

Financing and delivering affordable wastewater reuse schemes



Through an early engagement process, TRILITY partnered with the District Council of Loxton Waikerie to develop, deliver and operate an affordable and environmentally sound wastewater management scheme for the Waikerie township which provides Class B reuse water which is used to irrigate the community golf course.



The original wastewater treatment lagoons were located on a River Murray flood plain and were overloaded, causing concern to government agencies and stakeholders. A new solution was required to remove the risk of flooding whilst providing for future growth and a sustainable long term disposal path. With only 1,100 connections the financial viability of the project was paramount and required innovative solutions.

The District Council of Loxton Waikerie sought, through a call for expressions of interest, a water company which would work with them in the development of a long term solution. TRILITY worked with the client through the development phase and as the project feasibility progressed, entered into an agreement with the District Council of Loxton Waikerie to Design, Build, Operate and Maintain (DBOM) a wastewater management scheme.

TRILITY was responsible for the Design and Construction (D&C) of the Wastewater Treatment Plant (WWTP), the upgrade of an existing pump station, construction of a 40 megalitre capacity recycled water storage lagoon, and the installation of pipeline for the disposal of the recycled water. TRILITY currently operates and maintains the wastewater management scheme.

The facility is a purpose built aerated biological WWTP, sized to cater for up to 1,100 connections.

The plant provides treated water that complies with the Department for Health and Ageing, Reclaimed Water Guidelines for Class B treated effluent, which is used for the irrigation of the local golf course. The plant is operated in accordance with Environmental Protection Authority (EPA) and Department of Health approvals, with regular sampling undertaken to verify performance.



Who

The District Council of Loxton Waikerie was formed from the amalgamation of the Loxton, Waikerie and Browns Wells district councils. The council covers an area of 7,957km² and has a population of approximately 12,000, with 3,500 in Loxton and 1,760 residing in Waikerie.

What

A purpose built aerated biological treatment plant that provides treated water compliant with the Department of Health and Environmental Reclaimed Water Guidelines for Class B treated effluent and allows the reused water to be used for the irrigation of the local golf course. The scheme also included the replacement of the existing main pump station and the redirection of two other pump stations, nine kilometres of pipeline to the disposal site and a recycled water storage lagoon.

Where

Waikerie, approximately 170km north-east of Adelaide in South Australia's Riverland region.

Why

The scheme was essential because the wastewater treatment lagoons which are located on a flood plain were overloaded, causing concern to both the EPA and the South Australian Department of Health. Additionally, future growth of the Waikerie township could not proceed until new wastewater treatment infrastructure was commissioned.

Snapshot

Client	District Council of Loxton Waikerie
Type of Contract	Design, Build, Operate and Maintain (DBOM)
Facilities	Wastewater treatment plant, pumping station, water storage lagoon, and a reuse end user pump station
Technology	Hybrid Sequencing Batch Reactor/ completely mixed activated sludge treatment plant
Design Capacity	0.35 ML/d with provisions for future expansion to 0.50 ML/d
Term	15 years
Capital Cost	c. \$3.6m



For further information

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