



Kooragang Coal Terminal Construction Environmental Management Plan

120Mtpa Capacity Project

March 2008



Kooragang Coal Terminal Construction Environmental Management Plan 120Mtpa Capacity Project

Prepared by

Umwelt (Australia) Pty Limited

on behalf of



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1.0 Introduction

Port Waratah Coal Services Limited (PWCS) owns and operates the Carrington and Kooragang Coal Terminals in the Port of Newcastle in New South Wales (NSW). These terminals receive, assemble and load Hunter Valley coal onto ships for export to customers around the world.

Kooragang Coal Terminal (KCT) operations are located on Kooragang Island on the lower reaches of the Hunter River approximately 2 kilometres north of Newcastle (refer to **Figure 1.1**). As shown on **Figure 1.1**, the nearest urban areas are Fern Bay located approximately 1.7 kilometres to the east; the suburb of Stockton (North), located approximately 1.5 kilometres to the south-east of the site; and Mayfield located 1.7 kilometres to the south-west. The former BHP steelworks and current OneSteel operations are located to the south and south-west, across the South Arm of the Hunter River.

PWCS was granted Project Approval from the Minister for Planning on 13 April 2007 for the increase in throughput capacity of KCT from 77 Million tonnes per annum (Mtpa) to a nominal 120 Mtpa (Project Approval). The works associated with the approved increase to the throughput capacity will be undertaken as part of the 120 Mtpa Capacity Project (the Project).

Condition 7.2 of the Project Approval requires the preparation and implementation of a Construction Environmental Management Plan (CEMP) for construction activities associated with the Project. This condition is outlined in **Table 1.1** and includes an indication of where the specific requirements have been addressed in this CEMP.

Table 1.1 – Condition 7.2 of KCT Project Approval

Condition Number	Condition Title	Condition Detail	Section of Plan
7.2	Construction Environmental Management Plan	Prior to the commencement of construction of the project, the Proponent shall prepare and implement a Construction Environmental Management Plan to outline environmental management practices and procedures to be followed during construction of the project. The Plan shall be prepared in accordance with <i>Guideline for the Preparation of Environmental Management Plans</i> (DIPNR 2004) and shall include, but not necessarily be limited to:	Whole of Plan
		a) a description of all activities to be undertaken on the Site during construction including an indication of stages of construction, where relevant;	Section 1.1
		b) statutory and other obligations that the Proponent is required to fulfil during construction including all approvals, consultations and agreements required from authorities and other stakeholders, and key legislation and policies;	Section 2.1



Legend

 Kooragang Coal Terminal

FIGURE 1.1

Location of Kooragang Coal Terminal

Table 1.1 – Condition 7.2 of KCT Project Approval (cont)

Condition Number	Condition Title	Condition Detail	Section of Plan
		c) details of how the environmental performance of the construction works will be monitored, and what actions will be taken to address identified adverse environmental impacts. In particular, the following environmental performance issues shall be addressed in the Plan:	Section 5.1
7.2 (cont)		i) measures to monitor and manage dust emissions;	Sections 4.0 and 5.1
		ii) measures to monitor and minimise soil erosion and the discharge of sediment and other pollutants to lands and/or waters during construction activities;	Sections 4.0 and 5.1
		iii) measures to monitor and control noise emissions during construction works;	Sections 4.0 and 5.1
		d) a description of the roles and responsibilities for all relevant employees involved in the construction of the project;	Section 3.0
		e) the additional studies listed under condition 7.3 of this approval; and	Attached Plans
		f) complaints and enquiries handling procedures during construction.	Section 5.1.2

As indicated in **Table 1.1**, Condition 7.2(e) requires the CEMP include a range of specialised management plans relating to Construction Surface Water Management, Construction Noise Management and Construction Traffic Management. These specialised plans and protocols have been developed separately and included as attachments to the CEMP. The relationship between the CEMP and the specialised construction management plans and protocols is outlined further in **Section 1.2**.

1.1 Construction Activities

PWCS has identified ways to increase its throughput by optimising operational activities and associated upgrading of plant and equipment using demonstrated technology. Optimisation design indicates that the approved KCT facilities have the capacity for throughput to increase from 77 Mtpa to a nominal 120 Mtpa. This will be achieved essentially by operational efficiencies and the implementation of a range of conveyor and drive changes both for approved plant and equipment yet to be constructed and retrofitting of existing plant and equipment with upgraded components. All of these capacity improvement initiatives are located internally within the major approved coal terminal facilities.

