PWCS

PRELIMINARY ENVIRONMENTAL ASSESSMENT

Kooragang Coal Terminal Stage 4 Project
Fourth Dump Station & Fourth Shiploader

Umwelt
Environmental Consultants

JANUARY 2009

Preliminary Environmental Assessment

Kooragang Coal Terminal
Stage 4 Project
Fourth Dump Station and Fourth Shiploader

Prepared by

Umwelt (Australia) Pty Limited

on behalf of

Port Waratah Coal Services Limited

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1.0 Introduction

Port Waratah Coal Services Limited (PWCS) owns and operates the Carrington Coal Terminal (CCT) and Kooragang Coal Terminal (KCT) in the Port of Newcastle in New South Wales (NSW) (refer to **Figure 1.1**). The terminals receive, assemble, blend and load Hunter region coal onto ships for export to customers around the world. To meet the increasing demand for Hunter region coal, PWCS has implemented a continuous expansion program that has seen total throughput capacity for the two terminals increase from 46 million tonnes per annum (Mtpa) in 1996 to the present approved 145 Mtpa capacity.

Expansion works at the KCT are being progressed in accordance with the Stage 3 Expansion development consent (DA No 35/96) issued by the Minister for Urban Affairs and Planning in November 1996. This development consent provided for two additional stockpile pads (referred to as Pad C and Pad D), a third shipping berth (referred to as K6 wharf) and third ship loader, a third rail coal receival station, a fourth shipping berth (K7 wharf) and associated coal handling infrastructure (refer to **Figure 1.2**). It was envisaged at the time of approval that these works would enable KCT capacity to increase from approximately 44 Mtpa to a nominal 77 Mtpa. Since 1996, PWCS has established the third rail coal receival station; the K6 wharf and third shiploader; and the eastern half of the approved stockpiles Pad C and D, and the associated reclaimers, stackers and interconnecting conveyors.

PWCS obtained a Project Approval under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act) in 2007 to increase the approved capacity throughput to a nominal 120 Mtpa. The Project involved capacity enhancement of the existing and approved operations. The approved increase in capacity will not require any change to the size of the approved footprint or operational area. The approved increase to throughput capacity of 120 Mtpa is to be achieved through the maximisation of capacity of existing and approved coal handling infrastructure, such as:

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

In response to the continued increase in demand for Hunter Valley coal, PWCS has investigated options to maximise the efficiency of KCT so as to achieve the approved throughput capacity while accommodating the constraints, both internal and external, to the terminals. This investigation has identified the benefit of constructing and operating a fourth dump station, a fourth shiploader, and associated coal handling infrastructure. PWCS is seeking approval for the construction and operation of the fourth coal handling stream at KCT.

PWCS has consulted with the Department of Planning (DoP) in regard to this proposal and confirmed that the 2007 Project Approval (Approval No 06_0189) can be modified under section 75W of the EP&A Act. Consequently, the Minister for Planning is the approval authority for this proposal.

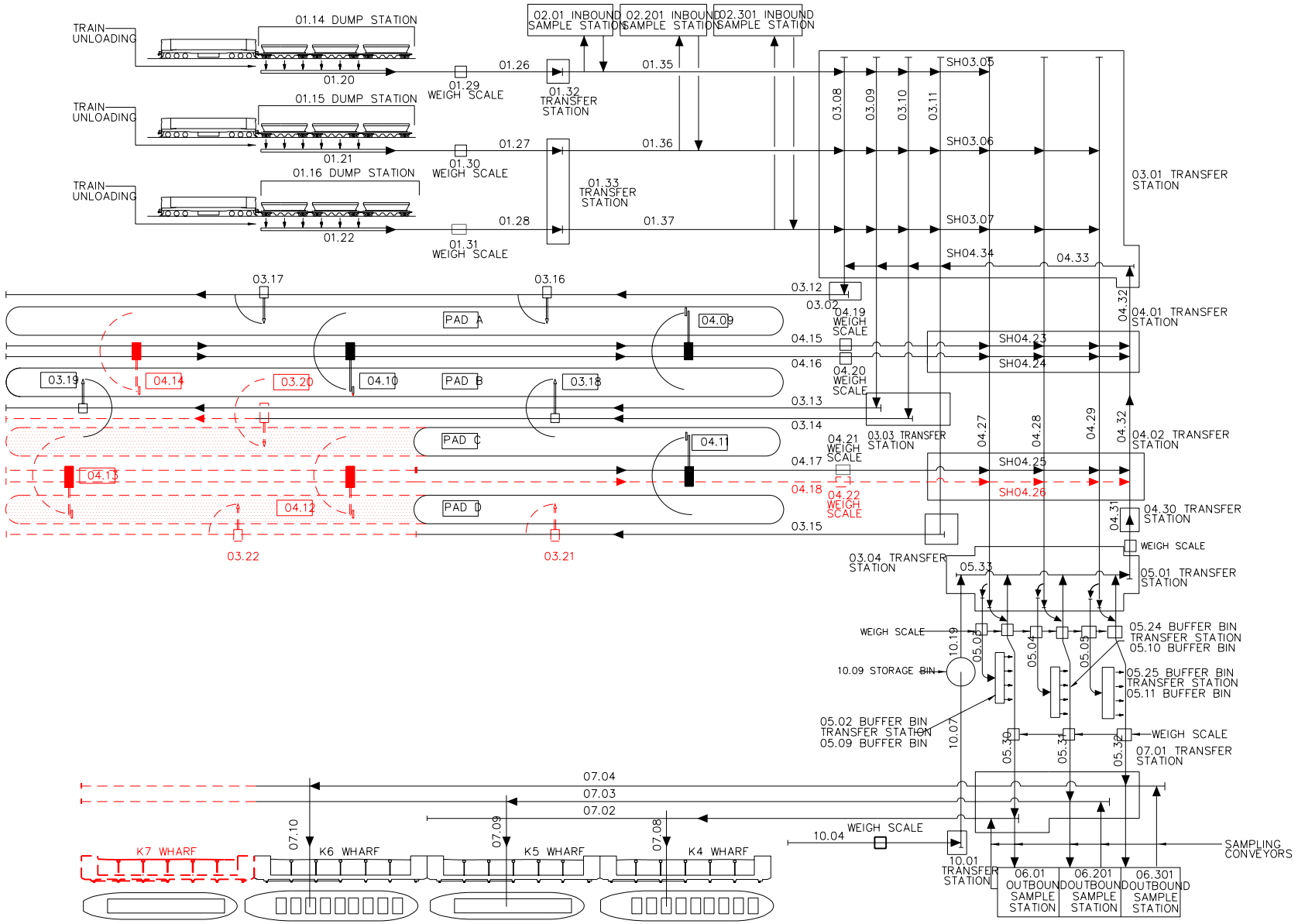
This Preliminary Environmental Assessment (PEA) has been prepared by Umwelt (Australia) Pty Limited on behalf of PWCS to accompany the application to modify the 2007 Project

Legend

Kooragang Coal Terminal

FIGURE 1.1

Location of Kooragang Coal Terminal



Source: Port Waratah Coal Services Limited

Legend

- Existing Plant
- Approved Plant yet to be Built

FIGURE 1.2

Schematic of Existing and Approved Kooragang Coal Terminal

Approval to DoP. Following consideration of the PEA and consultation with relevant government agencies, DoP will provide Director-General's Requirements (DGRs) for preparation of the Environmental Assessment (EA). Once completed, the EA will be provided to DoP for adequacy review, prior to being placed on public exhibition.

This document provides a brief outline of the existing, approved and proposed development; an overview of the community and environment context; an environmental risk analysis; and identifies key issues proposed to be addressed in the EA for the Fourth Dump Station and Fourth Shiploader Project (the Project).

2.0 Project Description

2.1 Existing and Approved Operations

PWCS receives, stockpiles, blends and loads coal onto ships for export. It serves approximately 20 coal producers who operate mines in the Hunter Valley, Gunnedah and Ulan regions. During the year ending 2008, PWCS handled 74 million tonnes (Mt) of coal through the KCT facility. Road transport of coal to KCT ceased in 1999 and all coal is now delivered to the terminal by rail.

The layout of current and approved operations is shown on **Figure 2.1** with the operational coal receival, handling and shiploading facilities presented in schematic format on **Figure 1.2**. On arrival at the terminal, coal is discharged from rail wagons within the enclosed rail receival station and transferred by conveyors to the stockpile areas, referred to as the stockyard. Coal can also be conveyed directly from the receival station to the shiploading facility, if required as a contingency for late train arrivals. Contractual arrangements with customers require that coal cargoes be assembled on the KCT stockpile before the relevant ship comes into the port for coal loading. Late coal arrivals therefore only occur under exceptional circumstances, i.e. if there is an operational or system issue. All in-bound coal can be sampled for quality checks as it leaves the rail receival station.

