

**CLIENT:**

Kempsey Shire Council

**LOCATION:**

South West Rocks, NSW

**SERVICE:**

Wastewater Treatment

**SOLUTIONS:**

Supplement and replace the Biological Nutrient Reduction process of the three existing Passveer channels with a dual tank Sequential Batch Reactor Process

**PRODUCT:**

Diffusers, Rotary Trough Decanters, Submersible Mixers, PLC Control System

**COMPLETION DATE:**

December 2009

**CONTACT:**

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## South West Rocks Sewage Treatment Plant

The South West Rocks STP Augmentation Project was a unique project for which Aquatec Maxcon equipment was pre-selected and contracted prior to the selection and appointment of the Civil and/or Prime Contractor. Aquatec Maxcon's high efficiency AquaBlade Diffuser and Rotary AquaDecanter were chosen and ordered by Kempsey Water well prior to any commencement of work on site. Consequently, Aquatec Maxcon was invited to participate in the conduct of the pre-contract Hazop and Chair meetings that allowed circumvention of many construction, installation and maintenance problems.

The aim of the project was to supplement and replace the Biological Nutrient Reduction process of the three existing Passveer channels, with a dual tank Sequential Batch Reactor process. The dual tank system utilised the intermittent aeration cycles of each SBR tank at 180 degrees out of phase to each other, so that only one set of reasonably sized blowers could be employed to provide the entire air demand for both tanks alternatively.

To this end, Aquatec Maxcon designed, manufactured, supplied, installed, commissioned and proved the performance of the great majority of the new equipment. The equipment thus supplied, included 240 diffusers (120 per tank each of four removable headers and pipe work), two 12m wide rotary trough decanters, submersible mixers, service davits, tank instrumentation (depth, position, limits and dissolved oxygen), as well as the entire dual panel PLC control system for the operation of the SBRs.

The responsibility for the control system enabled Aquatec Maxcon to employ a number of improved control features, including an automatic diffuser purge system to clear the diffusers and headers of condensed or entrapped moisture.

The plant was commissioned in December 2009.