The increase in capacity will be achieved by the following operational improvements:

1. An increase in the throughput capacity of the three receival and four stacking streams.
2. An increase in the throughput capacity of the coal reclaim system.
3. An increase in the throughput capacity of the shiploading system.

Increased throughput capacities will be achieved by:

- installing new low noise drives of higher power and increased speed;
- increasing the coal profile on the belt;
- changing to higher capacity transfer chutes and introducing soft flow design for more efficient movement of the coal; and
- changes to operational activities and practices.

4. Upgrade works on services including power supply and control systems.

The Construction activities associated with the Project will be undertaken on a progressive basis during the normal operation of KCT. Construction activities will be undertaken in small steps (campaigns) over an extended period of time by appropriately small teams to suit equipment availability and the anticipated coal demand and will primarily consist of the following construction activities:

- Conveyor upgrades – replacement of conveyor drives and pulleys and changes to transfer chutes to increase flow rates.
- Reclaimer and Stacker upgrades.

Implementing the capacity throughput increase will not require mobilisation of a major construction workforce. The major types of equipment that will be on site during construction activities includes cranes and boom lifts, elevated work platforms, loaders, heavy vehicles (delivery of equipment), and miscellaneous vehicles utilised at KCT.

At times, construction activities will be undertaken over a 24 hour per day 7 day per week basis. In accordance with Condition 2.7 of the Project Approval (refer to **Section 2.2**), construction activities that would generate any audible noise at residential receivers will be restricted to between 7.00 am and 6.00 pm seven days per week, except where construction activities are undertaken in response to a direction from police or other relevant authority for safety or emergency reasons.

1.2 Management Plan Context

The requirements of the CEMP apply to all construction activities associated with the Project. All on site construction activities associated with the Project will be required to comply with the CEMP. The Environmental Management Map (refer to **Figure 1.2**), provides for the overall integration of design and construction requirements from the EA, Project Approval conditions with construction requirements being accommodated in the CEMP and design requirements in the design criteria.

As outlined in **Section 1.0**, a number of specialised management plans have been developed. These specialised management plans have been prepared to provide specific guidance on the management of potential noise, surface water and traffic impacts associated with construction activities. These specialised management plans have been developed as sub plans under this CEMP.