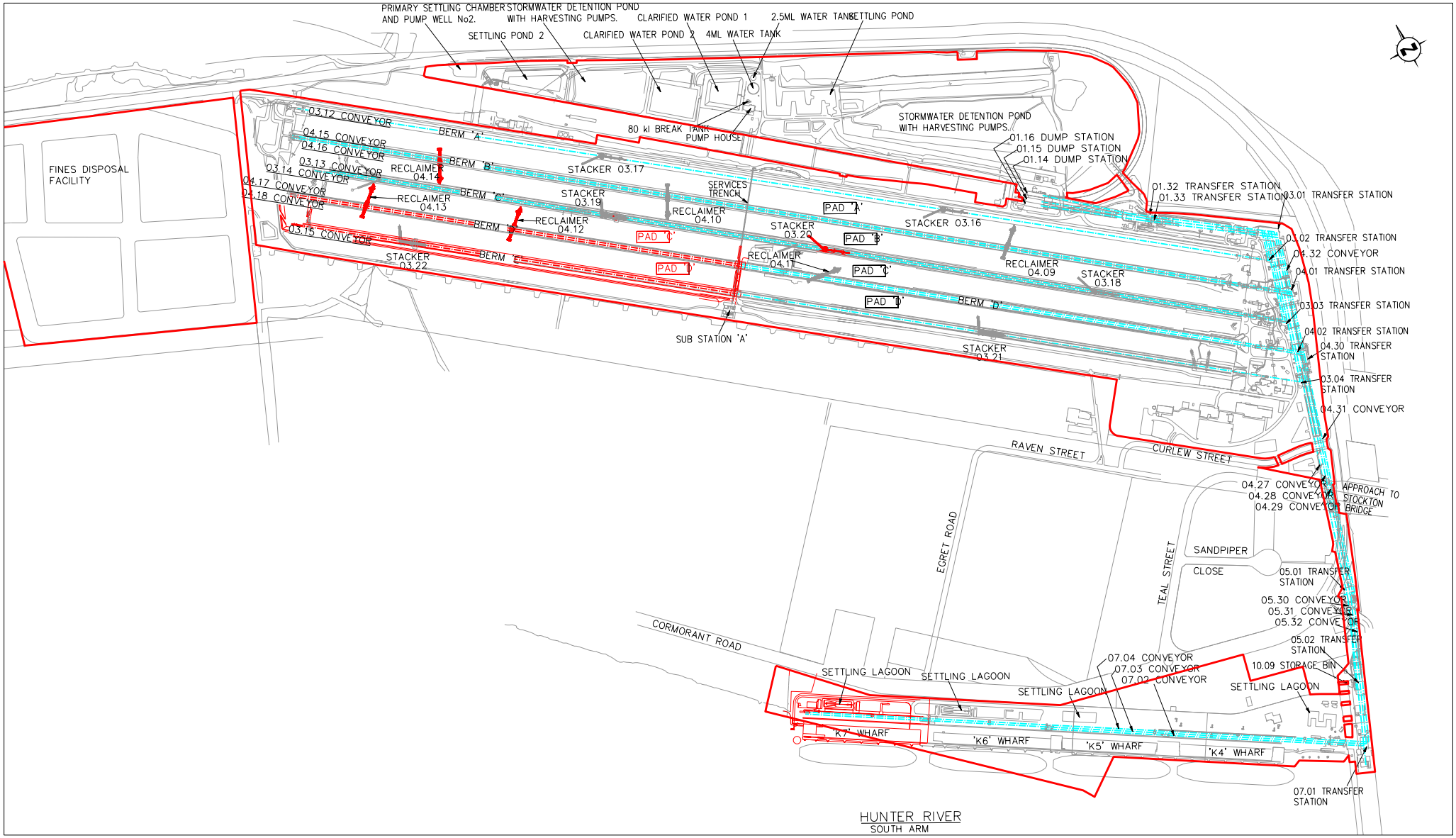
Stockpile Pads A and B and half of stockpile Pads C and Pad D, are established and used during current operations. The full length of stockpile Pads C and D are approved for construction within the footprint shown on **Figure 2.1**. These remaining approved stockpile areas are planned to be established and operate progressively to meet the future demands of the export coal industry. In the stockyard, rail mounted luffing/slewing 'stackers' place coal in pre-designated pad areas. Different types and cargoes of coal are stacked into separate stockpiles. Cargo assembly is planned to maximise port throughput with cargoes being assembled in nominally three to ten days dependent on source. The total existing working stockpile capacity is approximately 2 Mt and this will increase to a nominal 3 Mt when all stockpiles are operational.

Coal is retrieved from the stockyard by rail mounted 'bucket-wheel reclaimers'. It is then conveyed directly to the shiploading facility or recirculated within the stockyard for blending or cargo assembly. The terminal currently prepares and handles over 80 different coal types.

Coal is loaded onto ships at the berths by shiploaders. The existing facility has three shiploaders and three berths; K4, K5 and K6. Each shiploader, and its associated system of conveyors, buffer bins and transfer stations, is referred to as a shiploading stream. Buffer bins allow continuous coal reclaiming and transfer during the changing of ship hatches by the shiploader. PWCS has approval to construct a fourth shipping berth (K7) (refer to **Figure 2.1**). The existing shiploader for the third shipping berth (K6) will also service the fourth shipping berth (K7) when it is constructed, allowing for a higher utilisation of the shiploading systems during the period in which ships are being prepared for loading and dispatch.

All out-bound coal is sampled for quality prior to shiploading. The average time to load and dispatch a ship is less than two days.

As outlined in **Section 1.0**, PWCS obtained a Project Approval in April 2007 to enable an increase to the throughput capacity of KCT from 77 Mtpa to a nominal 120 Mtpa. The increase in throughput capacity did not require any changes to the size of the approved footprint or operational area or additional plant and equipment at KCT.



Source: Port Waratah Coal Services Limited

Legend

- Kooragang Coal Terminal
- Existing Plant
- Existing Conveyors
- Approved Plant yet to be Built

FIGURE 2.1

Layout of Existing and Approved Kooragang Coal Terminal

2.1.1 Existing Environmental Management

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. All management strategies and plans are consistent with meeting current regulatory and community standards. Central to the environmental management framework of KCT, is an Environmental Management Plan, developed by PWCS to provide the overarching environmental management framework for both the construction and operational phases of KCT.

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. Each of the environmental management plans have been approved by relevant authorities including the Department of Environment and Climate Change (DECC), DoP and Newcastle City Council (NCC).

Further details on the environmental management practices implemented at KCT are provided in **Section 4.0**.

2.2 Need for the Project

PWCS has identified a potential benefit to the current and approved KCT facility to have 'sprint capacity' to meet the overall 120 Mtpa throughput following short term disruptions to operations. Short term delays in throughput result from a variety of occurrences, such as closures of the coal transportation chain, unplanned maintenance outages and port and rail interruptions due to bad weather. The additional 'sprint capacity' is proposed to be achieved through the construction and operation of additional coal handling infrastructure at KCT.

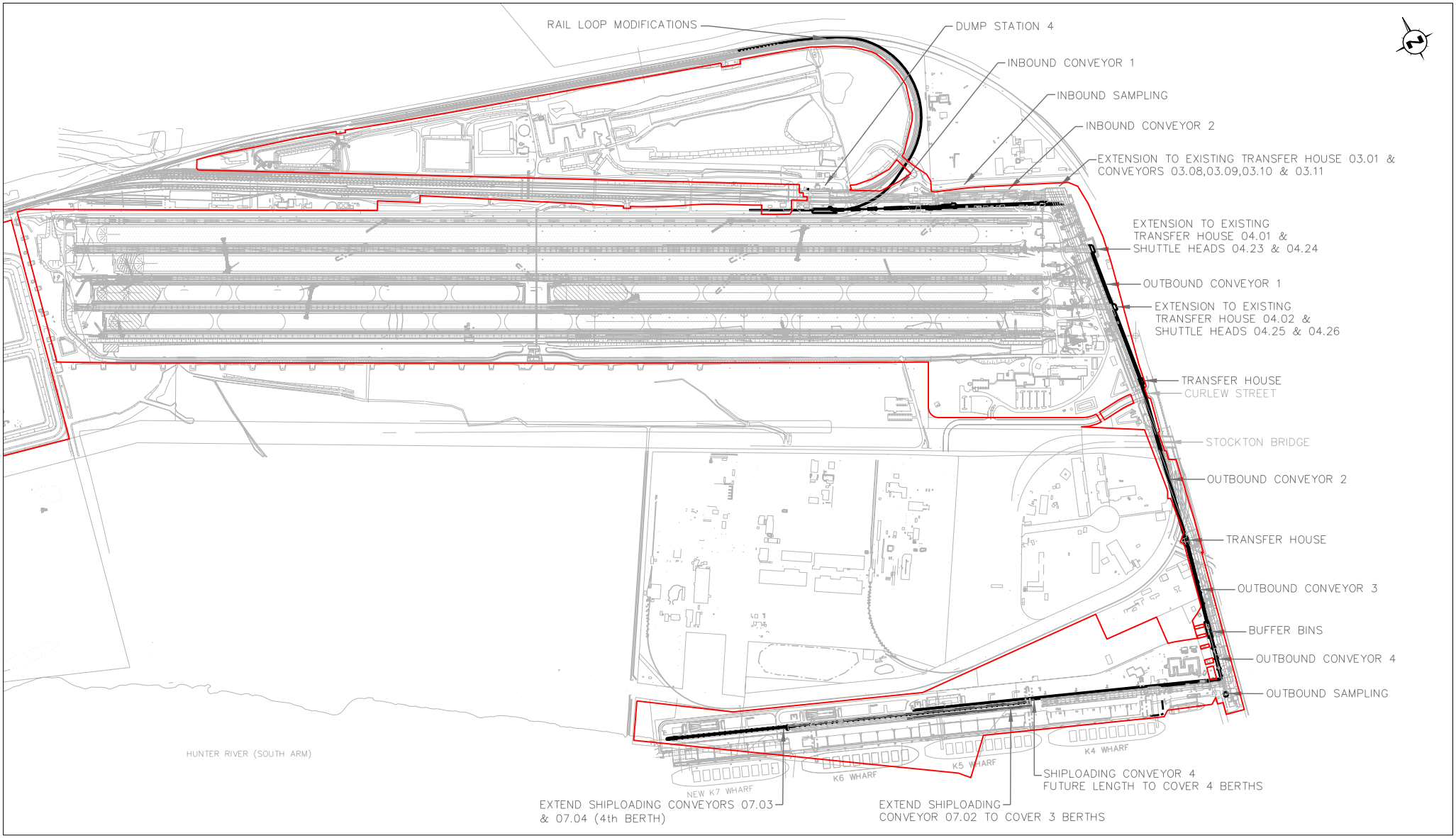
The Project seeks to accommodate the anticipated growth in demand for Hunter region coal internationally. The Hunter region coal industry has recently publicly reported coal export forecasts in excess of 250 Mtpa within the medium term. Coupled with this identified increase in throughput demand, significant investment has been proposed to provide expansions in transport and handling infrastructure, which is expected to result in a significant increase in thermal coal exports in the next few years.

