Operational Environmental Management Plan

Mayfield Cargo Storage Facility

Development Approval 8137 Mod 2

Document Control

Title: Operational Environmental Management Plan – Mayfield Cargo Storage Facility

Address: Part Lot 42 DP1191982, Part Lot 51 and Part Lot 54 DP1229869
Mayfield Precinct, Port of Newcastle NSW 2300

This Operational Environmental Management Plan is to be reviewed triennially or more frequently as required.

Version	Date	Prepared by	Approved
1.0	24/11/2017	Jackie Spiteri	Keith Wilks
2.0	26/02/2024	Brigid Kelly	Alicia Marix-Evans
3.0	01/07/2024	Gabrielle Rigg	Alicia Marix-Evans

For questions regarding the content of the document please contact PON at
environment@portofnewcastle.com.au

Contents

Appendices

DEFINITIONS

List of Abbreviations	
ANVA	Annual Noise Verification Assessment
CEMP	Construction Environmental Management Plan
CEO	Chief Executive Officer
CSMP	Contaminated Site Management Plan
DA	Development Application
DAWE	Department of Agriculture, Water and the Environment
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DPHI	Department of Planning, Housing and Infrastructure
DPE	Department of Planning and Environment
EIS	Environmental Impact Statement
EPL	Environment Protection Licence
EPA	Environment Protection Authority
EP&A Act	Environmental Planning and Assessment Act 1979
HCCDC	Hunter and Central Coast Development Corporation (formerly HDC)
HDC	Hunter Development Corporation (now HCCDC)
HVAS	High Volume Air Sampler
HVR	Heavy Vehicle Route
LEP	Local Environment Plan
LGA	Local Government Area
Licensee	Holder of STL at the Site
MCP	Mayfield Concept Plan (09_0096), approved by the Minister on 16 July 2012 and as modified
MTOFSA	Maritime Transport and Offshore Facilities Security Act 2003
NATA	National Association of Testing Authorities
NPC	Newcastle Port Corporation
NSW	New South Wales
OEMP	Operational Environmental Management Plan
OSOM	Oversize and/or Over Mass
PANSW	Port Authority NSW
POEO Act	Protection of the Environment Operations Act 1997
PON	Port of Newcastle
PPE	Personal Protective Equipment
PSOL	Port Safety Operating Licence
RAP	Remediation Action Plan
Ro-Ro	Roll-on Roll-off

List of Abbreviations	
SEPP	State Environmental Planning Policy
SSD	State Significant Development
STL	Short Term Licence of allocated area of the Site
SWL	Sound Power Level
TEU	Twenty foot (container) Equivalent Units
TfNSW	Transport for NSW
TPA	Tonnes per Annum
VOC	Volatile Organic Compounds
VRA	Voluntary Remediation Agreement
VTS	Vessel Traffic Service
WHS	Work Health and Safety

1. BACKGROUND

1.1. Introduction

Port of Newcastle Ministerial Holding Corporation owns the land known as the Mayfield Cargo Storage Facility (the Site) located within the suburb of Mayfield on the south arm of the Hunter River, Newcastle, New South Wales. Port of Newcastle Lessor Ministerial Holding Corporation is a State Government owned entity.

The Site comprises:

- Lots 42 DP1191982
- Lot 51 & 54 DP1229869

The Site is managed by Port of Newcastle (PON) Operations Limited Pty as trustee for the Port of Newcastle Trust under a 98-year lease.

The Site is maintained as an open hardstand area primarily within Lot 54, with access to the site through Lot 42 1. The Site may be occupied by one or more Licensees under the provisions of a Short Term Licence (STL). The spatial extent of any STL is demarcated by way of line marking indicating bays the subject of a STL (with individual site plans to be attached to each licence).

The OEMP is to be attached to any lease or licence documentation issued to Licensees occupying the Site. Licensees occupying the Site are required to comply with this OEMP at all times.

1.2. History and Remediation

Lot 42 DP 1191982 and Lots 51 and 54 DP 1229869 are located within the BHP Steelworks Closure Area, an area formerly occupied by the BHP Steelworks from 1915 to 1999. The land was reclaimed from swampland with steelworks waste such as slags, coal washery rejects, ashes, metallic dusts, hydrocarbons including oils and tar and other materials including general (non-putrescible) refuse.

On 14 June 2001, under former section 21 of the *Contaminated Land Management Act 1997* (CLM Act), the NSW Environment Protection Authority (EPA) declared the Closure Area site to be a remediation site. Voluntary Remediation Agreement (VRA) No 26025 for the remediation of the Closure Area which incorporates the site was issued by the EPA on 30 August 2005.

In March 2008 a Contaminated Site Management Plan (CSMP) for the Closure Area was prepared by then Hunter Development Corporation (HDC), now Hunter and Central Coast Development Corporation (HCCDC) (Appendix A). The CSMP provides a common framework to be applied across the whole of the Closure Area for the design, implementation, completion, use and maintenance of remediation and project works.

Following the remediation of the Closure Area which incorporates the Site, the area was capped and returned to hardstand.

1.3. Purpose of the OEMP

The Mayfield Cargo Storage Facility Operation Environment Management Plan (OEMP) has been developed to detail the environmental management framework for the Site and the obligations, practices and procedures to be followed by its occupants to ensure compliance with relevant Development Consent(s) and key legislation.

The entire Site has been nominated for storage of cargo and accordingly PON may enter into leases or licences with third parties for smaller portions of the Site as required by the types and volumes of cargo being transferred. The OEMP is to be attached to any lease or licence documentation issued to Licensees occupying the Site. Licensees occupying the Site are required to comply with this OEMP at all times.

This version of the OEMP supersedes all previously dated versions of the OEMP and includes all ongoing requirements associated with the Development Consent 8137 (MOD 2).

The OEMP has been developed in accordance with the *Department's Guideline for the Preparation of Environmental Management Plans* (DIPNR 2004).

2. COMPLIANCE

Table 1 provides a summary of the planning consents applicable to the Site. The text in grey represents previous consent documents that have been superseded. All operations at the Site shall be carried out in accordance with the current conditions of consent and relevant provisions of the supporting documents.

Table 1: Summary of approvals

Approval	Approval Body	Scope	Supporting Documents
Development consent DA-293-08-00, 6 April 2001 MOD 29 August 2013	DPHI	Stage 1being the remediation of the Closure Area including the demolition and removal of structures (complete); and the development of a Multi-Purpose Terminal.	N/A
Maintenance of Remediation Notice #20142802	NSW EPA	Maintain remediation action Section 28 of the *Contaminated Land Management Act 1997* (CLM Act), by implementing the Contaminated Site Management Plan (CSMP), in so far as it relates to the land.	Contaminated Site Management Plan 2016
Major Project Application 09_0096 Mayfield Concept Plan Approval, 16 July 2012	DPHI	The Concept Plan is provided under the *Environmental Planning and Assessment Act 1979* and establishes the broad parameters and environmental performance criteria to assess and develop future projects in the Mayfield Development Site. The Concept Plan approval does not in itself permit the construction or operation of any project. Future projects within the Concept Plan area are subject to separate approval(s) under the Act. The Concept Plan includes the following requirements: Cumulative Noise Model; Air Dispersion Model; Stormwater Management Strategy; Compliance Tracking Program; Community Communication Strategy.	Statement of Environmental Effects prepared by AECOM, November 2016 Response to Submissions prepared by PON / Aurecon, 8 May 2017
Development Consent DA 8137, 30 June 2017	DPHI	Mayfield Cargo Storage Facility. Part Lot 42 DP 1191982, Part Lot 51 DP 1229869 and Part Lot 54 DP 1229869. Use of existing hardstand area as port facilities for the storage of freight, including the loading and unloading of freight on the site.	As above
DA 8137 Mod 1, 23 June 2020	DPHI	Increase of the approved storage area from approximately 12 ha to 18.6 ha; and allowance for Roll-on/Roll-off (RoRo) cargo to be imported and exported from the site.	As above

Approval	Approval Body	Scope	Supporting Documents
DA 8137 Mod 2, 8 February 2024	DPHI	Modification of conditions of consent B9 and B10 to permit operations on the remediated areas of the site.	See Fig. 2

2.1. Development Consent DA-293-08-00 and Remediation Notice No 20142802

Development Consent DA-293-08-00 relates to the remediation of the broader BHP Closure Area on which the Site is located. Following the completion of remediation works on 24 October 2012, 90 hectares of remediated land and 10 hectares of un-remediated land were handed over to PON to be developed under Major Project Application 09_0096. Remediation Notice No 20142802 was issued by the NSW EPA under Section 28 of the Contaminated Land Management Act 1997 outlining the Maintenance of remediation requirements.

2.2. Mayfield Concept Plan Approval MP09_0096

A Concept Plan application for the future strategic development of the BHP Closure Area was approved by the Minister for Planning and Public Spaces (then Minister for Planning) in July 2012. The Mayfield Concept Plan (MCP) Approval (09_0096, provided as Appendix B) made provision for the future development of part of the former BHP steelworks site for a range of industrial and port related uses. PON or its Licensees must carry out the development in accordance with the requirements of MCP Approval as modified. If there is an inconsistency between Development Consent DA 8137 and the MCP Approval, the Concept Plan Approval shall prevail to the extent of the inconsistency.

2.3. Development Consent DA 8137

Development Consent DA 8137 (Appendix C) was granted to the Port of Newcastle (PON) Operations Pty Limited as trustee for the Port of Newcastle Trust on 30 June 2017 by the Department of Planning and Environment (DPE) under the *Environmental Planning and Assessment Act 1979* (EP&A).

DA 8137 relates to the use of the Site as Port Facilities as defined under *State Environmental Planning Policy (Transport and Infrastructure) 2021* (**Transport and Infrastructure SEPP**). DA 8137 applies to Part Lot 42 and Part Lot 45 DP1191982, Mayfield Precinct, Port of Newcastle Lease Area NSW 2300 for the use of the existing hardstand area as port facilities for the storage of freight, including the loading and unloading of freight to and from the Site.

Freight is defined by the current SEPP as:

> ***freight*** *means any item, goods or produce being transported and includes containers (whether empty or otherwise), gases, livestock, liquids, minerals plant and equipment, raw materials, vehicles and vessel.*

2.3.1. DA 8137 Modification 1 - 2020

DA 8137 was modified under section 4.55(1A) of the *Environment Planning and Assessment Act 1979* (the EP&A Act) on 23 June 2020 (Appendix D). The modification (DA 8137 Mod 1) included the following changes:

- increase of the approved storage area from approximately 12ha to 18.6 ha; and
- allowance for Roll-on/Roll-off (RoRo) cargo to be imported and exported from the site.

Figure 1: Mayfield Cargo Storage Facility Site Plan (as per DA 8137 Mod 1 dated 23/06/2020)

2.3.2. DA 8137 Modification 2 - 2022

DA 8137 was modified under section 4.55(1A) of the *Environment Planning and Assessment Act 1979* (the EP&A Act) on 23 June 2020 (Appendix C). The modification (DA 8137 Mod 2) included the following changes:

- Variation of the approved DA boundary to increase the cargo storage area given the Koppers gantry removal and remediation and confirmed suitable for cargo storage by the Site Auditor, noting PON proposes that the red 'uncapped area' will continue un-remediated until it is more economic for PON to remove the legacy BHP6 Berth and remediate the red uncapped area about it; and
- The remaining un-remediated area is to be fenced and appropriately signed until such time as it is remediated.

DA 8137 was again modified 8 February 2024 as MOD 2 (see fig 2) which included the following changes to conditions B9 and B10 to allow operations to occur on the remediated portions of the site, which included the following changes (full MOD 2 in Appendix C):

- Insertion of condition B11 to B19 to require construction of a security fence around the uncapped area (red shaded area; 'Excluded Area').

- Inclusion of additional auditing requirements

Figure 2: Mayfield Cargo Storage Facility Site Plan (as per DA 8137 Mod 2 dated 08/02/2024)

2.3.3. SCOPE OF DA 8137

DA 8137 relates to the use of the Site as Port Facilities as defined under *State Environmental Planning Policy (Transport and Infrastructure) 2021 (***Transport and Infrastructure SEPP***)*. The consent enables the site to be used as a storage facility for freight, including the loading and unloading of freight to and from the Site. DA 8137 Mod 1 also permits the importing and exporting of Roll on Roll off (RoRo) cargo.
Mod 2 allows for the use of the remaining hardstand except for the un-remediated area, subject to the installation of a fence and appropriate signage, and the implementation of an updated OEMP.

2.4. Key Legislation

Port of Newcastle maintains a register of all relevant legislation. The register includes Commonwealth and State Legislation, national and state policies and strategies and a list of Australian Standards. The key pieces of legislation that apply to the Site are as follows, noting this is not intended to be an exhaustive list:

New South Wales Legislation

- Contaminated Land Management Act 1997
- Environmental Planning and Assessment Act 1979
- Environmental Planning and Assessment Regulation 2021
- Protection of the Environment Operations Act 1997
- Protection of the Environment Operations (Waste) Regulation 2014
- Water Management Act 2000

- State Environment Planning Policy (Transport and Infrastructure) 2021 (includes the former Three Ports SEPP).

Commonwealth Legislation

- Biosecurity Act 2015
- Marine Pollution Act 2012
- Hazardous Waste (Regulation of Exports and Imports) Act 1989
- Environment Protection and Biodiversity Conservation Act 1999
- Environment Protection and Biodiversity Conservation Regulations 2000

A range of standards are relevant to the environmental management of Port of Newcastle operations. These standards include Australian Standards, Government policies and guidelines or recognised organisation standards (e.g. NEPM, ANZECC). These standards are typically applied where development consent criteria are absent and the circumstance warrants.

2.5. Compliance Register

A Compliance Register has been developed for the Site to demonstrate how compliance is being achieved. The register is maintained and updated at least three yearly by the PON's Environmental Team.

3. ENVIRONMENTAL MANAGEMENT

3.1. Roles and Responsibilities

The roles and responsibilities of all key stakeholders involved in the environmental management of the Site are described in Table 2.

Table 2: Key Stakeholder Roles & Responsibilities

Role	Responsibility
PON	• Development of the OEMP implementation and maintaining currency. • Reporting to DPHI as required for compliance. • Overall responsibility for future management and operations of the Site. • Advise Licensees and contractors of the OEMP and management requirements within. • Review Licensee OEMP and compliance reports. • Respond to community complaints. • Reporting to EPA as required.
Licensee	• Ensure all workers and contractors are familiar with and abide by the requirements of the OEMP. • Undertaking of an environmental Risk Assessment specific to their operations within the Site • Development of any specific environmental management procedures that are in addition to that outlined in the OEMP. • Periodic reporting of management/monitoring data to PON. • Periodic auditing of compliance against the OEMP • Report any non-compliances with the OEMP including breaches of the cap to PON.

Role	Responsibility
	• Report immediately to PON, any incident, accident, damage, leakage, spillage, seepage, pollution, overflows or otherwise of any material, substances or liquid that occurs within the Site.
Subcontractors and Maintenance Workers	• Provide risk assessment and inductions prior to commencing work. • Comply with requirements of OEMP.

3.2. Environmental Aspects and Impacts

Table 3 sets out the minimum environmental Aspects and Impacts associated with activities carried out on the site.

Table 3. Risk Assessment

Risk	Description	Probability	Severity	Actions to Minimise	Risk with mitigation
Traffic Management	Impact on local roads and traffic flow. Impact on operations, impact on peak hour traffic.	Medium	Low	Heavy vehicle routes and limits have been outlined in the TMP to minimise impact on roads and traffic flow. Bi-Monthly reporting of traffic movements.	Low
Noise	Exceedance of noise restrictions resulting in impact on neighbours, environment and human health.	Medium	Low	Noise Management Strategy Outlined in Section 4.3.	Low
Stormwater Runoff	Flooding and stormwater run-off impacting local environment.	Medium	Low	Stormwater Strategy and Drainage plan outlined in Section 4.4	Low
Spill Management	Spillage of fuels or liquids stored in cargo areas impacting surrounding environment.	Low	Medium	Spill management Strategy Outlined in Section 4.6. Spill kits. No bulk cargos or bulk liquids are to be stored on site as outlined in Section 4.4.	Low
Chemical and Substance Management	Chemical or hazardous substances leaking/ spilling into environment or interacting with each other.	Low	Medium	No bulk cargos or bulk liquids are to be stored on site as outlined in Section 4.4	Low

Waste Management	Public health or environmental impacts from waste mismanagement, leakage or improper disposal.	Low	Low	Waste management procedures outlined in Section 4.5. Consistent and regulated removal and disposal of waste.	Low
Air Quality	Air quality degradation vehicle and machinery exhaust, dust from vehicle movements, general dust lift-off.	Low	Low	Monthly reporting of air quality monitoring as outlined in Section 4.7	Low
Maintenance of Contamination Capping Layer	Daily activities or excavation could reduce the integrity of the capping layer and allow for leaching of capped chemicals into the environment.			Maintenance of capping layer outlined in section 4.8. Excavation permission must be given by PON and the lessee is to comply with CSMP.	Low
Benzene Venting	Impacts on environmental and human health.	Low	Medium	Consistent monitoring and reporting are outlined in Section 4.8	Low
Lighting	Impact on surrounding neighbours and causing nuisance.	Low	Low	Lighting management outlined in Section 4.11. Lighting is to be kept to a minimum and directed away from neighbouring properties.	Low
Biosecurity	Cargo may bring biosecurity threats such as invasive species or diseases that can threaten local ecosystems.	Medium	High	Biosecurity management and monitoring will be undertaken as outlined in Section 4.9. Ships are to ensure cargo and bunds do not hold water that could host mosquito larvae.	Medium

Notwithstanding the above, Licensees may be required to complete an Environmental Risk Assessment specific to their activities and evaluate any environmental risk(s) additional to those in the OEMP. Licensees may be

requested to develop any necessary environmental controls or procedures identified in the site-specific risk assessment.

3.3. Sensitive Receptors

The land to which the Development Consent applies is located within an industrial precinct with surrounding uses predominantly related to operations supported by the port. Development on surrounding properties include large industrial buildings, railway yards and tracks, coal handling and storage and industrial process plants. In this regard, the surrounding industrial landscape is highly modified and intensively disturbed.

Coal handling and industrial operations at Kooragang Island and Walsh Point are located directly across the Hunter River from the site to the northwest, north and east. Further coal handling operations are located to the south. Bulk fuel operations are to the west.

There are no environmentally sensitive areas on the Site or immediately adjacent land. The Site is sealed and there is no vegetation that requires protection. The nearest environmental receptor is that of the Hunter River adjoining the Site to the North.

The closest residential properties as receptors are to the east in Mayfield as shown in Table 7.

4. IMPLEMENTATION

This section of the OEMP specifies the minimum environmental management activities together with mitigation and control measures to prevent or minimise environmental impacts.

4.1. Operational Hours

In accordance with Condition B1 of the Development Consent the Site is permitted to operate 24 hours a day, seven (7) days a week.

4.2. Traffic Management

During the operation of the Site daily traffic movements will consist of trucks loading cargo, deliveries and movements of employees, contractors and visitors.

The traffic management requirements within this OEMP have been developed in accordance with the requirements of the Mayfield Concept Plan (MCP) Approval Traffic Management Plan (TMP), the Traffic Monitoring and Review Plan (TMRP) and the Mayfield Cargo Storage Facility SEE and DA 8137 Mod 2.

Roll-on Roll-off Traffic Volumes

In respect to DA 8137 Mod 1 the following condition has been imposed to manage traffic volumes associated with the RoRo element of the development. RoRo refers to cargo ships that carry large wheeled cargo (such as cars, trucks, loaders, buses) that can be driven on and off the ship on their own, or with the use of a platform vehicle instead of using ships cranes or similar. Condition B7A has been added as follows:

> *B7A Prior to the commencement of operations under DA 8137 MOD 1, the Applicant is to update the OEMP required under condition B7. It must include a restriction that no more than 104 movements of cargo under its own power are permitted from the site during the course of a calendar year and are to occur outside of the AM and PM peak. A record of all cargo movements made under its own power is to be kept by the Applicant and incorporated into the monitoring program required under Condition B7.*

Prior to RoRo cargo being received (either by import or for export) the party undertaking the RoRo operation must advise PON of the total number of traffic movements to be made by vehicles under their own power ie delivery by RoRo of a vehicle onto the wharf and then being driven away to its location.

The responsible PON Operations Officer will keep a record over the course of the calendar year to ensure this number does not exceed 104 movements. All vehicle movements to or from the Site are to occur outside of peak morning and afternoon traffic times.

Access to Site

Access to the Site is restricted to persons that have been inducted. Licensees are responsible for providing access inductions for the area of the Site they occupy.

Inductions for access to the Site should be suitable for the operation and include detail of the following:

- access and egress routes to the Site in accordance with the MCP TMP
- traffic management within the Site
- oversize cargo transport requirements
- the use of compression braking while driving on Industrial Drive and the Site
- the minimisation of noise related activities within the Site, including:
    - reversing alarms
    - compression braking
- general road and traffic rules
- any other requirements that are specific to the cargo type being loaded

To access the Site, vehicles will exit Industrial Drive onto George Street, then Selwyn Street and Quayside Close then using the internal access road, shown in Figure 3, vehicles will enter the site at the eastern end and leave in a forward direction via the same route. Heavy vehicles accessing the site are restricted to the approved routes.

Licensees are responsible for monitoring driver compliance with the approved route and are required to report any non-compliances to PON.

Traffic Management Within Site

Light vehicle parking for staff and contractors is to be provided. The size and layout of the light vehicle parking area will be subject to the specific requirements of each Licensee.

Jersey (concrete) barriers or similar used to define the Licensed Area to assist in the safe management of vehicle and plant movement.

Oversize Cargo Transportation

If cargos require oversized vehicles for transportation permits are to be obtained from Transport for NSW (TfNSW) in accordance with the Oversize and/or Over Mass (OSOM) vehicle permitting requirements. It is the responsibility of the Licensee to ensure that all requirements of the permit are met.

All vehicles attending the Site are to comply with the noise mitigation measures described in Section 4.3 of this OEMP.

Figure 3: Traffic Access Plan

Heavy Vehicle Movements

Condition 2.10 (a) of the MCP requires freight volumes, types, and movements to be reported. Licensees are required to provide to PON evidence of the recording of traffic monitoring data upon request including:

- mode of freight transport into and out of the site
- time of entry and exit from the Site
- origin and destination of heavy vehicles

Condition 2.3 of the MCP provides total truck movement limits for the Mayfield Concept Area as shown in 4. To enable PON to demonstrate compliance with the MCP requirements Licensees at the Site are required to record all truck movements at the site and report these to PON on a bi-monthly basis.

Table 4: Initial Staging and Total Truck Movement Limits Condition 2.3 MCP Approval 09_0096

Item	Total Hourly Truck Movements in peak Periods	Total Truck Movements Per Day	Total Truck Movements Per Annum
MCP	95	1,268	462,104

Periodic reporting on truck movements at the Site must include:

- a detailed truck movement assessment for the reporting period (bi-monthly) collating all movements and displaying them in hourly intervals
- a truck movement assessment against the prescribed MCP criteria (see 5).

Table 5: Example of Licensee Truck Movement Assessment Reporting Requirements

Item	Total Hourly Truck Movements in peak Periods	Total Truck Movements Per Day	Total Truck Movements Per Annum
MCP	95	1,268	462,104
Mayfield Cargo Storage Facility	Based on an average over an actual twelve-month period	Based on an average over an actual twelve-month period	Rolling cumulative total over a 12-month period

Peak Hour Traffic Management

Due to the nature of the cargos trucks will need to be progressively loaded before leaving site. This will require truck movements to be staggered as per DA 8137 Mod 1 condition B7A. No under-own power RoRo movements are to take place during peak morning or evening hours.

Workplace Travel Plan

In accordance with Section 2.3 of the MCP TMRP a Workplace Travel Plan (WTP) is to be developed.

In meeting the requirements of the PON Health and Safety Policy all access to site must be in a vehicle. Employees accessing the site are encouraged to car share where possible.

Due to the industrial nature of the location and restrictions of the PON Health and Safety Policy only allowing access by vehicle, annual staff surveys to improve non-vehicular access to the Facility will not be undertaken.

4.3. Noise Management

Facility Establishment Noise

Construction and development activities are not permitted without prior consent from PON and relevant agencies, which may include DPHI and EPA.

Site set up and establishment activities are limited to the use of temporary fencing to be brought in by a Licensee and dependent on the cargo storage requirements. If temporary buildings are proposed the consent of PON is required prior to installation.

Site establishment activities are only permitted during standard working hours, being Monday to Friday 7am to 6pm and Saturday 8am to 1pm.

During any site establishment activities at the Site, the noise management mitigation measures provided in 6 must be implemented by the occupier of the Site.

Table 6: Noise Management Mitigation Measures for Site Establishment at the Facility (Source: EPA Interim Construction Noise Guideline)

Noise Mitigation Measure – site establishment	
1.	Only to occur during standard working hours
2.	Turn off plant and equipment that is not in use
3.	Where feasible use electric equipment instead of diesel or petrol-powered equipment
4.	Unnecessary revving of engines is to be avoided

Noise Mitigation Measure – site establishment	
5.	Where feasible use noise shielding around stationary plant
6.	Unnecessary shouting and loud radios/stereos on site are prohibited
7.	Avoid dropping materials from height or dragging road plates
8.	Where practical, alternatives to typical 'beeper' alarms, such as broadband reversing alarms are to be installed on plant and vehicle equipment.

Operational Noise

In addition to the noise management mitigation measures in Table 6 where practical and in accordance with the *Noise and Vibration Impact Assessment* (AECOM 2016) for the Site and Condition B4 of DA 8137 the following measures are to be implemented by the Licensee of the site:

- all reach stackers, forklifts or other unloading equipment selected for use during operations are required to have a maximum Sound Power Level (SWL) of 100 dB(A) (this may require the inclusion of mufflers on the exhaust system, or similar)
- for activities at night, light towers are to be selected that have a maximum SWL of 85dB(A)
- where feasible implement a safe system of work to negate the need for reverse alarms
- maintain the effectiveness of noise suppression equipment and plant – defective plant that may generate offensive noise is not to be used.

Condition B2 of DA 8137 requires the Licensee of the Site to ensure that noise generated by its operations do not exceed the noise limits provided in Table 7. Compliance is to be achieved by ensuring that the noise mitigation measures described above are implemented and will be measured by noise monitoring described in Section 4.3.

Table 7: Noise Limits dB(A) and Monitoring Locations (Source: DA 8137)

Location	ID	Location	Day $L_{Aeq(15\ minute)}$	Evening $L_{Aeq(15\ minute)}$	Night $L_{Aeq(15\ minute)}$	Night $L_{Aeq(9\ hour)}$	Night $L_{A1(1\ minute)}$
R1	A	1 Arthur Street Mayfield	35	35	35	35	46
R2	B	2 Crebert Street Mayfield	39	39	39	35	51
R3	-	24 Crebert Street Mayfield	40	39	39	35	52
R4	C	32 Elizabeth Street Carrington	35	35	35	35	41
R5	D	186 Fullerton Road, Stockton	35	35	35	35	41

Noise Monitoring

PON will be responsible for undertaking the Annual Noise Verification Assessment (ANVA) for the Site in accordance with the MCP *Noise Verification Monitoring Plan* and the EPA's *Industrial Noise Policy* (INP, EPA 2000).

It is noted here for completeness that the INP was withdrawn in November 2017 and replaced by the *Noise Policy for Industry* (NPfI, EPA 2017) except as described in the EPA document *Implementation and transitional arrangements for the Noise Policy for Industry* (2017), point 8, as presented below:

8. *The NSW Industrial Noise Policy (2000) will continue to apply where it is referenced in existing statutory instruments (such as consents and licences), except for the NSW Industrial Noise Policy Section 4 modifying factors, which will be transitioned to the Noise Policy for Industry (2017) Fact Sheet C through a NSW Industrial Noise Policy application note. This approach has been taken because the Noise Policy for Industry (2017) modification factor approach reflects more recent understanding of the impact of tonal and low-frequency noise on the community.*

To enable the ANVA to be completed annual noise monitoring will be undertaken at the Site. The ANVA report is to include mitigation measures for any identified noise exceedance against the criteria in Table 7.

Upon completion the ANVA report is to be used by PON to update the MCP Sound Plan Master Model.

A copy of the ANVA report for the Site is to be provided to DPHI when requested by the Planning Secretary.

Noise Complaints

For any complaints received regarding noise from the Site the following information is to be recorded and provided to PON within 24 hours of receipt:

- Description of noise source, time of day and duration of the event
- Location of complainant at the time of the noise event and general area in which the noise was thought to be coming from
- Meteorological conditions at the time of the noise event.

All complaints associated with the Site are to be entered into the PON incident reporting system.

4.4. Stormwater Management

The site is a fully sealed hardstand area with runoff sheet flowing into an existing onsite stormwater management system. Runoff is directed via overland flow to the MCP drainage system. Most of the site drains to a culvert located along the northern boundary of the Site as shown on Figure 4. Runoff entering this culvert is then transferred by an underground pipe and discharged directly into the Hunter River. A small portion of the Site also drains towards the west and sheet flow into the MCP Western Trunk Drain which then connects directly to the Hunter River.

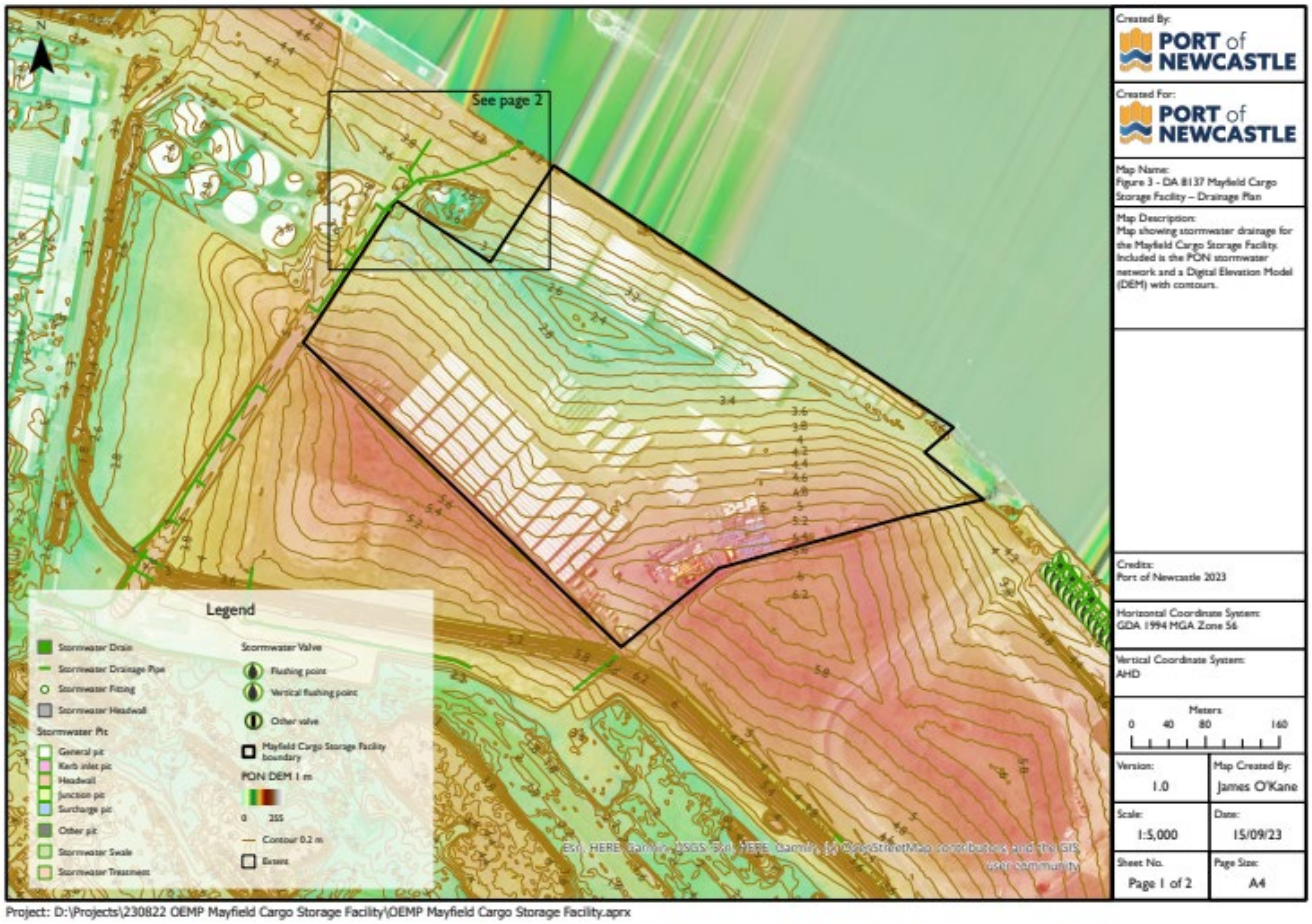


Figure 4: Drainage Plan for DA 8137 Cargo Storage Facility

Due to the types of cargos stored historically, there is limited potential for water quality impacts to occur.

Despite this the following measures must be implemented to mitigate against any potential risks associated with the STL's on the Site:

- No bulk cargo or bulk liquids are permitted to be stored on Site.
- Licensees are required to be aware of drainage flow on the area they occupy and the location of drain pits and pipes to the Hunter River.
- For onsite re-fuelling refer to Section 4.6 of this OEMP.
- At all times Licensees are required to comply with Section 120 of the *Protection of the Environment Operations Act 1997* (POEO Act), unless otherwise approved by the appropriate regulatory body.

4.5. Waste Management

All solid waste generated at the Site should be separated and placed in appropriate receptacles, recycled where possible and removed from Site by an appropriately licenced contractor arranged by the occupant of the Site.

Where activities are likely to generate substantial or difficult waste a Waste Management procedure shall be developed by the Licensee including the minimum management measures:

- All skips and containers must be labelled with waste type.
- All skips and containers must be well maintained to ensure they do not leak.
- All skips and containers must be inspected on a regular basis to ensure they do not overflow.
- No open or ground rubbish permitted.
- Waste should be classified according to EPA's *Waste Classification Guidelines* and sorted into waste streams where possible.
- All waste contractors and receiving waste facilities shall be appropriately licensed.

Wastewater from site amenities must be contained and removed for disposal by a licensed contractor. Licensees are required to provide PON with a copy of their licensed area layout including detail of the location of any proposed site amenities.

4.6. Spill Management

Licensees of the Site are required to provide PON with a copy of their refuelling and spill response procedure appropriate for the operation, including a drawing showing local surface water drainage flow, spill kit locations, temporary bunds and any other spill response equipment.

