



*Artists impression, subject to approval

BARANGAROO SEAWATER INTAKE PENSTOCKS

Lend Lease has awarded AWMA the penstock component of Sydney's high profile \$6 billion Barangaroo South urban regeneration project.

The District Cooling Plant (DCP) is a key element of the commitment to sustainability at Barangaroo South. Sea water will be used in the DCP condenser cycle as an efficient cooling medium. The AWMA penstocks and screens isolate and protect the seawater system intake.

The contract requires AWMA to custom design, manufacture and install

specialised water control gates, intake screens, lifting devices, storage rack and portable gantry system.

Three TLF penstocks will be manufactured from GR2507 super duplex stainless steel to accommodate the corrosive seawater environment, providing a 100 year design life. The specialised water control gates are designed to withstand 30tn water load with a design compliant to earthquake loading including seismic load from water column. All penstocks will be fitted with AUMA 3-phase actuators.

Aluminium stopboards, CuNi screens and access platforms will also be provided. The primary screens are designed for impact loading whilst the fine screens are removable for cleaning via AWMA's self engaging lifting frame.

GENERALLY SPEAKING

In recent years AWMA has designed, manufactured and installed water control solutions for some of Australia's most demanding urban and environmental projects.

One of the world's most challenging issues going forward is food production. Efficient irrigation practices hold the key to sustainably enhancing food and fibre production.

AWMA have a strong history in irrigation modernisation; within the channels delivering the water to farms, as well as on farm infrastructure and automation.

This year has seen our company deliver a fully upgraded and automated irrigation delivery system for the Tenandra Irrigation Scheme near Warren, NSW. Modernised regulating structures and flow meters have been installed throughout the 100km channel network as part of the PIOP funded project.

The AWMA i-Riser was also released this season and has been a resounding success with over a thousand units already installed. The i-Riser, i-RiserPLUS and new bay outlet automation are providing options on farm for surface irrigators in Northern Victoria and NSW who are currently benefiting from one of the largest on farm modernisation programs in the surface irrigation sector's history.

Being a business within the water industry gives us a satisfying sense of purpose - ***we are not just doing business***, we endeavour to create solutions that provide sustainable living, and when it comes to protecting our food and water - ***'we mean business'!***



Brett Kelly
Managing Director

**AWMA i-Riser – Winner of the
Telstra Technology and
Innovation Award**



ODOUR & WATER CONTROL AT CRONULLA WWTP

Flow and odour control solutions are progressing at the Cronulla WWTP with AWMA Pty Ltd providing design, manufacture, installation and after sales support for the control infrastructure.

AWMA have designed over 50 water control structures including penstocks, stopboards, specialised custom control gates and numerous rock traps for the Sydney Water plant.

AWMA were engaged by the Odour Management Program Alliance (OMP Alliance) who is responsible for the new odour control facility, odour covers, improved ventilation and protective coatings around the plant. AWMA has successfully delivered a number of fully automated, stainless steel ULF undershot penstocks. AWMA stopboards, rock traps and odour covers are scheduled for installation by early 2014.

Further works have been confirmed, with Process Engineering Technologies (PET) engaging AWMA for the supply of an additional four automated stainless steel ULFs for the UV channel inlet penstocks and four stainless steel automated DLF decant gates for the UV channel outlet penstocks.

Once complete in 2014, the Cronulla Wastewater Treatment Plant can continue to perform in line with environmental requirements.

DID YOU KNOW?

AWMA have designed a new combination spindle, ideal for confined spaces.

AWMA offer a Rising / Non-Rising Combination Spindle for applications involving corrosive environments and/or headstock limitations. Contact our sales team to discuss how this design innovation may benefit your next project.

HAWAIIAN 'DITCH GATE'

An AWMA FloTrol gate has been exported to Hawaii to regulate flows to an irrigation ditch system.

The automated, flow regulation gate complete with Linak Modbus actuator will be utilised by the Hawaiian industrial company as a 'Chute Ditch Gate'.

The gate will be automated for remote monitoring and control.

Contact Larry Keaton said 'it was a pleasure doing business with AWMA. We plan a trip down under next year and look forward to meeting them and visiting the manufacturing plant'.

NEW ZEALAND PENSTOCKS

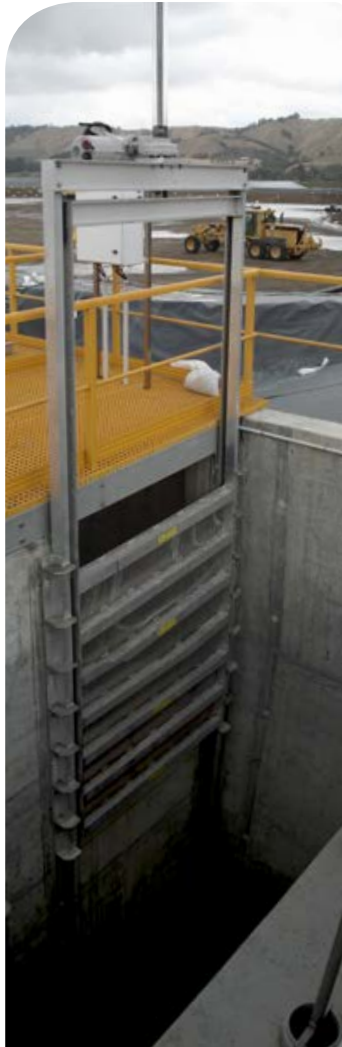
Construction has begun at Napier's \$30million advanced wastewater treatment plant in New Zealand.