The Australian Rail Track Corporation (ARTC) is currently implementing an infrastructure upgrade strategy of the Hunter Rail network in order to meet projected future growth in export coal production. The Hunter Rail network currently transports coal from the Gunnedah, Hunter, and Western Coal fields.

The proposed upgrades to rail infrastructure aim to remove the existing constraints within this system to increase the capacity and efficiency of the coal transportation and handling chain. The Project will benefit the overall coal transportation chain through minimising the potential for lost capacity during short term interruptions.

2.3 The Project

PWCS proposes to construct and operate a fourth dump station for the receival of coal at KCT, a fourth ship loader, and associated coal handling infrastructure. The additional coal handling and loading infrastructure will allow PWCS to improve the efficiency of coal throughput at KCT. The project will include the construction and operation of additional infrastructure as shown on **Figure 2.2**, including:



Source: Port Waratah Coal Services Limited (2008)

0 100 200 400m

Legend

- Kooragang Coal Terminal
- Stage 4 Project

FIGURE 2.2

Layout of Fourth Dump Station and Fourth Shiploader Project

- fourth dump station, associated rail facilities, sample plant and inbound conveyors;
- augmentation to the rail loop to include an additional inbound and outbound track to the fourth rail receival facility;
- feed out conveyor including the construction and operation of a conveyor bridge over Teal Street, on the approach to Stockton Bridge;
- transfer houses;
- surge bin;
- outbound sample plant;
- shiploader conveyor; and
- fourth shiploader to service the existing and approved berths.

Throughout the last 10 years of implementing the expansion of KCT, PWCS has consistently developed and implemented desirable new approaches and technologies to improve operational capacities, minimise environmental impacts, and to ensure the safety and health of its workforce. PWCS remains conscious of its obligations to its employees, neighbouring communities and the environment in which it operates. While the upgrade is operationally significant, with streamlining of systems and the use of new available technology, the projected impact on surrounding communities and the local environment are minimal, as discussed in **Section 4.0**. Key features of the Project that need to be borne in mind when considering potential impacts are provided below.

The project will:

- involve only minor changes to the approved footprint of KCT with additional infrastructure associated with the Project to be constructed on previously disturbed land;
- be encompassed by the existing environmental management systems including the water management system, air quality and noise mitigation strategies;
- maintain current internal road traffic movements as all coal will be moved by conveyors;
- include installation of proven noise attenuation on new plant and equipment to reduce operational noise impacts;
- include installation of proven dust control measures on new plant and equipment to reduce the potential for dust generation;
- introduce soft flow chutes to eliminate coal boiling typical of traditional chutes and so reduce dust at transfer points;
- continue to enclose coal transfer chutes within Transfer Houses;
- continue to receive rail deliveries in enclosed buildings and minimise unloading dust by minimising drop heights into receival bins;
- continue to control the dust from the stockpiled coal by ensuring the surface of stockpiles are kept appropriately moist by the stockpile yard spray system, controlled automatically from an on-site weather station;

- continue to limit stacker drop heights to minimise the 'drop zone' of the coal, thereby controlling dust. Automated stackers are used which assists with minimising this 'drop zone' and also provides for greater operational efficiency; and

- Shiploader infrastructure designed to discharge coal within the hold of a ship, minimising the height of open free fall of coal and dust creation.

The infrastructure associated with the Project will be constructed during defined periods and outages along side the existing operating plant. The construction activities will be scheduled to minimise potential impacts on KCT operations and surrounding land uses.

The Project does not require any change to the operational workforce and the facility will continue to operate 24 hours a day, for the whole year.

3.0 Planning Considerations and Consultation

3.1 Planning Considerations

As noted in **Section 1.0**, a modification to the 2007 Project Approval is sought under section 75W of the EP&A Act. The 2007 Project Approval was given under Part 3A of the EP&A Act as it is of a class of development listed in Schedule 1 of the State Environmental Planning Policy (SEPP) (Major Projects) 2005. As the 2007 Project Approval was given under Part 3A of the EP&A Act, the Section 75W path is available for the proposed modification to enable the construction and operation of the Project.

The KCT site is zoned Port and Industrial 4(b) under Newcastle Local Environmental Plan 2003 (LEP). The primary objective of this zoning is:

> To accommodate port, industrial and maritime industrial and bulk storage facilities, which by their nature or scale of their operations require separation from residential areas and other sensitive land uses.

The Project is consistent with the objectives of the LEP and is permissible with development consent.

The road reserve associated with Teal Street is zoned 5(a) Special Uses under the LEP as it has been identified as an arterial road. The objectives of this zoning include:

a. To accommodate major transport networks and facilities;

b. To accommodate large scale facilities and services, together with ancillary activities;

c. To accommodate large scale community establishments, together with ancillary activities;

d. To require development to be integrated and reasonably consistent in scale and character with surrounding natural, rural or urban environments.

As shown on **Figure 2.2**, it is proposed to construct a conveyor bridge over Teal Street as part of the Project. Within the 5(a) Special Uses zone, this aspect of the Project is prohibited under the provisions of the Newcastle LEP 2003. The current provisions of the EP&A Act, and associated Regulations, preclude the Minister from approving a project that is prohibited by an environmental planning instrument. At the time of the granting of the 2007 project approval, the relevant provisions of the EP&A Act and associated Regulations were not in force. Legal advice has indicated that the 2007 project approval may lawfully be modified despite the prohibition in the LEP for the conveyor crossing of Teal Street. As such, it would be available to the Minister to approve the proposed Section 75W modification to enable the construction and operation of the Project.

In addition to approval under Section 75W of the EP&A Act, there are other Commonwealth and State legislation and policies that are potentially relevant to this project. These are listed in **Table 3.1** together with an indication of further assessment proposed or approvals likely to be required under such legislation.

Table 3.1 – Other Potentially Relevant Acts and State Planning Policies

Planning Provision	Comments	Relevant Licences/ Approvals/Assessments
Commonwealth Legislation		
Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)	KCT is located adjacent to a RAMSAR wetland (Kooragang Nature Reserve) and a number of migratory and threatened species listed in the EPBC Act are known to occur in the area. The proposed development will involve minor changes to the approved footprint of KCT. Predicted off-site impacts (noise and dust) are also expected to be consistent with, or lower than, existing approved levels. On this basis, it is anticipated that the proposed development will not have a significant impact on the wetland or listed species, and therefore will not need to be assessed as a 'controlled action' under the EPBC Act.	A Preliminary Referral will be made to the Department of the Environment, Water, Heritage and the Arts to confirm that the project is not a controlled action under the EPBC Act.
NSW Legislation – State Environmental Planning Policies		
State Environmental Planning Policy 33 (SEPP 33)	SEPP 33 requires the consent authority to consider whether an industrial proposal is a potentially hazardous industry or a potentially offensive industry. A hazard assessment is completed for potentially hazardous development to assist the consent authority to determine acceptability.	The existing PWCS operation is not considered as hazardous or offensive under SEPP 33. The proposal will not result in KCT facility being classed as hazardous or offensive. A hazard assessment is not considered necessary.
State Environmental Planning Policy 44 (SEPP 44)	SEPP 44 restricts the granting of development consent for proposals on land identified as core koala habitat without preparation of a plan of management.	There is minimal clearing required for this development and no off-site impacts on koala habitat; therefore this SEPP does not apply.
State Environmental Planning Policy (Major Projects)	As discussed above, the project is of a class of development listed in the SEPP. The project therefore requires approval under section 75W of the EP&A Act and the Minister for Planning will be the consent authority.	Assessment under section 75W of the EP&A Act.
NSW Legislation – Acts		
Protection of the Environment Operations Act 1997 (POEO Act)	The PoEO Act is administered by DECC and requires licences for environmental protection including waste, air, water and noise pollution control.	PWCS currently holds an Environment Protection Licence (EPL) for KCT. Modification to this licence will not be required for this Project.
Roads Act 1993	The *Roads Act 1993* is administered by the Roads and Traffic Authority (RTA), local council or the Department of Lands. The RTA has jurisdiction over major roads, the local council over minor roads, and the Department of Lands over Crown road reserves.	The proposed construction of a conveyor bridge over Teal Street has the potential to impact on the road and an approval under this Act will be required.

