



SECTION 1.0

Introduction

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** and **Figure 1.2**). 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 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, which consists of 120 Mtpa from KCT and 25 Mtpa from CCT.

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 shiploader, a third rail coal receival station, a fourth shipping berth (K7 wharf) and associated coal handling infrastructure (refer to **Figure 1.3**). The Stage 3 Expansion development consent provides for the current approved footprint of KCT, as shown on **Figure 1.3**. 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 (refer to **Figure 1.3**).

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 of KCT 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.

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 120 Mtpa throughput capacity while accommodating for short term 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 to operate on the existing and approved ship berths, and associated coal handling infrastructure. PWCS is seeking approval for the construction and operation of the fourth coal handling stream at KCT. The proposal, referred to as the Stage 4 Project, will not increase the approved throughput capacity of KCT to above the nominal 120 Mtpa.

PWCS has consulted with the Department of Planning (DoP) in regard to the Stage 4 Project and confirmed that the 2007 Project Approval (Approval No. 06_0189) can be modified under section 75W of the EP&A Act. Consequently, PWCS seeks a modification of the 2007 Project Approval for the Stage 4 Project. The Minister for Planning is the approval authority for this proposal.

This Environmental Assessment (EA) has been prepared by Umwelt (Australia) Pty Limited on behalf of PWCS to accompany the application to DoP to modify the 2007 Project Approval. This EA has been prepared in accordance with DoP's Director-General's Requirements (DGRs) for preparation of the EA.

This document provides an outline of the existing and approved KCT facility; a description of the proposed Stage 4 Project; an overview of the community and environment context;



Legend

■ Koragang Coal Terminal

FIGURE 1.1

Regional Setting



Source: Port Waratah Coal Services Limited (2008, 2009)

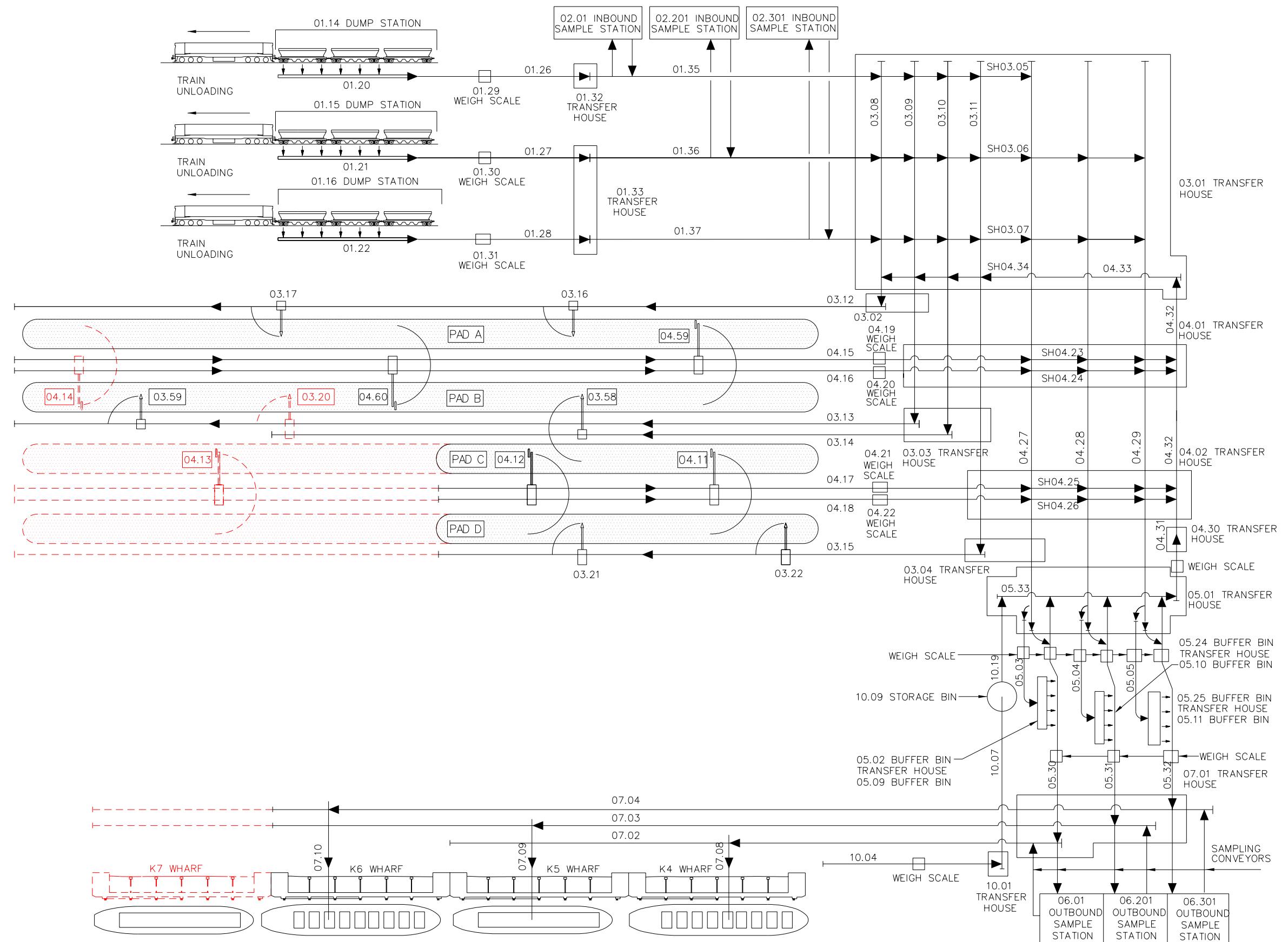
0 0.5 1.0 2.0 km
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Legend

- Kooragang Coal Terminal
- Heavy Industry (Former BHP Steelworks and OneSteel)
- Newcastle Coal Infrastructure Group

FIGURE 1.2

Location of Kooragang Coal Terminal



Source: Port Waratah Coal Services Limited (2009)

Legend

- Existing Plant
- - - Approved Plant yet to be Built

FIGURE 1.3

Schematic of Existing and Approved Kooringal Coal Terminal

identification and assessment of key environmental issues; and proposed control measures for the Stage 4 Project.