The procedure must detail the following information and minimum management measures:

- Location and maintenance of spill kits on site. Spill kits should be checked regularly and replenished as required.
- Any spills or leaks from plant, equipment, vehicles or stored machinery must be contained and cleaned up immediately.
- All spills or leaks must be reported to PON as soon as practicable.
- Any refuelling of machinery, plant or equipment must be undertaken in a bunded area.
- Storage of any cargo containing fuels or chemicals must be stored within a bunded area capable of containing at least the contents of the item(s).
- Any hazardous materials required for refuelling during a loading or unloading operation may be retained on site for the duration of the individual operation, provided that they are stored on a bunded pallet or suitable equivalent capable of containing at least the contents of the item.
- A register of any hazardous materials temporarily stored onsite shall be maintained by the occupant for the purpose of providing to emergency crews in the event of a fire or otherwise.
- All bunds must be inspected following rainfall and if free from spill contents, be dewatered through suitable filter medium to reinstate capacity.

All spills reported to PON by the facility are to be entered into the PON incident reporting system.

4.7. Air Quality

Air emissions from operations and maintenance of the Site must be manage so as to not cause visible dust at the Site boundary or elsewhere. Emission sources can include:

- vehicle and machinery exhaust
- dust from vehicle movements
- general dust lift-off

Given that the Site is fully sealed the risk of dust related air quality issues is considered to be low. However, the minimum management measures include:

- 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.
- Immediate clean-up of any dusty spills.
- Hardstand sweeping as required.
- Adjusted work practices based on wind conditions and visual observations, including application of water to surfaces.
- No offensive odour, as defined under Section 129 of the Protection of the Environment Operations Act 1997, may be emitted from the premises.

4.8. Contaminated Land Management

The Site is located within a contaminated site which has been remediated by a cap and contain methodology. A CSMP has been prepared for the area.

Maintenance of the Cap

The Licensee must not undertake any activity that may affect the integrity of the remediation cap.

If the integrity of the remediation cap is affected as a result of activities on Site, then the Licensee of the Site must notify PON within 24 hours of the event occurring.

The Licensee must not undertake works that will require penetration of the cap without the consent of PON and including any relevant planning approvals from the relevant authority. If consent is granted the Licensee must also:

i. Obtain an Excavation Permit from PON
ii. Comply with the CSMP
iii. Comply with reasonable directions of PON.

Un-remediated Area

The Koppers pipeline gantry has been removed and land remediated and confirmed suitable for cargo storage by the Site Auditor.

A small area which is unsuitable for use as storage as it comprises deteriorated rock revetment and remanent BHP6 Berth structures, remains un-remediated, ie 'uncapped', known as the Un-remediated Area. It is PON's intention to retain this portion as un-remediated until it is more economic to remove the legacy infrastructure and remediate the area.

Pursuant to Mod 2, PON has fenced the Un- Remediated Area and put in place appropriate signage to prevent potential interaction with the un-remediated land.

Benzene Vent Management

The Site was previously owned and occupied by BHP. During the course of BHP operations two major spills occurred in the area of the former Benzol plant in Area 1 in 1985 and 1991. Groundwater and soil vapour monitoring was historically performed at the Site and the results indicated the presence of volatile organic compounds (VOC), including benzene, beneath the cap.

In order to mitigate the potential migration or build-up of VOC gases underneath the capping layer, the Site has eight Benzene Vents installed through the low permeability surface cap. Since the time of installation monitoring has been performed adjacent to the benzene vents. The concentrations measured during the monitoring programs are of low magnitude and indicated a minimal risk for workers that may be performing tasks within the general vicinity of the vents.

However, for personal safety each vent is surrounded by barricade fencing and signage has been installed. Licensees, employees and contractors are to remain well outside the barricaded areas during the normal course of activities. The barricade fencing and signage are not to be removed for any reason without prior permission of PON.

It is recommended that if work is intended to be performed directly adjacent to a benzene vent pipe or within the barricade for a significant amount of time then personal exposure monitoring should be undertaken for the duration of work.

4.9. Biosecurity

DAFF perform regular inspections of the site. Licensees are to ensure that cargo and bunds do not hold water that may become a mosquito vector.

4.10. Emergency Response

It is the responsibility of the Licensee to maintain its own Work Health and Safety (WHS) and Environmental Emergency Response procedures and policies. These procedures and policies must consider and include reference to the following emergency response procedures (Appendix E):

- WHS 3009 Mayfield Cargo Storage Facility Emergency Plan
- Mayfield Site Precinct Emergency Management Plan WHS 3003

It is the responsibility of the Licensee to ensure all persons onsite are familiar with this documentation.

4.11. Lighting Management

The Licensee must ensure that any external lighting associated with their operations is mounted, screened, and directed in such a manner so as not to create a nuisance to surrounding land uses. The lighting must be the minimum level of illumination necessary.

5. COMMUNICATION

5.1. Emergency

If there is an environmental emergency all persons should exit the area in accordance with the emergency management documents described in Section 11 of this OEMP. The parties below are to be contacted in the following order:

1. Emergency Services including Fire and Rescue 000
2. Port Wide Emergency Number 02 4929 3890
3. EPA Environment Line 131 555
4. Ministry of Health via Newcastle Public Health Unit 02 4924 6477
5. SafeWork NSW 13 10 50
6. Newcastle City Council 02 4974 2000

5.2. Incident

If there is an incident, accident, damage, leakage, spillage, seepage, pollution, overflows or otherwise of any material, substances or liquid occurring within the Site the Licensee must:

a) immediately notify PON of the nature and extent of such damage or accident;

b) immediately take all and every measure reasonably necessary, at its own cost and using its best endeavours, to avoid any damage to the Licensed Area, TfNSW land, Port of Newcastle land, the groundwater and the waters of the Port of Newcastle; and

c) use state of the art equipment for limiting and remediating any damage.

5.3. Community Complaints and Communication

In accordance with the provisions of the Mayfield Site Port Related Activities Concept Plan Community Communication Strategy, stakeholders wanting to lodge a complaint regarding the operation of the facility are able to do so via Port of Newcastle public website or via telephone.

Contact details for stakeholders to submit enquiries, feedback or complaints about matters relating to the Cargo Storage Facility are:

Telephone: +61 2 4908 8200
Postal address: PO Box 790, Newcastle NSW 2300
Street address: Level 4, 251 Wharf Road, Newcastle NSW 2300
Website: www.portofnewcastle.com.au

Should PON receive complaints regarding the operation of the Facility directly, these will be recorded and directed to the site contact number provided by the licensee of the Facility for them to further action.

Any complaints received directly by the licensee of the facility are to be reported to PON within 24 hours of\ receipt. A legible record of all complaints received is to be maintained by the occupier and provided to PON upon request.

A Mayfield page is available on the PON website at https://www.portofnewcastle.com.au/landside/major-projects/mayfield-concept-plan/ to keep the local community and relevant agencies informed about the operational and environmental performance of the development.

5.4. Licensee Reporting

In accordance with the requirements of Section 4.2 of this OEMP the Licensee of the site is required to provide PON with bi-monthly traffic monitoring data. This data is to be provided to the PON Environment Manager through environment@portofnewcastle.com.au.

5.5. Environmental Meeting

The PON Property Environment and Planning Team generally meet weekly to discuss environmental performance and compliance at Mayfield.

5.6. Public Information

PON operates and maintains a website with information available to the public and stakeholders regarding our operations, including relevant information regarding the approvals and compliance of PON operations.

To the extent permitted Port of Newcastle shall on request make all documents required under project approvals and development consents available for public inspection.

Provided on the website is also a range of environmental monitoring reports, copies of the Environmental Management Plans and annual performance reports such as the Port of Newcastle Sustainability Report. The Mayfield Cargo Storage Facility Operational Environmental Management Plan is available at https://www.portofnewcastle.com.au/esg/policies-compliance/.

5.7. Training

PON staff responsible for the licensing of the Site are to be briefed on the OEMP and the requirement to properly inform any Licensee of the Site of their obligations under this OEMP.

All Licensees are required to perform a site induction for any persons entering their licensed area. The induction must include at a minimum:

- Familiarisation with the requirements of the OEMP
- Familiarisation with Site controls
- Emergency response training appropriate to the scale of the operation and any PON requirements.
- Targeted training for specific personnel such as operators for high risk activities that may interfere with the cap or cause impact to the environment for example dust or spills.

Records of training must be maintained by the Licensee and supplied to PON on request including detail of:

- Who was trained
- When the person was trained
- The name of the trainer
- General description of the training content

6. PERFORMANCE EVALUATION

6.1. Monitoring and Measurement

Licensed areas may be inspected by PON representatives in accordance with STL provisions. The inspection and reporting process may include:

- Provision of Licensees own environmental audit against the OEMP and any sub-procedure such as refuelling.
- Licensees minutes of meetings related to the occupancy of the Site.
- PON Inspections/Audits.
- Training records.
- Boundary observations & encroachments.

6.2. Data Recording and Reporting

Port of Newcastle gathers a range of environmental data regarding the operation and the performance of the Site. The data is used to prepare and distribute environmental reports including the following:

- Annual Noise Verification Report
- Bi-monthly Traffic Report
- Monthly Environmental Scorecard Report
- Annual Sustainability Report

6.3. Non-compliances and Corrective Action

Any non-compliances with any STL or the OEMP, or observations for improvement arising from internal and external monitoring will be recorded in PON Incident Reporting System. Appropriate corrective actions, accountability and timeframe to complete the assigned corrective action will be documented and tracked.

Corrective actions shall be appropriate to the significance of the effects of the non-compliances including the environmental impact(s). Once corrective actions have been implemented by the Licensee their effectiveness is to be reviewed and documented as complete.

7. REVIEW AND IMPROVEMENT

7.1. Review

This OEMP will be reviewed and updated in accordance with the following requirements:

- At least every three years
- Following an independent environmental audit, with findings relevant to this OEMP
- Following an environmental incident or community complaint relevant to the control measures outlined in this OEMP (if required)
- Following relevant outcomes from a risk assessment or change management process.

If any significant modifications to the OEMP are required as an outcome of the review, the revised OEMP will be submitted to DPE for approval. Minor changes such as formatting edits may be made with version control.

7.2. Environmental Aspects, Impacts, Risks and Opportunities

Key environmental aspects, impacts and risks associated with the Site are detailed in the PON EMS. The Register details the potential environmental risks associated with each identified environmental aspect and its associated potential impact, plus the management of the identified impact through the use of existing and/or additional controls proposed to reduce the risk.

The results of any subsequent environmental risk reviews or updates of the Register of Environmental Aspects, Impacts and Risks shall be considered in the development of improvement programs and Environmental Management Plans prioritising higher risk matters.

7.3. Continual Improvement

Port of Newcastle is committed to managing our environmental aspects and work to continuously improve environmental performance. This commitment relies on the effective management of our approval requirements and the Licensee interface.

Port of Newcastle complies with the requirements of approval authorities, government authorities and key stakeholders as relevant and feasible, to ensure that all potential environmental factors are considered during the preparation and planning of new operations or tenants within the Site.

Appendix A: Contaminated Site Management Plan

Contaminated Site Management Plan

Closure Area

Former BHP Steelworks
Mayfield, Newcastle

Hunter Development Corporation

February 2014

Page Number

Contents

Page Number

Page Number

Figures

List of Appendices

1. Application of Plan

This Contaminated Site Management Plan (CSMP) applies to the following lands:

1. Lot 1, Lot 2 of DP 1177466
2. Lot 36, 37 and 38 and Part Lot 35 of DP 1191723

A plan showing applicable lands is shown in Figure 1, Site Identification.

This Plan must be complied with at all times by people by or on behalf of whom Works are carried out on the Site, including owners, lessees, licensees and their contractors and subtenants and by occupiers of the Site.

This Plan sets out the minimum required works. Additional works and precautions may be required.

2. Purpose of Plan

2.1 Purpose

The Purpose of this Plan is to provide a common framework to be applied across the whole of the Site for the design, implementation, completion, use and maintenance of Works so that:

(a) In respect of Remediation Works:

- Remediation Works are properly designed and implemented having regard to relevant risks presented by contamination at the Site;
- Remediation Works are consistent with the requirements of the VRA and other legal requirements;
- the efficacy of Remediation Works is maintained over time;
- there are appropriate controls to protect the health and safety of workers implementing Remediation Works;
- there are appropriate controls to protect Remediation Works previously constructed or otherwise implemented by HDC or others [note that not all of the remediation works are going to be completed by HDC]; and
- there are appropriate verification, certification and approval processes.

(b) In respect of Project Works:

- Project Works are properly designed and implemented having regard to relevant risks presented by contamination at the Site;
- Project Works include appropriate delivery methodologies to adequately mitigate the risks presented by contamination at the Site during construction;
- Project Works include appropriate design features to adequately mitigate the risks presented by contamination at the Site during the use of the Project Works; and
- There are appropriate verification certification and approval protocols.

Whilst this Plan draws a distinction between Remediation Works and Project Works this does not mean that such works must be carried out separately. They may be carried out concurrently with Remediation Works being integral to the delivery of a project.

This plan is not intended to provide disclosure of site conditions that may be encountered during Project or Remediation Works. Descriptions of the site and previous works are provided for contextual purposes only.

2.2 Requirements and Implementation

This Plan sets out important requirements in respect of the design, delivery, completion, verification, use and maintenance of Works (including Remediation Works).

The primary method by which this plan will be enforced is as a fundamental consideration to inform decision makers when making decisions about the use of the Site. This is discussed further in part 6. Decisions about Works on the Site must be made consistently with this plan.

The requirements of this Plan will also be given effect as legally binding obligations or as procedural requirements for the development and use of the Site. The methods by which this may occur may vary for each requirement but may include:

- Being imposed as conditions of Planning Approval;
- Being imposed as a condition of another regulatory approval;
- Being imposed as registered covenants under s29 of the CLM Act;
- Being imposed in a Maintenance of Remediation Notice under s28 of the CLM Act
- Being imposed as restrictive or public positive covenants under the Conveyancing Act;
- Being imposed as a requirement of a community title plan;
- Being imposed by contractual arrangements including leases or sale agreements;
- Being communicated to a consent Authority as a relevant matter to be taken into consideration under s79C of the Environmental Planning and Assessment Act 1979;
- Being adopted as policy by relevant public authorities.

3. Interpretation of Plan

3.1 Glossary of Terms

A term or expression used in this plan has the meaning given to it as set out below:

Area 1	The area bounded by the Barrier Wall on three sides and the harbour to the north as shown on **Figure 1**
Area 2	The whole of the rest of the Site (excluding Area 1) comprising Area 2a NPC Port Lands West, Area 2a NPC Port Lands East, Berth 4, Area 2b NPC Intermodal, Area 2b HDC Intertrade, as shown on **Figure 1**
Area C	The area of the Site shown as such on **Figure 13**
Area D	The area of the Site shown as such on **Figure 13**
Area E	The area of the Site shown as such on **Figure 12**
Area F	The area of the Site shown as such on **Figure 12**
Area G	The area of the Site shown as L2 L3 Emplacement Areas as such on **Figure 2**
Area HA1	The area of the Site shown as such on **Figure 9**
Area HA2	The area of the Site shown as such on **Figure 9**
Area HB	The area of the Site shown as such on **Figure 9**
Area I	The area of the Site shown as “Location of Drainage Easements” on **Figure 6**
Area J	The area of the Site shown as “Items of Heritage Significance” in yellow, on **Figure 7**
Area K1	The area of the Site shown as “Location of Drainage Easements” on **Figure 6**
Area K2	The area of the Site shown in Blue as “Location of Location of HDPE Liners” on **Figure 3**
Area M	The area of the Site shown as such on **Figure 12**
Authority	An authority agency, department, corporation or other public authority of the State and includes a Planning Authority and also including any certifying authority or principal certifying authority under Part 4A of the EP&A Act.
Barrier Wall	A subterranean groundwater cut-off wall primarily constructed from a mix of soil and bentonite
Cap	A multi-layered engineered material with specified level of

	permeability, strength and compaction that is placed over an area in order to contain contaminants
CLM Act	Contaminated Land Management Act (1997)
Closure Area	The Site – this was formerly referred to by the Closure Area of the former BHP Steelworks site, being formerly Lot 3 in Deposited Plan 1032755.
CSMP	Contaminated Site Management Plan (*THIS DOCUMENT*)
Developer	Each person by whom or on whose behalf Works are carried out.
Development Consent	Development consent for Development Application No. DA 293-08-00, (File No. S99/00601) issued by the Minister for Planning on 6th April 2001 as modified by the following modifications: Modification Application DA 293-08-00 – M1, approved on 29th June 2001 Modification Application DA 293-08-00 – M2, approved on 13th August 2001 Modification Application DA 293-08-00 – M3, approved on 29th February 2002 Modification Application MOD-77-7-2003-i approved on 16th September 2003 Modification Application MOD-60-4-2005-i, approved on 15th September 2005 Modification Application MOD-64-7-2007-i, approved on 21st August 2007 Modification Application MOD-56-7-2008-i, approved on 21st August 2008 Modification Application MOD-06-2-2009, approved on 30th March 2009 Future Modifications
DoP	NSW Department of Planning and Infrastructure
EMP	Environmental Management Plan
EP&A Act	The *Environmental Planning and Assessment Act* 1979.
EP&A Regulation	The *Environmental Planning and Assessment Regulation* 2000.
Environmental Scientist	A qualified Environmental Scientist appointed to perform the functions of the "Environmental Scientist" under this Plan for a part of the Site with at least [***10 years***] practical experience.

EPA	Environment Protection Authority of NSW
Final Design	Remediation Works at Mayfield, Stage 1 – Contract No 3081 Detailed Design Documentation, Patterson Britton and Partners, 26th Feb 06, refer to Appendix C
Geotechnical Engineer	A qualified Geotechnical Engineer appointed to perform the functions of "Geotechnical Engineer" under this Plan for a part of the Site with at least 10 years practical experience.
HDC	Hunter Development Corporation, or its successor organisation
Infrastructure Works	Works to deliver, maintain or augment infrastructure or services on the Site and includes facilitative or preliminary works for such purposes including intrusive works such as excavations, drilling, sampling, earth works, laying or removal of slabs etc.
Key Documents	Each of: • the Material Management Plan; • the Remediation Action Plan • the VRA; • the VOC Report; • the Preliminary Remediation Design; • the Final Design • The SPEMP
Level 1, Level 2, Level 3 materials	Classification of contaminated materials as defined by the Materials Management Plan.
Maintenance or Maintain	Activities, preventative or corrective works required to repair or restore remediation works as a result of any action or event that causes a loss in performance or effectiveness
Materials Management Plan	Guidelines forming part of the VRA documents, for the classification and movement of contaminated materials within the Site, as detailed in *Mayfield Site Solid Waste (Soils) Materials Management Plan*, Maunsell, June 2005.
EP&A Act or Planning Act	The *Environmental Planning and Assessment Act 1979.*
PEO Act	The *Protection of the Environment Operations Act* 1997.
Planning Approval	A Development Consent under part 4 of the EP&A Act or approval of a State significant infrastructure application or staged infrastructure application under part 5.1 of the EP&A Act.

Planning Authority	An Authority that has power to grant a Planning Approval.
Preliminary Design	Remediation Works at Mayfield - Preliminary Design Documentation, Patterson Britton and Partners, August 2006 refer to Appendix K
RAP	The Remediation Action Plan, Former BHP Site Mayfield, September 2004, SKM, commissioned by RLMC refer to Appendix M
Stormwater Strategy	Preliminary Design Stormwater Strategy, Issue No. 2, Patterson Britton and Partners, August 2006 refer to Appendix L
Project Works	Redevelopment Works and Infrastructure Works
Redevelopment Works	Works to develop, redevelop or change the use of the Site or any part of it including the demolition or erection of buildings or other structures and includes facilitative or preliminary works for such purposes including intrusive works such as excavations, drilling, sampling, earth works, laying or removal of slabs etc.
Remediation (or Remediate)	Includes (but is not limited to): • removing, disposing, destroying, reducing, mitigating or containing contamination; • eliminating or reducing any hazard arising from the contamination; and • validating that Remediation Work has been successful.
Remediation FSL	For Area 2 these are the Finished Surface Levels documented in RLMC's Preliminary Design for site remediation. For Area 1 the Remediation FSL's are documented on drawings included in Appendix D.
Remediation Works	Works to Remediate or manage contamination or the risks from it.
Remediation Work Method Statement	A document prepared to illustrate remediation designs work method and demonstrate compliance to the RAP and VRA
Requirement	A requirement specified in the plan as a requirement.
RLMC	Regional Land Management Corporation or its successor organisation. If no successor exists, a relevant State Authority.
Site	Lot 1, Lot 2 of DP 1177466, Lot 36, 37 and 38 and Part Lot 35 of DP 1191723 as shown in Figure 1, Site Identification.
Site Auditor	Mr Graeme Nyland Environ Level 5, 60 Miller St

	North Sydney or any alternative person accredited as a Site Auditor under the CLM Act and appointed to be the Site Auditor for the Site or part of it.
Site Auditor Confirmation	A Site Audit Statement or other written confirmation issued by the Site Auditor.
Site Audit Report	A Site Audit Report issued by the Site Auditor in accordance with the CLM Act.
Site Audit Statement	A Site Audit Statement issued by the Site Auditor in accordance with the CLM Act.
Site Plan	The diagram attached to the CSMP which identifies site areas and locations to which location specific provisions of this CSMP apply. Denoted 'Plan of Proposed Lease Areas & Proposed Easements, Lot 33 DP1116571, Mayfield'
SPEMP	Closure Area Site Preparation Environmental Management Plan, RLMC, October 2006 (Appendix B).
Stage 1 Remediation Works	All works necessary to satisfy the requirements of the VRA including those set out in part 3.2 below as Stage 1 requirements.
Stage 2 Remediation Works	All works necessary to satisfy the requirements of the VRA including those set out in part 3.2 below as stage 2 requirements.
State Remediation Validation and Audit Reports	Documentation generated during and following completion of the State Remediation Works Contracts to demonstrate the remediation is completed in accordance with requirements of the VRA, including Site Auditor Confirmation, Site Audit Statements and Site Audit Reports, as required under the VRA. The validation reports for State Remediation Works Contracts are provided in Appendix Q. Site Audit Reports, Site Audit Statements and related interim advices are provided in Appendix R.
State Remediation Works Contracts	Each of: • the Barrier Wall RLMC Contract • the Stage 1 Civil Works RLMC Contract • the Mayfield Freight Rail Contract • the Stage 2a Early Works Contract • the Stage 2a Main Works Contract • future remediation works in Area 2(b) The works as executed plans of State Remediation Works Contracts are provided in Appendix D. The Specifications of

	State Remediation Works Contracts are provided in Appendix C
State	the State of New South Wales
VENM	Virgin Excavated Natural Material
VOC	Volatile Organic Compound
VOC Report	Volatile Organic Compound Reference Document, Closure Area Site Mayfield, RCA Australia, September 2009
VRA	Voluntary Remediation Agreement (see below)
Voluntary Remediation Agreement or VRA	Voluntary Remediation Agreement under the CLM Act, number 26025, dated 14th September 2005, for Lot 3 DP 1032755 Mayfield, which is attached as Appendix G.
Works	Project Works and Remediation Works

3.2 Stage 1 and Stage 2 Remediation Works

Remediation works are to be implemented in two stages as allowed for in the VRA.

Stage 1 VRA Remediation requirements include:

- an up-gradient subterranean Barrier Wall around three sides of Area 1;
- construction of new major drains;
- re-contouring and filling of Area 1;
- management of excavated material in accordance with the Materials Management Plan developed for the site;
- capping of Area 1 to a permeability of 10^{-9}m/s and minimum thickness of 0.5m;
- temporary works to reduce infiltration across Area 2, including temporary drainage works to alleviate areas of ponding or high infiltration;
- environmental controls including appropriate management of surface waters;
- monitoring of groundwater quality and levels in accordance with EPA agreement prior to commencement of the Remediation Works;
- reassessment of the risk of harm to the environment posed by contaminants in the groundwater following the completion of the Stage 1 construction works and groundwater monitoring undertaken to verify the efficacy of the Stage 1 Remediation Works; and
- prior to the construction of any buildings in Area 1, assessment of the risk of harm to human health posed by the potential ingress of volatile vapours into buildings or confined spaces. An environmental site management or contingency plan will be developed to address any identified risk of harm.

Those Stage 1 works which have been completed by HDC are described in Part 5.3.

Stage 2 VRA Remediation requirements include:

- contouring and Capping of Area 2 (except parts of Area 2 exempted under the conditions of Planning Approval);
- management of excavated material in accordance with the Materials Management Plan developed for the Site;
- reassessment of the risk of harm to the environment posed by contaminants in the groundwater following the completion of the Capping of Area 2 and groundwater monitoring to verify the efficacy of the Stage 1 and 2 Remediation Works; and
- prior to the commencement of construction of any buildings within Area 2 assessment of the risks to human health posed by potential ingress of volatile vapours into buildings and confined spaces. An environmental site management or contingency plan will be developed to address any identified risk of harm.

In 2010, the EPA split the schedule of delivery of Stage 2 into two phases, being Stage 2(a) Port Lands and Stage 2(b) IIP Lands, refer to Appendix G and Figure 1. The schedule of Stage 2(b) was further revised on 20th March 2012 (Appendix G). There may be future revisions of these schedules to allow remediation of Area 2(b) to occur synergistically with development, subject to EPA approval.

3.3 Interpretation

In this CSMP, unless the context requires otherwise, a reference to:

(a) any legislation or legislative provision includes any amendment or re-enactment of, or legislative provision substituted for, and any sub-ordinate legislation issued under, that legislation or legislative provision;

(b) any guideline or other document issued under or adopted by any legislation includes such guideline or document as amended from time to time and, where the guideline is substituted or replaced by another document, that other document;

(c) any agreement includes that agreement as amended from time to time and, where the agreement is substituted or replaced by another document, that other document;

(d) words such as “includes” or “including” are not words of limitation or exclusivity. They indicate examples and are not exhaustive.

4. Regulation

4.1 Relevant Instruments

The statutory and strategic planning instruments, which guide this plan, include:

i. Environmental Planning & Assessment (EP&A) Act 1979

ii. Contaminated Land Management (CLM) Act 1997

iii. Protection of the Environment Operations Act 1997

iv. Newcastle Local Environmental Plan 2012 (NLEP)

v. Newcastle Development Control Plan 2012 (NDCP)

vi. Hunter Regional Environmental Plan 1989 (Heritage) – made under the EP&A Act

vii. SEPP No. 55 - Remediation of Land

viii. Water Act 1912, Water Management Act 2000 and Rivers and Foreshores Improvement act 1948

ix. Conveyancing Act 1919

x. Occupational Health and Safety Act 2000

4.2 Environmental Planning and Assessment (EP&A) Act 1979

The Development Consent

Consent for Development Application No DA 293-08-00, (File No. S99/00601) was issued by the Minister for Planning on 6th April 2001, for activities within the Site including a container terminal, demolition and remediation. Remediation activities completed by the State have been carried out under the Development Consent. Further Planning Approvals may be required for Works.

As of 10th November 2013 there have been 8 modifications to the original consent conditions as follows:

- Modification Application DA 293-08-00 – M1, approved on 29th June 2001 in relation to the timing of establishment of a Community Consultative Committee;
- Modification Application DA 293-08-00 – M2, approved on 13th August 2001 in relation to excision of heritage areas from the development area;
- Modification Application DA 293-08-00 – M3, approved on 29th February 2002 in relation to protection of fig trees and noise monitoring requirements;
- Modification Application MOD-77-7-2003-i approved on 16th September 2003 in relation to the burial of Blast Furnace No.1 slag stump;

- Modification Application MOD-60-4-2005-i, approved on 15th September 2005 in relation to land description, soil Capping, hours of operation, groundwater management, stormwater, Capping exemptions and transport infrastructure; and
- Modification Application MOD-64-7-2007-i, approved on 21st August 2007 in relation to alteration of the alignment of the railway lines and relocation of two major stormwater drainage lines on the site.
- Modification Application MOD – 56-7-2008, approved in August 2008 in relation to alteration and temporary relocation of, the general cargo handling facility, refurbishment of the existing wharf and a change in site access from Crebert St to Selwyn St
- Modification Application MOD – 06-02-2009, approved in March 2009 in relation to a minor change in rail alignment

Reference should be made to the current consent conditions which as of 10th November 2013 are included in the Consolidated Instrument (Modification 8) in Appendix A. Note that these may be changed again and enquiries should be made with relevant Authorities and the Site Auditor to identify the current consent conditions.

It should be noted that permeability requirements for the 'M areas' identified in condition 5.18 are no longer relevant to the remediation obligations under the consent and have been superseded by requirements specified in the VRA, confirming permeability of K<1E-7ms-1 for all of Area 2A and Area 2B**.**

A 'Site Preparation Environmental Management Plan' (SPEMP) in accordance with consent condition 4.2 of the Development Consent has been approved by the Department of Planning. The SPEMP should be supported by a 'Construction Environmental Management Plan' and an 'Operations Environmental Management Plan' to the extent required by the relevant planning consent.

The purpose of this Contaminated Site Management Plan is detailed in Section 2.1. In the context of the development consent, this CSMP is formulated to satisfy consent conditions 4.1 and 5.20 in relation to "cap maintenance" and ongoing integrity of the remediation.

Other Relevant Requirements of the Act

Planning Approval for works can be issued under Part 5.1 or Part 4 of the EP&A Act.

Part 5.1 of the EP&A Act is concerned with State significant infrastructure and Division 4.1 of Part 4 is concerned with State significant development. Pursuant to those provisions of the EP&A Act:

- State significant development is development that is declared to be State significant development by a State environmental planning policy or by the Minister, by order published in the Gazette, following advice from the Planning Assessment Commission about the State or regional planning significance of the development (section 89C); and
- State significant infrastructure is development that is declared to be State significant infrastructure by a State environmental planning policy or by an order of the Minister (published on the NSW legislation website) that amends a State environmental planning policy for that purpose (section 115U).

With relevance to licence and permit requirements discussed below, approved State significant development and approved State significant infrastructure is exempt from any requirement to obtain certain approvals, including a water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91 of the *Water Management Act* 2000.

Part 4 of the EP&A Act is concerned with the grant of Development Consent (including where, as discussed above, the development consent is in respect of State significant development). Consent authorities can receive and determine development applications to grant Development Consent to permit the carrying out of development. Because Part 4 deals with Development Consents, the Authority granting a Development Consent is referred to as a consent Authority.

For all approvals, under Part 5.1 and Part 4, relating to the Site it is relevant to consider the contamination status of the Site.

Part 7A Liability in respect of contaminated land

Section 145B relevantly provides that a Planning Authority does not incur liability for anything that it does or omits to do in good faith, in duly exercising any planning function to which section 145B applies (which includes the processing and determination of a development application):

> …in so far as it relates to contaminated land (including the likelihood of land being contaminated land) or to the nature or extent of contamination on land.

Section 148(3) further provides that a Planning Authority is:

> …taken to have acted in good faith if the thing was done or omitted to be done substantially in accordance with the contaminated land planning guidelines in force at the time the thing was done or omitted to be done.

Accordingly, the Planning Authority will consider the contaminated land planning guidelines in determining an application for Planning Approval.

The Department of Planning has prepared Guidelines called "Management Land Contamination - Planning Guidelines SEPP55 – Remediation of Land". These refer to the role of Site Auditors and Site Audit Statements. It is intended that this plan will be utilised by site auditors and referenced in their statements or reports. Accordingly this plan should be a relevant consideration for Planning Authorities when considering the Works on the Site.

Environmental Assessment Requirements

In respect of Works proceeding for assessment under Part 4 of the EP&A Act s79C sets out assessment requirements:

Matters referred to in section 79C(1) include:

(a) the provisions of:

  (i) any environmental planning instrument, and

  (ii) any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (unless the Director-General has notified the consent authority

that the making of the proposed instrument has been deferred indefinitely or has not been approved, and

(iii) any development control plan, and

(iiia) any planning agreement that has been entered into under section 93F, or any draft planning agreement that a Developer has offered to enter into under section 93F, and

(iv) the regulations (to the extent that they prescribe matters for the purposes of this paragraph), and

(v) any coastal zone management plan (within the meaning of the *Coastal Protection Act 1979*),

that apply to the land to which the development application relates,

(b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,

(c) the suitability of the site for the development,

(d) any submissions made in accordance with this Act or the regulations,

(e) the public interest.

In respect of both State significant infrastructure (pursuant to section 115Y) and State significant development (pursuant to Part 2 of Schedule 2 of the EP&A Regulation) when an application is made, the Director-General will prepare environmental assessment requirements or EARs for the infrastructure or development. The environmental assessment prepared by the proponent will need to comply with these EARs (for State significant infrastructure: Schedule 2, Part 4, clause 13 of the EP&A Act Regulation and for State significant development: Schedule 2, Part 2, clause 3(8) of the EP&A Act Regulation).

Approval Conditions

Approvals under Part 5.1 and Part 4 can be issued subject to conditions that could, relevantly, include requirements relating to site remediation.

In respect of Part 4, section 80(1) (and section 89E(1) for Sate significant development) provides that a consent Authority may consent to a development application either unconditionally or subject to conditions.

Section 80A(1)(a) and (f) provide that conditions may be imposed if the conditions relate to, or require the carrying out of, works relating to any matter referred to in section 79C(1) that is relevant or applicable to the development that is the subject of the consent. Tmost relevant provisions in s79C are set out above.

In respect of Part 5.1, Section 115ZB(3) provides that State significant infrastructure may be approved under Part 5.1 "with such modifications of the infrastructure or on such conditions as the Minister may determine."

Accordingly, conditions can be imposed as conditions of Planning Approval under Part 4 and Part 5.1. The conditions might include conditions relating to contamination, for example that there be a Site Audit Statement (see CLM Act below) issued:

- before works commence;
- before a construction certificate is issued; or
- before an occupation certificate is issued.

Part 4A certification – construction and occupation certificates

Section 109C of Part 4A sets out four kinds of certificates that are relevant to development conducted in accordance with Part 5.1 and Part 4 approvals. The certificates include: compliance certificate, construction certificate, occupation certificate and subdivision certificate.

Most relevantly, section 109C provides that:

- a *construction certificate* is a certificate issued prior to work being performed, to the effect that if the work is completed in accordance with specified plans and specifications, then it will comply with the requirements of the regulations; and
- an *occupation certificate* is a certificate issued once work is completed, that authorises the occupation and use or a change in use of a building.

The erection of a building (which includes any structure other than certain temporary structures[1]) in accordance with a Development Consent must not be commenced until a construction certificate has been issued for the work by the consent Authority, council or accredited certifier, (section 81A(2)). A similar prohibition applies to commencing subdivision work without a construction certificate, (section 81A(4)).

In relation to an occupation certificate, a person must not commence occupation or use of a new building unless an occupation certificate has been issued, (section 109M).

For Part 5.1 approvals, clause 198(2) of the EP&A Regulation provides that the provisions requiring construction and occupation certificates (sections 81A and 109M) only apply if they would have applied if Part 5.1 did not apply to the infrastructure (that is, the infrastructure would have required Development Consent under Part 4), and only apply to a "critical infrastructure project" if the Minister makes compliance with section 81A or 109M a condition of the Part 5.1 approval (clause 198(3)).