3.2 Authority Consultation

An initial project briefing has been provided to DoP in order provide an overview of the Project and to confirm the proposed approval path for the Project. In addition, PWCS will maintain ongoing consultation with relevant agencies throughout the preparation of the EA for the Project, which will focus on the discussion of specific issues associated with the Project. Relevant agencies to be consulted throughout the preparation of the EA include:

- DECC;
- NSW Maritime;
- Newcastle City Council;
- Port Stephens Council;
- Newcastle Port Corporation; and
- NSW Maritime.

As noted in **Section 3.1**, the Commonwealth Department of the Environment, Water, Heritage and the Arts (DEWHA) will be consulted regarding this Project, and a Preliminary Referral made under the EPBC Act, to confirm that this project is not a 'controlled action' under the EPBC Act.

3.3 Community, Industry and Stakeholder Consultation

PWCS maintains an ongoing and active relationship with the local community by participation in a number of community forums and Council committees. PWCS also maintains a 24 hour phone line system to allow for the notification of environmental and community issues. All notifications are recorded on a community enquiry register. In the previous six years of the operation, there have been a very low number of notifications from the community. In the 12 months from July 2007 to June 2008, there were no KCT related community enquiries registered with PWCS relating to environmental issues. PWCS also maintains strong relationships and communications with industrial neighbours.

For the neighbouring communities of Fern Bay, Stockton and Mayfield and industrial neighbours, the changes to PWCS's existing operations will be of interest. To accommodate this interest and encourage open engagement, PWCS is conducting a comprehensive community consultation process for the project.

The community consultation will commence at the time of lodging the PEA. The objective of the consultation process is to notify and receive feedback from a broad cross-section of a range of stakeholders who may be interested in the project.

As an existing operator in the region with a commitment to be a good industrial neighbour, PWCS has established a solid and productive working relationship with its immediate neighbours and the local community. These existing communication processes will be utilised to consult with a range of stakeholders, including:

Neighbouring Industry – Existing and Proposed

- Cargill Oil
- Kooragang Bulk Facilities

- Newcastle Coal Infrastructure Group (NCIG)
- Orica
- Boral Group
- Origin Energy
- Blue Circle Cement
- Mountain Industries
- Pacific Carbon
- Cleanaway
- Transpacific
- Port Hunter Commodities.

Community

- Environmental Protection and Pollution Advisory Committee (EPAPAC)
- Fern Bay Community
- Mayfield Residents Action Group
- Mayfield Resident Forum
- Carrington Residents Action Group
- Citizens and Kooragang Alliance
- Stockton Residents Forum
- Kooragang Wetland Rehabilitation Project
- Hunter Coastal and Estuary Management Committee
- Rising Tide
- Climate Action Newcastle
- Hunter Community Environment Centre.

PWCS

- Employees, contractors and suppliers.

In addition, the Newcastle Business Club and Hunter Business Chamber will be briefed in order to inform a wider network of the local business community.

The community consultation strategy will use a range of methods to ensure PWCS consultation reaches a wide range of people. To support the consultation process, public information about the Project will be accessible on PWCS's website, distributed in newsletters to local residents, and be contained in regular briefings in the media. Relevant

PWCS personnel will be available to respond to enquiries in relation to the proposed development.

It is expected that during the consultation, other groups or individuals of interest will emerge and be included in the consultation process.

All findings will be recorded, summarised and presented for inclusion in the EA report.

4.0 Preliminary Environmental Assessment

4.1 Environment and Community Context

Kooragang Island is essentially reclaimed land created by joining Dempsey, Moscheto and Walsh Islands. The area was originally developed in the early to mid 1900s as the industrial centre for Newcastle. Officially named in 1968, Kooragang Island is a total area of approximately 2600 hectares and is bounded by the South and North Arms of the Hunter River (refer to **Figure 1.1**). KCT is strategically located in the south-eastern portion of Kooragang Island, providing ready shipping access via the Hunter River and Newcastle Harbour.

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 area are located to the south and south-west, across the Hunter River.

4.1.1 Existing and Proposed Land Use – Kooragang Island

Industry and port facilities are located on the southern part of Kooragang Island (refer to **Figure 4.1**). PWCS is one of a number of operations on the Island including Cargill Australia, Air Liquide, Orica, Incitec Pivot, Newcastle Woodchipping, Cleanaway, Mountain Industries, Blue Circle Cement, Boral, Port Hunter Commodities, Sims Metals, Kooragang Bulk Facilities, TransPacific, and Transfield. In addition, the Newcastle Coal Infrastructure Group (NCIG) is currently constructing a third coal export terminal (approved in 2007) on land adjacent to KCT. Existing land uses include heavy industrial, light industrial, transport and distribution, port facilities and vacant industrial land.

Heavy industrial land uses within the Kooragang Island industrial area include a range of large scale operations associated with cement production, concrete batching, oilseed processing, fertiliser manufacturing and distribution, and ammonium and acid manufacturing. In addition, surrounding heavy industrial land use includes a hazardous waste disposal facility, LPG gas production and distribution facilities and a scrap metal reclamation facility. Light industrial land uses within proximity to the KCT site include a number of engineering and fabrication operations and industrial building suppliers.

There are a number of other port facilities within proximity to the KCT site. These port facilities are primarily utilised for the receival or export of raw materials, including alumina, petroleum coke, wood chips, phosphate rock, grain, cement, and a number of agricultural products, most of which are utilised in the range of manufacturing operations associated with the heavy industry land uses within the area. There are also a number of transport and logistic companies located within the Kooragang Island industrial area associated with fertiliser manufacturing operations, and aluminium production.

Within the Kooragang Island industrial area there are considerable areas of vacant land, currently zoned for industrial land uses under the Newcastle LEP 2003. The Hunter Development Corporation (HDC) controls much of this land, with commercial leases being established between the HDC and entities to utilise land within the area.

Kooragang Nature Reserve adjoins the northern boundary of the KCT site. Following an investigation into the natural areas and environmental importance of the site, parts of Kooragang Island were internationally recognised as a RAMSAR site in 1984. The Kooragang Wetland Rehabilitation Project was created in 1993, with ongoing support from

Legend

- Kooragang Coal Terminal
- Heavy Industry
- Light Industry
- Vacant Land
- Urban
- Port Facilities
- Newcastle Golf Course
- Nature Reserve
- Approved NCIG Coal Export Terminal
- Suburban

FIGURE 4.1

Land Use

government, local industries (including PWCS) and the community. This Project includes work on Ash Island, to the north-west of KCT, Stockton Sandspit to the east and Tomago wetlands to the north.

4.2 Preliminary Environmental Risk Analysis

To assist in identifying the key environmental and community issues that require further assessment, a preliminary environmental risk analysis has been completed for the project and is included in **Appendix 1**.

The preliminary environmental risk analysis identifies those issues requiring detailed investigation in the EA, as being potential noise, dust and visual impacts. It is also acknowledged that Greenhouse Gas (GHG) emissions and associated climate change impacts are an increasingly important issue in the community and a GHG assessment will be a requirement for the EA for this Project. Further detailed assessment is not considered necessary for other potential environmental issues as indicated in **Appendix 1**.

The proposed approach to the detailed assessment of the key environment and community issues as part of the EA is discussed in **Section 4.3**, and an overview of other issues is provided in **Section 4.4**.

4.3 Key Environment and Community Issues

4.3.1 Noise

Heggies Pty Ltd (Heggies) has undertaken ongoing noise management, including monitoring and assessment, for PWCS since the inception of the Stage 3 expansion. A comprehensive noise assessment was also undertaken by Heggies for the 2007 Project Approval. This work focused on noise control optimisation and validation to achieve reductions in noise emissions from on-site plant and machinery. Heggies will complete the detailed noise assessment for the EA, in consultation with DECC and DoP.

4.3.1.1 Existing Noise Limits and Performance

The existing noise limits specified in the April 2007 Project Approval are outlined in **Table 4.1**.

Table 4.1 – Existing Noise Limits

Location	Day, Evening, Night At all times	Night 10.00pm to 7.00am Monday to Saturday 10.00pm to 8.00am on Sundays and Public Holidays	
	$L_{Aeq(15\ minutes)}$	$L_{Aeq(night)}$	$L_{A1(1\ minute)}$
Fern Bay North	46	43	55
Fern Bay West	50	47	55
Fern Bay East	49	46	55
Stockton West	50	47	57
Stockton East	49	46	56
Mayfield West	41	37	56
Mayfield	44	38	58
Carrington	42	38	52

The existing consent has provided an effective mechanism for managing KCT noise.