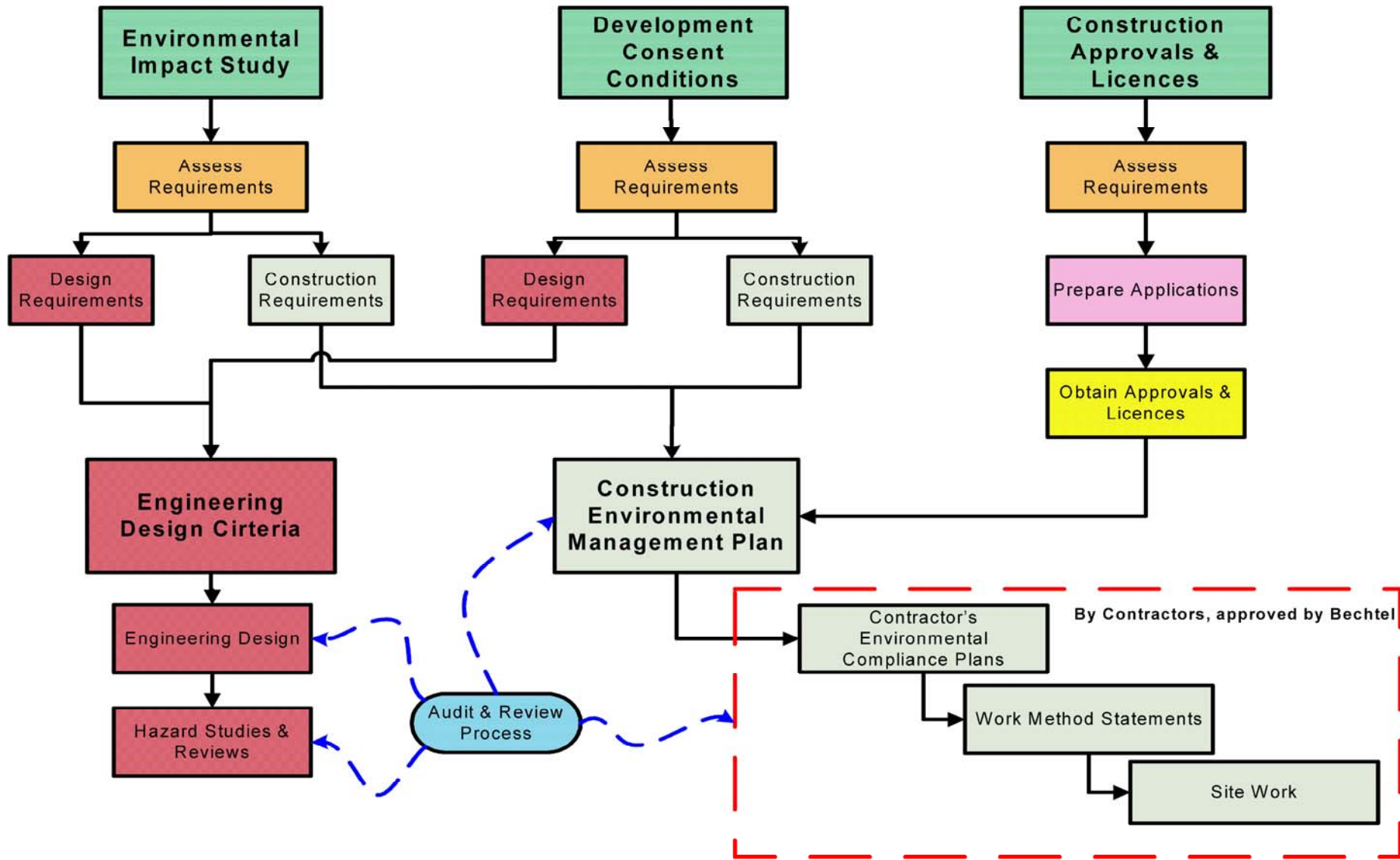


FIGURE 1.2

Environmental Management Map -
Kooragang Coal Terminal

1.3 Purpose and Scope

This CEMP has been prepared in accordance with Condition 7.2 of the Project Approval to outline the environmental management practices and procedures to be followed during construction activities associated with the Project. The CEMP has been prepared in accordance with the requirements of the Guideline for the Preparation of Environmental Management Plans (DIPNR 2004).

1.4 Objectives

The objectives of this CEMP are to:

- To minimise and control the impact of construction activities on the environment.
- Ensure compliance with regulatory and PWCS requirements. This is the minimum expectation for the Project.
- Clearly define the responsibilities and actions that are required to respond to environmental incidents.
- Maintain the relationship that PWCS has established with the local community and regulatory organisations.

These objectives will be achieved by:

- Incorporating environmental requirements as project design criteria and construction plans.
- Ensuring PWCS and Contractor awareness of, and compliance with, on site and off site environmental requirements.
- Providing regular overview and auditing of design and construction activities to ensure environmental performance and compliance.
- Preparation of specified Management Plans on key environmental issues associated with construction activities in accordance with Condition 7.2 of the Project Approval.
- The use of specific tools and activities, such as:
 - Employee/Contractor Environmental Awareness Training during Orientation, Inductions, Toolbox, Pre-Starts etc.
 - Site Environmental Inspections and Audits including daily, weekly and monthly checks with monitoring.
 - Environmental Monitoring.
 - Emergency Response Action Plans.
 - Incident Reporting, including analysing of cause and actions to rectify reoccurrence.
 - Non-conformance reporting with processes to rectify and close out.
 - Environmental requirements to be included in Contractor Work Method Statements.

1.5 Environmental Policy

PWCS is committed to 'Best Practice' environmental management in order to protect the environment and prevent pollution. PWCS expects everyone - employees and contractors, to act responsibly toward the environment by performing their work in a manner which causes minimal impact on the environment.

As part of the Environmental Policy, PWCS will:

- Provide environmental awareness training so that all employees and contractors:
 - Understand the environmental risk of their tasks.
 - Understand their responsibilities and accountabilities in regard to the protection of the environment.
 - Have the skills to perform their work with minimal impact on the environment through environmental risk analysis, responsible planning and implementation of control measures.
 - Have the knowledge and skills to report and respond responsibly to environmental incidents and emergencies.
- Establish and implement effective communications with employees, contractors, regulatory authorities and the community.
- Implement, maintain, audit and improve an Environmental Management System and related programs that are compliant with certification requirements of AS/NZS ISO 14001.
- Identify and analyse environmental risks and implement control measures to mitigate against these.
- Establish and implement Environmental Objectives and Targets and related Environmental Improvement Programs that drive improvement in environmental performance.
- Define and communicate environmental responsibilities and accountabilities in the organisation.
- As a minimum, manage its operations in compliance with all applicable laws, regulations and statutory requirements relating to the environment.

