

How we will manage and reduce impacts on Water



Wandoan Coal Project Fact Sheet



Keeping local waterways healthy

A detailed Water Management Plan will be developed and implemented to ensure the health of the waterways located in and around the mine site during the construction and operational phases of the Project.

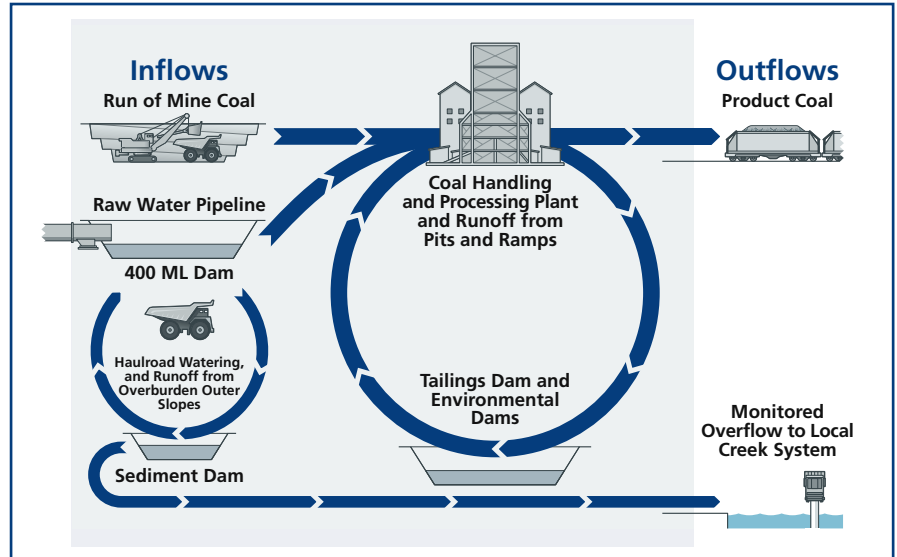
The plan will include:

- Monitoring the quality of local watercourses and identifying potential impacts requiring mitigation
- Ongoing surface and groundwater monitoring and management to minimise the mine's impact on the surrounding environment and on other water users
- Establishing a Site Water Management System that aims to:
 - avoid discharge of water from mine operations or water that collects in the pits by capturing, reusing and permanently containing that water
 - allow planned discharge of mine-affected runoff water only after it is collect and treated in sediment dams
 - allow discharge of non-affected runoff water
- The Site Water Management System consists of:
 - raw water dams to store incoming raw water and recycle it for all mine operations
 - environmental dams to capture and permanently contain water from mine operations
 - tailings dams to capture and permanently contain mine tailings
 - sediment dams to capture and treat all mine-affected runoff water
 - monitoring to ensure no unauthorised discharges from the mine-site occurs

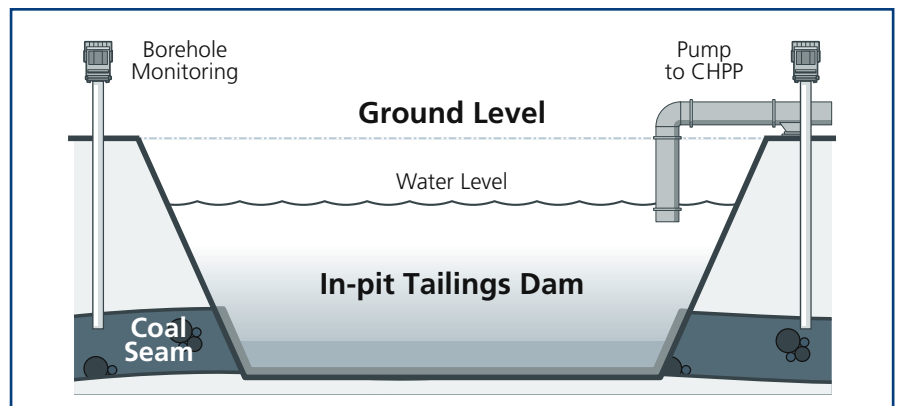
All discharges of water from the mine site will be planned and authorised before they occur by the Department of Environment and Resource Management.

Receiving Environment Monitoring Program

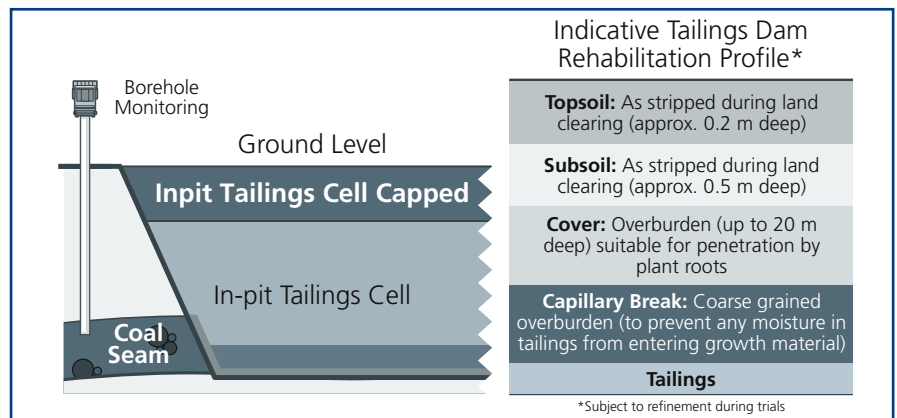
As part of the Site Water Management System, the Coordinator-General requires the Project to prepare a Receiving Environment Monitoring Program, which will monitor water quality and quantity in the waterways surrounding and within 10 kilometres downstream of the Project.