Existing noise monitoring locations are shown on **Figure 4.2**. Noise monitoring and modelling of the KCT facility confirm that the operations comply with these noise limits, and indeed, Stage 1 + 2 + 3 development is well below the relevant limit at the nearest residential areas. This is also confirmed by the low level of community concern regarding noise from the site with only four community enquiries received by PWCS in relation to noise issues for KCT, over the last five years.

4.3.1.2 Existing Noise Management

PWCS has implemented an Acoustical Design, Procurement, Construction and Commissioning process throughout the Stage 3 and 120 Mtpa Expansion to meet approved noise limits and ensure that the noise risk management procedure is consistent with current regulatory and community standards. This process has included:

- noise limits and acoustical specifications for all individual items of plant;
- off site full load testing of significant items of plant prior to acceptance for delivery to site;
- desktop design validation and full load supplier shop testing during plant procurement;
- *in-situ* acoustic performance acceptance testing during plant commissioning;
- ongoing acoustical modelling of the installed plant;
- regular on and off site noise emission monitoring and reporting;
- identifying potential noise controls at the source and propagation path; and
- ranking and actioning the noise controls based on site noise reduction cost effectiveness.

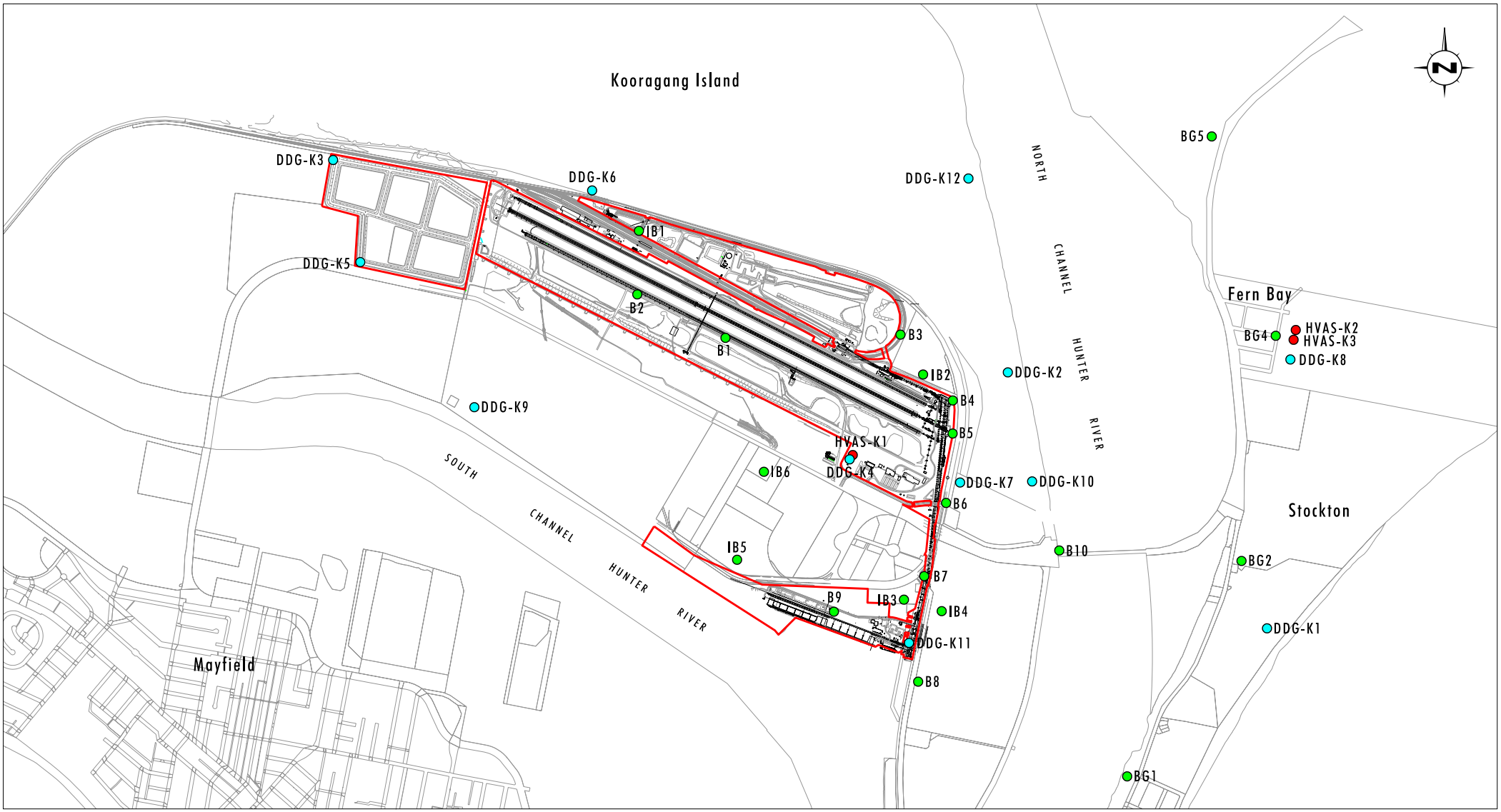
In many cases PWCS has gone well beyond Best Available Technology by promoting research and development of acoustical solutions not previously considered economically achievable. In comparison to earlier operations, specific noise control achievements implemented during Stage 3 and 120 Mtpa Expansion have included a 15 to 18 dBA reduction in conveyor drive sound power levels, and a 13 to 14 dBA reduction in sound power levels of stockyard and transfer conveyors.

4.3.1.3 Preliminary Findings and Further Assessment

A preliminary noise assessment has been undertaken by Heggies as part of the conceptual design phase of the Project. This assessment provides a preliminary review of the potential noise impacts associated with the Project in relation to current noise criteria outlined in the 2007 Project Approval and relevant INP requirements.

Overall, the preliminary noise assessment found that there only is a marginal difference in noise emissions from the total KCT operation with the inclusion of the additional infrastructure associated with the Project. Accordingly, the preliminary noise assessment has indicated that the potential noise impacts associated with the Project are consistent with the current approved KCT operations, and comply with relevant noise criteria, at the closest sensitive receiver areas.

As outlined in **Section 4.3.1.2**, PWCS implements an Acoustical Design, Procurement, Construction and Commissioning process that has demonstrated noise reduction at KCT not previously considered economically or practically achievable. PWCS is committed to the



Source: Port Waratah Coal Services Limited

Legend

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

FIGURE 4.2

Dust and Noise Monitoring Locations
Kooragang Coal Terminal

File Name (A4): R03_V1/2551_006.dgn

continuation of this noise attenuation program and will investigate all feasible options for the ongoing reduction in noise emissions from the Project.

A detailed noise impact assessment will be completed as part of the EA for the Project and will be prepared in accordance with the DECC's INP.

4.3.2 Air Quality

4.3.2.1 Existing Air Quality Management and Performance

PWCS developed and implemented a large array of dust controls and safeguards which are currently in place to ensure that air quality in the areas surrounding KCT is not adversely affected by emissions from the operation.

An integral part of the safeguards is the continuing implementation of an air quality monitoring program. The program was designed in consultation with the DECC and Newcastle City Council and the location of existing monitoring sites is shown on **Figure 4.2**. The focus of the program is to monitor compliance with air quality standards in the nearby residential areas. The monitoring program also seeks to document the indicative contribution of the operations at the terminal to the air quality in the area in general. By doing so, the results of the monitoring program identify any need for further strengthening of dust controls in certain areas of the operation.

Historically, early monitoring programs in the Kooragang and Stockton areas indicated dust levels well in excess of all current air quality goals. Over time, spanning three decades, the dust levels have been declining. The results of the current air quality monitoring program demonstrate that the air quality standards in the nearby residential areas of Fern Bay and Stockton are fully met.

A significant conclusion reached from the analysis of the monitoring results since 2000 is the fact that the levels of particulate matter in the ambient air of the residential areas have not risen with the increase in coal throughput at KCT.. Detailed analysis has also been undertaken in relation to the amount of coal particles reaching the residential areas. This analysis indicates that that the proportion of coal particles has remained constant (at approximately 20%) despite the increase coal throughput at KCT.

4.3.2.2 Preliminary Findings and Further Assessment

A preliminary air quality assessment has been undertaken by Holmes Air Sciences (Holmes). This assessment provides a preliminary review of the potential air quality impacts associated with the Project in relation to the relevant DECC impact assessment criteria.

Importantly for this assessment, the potential dust emission source of KCT of wind erosion from coal stockpile and exposed areas, remains unchanged from the approved KCT operation, as the Project does not propose to alter the existing approved stockpile areas.

The preliminary air quality assessment has indicated that the Project will result in marginal increases in dust emissions from KCT. Despite the predicted marginal increase in emissions, impacts associated with the Project will remain below relevant DECC criteria at surrounding residential areas.

A detailed air quality impact assessment will be undertaken as part of the EA process to further quantify and assess the air quality impacts associated with the Project, in consultation with DECC and DoP.

4.3.3 Visual Aspects

The Project will involve only minor changes to the current approved footprint of KCT. The construction of additional infrastructure, as outlined in **Section 2.3**, will result in minor changes to the appearance of the approved KCT operations. The primary change to the external appearance of the approved KCT is the proposed construction of a conveyor bridge over Teal Street, on the approach to Stockton Bridge. The additional infrastructure to be constructed and operated at the KCT will be consistent with the current industrial setting, and the approved conveyor bridges across Cormorant Road associated with the NCIG terminal.

