescent settling velocity of less than 3m/h	Flammability:	Where flammable and/or explosive substances may be present, Patrick must demonstrate that there is no possibility of explosions or fires occurring in the sewerage system, to the satisfaction of Sydney Water. The flammability of the discharge must never exceed 5% of the Lower Explosive Limit (LEL) at 25 degrees Celsius.	6.4
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3	Rate of discharge of waste to sewer:													
	<p>(a) Instantaneous maximum rate of gravitated discharge 1.00 litres per second</p> <p>(b) Maximum daily discharge 50.0 kilolitres</p> <p>(c) Average daily discharge 23.0 kilolitres</p>		6.4											
	<p>RECONCILIATION PROCEDURE:</p> <p>The data obtained by following the above procedures relating to trade wastewater is to be checked by the interface of a chart recorder to the flow metering equipment or by the installation of flow metering equipment by Sydney Water for a minimum of 7 days.</p>		6.4											

No.	TW Consent 24990 Conditions - Detail	OEMP Section
	<b>SCHEDULE 2 – Sampling, Analysis, Flow Rates and Volume Determination</b>	
<b>1</b>	<b>The Customer must provide and make available for the purpose of sampling and analysis:</b>	
	(a) Sampling point located at gauging pit/tank, incl. domestic sewage prior to the point of connection to the Sewer. (b) Equipment necessary to allow collection of composite automatic samples on either a flow proportional or time basis.	<b>6.4</b>
<b>2</b>	<b>The Customer is to undertake collection and analysis of samples in accordance with the schedule detailed below:</b>	
	(a) Composite samples are to be obtained: i. over one full production day by combining equal volumes taken at 1 kL intervals. The volumes are to be such that at least 5,000mL are obtained over the full day. The reading of the Flowmeter is to be obtained at the commencement and conclusion of the sampling day. ii. On 27 August 2015 and every 60 days thereafter, if trade wastewater is not discharged on this day, then the sample is to be taken on the next day that trade wastewater is discharged. Trade wastewater includes all non-domestic wastewater discharged to sewer from the premises, including cleaning waste.	<b>6.4</b>
	(b) Discrete samples are to be obtained as detailed below, and analysed according to the procedures and methods specified in Sydney Water's published analytical methods, to determine the concentrations or levels of the following substance characteristics: • pH: at the start and finish of each sample day • Petroleum Hydrocarbons (Flammable C6-C9): at the finish of each sample day • Volatile Hydrocarbons: at the finish of each sample day	<b>6.4</b>
	(c) Composite samples are to be analysed according to the procedures and methods specified in Sydney Water's published analytical methods, or methods otherwise agreed to and detailed hereunder, to determine the concentration or levels of the following substance characteristics: • Biological Oxygen Demand (BOD) • Suspended Solids (SS) • Grease • Volatile Hydrocarbons.	<b>6.4</b>
	(d) The Customer, or the laboratory contracted by the customer, is to submit results of analyses to Sydney Water within 21 days from the date the sample was taken. All analysis results are to be submitted on the sample analysis report provided as appendices 1 and 2 to this Consent OR in such format as may be specified from time to time by Sydney Water.	<b>6.4</b>
	(e) All data requested on the sample analysis report must be provided.	<b>6.4</b>



No.	TW Consent 24990 Conditions - Detail	OEMP Section
	<p>(f) Sydney Water must be notified in writing within 7 days of:</p> <ul style="list-style-type: none"> <li>i. any failure to obtain samples in accordance with the provisions of Schedule 2; or</li> <li>ii. any loss of any analytical data.</li> </ul> <p>Where data is unavailable, lost or not provided, the Quality Charge, as detailed in Schedule 3, will be assessed on the basis of the highest Composite Sample concentration recorded in the 12 months prior to the date of the missing sample data.</p>	6.4
<b>3</b>	<b>Volume of Wastewater Discharged, Flow Metering System</b>	
	The volume of wastewater discharged must be obtained from the reading of the total flow on the Customer's flow metering system. The rate of waste discharged is to be obtained by the reading of the instantaneous flow rate indicator on the Customer's flow metering system, or from any chart recorder interfaced to the Customer's flow metering system.	6.4
	The flow metering system is to be calibrated at least annually at the Customer's expense, by a person or company approved by Sydney Water and a copy of the calibration certificates supplied to Sydney Water within one month of such certificate being received by the Customer.	6.4
	If the Customer's flow metering system fails to record data for any period, Sydney Water is to be advised in writing by the Customer within 7 days of any such failure becoming known by the Customer. An estimate of any data not recorded is to be made as follows: Average of the waste discharges, registered for the four weeks before and/or after the failure to record.	6.4
	<b>SCHEDULE 3 - Payments</b>	
	Nil conditions	Not Applicable

