



Operational Environmental Management Plan

Mayfield No. 4 Berth

28 September 2018

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Contents

GLOSSARY OF TERMS	V
1.0 INTRODUCTION	1
1.1 Scope of the OEMP	1
1.2 Objectives of the OEMP	1
1.3 Mayfield Site “Closure Area”- Environmental Responsibilities	2
1.4 Mayfield No. 4 Berth Description	2
1.4.1 Mayfield No.4 Berth Structure.....	3
1.4.2 General Berth and Hardstand Arrangements	3
1.4.3 Potential Cargo	3
1.4.4 Cargo Volumes, Shipping, Handling and Storage	4
1.4.5 Personnel	5
1.4.6 Key Issues.....	5
2.0 ENVIRONMENTAL MANAGEMENT RESPONSIBILITIES	7
2.1 Organisational Structure	7
2.1.1 Newcastle Port Corporation	Error! Bookmark not defined.
2.1.2 General Manager - Operations	7
2.1.3 Stevedore Licence Deed.....	8
2.1.4 Port Users	8
2.2 Environmental Policy Objectives	8
3.0 STATUTORY REQUIREMENTS	10
3.1 Legislative and Policy Requirements.....	10
3.2 Licensing Requirements	11
4.0 REPORTING AND MONITORING	12
4.1 Environmental Monitoring Program	12
4.1.1 Noise	12
4.1.2 Air Quality.....	14
4.1.3 Stormwater	14
4.1.4 Reporting.....	17
4.1.5 Other Reporting	17
4.2 Maintenance	18
4.3 Incident Management	18
4.4 Non Conformance and Corrective Actions	18
4.5 Complaints Handling.....	19
5.0 AUDITING AND REVIEW	20
5.1 Environmental.....	20
5.2 Hazards	20
6.0 ENVIRONMENTAL TRAINING	21
7.0 OPERATIONAL ENVIRONMENTAL MANAGEMENT PLAN	22
7.1 Soil and Water	22
7.1.1 Water Supply.....	23
7.2 Stormwater	23
7.3 Groundwater	24
7.4 Capping Maintenance.....	24
7.5 Contaminated Site Management	26
7.6 Traffic.....	26

7.6.1	Heavy Vehicle Routes.....	26
7.6.2	Stevedores	27
7.7	Noise.....	28
7.8	Vibration.....	28
7.9	Air Quality	29
7.10	Waste.....	29
7.11	Security.....	31
7.12	Landscaping and Lighting.....	32
7.13	Heritage	33
8.0	EMERGENCY RESPONSE AND CONTACT DETAILS.....	34
8.1	Communication.....	34
8.2	Emergency Procedures	34
8.3	Incident Control System	Error! Bookmark not defined.
8.4	Follow up actions	35
8.4.1	Debrief and Resumption of Normal Operation.....	35
8.4.2	Review and Improvement of the Emergency Procedure	35
8.5	Emergency Contact	36
	Emergency Contacts.....	36
	Utilities and Government Contacts	36
9.0	RECORDS MANAGEMENT	37
10.0	OCCUPATIONAL HEALTH AND SAFETY	38
10.1	General	38
10.2	Personal Protective Equipment	38
10.3	Hazard and Risk	38
11.0	REFERENCES.....	40

List of Tables

Body Report

Table 1: Operational Environmental Management Plan requirements	1
Table 2: Cargo Volumes, Shipping, Handling and Storage.....	4
Table 3: Environmental Policy Objectives	8
Table 4: Legislation relevant to the operation and maintenance of Mayfield No. 4 Berth and hardstand	10
Table 5: Noise Limits for Mayfield No. 4 Berth and Hardstand	12
Table 6: Analytes for Stormwater	15
Table 7: Emergency response contacts	36



List of Figures

Figures Section

- Figure F1: Site Location
- Figure F2: Site Layout
- Figure F3: Mayfield No. 4 Berth Responsibility and Organisation Structure
- Figure F4: Water Supply System Arrangement (Plan View)
- Figure F5: Stormwater Management System

List of Appendices

- Appendix A Conditions of Consent
- Appendix B Environmental Protection Licence (EPL) 13181, 4 November 2009
- Appendix C OEMP Compliance Checklist
- Appendix D Contaminated Site Management Plan
- Appendix E Heavy Vehicle Route Plan

Review Date	Reviewed By	Signed	Approved by Department of Planning
09 January 2015	J Spiteri		15 December 2015
28 September 2018	J Spiteri		

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Glossary of Terms

List of Abbreviations	
CBD	Central Business District
CEMP	Construction Environmental Management Plan
CEO	Chief Executive Officer
CIMP	Cap Integrity Management Plan
CSMP	Contaminated Site Management Plan
EA	Environmental Assessment
EMP	Environmental Management Plan
EO	Environmental Officer
EPL	Environment Protection Licence
EPA	Environment Protection Authority
EP&A Act	Environmental Planning and Assessment Act 1979
EM-O	Executive Manager - Operations
HDC	Hunter Development Corporation
HVR	Heavy Vehicle Route
LEP	Local Environment Plan
LGA	Local Government Area
MPT	Multi-Purpose Terminal
MTOFSA	Maritime Transport and Offshore Facilities Security Act
NPC	Newcastle Port Corporation
NSW	New South Wales
OEH	Office of Environment and Heritage
OEMP	Operational Environmental Management Plan
WHS	Work Health and Safety
PANSW	Port Authority NSW
POEO Act	Protection of the Environment Operations Act 1997
PON	Port of Newcastle
PPE	Personal Protective Equipment
OS	Port Services Manager
PSOL	Port Safety Operating Licence
Ro Ro	Roll-on Roll-off
SEPP	State Environmental Planning Policy
SSS	State Significant Site
VTIC	Vessel Traffic Information Centre

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1.0 Introduction

1.1 Scope of the OEMP

This Operational Environmental Management Plan (OEMP) has been prepared for the operation and maintenance of the Mayfield No.4 Berth and hardstand area, operated by Port of Newcastle (PON).

This OEMP has been prepared in accordance with Condition 4.4 of the Consent Conditions of DA 293-08-00 (**Appendix A**) and subsequent modifications to 29 August 2013.

The OEMP has also been prepared in accordance with relevant legislative and policy requirements, and defines the environmental management and maintenance responsibilities and reporting channels for all personnel, including employees and contractors involved in the operation and maintenance of the Mayfield No.4 Berth and hardstand area. All personnel are responsible for ensuring that their activities are conducted in accordance with legislative requirements and the requirements of this OEMP.

This document has been prepared as a dynamic document that will be regularly reviewed and updated where required.

1.2 Objectives of the OEMP

The objectives of this OEMP are to:

- Ensure that environmental management is undertaken in accordance with relevant legislative and policy requirements;
- Prevent, reduce and effectively manage potential impacts to the environment resulting from operation and maintenance of the Mayfield No.4 Berth and hardstand area; and
- Promote environmental awareness amongst employees and contractors to ensure that operation and maintenance of the Mayfield No.4 Berth and hardstand area is conducted with due diligence to the environment.

The objectives of this OEMP as described in Condition 4.4 are outlined in **Table 1**. The relevant sections of this OEMP where specific requirements are addressed have also been referenced. In addition, other environmental issues requiring management at the site have also been addressed and included in **Section 7.0**.

Table 1: Operational Environmental Management Plan requirements

Consent Condition	Reference in OEMP
<ul style="list-style-type: none"> • Describe the proposed operations 	Section 1.3
<ul style="list-style-type: none"> • Identify all the relevant statutory requirements that apply to the operation of the development 	Section 3.0
<ul style="list-style-type: none"> • Set standards and performance measures for each of the relevant environmental issues 	Section 2.2 and 7.0
<ul style="list-style-type: none"> • Describe what actions and measures will be implemented to mitigate the potential impacts of the development, and to ensure that the development meets these standards and performance measures 	Section 7.0

Consent Condition	Reference in OEMP
<ul style="list-style-type: none"> • Describe what measures and procedures will be implemented to: • Register and respond to complaints; • Ensure the operational health and safety of the workers; and • Respond to potential emergencies, such as plant failure 	Section 4.5 Section 9.0 Section 8.0
<ul style="list-style-type: none"> • Describe the role, responsibility, authority, and accountability of all the key personnel involved in the operation of the development 	Section 2.1
<ul style="list-style-type: none"> • Incorporate the detailed Environmental Monitoring Program (see Condition 8.1) 	Section 4.0
<ul style="list-style-type: none"> • Include the following: • Stormwater Management Plan (Condition 5.30); • Capping Maintenance Plan (Condition 5.20); • Contaminated Site Environmental Management Plan (Condition 4.1); and • Heavy Vehicle Route Plan (Condition 5.46). 	Section 7.2 Section 7.3 Section 7.4 Section 7.5

1.3 Mayfield Site “Closure Area” - Environmental Responsibilities

The Mayfield No.4 Berth (which incorporates the berth and adjacent hardstand) is located within the Mayfield site Closure Area and constitutes approximately 1% of this area. The berth and hardstand has been fully remediated in compliance with the Voluntary Remediation Agreement requirements and is now isolated from the remainder of the site in terms of stormwater and groundwater. In this OEMP, **PON** describe its environmental management plan to comply with the Environment Protection Licence (EPL) issued specifically for the operations of Mayfield No.4 Berth and hardstand.

The remainder of the Closure Area (150ha) has been remediated and is now managed under the Mayfield Concept Approval.

1.4 Mayfield No. 4 Berth Description

Mayfield No.4 Berth is a two hectare multi-product berth and hardstand that was constructed as part of the refurbishment of former BHP Wharf 5 and is located within an area known as the Closure Area in Mayfield, NSW (**Figure 1**). Mayfield is approximately 7km northwest of the Newcastle CBD.