While it is considered that any visual impacts would be minor, a detailed visual assessment will be undertaken as part of the EA process to ensure that visual impacts are considered as part of the EA and mitigation or enhancement measures are incorporated where possible.

4.3.4 Greenhouse Gas and Energy

Recent legal interpretations of the application of GHG assessment to the EA process under the EP&A Act has indicated that where a project has a direct link to the contribution of GHG emissions beyond its immediate boundaries, these emissions need to be included in the GHG assessment undertaken as part of the preparation of an EA for a Project.

The requirement to assess Scope 3 emissions has been formalised through the Director General's Environmental Assessment Requirements (DGRs) for major coal mine related projects. Effectively, where the DGRs for a Project require a GHG assessment, it is now a requirement to include considerations of Scope 3 emissions through quantification of this emissions scope, and provide a qualitative assessment of the associated climate change impacts.

PWCS does not propose to increase the currently approved throughput capacity of KCT of 120 Mtpa. As such, the potential Scope 3 emissions associated with the transport of coal to and from KCT and the emissions associated with the end use of coal throughput will not increase above those assessed as part of the 2007 Project Approval. A preliminary greenhouse and energy assessment has identified potential increases in the Scope 1 and 2 emissions at KCT associated with the Project.

A comprehensive greenhouse and energy assessment that focuses on the quantification of Scope 1 and 2 emissions will be included in the EA for the Project, to provide the basis for the ongoing management by PWCS.

4.4 Other Environment and Community Issues

4.4.1 Hydrology and Water Quality

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. To enable greater water harvesting and reduce dependence on potable water, the water management system for the complete Stage 3 Expansion has already been implemented and is operational.

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 (refer to **Figure 4.3**).

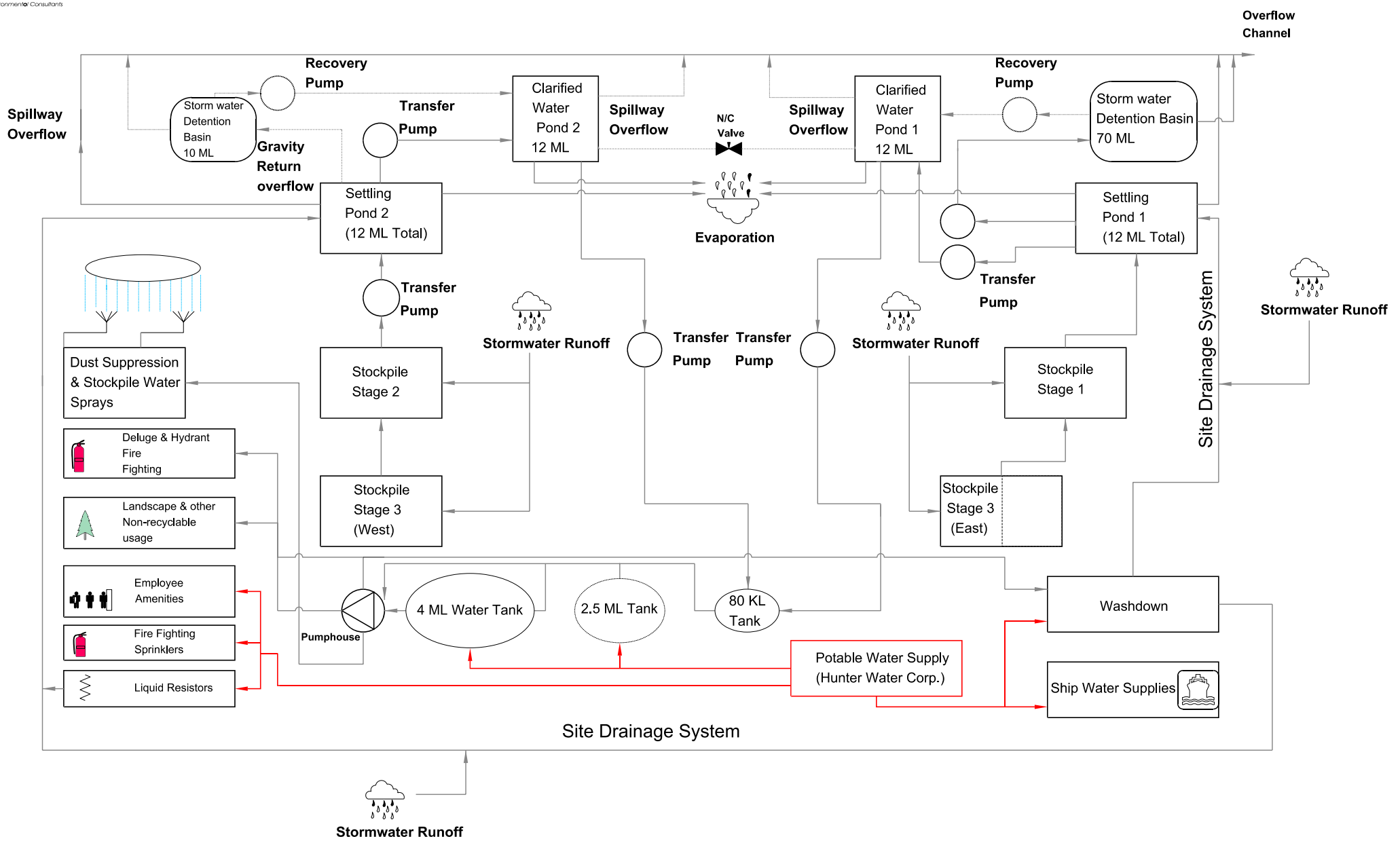


FIGURE 4.3

Schematic of Water Management System
Kooragang Coal Terminal

Source: Port Waratah Coal Services Limited

File Name (A4): R03_V1/2551_007.dgn

On site there are two 12 megalitre (ML) settling ponds and two 10 ML clarifying ponds. The ponds are located within the rail loop and are adjacent to large bunded areas (refer to **Figure 4.4**), which provide a further nominal 70 ML of storage, when needed. The 70 ML bunded areas are utilised for the capture of storm water from the KCT site and have a design capacity equivalent to the 1 in 100 year design storm event. The water from these additional storage areas can be recovered to the clarified water ponds for re-use. Water only overflows from the ponds during extreme or prolonged wet weather. Overflows are controlled within an existing storm water channel which provides a vegetated flow path to the North Arm of the Hunter River. The location of the rail loop embankment between the storm water channel and the adjacent Kooragang Nature Reserve provides a barrier to protect the Kooragang Nature Reserve in the unlikely event that the capacity of the storm water channel is exceeded.

Once the captured water passes through the clarifying ponds it is available for delivery to the pump house for reticulation across the site for wetting coal and stockpiles to control dust, wash down and clean up, fire fighting systems and landscape irrigation. The water quality is regularly monitored to ensure it is suitable for the purpose of recycling.

The Project does not require significant alterations to the established water management system at KCT. The water management system will continue to effectively contain, store, recover and treat water from the approved footprint of KCT.

The primary option for sourcing water at KCT for dust suppression is the re-use of the water captured from site as part of the water management system. In addition to this, PWCS currently purchases a supply of potable water from Hunter Water Corporation for domestic use in the office areas, employee amenities, and as make up water to supplement the recycled supply as needed. It is expected that with the proposed maintenance of the current approved throughput capacity associated with the Project, there will be no increase in the potable water demand at KCT.

