



## TOWNSVILLE PORT EXPANSION PROJECT

Additional Information to the  
Environmental Impact Statement

### APPENDIX B3

## Operational Environmental Management Plan



## 1.0 Introduction

This Operational Environmental Management Plan (OEMP) details environmental management procedures to be implemented during the operational phase of the Port of Townsville Limited (POTL) Port Expansion Project (PEP). The aim of the OEMP is to reduce potentially adverse impacts on the environment associated with the PEP operations.

The OEMP has been developed from, and is consistent with, the PEP Environmental Impact Statement (EIS) and Additional Information to the Environmental Impact Statement (AEIS). The OEMP has been updated in response to submissions received through the EIS process, and to consider the Design Refinement where appropriate.

### 1.1 Project Overview

The Port of Townsville is located on Cleveland Bay, approximately three kilometres east of the city centre in Townsville, North Queensland. The port is situated in the Great Barrier Reef World Heritage Area and the majority of the port infrastructure is not within the Great Barrier Reef Marine Park.

The Port of Townsville is a multi-purpose port that handles predominantly bulk and general cargo. The PEP aims to address capacity constraints and accommodate future growth in trade over a planning horizon to 2040.

The PEP includes development of port infrastructure and work to 'top of wharf' including: dredging, reclamation, breakwaters, revetments, wharves, access roads, rail loop, trunk services and utilities. The PEP does not include development 'above-wharf', which may include: terminal pavements, shiploaders and unloaders, material conveyors, storage buildings for products, rail loaders and unloaders, stacking and reclaiming equipment, storage tanks and pipelines.

As the Port develops, individual Port tenant operations will be subject to separate statutory assessment and approval requirements. Operators will be required to obtain all necessary approvals and licenses prior to the start of operations or in accordance with relevant statutory timing requirements.

### 1.2 Purpose

The OEMP is focussed on sound environmental management practices, to be undertaken to minimise adverse impacts on the environment through normal operation. In addition, an OEMP identifies what measures or actions are in place to manage incidents and emergencies that may occur. An OEMP must clearly state the measures employed on site to minimise potential adverse environmental impact. All activities are to be undertaken in accordance with relevant Commonwealth, State and local government legislation. The OEMP:

- describes POTL's commitments regarding environmental performance and the reduction of adverse impacts
- specifies the actions that would be taken to implement commitments (such as monitoring)
- identifies corrective actions to rectify any deviation from performance standards
- provides an action program to enable delivery of the environmental commitments so they are achieved and implemented.

### 1.3 Scope

This OEMP only applies to the on-land operations of the PEP and only to those activities that are under POTL's control in the common user areas. It does not address activities in tenant areas of the port, and does not address operational (maintenance) dredging. Maintenance dredging will be incorporated in POTL's relevant dredging documentation and permits at the time of operation. Site specific Environmental Management Plans (EMP's) will be developed by tenants and implemented during port operations.

This OEMP falls under the overall PEP EMP framework which includes:

- Construction phase:
  - Construction Environmental Management Plan
  - Dredge Management Plan
  - Vessel Traffic Management Plan.
- Operational phase:
  - Operational Environmental Management Plan (this document)
  - Maritime Operations Management Plan.

The key environmental values likely to be affected by on-land operational activities associated with the PEP were identified in the EIS. These values are further specified in Section 4.0 below. For each key value identified, the environmental management procedures to address the potential risks and impacts have been provided.

## 1.4 Terms of Reference

The OEMP also responds to the Queensland Government's *Townsville Port Expansion Project - Terms of reference for an environmental impact statement*, February 2012, issued by the Coordinator General (Appendix A of the EIS). Section 10 of the Terms of Reference (TOR) states the requirements of the EMPs. These requirements, and if appropriate where these requirements are addressed in this OEMP, are summarised in Table 1.

**Table 1 Terms of Reference Section 10 - EMP requirements**

Requirement	Where addressed in this OEMP
Detail the EMPs for both the construction and operation phases of the Project.	This OEMP details the management measures for the on-land operational phase of the PEP. A separate Maritime Operations Management Plan (MOMP) details the management measures associated with maritime operational activities (operational shipping) of the PEP.
The EMP should be developed from, and be consistent with, the information in the EIS. The EMP must address discrete project elements and provide life-of-proposal control strategies. It must be capable of being read as a stand-alone document without reference to other parts of the EIS.	The project elements from the EIS that require management measures are detailed in Section 4.0 below and form the basis of this OEMP.
The EMP must comprise the following components for performance criteria and implementation strategies: the proponent's commitments to acceptable levels of environmental performance, including environmental objectives, performance standards and associated measurable indicators, performance monitoring and reporting.	Refer Section 5.0 for specific environmental commitments during port operations.
Impact prevention or mitigation actions to implement the commitments.	Management actions are provided in Section 5.0
Corrective actions to rectify any deviation from performance standards.	Management actions are provided in Section 5.0
An action program to ensure the environmental protection commitments are achieved and implemented. This will include strategies in relation to: <ul style="list-style-type: none"> <li>▪ continuous improvement</li> <li>▪ environmental auditing</li> <li>▪ monitoring</li> <li>▪ reporting</li> <li>▪ staff training</li> <li>▪ a rehabilitation program for land proposed to be disturbed under each relevant aspect of the proposal.</li> </ul>	There has been no on-land vegetation disturbed as a result of the PEP, therefore a rehabilitation program is not applicable. An action program to address other environmental commitments is provided in Section 5.0 below.
The recommended structure of each element of the EMP is: <ul style="list-style-type: none"> <li>▪ element/issue</li> <li>▪ operational policy</li> <li>▪ performance criteria</li> <li>▪ implementation strategy</li> <li>▪ monitoring</li> <li>▪ auditing</li> <li>▪ reporting</li> <li>▪ corrective action.</li> </ul>	Refer Section 5.0

The TOR also refers to additional information that is to be provided in the EMPs. The information required, and where these requirements are addressed in this OEMP, is summarised in Table 2.