The site is located in an existing industrial port area and surrounding land use comprises predominantly of industrial development with the Mayfield East residential area located approximately 1.4km to the southwest across Industrial Drive. The main road access to the site is from Selwyn Street via Industrial Drive and shipping access is via the shipping channel in the South Arm of the Hunter River which the site abuts to the north and east (**Figure 1**).

The site is accessed by a sealed bitumen internal driveway crossing land that has recently been remediated (approximately 500m long) from the eastern end of Selwyn St, Mayfield.

The site overlooks Kooragang Island and other surrounding land uses which is largely characterised by industrial activities and associated infrastructure such as large storage buildings, railway yards and tracks, coal loading gantry cranes, stockpiles etc. In this regard, the landscape is predominantly industrial in nature, highly visually modified and intensively disturbed.

1.4.1 Mayfield No.4 Berth Structure

The berth is shown in **Figure 2** and can be described as consisting of:

- Wharf front constructed with reinforced concrete pile caps, edge beams, diaphragms and a 750mm thick apron slab approximately 266 metres long and 13.65 metres wide. The new wharf is fitted with new fenders, bollards, capstans, kerbs and ladders as wharf furniture. The following new services are provided:
 - Fire hose reels and hydrants;
 - Potable water;
 - Three-phase power;
 - Single-phase power;
 - Wharf flood lighting; and
 - Wharf edge lighting.
- A 400mm thick reinforced concrete slab immediately behind the wharf front on ground measuring approximately 262 metres by 23 metres. Along the south edge of the concrete slab runs an old service duct which has been capped with a 750mm thick reinforced concrete slab. This area is predominately used for the transfer of the potential cargoes.
- An adjacent hardstand area of approximately 9,000 square metres immediately south of the concrete slab which is used for temporary storage.

1.4.2 General Berth and Hardstand Arrangements

Figure 2 details the Site Layout and provides context for the following section.

The Mayfield No.4 Berth is a secured site and requires security approval or access card prior to gaining access. At any given time activities on the berth and hardstand may include:

- trucks carry cargo into and out of the site;
- handling cargo from or into a ship using land or ship based cranes, or discharging conveying equipment;
- transfer of cargo via forklifts to temporary ground storage;
- assembling cargo for shipment or road transport;
- ship bunkering from road tanker;
- employee vehicles entering or leaving the site; and
- Department of Agriculture biosecurity inspections.

The site will normally operate 5 days per week Monday to Friday during normal business hours. However when ships are in berth it will operate at 24 hours per day, 7 days per week, to load or unload the ship.

Operational buildings on the site are limited facilities for stevedoring operations; 2 x offices; 1 x first aid room; 1 x meal room; and, 1 x amenities block. These buildings are located on the eastern end of the hardstand. The employee car parking is located adjacent to the buildings and caters for up to 60 vehicles. There is also a guardhouse building upon at the site entrance.

1.4.3 Potential Cargo

The following potential cargoes have been identified by **PON** for Mayfield No. 4 Berth:

- Project cargoes: e.g. wind turbines, transformers, mining equipment and materials, other heavy plant;

- Break bulk (inert materials only) i.e.aluminium, timber logs;
- General freight in containers;
- Bulk cargoes which are transferred directly from ship to transport with no uncontained ground storage ie sand, cement; and
- Ammonium Nitrate in containers/bulker bags.
- Bulk liquids (Diesel) via pipeline managed by Stolthaven

Of the potential cargoes identified, ammonium nitrate is the only one classified as a Hazardous Material. Transport of ammonium nitrate has been considered as part of the Mayfield Berth Risk Assessment prepared for NPC (Lloyd's Register, 2009).

The Mayfield No.4 Berth will neither receive nor dispatch as cargo any material classified as a "Class 7 dangerous good" (radioactive material).

The Mayfield No.4 Berth will neither receive nor dispatch as cargo any material classified as a "Class 1 dangerous good" (explosives) unless prior approval of the Secretary General is sought.

1.4.4 Cargo Volumes, Shipping, Handling and Storage

The level of operations for the Mayfield No.4 Berth will be dictated by the volume of cargo which is handled via the berth. This volume is completely dependent on market development. The following **Table 3** lists the above mentioned cargo and PON's estimates for volume and shipping:

Table 2: Cargo Volumes, Shipping, Handling and Storage

Cargo Type	Year 1		Year 10		Ship Type	Handling Requirements	Storage Requirements
	Est. Vol. (TPAx 1000)	Est. No. Ships	Est. Vol. (TPAx 1000)	Est. No. Ships			
Project Cargoes ie. Heavy machinery	20	3	100	12	Up to Panamax	Roll on/roll off ramps, mobile cranes	Short term open hardstand
Break Bulk ie logs	100	5	300	15	Up to Handymax	Ship cranes, mobile cranes	Short term open hardstand
Bulk Cargoes ie sand, cement	100	5	500	36	Handymax to Panamax	Bulk discharger/loader unit units, ship self-unloader/loader	Nil. Direct to truck transport
Ammonia Nitrate	30	6	100	20	Up to Handymax	Ship cranes, mobile cranes	Nil. Direct to truck transport
Total TPA	250		1000				
General Freight in Containers	1000 TEU	4	20,000 TEU	30	Handymax to Panamax	Ship cranes, mobile cranes	Short term open hardstand

Cargo Type	Year 1	Year 10	Ship Type	Handling Requirements	Storage Requirements
Total Ships	23	132			

Note:

TEU = twenty foot (container) equivalent units

TPA = tonnes per annum

Panamax = Based on the maximum vessel dimensions that would fit through the locks of the Panama Canal. Maximum length 294.1 m, width 32.3 m, draft 12 m.

Handymax = Usually referred to a dry bulk vessel with deadweight of between 35,000 to 58,000 tonnes. Usually 150 to 200 m in length, usually have up to 5 cargo holds and up to 4 cranes.

This estimated scenario will result in approximately 1 ship per fortnight in the berth in Year 1 through to 2-3 per week in Year 10.

Cargo handling on the berth and hardstand between ship and truck, ship and storage or storage and truck may be undertaken using the following equipment (numbers in brackets indicate potential quantities of equipment at peak times):

- mobile cranes (2);
- bulk discharger/loader (1);
- forklifts (6);
- trucks (8); and
- front end loader or bobcats for cleaning the inside the ship (2)

Truck movements into and out of the site will be steady throughout normal business hours at around 5-10 truck movements per hour, peaking at up to 15-20 truck movements per hour in line with normal traffic peak hours. However, when ships are being unloaded or loaded directly onto road transport their will potentially be up to 35-40 truck movements per hour.

At Year 10, peak vehicle movements on a day when a ship is at the berth, including personnel vehicles, may total 800 vehicle movements per day.

There is no current intention to service this specific berth with rail. However, if this becomes a possibility, it will be the subject of a separate application to the NSW Department of Planning and Environment.

1.4.5 Personnel

The site may operate at up to 3 shifts per day including up to 30 stevedore employees per shift. At shift change over there may be 60 stevedoring employees on site.

At any given time the site will also potentially accommodate truck drivers, specialist contractors in maintenance or equipment operation, ship's crew, Department of Agriculture biosecurity inspectors and **PON** employees, this may total an additional 5-20 personnel.

1.4.6 Key Issues

The Mayfield No.4 Berth and hardstand area is located adjacent to the south arm of the Hunter River and comprises a concrete slab 400-750mm thick over the berth area and impervious bitumen over the hardstand area. Lighting poles are located across the site and are of different luminosity levels depending on the area and nominated lighting standards. Drainage of the site has been constructed for appropriate water and stormwater management.

Key issues associated with the operation and maintenance of the Mayfield No.4 Berth and hardstand area include:

- Stormwater runoff;
- Noise nuisance to residents, land users and sensitive native fauna;
- Traffic management and loading / unloading operations;
- Waste management;
- Damage to the existing contamination capping layer at the site;
- Security; and
- Air Quality.

The operation of Mayfield No.4 Berth is limited to 350,000 TEU to satisfy consent condition 2.3. **PON** will seek further NSW Department of Planning and Environment assessment in the unlikely event this limit is reached.

2.0 Environmental Management Responsibilities

Roles and responsibilities for personnel relevant to this OEMP are detailed below.

2.1 Organisational Structure

The organisation of environmental management responsibilities as shown in **Figure 3** is detailed below.

2.1.1 Port of Newcastle

Port of Newcastle (PON) is the proponent for this part of the development within the Closure Area. PON is a private entity whose primary function is to provide safe, effective and sustainable port operations at Newcastle and to deliver port development that enhances the economic growth of the Hunter Region and NSW. The Chief Executive Officer (CEO) of PON assumes ultimate responsibility for Mayfield No. 4 Berth.

2.1.2 Executive Manager - Operations

The Executive Manager – **Marine Operations (EMMO)** of PON is responsible for the operation and of the Mayfield No. 4 Berth Site. **The Executive Manager of Projects and Infrastructure (EMPI) is responsible for the maintenance of the site.** The **EMMO** and **EMPI** are therefore responsible for the environmental performance of the Mayfield No.4 Berth and hardstand site as well as directing staff and contractors. A stevedoring company will assume exclusive control over defined parts of the Mayfield No. 4 Berth in accordance with a Stevedore Licence Deed (see Section 2.1.4), which will transfer responsibility for elements of this OEMP. The transfer of this responsibility will exclude environmental monitoring and reporting.

