

# **APPENDIX 1**

## **Construction Surface Water Management Plan**

# **PWCS Construction Surface Water Management Plan**

## **1.0 Background**

Condition 2.13 of the 120 Mtpa Project Approval details the performance criteria for the water management system, while condition 7.3(a) requires the preparation and implementation of a Construction Surface Water Management Plan (CSWMP).

This CSWMP has been prepared to address the requirements of these conditions and was approved by the Director-General from the Department of Planning (DoP) in April 2008. The CSWMP has been implemented on site since 2008. In mid 2010 the Construction Environmental Management Plan (CEMP) was revised to incorporate the construction activities and requirements associated with the Stage 3 Development Consent, 120 Mtpa / Stage 4 Project Approval and the issue specific management sub plans for surface water, noise and traffic. In the event of subsequent project approvals and licence associated with the Kooragang Coal Terminal (KCT), the CSWMP will be reviewed and amended as appropriate.

### **1.1 Management Plan Context**

The CSWMP has been developed as a sub plan to the KCT CEMP. The context of this CSWMP in relation to KCT environmental management policy and systems is outlined in the CEMP.

### **1.2 Purpose and Scope**

The CSWMP details how surface water, process water, washdown water and stormwater etc will be managed on site during construction activities.

### **1.3 Objectives**

The objectives of this CSWMP are to:

- minimise and control surface water impacts to the environment resulting from construction activities;
- achieve compliance with regulatory and PWCS requirements;
- clearly define the actions that are required to respond to environmental incidents.

## **2.0 Construction Surface Water Management System**

PWCS has established a closed water management system to meet the design requirement of a 1 in 100 year design storm event or equivalent and allows for the harvesting of storm water captured during rain events and satisfies the principles outlined in Managing Urban Stormwater: Soils and Construction. The water management system for the complete facility (some of which is yet to be constructed) is implemented and is operational. It is noted that

essentially all construction activities are located within the existing surface water management system. To complement the existing controls and further minimise any potential erosion and sedimentation impacts localised erosion and sediment controls will be installed during the site establishment phase for each construction activity. This includes the construction activities associated with the rail loop augmentation which will be designed to water and divert it back to the KCT water management system. The management of water during construction activities will be undertaken in accordance with the principles outlined in Managing Urban Stormwater: Soils and Construction and any applicable EPL.

The water management system operates to collect water from all operational activities and to harvest surface water for recycling. All areas of the plant, including the wharf, capture surface water and channel it back to settling ponds for clarification prior to being held in storage ponds for re-use (refer to **Figure 2.1**).

On site there are two 12 megalitre (ML) settling ponds and two 12 ML clarifying ponds. The ponds are located within the rail loop and are adjacent to large bunded areas (refer to **Figure 2.2**). There are also two stormwater detention basins with a combined capacity of 80 ML, which provide further detention capacity when needed during rainfall events. The 80 ML basins are utilised for the capture of surface water from the KCT site. The water from these additional storage areas can be recovered to the clarified water ponds for re-use.

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

## **3.0 Water Monitoring**

Water may overflow from the existing KCT water management system during extreme or prolonged wet weather. Overflows are controlled within an existing stormwater channel which provides a vegetated flow path to the North Arm of the Hunter River. The location of the rail loop embankment between the stormwater 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 stormwater channel is exceeded. Any overflow of the water management system due to rainfall in excess of the design event or as a result of prolonged wet weather will be reported as part of the operational environmental monitoring program.

In addition to the existing KCT water management system, specific controls are in place in relation to spill response and hazardous substance management. These specific activities and controls are outlined in the CEMP (see Section 5.8 and 5.9).

### **3.1 Corrective Action**

Section 7.0 of the CEMP outlines the corrective action process to be followed in the event of a potential environmental incident.