Table 2 Terms of Reference - additional EMP requirements

Section from Terms of Reference	Requirement	Where addressed in this OEMP
5. Environmental values and management impacts	<i>The mitigation measures, monitoring programs etc., identified in ... the EIS should be used to develop the EMP for the Project.</i>	The OEMP has been developed from, and is consistent with, the PEP EIS and AEIS.
3.6.2 Objectives of the EIS	<i>The purpose of the EIS is to:... provide information to formulate the Project's EMP.</i>	The OEMP has been developed from, and is consistent with, the PEP EIS and AEIS.
5.3.5 Transport management strategies	<i>Conditions of approval for transport management impacts should also be detailed in the EMP.</i>	Transport impacts and transport management measures are provided in Section 5.10.
5.5.1 Sensitive environmental areas	<i>Outline how these measures [to mitigate impacts on sensitive environmental areas] will be implemented in the overall EMP for the Project.</i>	Measures to mitigate impacts on sensitive marine and land environments are provided in Section 5.3 and Section 5.4.
	<i>The overall EMP for the Project should address the performance requirements of the relevant policies and regional vegetation management codes published by DERM (now DEHP).</i>	There are no on-land vegetation impacts by the PEP. Performance requirements from DERM for native vegetation are not applicable. Mitigation measures for terrestrial ecology are provided in Section 5.4.
5.5.2 Terrestrial flora	<i>Include details of any post construction monitoring programs.</i>	Post-construction monitoring is included for each value/element in Section 5.0.
	<i>Outline how these measures [addressing harm to the ecological values of the area] will be implemented in the overall EMP for the Project.</i>	Mitigation measures for terrestrial ecology are provided in Section 5.4.
	<i>Discuss the [weed management] strategies in accordance with provisions of the Land Protection (Pest and Stock Route Management) Act 2002 (Qld)...in the pest management plan in the EMP for the Project.</i>	Pest management measures are provided in Section 5.5.
5.5.3 Terrestrial fauna	<i>Outline how these measures [for protecting rare or threatened species] will be implemented in the overall EMP for the Project.</i>	Mitigation measures for terrestrial ecology are provided in Section 5.4.
	<i>Discuss the [feral animal (including pest)] strategies in accordance with the provisions of the Land Protection (Pest and Stock Route Management) Act 2002 (Qld) ... in the pest management plan in the EMP for the Project.</i>	Pest Management measures are provided in Section 5.5.
5.5.4 Aquatic ecology	<i>Outline how ... [aquatic ecosystem] measures will be implemented in the overall EMP for the Project.</i>	Marine ecology measures are provided Section 5.3 of this OEMP. Marine ecology measures in relation to operational shipping are provided in the MOMP.
5.6.2 Water resources	<i>Incorporate strategies to protect or enhance water resource values into the EMP (paraphrased).</i>	Measures to protect and / or enhance water resources are provided in Section 5.2.
13 Appendices – Consultation report	<i>...plans for ongoing consultation to be outlined and included in the EMP.</i>	Community consultation for the operations of PEP will be included within POTLs consultation and communication activities at the time. A commitment has been included, however the specific mode may be different by the time the OEMP is in effect.

## 2.0 Environmental Management System

This Section describes POTL's commitments regarding environmental performance and the reduction of any adverse impacts.

### 2.1 POTLs Environmental Management Strategy

POTL maintains its commitment to sustainable development and operation through its Environmental Management System (EMS). The EMS provides a framework for environmental management at the Port, reflects POTL's Environmental Policy and commitments to manage its activities with concern for people and the environment.

POTL's EMS is compliant with AS/NZS ISO 14001 2004 and facilitates the continual improvement of environmental performance by:

- integrating environmental considerations into decision making and work practices related to the core functions of the corporation
- maintaining a high level of environmental awareness throughout the corporation and the wider port community
- utilising systems which act to reduce the risk of environmental harm through identification reporting, assessment, monitoring and control of environmental risks.

This OEMP includes the work elements necessary to satisfy environmental requirements during the operation of the PEP and will be incorporated into POTL's EMS. These work elements will be included in an overarching POTL EMP covering the common user areas which will be included in POTLs EMS. These actions include: management responsibilities, incident management, emergency responses, non-conformances, environmental training, monitoring, reporting, auditing and complaint handling.

Continuous improvement is a required deliverable of the EMS. As part of the continuous improvement, the OEMP may be updated or amended as required. This may include the merging of other documents to streamline EMP documentation. Any future amendments will take into account the intent of this document and the conditions of the existing approvals.

### 2.2 Environmental Policy

POTL Environmental Policy applies to POTL lands and activities, including the common user areas of the port. It is:

- displayed at prominent locations in the workplace of POTL employees and on the website
- communicated to POTL employees and Contractors during induction and training
- reviewed regularly.

POTL's Environmental Policy (POTL, 2014) states:

*Port of Townsville Limited (POTL) is committed to the protection of the environment and considers it as critical corporate value in the delivery and maintenance of port infrastructure and services and in planning for the future development of the Port of Townsville and Port of Lucinda.*

*POTL is committed to sustainable development and operation through responsible environmental management and continual improvement of environmental performance and the effectiveness of its Environmental Management System.*

*To achieve corporate performance consistent with this policy, POTL will employ the following principles: -*

- Integrate environmental considerations into decision making and work practices related to POTL's core functions
- Maintain a high level of environmental awareness throughout POTL and the wider port community
- Implement systems which act to minimise the risk of environmental harm through the identification, reporting, assessment, monitoring and control of environmental risks
- Establish a framework for setting and reviewing environmental objectives and targets and measuring POTL's performance
- Establish and maintain systems for assessing the environmental impacts associated with POTL's activities, identifying and acting on opportunities for improvement
- Compliance with all relevant legislation, codes of practice and standards
- Core functions to be conducted in a manner that will minimise waste, prevent pollution, promote efficient use of resources, reduce environmental impacts, and continually improve environmental and management system performance

- Providing adequate resources including finances, to facilitate the fulfilment of POTL's environmental responsibilities.