The **EMMO** and **EMPI** shall delegate accountability and responsibilities to the Operations Supervisor (OS) **Asset Manager (AM)**, the Safety **Adviser (SA)** and Environment **Adviser (EA)** for managing PON's activities at Mayfield No.4 Berth. The delegation of accountabilities and responsibilities will be as follows:

- The OS manages personnel (Wharf Officers) to coordinate the berthing and departure of all vessels, vessel samplings and inspections of Stevedores importing / exporting at the berth;
- The **AM** is responsible for maintaining the Mayfield No.4 Berth site. This will include preventative maintenance, any site specific project works and breakdowns;
- The Environmental **Adviser (EA)** appointed by the Director-General of the Department of Planning is responsible for all environmental matters associated with the Mayfield No.4 Berth and hardstand area. The **EA** reports to the Executive Manager **People Safety & Environment** on the efficiency of implemented environmental and management controls and any environmental incidents that may have occurred on site. The **EA** implements and oversees monitoring at the site so that the operations meet the Environment Protection Licence (EPL) and OEMP requirements.

The **EA** is responsible for ensuring environmental documentation is being maintained (i.e. policies, procedures, work instructions, risk assessments) and are current with all PON employees having access to them.

- The **SA** is responsible for ensuring Work Health and Safety (WHS) documentation is being maintained (i.e. policies, procedures, work instructions, risk assessments) and are current with all PON employees having access to them.

2.1.3 Stevedore Licence Deed

Any Stevedoring company operating on the Mayfield No. 4 Berth site will be required to enter into a Stevedore Licence Deed with PON. The licence will detail environmental accountabilities and responsibilities for the Mayfield No. 4 Berth site. Specifically, Stevedores are responsible and accountable for ensuring that all loading and unloading of cargo activities at the Mayfield No. 4 Berth site complies with relevant legislation, EPL requirements and this OEMP.

2.1.4 Port Users

Port Users comprise of any person, contractor or service provider engaged by the Stevedore, a vessel agent and / or PON. Port Users must complete PON's Level 1 Site Access Induction. The induction communicates the safety and environmental requirements for the Mayfield No. 4 Berth site and the inductee's responsibilities. All visitors to the site must be escorted by an inducted person at all times. Inductee's are responsible for complying with PON's site safety and environmental requirements.

2.2 Environmental Policy Objectives

Environmental objectives for key environmental management issues associated with the operation of the berth have been derived in accordance with the PON's Safety and Environmental Policies and are also provided for each key issue in **Section 7**. All personnel, including PON employees, Stevedores and Port Users have a responsibility to ensure that the Mayfield No. 4 Berth is operated and maintained in accordance with these objectives shown in **Table 3**.

Table 3: Environmental Policy Objectives

Management Issue	Objectives
Soil and Water	<ul style="list-style-type: none"> • Minimise the impacts of erosion and sediment discharge on the local environment during operation of activities • Minimise surface water runoff and sediment discharge from the site • Ensure that site drainage does not cause an increase in downstream turbidity • Ensure there are no adverse effects on the water quality of the downstream system
Stormwater	<ul style="list-style-type: none"> • Minimise uncontrolled surface water runoff and discharge from the site • Ensure that site drainage system efficiently manages potential onsite contaminants (such as fuels, wash-off and lubricants) and site drainage is reused where possible • Ensure there are no adverse effects on the water quality of the surrounding and downstream water system
Capping Maintenance	<ul style="list-style-type: none"> • Ensure the integrity of the capping layer is preserved
Contaminated Site	<ul style="list-style-type: none"> • Ensure the site is managed and monitored in a way that reduces the risk of contamination
Traffic	<ul style="list-style-type: none"> • Minimise impact to residents, landholders and third parties in the vicinity of the development
Noise and Vibration	<ul style="list-style-type: none"> • Minimise the impact and potential nuisance of noise emissions from operation and maintenance activities, machinery and vehicles on the local community

Management Issue	Objectives
Air Quality	<ul style="list-style-type: none"> • Control sources of dust and other emissions to air that may affect nearby residents and other landholders, pedestrians, vehicular traffic or other sensitive receiving environment • Minimise incidence of offensive odour, vapours or emissions
Waste	<ul style="list-style-type: none"> • Ensure responsible disposal of all waste generated on site, and recycle where possible • Minimise environmental impacts related to waste management
Security	<ul style="list-style-type: none"> • Prevention of vandalism and unlawful access • Prevention of security risks to vessels, adjacent residents and industry/landholders
Landscape and Lighting	<ul style="list-style-type: none"> • Prevention of lighting impacts on nearby receivers • Prevention of visual disturbance and degradation of amenity.
Biosecurity	<ul style="list-style-type: none"> • <i>Minimise the risk of introducing non-native species</i>

3.0 Statutory Requirements

3.1 Legislative and Policy Requirements

Legislation which may apply to the operation and maintenance of Mayfield No. 4 Berth and hardstand is listed in **Table 4** below.

Table 4: Legislation relevant to the operation and maintenance of Mayfield No. 4 Berth and hardstand

Relevant Legislation
<i>Environmental Planning and Assessment Act 1979; and the Environmental Planning and Assessment Regulation 2000</i>
<i>Protection of the Environment Operations Act 1997</i>
<i>Ports and Maritime Administration Act 1995</i>
<i>Heritage Act 1977</i>
<i>Roads Act 1993</i>
<i>Waste Avoidance and Resource Recovery Act 2007</i>
<i>Environment Protection and Biodiversity Conservation Act 1999</i>
<i>State Environmental Planning Policy (Infrastructure) 2007</i>
<i>State Environmental Planning Policy (SEPP) 55 – Remediation of Land</i>
<i>State Environmental Planning Policy 33 - Hazardous and Offensive Development</i>
State Environmental Planning Policy (Three Ports) 2013
Biosecurity Act 2015

The site is located within the Newcastle Local Government Area (LGA), and is subject to the provisions of the State Environmental Planning Policy (Three Ports) 2013 ('the Ports SEPP). Under the Ports SEPP the site is zoned SP1 – Special Activities with the main objectives of the zone being to maximise the use of waterfront areas to accommodate port facilities, and freight and bulk storage premises that benefit from being located close to port facilities, to enable efficient movement and operation of commercial shipping and to provide for the efficient handling and distribution of freight from Port areas.

Development Consent Conditions

The proposed Mayfield No. 4 Berth and hardstand is part of the overarching consent for;

Stage 1, being the remediation of the Closure Area, including the demolition and removal of structures and the development of a Multi-Purpose Terminal comprising a container terminal and a general cargo handling facility and associated road, rail and wharf infrastructure and dredging of the South Arm of the Hunter River.

As part of the development conditions of consent, preparation of an OEMP is also required.

This OEMP has been prepared in accordance with the relevant requirements identified in Condition 4.4 of DA 293-08-00 and subsequent modifications to 29 August 2013

3.2 Licensing Requirements

Mayfield No. 4 Berth will operate under an Environmental Protection Licence (EPL) for *shipping in bulk* activities issued by EPA under section 55 of the POEO Act. The EPL 13181 was transferred to PON on 27 February 2014 (refer to **Appendix B**).

4.0 Reporting and Monitoring

4.1 Environmental Monitoring Program

Environmental monitoring requirements for the operation of the berth are included in the relevant environmental management plans in **Section 7.0** of this OEMP. The **EO** is responsible for undertaking the monitoring required. If necessary, specialist consultants shall be engaged to assist with the establishment of monitoring systems and to train relevant personnel with sampling protocols, reading of instruments, and analysis and recording of results. Monitoring equipment will be maintained and calibrated according to the manufacturer's specifications.

The environmental monitoring plan presented in this section summarises all the monitoring and reporting commitments associated with the various plans held under this OEMP.

The commitments made in this section should be taken as minimum frequencies as monitoring may need to be more frequent if circumstances dictate. The Property Inspector who undertakes the weekly site inspections will need to complete a site inspection record to prove that the inspection has taken place and to show that no non-conformances have been noted. These inspections will also include a general visual inspection including matter such as sediment build up, litter, traffic conditions, capping exposure, and any retained water on site.

The following plans have primarily been prepared to comply with Environmental Protection Licence#13181 in accordance with EPA requirements, which is detailed in Section 3.3 and attached in appendix B. Refer to Section 1.3 for an explanation of full monitoring under the Conditions of Consent Clause 8.

4.1.1 Noise

Operational Noise Monitoring

Operator attended noise monitoring is conducted on an annual basis.

The following noise limits apply the locations shown [in **Table 5**] below.

Table 5: Noise Limits for Mayfield No. 4 Berth and Hardstand

<u>Location</u>	<u>Day</u> 7:00 am to 6:00 pm Mondays to Saturdays 8:00 am to 6:00 pm Sundays and public holidays	<u>Evening</u> 6:00 pm to 10:00 pm on any day	<u>Night</u> 10:00 pm to 7:00 am Mondays to Saturdays 10:00 pm to 8:00 am Sundays and public holidays
	<u>LAeq (15 minute)</u>	<u>LAeq (15 minute)</u>	<u>LAeq(15 minute)</u>
<u>1. 52 Arthur Street</u>	<u>49</u>	<u>38</u>	<u>38</u>
<u>2. Mayfield East Public School</u>	<u>47</u>	<u>37</u>	<u>37</u>
<u>3. 21 Crebert Street</u>	<u>49</u>	<u>39</u>	<u>39</u>
<u>4. Newcastle TAFE</u>	<u>44</u>	<u>38</u>	<u>38</u>
<u>5. 1 Arthur Street</u>	<u>48</u>	<u>33</u>	<u>33</u>

The noise monitoring is to be conducted at the five residences in the day, evening and night periods. Noise measurements are to be conducted as follows:

- Measure ambient noise levels at receivers 1 to 5 over a minimum of 15 minutes using a calibrated integrating sound level meter.
- Noise measurements are to be conducted at each location for a 15 minute period in the day and night periods.