Part 4A certification – enforcing approval conditions

S109F provides that a construction certificate is not to be issued unless the requirements of the regulations referred to in section 81A(5) have been complied with.

In this regard, clause 146 of the EP&A Regulation relevantly provides that a construction certificate must not be issued unless each condition of the Development Consent that must be complied with before a construction certificate may be issued has been complied with.

Similarly, section 109H(2) provides that:

[1] Temporary Structure is defined to mean:

(a) a booth, tent or other temporary enclosure, whether or not a part of the booth, tent or enclosure is permanent; and

(b) a mobile structure (not defined).

> An occupation certificate must not be issued unless any preconditions to the issue of the certificate that are specified in a development consent or complying development certificate…have been met.

In this way, Planning Approval conditions relating to contamination and remediation can be linked to the Part 4A certification process.

Planning Agreements

Planning Agreements may be entered into by a Planning Authority and people proposing to develop land. A Planning Agreement can, in some circumstances, be registered on the title to land and thereby bind successive owners of land.

Exempt Development

Exempt Development does not require development consent and is not an activity to which Part 5 of the EP&A Act applies. Categories of development may be prescribed as exempt development in an environmental planning instrument.

Generally it will not be appropriate for any development on the Site which involves any of:

- the penetration of the ground;
- earthworks of any sort;
- the use of lands in areas ###;

To be declared to be exempt development.

Complying Development

Development that requires development consent but meets the requirements for complying development can be carried out under a complying development certificate.

Generally it will not be appropriate for any development on the Site which involves any of:

- the penetration of the ground;
- earthworks of any sort;

To be declared to be complying development.

Part 5 Assessment

Some activities may be carried out without the need for development consent but must be assessed under Part 5 of the EP&A Act. In respect of these activities a public authority (called a determining authority) that needs to give its approval to the activity (eg the EPA or a public authority that is a lessor or licensor) must before doing so have regard to the fullest extent possible to the environmental impacts of the activity. The interaction between the contamination and the remediation works on the site and to the proposed activities are matters to which regard should be had by determining authorities. Determining authorities should condition their approvals in a manner consistent with and that requires compliance with this CSMP.

4.3 State Environmental Planning Policy No 55 – Remediation of Land (SEPP 55)

SEPP 55 applies to the Site and requires a consent authority to consider the contamination status of land prior to granting consent for the carrying out of any development. If the land is contaminated, the consent authority must be satisfied that:

(a) the land is suitable in its contaminated state (or will be suitable subsequent to remediation) for the purpose for which the development is proposed to be carried out; and

(b) if remediation is required, the land will be remediated before the land is used for that purpose.

SEPP 55 sets out the type of remediation work that is permissible with or without consent and various requirements in respect of each. It also provides that all remediation work must be carried out in accordance with:

(a) the contaminated land planning guidelines; and

(b) any guidelines in force under the CLM Act; and

(c) in the case of remediation work defined as category 1 remediation work under SEPP 55, a plan of remediation approved by the consent authority and prepared in accordance with the contaminated land planning guidelines.

Within 30 days of completion of remediation work, a notice of completion must be given to the relevant local council for the Site and the consent authority (if the consent authority is not the local council).

4.4 Contaminated Land Management (CLM) Act of 1997

The Site is regulated under the CLM Act. The most relevant sections include:

- Section 11 - The site has been declared to be significantly contaminated land;
- Section 17 – there is an approved voluntary management proposal in place for the site: Voluntary Remediation Agreement (VRA No. 26025 dated 14 September 2005) between the NSW EPA and the HDC;
- Section 28 - Maintenance of remediation: order to owner or occupier – The EPA may by order in writing served on a person who is an owner, or occupier, of land require the person to maintain remediation action in relation to the land, commencing within such reasonable time as is specified in the order. In the event that in the site is undeclared, a Section 28 may also be imposed to allow access for the continuance of monitoring (if the land has been the subject of a management order or approved voluntary management proposal); and
- Section 29 - Covenants for maintenance of remediation can be registered on title.

The declaration under Section 11 (formerly Section 21) identifies significant risk of harm issues to both the environment (principally via offsite migration of contaminated groundwater) and site occupants (principally via potential exposure to site soils and volatile gases).

The VRA requires Remediation Works that satisfactorily mitigate the risk of harm associated with:-

a) off-site migration of contaminated groundwater. These works include low permeability Capping of the site surface in accordance with the conditions of planning consent, and construction of an up-gradient Barrier Wall to Area 1 (completed February 2007); and

b) human exposure to soils and volatile gases. These works include Capping of the site surface in accordance with the conditions of Planning Approval, and appropriate measures to manage the risk of exposure to volatile gases. The VRA requires a Site Audit Statement that the site is suitable for the intended land-use.

The CLM Act also establishes the NSW Site Auditor Scheme. The requirements of this Plan include requirements for obtaining Site Auditor approval for various plans, proposals and Works.

A site audit has a particular statutory meaning under the CLM Act as follows: (section 4)

> ***site audit*** means a review:
>
> (a) that relates to management (whether under this Act or otherwise) of the actual or possible contamination of land, and
>
> (b) that is conducted for the purpose of determining any one or more of the following matters:
>
> (i) the nature and extent of any contamination of the land,
>
> (ii) the nature and extent of any management of actual or possible contamination of the land,
>
> (iii) whether the land is suitable for any specified use or range of uses,
>
> (iv) what management remains necessary before the land is suitable for any specified use or range of uses,
>
> (v) the suitability and appropriateness of a plan of remediation, a long-term management plan or voluntary management proposal.

A ***statutory site audit*** for the purpose of Part 4 of the CLM Act is a reference to a site audit carried out in order to secure compliance with one or more of the following:

> (a) a requirement under this Act,
>
> (b) an approved voluntary management proposal,
>
> (c) a requirement imposed by *State Environmental Planning Policy No 55—Remediation of Land* or by any other environmental planning instrument made under the *Environmental Planning and Assessment Act 1979* or by any development consent or approval given under that Act,
>
> (d) any other requirement imposed by or under an Act,
>
> unless it is carried out only in order to secure compliance with a legal obligation arising from an agreement or arising in such other circumstances as the regulations may prescribe.

Under the statutory definition, the purpose of a site audit is not restricted to determining whether land has been successfully remediated so as to be suitable for specified uses, but may also be for the purpose of determining the suitability and appropriateness of remediation plans and proposals to make the land suitable for specified uses.

Broadly, the certification that alternative forms of a site audit statement can provide include:

(a) prior to remediation, that a plan or design for remediation is suitable and appropriate; or

(b) following completion of the remediation, the land is now suitable for a relevant use.

Other provisions relevant to the provision of site audit statements include that:

- a Site Auditor who performs a statutory site audit must be accredited to do so by the EPA; (section 48);
- when carrying out a site audit, the Site Auditor must prepare a written site audit report and provide that report to the person who commissioned the site audit; (section 53B(1));
- the site audit report must critique the information collected in the site audit and justify the findings proposed to be contained in the site audit statement; and (section 53B(2));
- after completing the site audit report, the Site Auditor must make a site audit statement in an EPA approved form, which contains the Site Auditor's findings in relation to the site audit, and provide that report to the person who commissioned the site audit and the EPA and local Authority (if a statutory site audit), (section 53B(3) and (4)).

Where a Site Auditor is commissioned to carry out a "Statutory Site Audit" by any person other than the EPA, they must notify the EPA within 7 days of being commissioned (section 53C).

4.5 Conveyancing Act 1919

The Conveyancing Act 1919 regulates the ability to register restrictive covenants, public positive covenants, easements and other interests on title of land. Relevantly:

- a public positive covenant may be registered in specified circumstances. This includes covenants that impose obligations requiring the carrying out of development, the provision of services, the maintenance, repair or insurance of any structure or work;
- restrictive covenants may be registered that prevent or limit the use of land;
- section 88A enables the creation of easements benefiting certain public authorities and corporations;
- section 88BA enables the registration of covenants to maintain and repair land that is the site of or burdened by an easement;
- section 88B enables easements, restrictive covenants and other interests to be created by registration of plans;
- section 88D enables land held by certain authorities to be burdened by restrictive covenants and public positive covenants;
- section 88E enables certain public authorities to burden land not held by those with restrictive covenants and public positive covenants; and
- section 88F sets out certain powers in respect of the enforcement of public positive covenants.

<u>Maintenance of remediation covenant – CLM Act</u>

Under the CLM Act, where land has been the subject of:

- a management order under section 14 of the CLM Act; or

- an approved voluntary management proposal under section 17 of the CLM Act,

the EPA is permitted to impose positive covenants or restrictions on land requiring the owner to do one or more of the following in relation to that land (section 29):

(a) to carry out any ongoing management of the land that is specified,

(b) to provide reports to the EPA or any other specified person at specified periods or on the occurrence of any specified event,

(c) to inform the EPA of any change in the ownership or occupancy of the land, to the extent that the person is aware of the change,

(d) to not carry out specified activities on the land and to not permit other persons to carry out any such activities on the land,

(e) to not use the land for specified purposes and to not permit other persons to use the land for those purposes,

(f) to carry out any other requirement in relation to the ongoing monitoring and maintenance of the land that is prescribed by the regulations.

Section 29 operates by allowing the EPA to impose the positive covenant or restriction pursuant to section 88E of the *Conveyancing Act 1919* (NSW).

Section 88E of the Conveyancing Act allows a prescribed Authority to impose restrictions on the use of or impose public positive covenants on land so as to be enforceable by the prescribed Authority (in this case the EPA). However, whereas section 88E requires the deed or memorandum by which the covenant is imposed to be executed by agreement, section 29 allows the EPA to impose the section 88E covenants unilaterally.

Where land is actually held by a "prescribed authority" within the meaning of section 88E of the Conveyancing Act, the prescribed authority would not need to rely upon section 29 or section 88E but could impose a public positive covenant requiring the maintenance of Remediation Work.

Other powers from public positive covenant – Conveyancing Act

Section 88F of the Conveyancing Act provides that a prescribed authority having the benefit of a public positive covenant will have the following powers:

- to ensure covenant observance the Authority may enter and inspect the land twice in every year.
- where a covenant requires a person to insure any structure or carry out development of any nature and that person fails to perform their obligation, the prescribed Authority may step in and perform the obligation on the person's behalf.
- where the prescribed Authority steps in and performs an obligation that was required of another person, the Authority may recover its expenses in a court.

Further powers attach to a positive covenant as follows:

- where a person has engaged or is planning to engage in conduct that would contravene a covenant, section 88H allows a Court to, on application by the prescribed Authority, injunct the person from doing so; and
- where a person has contravened a public positive covenant imposed under section 88E, the prescribed Authority may apply to the Court under section 88I for an order that the land be conveyed or transferred to the Authority.

4.6 Protection of the Environment Operations Act 1997

The PEO Act contains a large number of offences including offences relating to land pollution, air pollution, waste disposal and leaks and spills.

Most relevantly, the PEO Act provides that it is an offence to cause or permit the pollution of any waters without an environmental protection licence, (section 120 and 122). For the purpose of this offence, the pollution of waters includes the pollution of groundwater, as water is defined to include any "underground or artesian water", (Dictionary to PEO Act).

In permitting environmental protection licences as a defence to water pollution, the PEO Act has empowered the EPA to regulate activities that may potentially pollute waters through the imposition of conditions within environmental protection licenses, (section 63).

The PEO Act also requires that environment protection licences be obtained for certain "scheduled activities".

4.7 Work Health and Safety Act 2011

One of the main objects of the *Work Health and Safety Act 2011* (NSW) (**WHS Act**) is to secure the health and safety of workers and workplaces by protecting workers and other persons against harm to their health, safety and welfare through the elimination or minimisation of risks arising from work or from specified types of substances or plant. In furthering that object: "regard must be had to the principle that workers and other persons should be given the highest level of protection against harm to their health, safety and welfare from hazards and risks arising from work or from specified types of substances or plant as is reasonably practicable. (section 3)

Under the WHS Act, the primary duty of care for any person conducting a business or undertaking is set out at section 19 as follows:

8 Primary duty of care

(1) A person conducting a business or undertaking must ensure, so far as is reasonably practicable, the health and safety of:

(a) workers engaged, or caused to be engaged by the person, and

(b) workers whose activities in carrying out work are influenced or directed by the person,

while the workers are at work in the business or undertaking.

(2) A person conducting a business or undertaking must ensure, so far as is reasonably practicable, that the health and safety of other persons is not put at risk from work carried out as part of the conduct of the business or undertaking.

(3) Without limiting subsections (1) and (2), a person conducting a business or undertaking must ensure, so far as is reasonably practicable:

(a) the provision and maintenance of a work environment without risks to health and safety, and

(b) the provision and maintenance of safe plant and structures, and

(c) the provision and maintenance of safe systems of work, and

(d) the safe use, handling, and storage of plant, structures and substances, and

(e) the provision of adequate facilities for the welfare at work of workers in carrying out work for the business or undertaking, including ensuring access to those facilities, and

(f) the provision of any information, training, instruction or supervision that is necessary to protect all persons from risks to their health and safety arising from work carried out as part of the conduct of the business or undertaking, and

(g) that the health of workers and the conditions at the workplace are monitored for the purpose of preventing illness or injury of workers arising from the conduct of the business or undertaking.

(4) If:

(a) a worker occupies accommodation that is owned by or under the management or control of the person conducting the business or undertaking, and

(b) the occupancy is necessary for the purposes of the worker's engagement because other accommodation is not reasonably available,

the person conducting the business or undertaking must, so far as is reasonably practicable, maintain the premises so that the worker occupying the premises is not exposed to risks to health and safety.

(5) A self-employed person must ensure, so far as is reasonably practicable, his or her own health and safety while at work.

Separate obligations for persons who have a degree of management or control over a workplace are set out at section 20 as follows:

20 Duty of persons conducting businesses or undertakings involving management or control of workplaces

(1) In this section, person with management or control of a workplace means a person conducting a business or undertaking to the extent that the business or undertaking involves the management or control, in whole or in part, of the workplace but does not include:

(a) the occupier of a residence, unless the residence is occupied for the purposes of, or as part of, the conduct of a business or undertaking, or

(b) a prescribed person.

(2) The person with management or control of a workplace must ensure, so far as is reasonably practicable, that the workplace, the means of entering and exiting the workplace and anything arising from the workplace are without risks to the health and safety of any person.

There are numerous other specific requirements for the protection of health and safety in the workplace.

4.8 Water Act 1912 and Water Management Act 2001

Certain authorisations discussed in this section, and the offences that arise from acting without those authorisations, will not apply to parts of the project that have been approved under Part 5.1 or under Division 4.1 of Part 4. (sections 115ZG and 89J of the EP&A Act).

Water Act 1912 (NSW) (**Water Act**)

Part 5 of the Water Act contains offences where the sinking or altering of a bore is not performed in accordance with a licence under that part, (sections 112 and 117I)

"Bore" is defined to relevantly include "…any excavation or other work connected or proposed to be connected with sources of sub-surface water and…capable of being used to obtain supplies of such water…" (section 105)

The Water Administration Ministerial Corporation is able to regulate works connected with a bore as the conditions subject to which a Part 5 licence is issued, may include conditions relating to the protection of the environment, (section 116AA).

Water Management Act 2000 (**WM Act**)

The WM Act makes it an offence to carry out a "controlled activity" in, on or under "waterfront land" other than in accordance with a controlled activity approval (section 91E), or carry out an "aquifer interference activity" other than in accordance with an aquifer interference approval (section 91F).

As an example, the note to section 91 states that an aquifer interference approval may be needed to perform "road construction and any other large scale activity that involves excavation."

Definitions in the WM Act dictionary which are relevant to sections 91E and 91F include:

- A **controlled activity** is relevantly defined to include the erection of a building or the carrying out of a work (as defined in the EP&A Act), the removal of material or the deposition of material.
- **Waterfront land** is relevantly defined as the bed of any river, together with any land lying between the bed and a line drawn parallel to, and 40m inland of, the highest bank of the river.
- An **aquifer interference activity** relevantly includes an activity involving the penetration of an aquifer, the interference with water in an aquifer or the obstruction of the flow in an aquifer.

Similarly, the WM Act requires water supply work approvals or drainage work approvals to carry out work such as: conveying water to the point at which it is used in a water pipe or draining water from land through pump, pipe or channel.

In issuing approvals, the Minister must be satisfied that adequate arrangements are in place to prevent the activity causing harm to water. For example, section 97(4) provides:

> A controlled activity approval is not to be granted unless the Minister is satisfied that adequate arrangements are in force to ensure that minimal harm will be done to any waterfront land as a consequence of the carrying out of the proposed controlled activity.

The WM Act enables the Minister to impose discretionary conditions on approvals relating to the protection of the environment, (section 100). In this way the Minister is able to regulate the relevant activities for the duration of the approval.

5. Remediation Strategy

5.1 VRA Remediation Strategy

The VRA remediation strategy includes the implementation of Remediation Works in two stages.

Stage 1 includes the following construction works:-

- Construction of a subterranean Barrier Wall (completed February 2008);
- Re-contouring and Capping of the majority of Area 1 (completed in June 2008);
- Major drains – the 'Eastern Drain' and 'Western Drain'; and
- Interim environmental works to reduce groundwater recharge rates in Area 2 and control sediments in stormwater runoff

Details of the completed Stage 1 Remediation Works are described in Section 5.3 below.

(See further part 3.2 above)

Stage 2 works primarily involve the re-contouring and low permeability Capping of Area 2. These works may be provided synergistically with Project Works, or as separate Remediation Works for undeveloped land.

The timeline for completion of Stage 2 works was revised in 2010, whereby the EPA confirmed a delivery of Stage 2 into two phases, being Stage 2(a) Port Lands (completed by HDC in 2013) and Stage 2(b) IIP Lands; refer to Appendix G and Figure 1. The schedule of Stage 2(b) was further revised on 20th March 2012 (Appendix G). There may be future revisions of these schedules to allow remediation of Area 2(b) to occur synergistically with development, subject to EPA approval.

5.2 Key Documents

The strategy and implementation of Remediation Works on the Closure Area is documented in the following Key Documents:

- The VRA;
- The RAP;
- Materials Management Plan;
- Preliminary Remediation Design;
- The VOC Report;
- The SPEMP;
- The State Remediation Works Contracts
- The State Remediation Validation and Audit Reports

The VRA documents the agreed remedial goals, and the scope and timing of Remediation Works. This may be varied only with the agreement of the EPA. The VRA was modified in

2010 and again in 2012. The VRA and subsequent modifications are provided in Appendix G.

The RAP was formulated to provide a basis for the VRA and is designed to address contamination issues in relation to soil and groundwater. The purpose of this document was to address the declaration of the Closure Area as a remediation site and form the basis of a VRA with EPA and comply with the conditions of consent for the approved remediation works. The RAP is provided in Appendix M.

The Materials Management Plan (MMP) provides guidelines for the classification and fate of contaminated materials encountered during site works. The plan outlines specific controls and procedures regarding the classification, segregation, movement and fate of materials. Requirements for the on-site fate of contaminated materials include restrictions in relation to depth of placement and location. The MMP is provided in Appendix I.

The Preliminary Remediation Design documents proposed earthworks levels and grades across the site, and the pattern of surface drainage. The Preliminary Remediation Design is generally consistent with the site stormwater strategy. During final design of the remainder of the remediation works, the Preliminary Remediation Design details may be revised to incorporate alternative designs for site civil works, provided they are compatible with adjacent site levels, infrastructure proposals, and the intent of the site stormwater strategy. The Preliminary Remediation Design is shown in Appendix J.

The VOC Report documents requirements for Remediation Works and Project Works to manage risks associated with the presence of volatile organic compounds at the Site. The VOC Report along with former monitoring reports and the plan showing the location of existing VOC vents in Area 1 are shown in Appendix H.

The SPEMP sets out plans and procedures to ensure the remediation activities undertaken under Development Application No. DA 293-08-00 is completed in compliance with the development consent. For remediation or project works undertaken under a separate consent, the SPEMP will not necessarily apply.

The State Remediation Works Contracts comprise:

- the Barrier Wall RLMC Contract;
- the Stage 1 Civil Works RLMC Contract;
- the Mayfield Freight Rail HDC Contract;
- the Stage 2a Early Works HDC Contract;
- the Stage 2a Main Works HDC Contract;

Contract documents for remediation works were formulated on the basis of general landform and drainage concepts of the Preliminary Remediation Design (Whole Site), the RAP, the MMP and the VRA. The WAE plans of State Remediation Works Contracts are provided in Appendix D.

The State Remediation Validation and Audit Reports were generated on completion of each State Remediation Works Contract to demonstrate the work is completed in accordance with requirements of the contract documents and the VRA. These reports are provided in Appendix Q. Interim Advices, Site Audit Reports, Site Audit Statements are generated during auditing processes under the CLM Act and are provided in Appendix R.

5.3 Port Lands Remediation by State

5.3.1 Stage 1 Barrier wall

A deep subsurface low permeability Barrier Wall was constructed by RLMC in 2006. It is constructed as part of the Stage 1 Remediation Works, extending from the ground surface to the bottom of the natural sand and alluvial deposits of the Hunter River (30 metres to 49 metres). The Barrier Wall has been constructed using soil-bentonite techniques which use bentonite slurry for trench support, with the Barrier Wall then formed by backfilling the trench with a high slump mixture of soil and bentonite slurry and clay additives.

The wall has a surface completion beam designed for SM1600 traffic loadings. Work-as-executed details on the alignment and elevation of the Barrier Wall and surface completion beam are attached as Appendix D.

Development restrictions apply to works or land-uses in the vicinity of the Barrier Wall. Refer to Part 15 of this Plan.

5.3.2 Contaminated Materials, Earthworks and Capping of Area 1

The re-contouring and Capping of Area 1 was completed by RLMC in 2008, as part of the Stage 1 Remediation Works. During the site earthworks contaminated materials were encountered, and these were excavated, classified and placed on site in accordance with the Materials Management Plan. Level 2 and Level 3 materials were placed within specific placement areas inside Area 1. The materials within the Level 2 and Level 3 placement areas within Area 1 are known to contain asbestos materials. The locations of these placement areas are shown on **Figure 2**.

Contaminated material encountered during the Stage 1 Remediation Works resting below the cut to fill profile has generally been left insitu and recorded in Figure 2. This is not an accurate or exhaustive map of in-situ contamination; other areas of in-situ are likely to exist but their location is unknown.

Levels and grades were designed to be compatible with anticipated land-uses while also meeting remediation objectives. Two types of Cap have been provided:-

- **VENM Cap** – comprising 0.5m of Virgin Excavated Natural Material (VENM) constructed to finished surface levels for remediation; and
- **Paved Cap** – comprising 300mm of granular site material overlain by 100mm of 20mm size crushed concrete, and sealed with a bituminous two coat seal. This has been constructed to a level which is 400mm below the finished surface levels documented on the Preliminary Remediation Design drawings for Area 1. This allows ‘air space’ for the construction of additional pavement thickness as part of subsequent Project Works, as may be structurally required for heavy duty hardstands, and/or as may be required to meet Site Auditor requirements for the proposed land-use.

A Validation Report was prepared for the Stage 1 Remediation Works by Coffey Environment in June 2008 to verify that contractor requirements for the handling, tracking, and fate of contaminated materials. The validation report is provided in Appendix Q. The validation report identifies that, based on the sampling undertaken the slag materials used for construction of the paved Cap within Area 1 comply with the requirements of the Materials

Management Plan for Level 1 materials. However, the sample test results indicate that some samples from the slag paved Cap exceed National Environmental Protection Measure guidelines for industrial land-use.

Works as Executed Plans showing the extent of regrading and Capping on Area 1 are included in Appendix D. The location of hazardous materials remaining in Situ and those emplaced during remediation works in Area 1 and Area 2(a) Port Lands is shown in Figure 2.

The land owner is to maintain the Cap over Area 1 until such time as the land is leased or sold, at which point the responsibility to maintain the remediation becomes the responsibility of the purchaser or Lessee. The mechanisms by which responsibilities are allocated are discussed in Section 6.3 *Control of Works and Enforcement of Plan.*

5.3.3 Major Drains

The western and eastern trunk stormwater drains have been constructed by RLMC as part of the Stage 1 Remediation Works. The location of these drains is shown in Figure 3 and also detailed in the WAE Plans, Appendix D. RLMC have also constructed interim environmental drainage works in Area 2 to reduce infiltration and provide stormwater detention for sediment removal, to operate in the period prior to development. Future development of the site will require regulatory approval for the design of permanent stormwater quality improvement devices to service the development, including provisions of NCC's DCP 50 for individual lots, grassed swales and sand filters, stormwater detention basins and gross pollutant traps, as outlined in the Stormwater Strategy. Interim environmental drains and detention basins may not be decommissioned until written authority has been obtained from the EPA on the design of permanent water quality improvement facilities.

It is noted that the major drains across the Port Lands have been designed in accordance with standard hydrological design protocols relevant at the time of construction, prior to any State or Local Government requirements that require additional consideration of Climate Change and associated sea level rise. Hence it is a possible that the Site may be affected by planning constraints which must be taken into account during Project Works feasibility, concept and detailed design processes.

The Stormwater Drainage Strategy is provided in Appendix L.

5.3.4 Soil Contamination Hot Spots in Un-remediated Area 2B

During Stage 1, the results of site soil contamination tests available across Area 2 as compiled and reported in Soil and Fill Assessment, Selected Areas of the Closure Site RCA, June 2005 (provided in Appendix T) indicated the potential presence of five known soil contamination hotspots within Area 2A and 2B. HDC's contractor for the Stage 1 Remediation Works have excavated soils at four locations identified as potential contamination hotspots within Area 2 and removed Level 2 and Level 3 soils in accordance with the Materials Management Plan. These contaminated soils were consolidated into the Level 3 Placement Area located beneath the Cap within Area 1.

The fifth Area 2B hotspot labelled as Hotspot 5, which was not addressed during the Stage 1 remediation is located as shown in Figure 4.

Other elevated risk areas and known hotspots in Area 2B have been identified by HDC are also shown in Figure 4. This risk map has been derived from the following sources:

- The Newcastle Steelworks M Area Reports (ref: Appendix T)
- Soil and Groundwater Assessment Reports Woodwood Clyde (ref: Appendix T – BHP M Area Reports)
- Buildev IIP Investigation (ref. Appendix T)
- Various RCA Investigations (ref Appendix T)

Attention is also drawn to sealed roads, pavements and the like. It was commonplace for BHP to utilise coal tars from the Coke Ovens (a Level 3 material) as a binder and seal for road pavements, carparks and the like. Some of these impacts are recorded in site investigations to date. In general, all old pavement areas should be treated with caution as they are likely to contain hazardous coal tars.

The Indicative Risk Map Area 2B Figure 4 is not intended to be an accurate or exhaustive and is intended for context only. There may be other hot spots in Area 1 or Area 2 which have not been detected by site investigations or recorded during implementation of State remediation works. Please refer to Section 18 (Information Disclosure) and Section 19 (Recommendations to Future Developers) for information on environmental characterisation of the Site as well as obligations for Developers of Project Works and Remediation Works to minimise risk.

5.3.5 Former Benzol Plant

A BHP site history review prepared in 1993 identified that there had been two major spills in the area of the Benzol plant in Area 1 (in 1985 and 1991). The spill that occurred in 1991 reportedly comprised 112500L of BTX (Benzene, Toluene and Xylene) and was discovered in the vertical tank storage bund area of the Benzol plant. At that time, spill cleanup was attempted by Environmental and Earth Sciences Pty Ltd (EES) who estimated that 93000L had discharged to ground. Some groundwater investigation work was undertaken by EES including partial remediation using a pump and treat system.

Subsequent site monitoring of volatile gases reported in Vapour Assessment Soil Vapour Investigation Area Former BHP Closure Site, Mayfield RCA, December 2005 indicated the presence of volatile hydrocarbons in the vicinity of the former Benzol Plant of the BHP Steelworks. To mitigate the potential build-up or migration of volatile gases under the surface Cap within Area 1, as part of the Stage 1 Remediation Works HDC has installed vents through the low permeability surface Cap within the area of the former Benzol Plant. The locations of these vents are shown in Appendix H.

Following installation of the wells and subsequent monitoring conducted by the RLMC / HDC it has been observed that VOC concentrations in wells have remained relatively consistent. All monitoring recorded to date is provided in Appendix H, along with a Benzene Assessment of this area undertaken by Woodward Clyde for BHP in 2000.

The Site Auditor has provided a letter of opinion that maintaining the VOC vents is an appropriate management of risks associated with volatile gases in this area for the period prior to site development within Area 1. Requirements for ongoing management of risks associated with volatile gases are provided in Part 14 of this Plan.

5.3.6 Demolition of Remnant Structures

Stage 1 and Stage 2A Remediation Works included the demolition of many below ground concrete structures remnant from the former steelworks. Generally, the structures were demolished to levels which are 1.5m below the ultimate Cap level as documented on the design drawings for Area 1 earthworks but in some instances relics remain less than 1.5m below the ultimate Cap levels.

It is also possible that undocumented structures exist within this clear zone, as it is likely that some foundations and structures were not recorded, or the records pre-date BHP mapping. Hence, it should be noted that massive steel and concrete foundations may be found anywhere on site.

Details of demolition levels are shown on Work-as-Executed drawings for the demolition works in Appendix N.

5.3.7 Documentation of Completed Stage 1 and Stage 2A Works

Completed Stage 1 and Stage 2A Remediation Works consist of the following phases:

1. Stage 1 Barrier Wall
2. Stage 1 Civil Works (Capping of Area 1 and construction of Major Drains in Area 2
3. Stage 2A Mayfield Freight Rail (including integrated remediation)
4. Stage 2A Early Works (Capping of Area 2E and 2D)
5. Stage 2A Main Works (Capping of the remainder of Port Lands)

The details of how these works were undertaken are identified on the documents listed below:-

- Works Contract Specifications — Appendix C
- Works as Executed Plans — Appendix D
- Work as Executed - Barrier Wall: — Appendix D
- Hazardous Material Emplacement — Figure 2
- Locations of groundwater monitoring wells : — Appendix F
- VOC Management Documents — Appendix H
- Utilities (disconnections, re-routing) — Appendix N
- Remediation and Validation Reports — Appendix Q
- Site Auditing — Appendix R

6. Control of Works and Enforcement of Plan

6.1 Overview

This Plan will be applied to control Works on the site through a number of mechanisms. In summary:

- The Plan documents issues for consideration by the Planning Authority when determining appropriate conditions of Planning Approval. These conditions may impose controls for compliance with requirements under this Plan.
- The Plan sets out matters that must be taken into consideration by the Site Auditor when issuing Site Audit Statements. The issue of those Site Audit Statements is expected to be to be a pre-condition to obtaining and relying on Planning Approvals and necessary construction and occupation certificates;
- The requirements for specific design elements and controls may be imposed as restrictive covenants, positive covenants or easements registered on title;
- The Plan may be incorporated into contractual arrangements between relevant parties including in lease and licence documents. These arrangements may include specific obligations to carry out (or not carry out) Works or as to the method of carrying out works, the design of works or obtaining Site Audit Statements or other controls.

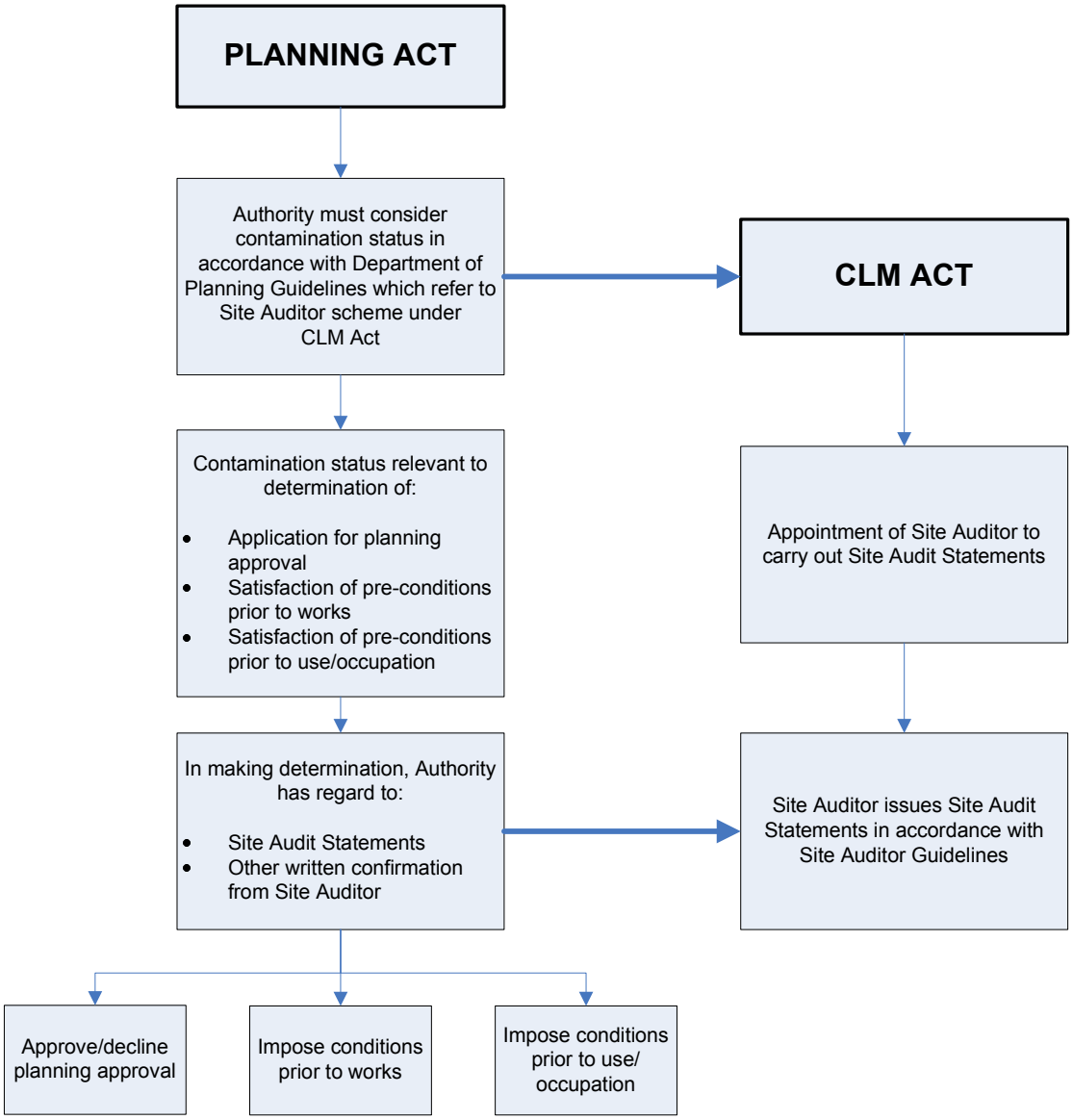
6.2 Site Auditor

The State has appointed the following EPA accredited Site Auditor as the ***Site Auditor.***

Mr Graeme Nyland
Environ
Level 5, 60 Miller St
North Sydney

The State may appoint a successor to the Site Auditor subject to the CLM Act.