*POTL's Board and senior management are responsible for providing the leadership to support the development and implementation of this Policy and for ensuring it is effectively applied.*

*This policy will be regularly reviewed following legislative or organisational changes, or as a minimum, every three years.*

### **3.0 Project Description**

At completion of the PEP it is anticipated that approximately 1,300 cargo ships per annum will call at the Port of Townsville and the port will continue to operate on a 24 hour, 7 day per week basis. POTL will own and manage the new 150 ha (approximate) reclaimed port-side outer harbour, and have control over the common areas. POTL will lease the land and berth facilities to tenants to occupy and undertake port related activities. Tenants will develop their leased areas and construct and install their own operating infrastructure. These may include: terminal pavements, ship loaders and unloaders, materials conveyors, storage buildings for products, rail loaders and unloaders, stacking and reclaiming equipment, storage tanks and pipelines. Necessary approvals for operations in the leased areas will be independently undertaken by the tenants at the appropriate time in the future. The tenants will need to meet legislative requirements that apply at the time of their application.

A range of environmental controls are incorporated at the time of lease and tenant activities need to be undertaken in accordance with the existing operational protocols established at the port. This will help ensure that the use of the facilities will follow the existing port protocols and meet the overall environmental requirements established for the port. Lease provisions could include provisions such as:

- requirement to meet legislative requirements
- appropriate stockpiles, conveyors and facilities control including being enclosed
- implementation of dust control and management to meet regulatory requirements
- stormwater runoff is to be handled in accordance with relevant guidelines, regulatory and POTL requirements
- wastewater and solid waste is to be treated and managed in accordance with relevant licensing requirements
- noise levels at specified receptors are not to exceed specified guidelines
- tanks, pipelines and associated facilities will be bunded and any spillage collected and treated in accordance with relevant standards and best practise management
- operational areas to be secured (fenced and gated) in accordance with the port's security protocols
- operational activity is to be undertaken in accordance with port procedures
- exterior lighting is to comply with relevant guidelines
- buildings and equipment are to comply with maximum height and visual amenity provisions established by the port.

Many of these provisions are detailed in Section 4.0 below. POTL also require tenants to develop site specific EMPs and Emergency Management Plans.

Commissioning activities for fixed port infrastructure will be minimal. Trunk services (stormwater, sewer, power, water supply, and telecommunications) will be commissioned by or in close consultation with the relevant authority in accordance with standard procedures.

The new site will be fenced and access controlled in a similar manner to the existing port. POTL and port tenants will be responsible for port security.

## 4.0 Operational Environmental Management Plan Structure

### 4.1 Management Issues

The environmental values listed in Table 3 have been identified in the EIS as key areas of concern that require consideration in the OEMP in order to deliver sound environmental management practices, and minimise adverse impacts on the environment.

**Table 3 OEMP components**

Reference	Management Issue	Scope
Section 5.1	Land	Manage the potential impacts to land and manage the use of land through the operation of the Port.
Section 5.2	Water resources	Manage surface water and drainage issues to reduce impacts to water quality and the receiving catchment.
Section 5.3	Marine ecology and conservation	Reduce any impacts to marine ecology as a result of landside operational activities.
Section 5.4	Terrestrial ecology	Reduce any impacts to terrestrial ecology as a result of operational activities.
Section 5.5	Pest management	Manage potential risk during port operations.
Section 5.6	Air quality	Manage impacts to air quality as a result of operational processes and activities.
Section 0	Noise and vibration	Manage and reduce noise and vibration impact as a result of operational activities to acceptable levels.
Section 0	Greenhouse gases	Reduce greenhouse gas production from operational activities.
Section 0	Waste	Reduce waste generation and maximise the use of the waste hierarchy in managing operational waste.
Section 5.10	Transport and infrastructure	Implement and maintain appropriate levels of transport infrastructure during the development of the PEP to reduce congestion and impacts to other stakeholders.
Section 5.11	Indigenous and non-Indigenous cultural heritage	Monitor and manage as required.
Section 5.12	Scenic amenity and lighting	Maintain appropriate levels of lighting and reduce potential effects on the environment (such as shore birds and turtles) and public amenity.

For each value identified, an environmental management strategy and actions have been developed to address potential risks that may arise. Each value has a stated environmental objective, performance criteria, management actions, monitoring, reporting, and corrective actions. The structure used for the strategy and actions is outlined in Table 4.

### 4.2 Structure of the OEMP

**Table 4 EMP Structure**

Management Strategy Component	Description of Content
Element/Issue	The aspect of the operational environmental issue to be managed (as it affects environmental values).
Potential Impacts	The potential impacts the issue/element may create without management.
Performance Objective	The aims and objectives which drive the need for management of the issue/element.
Performance Criteria	Measurable performance criteria (outcomes) for each element of the operation.
Monitoring and reporting	The monitoring requirements to measure actual performance (for example, specified limits to pre-selected indicators of change).
Management Actions	The strategies, tasks or action program (to nominated operational design standards) that would be implemented to achieve the performance criteria.
Responsibility	Identify who will be responsible for: implementing the management actions, undertaking monitoring of actions, subsequent reporting requirements, and other responsibilities which may arise out of the individual management actions.
Timing	Identify the frequency at which management actions need to be implemented.

Management Strategy Component	Description of Content
Corrective Actions	The action to be implemented and by whom in the case where a performance criterion is not met.

## 5.0 Management Plan Elements

This section of the OEMP identifies specific environmental management procedures related to the on-land operations of the PEP. The requirements in this section are intended to apply in addition to the general requirements for tenants (common user area) under POTL's lease arrangements.

These requirements are to be addressed by POTL and aims to ensure the activities being carried out are consistent with any existing procedures or protocols and requirements.

A separate MOMP details the management measures associated with maritime operational activities (operational shipping) of the PEP.