- The LAeq(15 minute) noise descriptors are to be recorded for each measurement location.
- Where noise measurements do not exceed the noise criteria detailed in Condition 5.11 compliance is demonstrated and the results are to be recorded.
- Where measured ambient noise levels exceed the noise criteria but the noise from the site is judged to be inaudible compliance is deemed to be achieved and the results are to be recorded.
- Where measured ambient noise levels exceed the noise criteria and the exceedance is deemed to be emanating from the subject site the results are to be recorded. This outcome will trigger the need for nearfield noise measurement.

Nearfield Noise Measurements

Nearfield noise measurements are to be conducted when:

- 1 Measured ambient noise levels exceed the nominated noise criteria, and;
- 2 The operator has determined that the exceedance may be as a result of industrial noise from the direction of the subject site.

Nearfield noise measurements are to be conducted during the period of assessment (i.e. that period of the day when further noise investigations are deemed to be necessary), on the boundary of the subject site to determine the noise emissions from the site. These noise levels will be used to determine the noise contribution at residences and hence compliance with noise criteria. Nearfield measurements will be conducted for 15 minutes at the site boundary. The noise levels will be used to determine the effective site sound power level. The noise contribution at receivers will be calculated at residences to determine compliance with site specific noise criteria. Result of measurements, observations and compliance calculations will be recorded.

Reporting

A report of ambient noise measurements is to be prepared. The report is to include the following details:

- Date of Noise Measurements;
- Location of Noise Measurements;
- Weather Conditions;
- Instrumentation and Calibration Checks; and
- Noise Criteria.

Exceedance Response and Contingency Measures

In the event that PON receive an exceedance in its annual noise monitoring, the following actions should be undertaken:

- Notify NSW Department of Planning and Environment of the result and our plan of action within 24hours;
- Conduct extensive noise monitoring to identify the offending noise source;
- Restrict the coincidence of noisy plant working simultaneously; and
- Implement engineered solutions as appropriate.

4.1.2 Air Quality

A PM10 High Volume Air Sampler (HVAS) and Total Suspended Particulate (TSP) sampler are installed as indicated in **Figure 2** allowing continuous monitoring throughout the operation of the berth as specified in EPL 13181 in **Appendix B**. Details for the monitoring are as follows:

- Monitoring methodology and frequency – Monitoring shall be undertaken in accordance with NSW OEH publication “Approved *Methods for Sampling and Analysis of Air Pollutants in NSW*” **AS 3580.9.3:2015 Total suspended particulate matter (TSP) – High volume sample gravimetric method** and AS 3580.9.6-1990 Particulate matter – *PM10-high volume sampler with size selective inlet* as specified in the EPL. The monitoring shall be on a six-day cycle in accordance with typical NSW Office of Environment and Heritage (OEH) requirements.
- Location of monitors – The location of the monitors were assessed and placed to ensure compliance with **AS3580.1.1:2007 Guide for siting of sampling units**
- Maintenance of monitor – The unit will be operated and calibrated in accordance with AS 3580.9.6-1990 *PM10-high volume sampler with size selective inlet* and analysis will be undertaken in accordance with AS 3580.9.3-2003 by a National Association of Testing Authorities (NATA) accredited laboratory.
- Procedure for recording results – results from the NATA accredited laboratory shall be reported monthly in a combined report with the sites stormwater monitoring and kept on PON’s electronic record system as indicated in section 9.0 and annually within a consolidated report that will be supplied to the Director General and the EPA as set out in Section 4.1.4.

Meteorological data is obtained from PON’s Mayfield 4 Meteorological station to assist in interpreting air quality results that is sited, operated and maintained in accordance with the Approved Methods for the Sampling and Analysis of Air Pollutants in NSW administered by OEH.

4.1.3 Stormwater

Monitoring of the stormwater onsite will be undertaken in accordance with the EPL and plan [EPA License Area, Mayfield No. 4 within Lot 4 DP.117746](#) indicated in Appendix B. All details for the monitoring are as follows:

- Monitoring methodology and frequency – the sampling procedure will be in accordance with AS/NZS 5667.1-1998 *Water quality – Sampling – Guidance on the design of sampling programs, sampling techniques and the preservation and handling samples* and AS/NZS 5667.10-1998 *Water Quality Sampling Guidance on sampling water waters*. The monitoring shall be undertaken monthly during a discharge by a grab sample in accordance with the sites EPL requirements as administered by the EPA
- Locations of monitoring – the locations of the stormwater monitoring was assessed by the EPA and PON representatives and will be undertaken in accordance with EPL and Plan [EPA License Area, Mayfield No. 4 within Lot 4 DP.117746](#) as indicated in Appendix B.
- Maintenance of stormwater pits – routine maintenance shall be undertaken by PON’s Infrastructure Services section as described in section 4.2
- Sampling and analysis methods – sampling will be undertaken by consultants engaged by PON in accordance with AS/NZS 5667.1-1998 and AS/NZS 5667.10-1998. Consultants will use a NATA accredited laboratory to undertake the analysis. Samples will be collected in appropriate containers, transported in eskies and chain of custody documentation shall be maintained.
- Procedure for recording results – results from the NATA accredited laboratory *shall be reported monthly in a combined report with the sites air quality monitoring and kept on PON’s electronic record system* as indicated in section 9.0 and annually within a consolidated report that will be supplied to the Secretary General and the EPA as set out in Section 4.1.4.

In the event PON receive an exceedance in its stormwater assessment, the following action and contingency measures should be undertaken:

- Notify the Department of Planning and Environment and Environmental Protection Agency within 24hours of receiving the laboratory report;
- Conduct an investigation (including additional sampling if required) to identify the offending source; and
- Implement solutions as appropriate.

The stormwater monitoring will include those analytes identified in **Table 6** below.

Table 6: Analytes for Stormwater

Pollutant	Unit of Measure	Frequency	Sampling Method
Total Suspended Solids	mg/L	<i>Special frequency 1</i>	Grab Sample
pH	pH units	<i>Special frequency 1</i>	Grab Sample
Nitrogen (Total)	ug/L	<i>Special frequency 1</i>	Grab Sample
Oil and Grease	mg/L	<i>Special frequency 1</i>	Grab Sample
Phosphate	ug/L	<i>Special frequency 1</i>	Grab Sample

For the purpose of the table above, Special Frequency 1 means the collection of samples during the first discharge event following a loose bulk cargo operations. Only one discharge event is required to be sampled each month.

The following Table 7 comments on PON's action or comment in relation to the environmental safeguards noted in table 10.2 of the original Environmental Impact Statement (2000) as required under the development consent Condition 5.30.

Table 7: Environmental Safeguards (ex EIS Table 10.2)

Environmental safeguards	PON Action/Comment
Prepare and implement an Environmental and Monitoring Management Plan (EMMO) which ensures that potential contaminants are appropriately contained and treated.	The current OEMP for the Mayfield No.4 berth and hardstand will ensure that potential contaminants are appropriately contained and treated.
Install detention/sediment control ponds in the Eastern and Western drains. The ponds would treat water to the appropriate EPA requirement and would be designed to meet minimum recognised standards for wet weather containment based on the document Australian Rainfall and Runoff. The ponds would be cleaned of silt as required to ensure their capacity is not reduced by more than 10% of volume.	Originally Regional Land Management Corporation (RLMC), now HDC, under the consent conditions have installed detention/sediment control ponds in the Eastern and Western drains in accordance with the document Australian Rainfall and Runoff. PON are responsible for the maintenance and upkeep of the drains.
Inform relevant personnel of appropriate contingency measures for spill containment, clean up and disposal procedures in the event that there are leaks of oil or grease from equipment or spills of waste materials. Store waste materials in dedicated receptacles which should be emptied on a regular basis. Maintain vehicles and equipment to minimise oil and fluid drips.	PON currently requires all employees, Stevedores and Port users accessing the Mayfield No.4 Berth and hardstand area to undertake appropriate inductions for activities in site. PON's Level 1 induction program provides general environmental awareness and ensures that all inductees understand their obligation and legislative requirement to exercise due diligence for environmental matters.
Provide a concrete bund around the fuel depot to	There is no refuelling depot on site. Refuelling of

contain any potential spillage while vehicles are refuelling. Spilled fuel and oil would be directed to a waste collection tank.	vehicles is not encouraged on site. Where there is a need to do it a temporary bund must be provided.
Store fumigation chemicals for the Bulk Handling Terminal in a hazardous materials storehouse	Fumigation chemicals will not be stored on the Mayfield No.4 berth and hardstand site. If fumigation is necessary a Department of Agriculture accredited service provider will be engaged to ensure that all fumigation is conducted in accordance with approved guidelines.

The following Table 8 identifies how the provisions of Newcastle City Council's Technical Manual – stormwater and Water Efficiency for Development (formally Development DCP No.50 – Stormwater Management for Development Sites) have been addressed, as required under development consent condition 5.30.

Table 8: stormwater Design Criteria

Design Criteria (from NCC Technical manual)	PON Comment
Interim controls for residential estate developments	This section is not relevant to this development
Erosion and sediment control strategy	Erosion and Sediment Control Plans and Soil along with Water Management Plans were part of the approved CEMP for the project and audits were carried out during construction to ensure that the requirements of these plans were addressed.
Stormwater collection	<ol style="list-style-type: none"> I. All surface levels have been designed and constructed to be free draining; II. Drainage pits have been installed so that nuisance water does not collect at low points; and III. Pits are connected to the stormwater management system for the site being a baffled system with a series of filters.
Flooding and run off regimes	All run off from low intensity common rainfall is captured and directed to the stormwater management system. There is no scour or natural creek systems affected by this rainfall.
Pollutants	All water from this site is treated in the stormwater management system constructed within the wharf prior to being discharged into the harbor. Testing points have been provided to check that any pollutants in the discharge to the harbor are below the allowable concentrations.
Overflow disposal	There are no neighbouring properties that are affected by overflows
Existing drainage systems	There are no existing drainage systems on site affected by the development.
Efficient use of mains water	Mains water is efficiently used on site
Comprehensive water cycle management plans	There is no water cycle management plan for the development as there is no landscaping or other facilities present that recycled water can be used

	in an efficient manner.
Installation and maintenance requirements	As noted previously the sediment and erosion controls were audited during construction to ensure that they were being maintained. The stormwater management system is routinely maintained as described in section 4.2.