No.	TW Consent 24990 Conditions - Detail	OEMP Section
	<b>SCHEDULE 4 – Additional Requirements</b>	
<b>1</b>	<b>Effluent Improvement Program</b>	
	N/A	Not Applicable
<b>2</b>	<b>Waste Management Program</b>	
	The existing pre-treatment will result in the generation of 42.0 tonne per annum of waste substances in the form of a sludge containing generally solids. The waste substances are, and will continue to be disposed of, in compliance with the requirements of the EPA.	<b>6.4</b>
<b>3</b>	<b>Waste Management Program</b>	
3.1	Backflow Containment Device must be installed and maintained at the water meter outlet property boundary in line with Sydney Water's Connected Customer Policy.	<b>6.4</b>
3.2	Backflow individual/zone protection is required on any tap located within 5m of the trade waste apparatus.	<b>6.4</b>
	<b>SCHEDULE 5 – Apparatus, Plant and Equipment</b>	
<b>1</b>	<b>Existing</b>	
	1 x Danfos Magflo Meter 1 x 1,000L Batch Tank 1 x 1,000L Line Transfer Tank 1 x 40L Caustic Tank with Low Level Alarm 1 x Auto Batch 500 with Indexing Belt and Filter Paper Roll 1 x 200,000L Holding Tank with Pumps	<b>6.4</b>

No.	TW Consent 24990 Conditions - Detail	OEMP Section
	<b>SCHEDULE 6 – Special Conditions</b>	
	<b>Proposed</b>	
	N/A	Not Applicable
<b>1</b>	<b>Dangerous Discharges</b>	
	<p>In this Schedule, the term 'may pose a danger to the environment, the Sewer or workers at a sewage treatment plant':</p> <p>(a) means an occurrence whereby matter is discharged to the Sewer which either alone or in conjunction with other matter discharged cannot be adequately treated or may cause corrosion or a lockage, explosion or the production of dangerous gases in the Sewer or may adversely affect the operation of a sewer or sewage treatment plant; and</p> <p>(b) includes, but not so as to restrict the generality of paragraph (a), matter or substances, which is or are:</p> <ul style="list-style-type: none"> <li>i. toxic or corrosive;</li> <li>ii. petroleum hydrocarbons;</li> <li>iii. heavy metals;</li> <li>iv. volatile solvents;</li> <li>v. phenolic compounds;</li> <li>vi. organic compounds.</li> </ul>	<b>6.4</b>
<b>2</b>	<b>Unintended Discharges</b>	
	(a) For purposes of avoiding unintended discharges to the Sewer or the stormwater drainage system, all matter and substances on the Premises must be processed, handled, moved and stored in a proper and efficient manner.	<b>6.4</b>
	(b) Any substance on the Premises which, if discharged to the Sewer, may pose a danger to the environment, the Sewer or workers at a STP or may harm any sewage treatment process must be handled, moved and stored in areas where leaks, spillages or overflows cannot drain by gravity or by automated or other mechanical means to the Sewer or the stormwater drainage system.	<b>6.4</b>
<b>3</b>	<b>Notification</b>	
	<p>In the event of a discharge of matter to the sewer that poses or may pose a danger to the environment, the sewer workers at a STP the Customer must immediately notify:</p> <p>(a) Malabar STP Control Room TEL: (02) 9931 8319 FAX: (02) 9931 8366</p> <p>(b) Business Customer Services (8am to 5pm Mon to Fri) TEL: 1300 985 227</p> <p>(c) Business Customer Services Emergency Contact (24 Hours) TEL: (02) 8849 5029</p>	<b>6.4</b>

No.	TW Consent 24990 Conditions - Detail	OEMP Section
4	<b>Provision of Safe Access</b>	
	The Customer shall provide safe access to Sydney Water employees visiting the site. In the event that unsafe conditions are identified the Customer must take reasonable steps to correct unsafe conditions and create safe access.	6.4
5	<b>Electronic Reporting of Sample Analysis Results</b>	
	Sydney Water reserves the right to vary this consent to specify the option of reporting by electronic mail as outlined in Schedule 2, 2 (d)).	6.4
	<b>SCHEDULE 7 (Location Details)</b>	
	Nil conditions	Not Applicable
	<b>SCHEDULE 8 – Notices and Communication Addresses</b>	
	Nil conditions	Not Applicable
	<b>SCHEDULE 9 – Authorised Officers</b>	
	Nil conditions	Not Applicable
	<b>SCHEDULE 10 – Nominated Representatives</b>	
	Nil conditions	Not Applicable