2.0 Statutory Requirements

2.1 Legislative Requirements

This section provides an overview of the key legislative and policy requirements for the environmental management of construction activities associated with the Project. **Table 2.1** provides a list of the key legislation and policies applicable to construction activities, the specific requirements for PWCS, and an indication of where the specific requirements are addressed in this CEMP.

Table 2.1 – Key Legislative and Policy Requirements Relevant to Construction Activities

Legislation/Policy	Requirements for Construction Activities	Section of Plan
Environmental Protection and Biodiversity Conservation Act	Two areas of national environmental significance potentially relate to the activities of PWCS: a) migratory species and threatened species utilising PWCS lands; and b) the adjoining Kooragang Island Nature Reserve which is a Ramsar Wetland The provisions of the EPBC Act are triggered if construction activities are considered a controlled activity under the Act. In 2007 the Project was referred to the then Commonwealth Department of Environment and Water Resources, who confirmed that the Project was not a controlled action.	-
Environmental Planning and Assessment Act 1979	PWCS has been granted a project approval for the increase to throughput capacity project (06_0189). The EP&A Act requires that all activities undertaken under this Project Approval comply with the conditions of the Project Approval. Construction activities will be undertaken in accordance with the relevant conditions of the Project Approval.	Section 2.2
Protection of the Environment Operations Act 1997	The Protection of the Environment Operations Act prohibits the pollution of air, water and land. PWCS currently holds an Environmental Protection Licence under the POEO Act. All construction activities will be undertaken so as not to pollute air, water or land and to comply with the relevant provisions of the EPL for KCT.	Section 4.0

2.2 Project Approval Requirements

The Project Approval also specifies a number of conditions that specifically apply to environmental management during construction activities. These conditions are outlined in **Table 2.2**, along with an indication of where each of the specific requirements is addressed by this CEMP.

**Table 2.2 – Construction Environmental Management Conditions Project Approval
06_0189**

Condition Number	Condition Title	Condition Detail	Section of Plan
2.2	Dust Emissions	The Proponent shall design, construct, commission, operate and maintain the project in a manner that minimises or prevents the emission of dust from the Site including wind blown and traffic generated dust.	Section 4.3
2.3		The Proponent shall take all practicable measures to ensure that all vehicles entering or leaving the Site, carrying a load that may generate dust, are covered at all times, except during loading and unloading. Any such vehicles shall be covered or enclosed in a manner that will prevent emissions of dust from the vehicle at all times, to the extent practicable.	Section 4.3
2.4		All activities on the Site shall be undertaken with the objective of preventing visible emissions of dust beyond the boundary of the Site. Should such visible dust emissions occur at any time, the Proponent shall identify and implement all practicable dust mitigation measures, including cessation of relevant works, as appropriate.	Section 4.3
2.5		The Proponent shall control dust emissions on all internal roads, trafficable areas and manoeuvring areas to minimise the potential for dust generation by sealing, or otherwise treating surfaces in a manner acceptable to the Director-General.	Section 4.3
2.6	Noise Impacts	The Proponent shall minimise noise emissions from plant and equipment operated on the Site in relation to the project according to the principles outlined in the NSW Government's <i>Industrial Noise Policy</i> .	Section 4.4
2.7	Construction Noise	The Proponent shall only undertake construction activities associated with the project that would generate an audible noise at any residential premises between 7.00 am and 6.00 pm, seven days a week. Audible noise is defined as 'noise that can be heard at the receiver'. This condition does not apply in the event of a direction from police or other relevant authority for safety or emergency reasons. Note: 'safety or emergency reasons' refers to emergency works which may need to be undertaken to avoid loss of life, property loss and/or to prevent environmental harm.	Section 4.4
2.14	Construction Soil and Water Management	The Proponent shall take all reasonable measures to prevent soil erosion and the discharge of sediments and pollutants from the Site during construction of the project.	Section 4.1

**Table 2.2 – Construction Environmental Management Conditions Project Approval
06_0189 (cont)**

Condition Number	Condition Title	Condition Detail	Section of Plan
2.15		The Proponent shall install stormwater drains, stormwater ponds, settlement ponds and/or storage ponds and other erosion, sediment and pollution controls as may be appropriate to manage stormwater on the Site. The Proponent shall maintain all erosion, sediment and pollution control infrastructure at or above design capacity for the duration of construction of the project and until such time as all ground disturbed by the works has been stabilised and rehabilitated so that it no longer acts as a source of sediment.	Section 4.1

3.0 Roles and Responsibilities

Specific responsibilities under the CEMP are as follows:

PWCS General Manager

- Provide direction for environmental management in accordance with the PWCS Environmental Policy; and
- Provide for the review of the PWCS Environmental Policy.