4.1.4 Reporting

PON will provide the detailed results from the Environmental Monitoring Program in an Annual Environmental Management Report to the Secretary General in accordance with section 8.4 of the consent conditions.

The report will:

- a. Identify all the standards, performance measures and statutory requirements this development is required to comply with;
- b. Review the environmental performance of the development to determine whether it is complying with these standards, performance measures and statutory requirements;
- c. Identify all the occasions during the previous year where these standards, performance measures and statutory requirements have not been complied with;
- d. Include a summary of any complaints made about the development and indicate what actions were taken (or are being taken) to address these complaints;
- e. Include the detailed reporting from the Environmental Monitoring Program (As per Consent Condition 8.1), and identify any trends in the monitoring over the life of the project; and
- 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.

After reviewing the Annual Environmental Management Report, the Secretary General may require the Applicant to address certain matters identified in the report. PON will comply with any reasonable requirements of the Secretary General.

PON will also complete and supply to the EPA an Annual Return in the approved form in accordance with section 6 of the EPL that will comprise:

- a. a statement of Compliance; and
- b. a Monitoring and Complaints Summary

The Annual return for the reporting period will be supplied to the EPA by registered post, no later than 60 days after the end of each reporting period.

4.1.5 Other Reporting

At 5 yearly intervals PON will provide a report to the Secretary General outlining the need for the Mayfield No.4 Berth to remain operational.

4.2 Maintenance

The following maintenance activities, in relation to environmental matters, will be undertaken by contractors at the site:

- Routine inspection and cleaning of stormwater management system;
- checking and maintaining the integrity of fencing;
- inspecting lighting and adjusting as necessary;
- immediate cleaning of any spills or materials; and
- clearing of rubbish and waste during loading and unloading activities.

4.3 Incident Management

An incident/ accident is an unplanned or uncontrolled sequence of events resulting in injury, illness, property damage, environmental impact or has the potential to do so. All accidents/ incidents should be reported immediately to the Port Authority NSW (PANSW) Vessel Traffic Information Centre (VTIC) on (02) 4929 3890 as soon as practicable and an incident form completed and forwarded to the relevant PON representative. All incidents are to be recorded in the PON i-Systain event management database.

Incident reporting requirements are communicated to all PON employees, Stevedores and Port Users through PON's Level 1 Induction.

Additionally, 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 will be supplied to the Department outlining the basic facts. A further detailed report will be prepared and submitted following investigations of the causes and identification of necessary additional preventative measures. The report will be submitted to the Secretary-General no later than 14 days after the incident or potential incident. PON maintains an events database. Events relating to Mayfield 4 berth shall be made available, at any time, for inspection by the Secretary-General. PON will comply with any reasonable requirement of the **Secretary-General** in response to a registered event.

4.4 Non Conformance and Corrective Actions

As soon as it is recognised that any required environmental control is not in place, environmental management practices are not being adhered to, or environmental impacts exceed nominated criteria, the EO will inspect the Mayfield site and / or activities to review the extent of the possible non-conformance. Activities in the affected area will cease or be modified until the non-conformance has been corrected. The **EMMO** is responsible for ensuring appropriate rectification measures, including work procedures, have been effectively implemented. Approval from the **EMMO** is required before work can re-commence.

Non-conformances reported are to be recorded in the i-Systain event database and will include details of the non-conformance, any immediate actions undertaken and the corrective actions implemented to prevent a recurrence.

The incident report would be reviewed by the relevant division manager. A register of non-conformances must be maintained for all active and resolved non-conformances.

4.5 Complaints Handling

PON maintain a public website with access to information on how to lodge a complaint:

<http://www.portofnewcastle.com.au/Contact/Contact-Us.aspx>

Any complaints received will be entered into the i-Systain database with relevant division managers being notified.

The following detail should be included in the event report:

- Date, time and nature of the complaint or inquiry;
- Type of communication (telephone, letter, meeting etc);
- Name, address, contact number;
- Nature of complaint; and
- Response details.

5.0 Auditing and Review

5.1 Environmental

Condition 9.4 of the development consent requires that:

Within 12 months of commissioning the Multi-Purpose Terminal 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.

A suitably qualified environmental specialist shall conduct an audit of the Conditions of Consent and associated OEMP initially following twelve months of its implementation, followed by regular audits every three years thereafter. Audits shall involve a review of all environmental documents, records, and reports to ensure compliance with the requirements of the Conditions of Consent and OEMP. If any deficiency is detected appropriate corrective actions will be initiated by PON.

The OEMP will be reviewed after the first twelve months of the site operation to ensure that it adequately addresses the identified issues and the activities being undertaken during the operation of the upgrade. Follow up reviews will take place following each audit.

Key environmental and procedural issues to be covered by the audit shall include, but may not be limited to:

- Environmental management measures presented in **Section 7.0**;
- Adherence to reporting procedures;
- Incidents and non-conformances (**Section 4.3**, **Section 4.4** and **Section 8.0**);
- Complaint management (**Section 4.5**);
- Licences and legislative requirements (**Section 3.0**);
- Environmental education and training (**Section 6.0**);
- Environmental monitoring outcomes (**Section 4.0**); and
- Changes in organisational structure and responsibilities (**Section 2.0**).

The audits and reviews will be documented and provided to the Secretary-General of the Department of Planning within 2 months of commissioning the audit.

5.2 Hazards

Condition 7.11 of the development consent requires that:

Twelve months after the receipt of the first dangerous goods cargo... the applicant shall carry out a comprehensive Hazard Audit of the development and submit a report to the Director General.

PON will conduct the Hazard Audit at twelve months after the receipt of the first dangerous goods cargo by a duly qualified independent auditor approved in advance by the Secretary General. The completed audit shall be submitted to the Secretary General within one month of its completion. Thereafter audits will be conducted at 3 yearly intervals or as determined by the Secretary General. Audits will be in accordance with the NSW DOP's Hazardous Industry Planning Advisory paper No.5 – Hazard Audit Guidelines

6.0 Environmental Training

All PON employees, Stevedores and Port Users shall be informed of their responsibilities under the OEMP.

PON currently requires all employees, Stevedores and Port Users accessing the Mayfield No. 4 Berth and hardstand area to undertake appropriate inductions for activities on site. PON's Level 1 induction program provides general environmental awareness and ensures that all inductees understand their obligation and legislative requirement to exercise due diligence for environmental matters.

PON is committed to providing appropriate training to all PON employees to enable them to perform their tasks without risks to health, safety and the environment. All operating and maintenance personnel are required to be suitably qualified, trained and experienced to accepted industry competency levels.

Records of all induction and training details and attendees are maintained within the PON induction system.

7.0 Operational Environmental Management Plan

The following sections set out the environmental management activities and management measures, which shall be undertaken or complied with during operation and maintenance of the Mayfield No. 4 Berth and hardstand. PON shall ensure that the personnel responsible for implementing the OEMP, such as the nominated EO and nominated Stevedores are aware of their roles and responsibilities.

Environmental management issues have been presented separately, with each aspect addressed in respect of environmental objectives, key environmental issues, and environmental management measures to achieve the objectives. An activity-specific OEMP compliance checklist is provided in **Appendix C**, which may be completed during operation and maintenance activities to document compliance with environmental management measures detailed in the following sections.

7.1 Soil and Water

Management of soil and water along Mayfield No. 4 Berth and hardstand is necessary to protect the berth's operation activities as well as the integrity of the South Arm of the Hunter River, and to minimise erosion which may destabilise site activities. Environmental management measures would comply with industry best practice.

Key Environmental Performance Objectives
<ul style="list-style-type: none"> • Minimise the impacts of erosion and sediment discharge on the local environment during operation of activities • Minimise surface water runoff and sediment discharge from the site • Ensure that site drainage does not cause an increase in downstream turbidity • Ensure there are no adverse effects on the water quality of the downstream system
Key Environmental Issues
<ul style="list-style-type: none"> • Sedimentation as a result of cargo movements and heavy vehicles • Pollution and hydrocarbon contamination of the Hunter River
Environmental Action and Management Measures
<ul style="list-style-type: none"> • Use of sediment control structures such as a series solid pollution filters and baffles within the stormwater management system. • Installation of emergency shut off valves at the three outlets on the wharf to prevent any spills from entering the Hunter River. • Any fuels, chemicals and liquids to be stored within the hardstand area will be appropriately bunded to prevent spills or contaminants entering the stormwater system. All fuels, chemicals and liquids to be securely stored at the site • Fuels and chemicals to be stored in bunded areas designed to contain 120% of volume stored • Containers to be stored on hardstand area to ensure potential contamination and soils are managed within the stormwater drainage and treatment system (as described in Section 7.2) • Records of inspections and maintenance on stormwater management systems to be kept and provided at any time upon request • Compliance with relevant EPA requirements with respect to stormwater discharges

7.1.1 Water Supply

All water supplied to the berth is sourced from Hunter Water mains via a private line from Selwyn Street.

Potable water is supplied to the amenities block located at the southern end of the site.

The fire water ring main is located beneath the berth. This main delivers water to the fire hydrants. Five dual outlet fire hydrants including pits are located across the site and run parallel to the potable water main (**Figure 4**).

Ships potable water is supplied via a standpipe with water being drawn from the ring main located under the berth.