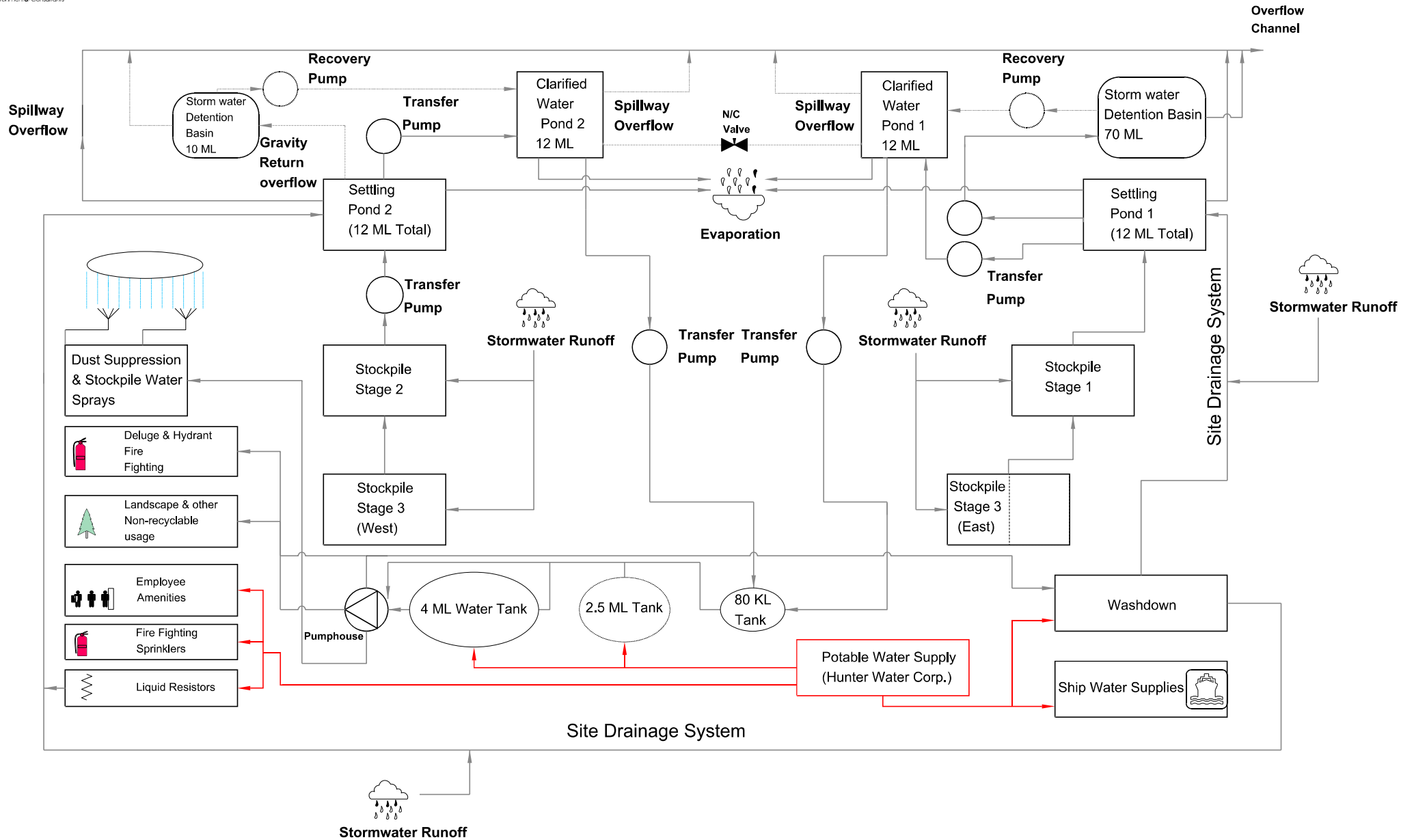
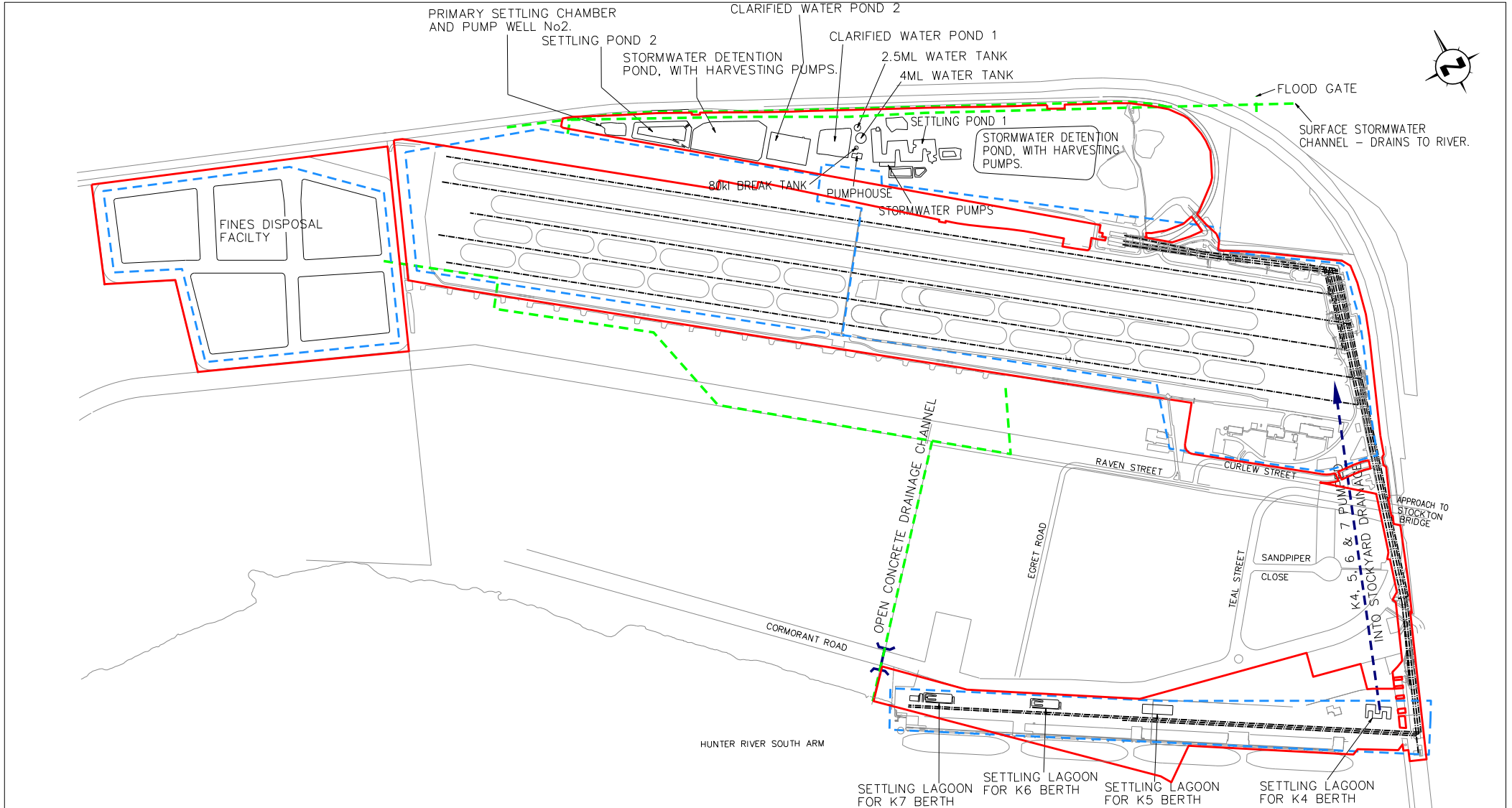


FIGURE 2.1

Schematic of Water Management System  
Kooragang Coal Terminal



Source: Port Waratah Coal Services Limited

0 200 400 800m  
1:16 000

- Legend**
- ▬ Kooragang Coal Terminal
  - ▬ Pump Delivery Pipeline
  - - - Catchment Boundary
  - ⌋ Culvert
  - - - Open Channel Drainage

FIGURE 2.2

**Plan of Water Management System  
Kooragang Coal Terminal**