4.4.2 Traffic

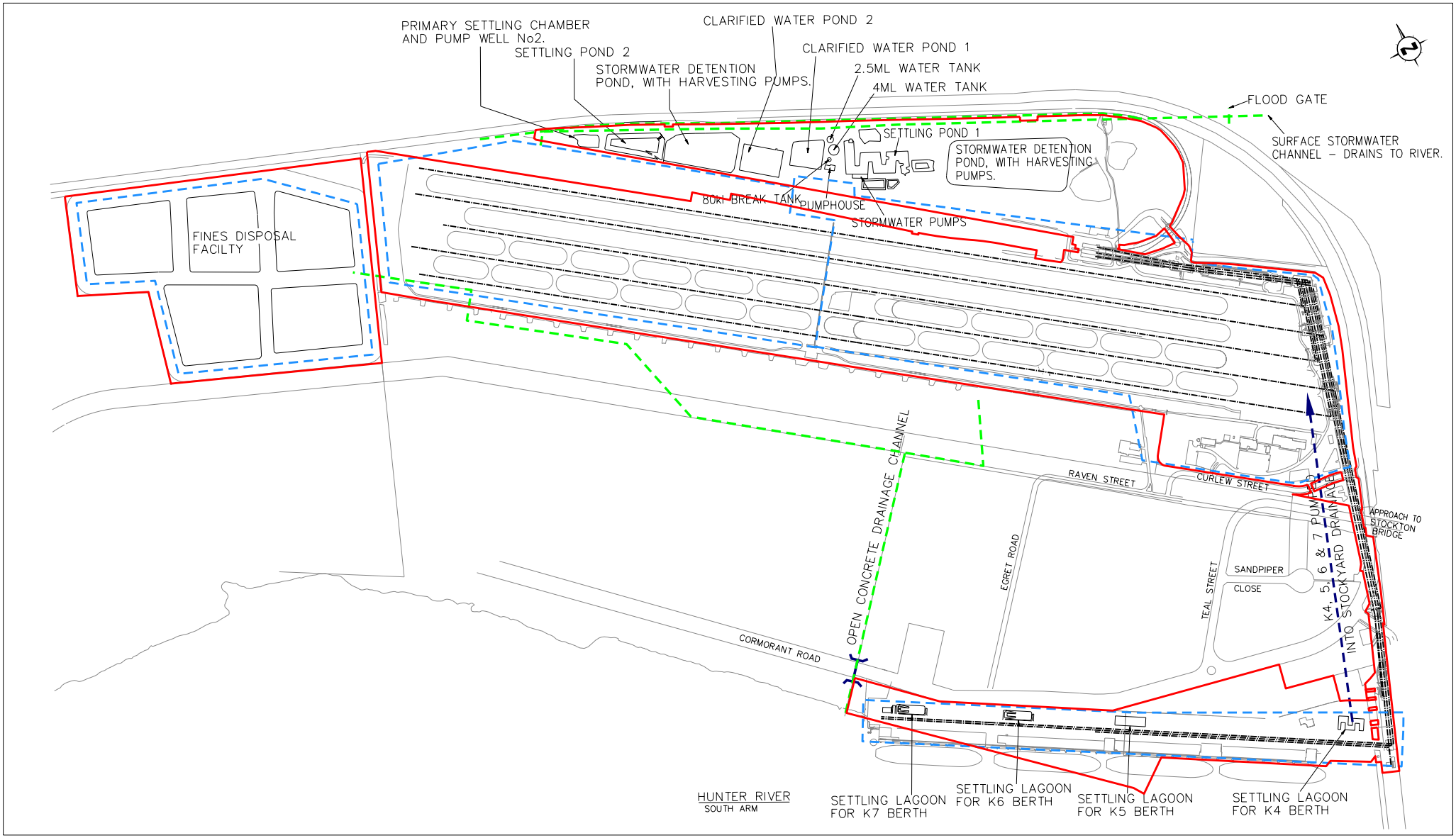
As outlined in **Section 2.0**, the infrastructure associated with the Project will be constructed during defined construction periods. Although minimal, heavy vehicle movements during these periods have potential to impact on normal traffic flow external and internal to the KCT site. Any potential impacts on traffic flow will be managed by the existing processes and procedures at KCT.

The Project is not expected to increase operational employee numbers, despite the addition of a fourth dump station and fourth shiploader. Also, changes are not proposed to the existing site access roads. Consequently, no further traffic assessment is considered necessary for this Project.

4.4.3 Maritime Safety

PWCS does not propose to increase the currently approved throughput capacity of KCT of 120 Mtpa. As such there will not be any further increase in shipping traffic associated with the Project.

The Newcastle Port Corporation is responsible for the management of shipping movements within the Port of Newcastle. It has conducted appropriate maritime oil spill response training and has a detailed environmental management plan and an environmental manual in place, and a response team ready to be mobilised if required.



Source: Port Waratah Coal Services Limited

Legend

- Kooragang Coal Terminal
- Pump Delivery Pipeline
- Catchment Boundary
- Culvert
- Open Channel Drainage

FIGURE 4.4

Layout of Water Management System
Kooragang Coal Terminal

4.4.4 Ecology and Cultural Heritage

All relevant ecology and cultural heritage considerations were taken into account during the Environmental Impact Statement process and subsequent development consent requirements for the Stage 3 Expansion. The Project does not propose to significantly alter the approved footprint of KCT. The infrastructure associated with the Project will be constructed on previously disturbed land. Relevant off-site impacts, including potential dust, noise and water quality impacts, are not expected to increase above existing levels. As such, the Project will have a marginal potential to impact on the ecological and archaeological values at KCT.

4.4.5 Socio-Economic

The Project will have significant socio-economic benefits on a local, regional and state level. Further detail regarding socio-economic considerations will be included in the EA.

5.0 Project Schedule

Based on current Project timing, PWCS intends to lodge the draft Environmental Assessment for the Project with DoP for adequacy review in mid 2009.

APPENDIX 1

Preliminary Environmental Risk Analysis

Environmental Risk Analysis

An environmental risk assessment has been undertaken for the Project to identify the key issues which warrant further detailed assessment and discussion. The methodology used for this process follows the general principles outlined in Australian Standard AS/NZS 4360:1999 Risk Management and Environmental Risk Management – Principles and Process (Standards Australia, 2000). The results of the risk assessment are included in Attachment A.

The method used for the environmental risk assessment encompasses the following key steps:

1. Establish the context for the risk assessment process

2. Identify environmental risks

3. Analyse risks

4. Evaluate risks to determine significant issues

Each of these steps is discussed further below.

Establish the Context

The risk assessment undertaken for the Project considers risks to the natural environment and members of the public. The 'Project' was considered to be the processes and activities described in Section 2.3 of the Preliminary Environmental Assessment, categorised as shown in **Table 1**.

Table 1 - Process Areas and Activities Considered

Process Area	Process Boundary	Activities
Construction	Construction of infrastructure associated with Project	Installation of proposed receival, stacking, reclamation and loading systems
Operation	Continued operations including the operation of the Project	The receival, stacking, reclaiming and loading of product coal through KCT
Ancillary Areas	Other activities undertaken to support installation and operation	Storage & handling of goods, maintenance

Risk Identification

Risk identification involves identifying the environmental risks to be managed, and in its simplest form involves the analysis of the severity and frequency of potential impacts and the operational processes underlying any impact.

In order to provide a systematic framework to identify environmental risks, the following basic process was used:

1. Select a component of the surrounding environment that may be impacted by the Project.

2. Identify the activities from Table 1 that may affect the value.

3. Identify the potential environmental impacts (positive or negative, acute or chronic) for each value, as a result of these activities.

Risk Analysis

Risks are typically analysed by combining possible consequences and their likelihood, in the context of existing measures to control the risk. The consequence and likelihood of each risk determines the level of risk.

Each risk was assessed using a five level qualitative ranking of consequence and likelihood as listed in **Table 2** and **Table 3** respectively. This yields a five by five risk analysis matrix and results in four levels of risk: 'catastrophic', 'major', 'moderate' and 'minor', as shown in **Table 4**.

Table 2 - Qualitative Measures of Environmental Consequence

Severity Level	Natural Environment	Legal / Government	Heritage	Community/Reputation/ Media
(1) Insignificant	Limited damage to minimal area of low significance.	Low-level legal issue. On the spot fine. Technical non-compliance prosecution unlikely. Ongoing scrutiny / attention from regulator	Low-level repairable damage to commonplace structures.	Low level social impacts. Public concern restricted to local complaints. Could not cause injury or disease to people.
(2) Minor	Minor effects on biological or physical environment. Minor short-medium term damage to small area of limited significance	Minor legal issues, non-compliances and breaches of regulation. Minor prosecution or litigation possible. Significant hardship from regulator	Minor damage to items of low cultural or heritage significance. Mostly repairable. Minor infringement of cultural heritage values	Minor medium-term social impacts on local population. Could cause first aid injury to people. Minor, adverse local public or media attention and complaints.
(3) Moderate	Moderate effects on biological or physical environment (air, water) but not affecting ecosystem function. Moderate short-medium term widespread impacts (e.g. significant spills).	Serious breach of regulation with investigation or report to authority with prosecution or moderate fine possible. Significant difficulties in gaining approvals	Substantial damage to items of moderate cultural or heritage significance. Infringement of cultural heritage / scared locations	Ongoing social issues. Could cause injury to people which requires medical treatment. Attention from regional media and/or heightened concern by local community. Criticism by NGOs. Environmental credentials moderately affected
(4) Major	Serious environmental effects with come impairment of ecosystem function. Relatively widespread medium-long term impacts	Major breach of regulation with potential major fine and/or investigation and prosecution by authority. Major litigation. Project approval seriously affected	Major permanent damage to items of high cultural or heritage significance. Significant infringement and disregard of cultural heritage values	On-going serious social issues. Could cause serious injury or disease to people. Significant adverse national media/public or NGO attention. Environment/management credentials significantly tarnished
(5) Catastrophic	Very serious environmental effects with impairment of ecosystem function. Long term, widespread effects on significant environment (e.g. national park)	Investigation by authority with significant prosecution and fines. Very serious litigation, including class actions. License to operate threatened	Total destruction of items of high cultural or heritage significance. Highly offensive infringements of cultural heritage	Very serious widespread social impacts with potential to significantly affect the well being of the local community. Could kill or permanently disable people. Serious public or media outcry (international coverage). Damaging NGO campaign. Reputation severely tarnished. Share price may be affected

Table 3 - Qualitative Measure of Likelihood

Level	Descriptor	Description	Guideline
A	Almost Certain	Consequence is expected to occur in most circumstances	Occurs more than once per month
B	Likely	Consequence will probably occur in most circumstances	Occurs once every 1 month – 1 year
C	Occasionally	Consequence should occur at some time	Occurs once every 1 year - 10 years
D	Unlikely	Consequence could occur at some time	Occurs once every 10 years – 100 years
E	Rare	Consequence may only occur in exceptional circumstances	Occurs less than once every 100 years

Source: AS/NZS 4360:1999 Risk Management

Table 4 - Qualitative Risk Matrix

	Maximum Reasonable Consequence				
Likelihood of the Consequence	(1) Insignificant	(2) Minor	(3) Moderate	(4) Major	(5) Catastrophic
(A) Almost certain	High	High	Extreme	Extreme	Extreme
(B) Likely	Moderate	High	High	Extreme	Extreme
(C) Occasionally	Low	Moderate	High	Extreme	Extreme
(D) Unlikely	Low	Low	Moderate	High	Extreme
(E) Rare	Low	Low	Moderate	High	High

Source: AS/NZS 4360:1999 Risk Management

The level of risk assessed was based on a risk level with the existing environmental management controls at KCT operations in place. An assessment of risk was also undertaken with the proposed mitigation controls in place. This allows for the determination of the effectiveness of the proposed controls in mitigating potential impacts associated with the project.