6.3 Overview of Site Audit Process and interaction with planning and approval process



Under the CLM Act a Site Auditor is appointed to carry out site audits. The definition of a site audit under the CLM Act is set out at Section 4.4 of this Plan.

The role of the Site Auditor is not limited to independent review of the effectiveness of remediation but includes review of proposed remediation.

Under the CLM Act the concept of "remediation" includes:

(a) preparing a long-term management plan (if any) for the land, and

(b) removing, dispersing, destroying, reducing, mitigating or containing the contamination of the land, and

(c) eliminating or reducing any hazard arising from the contamination of the land (including by preventing the entry of persons or animals on the land).

Accordingly, the role of the Site Auditor can include review of proposed risk mitigation measures or risk mitigation measures that have been undertaken.

A Site Auditor may issue Site Audit Statements in accordance with the requirements of the Site Auditor Guidelines. The form of Site Audit Statement in those guidelines includes Site Audit Statements of proposed works and Site Audit Statements of remediation actions taken.

Under the EP&A Act (see for example Part 7 of the Act) an Authority granting Planning Approval in respect of the Site must consider the contamination status of the Site in accordance with guidelines issued by the Department of Planning. Those guidelines in turn refer to the Site Auditor scheme under the CLM Act.

Three main and relevant decision points in the Planning Approval process are:

- Determination of an application for Planning Approval;
- The satisfaction of preconditions to the commencement of work; and
- The satisfaction of preconditions to the use or occupation of works.

A Planning Authority may (this is not an exclusive list):

- Decline to grant Planning Approval in the event that it is not satisfied that the Site is or can be made suitable for the proposed development or that the proposed development does not include design and other safeguards for the protection of human health and the environment;
- Impose conditions requiring that no Works proceed unless there is evidence that the Site is or can be made suitable for the proposed development or that the proposed development includes adequate design and other safeguards for the protection of human health and the environment (normally this requirement is tied to the issue of a construction certificate); or
- Impose conditions requiring that prior to the occupation or use of Works there is evidence that the Site is suitable for the proposed development or that the proposed development does include design and other safeguards for the protection of human health and the environment (normally this requirement is tied to the issue of an occupation certificate).

In making each of the determinations listed in the preceding paragraph regard can be had to the issue of a Site Audit Statement or some other written confirmation from the Site Auditor. In particular:

- If a Site Audit Statement has been issued confirming that in the opinion of the Site Auditor the Works as designed are appropriate;
- If at conclusion of Remediation Works a Site Audit Statement has been issued that the Site is in a condition that it suitable for the proposed development.

In issuing Site Audit Statements it is valid for the Site Auditor to have regard to the information that has been presented to the Site Auditor and, in particular, to have regard to whether Works have been carried out in accordance with designs or work plans that have previously been reviewed by the Site Auditor and any conditions imposed by the Site Auditor.

For example, the Site Auditor might decline to issue the final Site Audit Statement until the Site Auditor is satisfied that a Materials Management Plan designed to prevent recontamination of the relevant part of the Site has been complied with. In this scenario it makes sense for the Site Auditor to progressively review designs and work plans before the commencement of works so that problems as to design and work method are flushed out prior to works commencing.

It is intended that this Plan will be made available to Authorities and persons intending to carry out Work on the Site so that they are familiar with its requirements and are aware that the Site Auditor will have regard to it before issuing relevant Site Audit Statements. It is intended that when determining applications for Planning Approvals or certificates under the EP&A Act, Planning Authorities and certifying authorities will have regard to and act consistently with the requirements of the plan and will impose appropriate conditions to require a Site Audit be carried out and Site Audit Statements issued either prior to the grant of Planning Approval or prior to the grant of relevant certificates.

6.4 Summary of Requirements to Obtain Site Auditor Sign Off

The following table summarises the involvement of the Site Auditor relative to the decision points discussed in the previous section. It is not intended to be comprehensive. People by or on whose behalf Works are carried out on the Site must comply with the requirements of law and the relevant Authority guidelines which will require other interactions with and involvement of the Site Auditor.

Stage	**Site Auditor involvement**	**Type of work**	**Site Auditor involvement includes:**
Prior to commencement of Works	Site Auditor when satisfied provides Site Audit Statement or other written confirmation of appropriateness of design, outcomes envisaged and associated management / work plans	Remediation Works	Appropriateness of plan of remediation generally including proposed design, implementation and maintenance. Receives information, access and reports as required by this Plan, existing agreements, approvals, certificates and site audit statements .
		Infrastructure Works	Appropriateness of proposed management of risks relating to interaction of the works with contamination and other Remediation Works. Receives information, access and reports as required by this Plan, existing agreements, approvals, certificates and site audit statements.
		Redevelopment Works	Appropriateness of management of risks relating to interaction of the works with contamination (including post-completion risks to users). Receives information, access and reports as required by this Plan, existing agreements, approvals, certificates and site audit statements.
During the conduct of Works	Reports to be provided to Site Auditor as required by Site	Remediation Works	Validation reports and updates on risks and other relevant information to be provided to Site Auditor. Receives information, access and reports as required by this Plan, existing agreements, approvals,

Stage	Site Auditor involvement	Type of work	Site Auditor involvement includes:
	Auditor or by law		certificates and site audit statements.
		Infrastructure Works	Updates on risks and other relevant information to be provided to Site Auditor. Receives information, access and reports as required by this Plan, existing agreements, approvals, certificates and site audit statements.
		Redevelopment Works	Updates on risks and other relevant information to be provided to Site Auditor. Receives information, access and reports as required by this Plan, existing agreements, approvals, certificates and site audit statements.
Upon completion of works or relevant stages of Works	Site Auditor when satisfied provides Site Audit Statement or other written confirmation that works carried out as required and that site is suitable for specified uses subject to conditions	Remediation Works	Site Audit Statement as to completion of Remediation Works. Receives information, access and reports as required by this Plan, existing agreements, approvals, certificates and site audit statements.
		Infrastructure Works	Site audit statement as to implementation of appropriate risk management works. Receives information, access and reports as required by this Plan, existing agreements, approvals, certificates and site audit statements.
		Redevelopment Works	Site audit statement as to implementation of appropriate risk management works. Receives information, access and reports as required by this Plan, existing agreements, approvals, certificates and site audit statements.
Following completion of Works	Receives reports as required by site audit statements issued	Maintenance of remediation	Receives information, access and reports as required by existing agreements, approvals, certificates and site audit statements and complies with reporting obligations to Authorities.

6.5 Additional Site Auditor Requirements

It is possible that the Site Auditor may have requirements which are additional to or different from those documented in this Plan. This may occur, for example, because of:

- Site conditions which differ from those anticipated from the extant data; or
- Specific circumstances relating to the Works; or
- Changes in law or guidelines relating to exposure of humans to contaminants; or
- Combinations of the above;
- Other matters

Site Audit Statements must be obtained for Works as required by the relevant legislation, the VRA, any approval (including the Development Consent), the requirements of authorities or the requirements of this CSMP.

6.6 Site Auditor Discretions

The Site Auditor's discretions to respond in an appropriate manner are not removed by this Plan.

The Site Auditor is required to form an independent view about the design, delivery and performance of all Remediation Works on the Site, having regard to the CLM Act and all relevant guidelines made or approved under section 105 of the CLM Act. In forming such a view, the Site Auditor may consider that additional requirements to those set out in this Plan are necessary or that it is appropriate in the circumstances to depart from or relax the relevant standard or Requirement.

6.7 Additional controls in the Planning Approval Process

The requirement for Site Auditor sign off is not the only control that may be imposed in the Planning Approval process. For example, a Planning Approval may impose controls on the method of carrying out Works. This could include requirements that works plans be prepared in accordance with the requirements of this Plan or that other, additional plans be prepared. It could also include conditions as to testing, commissioning and proving outcomes prior to commencement and other controls.

It is expected that Planning Authorities will have regard to this plan when determining applications for Planning Approval and will impose appropriate conditions to give effect to it.

Specifically it is expected that Planning Authorities will act consistently with the CSMP. (Note as a legal matter a condition of an approval that is more stringent than a Requirement is consistent with the Requirement because it is possible to comply with the Requirement by complying with the more stringent condition.)

6.8 Other Control Mechanisms

It is expected that there will be other mechanisms controlling the conduct of Works on the Site. These may include:

- Registered instruments
- Agreements
- Other approvals (for example from the EPA)
- The VRA.

These mechanisms may incorporate relevant parts of this Plan and may also include requirements for Site Auditor sign off prior to particular key decisions, Works or processes being made or undertaken.

7. Guide to Requirements

Requirements:

- Part 8 sets out compliance Requirements in respect of environmental management plans applicable to the Site, requires the appointment of a geotechnical expert and environmental scientist to review and certify Works and management and reporting Requirements;
- Part 9 sets out design Requirements in respect of Remediation Works;
- Part 10 sets out Requirements for the delivery of Remediation Works;
- Part 11 sets out maintenance Requirements for Remediation Works;
- Part 12 sets out design Requirements for Project Works;
- Part 13 sets out Requirements for the delivery of Project Works;
- Part 14 sets out vapour management Requirements;
- Part 15 sets out other specific Requirements; and
- Part 16 sets out requirements relating to reporting and the provision of information.
- Part 17 sets out how the Plan is intended to be modified over time
- Part 18 sets out the extent of information that is relevant to contamination
- Part 19 sets out a Requirement and recommended strategies to manage risk

The following table provides a list of requirements for Works under this Plan. This is provided as a guide only and the actual requirements detailed in subsequent sections take precedence.

Requirement	Description
Part 8 - Plans	
8.1	Environmental Management Plans
8.1.1	Comply with SPEMP (if applicable to current development consent)
8.1.2	Comply with CEMP (if applicable to current development consent)
8.1.3	Comply with OEMP (if applicable to current development consent)
8.2	Work Management Plan
8.3	Appoint Geotechnical Expert
8.4	Appoint Environmental Scientist
8.5	Environmental Management and Reporting
Part 9 – Remediation Works Design	

9.1.1	Prepare a Remediation Work Method Statement
9.2.1	Obligation to Cap
9.2.2	Cap performance/design Requirements
9.2.3	Geotechnical Engineer's report
9.2.4	Comply with Preliminary Design and other works
9 2.5	Plan for future management
9.3.1	Vapour Management
9.4.1	Area 1 – comply with Site Auditor requirements for supplementary Capping
9.4.2	Area 1 – protect Barrier Wall
9.5.1	Construction of Emplacement Area
9.5.2	Management of Emplacement Area
9.6	Signage
9.7	Technical/Commercial Area – Relaxation of time for Cap placement
9.8	Exemption of Cap requirement for specific areas
9.9	Site Auditor Confirmation
Part 10 –Remediation Works Delivery	
10.1	Comply with plans, designs etc
10.2.1	Obtain report from Geotechnical Engineer
10.2.2	Obtain report from Environmental Scientist
10.3	Obtain Site Auditor Confirmation
Part 11 –Remediation Works Maintenance	
11.1.1	Ongoing obligation to maintain Cap
11.1.2	Obligation to regularly inspect, monitor and repair Cap.
11.2	Maintenance of other Remediation Works
11.3	Maintenance of VOC vents
Part 12 –Project Works Design	
12.1.1	General design obligation
12.1.2	Other design obligations
12.1.3	Comply with Parts 11, 14 and 15
12.2	Obtain Site Auditor Confirmation

Part 13 – Project Work Delivery	
13.1.1	Comply with designs and plans
13.1.2	Obtain Geotechnical Engineer Certification
13.1.3	Obtain Environmental Scientist Certification
13.2.1	Obtain Site Auditor Certification
Part 14 – Vapour Management	
14.1.1	Assess VOC risks and incorporate into design
14.2.1	Additional Requirements Area HA1
14.3.1	VOC Management in Area 1
14.4.1	VOC Management in Area 2
Part 15 – Other Specific Requirements	
15.1.1	Easement to access and maintain Barrier Wall
15.1.2	Restriction on surface development in vicinity of Barrier Wall
15.1.3	Work to be designed for differential settlement
15.1.4	Control of works affecting Capping beam
15.1.5	Geotechnical Engineer Certification
15.1.6	Control of Piles and Footing
15.2.1	Right of access to Monitoring Wells
15.2.2	Right to expand Monitoring Wells
15.3.1	Control of Work in Level 3 Placement Area
15.3.2	Work Management Plans within areas of known Level 2 and Level 3 Contamination
15.3.3	Work Management Plans within Area 1
15.3.4	Site Auditor Requirements for future landuse
15.4	Control of excavation of Area I
15.5.1	Heritage Protection
15.6.1	Maintenance of Major Drains
15.6.2	Maintenance of HDPE Liners
15.7.2	Right to undertake Remediation Works
15.8.1	Remediation of Koppers LTP Facility
15.9.1	Remediation of OneSteel Carpark

15.10.1	Remediation of Koppers Operational Area
15.11.1	Remediation of Existing Onesteel Rail Line
15.12.1	Right to Access Future Cell 6 and 7
15.13.1	Restriction on Beneficial Use of Groundwater
15.13.2	Management of Risks During Dewatering
15.14.1	Restriction on Taking of Shellfish
Part 16 Reporting and Information Requirements	
16.1.1	Keep records and information
16.1.2	Notify the EPA of material changes
16.1.13	Notify the EPA of any failure to comply with the VRA
19.1	Obligation to manage risk

8. Works Plans and Appointment of Experts

8.1 Environmental Management Plans

The Development Consent requires four levels of environmental management plans for the Site. They are:

- Contaminated Site Management Plan (CSMP, this document); refer to Condition of Consent 4.1;
- Site Preparation Environmental Management Plan (SPEMP); refer to Condition of Consent 4.2;
- Construction Environmental Management Plan(s) (CEMP); refer to Condition of Consent 4.3; and
- Operational Environmental Management Plan(s), (OEMP); refer to Condition of Consent 4.4.

Future Approvals may impose additional or different requirements.

8.1.1 SPEMP

Background

HDC has prepared a SPEMP to provide overarching principals of environmental management for demolition, remediation and site preparation activities for the Site. The SPEMP is included in Appendix B.

Application

The SPEMP has been approved by the DoP as a condition of Planning Approval. The SPEMP remains applicable to site preparation activities to be completed in Stage 2 and also applies to the whole Site unless specifically provided in this plan.

The existing Development Consent and the remediation works that were permitted under it form the foundation upon which future uses of the Site are permitted. The remediation works remain in place and will need to be managed in accordance with this CSMP including the need to comply with the SPEMP for relevant works. Future Planning Approvals should be consistent with this plan and should require compliance with it as one of the documents that governs how to manage and use the Site in light of the remediation works. Future Planning Approvals should not seek to alter or relax this plan unless the site auditor has fully assessed the proposed alteration or relaxation and has certified that the alteration or relaxation is appropriate. At that time this CSMP should be updated to reflect the change and all relevant authorities notified.

Requirement

The SPEMP framework for site preparation activities must be followed at all times for all Works.

8.1.2 CEMP

Background

Environmental controls relevant to the detailed work practices of individual contractors, for site specific remediation, site preparation and subsequent project works must be prepared by those remediation contractor(s) performing the works. CEMP documents are to be presented for DoP approval prior to commencement of construction.

Whilst contractors are required to draw on overarching principals of the SPEMP, they will be required to independently seek DoP approval for CEMP procedures as outlined in Section 4.2.2 of the SPEMP that are specific to their works. Individual contractors will possess CEMP's specific to their projects and activities at the same time adhering to the overarching principals of the SPEMP.

Future Planning Approvals are expected to impose similar requirements.

Application

The requirements of this part apply to the whole Site

The existing Development Consent and the remediation works that were permitted under it form the foundation upon which future uses of the Site are permitted. The remediation works remain in place and will need to be managed in accordance with this CSMP including the requirement for a CEMP. Future Planning Approvals should be consistent with this plan and should require compliance with it as one of the documents that governs how to manage and use the Site in light of the remediation works. Future Planning Approvals should not seek to alter or relax this plan unless the site auditor has fully assessed the proposed alteration or relaxation and has certified that the alteration or relaxation is appropriate. At that time this CSMP should be updated to reflect the change and all relevant authorities notified.

Requirement

No construction work may occur before a contractor's CEMP has been prepared that complies with the requirements of relevant approvals and:

(a) been approved by the Site Auditor; and

(b) approved by other Authorities as required by applicable approvals.

A copy of the CEMP must also be provided to the Site Auditor and a written sign-off of the CEMP must be obtained from the Site Auditor prior to commencement of construction.

Note the Development Consent requires that the CEMP must:

- Describe the proposed construction works;
- Outline the proposed construction work program;
- Identify all the relevant statutory requirements and conditions of consent that apply to the construction phase of the development;
- Set standards and performance measures for each of the relevant environmental matters associated with the construction work;
- Describe what actions and measures will be implemented to mitigate the potential impacts of the construction works, and to ensure that these works will comply with the relevant standards and performance measures;

- Describe in detail what measures and procedures will be implemented to:
    - Manage construction traffic;
    - Mitigate any potential dust impacts;
    - Register and respond to complaints during the construction period;
    - Ensure the occupational health and safety of construction workers;
    - Respond to any emergencies; and
    - Respond to the discovery of any archaeological relics or sites during site works.
- Explain how the environmental performance of the construction works will be monitored, and what actions will be taken if any non-compliance is detected;
- Describe the role, responsibility, authority, accountability, and reporting of key personnel involved in the construction of the development; and
- Include the following plans:
    - Soil and Water Management Plan (Condition 5.27)
    - Site Preparation and Construction Noise Management Plan (Condition 5.8);
    - Heavy Vehicle Route Plan (Condition 5.46)
    - Landscape Management Plan (Condition 5.47)
    - Contaminated Site Management Plan (Condition 4.1)
    - Archaeological Management Plan (Condition 6.3).

8.1.3 OEMP

Background

The Development Consent requires preparation and implementation of an OEMP. Future approvals for other development may impose similar conditions.

Application

The requirements of this part apply to the whole Site unless

The existing Development Consent and the remediation works that were permitted under it form the foundation upon which future uses of the Site are permitted. The remediation works remain in place and will need to be managed in accordance with this CSMP including the requirement for an OEMP. Future Planning Approvals should be consistent with this plan and should require compliance with it as one of the documents that governs how to manage and use the Site in light of the remediation works. Future Planning Approvals should not seek to alter or relax this plan unless the site auditor has fully assessed the proposed alteration or relaxation and has certified that the alteration or relaxation is appropriate. At that time this CSMP should be updated to reflect the change and all relevant authorities notified.

Requirement

The Developer must prepare and implement an OEMP for all future operations of the proposed development which has been prepared as required by relevant approvals and:

(a) approved by the Site Auditor; and

(b) approved by each other Authority as required by applicable approvals.

Note the Development Consent requires that this plan must:

- Describe the proposed operations;
- Identify all the relevant statutory requirements that apply to the operation of the development;
- Set standards and performance measures for each of the relevant environmental issues;
- 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;
- Describe what measures and procedures will be implemented to:
- Register and respond to complaints;
- Ensure the operational health and safety of the workers;
- Respond to potential emergencies, such as plant failure;
- Describe the role, responsibility, authority, and accountability of all the key personnel involved in the operation of the development;
- Incorporate the detailed Environmental Monitoring Program (Condition 8.1);
- Incorporate a Stormwater Management Plan (Condition 5.30);
- Incorporate a Capping Maintenance Plan (Condition 5.20);
- Incorporate the Contaminated Site Environmental Management Plan (this document, Condition 4.1);
- Heavy Vehicle Route Plan (Condition 5.46);
- Provision of site inductions for new employees or contractors on site; and
- Use of physical markers, marker layer, notices or other suitable precautions to warn of the location of emplacement areas or potentially contaminated materials. The proposed precautions must be consistent with this Plan and the Key Documents and must be included in the information provided to the Site Auditor under Part 16.

The Developer must ensure that a copies of the OEMP are publicly available and review and update the OEMP regularly, or as directed by Director-General. The OEMP must be approved by the Director-General before operations can commence.

A copy of the OEMP must also be provided to the Site Auditor and a written sign-off of the OEMP must be obtained prior to commencement of operations.

8.2 Work Management Plan

Background

Works may encounter contaminated soils, groundwater or gases associated with past land-uses or previously completed remediation works which included on-site placement of contaminated materials in the Level 2 and Level 3 placement areas within Area 1 and Level 2 in Area 2. Measures need to be taken to protect the health and safety of people and to protect the environment. Specific attention should be paid to Works that may penetrate below Caps that have been put in place.

Application

The requirements of this Part 8.2.apply to the whole Site unless specifically identified otherwise for works that penetrate the surface,.

Requirement 8.2.1 – Work Management Plan to be prepared and approved

(a) A Works Management Plan must be prepared for all Works and must be approved by the Site Auditor prior to the commencement of those Works.

(b) The works Management Plan must include:

(i) assessment of the nature and extent of contamination and the risks from it to the satisfaction of the Site Auditor;

(ii) a risk assessment carried out in accordance with AS 90001 by an appropriately qualified and experienced expert identifying the potential risks arising in connection with the proposed Works;

(iii) protocols for the safe conduct of the Works which have been prepared by an appropriately qualified and experienced expert and which specify precautions to be taken to mitigate risks identified in the risk assessment as requiring mitigation;

(iv) a safe work method for the proposed activities, which includes appropriate contingency plans for the possibility of encountering contaminated materials;

(v) a procedure to progressively classify and manage soils encountered during excavation in accordance with the Materials Management Plan including assessment by the Environmental Scientist as materials are excavated;

(vi) where there has been any excavation into or below a Cap – protocols for assessing and confirming that the Cap has been properly reinstated;

(vii) a validation procedure and quality assurance / quality control procedures to confirm classification of materials excavated and to confirm achievement of relevant standards of remediation; and

(viii) controls to ensure that no damage is caused to any remediation works and structures on the Site

[Note the requirements specified in Part 9 require design of the Remediation Works to be in accordance with the SPEMP and Parts 10 and 12 require Work to be carried out in accordance with the approved SPEMP and the specifics of the individual contractors CEMP's and other documents]

8.3 Geotechnical Expert

Background

This Plan requires that a Geotechnical Engineer provide certain certifications including in respect of the following:

- 10.2.1 Cap installation;
- 11.1.2 Cap inspection;
- 13.1.2 Cap integrity;
- 15.1.2 Excess loads;
- 15.1.5 Surface development; and
- 15.1.6 Foundations within the exclusion zone.

Application

This requirement applies to the whole Site.

Requirement 8.3.1

A person by whom (or on whose behalf) Work is to be carried out on Site must appoint an expert Geotechnical Engineer to review and provide certification of the Works as required by this Plan.

8.4 Environmental Scientist

Background

This Plan requires that an Environmental Scientist provide certain certifications including in respect of compliance with the Materials Management Plan.

Application

This requirement applies to the whole Site.

Requirement 8.3.1

A person by whom (or on whose behalf) Work is to be carried out on Site must appoint an expert Environmental Scientist to review and provide certification of the Works as required by this Plan.

8.5 Environmental Management and Reporting

Background

Section 9 of the Development Consent outlines environmental management and reporting requirements including:

(i) Appointment of an Environmental Officer (condition 9.1);

(ii) Annual Environmental Management Reporting (condition 9.2 and 9.3);

(iii) Independent Environmental Auditing (condition 9.4 and 9.5);

(iv) Community Consultative Committee (condition 9.6, 9.7 and 9.8); and

(v) Complaints Procedure (condition 9.9).

Future approvals may impose similar requirements.

Application

This requirement applies to the whole Site.

Requirement 8.5.1

Comply with the requirements of applicable approvals.

9. Remediation Works Design

9.1 Preparation of Remediation Work Method Statement

Background

Two key documents govern Remediation Works on the Site. They are the RAP and the VRA.

An approved RAP has been prepared for the Site. The RAP:

- illustrates remediation goals and objectives;
- provides an assessment and understanding of the soil and groundwater contamination affecting the Site;
- provides an approved and a remediation strategy for all parts of the Site

The Site is also subject to a VRA, which:

- sets out a performance schedule to complete works considered in the RAP
- establishes a program of works
- establishes monitoring requirements
- specifies requirements for risk assessment and contingency planning
- specifies requirements for site auditing and assessment of efficacy of works

Application

The requirements of this Part 9.1 apply to the whole of the Site

Requirement 9.1.1 Preparation of a Remediation Work Method Statement

For each part of the Site, prior to preparation of remediation detailed design documentation, a Remediation Work Method Statement is to be prepared to the satisfaction of the Site Auditor. The document is to demonstrate an understanding of the RAP and the VRA and outline how the Remediation Works are to comply with the performance schedule of the VRA and be compatible with the intent of the RAP.

The Remediation Works Method Statement is also to provide a schedule of any departures from the objectives and strategy of the RAP and the performance schedule in the VRA. In such case, supporting documentation may be required to demonstrate that any alternative remediation approach is equivalent or better in addressing these requirements or justification for any departures. Supplementary documentation may be requested at the discretion of the Site Auditor, and may include, but not necessarily limited to:

- identification of likely areas affected by Contamination;
- identification and characterisation of likely contaminants;
- sampling and analysis program and methodology;

- sampling and analysis of contaminants;
- assessment of risks;
- demonstration of effectiveness of proposed works (which may include hydraulic, environmental or geotechnical assessments);
- contingency planning;
- QA/QC procedure;
- validation protocols;
- maintenance and inspection protocols including inspection schedule including for any Caps, repair of defects or damage and plan of management for any proposed emplacement areas;
- includes proposed reporting protocols;
- complies with the Key Documents;

And must:

- as a minimum comply with EPA requirements and guidelines;
- comply with the requirements of this Plan, including Parts 9, 10, 11 , 14 and 15;
- be of a scope satisfactory to and carried out to the satisfaction of the Site Auditor and the relevant Authorities; and
- include assessment of VOC risks as noted in Part 14 below

9.2 Design Requirement- Provision of Cap

Background

Various parts of the Site are known to contain materials that may be potentially harmful to humans. There is also a risk that infiltration can cause off-site migration of contaminated groundwater. Therefore, the RAP and VRA requires that a low permeability Cap is to be provided and maintained across the Site to limit as far as practicable infiltration of surface waters and protect future occupants of the Site from being exposed to potentially contaminated soils and groundwater.

Application

This requirement applies to the whole of the Site.

Requirement 9.2.1 – Obligation to Cap

The whole of the Site must be Capped except:

- those parts of the Site that are shown in Figure 13 as being exempt from this Requirement; and
- any part of the Site that the VRA provides does not require Capping.

Capping may be carried out synergistically with redevelopment but each part of the Site to be Capped must be completed on the earlier of:

- the date required by the VRA; or
- prior to the occupation or use of any Redevelopment Works on that part.

Requirement 9.2.2 - Cap Performance/ Design

The Cap must:

- prevent as far as practicable the ingress of water to any part of the Site that may be contaminated and, thereby in turn, prevent as far as practicable, the mobilisation and migration of contaminants in surface water or ground water; and
- be capable of performing without substantial maintenance or repair for at least 25 years under the conditions anticipated at the Site.

In addition, any Cap for any part of the Site must comply with the following:

(i) Permeability, thickness and materials of the surface Cap are to be provided in accordance with the conditions 5.18 and 5.18A of the Development Consent unless superseded by requirements for same in a latter applicable Planning Approval..

(ii) Caps constructed from materials including clays and/or coal washery products are to be materials which are non-dispersive, resistant to erosion, low shrink swell potential, and be free of acidic leachates.

(iii) Areas of higher permeability may be included (such as landscaped zones) subject to analysis to the satisfaction of the Site Auditor that the overall site groundwater recharge rate is equivalent to or less than the VRA required permeability for 10%, 50% and 90% annual probability exceedance rainfalls.

(iv) All Caps except building slabs should have a minimum slope of 1% and be constructed to be free of surface water ponding.

(v)Grade the surface and provide a drainage system so that no undrained ponding of surface water occurs.

(vi) Be constructed of highly stable materials to minimise degradation over time; and

(vii) Comply with the requirements of this Part 9 and also Parts 14 and 15

Requirement 9.2.3 - Geotechnical Engineer Report

Prior to the commencement of works, a Geotechnical Engineer's report must be provided to the Site Auditor describing the Capping materials, thicknesses and jointing methods and certifying that the design complies with the Cap performance requirements specified in this Part 9 and Parts 14 and 15. The Geotechnical Engineers report is also to prescribe an inspection and maintenance schedule. The people to whom the report is addressed must include the Site Auditor.

Requirement 9.2.4 - Preliminary Design and Compatibility with other Works

The design of Remedial Works must comply with the following:

(i) the requirements of the VRA and this CSMP and all legal requirements;

(ii) Planning Approval requirements;

(iii) levels at the boundary of the proposed development should match those documented on the Preliminary Design for site earthworks or those in the Final Design where applicable;

(iv) the drainage system is to accommodate the drainage pathways identified in the Preliminary Design or those in the Final Design where applicable, and to provide a similar pattern of drainage, and be compatible with the stormwater strategy for the site, unless otherwise dictated by design flood levels.

(v) stormwater systems and sewer systems (including subsoil drains, pumping stations, sumps and other infrastructure or equipment) are to be isolated from ingress of groundwater;

(vi) limiting exposure to site contamination during site regrading earthworks;

(vii) wharf heights agreed with the Newcastle Port Corporation;

(viii) railway gradings along the proposed alignment for the relocated Morandoo Sidings to One Steel railway line as documented in the Preliminary Design or subsequent design approved by the Hunter Development Corporation; and

(ix) levels at the perimeter of proposed works should be compatible with both the Preliminary Remediation Design for earthworks across the whole Closure Area and other Project Works, either proposed or constructed, unless otherwise dictated by design flood levels or instructed by the Hunter Development Corporation.

Requirement 9.2.5 – Plan for Future Management

The design of Remediation Works must include:

(i) a plan for the future management of the relevant part of the Site to inform people of the presence of the Remediation Works and the potential hazards of works in the area relating to the Remediation Works or contamination;

(ii) identification of any proposed physical markers, marker layer, notices or other precautions, to warn people if they are about to excavate within an emplacement area onto contaminated materials. The proposed plan and proposed precautions must be consistent with this Plan and the Key Documents and must be included in the information provided to the Site Auditor.

9.3 Design Requirement- Vapour Management

Background

Various parts of the Site are known to contain materials that may give rise to potentially harmful vapours – in particular where enclosed spaces are created. In Part 14 of this Plan there are specific controls relating to vapour mitigation and management which must be incorporated into the design.

Application

This requirement applies to the whole of the Site.

Requirement 9 3.1 – Vapour Management

The design of Remediation Works must be consistent with and give effect to the requirements of Part 14 below in respect of management of vapours.

9.4 Area 1 - Specific Requirements

Background

The HDC has provided a low permeability Cap across Area 1a, as described in Part 5.3.2 of this CSMP. Additional Capping may be required to satisfy Site Auditor requirements for specific Project Works, or to meet engineering requirements for Project Work pavements or hardstands.

In addition, RLMC has installed a Barrier Wall around Area 1 and precautions must be taken to protect the Barrier Wall.

Application

This requirement applies to the **Area '1'.**

***Requirement 9.4.1* - comply with Site Auditor requirements for supplementary Capping**

Comply with any Site Auditor requirements for supplementary Capping as required for the intended land-use including the Site Auditor's requirements for design approval.

Requirement 9.4.2 – protection of Barrier Wall

All Works must be designed and implemented in accordance with the requirements specified in Parts 14 and 15 below.

9.5 New Emplacement Areas

Background

The Materials Management Plan contains a classification of materials. If Level 3 materials (as defined in the Materials Management Plan) are identified, these materials may be able to be placed into and contained and isolated in emplacement areas within the area of the Works.

Application

This requirement applies to the whole of the Site.

Requirement 9.5.1 – Construction of Emplacement Area

Emplacement areas are to be designed and constructed to fully and safely contain material to be contained in them. The design must be approved by the Site Auditor and all relevant Authorities and must satisfy the requirements of the VRA including to prevent as far as possible further contamination of the Hunter River. The emplacement area must be covered by a distinctive physical marker layer such as a high density poly-ethylene mesh in a distinctive colour. The location of emplacement areas must be shown on a plan prepared by a Registered Surveyor, and provided to the Site Auditor.

Requirement 9.5.2 –Management of Emplacement Area

Prepare a Plan of Management for Emplacement areas in accordance with Site Auditor and EPA requirements.

9.6 Signage

For all parts of the site that are Capped or on which there is an emplacement area, consideration should be given to the placement of signs in prominent, visible and accessible locations notifying of the presence of the Cap or emplacement area and of the information that should be referred to prior to any work in that area. Emplacement areas are shown in Area 1 and Area 2A in Figure 2. The signage should also be provided for future emplacement areas.

9.7 Technical/Commercial Area - Relaxation of Time for Placement of Cap

Background

Part of the site in Area 2 is covered by existing structures and sealed pavements which are recognised to provide a low level of permeability and also provide some existing functional purpose as car parking, roads and buildings.

Application

This provision applies as a relaxation of requirement 9.2.1 for Area C**.**

Relaxation of Requirement 9.7.1 timing

The Technical / Commercial Precinct is to be provided with a low permeability Cap in accordance with part 9.1 of this plan, only when Redevelopment Works occur within this area. At such time, the area is required to be remediated in accordance with the RAP and VRA.

9.8 Exemption of Cap requirement for specific areas

Background

The Development Consent (as modified) excludes certain site areas from requiring low permeability Capping. These areas are shown on Figure 13 include the landscaped areas adjacent to Industrial Drive.

The relaxation of Capping requirements in these areas was based on heritage and landscape values and assessment of contamination risks. For information in relation to exempt areas may be found in *Application to Vary Development Consent Conditions for the Multi Purpose Terminal and remediation of the Former BHP Site, Mayfield (2001),* prepared by URS Australia, 19th April 2005 (Appendix O), which was a supporting document for modification application MOD-60-4-205-i.

Any redevelopment of exempted areas would mean that the exemption would no longer apply in the area of redevelopment.

Application

This provision applies to relax the requirement 9.2.1 to that part of Area D adjacent to Industrial Drive.

Any areas within the exempted area in which Redevelopment Works are carried out are to be provided with a Cap in accordance with requirement 9.1.1.

Relaxation of Requirement 9.8.1 - timing

Requirement 9.2.1 does not apply to the part of Area D until this area is subject to Redevelopment Works.

9.9 Site Auditor Confirmation

Background

The Site Auditor has been appointed to carry out site audits in respect of the Site. Developers should make commercial arrangements for provision of services by the Site Auditor.

Application

This requirement applies to the whole of the Site.

Requirement 9.9.1 – Site Auditor Confirmation

For each part of the Site, prior to the commencement of the Remediation Work for that part, Site Auditor Confirmation that the design of the Remediation Works is suitable and appropriate and complies with the Requirements of this Plan must be obtained.

