



## Remote 200 Man Work Camp Sewage Treatment Plant

**Customer:** Origin Energy

**Location:** Near Euthulla, QLD

**Case Study ID:** CS-87

**Date:** November 2013

### Overview

Dowdens Pumping and Water Treatment were contracted by Origin Energy to design, manufacture, supply, install and commission a Rotating Biological Contactor (RBC) and Ultrafiltration (UF) Sewage Treatment Plant (STP) for a 200 man work camp located at their Spring Gully site – Euthulla (near Roma).

### The Problem

Origin Energy required a Sewage Treatment Plant for a 200 man work camp located at their Spring Gully site. The treated effluent needed to be discharged to an onsite Pongamia plantation via an irrigation system in accordance with criteria from the Class A recycled water guidelines.

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## Our Solution

Incoming raw sewage is deposited in primary holding/settling tanks where primary settlement and anaerobic digestion occurs.

The retention capacity in the holding tanks ensured proper settling of biosolids and anaerobic digestion occurred. The settling tank effluent then flows through to the rotating disc stage, where aerobic treatment takes place.

Effluent from the rotating disc stage then passes through the clarifier. Treated effluent from the clarifier is pumped through the UF system to reduce the suspended solids level to meet the final treated effluent quality.

The effluent is dosed with liquid chlorine enabling effective disinfection before use for onsite plantation irrigation.

## Key Components & Features

- **STP Components:**
  - The system is capable of treating 60m<sup>3</sup>/day of raw sewage into Class A effluent
  - 12.2m<sup>3</sup> pump station complete with duty stand-by maceration pumps
  - Emergency 30m<sup>3</sup> peak flow storage tank
  - 2x 1.1kW Rotating Disc Rotor Units
  - Electrical Control Panel, Chlorine Disinfection and Filter Room all and housed in refurbished shipping containers with air conditioning and lined panels
  - 4x 47kL treated effluent/wet weather storage tanks with interconnecting pipework
- **Class 'A' UF Polishing System Components:**
  - UF polishing system housed in a refurbished shipping container with air conditioning and lined panels
  - Chlorine dosing system with 200L tank, level sensor and 2x dosing pumps
  - 650L filter backwash tank with level sensor
  - PLC-based control panel with HMI Touch Screen

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- Fully automated irrigation system supplying treated water to Pongamia plantation

## Project Design Philosophy

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

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



## Brands used in this project



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