## 5.1 Land

<b>Potential Impacts</b>	<ul style="list-style-type: none"> <li>Impacts to land from spillage or leakage of goods/cargo in the common user areas (for example, petroleum products, chemicals, wastes, including hazardous or regulated wastes and loose bulk products such as mineral concentrates).</li> </ul>
<b>Environmental Performance Objectives</b>	<ul style="list-style-type: none"> <li>To reduce the potential for environmental harm as a result of changes to landform.</li> </ul>
<b>Performance Criteria</b>	<ul style="list-style-type: none"> <li>Spills are reported</li> <li>Spills are appropriately cleaned up</li> <li>Spilled material is appropriately disposed.</li> </ul>
<b>Monitoring and Reporting</b>	<ul style="list-style-type: none"> <li>Any spill or contamination of land to be reported to relevant agencies and POTL as required in accordance with POTL procedures</li> <li>Record complaints.</li> </ul>

Management Actions	Responsibility	Timing	Corrective Actions
Include spill response awareness training as part of site inductions.	POTL / Tenant(s) (common user areas)	Ongoing	Regularly review site induction training and update when required.
Operate berths and cargo handling facilities in compliance with relevant management plans and licences.	Port tenants are to be aware of compliance responsibilities. On-going operational compliance is the responsibility of the port tenants.	POTL is to advise port tenants of the responsibilities prior to signing lease. The port tenants are to maintain compliance at all times during the lease.	Engagement with port tenant to address non-compliance and investigate. Follow breach provision, where required.
Follow POTL vessel/plant refuelling Standard Operating Procedure when using POTL plant and equipment.	POTL	Procedure is to be implemented during refuelling.	Investigate breach and take disciplinary action if required. Review staff training and awareness.
Manage any spills of dangerous goods in accordance with relevant incident / emergency plans.	POTL / Tenant (common user area)	Ongoing	Investigate breach. Take disciplinary actions if required.
Undertake risk assessments for all activities and have in place relevant emergency spill kits at risk areas.			Review and revise controls as required. Replace spill kits as soon as practicable after use or if missing.
Operate a complaints management system.	POTL	At all times	Review and modify controls if any adverse impacts are observed.

## 5.2 Water Resources

<b>Potential Impacts</b>	<ul style="list-style-type: none"> <li>Disturbance of marine waters due to release of contaminants (e.g. oil/fuel leaks and spills) or sediment-laden stormwater runoff into Cleveland Bay from the common user or POTL controlled areas (note that dredge tailwater management is addressed in the Dredge Management Plan).</li> <li>Effects on marine life, as well as indirect potential impacts to human health, through the exposure to substances released in stormwater into marine waters.</li> </ul>
<b>Environmental Performance Objectives</b>	<ul style="list-style-type: none"> <li>To reduce adverse impacts on water and sediment quality of Cleveland Bay.</li> <li>To reduce the introduction of contaminants into the environment from the operational activities.</li> </ul>
<b>Performance Criteria</b>	<ul style="list-style-type: none"> <li>No discharge of contaminated surface water to the surrounding environment.</li> <li>Spills are adequately contained and cleaned up.</li> </ul>
<b>Monitoring and Reporting</b>	<ul style="list-style-type: none"> <li>Regular visual site inspections of stormwater runoff areas, to check for cleanliness and potential for contaminants to impact on water quality.</li> <li>Regular site inspections to POTL controlled common areas, to check for leaks, spillage and damage to bunded storage areas.</li> <li>POTL Immediately notified in the event of an uncontained spill.</li> <li>Site specific Environmental Management Plans (EMP's) developed by tenants and implemented during port operations.</li> <li>Record complaints.</li> </ul>

Management Actions	Responsibility	Timing	Corrective Actions
Include stormwater management awareness training as part of site inductions.	POTL / Tenant(s) (common user areas)	Ongoing	Regularly review site induction training and update when required.
Design drainage as a means of source control focusing on reducing the occurrence of uncontaminated runoff entering contaminated surfaces, and to separate contaminated and uncontaminated areas in common user areas.	POTL / Tenant(s) (common user areas)	Detailed design	Report breaches to appropriate regulatory authorities.
Develop a site based stormwater management strategy, including the preparation of a Stormwater Management Plan, based on applicable guidelines at the time.	POTL / Tenant(s) (common user areas)	Detailed design	Review and amend controls if adverse impacts are observed.
Make provision for containment and removal of any spillage prior to it entering the stormwater system in design and response provisions.	POTL / Tenant(s) (common user areas)	Prior to tenant occupation.	Implement treatment control measures if source control measures fail.
Holistically review stormwater plans and new sites / activities to be undertaken for development. Dependent upon proposed activity this may require treatment devices to meet the relevant codes and be industry compliant.	POTL/Tenant(s)		Review and amend controls as necessary.
Regularly inspect erosion and sediment controls for maintenance and efficiency. Changes may have to be made to Environment and Sediment Control Plans to meet environmental conditions.	POTL / Tenant(s) (common user areas)	Ongoing	Review and amend controls if adverse impacts are observed.
Implement specific operational controls to contain contaminants at the source, or reduce runoff areas with the potential to generate contaminants. Source control measures to be implemented, include, but are not limited to: <ul style="list-style-type: none"> <li>vehicle wash racks</li> <li>machinery drip pans</li> <li>covered rubbish compartments</li> <li>dry cleaning</li> <li>chemical cabinets.</li> </ul>	POTL	Ongoing	Engagement with tenant to address non-compliance and investigate. Follow breach provision, where required.

Management Actions	Responsibility	Timing	Corrective Actions
Manage any spills of dangerous goods in accordance with Emergency Spill Response Plans.	POTL / Tenant(s) (common user areas)	Ongoing	Review and amend controls if adverse impacts are observed.
Chemicals/fuels/contaminates to be stored appropriately with proper signposting and bunding.	POTL / Tenant(s) (common user areas)	As required	Review and amend controls if adverse impacts are observed.
Operate a complaints management system.	POTL	At all times	Review and modify controls if any adverse impacts are observed.

### 5.3 Marine Ecology and Conservation

<b>Potential Impacts</b>	<ul style="list-style-type: none"> <li>General disturbance and degradation of benthic communities in the harbour basin through day to day port operations (such as stormwater discharges or spills).</li> <li>Light spill from the port facilities potentially leading to disorientation of shore birds or turtles.</li> <li>Increase in rubbish production, increasing the risk of entanglement and/or ingestion of marine debris by turtles and marine mammals.</li> </ul>
<b>Environmental Performance Objectives</b>	<ul style="list-style-type: none"> <li>To reduce indirect effects on marine ecology during the operational phase.</li> <li>To prevent contamination from operations entering the marine environment.</li> </ul>
<b>Performance Criteria</b>	<ul style="list-style-type: none"> <li>No injury or fatality to marine vertebrates as a result of PEP operational activities.</li> <li>No permanent loss of benthic habitat as a result of PEP operational activities.</li> </ul>
<b>Monitoring and Reporting</b>	<ul style="list-style-type: none"> <li>Regular visual site inspections will be carried out to monitor the site for compliance with light (when required) and waste management procedures, and hazardous material handling procedures.</li> <li>Marine monitoring to will be carried out for relevant aquatic indicators.</li> <li>Record complaints.</li> </ul>