10. Remediation Works - Delivery

10.1 Compliance with Remediation Work Method Statement, Environmental Management Plans and Approved Design

Background

This CSMP imposes obligations to have in place approved Works Management Plans (Requirement 8.2.1), Environmental Management Plans (Requirement 8.1, where applicable), future management of remediated areas (Requirement 9.2.5) and for the design of Remediation Works to be specified in a remediation works method statement and meet certain standards s in part 9 and be approved by the Site Auditor. In addition other plans have been prepared. These include the Key Documents and the other documents listed below in Requirement 10.1.1.

Application

This Requirement applies to the whole of the Site.

Requirement 10.1.1 – Comply with plans, designs etc

Remediation Works shall be carried out in accordance with:

(i) the Remediation Work Method Statement and remediation Design that has been approved by the Site Auditor (under Part 9 above)

(ii) the Key Documents;

(iii) the Works Management Plan that has been approved under Requirement 8.2.1;

(iv) the Geotechnical Engineers report provided under Requirement 9.2.3; and

(v) the plans prepared for future management under Requirement 9.2..5;

And in accordance with the requirements of the Site Auditor and all applicable laws

10.2 Obtain Geotechnical Engineers Report and Environmental Scientist Report

Background

Where Remediation Works are carried out on the Site it will be necessary to obtain a report from a properly qualified person confirming that they are properly carried out and installed and free of defects.

Application

This Requirement applies to the whole of the Site.

Requirement 10.2.1 – Geotechnical Engineer

At the completion of the Remediation Works certification must be obtained from the Geotechnical Engineer that the installed Cap will satisfy VRA requirements for Cap

permeability for a design life of not less than 25 years, when exposed to the environment and proposed land-use, and maintained in accordance with the Geotechnical Engineer's inspection and maintenance schedule. The people to whom the certificate is addressed and issued must include the Site Auditor and the EPA.

This certification must be provided prior to any occupation or use of Project Works on the relevant part of the Site.

Requirement 10.2.2 – Environmental Scientist

At the completion of Remediation Work a report must be obtained from an Environmental Scientist stating that the materials encountered during excavation have been managed in accordance with the Materials Management Plan, and if replaced on site do not pose an unacceptable exposure risk to human health. The people to whom the report is addressed must include the Site Auditor.

This report must be provided prior to any occupation or use of Project Works on the relevant part of the Site.

10.3 Site Auditor Confirmation

Background

The Site Auditor has been appointed to audit the conduct of Remediation Works in accordance with EPA guidelines and legislation.

Application

This Requirement applies to the whole of the Site.

Requirement 10.3.1 – Site Auditor Confirmation

Following completion of Remediation Work obtain a Site Audit Statement from the Site Auditor confirming that the Remediation Works have been carried out and that the Site is suitable for the proposed use.

This must be provided prior to any occupation or use of Project Works on the relevant part of the Site.

11. Remediation Works – Maintenance

11.1 Cap Integrity over time

Background

Once installed the integrity of Caps must be maintained over time. Work has the potential to impact on Cap integrity. Materials may also break down in time and require future maintenance.

Application

The following Requirements apply to the whole of the Site**.**

Requirement 11.1.1 – Ongoing Obligation to Maintain Cap

The design parameters set out in Parts 9, 14 and 15 must be complied with on an ongoing basis and any Cap installed on the Site must be maintained in a manner and condition to continue to comply with /achieve those parameters and to comply with all applicable Planning Approvals and conditions of Site Audit Statements unless and until, in respect of any specific part of the Site:

a) the conditions of a Planning Approval applicable to that part of the Site allow a change in Cap permeability requirements in respect of that part, and;

b) written concurrence is provided by the Site Auditor and NSW EPA to the same change in Cap permeability requirements in respect of that part.

Requirement 11.1.2 –Regularly Inspect, Monitor and Repair Cap

For every part of the Site on which a Cap has been installed, the following requirements must be satisfied:

(i) on each Cap Maintenance Inspection Date ensure that a Geotechnical Engineer inspects the whole of the Cap and certifies that the design parameters set out in Part 9 continue to be complied with and provide a copy of that report to the Site Auditor. The people to whom the certificate is addressed must include the Site Auditor;

(ii) promptly repair any defects in the Cap and carry out any other works necessary to obtain that Geotechnical Engineer's certification; and

(iii) provide reports of inspection and confirmation that defects have been repaired to the EPA and the Site Auditor.

(*Note the Site Auditor or Planning Authority may require production of these reports prior to the issue of later Site Audit Statements or approvals).*

11.2 Maintenance of Other Remediation Works

Background

Once installed the integrity of other Remediation Works – in particular any structures - must be maintained over time.

Application

This Requirement applies to the whole of the Site**.**

Requirement 11.2.1 – Maintenance of Other Remediation Works

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:

(i) the maintenance protocol included in the relevant RWMS approved under Part 9;

(ii) any Site Auditor requirements;

(iii) all applicable legal requirements

11.3 Maintenance of VOC Management Works

Background

Measures to protect structures and people from VOCs may be required including as described in Part 14. These may include vents and other works or structures to allow VOCs to dissipate. These vents and other works or structures will need to be maintained over time.

Application

This Requirement applies to the whole of the Site.

Requirement 11 3.1 – Maintenance of VOC Vents

All vents or other works or structures for managing the risk from VOC's must be maintained in a proper and efficient manner and condition. There must be regular inspections of them and they must be repaired and kept free of defects.

12. Project Works - Design

12.1 Design Requirements

Background

Project Works have the potential to impact upon the effectiveness of Remediation Works and to impact Cap integrity. Project Works must be designed so that they are compatible with Remediation Works and requirements

Application

These Requirements apply to the whole of the Site.

Requirement 12.1.1 – General Design Obligations

Having regard to any contamination likely to be encountered, Project Works must be designed:

(i) to provide adequate protection of the health and safety of people;

(ii) to protect the environment;

(iii) to comply with the requirements of the Site Auditor an all applicable legal requirements;

(iv) to comply with the requirements of Parts 14 and 15 below;

(v) to be consistent with the Key Documents, any RAP or other plans for the delivery and maintenance of Remediation Works approved by the Site Auditor or relevant Authorities.

Requirement 12.1.2 – Other Design Obligations

Project Works must be designed to compatible with:

(i) the requirements of the VRA and this CSMP and all legal requirements;

(ii) Planning Approval requirements;

(iii) levels at the boundary of the proposed development should match those documented on the Preliminary Design for site earthworks or those superseded by the Final Design;

(iv) the drainage system is to accommodate the drainage pathways identified in the Preliminary Design or those superseded by the Works as Executed Plans, and to provide a similar pattern of drainage, and be compatible with the stormwater strategy for the site; (Patterson Britton, 2007);

(v) stormwater systems and sewer systems (including subsoil drains, pumping stations, sumps and other infrastructure or equipment) are to be isolated from ingress of groundwater;

(vi) limiting exposure to site contamination during site regrading earthworks;

(vii) wharf heights agreed with the Newcastle Port Corporation;

(viii) railway gradings along the proposed alignment for the relocated Morandoo Sidings to One Steel railway line as documented in the Preliminary Design or subsequent design approved by the Hunter Development Corporation; and

(ix) levels at the perimeter of proposed works should be compatible with both the Preliminary Remediation Design for earthworks across the whole Closure Area and other Project Works, either proposed or constructed.

(x) landscaping to be compatible with remediation works with consideration to Capping maintenance issues and long-term Capping and drainage performance

(xi) manage risks associated with ground engagement contamination

Requirement 12.1.3 – Comply with Parts 11, 14, 15 and 19

Project Works must be designed to ensure ongoing compliance with:

(i) Parts 11, 14, 15 and 19 of this Plan; and

12.2 Site Auditor Confirmation

Background

The Site Auditor has been appointed

Application

This Requirement applies to the whole of the Site.

Requirement 12.2.1 – Site Auditor Confirmation

Prior to the commencement of Project Work obtain Site Auditor Confirmation that the design of proposed Project Works includes suitable and appropriate remediation and risk management controls and complies with the Requirements of this Plan.

13. Project Work - Delivery

13.1 Controls on delivery of Project Works

Background

Project Works have the potential to impact upon the effectiveness of Remediation Works and to impact Cap integrity. Project Works must be delivered in a manner so that they are compatible with Remediation Works and Requirements of this Plan.

Application

This Requirement applies to the whole of the Site.

Requirement 13.1.1 – Comply with Designs and Plans

Project Works shall be carried out in accordance with:

(i) the design that has been approved by the Site Auditor in accordance with Requirement 12.2.1;

(ii) the RAP and design for Remediation Works;

(iii) the Key Documents;

(iv) the Works Management Plan that has been approved under Requirement 8.2.1;

(v) the Geotechnical Engineers report provided under Requirement 9.1.2;

(vi) the plans prepared for future management under Requirement 9.1.5;

(vii) the requirements of Parts 14 and 15 of this Plan,

(viii) any requirements that limit the depth or location of excavations, drilling, piling or other subsurface works

(ix) with due regard to implement strategies that minimise risk of ground engagement under Requirement 19.1

And in accordance with the requirements of the Site auditor and all applicable laws

Requirement 13.1.2 – Geotechnical Engineer Certification

At the completion of the Project Works a report confirming that the Project Works have been carried out in such a manner that they have not adversely impacted upon the integrity of the Cap must be obtained from a Geotechnical Engineer. The people to whom this report is addressed and delivered must include the Site Auditor and the EPA.

This certification must be provided prior to the use of the Project Works.

Requirement 13.1.3 – Environmental Scientist Certification

At the completion of Project Works a report from an Environmental Scientist must be obtained stating that the materials encountered during any excavation have been managed in accordance with the Materials Management Plan, and if replaced on site do not pose an

unacceptable exposure risk to human health. The people to whom this report is addressed and delivered must include the Site Auditor and the EPA.

This report must be provided prior to the use of the Project Works.

13.2 Site Auditor Confirmation

Background

The Site Auditor has been appointed.

Application

This Requirement applies to the whole of the Site.

Requirement 13.2.1

Prior to occupation or use of any Project Works obtain a Site Audit Statement from the Site Auditor confirming that the Project Works have been carried out in such a manner that the Site is suitable for the proposed use. The Site Audit Statement must certify suitability for the proposed use, either without conditions or subject to a long term environmental management plan that is specific to the area that the Site Audit Statement applies to.

14. Vapour Management

14.1 Whole of Site

Background

Contamination within the site may generate VOCs. The VOC Report provides a preliminary indication of the management measures to be implemented to manage the risk from VOCs.

A document titled Volatile Organic Compound Reference Document in Appendix H may provide useful reference background material in relation to this issue.

Application

This Requirement applies to the whole of the Site.

Requirement 14.1.1 – Assess VOC risks and incorporate into design

(a) The risks associated with the potential presence of VOCs must be investigated, assessed and quantified in an appropriate and professional manner prior to the commencement of Works and at least in compliance with applicable legal requirements and the requirements of guidelines, standards or codes adopted or applied by relevant Authorities.

(b) In respect of risks identified or anticipated for VOCs having regard to the results of such investigations assessments or quantifications:

(i) the design of Works must include adequate controls and protections to protect the health and safety of people using the Works or involved in the delivery of Works; and

(ii) the Work plans (including plans prepared to comply with this Plan) must include necessary controls and work methods to protect the health and safety of people using the content of the Works.

14.2 Within 'Benzol Plant' area

Background

Presence of VOCs, principally benzene, in the subsurface in this area presents a potential risk to building occupants. Also, any structures including paving could influence movement of VOCs and create a risk elsewhere.

As part of the Stage 1 Remediation Works, RLMC / HDC have constructed vents within this area following the completion of Capping works in 2008, to alleviate the potential build-up and migration of volatile gases. This is an interim measure and not intended as a final solution for future development. Additional risk management and control measures may be necessary.

Application

This requirement applies to the Area HA1.

Requirement 14.2.1 – Additional Management in Area HA1

Works must be designed and carried out so that:

i. gas management system must be installed for any building structure in which people may work or gas may accumulate

ii. no building basements or other accessible voids below the final Cap surface level

iii. no penetrations into buildings that could act as pathways for gas migration

iv. venting (existing or new) to be installed and maintained in areas not covered by structures

v. venting of VOCs must not present a hazard to this or adjoining parts of the site.

vi. either the existing vents are kept/left and maintained in their current location or in an alternative location that manages the risks associated with the presence of VOC or alternative methods for the management of risks associated with VOC are utilised;

vii. excavations are no deeper than 1.5m below the Area 1 finished Cap level;

viii. there are no building basements or other accessible voids below the Cap level; and

ix. for any part of the Site the method location and extent of management or of venting of VOCs does not limit or adversely affect the development of adjoining part of the Site. For example, venting must be set back from or elevated from lot boundaries or other techniques used to ensure that venting from one lot does not present hazards for another lot.

14.3 Within Area 1

Background

VOCs have been found in some places in the remainder of Area 1 at levels that may present a risk to site users. They may also exist in other areas that have not yet been located. Specific risks have been identified in respect of VOCs in Area 1 which require specific management precautions.

Application

For remediation or Project Works anywhere within Area 1 comply with additional requirements below.

Requirement 14.3 .1 – VOC Management in Area 1

i. Gas management system must be installed for any structure in which people may work or gas may accumulate or sufficient investigation done to conclusively demonstrate (to the satisfaction of the Site Auditor) that no building-specific gas management system is required.

ii. Investigations for project works must include investigations into the presence of VOCs within the project Area, at depths below surface that correspond with the depth of proposed project works and associated utility services.

iii. Where VOCs are detected that may pose a risk, venting or suitable controls must be installed.

iv. Investigations for Project Works must include investigations into the presence of VOC's within the Project Area, at depths below the surface that correspond with the depth of proposed Project Works and associated utility services.

14.4 Area 2

Background

VOC's have been detected in Area 2, and may exist locally in concentrations that could present a risk to building occupants or maintenance workers. VOC's have been detected in subsoils adjacent the Roll Shop (Refer to M area Reports and Buildev IIP investigation in Appendix T also Figure 4 Indicative Risk Map Area 2B) and also in the vicinity of the former Wagon Repair Shed (Refer to RCA Investigation Reports Appendix T and Figure 4 of this Plan).

Application

For remediation or Project Works anywhere within Area 1 comply with additional requirements below.

Requirement 14.4 .1 – VOC Management in Area 2

i. Investigations for project works must include investigations into the presence of VOCs within the project Area, within proposed building footprints and at depths below surface that correspond with the depth of proposed project works and associated utility services.

ii. Where VOCs are detected that may pose a risk, restrictions on development, venting or suitable development controls must be installed or implemented.

15. Other specific Requirements

15.1 Barrier Wall

Background

A subsurface low permeability Barrier Wall was constructed as part of the Stage 1 Remediation Works, and is described in Part 5 of this Plan. The Barrier Wall is constructed from a soil-bentonite mix, which has a lesser load bearing capacity than the surrounding ground. The Barrier Wall construction includes a "surface completion beam" to distribute surface loadings across the wall. The completed wall has been designed to accommodate a sustained traffic load equivalent to SM1600 (as outlined in AS 5100) applied at any location(s) on the existing ground surface, including asymmetrical loadings. The SM1600 design loading is equivalent to a 3.2 metre wide sustained loading of 36kPa.

Due to the lower strength and consolidation properties of the completed soil-bentonite Barrier Wall structure, there is a risk of surface and subsurface displacement resulting from sustained future loadings of the site, both laterally and vertically. Restrictions on further Remediation Works and Project Works in the vicinity of the Barrier Wall are described below.

Loads in excess of the design load may be allowable, subject to:-

a) analysis and certification by a suitably qualified Geotechnical Engineer that there will not be any adverse affect on the Barrier Wall or surrounding ground; and

b) certification from a structural engineer that the design of the structures takes account of ground movements predicted by the certifying Geotechnical Engineer;

but only with written consent of the State of NSW.

Where higher design loads are required, it may be necessary to replace or reinforce the existing Capping system to support the required loads. No guarantee on the performance of the existing Capping system or Barrier Wall is given. For all Works, designers must make their own estimates on the capacity and potential for both total and differential settlements that may occur as a result of deformation of the wall under load and make such allowances in their designs to accommodate such conditions.

Application

Requirement 15.1.1 applies to the Area E.

Requirement 15.1.2 applies to the Area F.

Requirement 15.1.3 applies to Area F.

Requirement 15.1.4 applies to Area F.

Requirement 15.1.5 applies to Area F.

Requirement 15.1.6 applies to Area E.

Requirement 15.1.1 - Easement

Any plan of subdivision or lease is to maintain an easement for access and maintenance over Area E which as a minimum benefits the State Authorities and other public Authorities and their respective invitees. This easement is to have a total width of 15m, comprising 5m on that side of the barrier wall which is within the inside of the containment area and 10m on the other side (i.e. that side of the barrier wall which is exterior to the containment area).

Requirement 15.1.2 – Restriction on surface development

Work is not to include any activity that would result in a combination of dead and live loads that are in excess of the design load for the surface completion beam unless:

(a) a Geotechnical Engineer has provided written certification that there will be no adverse effect on the Barrier Wall or Cap or surrounding ground. The people to whom this certification is addressed must include the State and the Site Auditor;

(b) a structural engineer with appropriate qualifications and experience has certified that the design of the Work takes account of ground movements predicted by the Geotechnical Engineer and that the Works will not damage the Barrier Wall or beam. The people to whom the certificate is addressed must include the State and the Site Auditor;

(c) the Site Auditor is satisfied that the Work will not adversely effect the Barrier Wall or beam; or

(d) the State is satisfied that the Work will not adversely effect the Barrier Wall or beam.

Requirement 15.1.3 – Works to be designed for differential settlement

Works must be designed to allow for any differential settlement that may occur as a result of deformation of the Barrier Wall under load.

Requirement 15.1.4 – Control of Works affecting Capping beam

Works that involve trenching or excavation through the Capping beam must include:

(a) appropriate controls and work methods to minimise damage to the beam; and

(b) appropriate design to replace or reinstate the beam to ensure that the functionality of the beam, Barrier Wall and Cap is not adversely effected.

(c) controls to ensure that capping beam excavations result in nil excavations into the underlying barrier wall. Excavations in capping beam are to be no deeper than 1m below "surface completion levels" in Barrier Wall WAE Plans, Appendix D, noting that the barrier wall sits 1.2m below the surface completion level. The area of Nil excavation below this depth is shown as Area M in **Figure 12.**

Requirement 15.1.5 – Geotechnical Engineer Certificate

A Geotechnical Engineers certificate must be obtained:

(a) certifying that the design of the Works comply with the requirements of this Part 15; and

(b) upon completion of the Works, certifying that the beam has been reinstated properly.

The people to whom each certificate is addressed must include the State and the Site Auditor.

Requirement 15.1.6 – Piles and footings

To protect the integrity of the Barrier Wall, no foundations are permitted (both pile and pad foundations) that penetrate into the surface completion beam or Barrier Wall. An exclusion zone either side of the Barrier Wall has been established for both pad and pile foundations that exceed the above design load for the surface completion beam.

Foundations within the exclusion zone may be allowable, subject to analysis and certification by a suitably qualified Geotechnical Engineer that there will not be any adverse affect on the Barrier Wall or surrounding ground and with the written consent of HDC. Where foundations are required in this zone they must not be within 15 metres (or greater if required) of the Barrier Wall outside alignment. No guarantee on the performance of the existing surface completion beam or Barrier Wall is given. For all foundation design works, designers must make their own estimates on the bearing capacity and potential for both total and differential settlements that may occur as a result of deformation of the wall under load and make such allowances in their designs to accommodate such conditions.

Any plan of subdivision or lease is to create a restriction on use within Area F consistent with the above restrictions.

No work may be carried out that involves excavations or trenches at or below 2m AHD.

15.2 Monitoring Wells

Background

The VRA requirements include the monitoring of site groundwater levels and water quality and this is carried out at a number of groundwater monitoring wells. The State and land owner requires access to these wells for continued monitoring of groundwater conditions.

Application

This Requirement applies to the whole of the Site.

Requirement 15.2.1 – Right of Access to Monitoring Wells

Provide legal right of access for the land owner, State Authorities and other public Authorities and their respective invitees to monitor groundwater from groundwater wells identified in Appendix F including plans of chemical monitoring and groundwater level monitoring.

Requirement 15.2.2 – Right to Revise Monitoring Well Network

Provide legal right of access for HDC and their consultants to install groundwater wells in access, road and utility corridors and easements or any community or common title lands and retain legal right of access for the purpose of monitoring these wells.

Provide legal right of access for HDC and their consultants to decommission and demolish existing or future groundwater wells.

15.3 Contaminated Materials within Area 1 and Area 2A

Background

Earthworks for the Stage 1 and Stage 2A Remediation Works encountered contaminated materials that were beneficially used on site for bulk earthworks below the Area 1 Cap. These contaminated materials were classified as Level 1, Level 2 or Level 3 materials in accordance with the Materials Management Plan. The Materials Management Plan is part of the Voluntary Remediation Agreement and allows for these materials to be left in-situ or relocated on site subject to certain conditions including depth below the finished surface levels.

The location of Level 2 and Level 3 materials is shown indicatively on Figure 2. All Level 2 and Level 3 materials, in situ or emplaced, have a minimum cover of at least 500mm of Level 1 plus the surface Cap. The following hazardous material areas (Area G) are shown:

- Level 3 Material Emplacement
- Level 3 Material In-Situ (indicative only)
- Level 2 Material Emplacement
- Level 2 Material In-Situ (indicative only)
- Level 2 Material Asbestos Emplacement
- Level 2 Material Asbestos In-Situ (indicative only)
- Level 3 Benzene Plume (indicative only)

In-situ contamination has been identified and mapped but the precise extents of contamination are not known.

Level 2 and Level 3 soils/solids do not pose an environmental or human health risk if they are not disturbed. Works involving disturbance of Level 2 or Level 3 soils needs to include precautions and methodologies that prevent unacceptable exposure to the contaminants.

Application

Requirement 15.3.1 applies to the Area G – Hazardous Materials Placement Area

Requirements 15.3.2.applies to Area G – Hazardous Materials Placement Area

Requirement 15.3.3 applies to the whole of Area 1

Requirement 15.3.4 applies to those parts of Area 1 previously Capped with a slag pavement as part of the Stage 1 remediation works.

Requirement 15.3.1 – Control of Work in Area G

The construction of buildings is not permitted within the following areas:

- Level 3 Material Emplacement
- Level 3 Material In-Situ (indicative only)
- Level 3 Benzene Plume (indicative only)

Excavation is not permitted at depths of more than 1.0m below the finished Cap (including 400mm air gap in Pavement Cap, Area 1) within:

- Level 3 Material Emplacement
- Level 3 Material In-Situ (indicative only)
- Level 2 Material Emplacement
- Level 2 Material In-Situ (indicative only)
- Level 3 Benzene Plume (indicative only)

Excavation is not permitted at all in areas of Level 2 Material Asbestos Emplacement, or Level 2 Material Asbestos In-Situ:

- Level 2 Material Asbestos Emplacement
- Level 2 Material Asbestos In-Situ (indicative only)

Requirement 15.3.2 – Work Management Plans within areas of known Level 2 and Level 3 Contamination

For Works within the following areas (Refer to Figure 2):-

- Level 3 Material Emplacement
- Level 3 Material In-Situ (indicative only)
- Level 2 Material Emplacement
- Level 2 Material In-Situ (indicative only)
- Level 2 Material Asbestos Emplacement
- Level 2 Material Asbestos In-Situ (indicative only)
- Level 3 Benzene Plume (indicative only)

the Work Management Plan prepared in accordance with Requirement 8.2 is to specifically address the following additional matters:

- Identify the fate of contaminated Level 2 or Level 3 materials encountered during the carrying out of the Works, the necessary approvals, and verification activities
- Specifically address the potential presence of Asbestos in the materials to be excavated
- Include controls to reduce, as far as practicable, the recharge of groundwater aquifers due to ingress of surface water during carrying our of the Works
- Include a program that shows the timeframes for carrying out the Works including Cap reinstatement and verification requirements.
- For Works below groundwater level show that the Works will not disturb the integrity of the aquitard between the upper and lower water tables

Requirement 15.3.3 – Work Management Plans within Area 1 or 2A

For any Works within Area 1, the Work Management Plans prepared in accordance with Section 8.2 and Section 19 of this Plan should specifically address the possibility of encountering previously unidentified contamination below the underside of Cap and include contingency plans to manage exposure risks arising from such occurrences, and identify the planned fate of Level 2 or Level 3 contamination.

For Works within those parts of Area 1 previously provided with a paved Cap constructed from site slag materials, the Work Management Plan is to specifically address health risks associated with worker exposure to PAH within the slag materials.

Requirement 15.3.4 – Site Auditor Requirements for future landuse

Project Works within parts of Area 1 previously provided with a paved Cap constructed from site slag materials must satisfy Site Auditor requirements for site occupant health risks associated with exposure to elevated PAH levels that exceed NEPM guidelines within the slag materials. Management measures might include overlaying the existing Cap with VENM material, placement of concrete slabs or hardstands, and site use restrictions and protocols.

15.4 Coke Ovens

Background

The former BHPB steelworks contained 5 coke oven batteries located within Area 1. All of these have been demolished by RLMC in 2007 to levels which are below the underside of the Cap constructed by RLMC and completed in 2008. Demolition levels on Coke Ovens 1, 4 and 5 are shown on Works as executed drawings in Appendix N. Restrictions on excavation are appropriate to minimise the risk of encountering contaminants associated with the former coke ovens, and to avoid demolition of remnant structures.

The excavation restrictions relate to the anticipated ultimate surface levels. For those parts of Area 1 which were Capped with VENM material these are the same as the Remediation FSL's constructed by RLMC. For those parts of Area 1 which were Capped with a pavement and bituminous seal it is anticipated that approximately 400mm thickness of additional pavement material will be added to the Cap levels constructed by RLMC.

Application

This Requirement applies to Area I.

Requirement 15.4.1

For areas identified as Area I on the CSMP Plan and which had a VENM Cap provided by RLMC, excavation is not permitted at levels which are more than 1.00m below the Remediation FSL.

For areas identified as Area I on the CSMP Plan and which had a Cap provided by RLMC which comprised of pavement and bituminous seal, excavation is not permitted at levels which more than 0.600m below the Remediation FSL.

15.5 Heritage Requirements

Background

The whole of the Closure Area has heritage requirements, and these are detailed in the Archaeological Management Plan for the Closure Area, included in Appendix P.

Some specific areas of the site with higher heritage significance are identified as Area J on the CSMP Plan. The Heritage Management Plan includes requirements for compliance with the Heritage Act 1977(NSW), obtaining an excavation permit from the NSW Heritage Office prior to excavation, modification or disturbance, and monitoring by an archaeologist in the following areas:-

- Hunter River Copper Smelting Works
- Coke Oven Battreies
- No 2 Blast Furnace
- 18 Inch Mill building
- Small Merchant Mills/Combination Mill
- Merchant Mill Boiler
- No 1 Pig Casting Machine

Some site buildings which are shown within Area J on Figure 13 and Figure 7, have heritage listings including:-

- Pattern Store (Local Significance)
- Master Mechanics Office (Local Significance)
- Admistration Building (State Significance)

Application

This Requirement applies to specific areas of the site with higher heritage significance identified as Area J on the CSMP Plan.

Requirement 15.5.1 – Heritage Protection

At these areas, comply with the requirements of relevant legislation, the Planning Consent, and the Archaeological Management Plan for the Closure Area.

15.6 Major Drains

Background

HDC has constructed major surface water drains within the Site. Construction was completed in 2012.

Application

Requirement 15.6.1 applies to Area K

Requirement 15.6.2 applies to Area K2

Requirement 15.6.1 – Maintenance of Major Drains

Any plan of subdivision or lease is to create a drainage easement over the areas denoted Area K on the CSMP Plan, and have suitable terms for access to maintain the drains which are acceptable to the State.

Prior to lodging for registration submit draft Plans of Subdivision with accompanying 88B Instruments to the State and receive written agreement.

Requirement 15.6.2 – Maintenance and Protection of HDPE Liners

Some of the major drains are lined with High Density Polyurethane Liners to act as an impermeable barrier between surface waters and groundwater. These liners are engineered and constructed with permanent welds to be completely impermeable. These liners are a key feature of the State Remediation Works and are to be maintained.

Liners are not to be cut, punctured or disturbed.

15.7 Additional Remediation Works

Background

The VRA requirements includes a requirement for contingency planning to cover the event that remediation works specified in the RAP do not work as expected, or there are unexpected finds of contaminated materials that require additional Remediation Work.

Application

This Requirement applies to all forms of Common or Association Property, access, road, drainage or utility corridors and easements and lands held by the Crown, a Public Authority or Public Corporation.

Requirement 15.7.1 – Right to Undertake Remediation Works

Provide legal right of access for the State and their respective invitees, the land owner and their representatives to undertake unforseen Remediation Works as required, without recourse for any potential damages.

15.8 Remediation of Koppers LTP Facility

Background

The Koppers Liquid Tar Pitch Facility and access ramps are located in Area 1 as shown in Figure 14. This area was not fully remediated due to operational constraints, but the interim approach is not expected to have a material impact on the efficacy of the overall remediation. As interim measures, RLMC / HDC have applied a fresh 2 coat seal to the access ramps to prevent infiltration and decommissioned all stormwater drainage pit and pipe in the low area of the ramp; surface waters are now pump out and as required by Koppers. No remediation has been applied to the footprint of the operational LTP facility, which is located on the concrete slab. The facility is understood to be decommissioned by Koppers in 2014 and the area will be filled to surrounding grade at 1% and Capped in a manner consistent with the Area 1 Pavement Cap that surrounds.

Application

This Requirement applies to the area identified as Koppers LTP Area, as shown in Insert B in Figure 14.

Requirement 15.8.1 – Remediation of Koppers LTP Facility

Following cessation of Koppers LTP operations in 2014, the land owners will arrange for the filling, grading and Capping of the LTP footprint, to the extent necessary. A Section B Site Audit Statement is to be obtained from the Site Auditor to confirm the site has been managed in accordance with the VRA.

15.9 Remediation of OneSteel (Portion G) Carpark

Background

The Onesteel Car Park (Portion G) is located in Area 2A, as shown in Figure 14. It comprises a well graded bitumous area with engineered stormwater drainage system. This area was resealed by HDC in 2012 to ensure infiltration was minimised. Grades were surveyed by registered surveyor and noted to be generally >1%, with no significant surface ponding expected during rainfall, all aspects draining to a pit and pipe system that discharges into an adjacent stormwater channel within OneSteel.

There is no 500mm separation barrier installed by HDC in this portion due to operational constraints (occupation by OneSteel). The interim approach adopted is not expected to have a material impact on the efficacy of the overall remediation.

Application

This Requirement applies to the area identified as Portion G OneSteel Carpark, as shown in Insert A in Figure 14.

Requirement 15.9.1 – Remediation of OneSteel Carpark

This area is currently used as a carpark by Koppers. Any change of land use or redevelopment that will involve human occupation will require appropriate remediation measures that meet the VRA, to the satisfaction of the Site Auditor. A Section B Site Audit Statement is to be obtained from the Site Auditor to confirm the site has been managed in accordance with the VRA

15.10 Remediation of Koppers Operational Area

Background

The Koppers Berth Operational Area is a small portion shown in Area 2, as shown in Figure 14. This area has not been remediated due to operational and safety constraints (see also Seawall defect plan, Figure 15). The interim approach is not expected to have a material impact on the efficacy of the remediation due to immediate proximity to the active interface with the Hunter River (i.e. the area is already fully flushed by direct tidal exchange with the Hunter River. The main issue preventing immediate remediation by HDC was a failing sheet pile wall causing potholing behind the wall and significant safety risk for heavy vehicles and the area is subject to existing use rights (Koppers). The landowner has been notified of the defect in the seawall and the area is fenced off as a safety precaution. It is expected that the

defective seawall will be repaired by the landowner following Koppers vacating this area in 2014, when Berth 7 becomes operational, and the small footprint of the Operational Area will be graded and Capped by the landowner on Koppers departure.

Application

This Requirement applies to the area identified as Koppers Operational Area, as shown in Insert B in Figure 14.

Requirement 15.10.1 – Remediation of Koppers Operational Area

This area is currently used as a Berth Facility by Koppers. Any change of land use or redevelopment that will involve human occupation will require appropriate remediation measures that meet the VRA, to the satisfaction of the Site Auditor. A Section B Site Audit Statement is to be obtained from the Site Auditor to confirm the site has been managed in accordance with the VRA.

15.11 Remediation of Existing OneSteel Rail Line

Background

A residual portion of Freight Rail Line shown on the Plan has not been remediated, due to operational constraints of the active rail and the relatively inconsequential impact of this shortfall, given the immediate proximity to the uncapped lands adjacent (i.e. OneSteel). Note that this anomaly is a result of NPC requesting a change of alignment to the freight rail remediation works, causing a small, unremediated residual as shown. The remaining rail line undertaken in the Freight Rail Contract includes a contiguous VENM Cap integral to the rail embankment, compliant with the VRA.

Application

This Requirement applies to the area identified as Freight Rail Line, as shown in Insert A in Figure 14.

Requirement 15.11.1 – Remediation of Existing Onesteel Rail Line

This area is currently used as an operational rail line by Onesteel. Any change of land use or redevelopment that will involve human occupation will require appropriate remediation measures that meet the VRA, to the satisfaction of the Site Auditor. A Section B Site Audit Statement is to be obtained from the Site Auditor to confirm the site has been managed in accordance with the VRA.

15.12 Retention of Access to Future Emplacement Area

Background

A key feature of the State's remediation work to date has been the consolidation of Level 3 materials into Area 1. This is undertaken on the basis that Area 1 is hydraulically contained.

This infrastructure is critical to the cost effective delivery of the remaining remediation works in Area 2B. Subject to agreement by the NSW Government it may also be beneficial for other Developers, in the event that L3 material is encountered outside of the Area 1. Continued access in favour of the State is required for remaining works.

The intent of this restriction will not prevent development in the vicinity of the nominated area, only create a framework that would lend to logical planning and open space allocations for the nominated site, such as car or truck parking, terminal storage, bulk material storage and handling, lay-down area, removable structures and the like, or staging of development that preferences development on other parts of the site first.

The significant Infrastructure Exclusion Area requirement is shown in the attached plan. It is an area of 0.8Ha, or less than 1% of the Port Lands.

Application

This Requirement applies to the area identified as Future Cell 6 and Future Cell 7 in Figure 10.

Requirement 15.12.1 – Right to Access Future Cell 6 and 7

Provide legal right of access for the State and their respective invitees, the land owner and their representatives to undertake Level 3 emplacement works as required, without recourse for any potential damages.

15.13 Controls on Use of Groundwater

Background

Groundwater behaviour has been significantly modified by the remediation, to manage environmental risk posed by groundwater at the Site. Nevertheless, groundwater remains unsuitable for abstraction for beneficial use.

Risk from any groundwater encountered or extracted for dewatering during remediation or development activities will need to be managed in accordance with a work management plan that considers its contamination status.

