

## Taree Effluent Management Scheme

### Rodney Industries - Marani Irrigators

The Taree Effluent Management scheme is part of a \$16million project to beneficially reuse treated effluent at Taree and Wingham on the New South Wales northern coast.

The Taree scheme will supply up to 1,000 mega litres of treated water from the Dawson River Sewerage Treatment Plant each year to 11 dairy farmers at Cundletown and Dumaresq Island. Once fully operational the scheme will reduce the release of treated effluent into the Manning River by 50%. This program had provided participating farmers with guaranteed water quality and volume, and has turned a waste product into a valuable resource.

The project which was opened in May 2009 was conceived 10 years earlier when the decision was made to seek alternative uses for the treated effluent. Discussions were held with the various farmers, soil tests undertaken, environmental reviews completed and a decision made to proceed to design. Apart from some minor external inputs, the designs of the scheme were completed by MidCoast Water staff.

The work has included improvements to the storage and treatment of effluent at the Dawson River STP, construction of two large storage ponds, a major pumping station and pipelines to the various farms, together with new irrigation systems on each of the farms involved. The whole system is continuously controlled and monitored by SCADA from the Dawson River STP.

Construction of the major parts of the project, including the main pumping station and the transfer pipelines, was also undertaken by MidCoast Water staff. External contracts were awarded for the construction of the two effluent storage ponds and the on-farm irrigation systems.

This project is a great example of MidCoast Water working closely with our community to provide long lasting benefits.

McCrackens Water Services (formerly Branxton Irrigation) was responsible for specifying and selling the 8 Marani Hard-Hose Irrigators (sizes 90mm & 110mm) which were supplied by Rodney Industries. The Irrigators formed part of the irrigation system on the farms utilising the treated water.

The Marani range of Irrigators, available from Rodney Industries, is very extensive ranging in sizes from the 40mm machine up to 160mm.

The Marani machines are all fully hot-dipped galvanised, with the direct transmission, the variable speed gear-box and speed regulator giving better performance and reducing energy costs. The availability and back up service were all considered in final appraisal and the awarding of the contract.

**Marani Irrigators, supplied by Rodney Industries**

Operational performance advantages include:

- Low pressure losses over the turbine
- Increased flow and low friction loss through HDPE pipe
- Fully Hot Dipped Galvanizing for longevity
- Reduced OH&S risk through the use of panels and guards
- Top of the range computer controls for accurate water application
- Inclusion of a Solar Panel for trickle feeding batteries

Environmental benefits include:

- Low environmental impact through the turbine efficiency
- Reduced pumping energy requirements
- Low carbon footprint due to reduced energy requirements
- Use of solar for battery charging
- Lower water wastage with accurate water application

Commercial benefits include:

- Long service life with low maintenance requirements due to minimal moving parts
- Reduced pumping cost and energy savings
- Cost effective installation
- Lower water costs due to accurate water application
- Labour cost savings due to ease of moving