Management Actions	Responsibility	Timing	Corrective Actions
Include marine ecology awareness training as part of site inductions.	POTL / Tenant(s) (common user areas)	Ongoing	Regularly review site induction training and update when required.
Implement stormwater and waste management measures (refer to Water Resources, Section 5.2 and Waste, Section 5.9).	POTL	Opportunistically checked during regular inspection.	Review measures and modify if any adverse impacts are observed.
Implement light management procedures to reduce light spill to the marine environment to the extent possible whilst meeting all safety requirements.	POTL / Tenant(s) (common user areas)	During incident response.	Review and modify equipment and controls if any adverse impacts are observed.
Manage any spills of dangerous goods in accordance with relevant incident / emergency plans.			
Include new operational areas in routine monitoring programs.	POTL	Ongoing	Review measures and modify if any adverse impacts are observed.
Operate a complaints management system.	POTL	At all times	Review and modify controls if any adverse impacts are observed.

## 5.4 Terrestrial Ecology

<b>Potential Impacts</b>	<ul style="list-style-type: none"> <li>Injury/mortality to fauna resulting from operational activities.</li> </ul>
<b>Environmental Performance Objectives</b>	<ul style="list-style-type: none"> <li>To avoid injury and death of terrestrial fauna from operational activities.</li> </ul>
<b>Performance Criteria</b>	<ul style="list-style-type: none"> <li>No reported incidents of harm to terrestrial fauna.</li> </ul>
<b>Monitoring and Reporting</b>	<ul style="list-style-type: none"> <li>Any incidents that affect terrestrial fauna to be reported to relevant authorities.</li> <li>Record complaints.</li> </ul>

Management Actions	Responsibility	Timing	Corrective Actions
Include terrestrial ecology awareness training as part of site inductions.	POTL / Tenant(s) (common user areas)	Ongoing	Regularly review site induction training and update when required.
Implement control measures to reduce the likelihood and impact of pests (refer to Weed and Animal Pest Management, Section 5.5).	POTL / Tenant(s) (common user areas)	Ongoing	Review and modify management practices if any adverse impacts are observed.
Manage lighting to reduce light spill away from foreshore in so far as consistent with existing Operational Health and Safety and land use codes.		Regularly checked as per maintenance schedules	Review and modify lighting management practices if any adverse impacts are observed.
Put in place and enforce site speed limits to reduce the risk of fauna collision.		Ongoing	Review and modify controls as required.
Restrict vehicle access to designated access routes to prevent disturbance to sensitive receptors.			
Maintain plant equipment and machinery in good working order to reduce potential noise impacts from equipment running inefficiently.			
Use low-noise equipment where possible and orientate noise emitting equipment away from foreshore.			
Include terrestrial ecology awareness training as part of site inductions.		POTL	At all times
Operate a complaints management system.			

## 5.5 Weed and Animal Pest Management

<b>Potential Impacts</b>	<ul style="list-style-type: none"> <li>Spread of weeds (into landscaped port lands) by movement of vehicles, machinery and equipment via rail or road, to and from site.</li> <li>Introduction and / or spread of pest animals to port land and surrounding areas.</li> </ul>
<b>Environmental Performance Objectives</b>	<ul style="list-style-type: none"> <li>To reduce the spread of weeds to and from the site.</li> <li>To reduce attraction of the PEP area to pest animals.</li> </ul>
<b>Performance Criteria</b>	<ul style="list-style-type: none"> <li>Control of weeds on the PEP area.</li> <li>Animal pests discouraged and mosquito breeding habitats are not created.</li> </ul>
<b>Monitoring and Reporting</b>	<ul style="list-style-type: none"> <li>Regular site inspections for weed infestations.</li> <li>Monitor the presence and abundance of pest animal species in the PEP area.</li> <li>Regular site inspection for mosquito breeding areas.</li> <li>Record complaints</li> </ul>

Management Actions	Responsibility	Timing	Corrective Actions
Include weed and animal pest awareness training as part of site inductions.	POTL / Tenant(s) (common user areas)	Ongoing	Regularly review site induction training and update when required.
Routinely undertake site inspections for possible mosquito breeding areas. Implement chemical control measures to control mosquito breeding if required.	Tenant(s) (common user areas) and POTL	Beginning and during every wet season.	If mosquito larvae are present on PEP lands, manual or chemical control must be implemented to interrupt the mosquito breeding cycle. Removal and/or action to prevent standing water from occurring.
Minimise shallow standing water to collect in structures on site to minimise mosquito breeding habitat.		Ongoing	Prevent water from collecting in structures or around buildings.
Ensure PEP area contains enclosed bins that are emptied on a regular basis to avoid attracting pest animals.		Review and modify controls as required. Licensed pest control contractor engaged to control pest animals as required.	
Implement regular weed control activities (for example, spraying, mowing and removal).	POTL / Tenant(s) (common user areas)	Ongoing	Review and modify controls as required.
Operate a complaints management system.	POTL	At all times	Review and modify controls if any adverse impacts are observed.

## 5.6 Air Quality

<b>Potential Impacts</b>	<ul style="list-style-type: none"> <li>▪ Fugitive dust from exposed surfaces may result in:             <ul style="list-style-type: none"> <li>- nuisance</li> <li>- increased risks to human health</li> <li>- discolouration of buildings or structure</li> <li>- depositions into the marine environment.</li> </ul> </li> <li>▪ Fugitive dust from spillage of goods/cargo in common user areas.</li> <li>▪ Fuel combustion emissions from vehicles and equipment result in increased risk to human health.</li> </ul>
<b>Environmental Performance Objectives</b>	<ul style="list-style-type: none"> <li>▪ To reduce the effects from emissions generated during the PEP operation so ambient air quality is maintained.</li> </ul>
<b>Performance Criteria</b>	<ul style="list-style-type: none"> <li>▪ No complaints from affected persons due to air or dust emissions from POTL controlled areas.</li> <li>▪ Performance in relation to relevant standards or appropriate guidelines at sensitive receptors including stipulated EPP (Air) criteria.</li> </ul>
<b>Monitoring and Reporting</b>	<ul style="list-style-type: none"> <li>▪ Visual monitoring of dust and observation of weather conditions.</li> <li>▪ Boundary dust monitoring.</li> <li>▪ Record complaints.</li> </ul>