Application

This Requirement applies to the Site.

Requirement 15.13.1 – Restriction on Beneficial Use of Groundwater

Beneficial use of groundwater at the Site should not be contemplated and is prohibited.

Requirement 15.13.2 – Management of Risks During Dewatering

Necessity for engagement with groundwater during Project Works or Remediation Works is to be minimised in the design phase. If unavoidable, a work management plan is to incorporate consideration of the contamination status of groundwater and take appropriate measures to manage risks to human health and the environment.

15.14 Controls on Taking of Shellfish

Background

Groundwater behaviour has been significantly modified by the remediation, to manage environmental risk posed by groundwater at the Site. Nevertheless, taking of shellfish along the shoreline remains an unquantified risk and should therefore be avoided.

Application

This Requirement applies to the foreshore interface with the Hunter River, for the Site.

Requirement 15.14.1 – Restriction on Taking of Shellfish

Taking of shellfish at the Site should not be contemplated and is prohibited.

16. Reporting and Information Management

Background

The VRA requires certain records and information to be kept and provided to the EPA upon request. It also requires material changes in Site conditions and any failure to comply with the VRA requirements to be notified to the EPA.

Application

This Requirement applies to the whole of the Site.

Requirement 16.1.1 – Keep records and information

Until the EPA has given notification that it considers that the contamination no longer poses a significant risk of harm, records of all monitoring data and information regarding the investigation and remediation of the Site must be retained and provided to the EPA at any time upon the EPA's request.

Requirement 16.1.2 – Notify material changes

Written notification must be given to the EPA if information or data indicates a material change in conditions at the Site or its surrounding environment which could adversely affect the ability to investigate or remediate the Site or result in harm to the environment.

Requirement 16.1.3 – Notify failure to comply with VRA

Written notification is to be given to the EPA of any failure by any person to comply with any component or aspect of the VRA or any pollution incident at the Site within the meaning of the Protection of the Environment Operations Act 1997.

17. Modification and control of this Plan

This Plan is intended to be applied to the Site. It is not intended that this Plan itself will be modified once it is in final form. Rather the Plan will be finalised and then copies retained by Authorities such as the DoP, Newcastle City Council and the EPA. Copies will also be held by the Site Auditor. [In addition a copy may be available through the General Register of Deeds.

However the Plan will be referenced and applied by other instruments such as:

- Conditions of development consent;
- Licence conditions;
- Conditions of Site Audit Statements;
- Contracts; and
- Registered instruments and agreements.

Those instruments will give legal effect to this Plan in accordance with the nature and terms of the instrument. For example a contract may require compliance with this Plan or a condition of planning approval may require compliance with this Plan.

However, in particular circumstances a modified approach to the management of contamination issues on the Site may be appropriate. If that is so then the relevant approvals, licences and contracts may apply this Plan with changes or modifications. Those changes or modifications would then apply to the relevant land or development in accordance with the approval, licence or contract.

The Requirements of this Plan and of Key Documents as applicable to any particular part of the Site may, having regard to particular circumstances and knowledge of the contamination and risks found, need to be implemented in a modified manner. Such modification should only occur to the satisfaction of the Site Auditor and relevant Authorities and be fully justified by appropriate technical assessments.

Records of decisions to modify any requirement for any part of the Site should be kept. In particular, it is expected that such records will be kept by:

(a) the owner of the land who seeks the modification;

(b) the Authorities that authorise it; and

(c) the Site Auditor.

18. Information Disclosure

The Site has been subject to various environmental investigations, site assessments, risk assessment, audits and environmental monitoring regimes which may provide valuable context to inform a site owner, occupier, a proponent or works contractor of the risk of encountering contamination during ground engagement. This information may be relevant disclosure for (but not limited to) leases, licences, land disposals, Project Works, Remediation Works, concept and detailed design processes and construction activities.

The information compiled in this Plan is not intended to provide full disclosure of all site conditions that may be encountered during Project or Remediation Works and some information may be missing, or incomplete. Descriptions of the site and previous works are provided for contextual purposes only and are not intended to be an exhaustive description or compilation of the risks. All parties with due diligence responsibilities or interests in the land are required to undertake their own research and investigations as necessary to inform themselves of the risks.

The environmental characterisation of the Site is limited in the context of the size of the Site, the depth and complexity of impacted aquifers, the scale and heterogeneous distribution of impacted soil and the long history of industrial activities having some bearing on risk. The Site is recognised as one of Australia's first and most significant heavy industrial facilities, commencing in the 1860's as the Hunter Valley Copper Smelter Company and ultimately forming the site of the Newcastle BHP Steelworks. It is noted that there are limitations in the body of information available and that there is unavoidable inherent risks to be considered when undertaking ground engaging activities at the Site.

Relevant baseline information available is provided for information, as follows:

Figure 2 – Location of Hazardous Material In-Situ and Emplacement Areas

Appendix H – VOC Management Documents

Appendix Q – Validation Reports

Appendix R – Site Auditing

Appendix T – Environmental Technical Reports

19. Recommendations for Developers

The Site contains contaminated soil and groundwater which when exposed, may represent a significant risk to humans or the environment. Remediation works conducted by the State and compliance with this plan help manage the risks but are not necessarily a complete response. However, as the remediation is based on the system of containment it follows that steelwork era contamination remains at all times on the Site.

Therefore, removal of the installed human health and low permeability barriers and or subsequent excavations into contaminated fill will re-expose steelwork era contamination and potentially reactivate risk.

Future excavations into contaminated sub-grade or interface with contaminated groundwater at the Site should be avoided. This approach is to be applied to Project or Remediation

Works across the Site, to the extent practical. Where ground engagement is unavoidable, it should be undertaken in a manner that minimises risk.

Requirement 19.1 – Obligation to Manage Risk

All reasonable alternatives to excavations in steelworks era fill are to be explored prior to undertaking ground engaging activities that may expose contaminated soil or groundwater or affect the operation of the Cap.

Risk management strategies that should be considered by Developers of Project and Remediation Works include (but not limited to):

a. Importation of environmentally and geotechnically appropriate fill (subject to appropriate approvals under the EP&A Act and meeting all legal obligations under the PEO Act) to build lands up to achieve desired landform or surface grades as an alternative to cut to fill strategies that expose contaminated soils

b. In consideration of the above, exploring significant fill sources such as other major projects with surplus fill and or dredging of the Hunter River (Berth 2,3 and 7 will be undertaken in the near-term)

c. Provision, where possible, of above ground services and utilities as a preference to trenching services into contaminated lands

d. Development of above ground surface stormwater systems utilising open drains, swales and the like to minimise trenching and below ground infrastructure

e. Deployment of vacuum sewer systems, shallow rising mains, concrete encased systems as necessary, to reduce minimum cover requirements of services and facilitate deployment of utilities in the clean fill zone above the under side of Cap

f. Minimisation of trenching into BHP era fill generally by installation of IT or communication infrastructure into shallow encased service conduits and or deployment of above ground facilities

g. Provision of above ground electrical reticulation service infrastructure

Service infrastructure discussed above may otherwise be installed below ground in areas of clean imported fill but this will require importation of significant quantities of fill. On the balance, this option may be strategically advantageous in area 2B as it removes constraints and mitigates risks while also improving hydraulic gradients at the rear of the site. This has the additional benefit of reducing potential planning and approval constraints arising from Climate Change and sea level rise (refer also to Section 5.3.3 Major Drains).

In the event that excavations into the steelworks era sub-grade are unavoidable, it is the proponent's responsibility to undertake investigations to route excavations to avoid high risk areas, with reference to information provided in the Plan in Section 19, supplemented with any other environmental investigations or expert advice deemed necessary to minimise risk of encountering significant contamination. In this case, a Work Management Plan is also to be provided in accordance with Section 8.2 of this Plan.

Appendix A

Planning Approval - Consent Conditions
(Consolidated Instrument)

Appendix B

SPEMP

Appendix C

State Works Contract Specifications

Appendix D

Work-As-Executed Drawings

Appendix E

Not Used

Appendix F

Groundwater Monitoring Well Locations

Appendix G

VRA

Appendix H

VOC Management Documents

Appendix I

Materials Management Plan

Appendix J

Preliminary Design

Appendix K

Not Used

Appendix L

Drainage

Appendix M

Remediation Strategy

Appendix N

Utilities

Appendix O

Not Used

Appendix P

Heritage

Appendix Q

Remediation and Validation Reports

Appendix R

Site Auditing

Appendix S

GIS Mapping Digital Data
(Electronic Only)

Appendix T

Environmental Technical Reports

Appendix B: Concept Plan Approval (09_0096)

Concept Approval

Section 75O of the *Environmental Planning and Assessment Act 1979*

I, the Minister for Planning and Infrastructure, under the *Environmental Planning and Assessment Act 1979* (the Act), determine:

a) to approve the Concept Plan referred to in Schedule 1, subject to the terms of approval in Schedule 2 and the modifications in Schedule 3;
b) under section 75P(1)(b) of the Act that approval to carry out the development the subject of the Concept Plan is to be subject to:
   i. Part 4 of the Act, where that part of the development is of a type that is identified as permissible with consent by an applicable environmental planning instrument (EPI); or
   ii. Part 5 of the Act, where that part of the development is a type of activity within the meaning of Part 5 and identified as permissible without consent by an applicable EPI; or
   iii. section 76 of the Act, where that part of the development is of a type identified as exempt development by an applicable EPI;
c) under section 75P(2)(c) of the Act:
   i. where development is subject to Part 4 of the Act (other than complying development), that development is subject to the further environmental assessment requirements specified in Schedule 3 of this approval, and
   ii. where development is subject to Part 5 of the Act, that development is subject to the further environmental assessment requirements specified in Schedule 3 of this approval.

Brad Hazzard MP
Minister for Planning and Infrastructure

Sydney 2012

SCHEDULE 1

Application No:	09_0096
Proponent:	Newcastle Port Corporation
Approval Authority:	Minister for Planning and Infrastructure
Land:	Lot 33 in DP 1116571 - land within the former BHP Steelworks site, off Selwyn Street, Mayfield, within the Newcastle local government area

Proposal:	The concept plan involves the redevelopment of 90 hectares of port-side land in Mayfield, for land based port facilities serving a mix of cargo types. The Concept Plan also includes supporting road and rail infrastructure to service the port facilities.

DEFINITIONS

Act, the	*Environmental Planning and Assessment Act, 1979*
ARTC	Australian Rail Track Corporation
Concept Plan	The concept plan the subject of this approval
Concept Plan Site	Land on which all components of the Port Terminal Facilities will be located.
Council	Newcastle City Council
Department, the (DP&I)	Department of Planning and Infrastructure
Director-General, the	Director-General of the Department of Planning and Infrastructure (or delegate)
Director-General's Approval	A written approval from the Director-General (or delegate). Where the Director-General's Approval is required, the Director-General will endeavour to provide a response within one month of receiving an approval request. The Director-General may ask for additional information if the approval request is considered incomplete. When further information is requested, the time taken for the Proponent to respond in writing will be added to the one month period.
EA	Environmental Assessment
EPA	Environment Protection Authority of the Office of Environment and Heritage
HDC	Hunter Development Corporation
Intertrade Industrial Park	The site adjoining the Concept Plan, being part of the former BHP steel works site.
Minister, the	Minister for Planning and Infrastructure
Mtpa	Million tonnes per annum
OEH	Office of Environment and Heritage (formerly the Department of Environment, Conservation, Climate Change and Water)
Project	Development as described in the Concept Plan (including development to be assessed under Part 4 and Part 5 of the Act)
Project Approval	Approval granted for development in accordance with the *Environmental Planning and Assessment Act, 1979*
Proposal	Port Terminal Facilities - Concept Plan
Proponent	Newcastle Port Corporation
Publicly Available	Available for inspection by a member of the general public (for example available on an internet site or at a display centre)
Remediation Works	Works required to remediate and manage contamination and the risks from it.
RLMC	Regional Land Management Corporation
RMS	Roads and Maritime Services
Utilities Infrastructure	Infrastructure to support the future development of the Concept Plan site, including but not limited to water, sewerage, electricity and telecommunications infrastructure, but not including transport infrastructure

TEU	Twenty foot equivalent units
VOC	Volatile Organic Compound

SCHEDULE 2

1. TERMS OF CONCEPT PLAN APPROVAL

1.1 The Proponent shall carry out the project generally in accordance with:

a) Major Project Application 09_0096;

b) the *Mayfield Site Port-Related Activities Concept Plan Environmental Assessment*, Volumes 1 to 6, prepared by AECOM Australia Pty Ltd and dated July 2010;

c) the *Mayfield Site Port-Related Activities Concept Plan Submissions Report*, prepared by AECOM Australia Pty Ltd and dated December 2010;

d) the Addendum to the Submissions Report, prepared by AECOM Australia Pty Ltd and dated 4 March 2011;

e) the Newcastle Port Corporation – Modification of Concept Plan, prepared by Newcastle Port Corporation and dated 6 December 2013; and

f) the terms of this approval.

1.2 In the event of an inconsistency between:

a) the terms of this approval and any document listed from term 1.1a) and 1.1d) inclusive, the terms of this approval shall prevail to the extent of the inconsistency; and

b) any document listed from terms 1.1a) and 1.1e) inclusive, and any other document listed from terms 1.1a) and 1.1e) inclusive, the most recent document shall prevail to the extent of the inconsistency.

1.3 If there is any inconsistency between this concept plan approval and any related approvals (being those approvals subject to the requirements of this Concept Plan), this Concept Plan approval shall prevail to the extent of the inconsistency.

1.4 The Proponent shall comply with any reasonable requirement(s) of the Director-General arising from the Department's assessment of:

a) any reports, plans or correspondence that are submitted in accordance with this Concept Plan approval or any related approvals; and

b) the implementation of any actions or measures contained in these reports, plans or correspondence.

1.5 With the approval of the Director-General, the Proponent may prepare and submit any management plan, strategy or monitoring program required by this approval on a progressive basis. Where a management plan, strategy and monitoring program is required before carrying out any development or stage of development, the document may be prepared and submitted in relation to either discrete components of the project or for a specified time period.

Limits of Approval

1.6 This Concept Plan approval does not apply to berths, berthing or harbour operations. It also does not apply to activities approved or legally operating at the site in accordance with other project approvals at the date of this Concept Plan approval.

1.7 To avoid any doubt, this Concept Plan approval does not permit the construction or operation of any project, which will be subject to separate approval(s) under the Act.

1.8 The provisions of requirements 2.5, 2.6, 2.7, 2.8, 2.10, 2.11, 2.12, 2.13, 2.14, 2.15, 2.19, 2.20, 2.20 and 2.29 do not apply to utilities infrastructure if developed independently from other port uses.

Contamination

1.9 This Concept Plan approval does not limit or affect the requirements the Voluntary Remediation Agreement issued to the RLMC pursuant to section 26 of the *Contaminated Land Management Act, 1997*, dated 14 September 2005.

1.10 The requirements of development consent DA 293-08-00 approved by the Minister for Planning on 6 April 2001 (and as subsequently modified), as they relate to remediation works, including the maintenance and monitoring of remediation works and the Concept Plan site in general (including groundwater and surface water monitoring), and as they relate to development constructed and operated under the development consent, remain in force, until they are superseded by future project approvals or as otherwise agreed by the Director-General, in consultation with the EPA.

Heritage

1.11 This Concept Plan approval does not limit or affect the requirements the Excavation Permit requirements issued to the RLMC (and transferred to HDC) pursuant to section 140 of the *Heritage Act, 1977*, dated 21 September 2005.

1.12 The requirements of development consent DA 293-08-00 approved by the Minister for Planning on 6 April 2001 (and as subsequently modified), as they relate to cultural heritage, remain in force, until they are superseded by future project approvals or as otherwise agreed by the Director-General, in consultation with the OEH.

Statutory Requirements

1.13 This Concept Plan approval does not remove any obligation to obtain, renew, or comply with licences, permits or approvals as required by law associated with any project subject to this Concept Plan approval.

Existing and Approved Development

1.14 Construction and operational environmental impacts associated with existing and approved development not subject to this shall be considered in the assessment of projects associated with this Concept Plan and shall be incorporated into any management plan, strategy, monitoring program and review (and the like) required under this Concept Plan approval.

SCHEDULE 3

2. MODIFICATIONS TO THE CONCEPT PLAN – ENVIRONMENTAL ASSESSMENT REQUIREMENTS

Project Stages Subject to Other Provisions of the Act

2.1 Under section 75P(2)(c) of the Act, the following environmental assessment requirements apply with respect to future development that is subject to Part 4 (other than complying development) or Part 5 of the Act:

General Requirements

a) demonstration that the project is generally consistent with the requirements of this approval and with the scope and intent of the Concept Plan outlined in the documents under requirement 1.1 of this approval;

b) detailed project description, including construction, operation, maintenance, and staging; and the design and location of ancillary infrastructure (including consideration of the *Utilities Infrastructure Plan* prepared as a requirement of this approval);

c) details of the consultation process and outcomes with relevant stakeholders, including with (but not limited to):
   i. Government authorities, such as DP&I, OEH, EPA, DPI, Transport for NSW, HDC and Council;
   ii. Service and infrastructure providers, such as ARTC, RMS, Railcorp, AusGrid, Hunter Water Corporation and Jemena;
   iii. Special interest groups and the public, including adjoining and affected landowners; and

d) an updated environmental assessment of relevant statutory matters and *Issue-Specific Requirements* for construction and operation (including cumulative impacts of existing and approved development on the site and on adjoining sites) and the identification of relevant avoidance, mitigation and management measures to address associated impacts.

Issue-Specific Requirements

e) a **Transport Assessment** that assesses the transport, access and traffic impacts from projects associated with this Concept Plan. The assessment shall:
   i. consider the transport limits and objectives of the Concept Plan, including the objective of not exceeding the total truck movement limits identified in requirement 2.3 (Table 3);
   ii. consider freight volume forecasts and transport demand;
   iii. consider the *Transport Infrastructure Strategy* (if required) and identified infrastructure, service improvements or management measures (if identified);
   iv. consider the traffic performance and functionality of the local, regional and State road network and site access, including the consideration of development within the vicinity of the Concept Plan site (including connecting road networks) and the cumulative impacts from adjoining development;
   v. consider rail impacts associated with the project, including: network capacity and the availability of rail access and paths, rail operations on the Port Waratah and Bullock Island loops, and rail access and interface agreements;
   vi. consider the *Transport Monitoring and Review* results undertaken as a requirement of this approval;
   vii. identify rail and road infrastructure requirements, including those specified in this approval and the corresponding exceptions;

viii. identify traffic management measures consistent with the requirements of the *Traffic Management Plan* required under this approval;
ix. identify rail service and infrastructure changes and upgrades, and initiatives to facilitate an increased rail share of freight movements;
x. consider construction traffic routes and associated traffic impacts, including capacity constraints, changes to access and safety impacts; and
xi. include consideration of relevant road and rail design standards including but not limited to *Austroads Guide to Road Design 2009 (with RTA supplements) , Australian Standards,* and *Newcastle Development Control Plan 2005 – Element 4.11 (Subdivision).*

f) An **Air Quality and Greenhouse Gas Assessment** that assesses emissions and air quality impacts on local and regional receivers and at a broader level. The assessment shall:
i. identify emissions and pollutants of concern (including from associated shipping and transport activities) and identify surrounding sensitive receptors that may be impacted by potential pollutants;
ii. consider the site pollutant performance criteria identified in this approval;
iii. include a refined assessment of pollutants on receptors, including PM_{10} concentrations, taking into account the *Site Air Quality Model, Meteorological Monitoring and Air Quality Monitoring Program* required under this approval, and cumulative air quality impacts, as relevant;
iv. identify mitigation and management measures that would be implemented to prevent adverse impact to local and regional air quality and sensitive receptors, including designs that allow provision of 'cold ironing' and the demonstration of best practice air quality management, with the objective of not increasing emission concentrations beyond the boundary of the site above existing background levels;
v. a scope 1 Greenhouse Gas Assessment and the identification of management measures and sustainability initiatives to reduce greenhouse gas emissions; and
vi. include consideration of the *Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in NSW* (EPA, 2001).

g) A **Noise and Vibration Assessment** that assesses noise and vibration impacts. The assessment shall:
i. consider noise goals defined in this approval;
ii. consider the *Concept Plan Noise Model* and *Noise Verification Monitoring Program*, required under this Concept Plan approval and identify project specific noise and vibration criteria;
iii. identify baseline and future conditions and the levels and character of noise and vibration sources;
iv. identify sensitive receivers, modelling assumptions and noise and vibration impacts, including on and off-site road and rail noise impacts on receivers within the vicinity of the site, such as road traffic noise impacts on residential areas adjacent to Industrial Drive;
v. include details of noise and vibration attenuation measures and how these would be implemented and managed (including costs to property owners, where relevant), should the predicted levels exceed the Concept Plan and project specific criteria, along with a schedule for implementing such works; and
vi. include consideration of the following guidelines or any documents that supersede them: *NSW Industrial Noise Policy* (EPA, 2000) for operational noise; *Interim Construction Noise Guideline* (DECC, 2009) for site

establishment and construction; *Environmental Noise Management – Assessing Vibration: A Technical Guideline* (DECC, 2006) for vibration; the *NSW Roads Noise Policy* (DECCW, 2011) for off-site traffic noise and the *Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects* (DECC and DoP, 2007) for off-site rail noise.

h) A **Hydrological Assessment** that assesses the potential on and off site hydrological impacts of the project and the projects interaction with the sites hydrological objectives. The assessment shall:
   i. consider flooding coastal risk impacts on the project and adjoining land uses within, adjoining and within the locality of the site, including the consideration of climate change risks, and the NSW sea level rise planning benchmarks;
   ii. consider surface and storm water impacts, including interactions with remediation works and the sites drainage regime, spills and leaks and impacts to coastal processes;
   iii. consider impacts to groundwater, including the need to isolate stormwater from land contamination and the local groundwater table;
   iv. detail flooding, surface and storm water, groundwater, and water quality management and monitoring measures, including the maintenance of measures, the application of first flush collection systems and Water Sensitive Urban Design measures; and
   v. consideration of the *Stormwater Management Strategy* required under this approval; and
   vi. relevant documents including the *Floodplain Development Manual* (DIPNR, 2005)*, Flood Risk Management Guide* (DECCW, 2010), and *Newcastle Development Control Plan 2005.*

i) A **Hazards and Risks Assessment** for potentially hazardous projects (including projects that are associated with the transport, handling or storage of hazardous or dangerous materials) that details a hazards assessment and the identification of risk reduction measures to ensure that risk levels for the projects are maintained within acceptable levels at a project, precinct and site level. The assessment shall:
   i. consider appropriate separation distances, hazard safeguards, *Port Emergency Response Plan*, *Safety Management System*, and *Hazard Audits* as required by this approval;
   ii. consider climate change and associated coastal risks and hazards,
   iii. consider *State Environmental Planning Policy No.33 – Hazardous and Offensive Development* and associated guidelines and include (as relevant):
      a) a hazard analysis taking into account *Hazardous Industry Planning Advisory Paper No 6 – Hazard Analysis*, Department of Planning, January 2011, and the identification of impact distances and buffer zones for fire, explosion and gas release (as relevant) to prevent impacts on adjoining land uses both within and external to the site;
      b) a hazardous materials transport study detailing routes to be used for the movement of vehicles (road and rail) carrying hazardous or dangerous materials to or from the site, and shall take into account *Hazardous Industry Planning Advisory Paper No 11 – Route Selection*, Department of Planning, January 2011; and
      c) a fire safety study taking into account relevant aspects of *Hazardous Industry Planning Advisory Paper No 2 – Fire Safety Study Guidelines*, Department of Planning, January 2011, and *Best Practice Guidelines for Contaminated Water Retention and Treatment Systems*, Department of Planning, 1994.

j) A **Contamination Assessment** that assesses the potential environmental and human health risks of site contaminants on the project and impacts on site remediation outcomes, including remediation works and the maintenance and monitoring of those works. The assessment shall:

i. consider contamination risks, potential acid sulfate soils, site suitability and that the project will not increase risks on adjoining sites, waterways and/or projects;

ii. demonstrate compatibility with and will not have a detrimental impact on site remediation works (completed, current and future, as applicable) and the maintenance and monitoring of remediation works, including consideration of:

a) soil, ground water, surface water, VOC and odour works, including contaminants left in-situ or encapsulated,

b) the maintenance of remediation works, including cap integrity and permeability, site grading, levels and storm and waste water drainage systems, and VOC management measures,

c) the structural integrity of drainage works and the barrier wall, including the risk of surface and subsurface displacement resulting from future vertical and lateral loadings, easements, differential settlement, capping beam intrusions and foundation restrictions, and

d) access to and protection of existing and future groundwater monitoring wells;

iii. demonstrate that the design has assessed VOC risks and that it incorporates controls and protections to protect human health; and

iv. include consideration of the following documents:

a) *Contaminated Land Management Act, 1997, State Environmental Planning Policy No.55 – Remediation of Land* and related guidelines,

b) DA 293-08-00 approved by the Minister for Planning on 6 April 2001, as subsequently modified and related management plans, including the *Contaminated Site Management Plan*, dated 2009 prepared by Hunter Development Corporation, and

c) Voluntary Remediation Agreement pursuant to section 26 of the *Contaminated Land Management Act, 1997*, dated 14 September 2005 and related documents including the *Voluntary Remediation Proposal* prepared by the RLMC, dated 30 August 2005 and the *Remediation Action Plan* dated September 2004 and prepared by Sinclair Knight Mertz for the RLMC.

k) an **Archaeological Assessment** that assesses the potential archaeological resources of the site (historical archaeological relics) and the project impacts on the heritage significance of these resources. The assessment shall:

i. consider Excavation Permit (2005/S140/041) and the associated Research Design and Methodology;

ii. consider previous archaeological studies completed for the site, including the *Assessment of the Historical Archaeology and Research Design: Newcastle Steelworks Closure Area* (Umwelt, May 2005); and

iii. consider relevant documents including the NSW Heritage Manual (NSW Heritage Council) and associated guidelines.

l) an assessment at an appropriate level of detail, of other environmental issues but not limited to: social and economic, waste management, visual, landscaping and lighting

impacts. The assessment shall identify the measures for managing and mitigating any impacts, consistent with industry accepted environmental practice.

Berths

m) an assessment of the cumulative impacts of any berthing, water front structure or the like associated with any future project, including consideration of the *Issue-Specific Requirements* noted above, as relevant.

Transport

2.2 Projects associated with this Concept Plan shall be operated with the objective of not exceeding the capacity of the transport network, including the local, regional and State road network, and the total truck movement limits identified in Table 1, subject to the identified exceptions, which will be considered in future project assessments.

Note: Table 1 should be interpreted with reasonable flexibility to recognise the long term variance in assumed background traffic conditions, which can be influenced by broader transport enhancements and development not related to this concept plan approval.

2.3 Projects associated with this Concept Plan shall not exceed the total truck movement limits presented in Table 1, except as identified.

Table 1 – Initial Staging and Total Truck Movement Limits

Total Truck Movements per annum	**Total Truck Movements per day**	**Total Hourly Truck Movements in peak periods**
462,104	1,268	95

a) Truck movements by road may exceed the identified limits in Table 1 up to the limits identified in Table 2, subject to:

i. traffic monitoring identifying that Concept Plan related traffic movements are not having a detrimental impact on the local, regional and State road network and/or predicted background traffic growth is lower than the long term per annum growth rate of 1.0%; or
ii. Deleted
iii. the consideration of land use planning and development changes within the locality of the Concept Plan site, including approved uses on the adjoining Intertrade Industrial Park site, which may result in less traffic generation than considered under this Concept Plan.

Table 2: Intermediate Staging and Total Truck Movement Limits

Total Truck Movements per annum	**Total Truck Movements per day**	**Total Hourly Truck Movements in peak periods**
773,438	**2,120**	**159**

b) Truck movements by road may exceed the identified limits in Table 2 up to the limits identified in Table 3, subject to:

i. the consideration of the matters listed in requirement 2.3a), as relevant; and
ii. the implementation of a *Transport Infrastructure Strategy* as per requirement 2.4, which has been endorsed by Transport for NSW and RMS.

Table 3: Ultimate Staging and Total Truck Movement Limits

Total Truck Movements per annum	Total Truck Movements per day	Total Hourly Truck Movements in peak periods
1,017,882	**2,790**	**209**

Notwithstanding, projects associated with this Concept Plan shall be operated with the objective of not exceeding the total truck movement limits identified in Table 3.

Note: The above requirements do not permit an immediate increase to the identified limits in Table 1. Any exceedances of the limits identified in Table 1, consistent with the above requirements, shall only be permitted, following consideration of the exceedances in future project assessments.

Transport Infrastructure Strategy

2.4 Truck movements by road, which exceed the limits specified in requirement 2.3b) and Table 2, may be undertaken following the preparation, endorsement and implementation of a *Transport Infrastructure Strategy*.

The Strategy shall provide a framework for the development and implementation of local, regional and State road and rail infrastructure improvements or traffic management measures necessary for an increase in truck movements beyond the limits identified in requirement 2.3b) and Table 2. The Strategy shall be developed in consultation with the Department, Transport for NSW, RMS, HDC, Council, adjoining land owners and the local community. The Strategy shall include, but not necessarily be limited to:

a) the objectives and scope of the Strategy;
b) identification of stakeholders associated with the development of the Strategy, consultation undertaken with Stakeholders and how matters raised were considered;
c) freight volume demand forecasts for road and rail freight movement, including a demand and supply analysis and description of the supply chain for the Concept Plan (for all freight movement);
d) identification and alignment of road and rail movements with required road and rail infrastructure and service improvements or management measures required to meet forecast road and rail freight demand;
e) the feasibility of port freight movements utilising existing and identified infrastructure and service provisions measures for the proposal; and
f) identification of how and when the required infrastructure and service improvements or management measures will be delivered, including parties responsible for the funding and implementation of the works.

The Strategy shall be made available to the Director-General and Council following its endorsement by Transport for NSW and the RMS.

Traffic Management Plan

2.5 The Proponent shall prepare and implement a *Traffic Management Plan* for the Concept Plan site in consultation with RMS, HDC, Council, adjoining land owners and the local community to provide a framework for the coordinated management of traffic to, from, and within the Concept Plan site.

The Plan shall include traffic management devices and measures to facilitate the orderly movement of port related traffic movement to/from the road network, and shall include but not necessarily be limited to:

a) measures to ensure heavy vehicle access to and from the site will be primarily along the routes shown in Attachment A to this approval;
b) measures to minimise port freight movements inside am and pm peak traffic periods;
c) measures to encourage the equal distribution of truck movements between the Industrial Drive/George Street and Industrial Drive/Ingall Street intersections;
d) measures to prevent heavy vehicles accessing residential streets and areas within the vicinity of the site and to maintain the residential amenity of the local community; and
e) measures to encourage staff access to the site by means other than private vehicles.

The Plan shall be prepared and implemented prior to the operation of any projects associated with this Concept Plan approval and shall be updated prior to the commencement of any subsequent project approvals associated with this Concept Plan approval.

Transport Infrastructure Upgrades

Link Road

2.6 A link road between Ingall Street and Selwyn Street of suitable standard shall be provided prior to the operation of projects associated with this Concept Plan to minimise traffic impacts on Industrial Drive intersections and to maintain access for emergency vehicles to and between the different precincts of the site.

The timing of provision of the link road may be varied, subject to consideration of the matters outlined in requirement 2.9.

Road Intersections

2.7 The following road intersections shall be upgraded prior to the operation of any projects associated with this Concept Plan with the objective of improving or maintaining the performance of the intersections:

a) Industrial Drive/Ingall Street;
b) Industrial Drive/George Street; and
c) George Street/Selwyn Street.

The upgrades shall be generally consistent with those outlined in Attachment B and shall be designed in accordance with the *Guide to Road Design 2009* (Austroads) (with RTA supplements), and *Traffic Signal Design 2008* (RTA) (or as subsequently updated), and shall be informed by appropriate intersection analysis.

The timing, staging, scope and design of the upgrades may be varied, subject to consideration of the matters outlined in requirement 2.9.

Rail Access

2.8 Rail access to and within the Concept Plan site shall be configured and operated to facilitate increased rail mode share to and from the site, to accommodate train operations to minimise physical and operational impacts on other rail operations within the vicinity of the site, and shall be generally consistent with the following listed infrastructure and operational scenarios:

a) a new rail line extended between the One Steel line and the Bullock Island loop to provide direct access to the site for Port trains and the provision of at least two x 650m length rail sidings to service 1,300m length trains; and
b) the use of an extended shunt neck on the Bullock Island loop approximately 700m beyond the new rail entry to the Port to provide for trains to entering and exiting the site; and
c) provision for the reconfiguration of the Morandoo Yard (road numbers 1 to 5) to provide a total of four x 650m length rail sidings to hold two Port trains while a third train is within the rail sidings within the Concept Plan site.

Rail access consistent with this configuration shall be operational prior to total annual truck movements exceeding the limits identified in requirement 2.3 (Table 1) and total rail freight movements exceeding an average of 3 trains per day (i.e. 3 trains in and 3 trains out) in any given 12 month period.

The timing, staging, scope and design of this rail infrastructure may be varied, subject to consideration of the matters outlined in requirement 2.9.

2.9 The final timing, staging, scope and design of the *Transport Infrastructure Upgrades* identified in requirements 2.6, 2.7 and 2.8 may be revised by subsequent project approvals, where the following matters, where relevant, have been considered:

a) In relation to road infrastructure:

i. the level of traffic generated by the operation of the project and the consideration of existing and approved development both on and adjoining the site (including the timing of approved development and access to these sites, where relevant);
ii. satisfactory performance of the intersections, including Level of Service, Degree of Saturation, and queue lengths;
iii. traffic management measures designed to reduce vehicle movements or distribute movements between the intersections;
iv. safe access between and to precincts both from within and outside the site, including the consideration of the *Port Emergency Response Plan*; and
v. consultation with Transport for NSW, the RMS, HDC, Council and adjoining land owners.

b) In relation to rail infrastructure:

i. the objective of increasing freight movement by rail to and from the Concept Plan site and the optimisation of rail operations;
ii. minimising the physical and operational impacts on other rail operations within the vicinity of the site;
iii. availability of additional freight train paths and capacity; and
iv. consultation with Transport for NSW, ARTC, rail operators within the vicinity of the site and adjoining land owners.

Transport Monitoring and Review

2.10 The Proponent shall undertake transport monitoring and review to assess compliance with this Concept Plan approval, subsequent project approvals and to inform transport planning, and the timing of transport infrastructure delivery, service provision and management measures associated with this Concept Plan.