7.2 Stormwater

The stormwater drainage system used for the site is shown in **Figure 5**. The power drain manages the wharf area drainage system located between the wharf front and 400mm cement apron, and running along the length of the berth.

The power drain which receives water runoff and potential contaminant water from the berth area as the area slopes towards the power drain as shown on **Figure 5**. Within this drainage system there are three treatment chambers incorporating the stormwater management filter systems which remove hydrocarbons and suspended solids from stormwater, preventing spills and minimising non-point source pollution entering downstream waterways. When there is sufficient water within this system, the stormwater is discharged into the river.

Each of the three treatment chambers has been fitted with an emergency shut off valve. In the event that there is a spill of material on the wharf the valves can be closed and all material can be contained within the power drain

The hardstand area at the rear of the berth drains into a stormwater swale outside the boundaries of the berth area. The swale has been designed to remove contaminants and other pollution that may be contained in the runoff. The swale connects to a stormwater culvert for discharge to the Hunter River.

Key Environmental Performance Objectives
<ul style="list-style-type: none"> • Minimise uncontrolled surface water runoff and discharge from the site • Ensure that site drainage system efficiently manages potential onsite contaminants (such as fuels, wash-off and lubricants) and site drainage is reused where possible • Ensure there are no adverse affects on the water quality of the surrounding and downstream water system
Key Environmental Issues
<ul style="list-style-type: none"> • Further contamination of stormwater with fuels, lubricants, wash-off from cargoes, other liquids and herbicides/pesticides as well as accidental spillages • The potential of uncontrolled runoff to increase pollution and turbidity and overall water quality of the Hunter River.
Environmental Action and Management Measures
<p>In addition to general measures listed in Section 7.1, specific control measures to stormwater include the following:</p> <ul style="list-style-type: none"> • Direction of all stormwater to constructed stormwater drains/swales; • Stormwater Culvert system (as outlined in Section 7.2) with biofiltration swale used in stormwater diversion from hardstand area to outlet drains; • Re-use of stormwater onsite (where possible); and • Regular monitoring as specified in Section 4.1.3

7.3 Groundwater

The Mayfield No.4 Berth and hardstand has been remediated in accordance with the VRA. There is no longer a requirement to monitor groundwater for the Mayfield No. 4 Berth and hardstand area.

7.4 Capping Maintenance

As part of the remediation activities undertaken onsite, a final capping layer has been applied in order to contain contaminants in the subsoils. As part of the Contaminated Site Management Plan (CSMP) for previous Stage 1 works (**Appendix D**), specific control measures have been outlined for the maintenance of the integrity of the capping layer. These control measures are adopted for the Mayfield No. 4 Berth and are outlined below.

Key Environmental Performance Objectives
<ul style="list-style-type: none"> • Ensure the integrity of the capping layer is preserved
Key Environmental Issues
<ul style="list-style-type: none"> • A breach in the capping layer as a result of poor site management resulting in the exposure of potential contamination risk
Environmental Action and Management Measures

Key Environmental Performance Objectives

- Specific inductions on cap preservation where required e.g. any excavation;
- No excavation work will be allowed on site without an excavation permit and/ or excavation notification form being completed. The excavation permitting process will prompt PON to consider whether cap integrity could be compromised by the proposed work. Works should be planned to minimise excavation needs near or through the cap;
- Any excavation permit will reference the three diagrams attached in Appendix F, which identify the nature and thickness of the capping layer, the location of Level 2 materials (refer to CSMP for definition) and the location of Steelstone Mix 3 (a recycled mix containing manganese)
- Where there is the potential for a breach of cap integrity, procedures identified in the CSMP must be adhered to (**Appendix D**).
- Where actual breach of cap integrity occurs, the event will be logged on the Incident Register and formal notification procedures implemented under this OEMP (refer **Section 4.3** and **4.4**) and rectification measures undertaken as specified in the CSMP; and
- General visual monitoring would be conducted as specified in **Section 4.1** of this OEMP.

7.5 Contaminated Site Management

The objectives of contaminated site management include ensuring the efficacy of remediation works across the site is maintained over time.

Specific control measures for contaminated site management are found in the CSMP for the whole Mayfield remediated area, including Mayfield No. 4 Berth and hardstand. The CSMP shall be referred to for all contaminated site monitoring and management (**Appendix D**).

Key Environmental Performance Objectives
<ul style="list-style-type: none"> • Ensure the site is managed and monitored in a way that reduces the risk of contamination
Key Environmental Issues
<ul style="list-style-type: none"> • Contamination of runoff or sediment resulting in downstream impacts in the surrounding land uses and Hunter River.
Environmental Action and Management Measures
<p>All remediation works and structures must be maintained in a proper and efficient condition and manner so that they continue to properly perform those functions for which they were delivered or installed, including compliance with:</p> <ul style="list-style-type: none"> • Maintenance protocols included in the relevant approved Remediation Action Plan (RAP) for the Mayfield site and which outlines design requirements in respect of remediation works; • Any Site Auditor requirements; • All applicable legal requirements; and • All onsite workers are inducted and trained appropriately as discussed in Section 6.0 of this OEMP.

7.6 Traffic

7.6.1 Heavy Vehicle Routes

The Heavy Vehicle Route is outlined in the *Heavy Vehicle Route Plan for Mayfield No. 4 Berth* (HVR Plan) attached in **Appendix E**. All heavy vehicles will access the site via the following route:

- 1 Pacific Highway
- 2 Industrial Drive
- 3 Selwyn Street
- 4 Internal Lead-in road

All drivers of heavy vehicles will be inducted into the overall OEMP and the HVR Plan and be made familiar with the approved heavy vehicle route.

Industrial Drive provides regional road linkages to the west via the New England Highway, to the north via the Pacific Highway and south via the F3 Freeway. The majority of cargo transport to the port is via these regional road linkages.

Due to the uncertainty with the cargo sources and delivery location precise heavy vehicle routes are not able to be determined. However general principles including prohibiting heavy vehicles going to and from the port from using local residential streets have been included in the HVR Plan. Approved B-double routes in the locality are shown in this Plan.

7.6.2 Stevedores

All Stevedores operating from PON owned wharves are required to enter into licence agreements with PON. The licence covers the use of the wharf and the conditions under which the wharf can be operated.

As part of the conditions of the stevedoring licence to use the wharf PON will impose a condition specifying that all truck drivers engaged and/ or arranged by the stevedoring company are to be notified that all heavy vehicles accessing the site are prohibited from using the residential streets of Mayfield and Mayfield East and are to follow the routes identified in the HVR Plan and outlined above in **Section 7.5.1**.

Key Environmental Performance Objectives
<ul style="list-style-type: none"> • Minimise impact to residents, landholders and third parties in the vicinity of the development
Key Environmental Issues
<ul style="list-style-type: none"> • Temporary disruptions to residents, landholders and other third parties
Environmental Action and Management Measures
<ul style="list-style-type: none"> • Implementation of the Heavy Vehicle Route Plan for Mayfield No. 4 Berth • Access would be via Selwyn Street only and controlled via the gate located at the Mayfield No. 4 Berth and hardstand • Public access to the site shall not be permitted • Roads and parking areas will be regularly maintained • A restricted speed limit will apply to the site • Appropriate signage will be implemented around the site and along the access route • Where local deliveries of cargo are required the heavy vehicles will be confined to the major roads • All heavy vehicles are prohibited from passing through residential areas and in particular, no travel is allowed through Mayfield or Mayfield East • General monitoring would be conducted as specified in Section 4.1. • Operation of the Complaint Register

7.7 Noise

Noise impacts associated with the operation and maintenance are likely to be similar to the existing industrial environment. The operation may have the potential to impact on the amenity of residents and landowners in surrounding areas. Activities that may result in localised impacts to the amenity of the surrounding area should be assessed on a site-specific basis, and management measures implemented in accordance with this OEMP.

Key Environmental Performance Objectives
<ul style="list-style-type: none"> • Minimise the impact and potential nuisance of noise emissions from operation and maintenance activities, machinery and vehicles on the local community
Key Environmental Issues
<ul style="list-style-type: none"> • Disturbance to amenity of residents and other land users in the vicinity
Environmental Action and Management Measures
<ul style="list-style-type: none"> • Limiting daytime and night time noise to development consent criteria through regular monitoring • Ensure regular maintenance of machinery and vehicles • Ensure machinery and vehicles are fitted with high efficiency mufflers (if required) • Avoid the coincidence of simultaneous workings of high noise level machinery/operations near sensitive receivers where possible • Loading and unloading operations to be conducted away from noise sensitive receivers where possible • Use of noise mitigation technologies and techniques where necessary (e.g. silencers, noise barriers or other noise treatment of high noise generating equipment) • Minimise the operation of site machinery and vehicles during the night period where practicable and feasible • Noise Compliance Monitoring to be conducted as described in Section 4.1.1. • Noise complaints shall be considered incidents and shall be managed in accordance with the non-conformance and corrective action procedures detailed in Section 4.4.

7.8 Vibration

Due to the considerable distance between the key components of the operational activities and the surrounding residents, vibration is not expected to be a significant environmental issue. As such there are no vibration management measures or monitoring proposed for the Mayfield No. 4 Berth and hardstand.

7.9 Air Quality

PON maintain both an air quality monitoring station to measure PM10 and TSP for accurately monitoring the operational aspects of the site where the level of particulate matter being sampled is representative of emissions from the premises taking into account prevailing wind direction and the location of residential properties or other sensitive receivers.

Air emissions from the operation and maintenance of the site are expected to be manageable. Emissions that may have an adverse impact on surrounding air quality include vehicle and machinery exhaust. Given that the site is completely sealed, no air quality issues are anticipated for the site.