1.1 Project Background and Objectives

The continuing international demand for coal has provided the impetus to increase the efficiency of the coal handling and delivery infrastructure at KCT. PWCS has identified a potential benefit to the current and approved KCT facility to have increased 'sprint capacity' to meet the overall approved 120 Mtpa throughput following short term disruptions to operations. Short term delays in throughput result in large variations in daily coal throughput rates, which subsequently limit overall throughput capacity of KCT. Short term disruptions in operations 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 operational benefits associated with increased 'sprint capacity' will reduce the variability of daily throughput rates through increasing the ability of KCT to respond to short term disruptions in coal throughput. The additional operational efficiency provided by increased 'sprint capacity' will result in improvements in average daily throughput rates at KCT, providing greater opportunity to consistently reach the current overall approved 120 Mtpa throughput capacity at KCT.

In order to achieve these operational benefits PWCS propose to construct and operate a fourth dump station, a fourth shiploader to operate on the existing and approved ship berths, and the associated coal handling infrastructure as part of the Stage 4 Project.

The objectives of the Stage 4 Project are to:

- achieve increased 'sprint capacity' to meet the approved 120 Mtpa throughput following short term disruptions to operations;
- assist the KCT facility in effectively responding to forecasted increases in export coal production in response to continued international demand for coal;
- improve the efficiency of coal receival, handling and loading processes of KCT;
- achieve the approved 120 Mtpa throughput capacity at KCT operations while continuing to improve environmental performance;
- continue to conduct KCT operations in an environmentally responsible manner through the incorporation of more efficient Project components; and
- continue PWCS's significant contribution to the local, regional, state and national economies as an effective member of the Hunter Valley Coal Chain.

1.2 Site Context

KCT operations are located on Kooragang Island on the lower reaches of the Hunter River approximately 2 kilometres north of Newcastle (refer to **Figures 1.1 and 1.2**). 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 has a total area of approximately 2600 hectares and is bounded by the South and North Arms of the Hunter River. The northern extent of Kooragang Island includes Kooragang Nature Reserve (KNR), which

forms part of the RAMSAR listed Hunter wetlands. The southern portion of Kooragang Island is effectively reclaimed land for industrial purposes. KCT is strategically located in the south-eastern portion of Kooragang Island, providing ready access to sea going vessels via the Hunter River and Newcastle Harbour (refer to **Figure 1.2**).

As shown on **Figure 1.2**, 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, as shown on **Figure 1.2**.

KCT operates on land owned by PWCS as well as land leased through agreements with Newcastle Port Corporation (NPC), by delegation of the Minister for Commerce. The rail line and loop utilised to transport coal to the KCT facilities is operated and maintained by the Australian Rail Track Corporation (ARTC). Further details on land use and land ownership in the vicinity of KCT operations are provided in **Section 6.1**.

1.3 Environmental Assessment Team

Umwelt has prepared this EA on behalf of PWCS in accordance with the DGRs issued by DoP. The following organisations undertook specialist studies as part of the EA process:

- PAE Holmes Air Sciences – Air Quality Assessment;
- Heggies Australia Pty Ltd – Noise Assessment;
- Stapleton Transportation and Planning Pty Ltd – Traffic Assessment;
- SEE Sustainability Consulting – Energy and Greenhouse Assessment; and
- Douglas Partners – Groundwater Assessment.

In addition to the above, Umwelt specialists also undertook an ecological assessment for the EA. Further details on the project team are provided in **Appendix 1**.

1.4 EA Structure

The EA has been prepared in accordance with the EP&A Act and Regulations (refer to EA Statement of Authorship in **Appendix 1**). An overview of the layout of this EA is provided below.

Section 1 provides background and context for the Project, outlines Project objectives and the Project team involved in preparing the EA.

Section 2 contains a detailed description of the development consent history, existing and approved KCT operations, the existing environmental management and monitoring strategy and the environmental and community performance of existing operations.

Section 3 contains a detailed description of the strategic need and justification of the Stage 4 Project and alternatives considered.

Section 4 describes the planning context for the Project, including the applicability of Commonwealth and State legislation.

Section 5 describes the community consultation process and the environmental and community issues identified as part of this process for detailed assessment in the EA.

Section 6 contains a description of the existing environment and a comprehensive analysis and assessment of key environmental issues associated with the Stage 4 Project to identify any new impacts or changes to existing impacts, including potential cumulative impacts resulting from potential interaction with surrounding existing operations.

Section 7 details the Statement of Commitments proposed to be adopted to mitigate any additional identified impacts associated with the Stage 4 Project.

Section 8 contains a conclusion.

Sections 9 to 11 provide a checklist of the DGRs considered in the preparation of the EA, a list of references referred to in the EA, a list of abbreviations and glossary of technical terms.