The monitoring and review shall:

a) report on freight volumes, types and movements (road and rail) resulting from projects associated with this Concept Plan, including origin and destination surveys;
b) assess the performance of the road network, including the performance of the Industrial Drive/Ingall Street and Industrial Drive/George Street intersections and the mid block capacity of nominated heavy vehicle routes at a local and regional level;
c) assess the effectiveness of distributing heavy vehicle movements outside of peak traffic periods and the effectiveness of management measures to minimise heavy vehicles accessing residential areas;
d) assess the effectiveness of measures to improve non-vehicular employee access to the site and links to external networks;
e) assess the performance of utilised rail networks, and the use of available train paths; and
f) inform the timing of necessary road and rail infrastructure upgrades, service provision and management measures.

Should the monitoring and review identify a substantial non-compliance with this Concept Plan Approval, and/or subsequent project approvals, the Proponent shall identify measures to be implemented to address the non-compliance.

The monitoring shall be prepared in consultation with Transport for NSW, the RMS and Council and shall be undertaken prior to and one and five years following the commencement of any project (or the commencement of a modification to a project that results in increased transport movements) associated with this Concept Plan, or as otherwise directed or agreed by the Director-General.

The results of this monitoring and review shall be submitted to Transport for NSW, the RMS, Council and the Director-General within six months of the monitoring period. The monitoring and reporting program shall be integrated with the Compliance Tracking Program.

Air Quality

2.11 Projects associated with this Concept Plan approval shall be designed, constructed and operated with the objective of meeting the overall site pollutant performance criteria described in Table 11-6 (or as may be updated in the source documents), of the document referred to in requirement 1.1b), including the utilisation of industry accepted air quality management measures for the transport, handling and storage of pollutant sources.

Site Air Quality Model

2.12 The Proponent shall, prior to the lodgement or consideration of any project associated with this Concept Plan approval, unless otherwise agreed by the Director-General, develop and maintain a *Site Air Quality Model* to facilitate the assessment of air quality impacts of

projects and to report on compliance with the site pollutant performance criteria outlined in requirement 2.11.

The Model shall take into consideration pre-project background air quality and pollutant levels at receptors and shall be maintained until such time as the site is fully developed. Air quality monitoring data collected as part of the *Air Quality Monitoring Program* shall be incorporated into the Model to allow air quality emissions to be managed for the site as a whole and on a cumulative and progressive basis.

The Model shall be updated with details from subsequent project approvals and used to assess performance against the air quality performance criteria during the Concept Plan sites development.

Air Quality Monitoring Program

2.13 The Proponent shall develop and implement an *Air Quality Monitoring Program*, to outline how the air quality impacts, and in particular particulate matter impacts, of the projects associated with this Concept Plan approval will be monitored and proactively managed.

The Program shall be prepared by an appropriately qualified person(s) and shall include, but not necessarily be limited to:

a) identification of an air quality monitoring network and meteorological monitoring that can facilitate the monitoring of air pollutants at a project, precinct and Concept Plan site level,
b) locations, frequencies and methods for monitoring air pollutants, including total suspended particles, PM_{10} and deposited particulate matter;
c) the use of appropriate sampling or monitoring methods to measure air quality and pollutant parameters and a meteorological station consistent with requirement 2.14;
d) the utilisation of real-time monitoring data to inform environmental management decisions associated with the project;
e) a framework for identifying actual and potential air quality impacts, and for applying pro-active and reactive mitigation and management measures to address those impacts;
f) active engagement with the local community to address air quality issues;
g) provisions for reporting monitoring results to the Department and EPA (if requested) and for independent review and auditing of the Program (to be incorporated into the Compliance Tracking Program); and
h) mechanisms for updating the Program as may be required from time to time.

The Program shall be prepared in consultation with the EPA and submitted to the Director-General prior to the commencement of operations of any project associated with this Concept Plan approval, unless otherwise agreed by the Director-General.

Meteorological Monitoring

2.14 The Proponent shall install, operate and maintain a meteorological monitoring station to monitor weather conditions representative of those on the site, in accordance with:
a) AM-1 Guide to Siting of Sampling Units (AS 2922-1987);

b) AM-2 Guide for Horizontal Measurement of Wind for Air Quality Applications (AS 2923-1987); and
c) AM-4 On-Site Meteorological Monitoring Program Guidance for Regulatory Modelling Applications.

The meteorological monitoring station shall be installed within or near the site and the Proponent shall use the meteorological monitoring station to facilitate the air quality monitoring required under this approval. This requirement does not preclude the Proponent from reaching agreement with any other relevant party for the installation, operation and maintenance of a shared monitoring station, or shared use of an existing monitoring station representative of the site, provided the outcomes of this requirement are achieved.

2.15 From the commencement of construction of any project associated with this Concept Plan approval, the Proponent shall continuously monitor, utilising the meteorological monitoring station required under this approval, for each of the parameters listed in Table ~~3~~ 4.

Table 4 – Meteorological Monitoring

Parameter	Units of Measure	Frequency	Averaging Period	Sampling Method
Rainfall	Mm	Continuous	1 hour	AM-4
Temperature at two metres	^{o}C	Continuous	15 minute	AM-4
Temperature at ten metres	^{o}C	Continuous	15 minute	AM-4
Wind speed at ten metres	m/s	Continuous	15 minute	AM-2 and AM-4
Wind direction at ten metres		Continuous	15 minute	AM-2 and AM-4
Sigma theta at ten metres		Continuous	15 minute	AM-2 and AM-4
Solar radiation	W/m^2	Continuous	15 minute	AM-4

Operational Noise

2.16 The proponent shall, within six months of the date of this approval, but prior to the lodgement or consideration of any project associated with this Concept Plan approval, unless otherwise agreed by the Director General, develop a Site Noise Model for the Concept Plan as described in requirement 2.19. The Site Noise Model shall be developed for the day, evening and night time periods to ensure that the amenity noise goals identified in Table 5 below are met. The Site Noise Model shall be developed having regard to the noise assessment undertaken for the Concept Plan Environmental Assessment.

2.17 Projects associated with the Concept Plan must comply with the amenity noise goals at sensitive residential receivers as detailed in Table 5 below.

Table 5 – Noise Goals at Nearby Residences

Location	Project Specific Noise Goals (dBA) $L_{Aeq\ period}$ (dBA)		
	Day (7.00 am to 6.00 pm)	Evening (6.00 pm to 10.00 pm)	Night (10.00 pm to 7.00 am)
A – 1 Arthur Street, Mayfield (Urban)	60	49	43
B – 2 Crebert Street, Mayfield (Urban)	60	50	43
C – 32 Elizabeth Street, Carrington (Urban)	57	44	45
D – Stockton (Suburban)	55	37	37

The above noise goals apply under winds of up to three metres per second (measured at 10 metres above ground level) and Pasquill stability class from A to F.

Note: To allow for cumulative noise generated by multiple projects under the Concept Plan, individual projects under the Concept Plan should not utilise all of the noise envelope specified by the criteria outlined in Table ~~4~~ 5.

2.18 The Proponent shall, in relation to any project associated with the Concept Plan, assess and implement feasible and reasonable noise mitigation measures to reduce traffic noise impacts associated with the total Concept Plan (including total truck movement limits identified in Table 3) on sensitive receivers where exceedances of traffic noise criteria have been predicted. The application of mitigation measures shall be consistent with the requirements of the *NSW Road Noise Policy* (DECCW, 2011).

Concept Plan Site Noise Model

2.19 The Proponent shall, prior to the lodgement or consideration of any project application associated with this Concept Plan, unless otherwise agreed by the Director-General, develop a *Concept Plan Site Noise Model* to facilitate the assessment of noise impacts and to report on compliance with project, precinct and Concept Plan noise criteria. The Noise Model shall take into consideration pre-project background noise levels at affected sensitive receivers and shall be maintained for the Concept Plan site until such time as the site is fully developed.

The Proponent shall ensure that any noise monitoring data collected as part of the *Noise Verification Monitoring Program* be incorporated into the Noise Model. The Noise Model shall be updated with details from each individual project and used to assess performance against the Concept Plan noise goals.

Noise Verification Monitoring Program

2.20 The Proponent shall develop a *Noise Verification Monitoring Program*, to outline how the noise impacts of the projects associated with this Concept Plan approval will be monitored and proactively managed. The Program shall include, but not necessarily be limited to:

a) identification of a noise monitoring network, consistent with the guidelines provided in the *Industrial Noise Policy* (EPA, 2000);
b) locations, timing and methods for monitoring noise impacts as operations commence for each project associated with the Concept Plan to assess compliance with precinct sound power levels, project specific noise criteria and Concept Plan noise goals, including

identification of monitoring sites at which pre-project and post-project noise levels can be ascertained;

c) a framework for identifying actual and potential noise impacts, and for applying pro-active and reactive mitigation and management measures to address those impacts;
d) provisions for reporting monitoring results and complaints and enquiries received to the EPA and the Department and for independent review and auditing of the Program (to be incorporated into the Compliance Tracking Program); and
e) mechanisms for updating the Program as may be required from time to time, including a system that allows for the periodic assessment of industry accepted Management Practices and Available Technology Economically Achievable to satisfy the Concept Plan noise goals and the project specific noise criteria.

The Program shall be prepared by an appropriately qualified person(s) and shall be submitted to the Director-General prior to the commencement of operations for any project associated with this Concept Plan approval.

Hydrology

Stormwater Management Strategy

2.21 The Proponent shall prepare a *Stormwater Management Strategy* for the Concept Plan site to provide a framework for the coordinated management of storm water and flood risks across the site and within precincts and to facilitate the continual improvement in the quality of stormwater discharge to the South Arm of the Hunter River and a reduction in flooding impacts to land uses within and surrounding the site. The Strategy shall include:

a) the identification of water management risks, including flood risk, water quality and stormwater impacts, the isolation of stormwater from contaminated land and the local groundwater table, and the consideration of climate change and coastal risks;
b) design principles, objectives and environmental performance criteria for flooding, ground water, and storm water management, including the consideration of the following matters:
    i. the design and adoption of stormwater management measures that reflect site constraints, land use and catchment conditions;
    ii. the minimisation of runoff and the reduction of peak flows;
    iii. minimising coastal risks and flooding impacts for land uses within, adjoining and in proximity of the site, including the establishment of site design criteria for site levels and drainage capacity, and consideration of NSW seal level rise planning benchmarks;
    iv. integrating stormwater capture, treatment and reuse into the operating environment;
    v. improving surface and groundwater quality within the site and at discharge points.
c) conceptual site based flooding, storm water, surface water and water quality management measures, including standards for the protection and maintenance of these measures;
d) a monitoring program for surface and ground water which identifies parameters to be monitored, sampling locations, monitoring methods and sampling methodology, including frequency and duration of monitoring and sampling, responsibilities and reporting;
e) corrective action and contingency measures in the event of exceedances of the relevant environmental performance criteria;
f) process for regularly reviewing and updating the Strategy to identify continual improvement to procedures and to reflect ongoing the development of the site;
g) reporting procedures and protocols for evaluating performance; and

h) taking into account the *NSW Coastal Planning Guideline: Adapting to Sea Level Rise* (DoP, 2010), the Preliminary Stormwater Strategy (contained in Appendix H of the Environmental Assessment), *Managing Urban Stormwater: Soils and Construction* (Landcom, 2004), Council design criteria and the existing Hunter Development Corporation groundwater monitoring program.

The Strategy shall be prepared in consultation with Council, HDC, EPA and shall be submitted to the Director-General prior to the lodgement or consideration of any project application associated with this Concept Plan approval, or as otherwise agreed by the Director-General. The Proponent shall update the Strategy, as required, following subsequent project approvals associated with this Concept Plan Approval.

Site Infrastructure

Utilities Infrastructure Plan

2.22 The Proponent shall prepare a *Utilities Infrastructure Plan* for the Concept Plan site to identify the services and utility infrastructure (ie non transport related infrastructure) that will be required for the site and each precinct, and to provide for the coordinated provision of this infrastructure. The Plan shall include, but not be limited to the following:

a) the expected site services/utility demand levels and infrastructure requirements, including reasonable contingencies, at a site and precinct level;
b) the identification of service corridors to and within the site, including at a precinct level, to facilitate the rationalisation of infrastructure provision and to minimise conflict with existing and future site operations, including the prioritisation of connecting services to trunk infrastructure facilities to be provided in the adjoining Intertrade Industrial Park and the provision of shore to ship power to berthed vessels (subject to the findings of the Shore Side Power Feasibility Report); and
c) the identification of when the required infrastructure will be required and the inclusion of an implementation schedule to indicate when infrastructure will be delivered and associated installation protocols.

The Plan shall be prepared in consultation with infrastructure and public utility authorities as well as adjacent landowners, including but not limited to HDC, AusGrid, Hunter Water Corporation, Jemena, RailCorp, RMS, Council, and telecommunication providers (as relevant).

The Plan shall be prepared and submitted to the Director-General prior to the lodgement of or consideration of any project application associated with this Concept Plan approval, or as otherwise agreed by the Director-General. The Proponent shall be responsible for overseeing the implementation of the Plan and shall update it as required, following any subsequent project approvals associated with this Concept Plan approval.

Shore Side Power (cold ironing) Feasibility Report

2.23 The Proponent shall prepare a Shore Side Power (cold ironing) Feasibility Report, in consultation with the EPA, for shore side power on the landside areas adjacent to berths. The Feasibility Report shall be prepared by a suitably qualified person and shall include, but not be limited to:

a) a discussion of industry accepted environmental practice for Shore Side Power, including relevant international experience and standards;
b) consideration of feasible and reasonable measures that could be adopted at the berths, including the consideration and quantification of air quality and noise benefits; and
c) potential options and future recommendations, including the provision of service corridors for future infrastructure.

The Plan shall be prepared and submitted to the Director-General prior to the lodgement of or consideration of any project application associated with this Concept Plan approval, or as otherwise agreed by the Director-General.

Hazards, Dangerous Goods and Chemical Storage

2.24 Potentially hazardous facilities of a project associated with this Concept Plan Approval shall be designed and sited with appropriate separation distances such that they do not cumulatively impact adjacent surrounding land uses at a precinct and Concept Plan site level in a manner exceeding permissible impact levels published in *Hazardous Industry Planning Advisory Paper No.4 – Risk Criteria for Land Use Safety Planning*, Department of Planning, January 2011.

2.25 The hazard safeguards (as applicable) listed in the Hazard Identification Table A.1, in Appendix A, of the report titled *Preliminary Hazardous Analysis, Mayfield Site Port-Related Activities Concept Plan,* dated 19 July 2010 and prepared by AECOM, shall be implemented.

Port Emergency Response Plan

2.26 The Proponent shall prepare a *Port Emergency Response Plan* for the Concept Plan site, precinct and project(s) prior to the commissioning of any projects associated with this Concept Plan approval that involve the transport, handling or storage of hazardous or dangerous materials. The Plan shall:

a) include detailed procedures for the safety of people on and off site who may be at risk from the project;
b) include provision for safe and fully accessible emergency service vehicle access to portside facilities;
c) consider any *Safety Management System* prepared for the project;
d) be updated prior the commissioning of any subsequent projects associated with this Concept Plan approval; and
e) be consistent with the *Hazardous Industry Planning Advisory Paper No.1 - Emergency Planning*, Department of Planning, January 2011.

The Proponent shall submit the Plan or any update of the Plan to the Director-General no later than two months prior to the commencement of any project associated with this Concept Plan approval, or as otherwise agreed by the Director-General. The Proponent may elect to use an existing Plan should that Plan address the requirements of this Concept Plan approval.

Safety Management System

2.27 A *Safety Management System* shall be prepared prior to the commissioning of any project associated with this Concept Plan approval that involves the transport, handling or storage of hazardous or dangerous materials. The System shall cover on-site operations and

associated transport activities involving the transport, handling or storage of hazardous and dangerous materials. The document shall:

a) specify safety related procedures, responsibilities and policies, along with details of mechanisms for ensuring adherence to the procedures; and
b) be consistent with the *Hazardous Industry Planning Advisory Paper No.9 – Safety Management*, Department of Planning, January 2011.

The Proponent of future project applications under this Concept Plan approval shall submit the System to the Director-General no later than two months prior to the commencement of any project associated with this Concept Plan approval, or as otherwise agreed by the Director-General. Records shall be kept on site and shall be available for inspection by the Director-General upon request.

Hazard Audit

2.28 A *Hazard Audit* of each project associated with this Concept Plan approval that involves the transport, handling or storage of hazardous or dangerous materials shall be undertaken twelve months after the commencement of operations and every three years thereafter, or at such intervals as the Director-General may agree.

The audits shall be carried out by a qualified person or team, independent of the project, and shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 5, '*Hazard Audit Guidelines'*.

The Proponent of future project applications under this Concept Plan approval shall submit each audit to the Director-General within one month of the audit being undertaken. The three yearly site Hazard Audits for each project associated with this Concept Plan approval shall be consolidated.

Social and Economic

2.29 Projects associated with this Concept Plan Approval, shall be subject to section 94A development contribution levies consistent with rates identified in the *Section 94A Development Contributions Plan 2009,* The City of Newcastle, March 2011 (or as subsequently updated), or as otherwise agreed with Council.

3. COMMUNITY INFORMATION, CONSULTATION AND INVOLVEMENT

3.1 Subject to confidentiality, the Proponent shall make all documents required under this approval available for public inspection on request.

Provision of Electronic Information

3.2 The Proponent shall establish and maintain a dedicated website or maintain dedicated pages within its existing website for the provision of electronic information associated with this Concept Plan approval subject to confidentiality requirements. The Proponent shall publish and maintain up-to-date information on this website or dedicated pages including, but not necessarily limited to:

b) information on the statutory context of the Concept Plan approval and the current implementation status of the project;
c) a copy of this approval, any related project approvals and any future modification to this approval;
d) a copy of each relevant environmental approval, licence or permit required and obtained in relation to the project; and
e) details of the outcomes of compliance reviews and audits of the project.

Community Communication Strategy

3.3 The Proponent shall prepare and implement a **Community Communication Strategy** for the project. This Strategy shall be designed to provide mechanisms to facilitate communication between the Proponent, Council and local community (broader and local stakeholders) on the progress and the related environmental management of the project. The Strategy shall include, but not necessarily limited to:

a) identification of stakeholders to be consulted as part of the Strategy, including affected and adjoining landowners;
b) procedures and mechanisms for the regular distribution of information to stakeholders on the progress of the project;
c) procedures and mechanisms through which stakeholders can discuss or provide feedback to the Proponent on the progress of the project;
d) procedures and mechanisms through which the Proponent can respond to any enquiries or feedback from stakeholders in the progress of the project; and
e) procedures and mechanisms that would be implemented to resolve any issues/disputes that may arise between parties on the matters relating to the progress of the project. This may include the use of an appropriately qualified and experienced independent mediator.

Key issues that should be addressed in the Community Communication Strategy should include, but not necessarily be limited to:

i) transport and traffic monitoring and management;
ii) noise and vibration monitoring and management;
iii) air quality monitoring and management; and
iv) cumulative impacts

The Proponent shall maintain and implement the Strategy throughout the development of the Project. The Strategy shall be submitted to the Director-General prior to the lodgement of any project application or commencement of works associated with this Concept Plan approval, unless otherwise agreed by the Director-General.

4. COMPLIANCE MONITORING AND TRACKING

Compliance Tracking Program

4.1 The Proponent shall develop and implement a **Compliance Tracking Program** to track compliance with the requirements of this approval. The Program shall include, but not necessarily be limited to:

a) provisions for periodic review of the compliance status of the Concept Plan and associated projects against the requirements of this approval;
b) provisions for the notification of the Director-General following the determination of, prior to the commencement of construction and prior to the commencement of operation of projects associated with this Concept Plan approval;
c) provisions for periodic reporting of environmental monitoring and compliance status to the Director-General;
d) a program for independent environmental auditing in accordance with *ISO 19011:2003 - Guidelines for Quality and/ or Environmental Management Systems Auditing*; and
e) procedures for rectifying any non-compliance identified during environmental auditing or review of compliance.

The Program shall be submitted to the Director-General for approval prior to the lodgement of approval for any project associated with this Concept Plan approval, unless otherwise agreed by the Director-General.

Attachment A – Heavy Vehicle Route

Attachment B – Road Intersection Upgrades

Works required at the Industrial Drive/Ingall Street Intersection

Ingall Street (Southern Leg)
- The southern leg approach shall be reconfigured to provide a channelized/signalised left turn lane and a single through lane. The southern leg departure shall be maintained as a single lane.
- The left turn lane shall be a minimum 120 metres in length, including taper.
- A signalised pedestrian crossing shall be provided on the southern leg.

Industrial Drive (Eastern Leg)
- The eastern leg approach shall be maintained to provide a left turn lane, two through lanes and a right turn lane. The eastern leg departure shall be maintained as two lanes.
- The right turn lane shall be extended to a minimum 140 metres in length, including taper.
- A signalised pedestrian crossing shall be provided on the eastern leg.

Ingall Street (Northern Leg)
- The northern leg approach shall be reconfigured to provide a combined channelised/signalised left turn/through lane, and two right turn lanes. The northern leg departure shall be maintained as a signal lane.
- The median right lane shall be a minimum 50 metres in length, excluding taper.
- The left turn/through lane and central right turn lane shall extend back to the existing railway level crossing.
- A signalised pedestrian crossing shall be provided on the northern leg.

Industrial Drive (Western Leg)
- The western leg approach shall be reconfigured to provide a channelised/signalised left turn lane, two through lanes and a right turn lane. The western leg departure shall be maintained as two lanes.
- The left turn lane shall be a minimum 120 metres in length, including taper.
- The right turn lane shall be extended to a minimum 170 metres in length, including taper.
- A signalised pedestrian crossing shall be provided on the western leg.

Works required at the Industrial Drive/George Street Intersection

Industrial Drive (Southern Leg)
- The southern leg approach shall be maintained to provide a left turn lane, two through lanes and a right turn lane. The southern leg departure shall be maintained as two lanes.
- A signalised pedestrian crossing shall be provided on the southern leg.

George Street (Eastern Leg)
- The eastern leg approach shall be reconfigured to provide a channelised/signalised left turn lane, a through lane and a right turn lane. The eastern leg departure shall be reconfigured to provide a single lane at the throat of the intersection. The auxiliary lane for the right turn into Selwyn Street shall be retained.
- The current left turn acceleration/merge lane shall be closed and reinstated to match the surrounding environment.
- The left turn lane shall be a minimum 50 metres in length, including taper.
- A central raised concrete median shall be provided.
- A signalised pedestrian crossing shall be provided on the eastern leg.

Industrial Drive (Northern Leg)

- The northern leg approach shall be reconfigured to provide a channelised/signalised left turn lane, two through lanes and a right turn lane. The southern leg departure shall be maintained as two lanes.
- The left turn shall be extended to a minimum 150 metres in length, including taper.

George Street (Western Leg)

- The western leg shall be maintained to provide a two approach lanes and a single departure lane.
- A signalised pedestrian crossing shall be provided on the western leg.

Works required at the George Street/Selwyn Street Intersection

- Move the Give Way line forward for vehicles exiting Selwyn Street.
- Provide a raised central concrete median/island in the throat of Selwyn Street to reinforce the prohibition of the right turn.

General Requirements

- Kerb and gutter and raised median/island kerbs shall be provided where required, as determined by the RMS.
- The intersections shall be designed to accommodate the turn path of the largest design vehicle (B-Double).
- Provision shall be made for on-road cyclists on all approaches and along the length of the proposed works.
- All lanes shall be 3.5 metres in width, or as determined by the RMS.
- Street lighting shall be provided in accordance with Australian Standard AS 1158 or as determined by the RMS.

Modification of Minister's Approval

Section 75W of the *Environmental Planning & Assessment Act 1979*

As delegate of the Minister for Planning under delegation executed on 10 November 2014, I approve the modification of the project application referred to in Schedule 1, subject to the conditions in Schedule 2.

Karen Jones
Director
Infrastructure

Sydney 12 December 2014

SCHEDULE 1

Concept Approval:	MP09_0096 granted by the Minister for Planning and Infrastructure on 16 July 2012
For the following:	The concept plan involves the redevelopment of 90 hectares of port-side land in Mayfield for land based port facilities serving a mix of cargo types. The Concept Plan also includes supporting road and rail infrastructure to service the port facilities.
Modification:	MP09_0096 MOD 2: Correct typographic errors to Requirements 2.1(g)(iii) and 2.3(b)(ii), and change references to "Requirement 2.3(b) and Table 2" to "Requirement 2.3 (Table 2).

SCHEDULE 2

CONDITIONS

MODIFICATIONS TO THE CONCEPT PLAN – ENVIRONMENTAL ASSESSMENT REQUIREMENTS

Project Stages Subject to Other Provisions of the Act

Delete requirement 2.1g) and replace with the following:

2.1g) a **Noise and Vibration Assessment** that assesses noise and vibration impacts. The assessment shall:

i. consider noise goals defined in this approval;
ii. consider the *Concept Plan Noise Model* and *Noise Verification Monitoring Program*, required under this Concept Plan approval and identify project specific noise and vibration criteria;
iii. identify baseline and future requirements and the levels and character of noise and vibration sources;
iv. identify sensitive receivers, modelling assumptions and noise and vibration impacts, including on and off-site road and rail noise impacts on receivers within the vicinity of the site, such as road traffic noise impacts on residential areas adjacent to Industrial Drive;
v. include details of noise and vibration attenuation measures to be implemented should the predicted levels exceed the Concept Plan and project specific criteria, along with a schedule for implementing such works; and
vi. include consideration of the following guidelines or any documents that supersede them: *NSW Industrial Noise Policy* (EPA, 2000) for operational noise; *Interim Construction Noise Guideline* (DECC, 2009) for site establishment and construction; *Environmental Noise Management – Assessing Vibration: A Technical Guideline* (DECC, 2006) for vibration; the *NSW Roads Noise Policy* (DECCW, 2011) for off-site traffic noise and the *Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects* (DECC and DoP, 2007) for off-site rail noise.

Delete requirement 2.3 and replace with the following:

2.3 Projects associated with this Concept Plan shall not exceed the total truck movement limits presented in Table 1, except as identified.

Table 1 – Initial Staging and Total Truck Movement Limits

Total Truck Movements per annum	Total Truck Movements per day	Total Hourly Truck Movements in peak periods
462,104	1,268	95

(a) Truck movements by road may exceed the identified limits in Table 1 up to the limits identified in Table 2, subject to:

i. traffic monitoring identifying that Concept Plan related traffic movements are not having a detrimental impact on the local, regional and State road network and/or predicted background traffic growth is lower than the long term per annum growth rate of 1.0%; or
ii. *Deleted*
iii. the consideration of land use planning and development changes within the locality of the Concept Plan site, including approved uses on the adjoining

Intertrade Industrial Park site, which may result in less traffic generation than considered under this Concept Plan.

Table 2: Intermediate Staging and Total Truck Movement Limits

Total Truck Movements per annum	Total Truck Movements per day	Total Hourly Truck Movements in peak periods
773,438	2,120	159

(b) Truck movements by road may exceed the identified limits in Table 2 up to the limits identified in Table 3, subject to:
   i. the consideration of the matters listed in requirement 2.3a), as relevant; and
   ii. the implementation of a *Transport Infrastructure Strategy* as per requirement 2.4, which has been endorsed by Transport for NSW and RMS.

Table 3: Ultimate Staging and Total Truck Movement Limits

Total Truck Movements per annum	Total Truck Movements per day	Total Hourly Truck Movements in peak periods
1,017,882	2,720	209

Notwithstanding, projects associated with this Concept Plan shall be operated with the objective of not exceeding the total truck movements identified in Table 3.

Note: The above requirements do not permit an immediate increased to the identified limits in Table 1. Any exceedances of the limits identified in Table 1, consistent with the above requirements, shall only be permitted, following consideration of the exceedances in future project assessments.

Delete requirement 2.4 and replace with the following:

2.4 Truck movements by road, which exceed the limits specified in requirement 2.3 (Table 2), may be undertaken following the preparation, endorsement and implementation of a *Transport Infrastructure Strategy*.

The Strategy shall provide a framework for the development and implementation of local, regional and State road and rail infrastructure improvements or traffic management measures necessary for an increase in truck movements beyond the limits identified in requirement 2.3 (Table 2). The Strategy shall be developed in consultation with the Department, Transport for NSW, RMS, Council, adjoining land owners and the local community. The Strategy shall include, but not necessarily be limited to:

a) the objectives and scope of the Strategy;
b) identification of stakeholders associated with the development of the Strategy, consultation undertaken with Stakeholders and how matters raised were considered;
c) freight volume demand forecasts for road and rail freight movement, including a demand and supply analysis and description of the supply chain for the Concept Plan (for all freight movement);
d) identification and alignment of road and rail movements with required road and rail infrastructure and service improvements or management measures required to meet forecast road and rail freight demand;
e) the feasibility of port freight movements utilising existing and identified infrastructure and service provisions measures for the proposal; and

f) identification of how and when the required infrastructure and service improvements or management measures will be delivered, including parties responsible for the funding and implementation of the works.

The Strategy shall be made available to the Director-General and Council following its endorsement by Transport for NSW and the RMS.

Appendix C: Development Consent DA 8137 including MOD 2

Development Consent

Section 4.55(1A) of the *Environmental Planning and Assessment Act 1979*

As delegate for the Minister for Planning under delegation dated 16 February 2015, I hereby grant consent to the Development Application referred to in Schedule 1, subject to the conditions in Schedule 2.

These conditions are required to:

- prevent, minimise, and/or offset adverse environmental impacts including economic and social impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the ongoing environmental management of the development.

Chris Ritchie
Director
Industry Assessments

Sydney, 30 June 2017

The Department has prepared a consolidated version of the consent which is intended to include all modifications to the original determination instrument.

The consolidated version of the consent has been prepared by the Department with all due care. This consolidated version is intended to aid the consent holder by combining all consents relating to the original determination instrument but it does not relieve a consent holder of its obligation to be aware of and fully comply with all consent obligations as they are set out in the legal instruments, including the original determination instrument and all subsequent modification instruments.

SCHEDULE 1

Application No.:	DA 8137
Applicant:	Port of Newcastle Operations Pty Limited as trustee for the Port of Newcastle Unit Trust
Consent Authority:	Minister for Planning
Land:	Part Lot 42 DP 1191982, Part Lot 51 DP 1229869 and Part Lot 54 DP 1229869
Development:	Use the existing hardstand area as port facilities for the storage of freight, including the loading and unloading of freight on the site

SUMMARY OF MODIFICATIONS

Application Number	Determination Date	Decider	Modification Description
DA 8137 MOD 1	23 June 2020	Director Industry Assessments	Expand the loading and unloading area of the Mayfield Cargo Storage Facility from 12 hectares to 18.6 hectares, and to include roll-on / roll-off cargo as a permitted cargo type.
DA 8137 MOD 2	8 February 2024	Independent Planning Commission	Modify Conditions B9 and B10 to permit operations to occur on the remediated portions of the site.

DEFINITIONS

Applicant	Port of Newcastle Operations Pty Limited as trustee for the Port of Newcastle Unit Trust
Certifier	Has the same meaning as in Part 6 of the EP&A Act
Construction	The demolition of buildings or works, the carrying out of works, including bulk earthworks, and erection of buildings and other infrastructure covered by this consent
Council	City of Newcastle
Day time	The period from 7am to 6pm on Monday to Saturday, and 8am to 6pm on Sundays and Public Holidays
Department	Department of Planning and Environment
Development	The development as described in Schedule 1 and the documents listed in Condition A2, involving the use of the existing hardstand area as port facilities for the storage of freight, including the loading and unloading of freight on the site
EP&A Act	*Environmental Planning and Assessment Act 1979*
EP&A Regulation 2000	*Environmental Planning and Assessment Regulation 2000*
EPA	Environment Protection Authority
Evening	The period from 6pm to 10pm
Excluded Area	The Excluded Area means the uncapped area shown in red hatching in Figure 2 of Appendix B (Plan Ref: Map Description: DA 8137 (MOD 2) Date: 02/11/23)
Incident	An occurrence or set of circumstances that causes or threatens to cause material harm and which may or may not be or cause a non-compliance. ***Note:*** *"material harm" is defined in this consent*
Material harm	Harm that: (a) involves actual or potential harm to the health or safety of human beings or to the environment that is not trivial, or (b) results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding $10,000, (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment)
MCP	Mayfield Concept Plan (09_0096), approved by the Minister on 16 July 2012 and as modified
Minister	Minister for Planning and Public Spaces
NCC	National Construction Code
Night time	The period from 10pm to 7am on Monday to Saturday, and 10pm to 8am on Sundays and Public Holidays
Operation	Use of the existing hardstand area as port facilities for the storage of freight, including the loading and unloading of freight on the site
PCA	Principal Certifying Authority
POEO Act	*Protection of the Environment Operations Act 1997*
PoN	Port of Newcastle
Principal Certifier	Means the principal certifier and has the same meaning as in Part 6 of the EP&A Act
Reasonable	Reasonable relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements
Secretary	Secretary of the Department, or nominee
Site	Land referred to in Schedule 1
Site Noise Model	A model developed by PoN for the assessment and management of cumulative noise from the MCP area
TfNSW	Transport for NSW

SCHEDULE 2

PART A – ADMINISTRATIVE CONDITIONS

Obligation to Minimise Harm to the Environment

A1. In addition to meeting the specific performance criteria established under this consent, the Applicant must implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the Development.

Terms of Consent

A2. The development must be carried out in accordance with:

a) Development Application 8137, including the Statement of Environmental Effects titled, *Cargo Storage Facility, Mayfield,* prepared by AECOM, and dated 25 November 2016 and Response to Submissions email from PoN dated 5 May 2017, and all attached documents including the letter report titled, *Road Safety Review – Selwyn Street, Mayfield, NSW,* prepared by SECA Solution, dated 28 April 2017, and supplementary information provided by email from PoN, dated 8 May 2017;

b) DA 8137 MOD 1, accompanied by *Statement of Environmental Effects Development Consent Modification – Mayfield Cargo Storage Facility*, dated 11 October 2019, prepared by Aurecon Australasia Pty Ltd, and *Response to Submissions* dated 13 May 2020, prepared by Aurecon Australasia Pty Ltd; and

c) DA 8137 MOD 2, accompanied by *Modification to expand wharf area (DA8137) Statement of Environmental Effects*, dated 27 April 2023, prepared by GHD, PoN letter titled *DA8137 Mayfield Cargo Storage Facility* dated 17 November 2023, and additional information provided by email from PoN, dated 6 November 2023.

A3. If there is any inconsistency between the above documents, the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this consent shall prevail to the extent of any inconsistency.

A4. Notwithstanding condition A3, the Applicant must carry out the development in accordance with the requirements of the Mayfield Concept Plan Approval (09_0096), as modified (MCP). If there is an inconsistency between this consent and the MCP, the concept plan approval shall prevail to the extent of the inconsistency.

A5. The Applicant must comply with any written requirement(s) of the Secretary arising from the Department's assessment of:

a) any reports, plans, strategies, programs, studies or correspondence that are submitted in accordance with this consent; and

b) the implementation of any actions or measures contained in these reports, plans, strategies, programs, studies or correspondence.

