

## CUSTOM BACKFLOW PREVENTION DEVICES

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# GENERALLY SPEAKING

To be successful in business there needs to be a distinct differentiator between you and your competitors.

At AWMA we design, build and install innovative water control infrastructure that provides unique solutions, but that is not our critical point of difference; our people are.

The people you talk with, the people who design your infrastructure, the people who build it, the team that manage your projects, the guys you see on-site, the salesmen who ensures you select the right solution, through to the finance team who process your account. They all form a team that has the sole purpose of working together to ensure that we safely and effectively deliver projects that meet your specifications and exceed your expectations.

I believe we have a unique culture at AWMA that extends from our work place to our clients' as we deliver projects.

There are always plenty of challenges, but working with motivated and focussed people, internally and externally, makes for successful results. Our team look forward to sharing the experience with you and yours, in the near future.



**Brett Kelly**  
Managing Director

# MILTON DRAIN DEVICES

"The Milton Backflow Prevention Device (MBPD) was one of the most difficult Projects Mcllwain's have completed; working in a live creek, adjacent arguably Brisbane's busiest road (Coronation Dr), preventing tidal influences, and with extremely tight access constraints. As such, the design and construction programming coordination was one of the most critical elements in ensuring the success of the Project. Whilst AWMA were not directly sub-contracted by Mcllwain, it was imperative that this coordination and planning ran smoothly to ensure "best for Project" outcomes were achieved. The relationships built throughout the course of the Project between Mcllwain Civil, Brisbane City Council and AWMA Pty Ltd, ensured that this success was achieved." Matt Scully Project Manager Mcllwain Civil.

The largest and most challenging device required for the Brisbane City Council (BCC) Backflow program, has been installed in Milton.

The Milton gate alone is designed to protect approximately 452 local properties across Milton, Rosalie and Auchenflower, including the Milton State School (<http://www.brisbanetimes.com.au/>).

By the end of the 2013/2014 financial year BCC have installed 41 back-flow devices in different locations across the city, benefiting about 1,500 properties. This will mean the risk of back-flow flooding will be reduced for approximately 80 per cent of properties affected by back-flow flooding in 2011 (<http://www.brisbane.qld.gov.au>).

Installing flood-prevention devices on drains and pipes is generally straight forward. The Milton Drain however, proved to be quite a challenge. The very popular bikeway and pedestrian access required isolation, as did the large trapezoidal shaped drain that extended all the way up to the bridge above.

A concept report by Cardino Group proposed twin sector gates with secondary flap gates. AWMA therefore went forth and designed:

- a 6m wide x 4m high duplex /316/2507 stainless steel dual leaf top sealing isolation penstock;
- two 2200mm duplex non return (flap) gates; and
- one 2200mm 316 pedestrian gate.

The structure is subject to 7.5m bi-direction head pressure. The prepared design was subjected to third party RPEQ structural certification by GHD and designed in accordance with AS4100-1998, AS3990-1993, AS1170.0 & AS1170.2.



**"The Milton Backflow Prevention Device (MBPD) was one of the most difficult Projects Mcllwain's have completed"**

# PROJECT ANNOUNCEMENTS

## East Rockingham Wastewater Treatment Plant

TASK JV (a joint venture between Thiess and SKM) has been awarded an \$82 million contract by the Water Corporation of Western Australia to design and construct the East Rockingham Wastewater Treatment Plant (WWTP) near Perth. AWMA have been engaged to supply 27 penstocks (ULF, TLF and DLF), 17 stainless steel bulkhead gates with 20 frames, stopboard storage racks, AWMA portable actuator and install supervision.

## Dalrymple Bay Coal Terminal

DBCT Management P/L are the lessee of the Dalrymple Bay Coal Terminal south of Mackay, Queensland. They are performing an upgrade of the DBCT Industrial Dam to improve coal fines settlement and recovery processes from the dam following stormwater events. The project includes the supply and installation of a total of eight penstocks in four different areas, the largest of which is 4m wide x 2.2m high and will utilise dual rising spindles. Some of the penstocks shall be subject to long term inundation (2-3 months at a time during the wet season) and shall operate in a very harsh environment (coastal area, with a high concentration of coal fines in suspension). All components are grade 316 stainless steel, to achieve the target design life of 25 years.

## Brisbane City Council Stormwater Harvesting Projects

Brisbane City Council are delivering a series of stormwater harvesting projects. The Downey Park and Norman Creek projects require controls be put in place to prevent salt water intrusion from polluting the stormwater harvested from the scheme. AWMA floating weir gates shall be installed across the waterways. The gates shall rise automatically when the downstream (river/saline) water levels rise above the crest of the weir. When upstream levels increase, the door shall open allowing fresh water flows to pass. The gates are designed to be self-regulating and effectively maintenance free.

## DLF PENSTOCKS REGULATE FLOWS IN SA

Visit our website or youtube channel to see DLF Penstocks (Decant Weir Gates) regulating flows on Pipeclay creek for SA Water.

The Pipeclay creek sites are now complete with regulating weir gates, fishway control and portable actuation systems.

Large AWMA Fixed Base Overshot Gates were utilised to simulate the overshot flow patterns of original stoplogs. Segmented stopboards are lengths of aluminium segments also designed to replicate the original dropbars traditionally used to regulate flows in river systems.

As you will see from photos available on our project page, the Slaneys site is only accessible by boat. SA Water will therefore operate these gates using AWMA's petrol driven Hydraulic Power Pack, for easy 'plug and play' operation of the remote sites.



## WATER CONTROL GATES MEET BEST PRACTISE REQUIREMENTS FOR FISH SURVIVAL

### 4.4m high Penstocks have been Installed for Mollee Weir.

State Water Corporation's (SWC) Mollee Weir Fishlock and Regulator Upgrade nears completion.

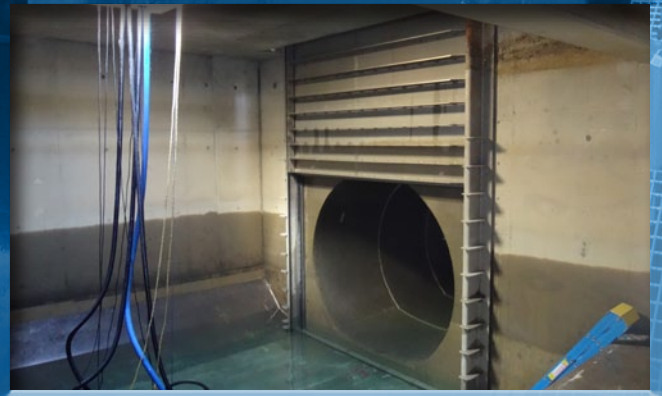
A dual leaf overshot gate, powered by an electric actuator, has been installed at Mollee Weir to allow regulation of the upstream weir pool on the Namoi River.

A number of DLF and TLF Penstocks have also been installed in the adjacent fish lock to control entry and exit points.





# BIG OR SMALL AWMA DO IT ALL



Gate Refurbishment.  
Photo Courtesy of SA Water.



WASTEWATER DESALINATION FLOOD MITIGATION ENVIRONMENTAL IRRIGATION



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