Management Actions	Responsibility	Timing	Corrective Actions
Include air quality awareness training as part of site inductions.	POTL / Tenant(s) (common user areas)	Ongoing	Regularly review site induction training and update when required.
To reduce fugitive dust: <ul style="list-style-type: none"> <li>▪ clean up spills of dry products</li> <li>▪ contain potentially dust generating cargos in common user areas</li> <li>▪ Implement appropriate controls to prevent material being tracked onto sealed roads.</li> </ul>	POTL / Tenant(s) (common user areas)	Ongoing	Review and modify controls if any adverse impacts are observed. Boundary air quality monitoring.
To reduce fuel combustion emissions: <ul style="list-style-type: none"> <li>▪ turn engines off while parked on site</li> <li>▪ regularly tune, modify or maintain equipment, plant and machinery to reduce visible smoke and emissions</li> <li>▪ manage vehicle movement to prevent queuing / idling.</li> </ul>			
Operate a complaints management system.	POTL	At all times	Review and modify controls if any adverse impacts are observed.

## 5.7 Noise and Vibration

<b>Potential Impacts</b>	<ul style="list-style-type: none"> <li>Night time noise from the port operations may adversely affect adjacent residents.</li> <li>Reduction of daytime acoustic amenity for the closest residential locations as a result of operations (including tenants loading and unloading activities) and heavy vehicle movement on public and internal roads.</li> </ul>
<b>Environmental Performance Objectives</b>	<ul style="list-style-type: none"> <li>To reduce noise generated by operational activities so that ambient noise quality is maintained.</li> </ul>
<b>Performance Criteria</b>	<ul style="list-style-type: none"> <li>Adaptive management during operations, in response to any complaints related to noise and vibration</li> <li>Noise levels to meet relevant standards or appropriate noise guidelines at sensitive receptors.</li> </ul>
<b>Monitoring and Reporting</b>	<ul style="list-style-type: none"> <li>Noise and vibration complaints recorded to inform the need for corrective actions</li> </ul>

Management Actions	Responsibility	Timing	Corrective Actions
Include noise and vibration awareness training as part of site inductions.	POTL / Tenant(s) (common user areas)	Ongoing	Regularly review site induction training and update when required.
Equipment management includes the following: <ul style="list-style-type: none"> <li>select low noise plant and equipment suitable for purpose</li> <li>equipment has high-quality mufflers installed</li> <li>equipment is well maintained and fitted with adequately maintained silencers which meet the design specifications</li> <li>equipment / plant known to emit noise strongly in one direction (such as manifolds on compressors) are orientated so that noise is directed away from noise sensitive areas</li> <li>machines that are used intermittently are shut down in the intervening periods between works or throttled down to a minimum . Equipment shut down when not in use</li> <li>silencers and enclosures are kept intact; rotating plants are balanced; loose bolts are tightened; frictional noise is reduced through lubrication; and cutting noise is reduced by keeping blades sharp.</li> <li>equipment to be in good working condition.</li> </ul>	POTL / Tenant(s) (common user areas)		Review and modify equipment and controls if any adverse impacts are observed.
Incorporate operational Noise Management into site-specific EMP's to ensure that port operators are aware of the need to control environmental noise to sensitive receptors and have in place appropriate controls.	Tenant(s) (common user areas)	Ongoing	In the event of exceedances to the operational noise and vibration performance goals and criteria, or complaint, the activity in question will be reviewed and alternative methods/equipment/timing investigated and implemented where practical.
Where possible undertake noisy activities during daytime working hours to reduce any offsite impacts.	POTL / Tenant(s) (common user areas)	Ongoing	Review and modify operational practices if any adverse impacts are observed.
Implement general good site working practices.			
Port Tenants to consider noise mitigation and incorporate into applications, management plans and operations as part of assessments of actions and activities assessed under the Integrated Development Assessment System.	POTL / Tenant(s) (common user areas)		Review and where necessary modify operational practices if adverse impacts are identified. For example; consider alternative methods/equipment/timing and implement where practical.



Management Actions	Responsibility	Timing	Corrective Actions
Operate a complaints management system.	POTL	At all times	Review and modify controls if any adverse impacts are observed.

## 5.8 Greenhouse Gases

<b>Potential Impacts</b>	<ul style="list-style-type: none"> <li>Increase in greenhouse gas emissions produced from operations.</li> </ul>
<b>Environmental Performance Objectives</b>	<ul style="list-style-type: none"> <li>To consider greenhouse gas emissions from POTL controlled areas during port operations and reduce these where possible.</li> </ul>
<b>Performance Criteria</b>	<ul style="list-style-type: none"> <li>Reduction in calculable greenhouse gas emissions through implementation of management actions.</li> <li>Meet the applicable Commonwealth and State legislation and standards for the release of greenhouse gas emissions from POTL controlled areas.</li> </ul>
<b>Monitoring and Reporting</b>	<ul style="list-style-type: none"> <li>Undertake periodic energy audits to monitor energy use and changes to efficiency on site.</li> <li>Monitor key performance indicators on a regular basis to track operational greenhouse gas emissions, detect trends early and implement measures to address any unforeseen increases in emissions.</li> </ul>

Management Actions	Responsibility	Timing	Corrective Actions
<p>To implement energy efficiency measures:</p> <ul style="list-style-type: none"> <li>undertake preventative maintenance on equipment and engines</li> <li>switch off lighting and other electrical equipment that is not in use, where possible under OHS requirements</li> <li>use variable speed drives with high efficiency linings</li> <li>consider the use of high efficiency electrical motors</li> <li>consider purchasing electricity from renewable sources through Green Power.</li> </ul> <p>To investigate use of renewable energy on POTL controlled areas:</p> <ul style="list-style-type: none"> <li>investigate the feasibility of generating electricity from a renewable source on-site</li> <li>consider the use of solar panels for road lighting and powering isolated items.</li> </ul>	POTL / Tenant(s) (common user areas)	Ongoing	Review and modify practices if adverse impacts are experienced.
Consider energy efficiency in the procurement of equipment.			
Purchase offsets as required by legislation through a certified offset provider in Australia.			