Senior Project Manager

- Ensure that adequate resources are available to implement the requirements of this CEMP; and

Engineering Manager - Expansion

- Ensure that the CEMP is relevant to current construction activities.
- Co-ordinate environmental monitoring in accordance with this CEMP;
- Develop and maintain a protocol for evaluating compliance with applicable criteria relevant to construction activities;
- Develop and maintain a protocol for assessment and response to environmental monitoring data relevant to construction activities;
- Notify regulatory authorities and affected stakeholders of any exceptions to relevant environmental criteria and/or standards and undertake necessary reporting;
- Co-ordinate investigation of any environmental impacts or enquiries and implementation of any relevant mitigation and controls;
- Liaise with regulatory authorities on matters relating to approvals and consent conditions; and
- Coordinate periodic reviews of the CEMP.

Specialist Advisor Environment

- Co-ordinate the ongoing environmental monitoring program, community enquiry system and incident reporting program of KCT and notify the Engineering Manager of any monitoring, enquiry or incident associated with construction activities;
- Assist the Engineering Manager in the investigation of any monitoring, enquiry and/or incident associated with construction activities, where required.

Construction Manager

- Develop and maintain the construction activities to comply with the approvals and consent conditions and requirements of the CEMP;
- Monitor construction activities and respond to exceptions to the relevant criteria;
- Review construction activities in response to exceptions and modify construction activities as appropriate;
- Report to Engineering Manager on response to exceptions; and
- Assist the Engineering Manager with investigation of exceptions or enquiries and the implementation of any relevant mitigation and controls.

Other Employees and Contractors

All employees and contractors are required to comply with the requirements of this CEMP.

4.0 Environmental Management Activities and Controls

This section outlines the environmental management activities and controls to be implemented during construction activities associated with the Project. This section also outlines more general environmental management activities and controls associated with environmental training and emergency contact and response during construction activities.

4.1 Water Quality

As outlined in **Section 1.2**, the construction activities associated with the Project will involve a range of conveyor and drive changes both for approved plant and equipment yet to be constructed and retrofitting of existing plant and equipment with upgraded components. All of these capacity improvement initiatives are located internally within the major approved coal terminal facilities. As such the construction activities will not require major ground disturbance within the KCT site.

All construction activities will be undertaken within the boundaries of the existing KCT water management system. PWCS has established a totally closed water management system to meet the design requirement of a 1 in 100 year design storm event or equivalent. The water management system operates to collect water from operational activities and to harvest storm water for recycling. All areas of the plant, including the wharf, capture water and channel it back to settling ponds for clarification prior to being held in storage ponds for re-use. The KCT water management system is outlined further in the *Construction Surface Water Management Plan*.

4.2 Groundwater

As outlined in **Section 1.1**, all construction activities associated with the expansion of throughput capacity will be undertaken within the boundaries of the existing and approved KCT infrastructure. As such the existing ground water quality will not be impacted by construction activities associated with the Project as there are not any major excavations or a requirement to pump groundwater.

4.3 Air Quality

It is anticipated that total gaseous emissions released into the atmosphere during construction will be extremely small. Potential sources of emissions are refuelling of construction equipment, evaporative losses associated with on site painting, and the application of synthetic linings, adhesives and waterproofing chemicals. The frequency and extent of these activities is limited and will have a minimal impact on air quality.

The potential for fugitive dust emissions from construction activities associated with the Project is limited.

Fugitive dust is defined as dusts that become airborne due to the forces of wind or human activity. Fugitive dust emissions from construction activities associated with the Project may be generated due to vehicular activity and the action of wind on unsealed and/or uncontrolled areas.

The following techniques will be implemented to minimise dust generation and emission during construction activities associated with the Project:

- Temporary roads will be kept sufficiently damp to minimise or prevent wind blown or traffic generated dust.
- Paved surfaces will be kept clean to minimise dust lift off due to traffic movements or wind action.
- Trucks hauling bulk materials will have their loads covered.
- Abrasive blasting operations will be controlled to contain all blast materials on site.
- Construction personnel will park in designated locations and not bring personal vehicles onto site.
- Any disturbed areas will be stabilised as soon as practical.
- Road and traffic locations will be clearly defined.

4.4 Noise

PWCS has implemented a noise management and monitoring program throughout the operation of KCT. An integral aspect of ongoing noise management at KCT is an Acoustical Design, Procurement, Construction and Commissioning process. This program has aimed to meet approved noise limits and ensure that the noise management outcomes are consistent with current regulatory and community standards.