The Site Water Management System consists of raw water dams, environmental dams, sediment dams and tailings dams, as well as constant monitoring systems.



During operations tailings dams within old pits are used to capture and permanently contain mine tailings and recycle raw water to the Coal Handling Plant.



After operations, tailings are covered with up to 20 metres of overburden and top soil and rehabilitated. No unrehabilitated tailings dam sites are expected in the final landform.

Sourcing raw water during construction

The Project needs raw water (as opposed to drinking water) during the two to three years of construction, for activities such as construction works and dust suppression.

During construction the Project will have a total raw water demand of approximately 700 megalitres (ML).

The Project's water studies have found that a large proportion of the raw water needed during construction could be sourced from existing surface water dams. During construction, the Project will first use non-Great Artesian Basin (GAB) sources for raw water, including existing surface water dams, production bores in coal seams and existing farm water bores that do not tap the Great Artesian Basin.

The Project's water studies have found that the most reliable potential raw water source for construction is the Precipice Sandstone aquifer of the Great Artesian Basin. The Project proposes to establish a new bore into the Precipice Sandstone at a site within the mining lease application area adjacent to the Jackson-Wandoan Road. This bore will become a backup source for raw water during construction, to be used as a last resort if required. It will then be handed over to the Western Downs Regional Council to be used as a third potable town water supply bore in conjunction with the Council's two existing bores.

Sourcing raw water during operations

The Project needs raw water (as opposed to drinking water) during operations for activities such as coal washing, dust suppression and use in the workshops.

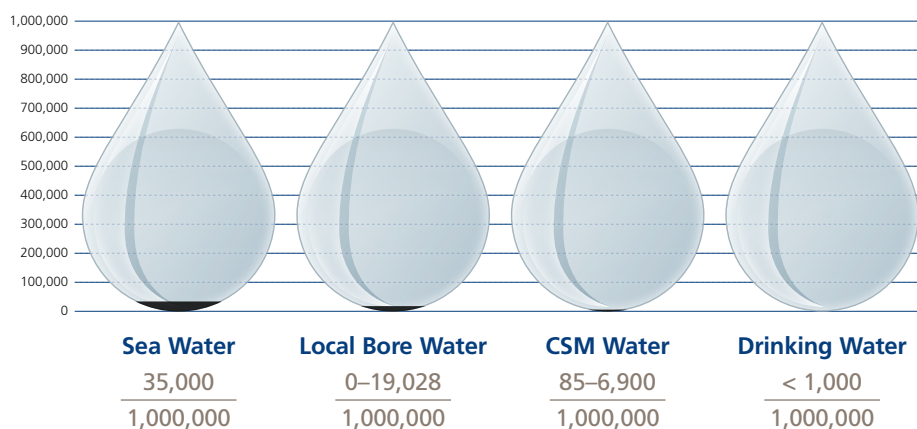
During operations the Project will need approximately 9,100 ML per year of raw water.

The options still being considered to meet the Project's operational raw water needs include sourcing water from:

- The Glebe Weir on the Dawson River, which is proposed to be raised to accommodate the mine's demands
- Coal Seam Methane water from the vicinity of the new Condamine Power Station around 100 kilometres south of Wandoan.

The Project's raw water needs during operations will not be sourced from the Great Artesian Basin.

Total Dissolved Solids – Parts per Million



The Project is considering meeting its raw water needs by sourcing CSM water that contains less than 4,000 parts per million total dissolved solids.

Coal Seam Methane water

Coal Seam Methane (CSM) water is a by-product of the production of coal seam methane gas. The water is typically saline, but these dissolved solids can be removed through reverse osmosis.

The Project is considering meeting its raw water needs by sourcing CSM water that contains less than 4,000 parts per million total dissolved solids.

By comparison, drinking water contains less than 1,000 parts per million, bore water up to 19,000 and sea water over 35,000 parts per million.

Studies undertaken for the Supplementary EIS have found that using CSM water that contains less than 4,000 parts per million total dissolved solids on the mine site will not detrimentally affect mining operations or the ability to rehabilitate the land.

All raw water, including any CSM water, used on the mine site will be managed through a Site Water Management System that includes a raw water dam for storing and recycling raw water, and environmental and sediment dams for collecting and treating runoff water.

Sourcing drinking water

The Project proposes to source drinking water for construction and operation of the mine from Wandoan's town drinking water. The Project proposes to fund an upgrade of Wandoan's town drinking water treatment facilities so there is enough water to meet the drinking water needs of the Project and the

growing population, without placing increased pressure on local supply. This will include establishing a new town bore into the Great Artesian Basin.

The Wandoan township and the Project combined will need approximately 350 ML of drinking water per year.

During construction of the mine (before completion of the pipes bringing drinking water from Wandoan township to the mine site), the Project proposes to source drinking water from either existing bores or from on-site surface storage.

Groundwater monitoring and management

The Project has commenced groundwater monitoring, with seasonal variations in the aquifers being established. The Coordinator-General has conditioned the Project to supply groundwater results to the Queensland Department of Environment and Resource Management prior to commencement of mining activities. To ensure that the Project does not result in undue impact on the availability and quality of groundwater supplies to neighbouring landholders, the Coordinator-General has conditioned the Project to reach mutually agreeable arrangements with landholders potentially affected by groundwater drawdown.

To find out more:

Talk to a member of our project team, call our free-call information line **1800 052 797**. The EIS and the Coordinator-General's Report are available online at www.wandoancoal.com.au and can be viewed at the Xstrata Coal Shopfront in Royd Street, Wandoan.

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