## 5.9 Waste

<b>Potential Impacts</b>	<ul style="list-style-type: none"> <li>▪ Incorrect handling and storage of waste materials may result in the introduction of wastes into the marine environment or surrounding lands.</li> <li>▪ Incorrect handling and/or storage of waste materials may encourage pests and provide breeding habitats for mosquitos.</li> <li>▪ General waste and debris generated from port operations potentially causes amenity or health and safety impacts.</li> </ul>
<b>Environmental Performance Objectives</b>	<ul style="list-style-type: none"> <li>▪ Appropriately manage the handling and storage of waste materials in PEP area.</li> </ul>
<b>Performance Criteria</b>	<ul style="list-style-type: none"> <li>▪ Waste materials are handled and stored in a safe and appropriate manner.</li> <li>▪ No environmental impact on or disturbance to, the surrounding marine area from loss of waste.</li> <li>▪ Animal pests discouraged and mosquito breeding habitats are not created.</li> </ul>
<b>Monitoring and Reporting</b>	<ul style="list-style-type: none"> <li>▪ POTL will monitor the management and disposal of waste for POTL controlled areas.</li> <li>▪ Any incidents will be recorded in POTL database in order to identify areas where waste management is creating adverse impacts.</li> <li>▪ Record complaints.</li> </ul>

Management Actions	Responsibility	Timing	Corrective Actions
Include waste awareness training as part of site inductions.	POTL / Tenant(s) (common user areas)	Ongoing	Regularly review site induction training and update when required.
Ensure that waste reduction in alignment with EHP. 2014. <i>Waste—Everyone's responsibility: Queensland Waste Avoidance and Resource Productivity Strategy (2014–2024)</i> . Brisbane: Department of Environment and Heritage Protection, Queensland Government.	POTL to implement for common areas and POTL buildings through provision of appropriate waste facilities.	Ongoing	Review waste measures.
Supply designated collection bins or other appropriate containers to facilitate segregation and encourage waste recycling or re-use. Store waste in designed areas using internationally recognised, and where possible ISO signage to aid international visitors/crews to meet AMSA and Department of Agriculture and Water Resources requirements for their waste and prevent mixing.	POTL / Tenant(s) (common user areas)	Opportunistically checked during regular inspection.	Modify bins where appropriate if any adverse impacts are observed.
Maintain the Port common user areas in a clean and tidy manner and regularly remove waste to avoid accumulation.	POTL / Tenant(s) (common user areas)		Review tenant management procedures if waste management becomes an issue.
Remove any trade or regulated waste through a licensed trade waste contractor to a licensed reception facility.	POTL / Tenant(s) (common user areas)	At all times	Review tenant management procedures if waste becomes an issue in common areas.
Record the movement and quantities of regulated and quarantine wastes.			
Seal waste receptacles and regularly remove waste to reduce attraction of pests or vermin.		Ongoing	Review waste storage arrangements and removal frequencies if pests become an issue.

Management Actions	Responsibility	Timing	Corrective Actions
Store, use, handle and dispose of hazardous materials, regulated and quarantine wastes on site in accordance with Australian Standards and relevant regulations, maintain hazardous materials register and provide access to relevant Safety Data Sheets.			Review and modify practices as required.
Discharge quarantine waste from vessels at berth for land disposal in accordance with relevant MARPOL annexes and other legislative requirements for the disposal of quarantine wastes.			
Dispose of sewage to an approved system and / or facility.			
Operate a complaints management system.	POTL	At all times	Review and modify controls if any adverse impacts are observed.

## 5.10 Transport and Infrastructure

<b>Potential Impacts</b>	<ul style="list-style-type: none"> <li>▪ Traffic congestion at some key intersections.</li> <li>▪ Pavement degradation from additional traffic loading.</li> <li>▪ Increase in demand for rail infrastructure reduces performance of rail network.</li> </ul>
<b>Environmental Performance Objectives</b>	<ul style="list-style-type: none"> <li>▪ To deliver appropriate traffic performance during operations.</li> </ul>
<b>Performance Criteria</b>	<ul style="list-style-type: none"> <li>▪ No loss of travel time.</li> <li>▪ Pavement condition meets appropriate standards.</li> <li>▪ No decrease in the standard of rail infrastructure or network performance.</li> </ul>
<b>Monitoring and Reporting</b>	<ul style="list-style-type: none"> <li>▪ Monitoring for infrastructure wear and tear and pavement degradation.</li> <li>▪ Record complaints.</li> </ul>

Management Actions	Responsibility	Timing	Corrective Actions
Include traffic management awareness training as part of site inductions.	POTL / Tenant(s) (common user areas)	Ongoing	Regularly review site induction training and update when required.
Incorporate traffic management into site-specific management plans or applications for tenants or facilities that will generate significant traffic.	Port tenants. POTL to review	Prior to operation	Review of Traffic Management Plan in consultation with POTL.
Work closely with Queensland Rail to identify appropriate trigger points and when commercially viable, plan for the rail access via the Eastern Access Corridor.	POTL	Prior to operation	Review and modify the rail planning if adverse impacts are experienced.
Liaise with government to further implement the 'Mount Isa Rail Infrastructure Master Plan' to address future rail capacity requirements.		Ongoing	Review and modify controls as required.
Investigate cost effective solutions to alleviate additional traffic impacts from the expanded port activities.			
Determine the need for pavement rehabilitation and maintenance in consultation with DTMR.			
Operate a complaints management system.	POTL	At all times	Review and modify controls if any adverse impacts are observed.

