

**CLIENT:**

South Burnett Regional Council

LOCATION:

Gordonbrook, QLD

SERVICE:

Water Treatment Plant

CAPACITY:

9.1ML/d

CONTACT:

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ISSUES:

Disinfection by-product formation potential (existing WTP). Brownfield site.

SOLUTIONS:

New WTP includes systems to mitigate against disinfection by-product formation. Effective communication with client operators, site management.

BENEFITS:

Modern WTP Technology, Automated Systems.

PRODUCT:

MRI Lamella Clarifier
MRI Hoseless CableVac
Statiflo Static Mixer

COMPLETION DATE:

May 2016

Gordonbrook Water Treatment Plant

Aquatec Maxcon's Gordonbrook WTP is situated approximately 22 kilometres northwest of Kingaroy. It utilises two sources of raw water (Gordonbrook Dam and Boondooma Pipeline) and has a design plant production capacity of 9.1ML/d.

The pre-existing WTP utilised outdated treatment technology and control systems having been originally constructed in the 1940's. Upgrade to the WTP became essential when issues with Algae, Taste, odour and Trihalomethanes were detected in the water supplied by the existing WTP.

In 2015/2016, Aquatec Maxcon provided South Burnett Regional Council with a conventional WTP capable of processing the poor-quality raw water characteristic of Gordonbrook Dam (high levels of organics, algae and turbidity) and Boondooma Dam. The treatment process consists of the following stages:

1. Raw Water PAC Contact Tank and flash mixing (including capabilities for enhanced coagulation);
2. Flocculation and Sedimentation (Lamella Plate Settler);
3. DAFF (Dissolved Air Flotation and Granular Activated Carbon Filter Media)
4. Filtered Water Transfer, disinfection and storage.
5. Clear Water Storage and Transfer pump station.

Several dosing systems are incorporated into the treatment process:

1. Powdered Activated Carbon Dosing System
2. Alum Dosing System
3. Soda Ash Dosing System
4. Sodium Hypochlorite Dosing System
5. Polymer Dosing System

Aquatec Maxcon's Gordonbrook WTP was constructed on the same site as the pre-existing plant; excellent communication and planning was required to achieve the new WTP construction, installation and commissioning on the brownfield site. Cutovers and work to existing systems required to service both the existing and new WTP's during the commissioning phase were crucial to the installation.

The extensive in-house capabilities of the Aquatec Maxcon Group were utilised in this project, including project management, process engineering, design and commissioning from Aquatec Maxcon, electrical and control system design, installation and commissioning from MPA Engineering, workshop fabrication from Maxcon Industries and mechanical installation from Aquatec Services.

Aquatec Maxcon's Gordonbrook WTP was successfully commissioned with zero LTI and no interruptions to water supply and is now under the operation of South Burnett Regional Council, supplying quality potable water to the community of Kingaroy.

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