A range of specific noise management controls and activities will be implemented for all construction activities associated with the Project. These specific noise management activities and controls are outlined in the *Construction Noise Management Plan*.

4.5 Biodiversity

As outlined in **Section 1.1**, all construction activities associated with the expansion of throughput capacity will be undertaken within the boundaries of the existing and approved KCT facility and as such does not require the clearing of vegetation

4.6 Cultural Heritage

As outlined in **Section 1.1**, all construction activities associated with the expansion of throughput capacity will be undertaken within the boundaries of the existing and approved KCT facility and as such does not require the disturbance of any items of cultural heritage.

4.7 Visual

The Project does not involve any change to the footprint or the bulk external appearance of the approved KCT facility. There are also no proposed changes to site lighting that would have the potential to cause adverse off-site impacts. Consequently, there will be no visual impact from the construction activities associated with the Project.

4.8 Land and Soil Management

There is a low potential for soil damage during construction from hazardous substances (hydrocarbons) contamination, which is addressed in **Section 4.9**. Other considerations include sediment transport, which is addressed as part of the *Construction Surface Water Management Plan* referenced in **Section 4.1**.

4.9 Hazardous Substances Management

Contamination of soil and land by hazardous substances is a low risk, with hydrocarbon products being the main potential for environmental damage. Avoidance of contamination of soil or ground water is paramount. Spills of any type are unacceptable and the greatest care is to be taken in this regard. In the unlikely event of a spill it will be totally cleaned up and the hazardous substances disposed of appropriately.

Impervious containment systems in the form of bunds which are large enough to hold 110% of the volume held in the largest tank shall be constructed around all fuel, chemical, paint, thinning and lubricant storage areas. Transportable bunds will be used to contain potential spills in locations remote from bunded areas.

Such hazardous materials and wastes (e.g. chemical wastes, fuels, lubricants, etc) which remain after implementation of the minimisation process will be collected, handled and disposed of off site.

Hazardous chemical absorbing materials, socks, booms and pillows will be located on site in appropriately marked containers, for containment and clean up in the event of spills.

Vehicle service bays, with an impervious liner, are installed on site and will be used to carry out the servicing of plant, equipment and vehicles.

4.10 Waste Disposal

KCT's overall waste management program focuses first on minimisation, specifically the reduction of the amount of materials used and related wastes generated during construction.

- General wastes will be collected in waste skips for disposal, by an approved and licensed contractor. This waste shall be disposed of at an approved off-site landfill location or other refuse facilities or recycled as appropriate.
- An approved and licensed Contractor, using a suitable vehicle, will collect sanitary wastes from the construction site toilet effluent tanks. Such sanitary waste will be processed off site, through a Hunter Water Corporation sewerage treatment plant.
- Recycling is encouraged and facilitated where practical. Recycling will address such items as paper, plastics, metals, toner cartridges etc.
- Waste material must not be disposed of on site. All waste must be removed from site.
- Concrete materials will be recycled through the Boral construction material recycling plant on Kooragang Island.

4.11 Unauthorised Waste Disposal

Scrap bins provided for the Project are to be used for Project waste purposes only. Should any unauthorised material which is not related to the Project be detected, an investigation determining the owner of the material will be undertaken and may include using video footage from security gate cameras. Appropriate corrective action will then be taken.

4.12 Traffic Management

As outlined in **Section 1.1**, implementing the capacity throughput increase will not require mobilisation of a major construction workforce. The work will be completed similar to ongoing maintenance activities by small teams to suit equipment availability and the anticipated coal demand. In addition, changes are not proposed to the existing site access roads. During construction activities heavy vehicles will periodically deliver construction material and equipment on an as needs basis. The specific management activities and controls for the delivery of construction materials and equipment is outlined in the *Construction Traffic Management Protocol*.

4.13 Spill Response

Spill response is designed as a planned response to a chemical or hydrocarbon spill, in order to minimise the potential to cause harm to the environment.

In the event where a spill has occurred the following steps shall be taken:

Immediate Actions

- Control the spill – attempt to stop or minimise the spill from the source.
- Contain the spill – attempt to stop or divert the spill. This can be done by using any available material including coal, dirt or defined spill response material. Critical to this process is to prevent the spill from entering any drains, waterways, water catchment areas or ground water.
- Clean up the spill – spilt material should be cleaned up using an appropriate absorbent material and placed into bags for disposal off site by a registered waste transporting company.
- Contaminated material from the spill is to be disposed of appropriately by a registered waste transporting/disposal company.

