



## Gladstone Area Water Board

### Yarwun Water Treatment Plant Refurbishment

**Background:**

Gladstone Area Water Board owns and operates two water treatment plants. The Yarwun Industrial Area and Mt Larcom Township are serviced by the Yarwun Water Treatment Plant which was originally constructed in 1989 with a capacity of 3.6MI/day. Industrial growth in this area and the associated extra demand necessitated the refurbishment and upgrade of the plant to deliver 10MI/day.

As Electrical consultants Welcon Technologies was responsible for the detail design of a Programmable Logic Controller (PLC) system to provide automatic control of treatment plant operation, backwash cycles and clearwater pumps.

The design was based on an Allen-Bradley SLC 5/05 programmable controller, associated hardware and control panels. A new CitectSCADA HMI system was provided for supervisory control and local monitoring of treatment plant operations. Modifications to existing instrumentation circuits, valve circuits, as well as starter circuits for pumps and motors, were required to incorporate the PLC and VSD control.

A new 415V outdoor Main Switchboard was also included to accommodate the upgrades, as well as future growth.

Project Specifics	
Client	Gladstone Area Water Board
Location	Yarwun, Gladstone, QLD
Year Completed	2008
Size / Quantities	Upgrade water treatment capacity from 3.6MI/day to 10MI/day
Services Provided	<ul style="list-style-type: none"> <li>• Detail Design of new Main Switchboard and Control Panel</li> <li>• Detail Design of Communications and Control System</li> <li>• Detail Design of PLC and SCADA Systems</li> <li>• Detail Design of Instrumentation and Actuator Systems</li> <li>• Site Testing &amp; Commissioning</li> </ul>
Delivery Method	Electrical Engineering Sub-Consultant