



Bore Water Blending Infrastructure Project

Customer: Longreach Regional Council

Location: Longreach, QLD

Case Study ID: CS-43

Date: June 2013

Overview

Longreach Regional Council engaged Dowdens Pumping and Water Treatment to engineer and design 'Bore Water Blending Infrastructure' to supply artesian water supplementing the existing treated water supply at Longreach Regional Council's existing Water Treatment Plant (WTP).

The Problem

The existing capped borehole head was to remain intact, yet the pump was to be installed through the bore discharge, creating a technical challenge. It was an express obligation from Longreach Regional Council that the Water Treatment Plant operations were not adversely affected during the development of the project, along with all other contract stipulations that were successfully delivered.

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Our Solution

Dowdens Pumping and Water Treatment were engaged at the project's inception, offering our entire service spectrum to assess, engineer, design, specify, construct, install, test and commission, and project manage a turnkey solution.

Pumping equipment supplied is operable via an electronic variable speed drive using a manually set speed selection. Interlocks were provided to prevent the borehole pump from operating for other than limited periods, for example, unless the water treatment plant is also operating.

Delivery of the pipeline included ductile iron cement lined (DICL) pipe laid below ground level to accommodate transfers of 15 l/sec of hot artesian water to the discharge of the Water Treatment Plant filters designed to withstand pressures of 500kPa. The plant was designed to withstand high water temperatures of 75°C from the constantly flowing artesian bore.

Pipeline construction works included excavation, bedding, laying and backfilling utilising Dowdens experienced infield crew, supervisors and project management. Dowdens Pumping and Water Treatment's Project Department design team also engineered concrete thrust blocks to restrain the pipeline within the unstable substrate.

Key Components

- Variable Speed Drive Pumps
- Ductile Iron Cement Lined (DICL) Pipe
- Bermad Control Valves
- Dowdens Engineered and Manufactured Stairs and Work Platform
- Groundworks and Concrete Slab

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Project Design Philosophy

Dowdens Pumping & Water Treatment design philosophy for this project was:

- Cost-Effectiveness
- Innovation
- Ease of Installation
- Simple & Effective Plant Operation
- System Reliability & Reduced Ongoing Maintenance



Brands used in this project



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