Although the risk rating gives no quantification of the actual value of the risk for a particular aspect, it does allow a relative comparison between issues to enable risks to be prioritised, facilitate informed decisions about treating risks and help identify whether a risk is acceptable.

Table 5 shows the format used for the Project environmental risk assessment contained in **Attachment A**.

Table 5 – Format for Preliminary Project Environmental Risk Assessment

Project Activities	Environmental Value	Potential Impacts/ Consequences	Existing Control	Preliminary Risk Assessment	Proposed Controls	Revised Risk
Identifies the Project's activities that may affect the Environmental Value	Components of the surrounding environment that can be affected by the Project	This describes any change to the environment, whether adverse or beneficial, wholly or partly resulting from the Project's activities	Details current understanding of the existing environment and existing controls	Risk Assessment provided in preliminary Environmental Assessment	Details additional controls to be incorporated into the Project	Details consequence, likelihood and risk rating for each aspect with proposed controls in place

Risk Evaluation

Risk evaluation concerns setting priorities for decisions about risk. The purpose of risk evaluation is to compare risks against significance criteria to determine the degree of assessment required. The application of significance criteria will reduce the number of activities that require specific management attention and provides an opportunity to prioritise environmental issues based on predetermined criteria.

Although guidelines and regulations provide great detail on risk identification and characterisation, there is less guidance on what constitutes an acceptable level of risk. This is because the development of risk acceptance criteria is quite subjective and is not an exact science or based on a complex formula. For each risk assessment process there is a degree of flexibility in defining its own criteria to determine which impacts are potentially 'significant' and which are not. For the purposes of this Preliminary Environmental Assessment, significant risks have been defined as those with a risk rating of high or extreme, as defined by **Table 4**.

It is important to note that certain impacts associated with the Project's activities may be predetermined as significant by State or Federal legislation. These 'regulated' impacts, whilst not always rated as significant based on risk score alone, will also require further assessment to be undertaken.

Attachment A

Port Waratah Coal Services – Kooragang Coal Terminal Fourth Dump Station and Ship Loader Project

Preliminary Environmental Risk Analysis

Activity	Environmental Value	Potential Impact	Status and Proposed Control	Risk Assessment			Further Assessment Requirements	Key Issue?
				C	L	R		
CONSTRUCTION PHASE								
Construction of infrastructure associated with Project	European Heritage	Disturbance of sites of European heritage significance.	The project will marginally increase the footprint of existing and approved operations.	1	D	L	No further assessment required	No
	Wetland Ecology	Loss of native flora and fauna.	The project will marginally increase the footprint of existing and approved operations.	3	D	M	No further assessment required	No
	Aquatic Ecology	Loss of native flora and fauna.	The project will marginally increase the footprint of existing and approved operations.	3	D	M	No further assessment required	No
	Cultural Heritage	Disturbance of Aboriginal places or objects.	The project marginally increase the footprint of existing and approved operations.	2	D	L	No further assessment required	No
	Erosion and sediment runoff	Sedimentation of local waterways.	Existing controls sufficient to mitigate potential impact from project. Controls include an integrated water management system designed collect and treat site 'dirty water' for up to a 1 in 100 year storm event.	2	E	L	No further assessment required	No

Activity	Environmental Value	Potential Impact	Status and Proposed Control	Risk Assessment			Further Assessment Requirements	Key Issue?
				C	L	R		
	Dust Generation	Degradation of air quality.	No potential for significant dust emissions during construction phase. Existing controls are sufficient to minimise potential dust impacts from construction activities. Controls include dust suppression sprays, equipment modifications and dust control safeguards	2	E	L	No further assessment required	No
	Noise Generation	Degradation of noise amenity (cumulative).	Construction phase does not involve significant noise generation. Existing controls are sufficient to minimise potential noise impacts from construction activities. Controls include noise attenuation measures fitted to equipment, noise monitoring	2	E	L	No further assessment required	No
	Visual Amenity	Change to the aesthetics of operations in landscape	The proposed construction of a conveyor bridge over Teal St on the approach to Stockton Bridge will have potential visual impacts. All other infrastructure constructed will be consistent with the existing and approved KCT.	3	C	H	A visual impact assessment will be undertaken	Yes
	Hydro geological impacts	Disturbance to existing hydro geological regime	The project will marginally increase the footprint of existing and approved operations.	3	E	M	No further assessment required	No
	Traffic	Supply of materials for installation phase resulting in increased traffic.	Infrastructure associated with the Project will be constructed during defined periods, or campaigns. Heavy vehicle movements during these periods have potential to impact on normal traffic flow external and internal to the KCT site. Any potential impacts on traffic flow can be managed by the existing processes and procedures at KCT.	3	D	L	No further assessment required	No

Activity	Environmental Value	Potential Impact	Status and Proposed Control	Risk Assessment			Further Assessment Requirements	Key Issue?
				C	L	R		
OPERATION PHASE								
Operation of equipment with Project	Erosion and sediment runoff	Sedimentation of local waterways.	Existing controls sufficient to mitigate potential impact from project. Controls include an integrated water management system designed to collect and treat site 'dirty water' for up to a 1 in 100 year storm event.	2	E	L	No further assessment required	No
	Water Demand	Increased water demand for dust suppression, washdown etc.	Operation of project will not substantially increase water demand for dust suppression purposes as there is no increase in throughput. Controls in place to maximise re-use of water.	2	D	L	No further assessment required	N
	Dust Generation	Degradation of air quality.	Operation of project has potential to increase dust generation from additional plant and equipment.	3	C	H	Further assessment required as part of Environmental Assessment	Y
	Noise Generation	Degradation of noise amenity (cumulative).	Operation of project has potential to increase noise generation from additional plant and equipment.	3	C	H	Further assessment required as part of Environmental Assessment	Y
	Visual Amenity	Aesthetics of modified operation	The proposed conveyor bridge over Teal St on the approach to Stockton Bridge will have potential visual impacts. All infrastructure will be consistent with the approved KCT facility.	3	C	H	A visual impact assessment will be undertaken	Y
	Energy Use	Increase in greenhouse gas emissions	The additional infrastructure associated with the Project will have increase the Scope 1 and 2 greenhouse emissions for the Project. As this project does not include any increase in throughput capacity, Scope 3 emissions will not increase from those assessed as part of 2007 Project Approval.	3	C	H	An assessment of Scope 1 and Scope 2 greenhouse gas emissions will be undertaken.	Y

Activity	Environmental Value	Potential Impact	Status and Proposed Control	Risk Assessment			Further Assessment Requirements	Key Issue?
				C	L	R		
	Hydro geological impacts	Impacts on existing hydro geological regime	The project will marginally increase the footprint of existing and approved operations.	3	E	M	No further assessment required	N
	Traffic	Increased traffic as a result of the Project	There will be no increased road traffic as a result of the Project – all coal is delivered by rail. Rail traffic is managed by others and this proposal does not seek approval to increase rail traffic on the Main Northern Rail Line– KCT receives the coal delivered by others.	2	E	L	No further assessment required	N
ANCILLARY ACTIVITIES AND ISSUES								
Waste Management	Waste disposal	Pollution/contamination due to incorrect disposal. Inefficient use of resources.	All wastes generated by the project will be incorporated into existing waste streams. Existing controls are sufficient to mitigate potential impacts from waste disposal	2	E	L	No further assessment required	No
	Waste oil and grease storage	Soil and/or water contamination from spills or leaks.	Existing controls sufficient to mitigate potential impact from project. Controls include storage in sealed bunded area, disposal by licensed waste contractor	2	D	L	No further assessment required	No
Materials supply and storage	Oil, fuel and grease supply and storage	Soil and/or water contamination from spills or leaks.	No change to existing supply and storage arrangements. Existing controls sufficient to mitigate potential impact from project.	2	D	L	No further assessment required	No
	Materials delivery	Increase in traffic.	Any potential increases in traffic associated with materials delivery will be minor, short term in duration, and consistent with current traffic during ongoing maintenance activities	2	D	L	No further assessment required	No
Workforce and Amenities	Transport and access of employees to site	Increase in traffic.	The proposed project will not increase the workforce of KCT.	2	E	L	No further assessment required	No

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