Management measures for the air quality of Mayfield Berth No. 4 are outlined below.

Key Environmental Performance Objectives	
<ul style="list-style-type: none"> Control sources of dust and other emissions to air that may affect nearby residents and other landholders, pedestrians, vehicular traffic or other sensitive receiving environment Minimise incidence of offensive odour, vapours or emissions 	
Key Environmental Issues	
<ul style="list-style-type: none"> Disturbance to amenity of residents and other land users in the vicinity as a result of pollution and dust generation from heavy vehicles and cargo movements. 	
Environmental Action and Management Measures	
<ul style="list-style-type: none"> All loading/unloading and vehicle movements to take place on fully sealed surfaces Vehicles to comply with Australian design standards and regularly serviced to minimise exhaust emissions Regular clean-up of any spills Adjusted work practices (as required) based on wind conditions and dust monitoring results – see section 7.11 for meteorological monitoring requirements Operation of complaints register Monitoring measures to be conducted as described in Section 4.1.2. 	

7.10 Waste

All wastes generated during operation and maintenance of the site shall be dealt with in an environmentally sensitive manner and in accordance with the *Protection of the Environment Operations Act 1997* and the *Waste Avoidance and Resource Recovery Act 2007*. Waste management should consider the reduction, reuse and recycling of wastes prior to disposal. Where activities are likely to generate waste, appropriate procedures shall be implemented to ensure responsible disposal of waste is undertaken or, where possible, appropriate recycling of waste. Likely and expected waste streams for the site include putrescible and non-putrescible general solid waste.

There is also a possibility that some vessels berthing at Mayfield No. 4 Berth and hardstand may require garbage to be collected. In these instances the vessel will contact the vessel agent who will arrange for a Department of Agriculture licensed waste contractor to collect the garbage to ensure disposal is conducted in accordance with Department of Agriculture requirements.

Vessels are required to submit a Quarantine Pre-Arrival Report for Vessels (*Pratique*) no more than 96 hours and no less than 12 hours prior to arrival (i.e. before dropping anchor) at the Port of Newcastle. This form is submitted to the Department of Agriculture through the vessel agent. The **Department of**

Agriculture conduct risk assessments on the completed forms and issue an approval form with clear instructions regarding quarantine matters including management of vessels waste during the time at berth to the vessel via the vessel agent. The Department of Agriculture risk assess every vessel where the Port of Newcastle is the first port of call and in line with the risk assessment conduct a *Pratique* inspection covering waste and ballast water management. Random inspections are conducted by the Department of Agriculture on all other vessels. The inspection includes checking if the vessels waste is secured in animal and leak proof containers or within a sealed room and also the garbage record books.

Key Environmental Performance Objectives
<ul style="list-style-type: none"> • Ensure responsible disposal of all waste generated on site, and recycle where possible • Minimise environmental impacts related to waste management
Key Environmental Issues
<ul style="list-style-type: none"> • Handling and transportation of waste
Environmental Action and Management Measures
<ul style="list-style-type: none"> • All skips and containers would be labelled with their content, would be well maintained to ensure they do not leak and would be emptied on a regular basis to ensure they do not overflow • All domestic and industrial waste to be disposed of into proper industrial bins for collection and disposal at a licensed offsite facility • No open or ground rubbish is permitted • Appropriate receptacles will be provided for the depositing of litter and other waste materials and their contents will be sent for reuse, recycling or disposal on a regular basis. • A 3 metre skip bin has been provided for general waste, paper and cardboard – the bin is located adjacent to the stevedore amenities and are emptied fortnightly. • Waste should be classified according to OEH <i>Waste Classification Guidelines</i> and sorted into waste streams where possible • All waste contractors and receiving waste facilities shall be appropriately licensed (and/or Department of Agriculture approved) • Appropriate signage, awareness and encouragement of staff and contractors to minimise waste generation and promote use of recycling practices • Routine visual inspections (refer to Section 4.1)

7.11 Meteorological Monitoring

In accordance with the requirements of EPL 13181 PON maintain an automated weather station onsite. Meteorological conditions are to be monitored during loose bulk cargo operations. Loose bulk cargo operations must cease for a period of at least 15 minutes:

(a) if the average wind speed exceeds 7 metres per second for a 5 minute period, or

(b) if a wind gust exceeds 12 metres per second

After loose bulk cargo operations have ceased, they must not recommence until the above wind speed limits are not exceeded in the preceding 15-minute time period.

The wind speed and direction limits specified in Condition L5.1 do not apply when the following loose cargoes are loaded or unloaded from the premises:

(a) Cottonseed pellets;

(b) Ferro-alloys;

(c) Magnetite;

(d) Mineral sands;

(e) Nut coal;

(f) Urea granules;

(g) Wet silica sands; and

(h) Whole soya beans

7.12 Security

In response to the risk of terrorism, the Federal Government introduced the *Maritime Transport and Offshore Facilities Security Act (MTOFSA) and Regulations* to safeguard against unlawful interference with maritime transport including ports, port facilities, ships and offshore vessels. The Port of Newcastle is a security regulated Port. The Mayfield No.4 Berth and hardstand area is located within the Security Regulated Port Boundary.

The Mayfield No. 4 Berth and hardstand is a secure site, fenced at the perimeter with locked entry/ exit gates. When there are no vessels berthed at Mayfield No. 4 Berth and hardstand, the site will be patrolled by PON Wharf Officers. When a vessel is berthed, a security guard will be posted at the entry / exit gate to manage site access in accordance with PON's Level 1 Access Induction.

The MTOFSA places responsibilities on every person within the Port to report any security incidents including suspicious activities.

Suspicious activities or occurrences could include:

- holes in fences;
- unauthorised people or vehicles;
- unknown objects;
- theft or break-ins; and
- people taking photographs or notes.

All suspicious activities regardless of the severity MUST be reported to the Police and then PANSW's VTIC advised on ph: 02 4929 3890 of the action taken.

All inductees are advised of their obligations under MTOFSA as part of PON Level 1 induction.

Management measures for the security of Mayfield No. 4 Berth are addressed below.

Key Environmental Performance Objectives	
•	Prevention of vandalism and unlawful access
•	Prevention of security risks to vessels, adjacent residents and industry/ landholders

Key Environmental Performance Objectives
Key Environmental Issues
<ul style="list-style-type: none"> • Crime and other security risks
Environmental Action and Management Measures
<ul style="list-style-type: none"> • Perimeter fencing to be maintained • All areas are security controlled to prevent unlawful access • Security systems and patrols are in place to guard against unauthorised entry • No staff shall be housed on site • Visitors to be accompanied by an inducted person at all times • Site inductions to be undertaken by all PON employees, Stevedores and Port Users

7.13 Landscaping and Lighting

No landscaping is planned for Mayfield No. 4 Berth. The area is covered entirely by hardstand and wharf area that provides no opportunity for landscaping.

The final landform is in accordance with the Contaminated Site Management Plan considerations. The Contaminated Site Management Plan recognises that the wharf is covered by existing structures and sealed pavements which provide a low level of permeability.

The permeability of the final landform has been assessed and approved by the Site Auditor.

Landscaping will be considered as part of the future developments of the remaining Closure Area.

Lighting is required for 24/7 operation, as well as for safety and security reasons. Lighting provided on site includes wharf flood lighting, exterior lighting, bulk head lighting, fender lighting and edge lighting. Lighting would be adjusted to suit operational uses including use of lighting during cargo loading activities, the limiting of flood lighting (where appropriate), and reducing light intensity when no ships are docked. Impacts from lighting would be similar to the existing surrounding environment which is industrial and largely used for port related activities.

The maximum height of lighting will be 30m and lighting spill will be limited to the edge of the wharf and hardstand area to minimise disturbances to other river users.

Key Environmental Performance Objectives
<ul style="list-style-type: none"> • Prevention of lighting impacts on nearby receivers • Prevention of visual disturbance and degradation of amenity.
Key Environmental Issues
<ul style="list-style-type: none"> • Lighting impacts on nearby receivers • Safety and security internal to the site
Environmental Action and Management Measures

Key Environmental Performance Objectives	
	<ul style="list-style-type: none">• Large floodlights would not be used other than for emergency lighting• Lighting will utilise the minimum level of illumination necessary for safety and security• Security lighting would be mounted, screened and directed (where possible) to ensure lighting would not spill onto existing residences

7.14 Heritage

The operation of the Mayfield No. 4 Berth would not impact on heritage items due to the following:

- No listed items of heritage significance are located on the Mayfield No. 4 Berth site;
- The site is a hardstand area;
- The site has been previously capped isolating the subsurface material; and
- No excavation will be allowed on site without an excavation permit and / or excavation notification form being completed.

The Mayfield No. 4 Berth and hardstand will comply with heritage requirements.

7.15 Dangerous Goods

In accordance with conditions 7.1, 7.2, 7.3 and 7.4 of DA 290-00-08:

The Container Terminal and General Cargo Handling Facility shall neither receive as cargo nor dispatch as cargo any material classified as a "Class 7 dangerous good" (radioactive material) under the Australian Dangerous Goods Code.

Usage, storage, temporarily or otherwise, of any dangerous good of Class 1 (explosives) on the site is not permitted without the prior written approval of the Secretary-General.

All dangerous goods received as cargo at either the Container Terminal or the General Cargo Handling Facility shall be dispatched from the site within 72 hours of receiving those goods.

Stevedores handling dangerous goods shall maintain documentation that includes the following information in relation to dangerous goods:

- ***the date and time of arrival of all dangerous goods to the site;***
- ***the exact location of all quantities of dangerous goods on the site;***
- ***details of all dangerous goods classes on the site, packaging specifications and UN number;***
and
- ***the date and time of dispatch of all dangerous goods from the site***

8.0 Emergency Response and Contact Details

8.1 Communication

PON has prepared and submitted to the Department of Planning and Environment an Emergency Plan for the Mayfield No.4 Berth and hardstand operations. All PON operations and maintenance employees are trained and competent to carry out their responsibilities under the Emergency Plan. Upon receipt of emergency advice, the applicable person based at the Mayfield No. 4 Berth and hardstand would initiate the Emergency Plan.