Limits of Consent

A6. This consent lapses five years after the date from which it operates, unless the use has physically commenced on the land to which the consent applies before the date on which the consent would otherwise lapse under section 4.53 of the EP&A Act.

A7. This consent is limited to the use of the site as Port Facilities as described in the documents listed in Condition A2.

Statutory Requirements

A8. The Applicant must ensure that all necessary licences, permits and approvals are obtained and kept up to date as required throughout the life of the development. No condition of this consent removes the obligation of the Applicant to obtain, renew or comply with such licences, permits or approvals.

Compliance

A9. The Applicant must ensure that employees, contractors and sub-contractors are aware of, and comply with, the conditions of this consent relevant to their respective activities.

PART B – OPERATIONAL ENVIRONMENTAL PERFORMANCE AND MANAGEMENT

Hours of Operation

B1. The Development is permitted to operate the development 24 hours-a-day, seven days-a-week.

Operational Noise Limits

B2. The Applicant must ensure that noise generated by the development does not exceed the noise limits in Table 1.

Table 1: Noise Limits (dB(A))

No.	MCP Receiver	Location	Day	Evening	Night	Night	Night
			$L_{eq(15min)}$	$L_{eq(15min)}$	$L_{eq(15min)}$	$L_{eq(9hr)}$	$L_{1(1min)}$
R1	**A**	1 Arthur Street, Mayfield	35	35	35	35	46
R2	**B**	2 Crebert Street, Mayfield	39	39	39	35	51
R3	**-**	24 Crebert Street, Mayfield	40	39	39	35	52
R4	**C**	32 Elizabeth Street, Carrington	35	35	35	35	41
R5	**D**	186 Fullerton Road, Stockton	35	35	35	35	40

Note:

- *To identify a noise receiver location, refer to the figure in **Appendix A**.*
- *Noise generated by the development is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the EPA's NSW Industrial Noise Policy.*

Mayfield Concept Plan Noise Quota

B3. The Applicant must:

a) ensure noise from the site does not exceed the noise quotas provided by the PoN in accordance with the Site Noise Model; and

b) comply with the directions of the PoN in relation to the management of noise from the Site.

Operating Conditions

B4. The Applicant must:

a) implement all reasonable and feasible noise management and mitigation measures to prevent and minimise noise from the site;

b) implement, where possible, a safe system of work so that tonal movement alarms, such as reversing beepers, are not needed on the site;

c) maintain the effectiveness of any noise suppression equipment or plant at all times and ensure defective plant that may generate offensive noise is not used operationally until fully repaired; and

d) regularly assess noise monitoring data and relocate, modify and/or stop operations to ensure compliance with the relevant conditions of this consent.

Mayfield Concept Plan Site Noise Model

B5. Prior to the commencement of operation of the development, as modified by MOD 2, the *Noise and Vibration Impact Assessment* included in the documents listed in Condition A2(a), including all modelling data, is to be provided to the PoN for the purposes of updating the Site Noise Model.

Selwyn Street Improvements

B6. Within six months of the commencement of operation, the Applicant must undertake the following roadworks at its own expense:

a) provide a white centre line for the length of Selwyn Street between the site access and the level crossing;

b) provide a white line along each edge of Selwyn Street between the site access and the level crossing to highlight the edge of the road. The vegetation on both sides of the road must be regularly maintained to ensure this line remains visible; and
c) provide a chevron marker board on Selwyn Street opposite the side road to reinforce the presence of the intersection for drivers exiting the site.

Operational Environmental Management Plan

B7. The Applicant must prepare an Operational Environmental Management Plan (OEMP) for the development. The Plan must:
a) be prepared by a suitably qualified and experienced expert;
b) provide the strategic framework for environmental management of the development;
c) identify the statutory approvals that apply to the development;
d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;
e) describe the procedures that would be implemented to:
i) keep the local community and relevant agencies informed about the operation and environmental performance of the development;
ii) receive, handle, respond to, and record complaints;
iii) respond to any non-compliance with the conditions of consent, such as noise mitigation measures;
iv) respond to emergencies;
f) detail measures to manage noise generated by the development;
g) detail measures to manage traffic generated by the development, in accordance with the MCP's *Traffic Management Plan*;
h) include details of a monitoring program that is to be undertaken in accordance with the *NSW Industrial Noise Policy* and the *Noise Verification Monitoring Plan, October 2015*, or its latest version;
i) include details of a reporting program to be provided annually to the Secretary and PoN that:
i) demonstrates compliance with the noise limits in this consent and the noise quotas determined in accordance with the MCP; and
ii) is prepared in accordance with the MCP's *Traffic Monitoring and Review Plan*. The traffic monitoring program shall include details of traffic movements to and from the site (during peak periods and daily volumes), including along Selwyn Street.

Note: *The monitoring requirements could be satisfied by the monitoring network required for the Mayfield Concept Plan*

B7A. The Applicant must update the OEMP required under Condition B7 to the satisfaction of the Secretary prior to the occupation and operation of the additional 6.6 hectares of loading / unloading area approved under DA 8137 MOD 1. The updated OEMP must include a:
a) restriction that no more than 104 movements of cargo under its own power are permitted from the site during the course of a calendar year and are to occur outside of the AM and PM peak; and
b) record of all cargo movements made under its own power is to be kept by the Applicant and incorporated into the traffic monitoring program required under Condition B7.

Note*: The purpose of condition B7A is to minimise traffic impacts of cargo that is transported from the site under its own power (for example, motor vehicles) and not to restrict cargo movements generally.*

B8. The Applicant and any other person carrying out any part of the development from time to time must operate the development in accordance with the OEMP (as revised from time to time), unless otherwise agreed by the Secretary. A copy of the approved OEMP must be made publicly available on the Applicant's website.

Contamination

B9. Prior to the occupation and operation of the additional 6.6 hectares of loading / unloading area approved under DA 8137 MOD 1:

a) the area marked as the Uncapped Area (Excluded Area), shown in Figure 2 of Appendix B (Plan Ref: Map Description: DA 8137 (MOD 2) Date: 02/11/23) must be isolated by the installation and maintenance of a security fence,
b) prominent signs must be placed and maintained on the security fence stating that the Excluded Area is not approved for the storage of cargo and that access to the Excluded Area is restricted to Port of Newcastle staff or those approved by the Port of Newcastle to enter the Uncapped Area; and
c) submission to the Secretary for information the Site Audit Report and Section A Site Audit Statement, prepared in accordance with the NSW Contaminated Land Management – Guidelines for NSW Site Auditor Scheme 2018, which demonstrates that the land is suitable for its intended use.

B10. Prior to the use of the Uncapped Area shown in Figure 2 of Appendix B:

a) the land must be remediated in accordance with the Contaminated Site Management Plan - Port Lands Former BHP Steelworks Mayfield Newcastle – Hunter Development Corporation December 2016 and any relevant requirements of the Environment Protection Authority; and
b) submission to the Secretary for information the Site Audit Report and Section A Site Audit Statement, prepared in accordance with the NSW Contaminated Land Management – Guidelines for NSW Site Auditor Scheme 2018, which demonstrates that the Excluded Area is suitable for its intended use.

Construction of Security Fence

B11. All new structures and any alterations or additions to existing structures, that are part of the development, must be constructed in accordance with the relevant requirements of the Building Code of Australia (BCA).

Notes:

- Under Part 6 of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for the proposed building works.
- Part 8 of the EP&A Regulation sets out the requirements for the certification of the development.

B12 Prior to the commencement of construction of the security fence (shown in Figure 2 of Appendix B (Plan Ref: Map Description: DA 8137 (MOD 2)) Date: 02/11/23) a **Contaminated Land Management Plan** must be submitted to the Secretary for approval. The Plan must be prepared by a suitably qualified and experienced person and be consistent with the *Contaminated Site Management Plan - Port Lands Former BHP Steelworks Mayfield Newcastle - Hunter Development Corporation, December 2016 (*Mayfield CSMP). The Plan must:

a) Describe the proposed construction works;
b) Set standards and performance measures for the construction work;
c) Describe actions and measures that will be implemented to mitigate potential impacts;
d) Explain how the environmental performance of the construction works will be monitored and what actions will be taken if any non-compliance is detected; and measures to reinstate the capping layer if disturbed.

The approved Plan must be implemented.

B13. Work must not commence until a Construction Certificate in respect of the work has been issued.

B14. All relevant conditions under this section must be met prior to the issue of any relevant Construction Certificate.

B15. Prior to the issue of any relevant Construction Certificate, the Applicant must:

a) Appoint a Principal Certifier in accordance with the relevant provisions of the EP&A Act and EP&A Regulation, and
b) The Principal Certifier must submit to the Planning Secretary and Council an "Appointment of Principal Certifier".

B16. Prior to the issue of any relevant Construction Certificate, the Applicant must provide evidence to the Certifier that any long service levy payable under Section 34 of *the Building and Construction Industry Long Service Payments Act 1986* (or, where such a levy is payable by instalments, the first instalment of the levy) has been paid.

B17. The proposed works must comply with the applicable Performance Requirements of the relevant sections of the BCA to achieve and maintain acceptable standards of structural sufficiency, safety, health and amenity for the ongoing benefit of the community. Compliance with the Performance Requirements can only be achieved by:

a) Compliance with relevant Deemed to Satisfy Provisions of the BCA; or
b) Performance Solution which demonstrates:
    a. compliance with all relevant Performance Requirements of the BCA or
    b. the solution is at least equivalent to the Deemed to Satisfy Provisions; or
c) a combination of B17 (a) and (b) above.

Prior to the issue of the first Construction Certificate, a report detailing compliance with any relevant provisions of the Building Code of Australia is to be submitted to the satisfaction of the Certifier.

B18 Reinstatement of the engineered pavement cap area and areas of former clay capping must be carried out in accordance with the Contaminated Land Management Plan required under Condition B12.

B19 Prior to the issue of any Occupation Certificate, evidence must be provided to the satisfaction of the Certifier that the proposed works have been completed in accordance with the BCA.

PART C - REPORTING AND AUDITING

Incident Notification, Reporting and Response

C1 The Secretary must be notified in writing via the Major Projects website immediately after the Applicant becomes aware of an incident that causes or is likely to cause material harm to the environment. The notification must identify the development (including the development application number and the name of the development if it has one) and set out the location and nature of the incident. Subsequent notification requirements must be given, and reports submitted in accordance with the requirements set out in Appendix C.

Non-Compliance Notification

C2 The Secretary must be notified in writing via the Major Projects website within seven days after the Applicant becomes aware of any non-compliance with this consent.

C3 A non-compliance notification must identify the development and the application number for it, set out the condition of consent that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.

C4 A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.

Independent Audit

C5 Within one year of the approval of DA 8137 MOD 2, and every three years after, unless the Secretary directs otherwise, the Applicant must commission and pay the full cost of an Independent Environmental Audit (Audit) of the development. Audits must:

(a) be prepared in accordance with the Independent Audit Post Approval Requirements (Department 2020)
(b) be led and conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary; and
(c) be submitted to the satisfaction of the Secretary within three months of commissioning the Audit (or within another timeframe agreed by the Secretary).

C6 In accordance with the specific requirements in the Independent Audit Post Approval Requirements (Department 2020, or its latest version), the Applicant must:

(a) review and respond to each Independent Audit Report prepared under condition C5 of this consent;
(b) submit the response to the Secretary and any other NSW agency that requests it, together with a timetable for the implementation of the recommendations; and
(c) implement the recommendations to the satisfaction of the Secretary.

Monitoring and Environmental Audits

C7 Any condition of this consent that requires the carrying out of monitoring or an environmental audit, whether directly or by way of a plan, strategy or program, is taken to be a condition requiring monitoring or an environmental audit under Division 9.4 of Part 9 of the EP&A Act. This includes conditions in respect of incident notification, reporting and response, non-compliance notification, compliance reporting and independent auditing.

Note: For the purposes of this condition, as set out in the EP&A Act, "monitoring" is monitoring of the development to provide data on compliance with the consent or on the environmental impact of the development, and an "environmental audit" is a periodic or particular documented evaluation of the development to provide information on compliance with the consent or the environmental management or impact of the development.

Access To Information

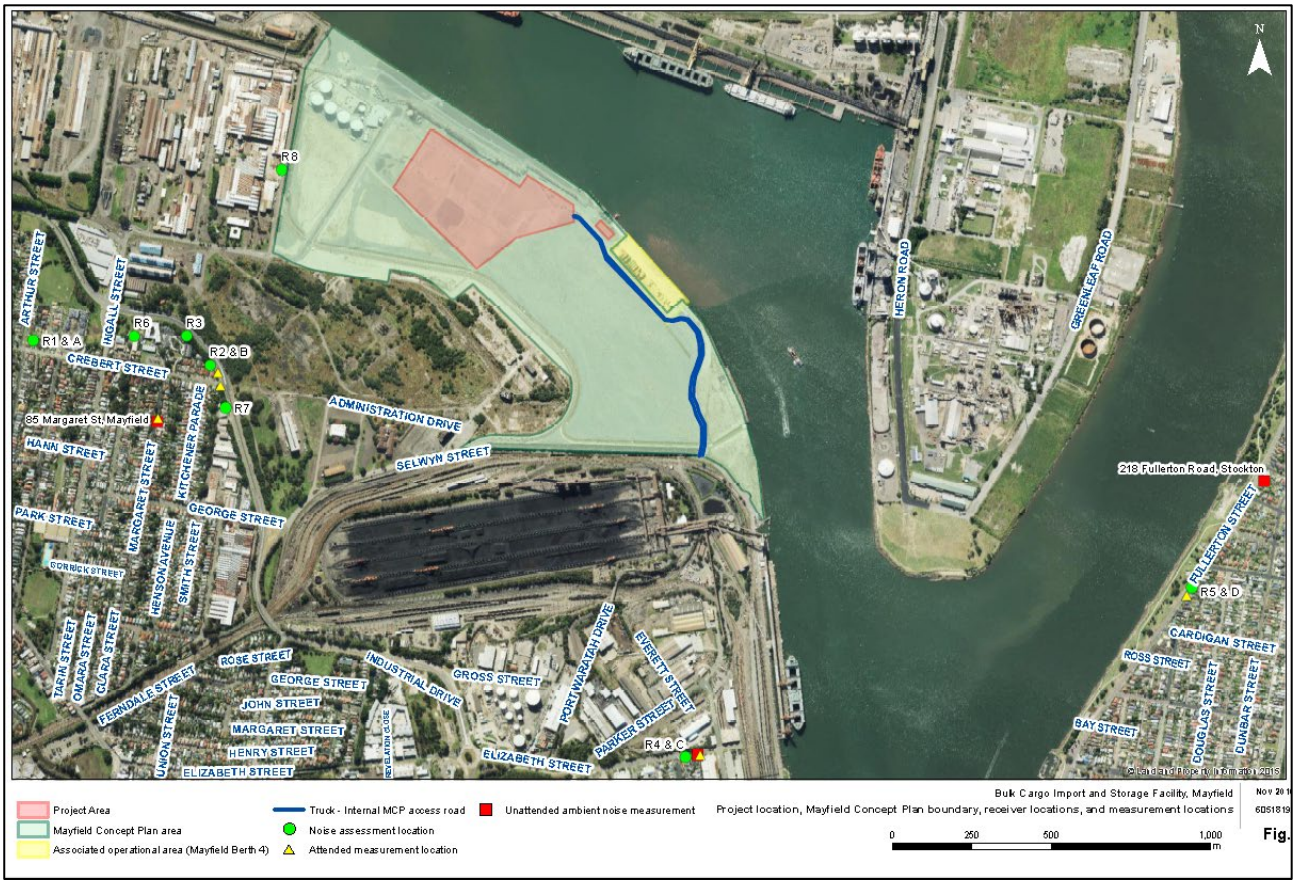
C8 At least 48 hours prior to the occupation and operation of the additional 6.6 hectares of loading / unloading area approved under DA 8137 MOD 1 and for the life of the development (or such other time as agreed by the Secretary), the Applicant must:

(a) make the following information and documents (as they are obtained or approved) publicly available on its website:
   (i) the documents referred to in condition A2 of this consent;
   (ii) all current statutory approvals for the development;
   (iii) all approved strategies, plans and programs required under the conditions of this consent;
   (iv) contact details to enquire about the development or to make a complaint;
   (v) a complaints register, updated monthly;
   (vi) audit reports prepared as part of any Independent Audit of the development and the Applicant's response to the recommendations in any audit report; and
   (vii) any other matter required by the Secretary.

(b) keep such information up to date, to the satisfaction of the Secretary

---

APPENDIX A
MAP SHOWING THE LOCATION OF NOISE SENSITIVE RESIDENTIAL RECEIVERS



APPENDIX B
MAP SHOWING THE EXCLUDED AREA (UNCAPPED AREA)

Figure 1 | Plan of the development site and locality (Source: PON)

Figure 2 | Plan of the Excluded Area (uncapped area) and immediate surrounds (Source: PON)

Proposed Fence Post Coordinates

PointID	Easting	Northing
1	384373.359	6360106.422
2	384361.374	6360089.762
3	384392.654	6360064.264
4	384381.881	6360054.891
5	384428.514	6360000.005
6	384495.077	6359947.712

Proposed Fence Post Coordinates

PointID	Easting	Northing
A	384382.618	6360102.210
B	384374.929	6360091.498
C	384381.438	6360086.088
D	384384.568	6360086.088
E	384415.202	6360057.185
F	384406.232	6360049.500
G	384417.467	6360038.005
H	384420.996	6360037.872
I	384443.639	6360020.157
J	384437.001	6360005.294
K	384474.540	6359977.070
L	384471.991	6359974.043
M	384494.985	6359949.499
N	384504.841	6359957.024
O	384490.485	6359971.406
P	384483.131	6359980.000
Q	384487.726	6359986.193
R	384484.796	6359988.191
S	384478.081	6359979.707
T	384445.192	6360002.988
U	384458.290	6360025.951
V	384450.432	6360033.743
W	384430.653	6360048.328
X	384399.527	6360091.153

Figure 3 | Proposed fence post coordinates (Source: PON)

APPENDIX C
WRITTEN INCIDENT NOTIFICATION AND REPORTING REQUIREMENTS

1. Written notification of an incident in accordance with C1 must:
   (a) identify the development and application number;
   (b) provide details of the incident (date, time, location, a brief description of what occurred and why it is classified as an incident);
   (c) identify how the incident was detected;
   (d) identify when the Applicant became aware of the incident;
   (e) identify any actual or potential non-compliance with terms of the approval;
   (f) describe what immediate steps were taken in relation to the incident;
   (g) identify further action that will be taken in relation to the incident; and
   (h) identify a project contact for further communication regarding the incident.

2. The Incident Report must include:
   (a) a summary of the incident;
   (b) outcomes of an incident investigation, including identification of the cause of the incident;
   (c) details of the corrective and preventative actions that have been, or will be, implemented to address the incident and prevent recurrence; and
   (d) details of any communication with other stakeholders regarding the incident.

Appendix D: Mayfield Site Precinct Emergency Management Plan WHS 3003

MAYFIELD SITE PRECINCT

EMERGENCY MANAGEMENT PLAN

VERSION D

4 APRIL 2023

MAYFIELD SITE PRECINCT EMERGENCY PLAN

Figure 1: Mayfield Site Precinct Boundary

Contents

Document Control

Revision	Date of Issue	Reason for Review	Pages affected	Approved By
A	Feb 2016	New document for PON	All	EMOI Keith Wilks
B	Nov 2017	Changes following M4 Hazard audit	5, 6, 7, 8, 9	EMOI Keith Wilks
C	Aug 2021	Administrative review	All	Security Manager
D	Apr 2023	Changes to Mayfield access/review	All	SMO Philipp Bourquin

Distribution List

A copy ***has been provided to the below organisations***:

Organisation copy issued to	Organisation Representative	Date Issued
Stolthaven	Ryan Duckmanton	27/04/2023
Koppers Carbon Materials & Chemicals Australia Pty Ltd	Nick Moretti	27/04/2023
InfraBuild	Ron Razmovski	27/04/2023

References

- Port Services Agreement
- PANSW Port Safety Operating Licence 2019-23
- NSW State Emergency Management Plan (EMPLAN) 2018
- Mayfield Concept Approval (MP 09_0096) Schedule 3 Condition 2.26

1 PURPOSE

The purpose of this Plan is to provide the framework within which emergencies occurring on the Mayfield Site Precinct will be planned for and managed.

1.1 Scope

This Plan applies to all tenants, facilities, organisations and people within the boundary of the Mayfield Site Precinct (see Figure 1).

This Plan takes an 'all-hazards' approach to emergencies. It applies to all emergencies which occur on the Mayfield Site Precinct.

2 PLAN OWNER AND AUTHORISATION

This Precinct Plan is developed under the authority of the Port of Newcastle (PON), to meet the requirements of the Precinct's Mayfield Concept Approval (MP 09_0096) Schedule 3 condition 2.26. Accordingly:

"*The Proponent shall prepare a Port Emergency Response Plan for the Concept Plan site and project(s) prior to the commissioning of any projects associated with this Concept Plan approval that involve the transport, handling or storage of hazardous or dangerous materials*.

The Plan shall:

a) *include detailed procedures for the safety of people on and off site who may be at risk from the project;*

b) *include provision for safe and fully accessible emergency service vehicle access to portside facilities;*

c) *consider any Safety Management System prepared for the project;*

d) *be updated prior to the commissioning of any subsequent projects associated with this Concept Plan approval; and*

e) *be consistent with the Hazardous Industry Planning Advisory Paper No.1 – Emergency Planning, Department of Planning, January 2011.*

The Proponent shall submit the Plan or any updated of the Plan to the Director-General no later than two months prior to the commencement of any project associated with this Concept Plan approval, or as otherwise agreed by the Director-General. The Proponent may elect to use an existing Plan should that Plan address the requirements of the Concept Plan approval"

This Plan forms part of PON's Business Continuity and Emergency Management Framework.

2.1 Related Plans

The Mayfield Site Precinct Emergency Plan should be read in the context of the:

- Mayfield Concept Approval (MP 09_0096) Schedule 3 Condition 2.26;
- Mayfield Site Precinct tenancy-specific Emergency Plans (Appendix 1);
- Port of Newcastle Business Continuity and Emergency Management Framework;
- Port of Newcastle Corporate Incident & Emergency Management Plan; and
- NSW State Emergency Management Plan (EMPLAN) and supporting plans.

3 PON INCIDENT MANAGEMENT FRAMEWORK

There are three levels to the PON's incident management framework. The level of activation is determined by the severity of the event. The Corporate Framework outlines the different levels and how they relate to each other.

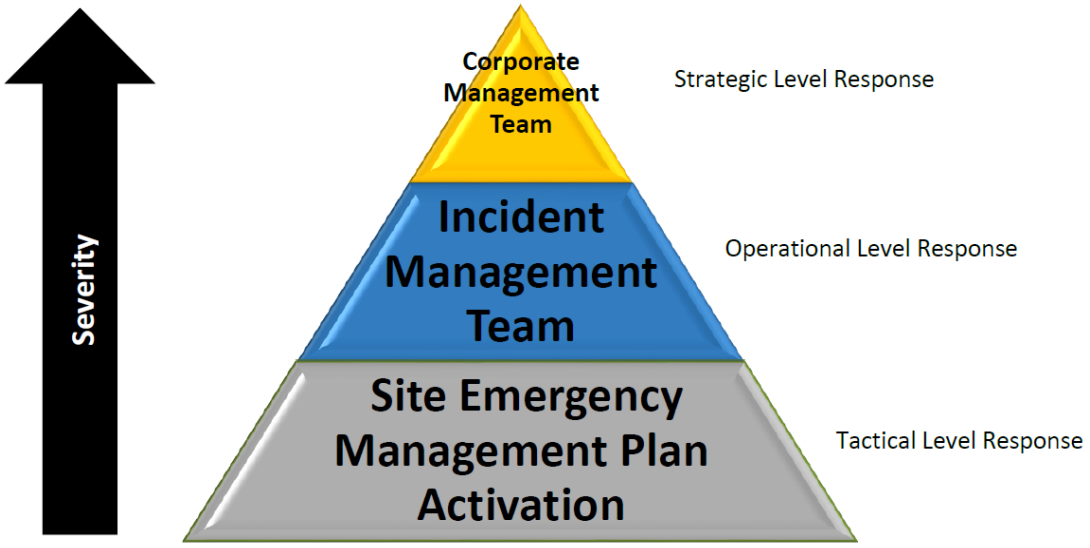


Figure 2: The Port of Newcastle's Incident Management Framework

A local incident is one where the impacts are confined to a specific location and no escalation is expected. The immediate response to any such incident is undertaken in accordance with the relevant stakeholder's emergency response plan (see Appendix 1).

The decision to escalate to higher levels of the Incident Management Framework will be made by the PON On-Call Duty Manager.

4 MAYFIELD SITE PRECINCT CONTEXT

4.1 Site Summary

The Mayfield Site Precinct comprises 90 hectares of remediated land. It is bounded by Selwyn Street on the East and the OneSteel site on the west.

Figure 1 shows the key features of the site.

4.2 Major Site Infrastructure and Risks

The Mayfield Site Precinct incorporates the following major ***facilities***:

- Stolthaven Bulk Liquids Terminal facility;
- Koppers Inc tar distillation and naphthalene still;
- InfraBuild rail corridor;
- PON Mayfield 4 Berth; and
- PON Mayfield Cargo Storage Facility

Each stakeholder with an approved Development Application (DA holder) holds an Emergency Management Plan for their facilities and operations which:

- Document procedures for the safety of people at that facility;
- Identify risks associated with that facility; and
- Outlines the safety management system for that facility.

A register of these Emergency Management Plans is held at Appendix 1.

4.3 Site Traffic Management

Roads in the Mayfield Site Precinct are managed by PON and are shown on Figure 1. Individual facilities are to ensure traffic management arrangements are discussed with PON and detailed in their EMPs and associated documentation.

5 ROLES AND RESPONSIBILITIES

The following organisations and agencies are key stakeholders in the management of emergencies on the Mayfield Site Precinct.

Organisation	Role
NSW Police Force	Assist designated Combat Agency to conduct evacuations Manage public information and warnings and secure incident scenes Provide advice and conduit to the Regional Emergency Operations Controller (REOCON)
Fire and Rescue NSW	Combat agency for land-based hazmat and fire incidents
Port Authority of NSW	Combat agency for vessel/water-based oil and chemical spills and fires on vessels.
Ambulance Service of NSW	Provide emergency care to persons affected in the incident area Provide transportation and evacuation to persons requiring assistance
Port of Newcastle	Manager of Port lands Support combat agency through the provision of resources and equipment as required Facilitate communications between operational stakeholders
Facilities	Develop and maintain Emergency Plans for facilities. Ensure staff are appropriately trained on facility Emergency Plans. Immediate response to incidents occurring on stakeholders controlled land. Assess the severity of the incident and escalate to the level of response as required. Support the Combat Agency as required during events. Support Combat Agency communications to external stakeholders.

6 MANAGING EMERGENCIES

All emergencies are to be reported to '**000' (TRIPLE ZERO)** and then to the **Port Wide Reporting Number – 02 4929 3890.**

Stakeholders are to follow their facility-specific emergency response plans, ensuring that the safety of personnel is prioritised.

6.1 Evacuation Assembly Areas

Each stakeholder holds facility-specific emergency management plan that define local evacuation procedures and on-site assembly areas.

The primary, off-site Evacuation Assembly Area is located off Selwyn St, adjacent to the David Baker Rd entry.

A secondary off-site Evacuation Assembly Area is at the Wests Leagues Club, Hannell St Mayfield West (as per the Local Emergency Plan).

Figure 1 depicts the primary off-site Evacuation Assembly Area.

6.2 Support to Combat Agencies and Emergency Services

Should the incident escalate to Precinct or Port-wide impacts, the PON Duty Manager will activate the PON's procedures to support the responsible Combat Agency and Emergency Services to respond to the incident.

These procedures are described in the PON Corporate Incident & Emergency Management Framework Plan.

6.3 Communications during Emergencies

Communications with external stakeholders and the broader community will be managed by the Combat Agency and the relevant stakeholder through the processes set out in their corporate communications plans.

7 TEST AND REVIEW

7.1 Exercises

Emergency plans under this Plan will be exercised in accordance with the schedules within the various facilities Emergency Management Plans.

7.2 Plan Review

This Plan shall be reviewed following:

- Any activation of emergency plans and procedures for an incident in the Mayfield Site Precinct (other than a drill); or

- Changes in legislation or planning permissions.

The Mayfield Concept Approval (2.26) requires the plan to be updated prior to the commissioning of any subsequent projects associated with the concept plan approval that involve the transport, handling or storage of hazardous or dangerous materials.

7.3 Plan Submission

This Plan shall be submitted to the Secretary of the Department of Planning and Environment two months prior to the commission of a new project associated with the approval that involve the transport, handling or storage of hazardous or dangerous materials.

APPENDIX 1 - STAKEHOLDER SPECIFIC EMERGENCY PLANS

The following stakeholders are currently operating within the Precinct under an approved Development Application:

Tenant	Operation	Emergency Plan	Contact Numbers
Stolthaven	Bulk liquids storage and distribution	Stolthaven Terminals Newcastle Emergency Response Plan	0418 736 974
Koppers Carbon Materials & Chemicals Australia Pty Ltd	Tar distillation and naphthalene still	Emergency Procedures – Serious Fire Emergency	0412 194 597
InfraBuild	Rail corridor through the Mayfield precinct	Emergency Response Plan Steel Manufacturing Industrial Precinct (REMS-GEN-0840)	4935 4999
Port of Newcastle	Mayfield 4 Common User Berth	Mayfield Berth 4 Emergency Management Response Plan (WHS-3004)	4929 3890
Port of Newcastle	Mayfield Cargo Storage Facility	Mayfield Cargo Storage Facility Emergency Management Plan (WHS 3009)	4929 3890

Appendix E: WHS 3009 Mayfield Cargo Storage Facility Emergency Plan

Mayfield Cargo Storage Facility

Emergency Management Plan

Version D

Oct 2023

Contents

Document Control

Revision	Date of Issue	Reason for Review	Pages affected
A	Dec 2017	New document for PON	All
B	Jul 2019	Review following initial implementation	5, 7
C	Aug 2021	Administrative Review	all
D	Oct 2023	Administrative Review	All

References

- Mayfield Concept Approval (MP 09_0096) Schedule 3 Condition 2.26
- WHS 3003 Mayfield Site Precinct Emergency Plan

1 PURPOSE

The purpose of this Plan is to provide an emergency response plan for entities operating within the Mayfield Cargo Storage Facility.

2 SCOPE

This Plan applies to all licensees, facilities, organisations and people within the boundary of the Mayfield Cargo Storage Facility (see Figure 1).

This Plan takes an 'all-hazards' approach to emergencies. It applies to all emergencies which occur within the boundary.

3 RELATED PLANS

The Mayfield Cargo Storage Facility Emergency Plan should be read in the context of the:

- WHS 3003 Mayfield Site Precinct Emergency Plan;
- Port of Newcastle Business Continuity and Emergency Management Framework;
- Port of Newcastle Corporate Incident & Emergency Management Plan; and
- NSW State Emergency Management Plan (EMPLAN) and supporting plans.

4 SITE SUMMARY

The Mayfield Cargo Storage Facility comprises approx. 12 hectares of uncovered hardstand area for open-air storage of freight.

The site is used for the loading, unloading, moving and stacking of freight using forklifts or other machinery. Facilities such as offices, amenities, power, lighting and fencing will be temporary in nature. No demolition or building construction works are undertaken on site.

Dangerous, hazardous or waste products, bulk commodities and roll-on roll-off cargoes will not be stored within the facility

5 LICENSEES

Each licensee operating within the site must hold an Emergency Plans for their operations which:

- Document emergency procedures for the safety of people at that facility;
- Identify risks associated with the operations; and
- Outlines the licensee's safety management system for that facility.

The requirement to develop an emergency plan is detailed in each lease/licence.

6 TRAFFIC MANAGEMENT

Cargo is trucked from Mayfield Berth 4 or an external site into the site for storage.

Roads in the Mayfield Site Precinct are managed by PON and are shown at Appendix B.

Vehicles accessing site will do so via Selwyn St.

7 ROLES AND RESPONSIBILITIES

The following organisations and agencies are key stakeholders in the management of emergencies on the Mayfield Site Precinct.

Organisation	Role
NSW Police Force	• Assist designated Combat Agency to conduct evacuations • Manage public information and warnings and secure incident scenes • Provide advice and conduit to the Regional Emergency Operations Controller (REOCON)
Fire and Rescue NSW	• Combat agency for land-based hazmat and fire incidents
Port Authority of NSW	• Combat agency for vessel/water-based oil and chemical spills and fires on vessels.
Ambulance Service of NSW	• Provide emergency care to persons affected in the incident area • Provide transportation and evacuation to persons requiring assistance
Port of Newcastle	• Manager of Port lands • Support combat agency through the provision of resources and equipment as required • Facilitate communications between operational stakeholders • Support Combat Agency communications to external stakeholders.
Licensee	• Develop and maintain Emergency Plans for facilities. • Ensure staff are appropriately trained on facility Emergency Plans. • Immediate response to incidents occurring on tenanted land. • Assess the severity of the incident and escalate to the level of response as required. • Support the Combat Agency as required during events.

8 MANAGING EMERGENCIES

All emergencies are to be reported to '**000' (TRIPLE ZERO)** and then to the **Port Wide Reporting Number – 02 4929 3890.**

Licensees are to follow their facility-specific emergency response plans, ensuring that the safety of personnel is prioritised.

9 EVACUATION ASSEMBLY AREAS

Each licensee holds lease-specific evacuation plans that define local evacuation procedures and on-site assembly areas.

The primary, off-site Evacuation Assembly Area is located at the Car Park between the David Baker Rd entry and the Rail line, off Selwyn Street.

A secondary off-site Evacuation Assembly Area is at the Wests Leagues Club, Hannell St Mayfield West.

Appendix B depicts the off-site Evacuation Assembly Area.

10 SUPPORT TO COMBAT AGENCIES AND EMERGENCY SERVICES

Should the incident escalate to Precinct or Port-wide impacts, the PON Duty Manager will activate the PON's procedures to support the responsible Combat Agency and Emergency Services to respond to the incident.

These procedures are described in the PON Corporate Incident & Emergency Management Plans.

11 COMMUNICATIONS DURING EMERGENCIES

Communications with external stakeholders and the broader community will be managed by the Combat Agency and PON through the processes set out in their corporate communications plans.

12 TEST AND REVIEW

12.1 EMERGENCY EXERCISES

Licensee Emergency Plans under this Plan will be exercised in accordance with the schedules within those various plans.

13 PLAN REVIEW

The Plan shall be reviewed:

- Every two years;
- Following any activation of emergency plans and procedures for an incident within the Mayfield Cargo Storage Facility (other than a drill), this will take the place of the two-yearly review; or
- Following changes in legislation or planning permissions.

14 APPENDIX A – SITE PLAN

15 APPENDIX B – OFFSITE EMERGENCY EVACUATION POINT