## 5.11 Indigenous and Non-Indigenous Cultural Heritage

<b>Aspects and Impacts</b>	<ul style="list-style-type: none"> <li>Disturbance or loss of indigenous or non-indigenous cultural heritage values or artefacts in the marine environment or on land.</li> </ul>
<b>Environmental Performance Objectives</b>	<ul style="list-style-type: none"> <li>Reduce the potential for disturbance of significant Indigenous values or artefacts.</li> <li>Reduce the potential for disturbance or degradation of significant Indigenous and non-Indigenous heritage items or places.</li> </ul>
<b>Performance Criteria</b>	<ul style="list-style-type: none"> <li>No loss or disturbance of significant Indigenous values or artefacts or non-Indigenous heritage items or places as a result of operations.</li> <li>No complaints received regarding damage to Indigenous or non-Indigenous areas or sites.</li> </ul>
<b>Monitoring and Report</b>	<ul style="list-style-type: none"> <li>Reporting suspected Indigenous discoveries in accordance with the Cultural Heritage Management Plan.</li> <li>Reporting suspected non-Indigenous discoveries to DEHP.</li> </ul>

Implementation Strategies and Management Actions	Responsibility	Timing	Corrective Actions
Include cultural heritage awareness training as part of site inductions.	POTL / Tenant(s) (common user areas)	Ongoing	Regularly review site induction training and update when required.
Continue ongoing consultation with Indigenous parties in accordance with the POTL Cultural Heritage Management Plan.	POTL	Ongoing	Review Program and consultation protocol where risks of unexpected adverse effects or complaints made.
If any Aboriginal cultural heritage sites, materials or values are discovered then operations work and other activities are to cease pending an inspection by a representative from the Aboriginal Parties.			Follow advice provided by Indigenous parties on inspection.
If human skeletal material is discovered during development works operations will cease immediately within 100m of the remains. The Queensland Police, Cultural Heritage Coordination Unit (DEHP) and an Aboriginal representative will be contacted immediately.			If works do not cease, penalties apply. Follow advice provided by DEHP and the Aboriginal representative regarding established policy and procedures for dealing with human remains.
Cease work around suspected non-Indigenous heritage discoveries and notify DEHP immediately.			Follow advice provided by DEHP.
Operate a complaints management system.	POTL	At all times	Review and modify controls if any adverse impacts are observed.

## 5.12 Scenic Amenity and Lighting

<b>Potential Impacts</b>	<ul style="list-style-type: none"> <li>Local scenic amenity adversely affected by waste, water pollution, and sediment plumes in the marine environment.</li> <li>Scenic amenity adversely affected by artificial light associated with the new port infrastructure.</li> </ul>
<b>Environmental Performance Objectives</b>	<ul style="list-style-type: none"> <li>To reduce adverse visual impacts associated with operational activities.</li> <li>To reduce and/or manage adverse lighting impacts of operation.</li> </ul>
<b>Performance Criteria</b>	<ul style="list-style-type: none"> <li>Light levels from POTL controlled areas meet relevant standards or appropriate guidelines and standards.</li> <li>No complaints regarding lighting overspill.</li> <li>Meet waste, water resources, air quality and marine ecology and conservation performance criteria.</li> </ul>
<b>Monitoring and Reporting</b>	<ul style="list-style-type: none"> <li>Regular site inspections to monitor for water pollution, rubbish and dust associated with port operations.</li> <li>Record complaints</li> </ul>

Management Actions	Responsibility	Timing	Corrective Actions
Manage lighting to reduce direct light spill from the site, consistent with OHS requirements and land use codes.	POTL / Tenant(s) (common user areas)	Regularly checked as per maintenance schedules.	Review and modify lighting management practices if any adverse impacts are observed.
Implement the following management measures: <ul style="list-style-type: none"> <li>waste (refer to Waste, Section 5.9)</li> <li>water quality (Water Resources, Section 5.2)</li> <li>air quality (Air Quality, Section 5.6)</li> <li>marine ecology (Marine Ecology and Conservation, Section 5.3).</li> </ul>		Opportunistically checked during regular inspection.	Review measures and modify if any adverse impacts observed.
Operate a complaints management system.	POTL	At all times	Review and modify controls if any adverse impacts are observed.

## **6.0 Action Program**

### **6.1 Continuous improvement**

This OEMP is a 'living document' that will be reviewed (every 3 years, or as required by changes to Port operations or legislation) and amended as necessary. This allows for new or changing environmental risks relating to the port operations to be incorporated and addressed.

As part of POTL's overall environmental management system, feedback systems are in place. This will enable the OEMP to be updated and responsive to learning's from any incidents, complaints and ongoing monitoring. The OEMP is a living document and will be subject to continual improvement, as such changes will be developed and implemented over time with current versions provided to relevant authorities as required.

Other triggers for OEMP review may include:

- changes to organisational structure and roles and responsibilities
- changes in environmental legislation and/or policies
- new technologies and innovation relevant to applied methods and controls.

### **6.2 Environmental auditing**

POTL undertakes regular reviews of its systems, plans, procedures and processes including the performance against performance criteria, in accordance with the relevant EMP. This includes monitoring records, complaints and actions taken. Records shall be maintained as per retention schedule and accessible.

### **6.3 Monitoring**

Monitoring for each value is detailed in Section 4.0. That monitoring will enable:

- early detection of environmental management matters
- development of baseline environmental information from which trends and changes in the environmental quality can be detected. For example monitoring waste quantities and monitoring generation rates over time measures effectiveness of reduction measures.

### **6.4 Records**

As noted in Section 6.2, records would be kept of environmental monitoring and actions taken in regards to the OEMP.

Environmental records will be:

- kept as objective evidence of compliance with environmental requirements
- maintained according to POTL's Recordkeeping Procedure, or in the case of tenants, individual tenant record keeping procedures.

Environmental records and the OEMP will be controlled in accordance with POTL's integrated management system.

### **6.5 Staff training**

In accordance with POTL and tenant requirements, personnel will attend an induction prior to commencing work in the PEP area.



## 7.0 Community Protocols

This section outlines plans for on-going community enquiries and complaints.

### 7.1 General Enquiries

POTL's general contact details phone number and email is:

**Telephone:** 07 4781 1500

**Facsimile:** 07 4781 1525

**Email:** [info@townsville-port.com.au](mailto:info@townsville-port.com.au).

Contact can also be made via POTL's website. POTL invites public comment via their 'Tell us what you think' page (<http://www.townsville-port.com.au/feedback>).

### 7.2 Complaints Management

Complaints can be made via POTL's website.

Complaints received directly by tenants must be recorded including investigations undertaken, conclusions formed and actions taken. Notification about the complaint and any associated response must be provided to POTL in a timely fashion.

The complaint response procedure will include:

- (a) the time, date name and contact details of the complainant
- (b) reasons for the complaint
- (c) any investigations undertaken
- (d) conclusions formed
- (e) any actions taken.