All response and clean up materials that have been used shall be replaced as soon as practicable after use. Any activities identified as high risk for environmental spills will cease where practical until an appropriate amount of spill containment and clean up material is immediately available in the work area.

4.14 Incident Reporting

All environmental incidents, or potential incidents, no matter how minor, will be reported to the work supervisor immediately following the incident, or as soon as practically possible after the incident. The supervisor will then advise the Construction Manager and Engineering Manager. The procedure for incident reporting is outlined in the incident reporting procedure.

4.15 Environmental Training

People who understand the environmental issues and sensitivities of the Project will be more likely to carry out their work in compliance with the environmental requirements and working procedures. To assist in understanding environmental issues and sensitivities the Project will provide environmental awareness training and information for all team members as part of their project orientation, inductions, toolbox and pre-start meetings.

4.16 Emergency Contacts and Response

PWCS is committed to establishing and maintaining a work place, which minimises hazards to human health and the environment from emergency situations (e.g. fires, explosions, unplanned material or liquid releases). All related emergency and corrective actions will be developed in conjunction with procedures and guidance set out in the Project's Emergency Procedure, the Hazardous Substances Procedure and the Terms and Conditions of the EPCM (Environment, Procurement, Construction & Management) Contract. These provisions shall be carried out promptly whenever emergencies occur which could threaten human health or the environment.

5.0 Monitor and Review

5.1 Environmental Monitoring

PWCS has designed and implemented a range of environmental management strategies and plans to effectively manage the impacts of KCT on the environment and local community. In addition, PWCS has developed noise management, dust control and water management plans and strategies. These plans and strategies outline the specific processes implemented at KCT to manage, monitor and effectively minimise potential impacts of KCT operations on these aspects of the surrounding environment.

An integral aspect of the environmental management system in place at KCT is the air quality and noise monitoring program. The existing noise and air quality monitoring locations are positioned to measure noise and dust emissions of the KCT facility in surrounding residential and industrial areas. The existing air quality and noise monitoring locations are shown on **Figure 5.1**. Environmental monitoring is undertaken on a regular basis in accordance with regulatory requirements, with monitoring results reported quarterly to the DECC and DoP.

The environmental monitoring program will continue to be carried out in accordance with current practices at KCT. This monitoring will enable the review of the effectiveness of the environmental management controls and activities implemented during construction activities associated with the Project. Further details on specific environmental monitoring are outlined further in the specialised construction management plans attached to this CEMP.