8.2 Emergency Procedures

Each emergency shall be actioned as deemed required (depending upon magnitude and situation) and handled in accordance with the procedures detailed in the Mayfield No. 4 Berth Emergency Plan.

In the event of an emergency, the following procedure shall apply:

- 1 **PHONE 000 (TRIPLE ZERO) AND DESCRIBE THE EMERGENCY AND LOCATION**
- 2 **PHONE THE PANSW VESSEL TRAFFIC INFORMATION CENTRE (VTIC) on (02) 4929 3890 and DESCRIBE THE EMERGENCY AND LOCATION.**

Upon identifying any emergency, it is essential the personnel are aware of their immediate actions. This is essential so the appropriate personnel / emergency services are notified and to confirm what immediate actions need to be put in place.

After contacting the emergency services, personnel working within the area need to be notified about the immediate danger. Depending upon the situation, this will usually be completed by sounding the emergency siren trying to notify individuals. All personnel shall then evacuate to the designated Emergency Evacuation Assembly Point.

The Emergency Evacuation Assembly Point is posted on notice boards and can generally be identified by a green and white sign. Personnel are to remain there until a company representative and / or emergency services give the "all clear" and direct personnel to return to the site.

Hazard and safety studies for the operation of the site have previously been undertaken for the Mayfield No.4 Berth and hardstand area. As per Condition 7.9 of the Conditions of Consent (**Appendix A**), Pre-operation Hazard studies have been prepared and were approved by the Department of Planning on 23 October 2009.

8.3 Notification of Significant Environmental Events to Authorities

*The PON Duty Manager will task designated persons to **immediately** follow the protocol below as per the Protection of the Environment Operations Act 2011 Amendment.*

The agencies must be contacted in the following order:

*As per section 8.2 above in the case of an **emergency, fire and rescue (000)** should be contacted in the first instance, otherwise:*

Contact	Phone Number
1. EPA Environment Line	131 555
2. The Ministry of Health via the Newcastle Public Health Unit	Ph: 02 4924 6477 Select Option 3 – General Enquiries (after 5pm calls divert to John Hunter)

Contact	Phone Number
	Hospital - ask for the Public Health Officer on call)
3. WorkCover NSW	13 10 50
4. Newcastle City Council	Water pollution incident reporting: 02 4974 2525 (during business hours) After hours phone the call centre: 4974 2000 (ask for the Compliance Duty Officer)
5. Fire and Rescue NSW	000

s150 of the POEO requires that the following information will need to be provided:

- **time, date, location and likely duration of incident;**
- **location of place where pollution is occurring or likely to occur;**
- **type of incident (e.g. chemical spill, water pollution etc.);**
- **extent of incident (e.g. magnitude of spill, area covered etc.); and**
- **action taken or proposed to be taken to deal with the incident and any resulting pollution or threatened pollution.**

Follow up actions

8.3.1 Debrief and Resumption of Normal Operation

All incidents and emergency response actions are reviewed, and appropriate debriefs performed, to ensure all staff are adequately informed. Resumption of normal operations is approved by the EM-O or delegated person as specified by the EM-O. The information will be relayed to staff via staff meetings and incorporated into toolbox talks (where applicable).

8.3.2 Review and Improvement of the Emergency Procedure

PANSW and PON conduct regular emergency response exercises as part of the incident control plan. A report detailing the findings from the exercise is prepared and maintained by both parties. Results from exercises are used to improve and update PANSW and PON's incident control mechanisms and / or emergency plans where required.

8.4 Emergency Contact

Emergency response and other contacts for the berth are listed in **Table 7** below.

Table 7: Emergency response contacts

Contacts		
24 hr Contact Numbers		
Port Authority NSW (PANSW) – (02) 4985 8301 OR (FREECALL– 1 800 048 205)		
Port of Newcastle (PON) 02 4908 8281		

Emergency Contacts		
Service	Address	Contact Details
Fire		000
Ambulance		
Police		
Hospital	John Hunter Hospital Lookout Road, NEW LAMBTON NSW 2305	(02) 4921 3000
Workcover		13 10 50
Australian Maritime Safety Authority - Newcastle Office	8 Cowper Street, CARRINGTON NSW 2294	(02) 4961 3277

Utilities and Government Contacts	
Utility / Agency	Contact Details
ENERGY AUSTRALIA	131 388
AGL	131 909
Hunter Water	1300 657 000
Telstra	132 203
Newcastle City Council	(02) 4974 1399
EPA - Report Pollution Incident (24hrs) - Newcastle Office	131 555 (02) 4908 6800
RMS	1300 308 349

9.0 Records Management

All PON records are maintained in accordance with a Records Management Program which incorporates a Records Management Policy, records Management System, associated guidelines and conventions. All records, regardless of format or origin, are maintained in the **PON** Records Management System. PON uses Objective 7 for the management of all hard copy and electronic records.

All records are sentenced (classified) in accordance with the NSW State Records general Disposal Authorities (GDA's) and are retained for the appropriate minimum retention period. It is of note that general records pertaining to project management of construction works will be retained in a format which can be reproduced for a minimum of 7 years after completion of construction. Any records related to the identification and remediation of hazardous materials identified during construction will be retained for a minimum period of 75 years.

Individuals involved with the environmental management of the site are responsible and trained to ensure all electronic, hard copy or facsimile correspondence is scanned (where necessary) and filed in the correct folder.

10.0 Work Health and Safety

10.1 General

The PON Safety Policy commits PON to providing a safe and healthy workplace for all employees and contractors. The site shall be operated and maintained in a manner that will not adversely affect the health and safety of employees, Stevedores, contractors, Port Users, visitors or the environment. **PON** is committed to ensuring that relevant legislation in relation to health and safety is complied with, and that all employees, Stevedores, Port Users and contractors are trained in understanding their environmental, health and safety roles and responsibilities.

10.2 Personal Protective Equipment

All personnel accessing the site shall as a minimum be required to wear at all times the following personal protective equipment (PPE):

- Appropriate safety footwear;
- High visibility clothing;
- Long sleeve shirt and long pants;
- Eye protection;
- Hearing protection (if in the vicinity of power tools, equipment & machinery or any area indicated by signs);
- Hard hat; and
- Life jacket must be worn when within 2 metres of the water's edge.

As discussed in **Section 6**, all operating and maintenance personnel are required to be suitably qualified, trained and experienced to accepted industry competency levels. **PON** personnel shall be trained in the requirements and use of PPE to an appropriate level according to responsibilities.

While on site inductees must have access to their own approved First Aid kits. First Aid Kits must be in accordance with those prescribed in the Work, Health and Safety Regulation 2001. If first aid is administered the VTIC must be notified on (02) 4929 3890. All accidents / incidents must be reported.

10.3 Hazard and Risk

The NSW Occupational Health and Safety Regulation 2011, Schedule 18B, Part 7 specifies that PANSW maintain the role as the regulator of dangerous goods in the Port of Newcastle, as previously conferred by the NSW Dangerous Goods (General) Regulation 1999, Part 11 – Special requirements relating to ports.

A revised Final Hazard Analysis (FHA), commissioned by NPC in March 2014, details hazard identification, risk analysis and mitigation management. The revised 2014 FHA was approved by the Department of Planning and Environment in June 2014

The Mayfield No. 4 Berth and hardstand will be used for the handling of goods passing through the Port of Newcastle. PON will implement a process to ensure all storage and transfer systems at the site will be designed so that hazardous materials remain within the containment systems. Any dangerous goods handled at Mayfield 4 Berth will be handled in accordance with the revised Final Hazard Analysis, PANSW dangerous good regulations and AS3846 – The handling and Transport of Dangerous Cargoes in Port Areas

Transport of ammonium nitrate has been considered as part of the Mayfield Berth Risk Assessment prepared for NPC (2012) as the dangerous goods regulator for port areas. The assessment concluded

that the individual risk levels outside the berth boundary are low given the low frequency and risk of ammonium nitrate explosion. Onsite precautions are outlined in the assessment and include ensuring that the required safety equipment and management systems are in place before the berth is used for shipments of ammonium nitrate.

The NSW Occupational Health and Safety Regulation 2011, Chapter 9 Major Hazard Facilities, Division 1 530 2 (a) states that port operational areas under the control of a port authority are not considered major hazard facilities.

11.0 References

Advitech 2014, Final Hazard Analysis Report, Mayfield No. 4 Berth Rev v05 - prepared for Newcastle Port Corporation

HDC, 2008. *Contaminated Site Management Plan (draft) Intertrade Industrial Park, Closure Area of Former Steelworks Site Mayfield*

Lloyd's Register, 2012. *Mayfield Berth Risk Assessment* prepared for Orica Australia and Newcastle Port Corporation

Sinclair Knight Merz (SKM), 2009. *Mayfield Wharf Refurbishment and Hardstand Construction, Construction Environmental Management Plan*

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Figures

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Figure F1: Site Location

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Figure F2: Site Layout

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Figure F3: Mayfield No. 4 Berth Responsibility and Organisation Structure

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Figure F4: Water Supply System Arrangement (Plan View)

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Figure F5: Stormwater Management System

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Appendix A

Conditions of Consent

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Appendix B

Environmental Protection Licence (EPL) 13181

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Appendix C

OEMP Compliance Checklist

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Appendix D

Contaminated Site Management Plan

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Appendix E

Heavy Vehicle Route Plan

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