## Appendix G: Trade Wastewater Discharge Schedule – Permit No. 40110

Table G: Trade Wastewater Discharge Schedule, Assessment Rating

Item	TW Consent 24990 Conditions - Detail		OEMP Section																
1	Sydney Water grants the Permission to the owner of the premises																		
	Contact Name and Details																		
2	Business Activities: (generating trade waste) undertaken at the Premises																		
	(AA32) – Patrick’s Staff Canteen – 200 KL/yr		6.4																
3	Pre-Treatment: (equipment that is required at the premises to treat trade wastewater)																		
	Pit 1 - 2,000 Litre boat type grease trap – New Patrick Stevedore Staff Canteen		6.4																
4	Not applicable																		
5	Sydney Water’s Sewerage Treatment Plan for the Area:																		
	Name: MALABAR		6.4																
	Level of Treatment we provide: PRIMARY		6.4																
6	Discharge Point																		
	At the Premises		6.4																
7	Sampling Point																		
	(where the quality of the trade wastewater may be checked)		6.4																
8	General Requirements for ALL trade wastewater discharged to sewer																		
	<table><tr><th>CHARACTERISTIC</th><th>REQUIREMENT</th></tr><tr><td>Temperature</td><td>Not more than 38 Degrees Celsius</td></tr><tr><td>Colour</td><td>Not noticeable when diluted 100 times in clear water</td></tr><tr><td>Flammables</td><td>None to be discharged to sewer</td></tr><tr><td>pH</td><td>Between pH 7 (neutral) and pH 10 (alkaline)</td></tr><tr><td>Fibrous Material</td><td>None which could block our sewer</td></tr><tr><td>Solid Matter</td><td>Not longer than 20 millimetres, must not settle faster than 3 metres in an hour</td></tr><tr><td>Discrete Oil</td><td>None to be discharged to water</td></tr></table>		CHARACTERISTIC	REQUIREMENT	Temperature	Not more than 38 Degrees Celsius	Colour	Not noticeable when diluted 100 times in clear water	Flammables	None to be discharged to sewer	pH	Between pH 7 (neutral) and pH 10 (alkaline)	Fibrous Material	None which could block our sewer	Solid Matter	Not longer than 20 millimetres, must not settle faster than 3 metres in an hour	Discrete Oil	None to be discharged to water	6.4
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Item	TW Consent 24990 Conditions - Detail			OEMP Section												
10	Cleaning Requirements for the equipment at the premises															
	<table><tr><th>Item</th><th>Requirement</th></tr><tr><td>(PIT DETAILS)</td><td>MUST BE SERVICED IN ACCORDANCE WITH THE WASTESAFE SYSTEM, BY A CONTRACTOR LICENCED BY THE ENVIRONMENT PROTECTION AUTHORITY</td></tr><tr><td>PIT 1 BOAT TYPE GREASE TRAP – NEW – 2,000 LITRES</td><td>YOU WILL NEED TO HAVE YOUR GREASE TRAP PUMPED OUT AND CLEANED EVERY 26 WEEKS COMMENCING ON 01/12/19</td></tr></table>			Item	Requirement	(PIT DETAILS)	MUST BE SERVICED IN ACCORDANCE WITH THE WASTESAFE SYSTEM, BY A CONTRACTOR LICENCED BY THE ENVIRONMENT PROTECTION AUTHORITY	PIT 1 BOAT TYPE GREASE TRAP – NEW – 2,000 LITRES	YOU WILL NEED TO HAVE YOUR GREASE TRAP PUMPED OUT AND CLEANED EVERY 26 WEEKS COMMENCING ON 01/12/19	6.4						
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11	Extra Requirements & Backflow Prevention Containment Policy															
	<p><b>Extra Requirements:</b> N/A</p> <p><b>Backflow Prevention Containment Policy:</b></p> <ul style="list-style-type: none"><li>Backflow Containment Device must be installed and maintained at the water meter outlet/property boundary in line with Sydney Water’s Backflow Policy.</li><li>Backflow individual/zone protection is required on any tap located within 5m of the trade waste apparatus.</li></ul>			6.4												
12	What Sydney Water will charge you:															
	<table><tr><th>Type of Charge</th><th>Amount</th><th>Commencement Date</th></tr><tr><td>Permit Fee</td><td>\$158.12</td><td>---</td></tr><tr><td>Trade Wastewater Quality Charge</td><td>\$475.00 per year</td><td>01/04/19</td></tr><tr><td># Wastesafe administration charge</td><td>\$112.48 per pit per year</td><td>---</td></tr></table> <p>Note: Unless 30 days written notice is given advising any proposed changes to the business operations all Trade Waste charges continue to apply, and credits will not be issued. This written notice must be provided by email to <a href="mailto:businesscustomers@sydneywater.com.au">businesscustomers@sydneywater.com.au</a> or by fax to 1300 364 403.</p>			Type of Charge	Amount	Commencement Date	Permit Fee	\$158.12	---	Trade Wastewater Quality Charge	\$475.00 per year	01/04/19	# Wastesafe administration charge	\$112.48 per pit per year	---	6.4
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	Phone: 9616 2485 Email: <a href="mailto:businesscustomers@sydneywater.com.au">businesscustomers@sydneywater.com.au</a> WEB: <a href="http://www.sydneywater.com.au">www.sydneywater.com.au</a>			6.4												