Factor UTB

SEPARATING WATER FROM WASTE

EMU PARK WASTEWATER TREATMENT PLANT

Client
Rockhampton Regional Council
Fitzroy River Water

Address
Emu Park, QLD

Completion Date
November, 2011

Factor UTB provided consultancy, design and construction for the Emu Park Wastewater Treatment Plant replacing the existing under capacity treatment plant.

Primary treatment is provided by three grinders in parallel. Secondary treatment is carried out by dual activated sludge sequencing batch reactors. The aeration system has been designed for a capacity of 4,950ep with the hydraulic capacity up to 86 L/s instantaneous peak flow. Flows in excess of 86 L/s are diverted to the treated water storage lagoons. The aeration capacity can be upgraded in the existing reactors by 33% to meet future needs. Tertiary equipment includes fine screen filtration, supplemental alum dosing, validated dual UV reactors and supplemental hypochlorite dosing.

The plant has automatic sludge wasting with a sludge thickening tank and supernatant return. A centrifuge with polymer dosing produces sludge cake from the thickened sludge dropping the cake into a trailer for disposal. The sludge handling systems operate largely unattended only requiring the operator to be present to start the centrifuge and remove / replace the trailer.

DESIGN PARAMETERS

Average Design Dry Weather Flow	1,238 kL / day
Peak Day Flow (Full Treatment)	3,714 kL / day
Max Instantaneous Flow	86 L / sec
Peak BOD Removal Capacity	903 kg / day
in conjuction with Nitrogen Removal	69.3 kg / day

Control Shed - Inline Grinders

Rockhampton Regional Council

FITZROY RIVER WATER
Business Unit of RRC

Control Shed - Tertiary Treatment

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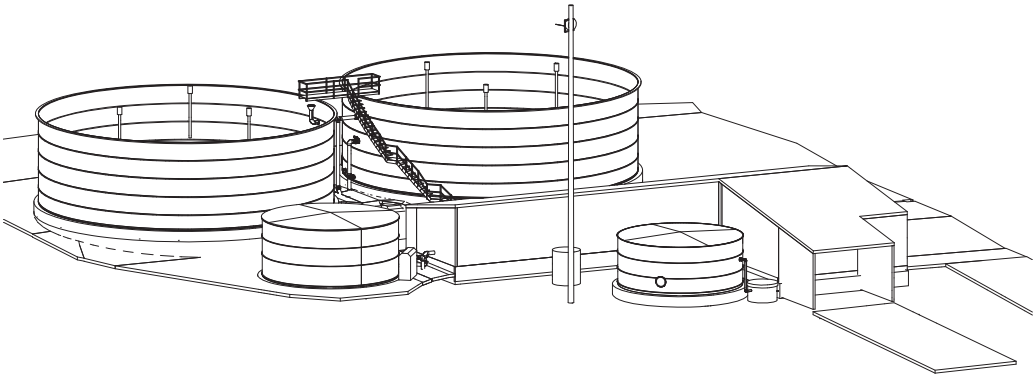
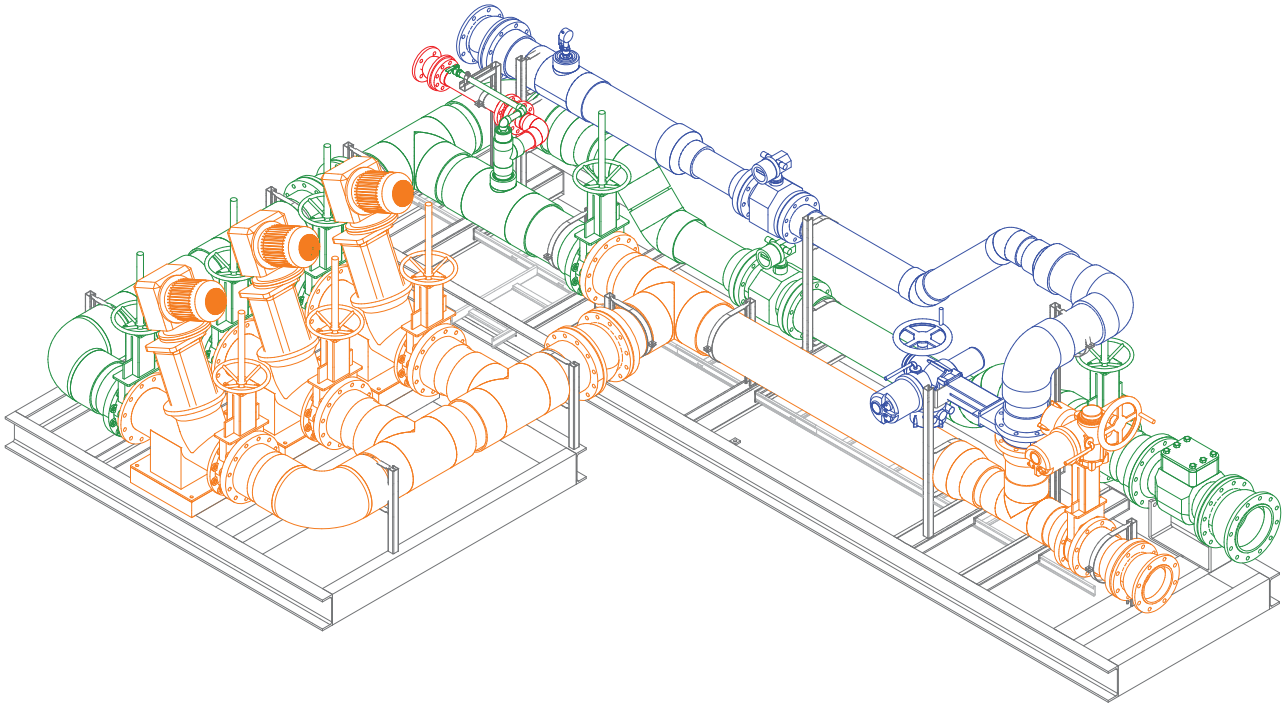


The plant has been built to withstand cyclonic conditions and this year (2013) saw peak hydraulic flows over a number of days up to 5,125 kL in a 24 hour period (4,940kL design peak) and 1,524 kL in a 6 hour period (986kL contracted). The plant was impacted on 19th February 2015 by Cyclone Marcia (Cat 4)with 3 second gusts around 156kph and suffered no damage.

The plant was constructed using steel panel tanks with ASKONobel bonded coating and has a cathodic protection system. Construction was delayed due to the 2011 floods and change over from the existing plant was made two weeks after the local power authority was able to provide the required transformers and switchgear in November 2011.

he treatment plant operates unattended. It has microwave links to the main Fitzroy Water Operations building in Rockhampton 42km distant. There is also a secure modem providing alarms and alternative remote access.



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