



1 Aerial exterior of the new Richmond Water Treatment Plant. 2 Surge vessels. 3 Internal pipework and pumps.

RICHMOND WATER TREATMENT PLANT

Stantec for Tasman District Council

Project Location: Nelson



The design and construction of a new water treatment plant in Richmond, the largest town in the Tasman district, was required to meet the updated Drinking-water Standards for New Zealand 2005 (Revised 2008) (DWSNZ) and to supply the increase in local water demand.

Richmond's water was previously supplied through two networks, one from the Waimea borefield and the other directly from the Richmond borefield. MWH, now part of Stantec (MWH) developed a unique strategy which blended the water from both borefields and treated it with ultraviolet (UV) before pumping the water to the reservoirs in Richmond.

The reason for blending the two sources was that one had high nitrates and so blending would dilute the nitrates to acceptable levels. This meant the water was the same quality across the network. It also allowed consented abstraction rates from each bore to be maximised, so providing more water and ensuring supply to 2030. Additionally, the plant was designed to run off one or both raw water sources, giving greater operational flexibility and improving the security of supply.

The project includes a 15,400m³/day treatment plant with chemical dosing and UV treatment, a 1,500m³ balance tank and bypass system, installation of over 4km of pipeline and upgraded bores. The treatment building and layout of equipment has also been designed to allow the building to expand and additional treatment equipment to be added in the future, should this be required.

MWH, Hawkins Infrastructure, sub-contractors and the Tasman District Council, all collaborated to deliver the best outcome for the community. Today, the water treatment plant provides greater operational flexibility, improved security of the supply and maximises the allowable abstraction rates.

Judging & Copyright Statement

This project is an entrant in the 2016 INNOVATE NZ Awards of Excellence competition. The winners will be celebrated at our Awards Gala Dinner on Saturday, 12th August 2017 in Taupo.

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