Max Tarr Industrial engaged AWMA to design and manufacture six stainless steel 'Pump Station Penstocks'.

The 'Wet Well' installation requires TLF Penstocks for full parameter sealing and a 6m spindle assembly.

The manually operated top sealing penstock is manufactured from grade 316 stainless steel.

Previous projects delivered through Max Tarr Industrial include the \$25million upgrade to the Masterton Waste Water Treatment Plant on New Zealand's north island. DLF Penstocks were supplied to control the discharge of effluent between the outfall and irrigation beds.



IRRIGATION MODERNISATION CONTINUES

AWMA continue to deliver water control infrastructure to support Murrumbidgee Irrigation's staged refurbishment works.

Girdwood Contracting engaged AWMA to upgrade water control gates and screens on escape structures, along two irrigation channels near Griffith NSW.

The structures will utilise aluminium Head and Discharge Gates which provide the flexibility of overshot and undershot gate operation.

TLF water control gates were installed to provide full parameter sealing for isolation of the adjoining pipeline, whilst AWMA Trash Racks prevent damage caused by weed and debris.



CONSISTENT DELIVERY TO WESTERN AUSTRALIA

AWMA work with Water Corporation and their contractors on projects throughout Western Australia.

Stainless steel Topsealing TLF Penstocks, Bulkheads and actuation systems have been successfully delivered to sites including the Eden Hills Sewage Pump Station, Neerabup Ground Water Treatment Plant, the Port Headland Waste Water Pump

Station, Kalbarri Waste Water Treatment Plant, Alkimos Waste Water Treatment Plant, Beenyup Wastewater Treatment Plant and Ellenbrook Pump Station.

Water control gates supplied by AWMA for Water Corporation are designed and manufactured in accordance with SPS295.

FISH LOCK AND REGULATOR UPGRADE

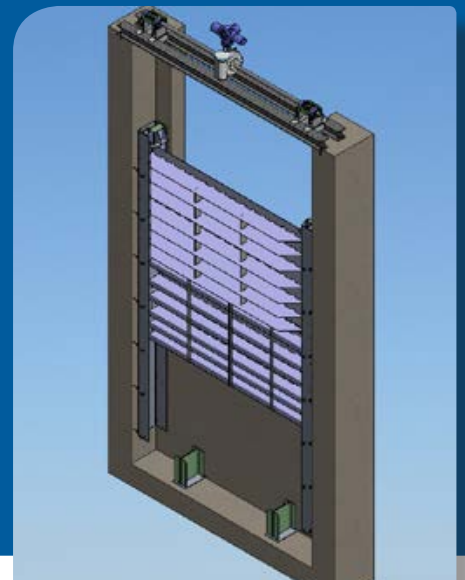
Geotechnical Engineering Pty Ltd has been awarded the construction contract for State Water Corporation's (SWC) Mollee Weir Fishlock and Regulator Upgrade near Narrabri, northern NSW.

As subcontractor to Geotech, AWMA has been commissioned to design, manufacture and install fishway and regulator gates for the Mollie weir as part of the Keepit Offset project.

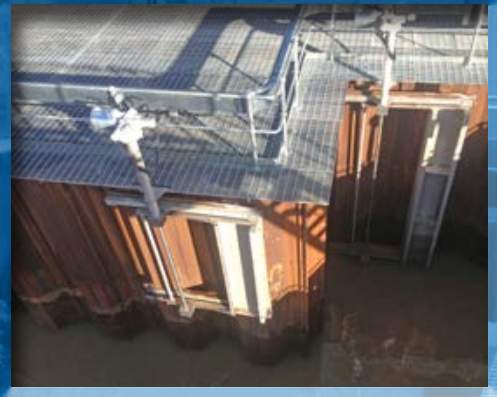
The \$6million project requires quality control infrastructure to sustain high frequency fishlock gate operation, as well as a regulator gate to attract fish and to pass environmental and low flows as required. All water control equipment will be linked to SWC's automated system for remote operation.

This project presented a number of initial design concerns regarding the potential wear of equipment, maintenance requirements and subsequent whole of life costs. To address these issues, AWMA developed a cable drive system based on the mechanics of the proven AWMA LayFlat gate. AWMA's innovative design effectively eliminates wearing parts from the actuation system, significantly reducing the whole of life costs and maintenance requirements for SWC.

The fish lock will require a number of TLF and DLF gates, all under hydraulic actuation, whilst the regulator gate is a custom designed dual leaf gate with an electric actuator.



BIG OR SMALL AWMA DO IT ALL



WASTEWATER DESALINATION FLOOD MITIGATION ENVIRONMENTAL IRRIGATION



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