5.1.1 Construction Environmental Noise Monitoring

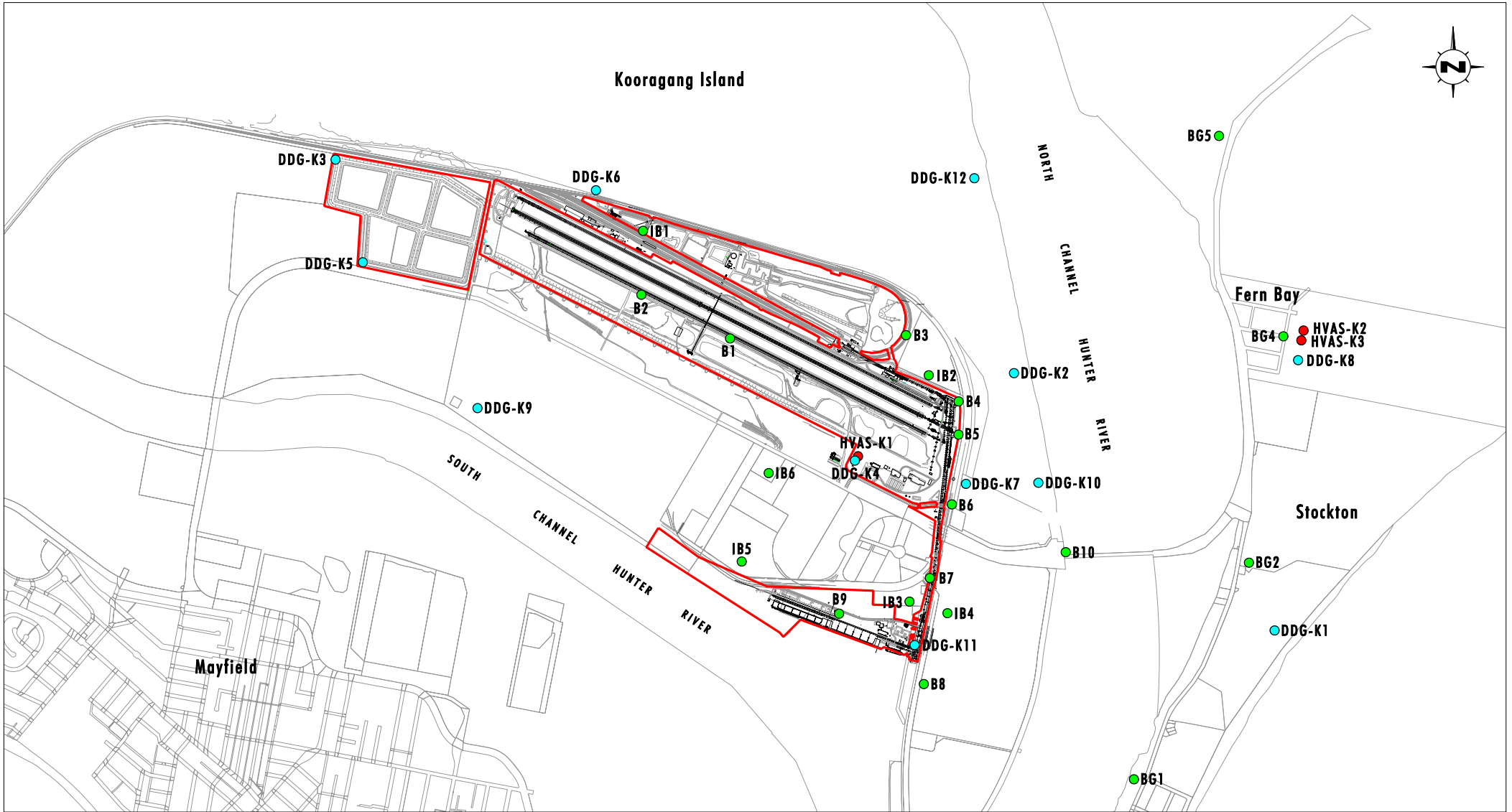
In addition to the ongoing implementation of the noise monitoring, noise monitoring will be carried out in accordance with the Construction Noise Management Plan on the construction area perimeter and in other locations, and will include both construction noise and background noise to confirm compliance with prescribed limits. Due to the nature of the construction activities monitoring will be carried out to focus on the specific task being undertaken, and will change according to the location of construction activities associated with the project. Where there is a potential for prolonged or intermittent activity to be reasonably detected at residential areas (but still be within prescribed limits) the need to liaise with affected residents will be implemented by PWCS.

5.1.2 Complaints and Enquiries

PWCS have in place a 24 hour Community Enquiry line for the operational plant and this will be available throughout the construction activities associated with the Project. The community enquiry processes in place at KCT are consistent with the requirements of the Project Approval.

Enquiries will be documented and transmitted to the PWCS Specialist Advisor Environment immediately, in accordance with the compliance tracking program.

The PWCS community enquiry line phone number is 02 49072280. If outside of normal work hours the caller is given the option to contact the shift supervisor of the operating plant or leave a message which will be responded to on the next working day.



Source: Port Waratah Coal Services Limited

0 0.5 1.0 1.5 km
1:30 000

Legend

- Kooragang Coal Terminal
- Dust Monitoring Location
- HVAS Monitoring Location
- Noise Monitoring Location

FIGURE 5.1

**Dust and Noise Monitoring Locations
Kooragang Coal Terminal**

5.2 Corrective Action

Table 5.1 summarises the potential environmental issues that may arise during construction and the appropriate corrective action to be taken.

Table 5.1 - Corrective Actions

Problem	Corrective Action
Potential for an exception to environmental criteria based on observations and/or interpretation of monitoring data.	Investigation of exceptions, undertaking mitigating measures where applicable. Report potential exception to Senior Management.
Exception to relevant environmental quality criteria.	Investigation of exception, undertaking mitigating measures where applicable. Report exception to regulatory agencies, senior management and notify impacted residents as required.
Community enquiry.	Investigation of enquiry, implementing mitigating measures where applicable and provide feedback to enquirer in accordance with enquiries protocol. Report enquiry to senior management as appropriate. Provide feedback to construction personnel, where relevant.

5.3 Review

The CEMP is to be reviewed at least every year or as otherwise directed by the Director-General of DoP. The review process is to reflect changes in environmental legislation and guidelines and changes in technology or construction activities and procedures.

In accordance with the Project Approval PWCS will commission an Independent Environmental Audit to the satisfaction of DoP on an annual basis. The Audit will include an assessment of the adequacy of the CEMP. Where necessary following the audit, the CEMP will be updated and action taken to improve performance and management practices.

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