

# MULLAROO CREEK ENVIRONMENTAL REGULATOR

## PROJECT DETAILS

ASSET OWNER/OPERATOR: SA WATER

CLIENT: LEED ENGINEERING & CONSTRUCTION PTY LTD

LOCATION: SOUTH AUSTRALIA

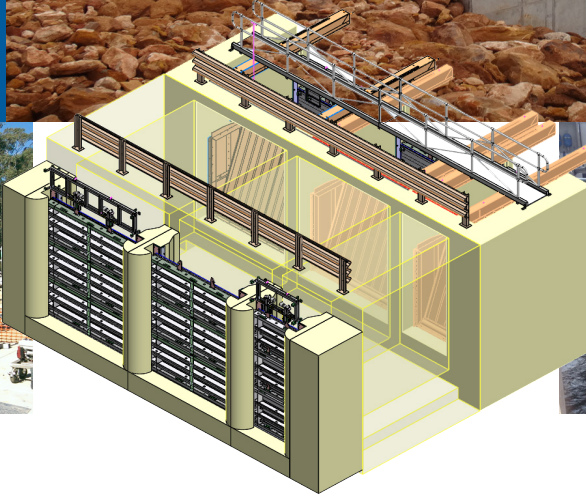
DATE: JAN 2014 – JULY 2015

PROJECT VALUE: AUD3.5MILLION





# MULLAROO CREEK ENVIRONMENTAL REGULATOR



## DESCRIPTION

AWMA were engaged by Leed Engineering and Construction to supply three new environmental regulators on the Mullaroo Creek. All sites are of significant environmental value, located within the iconic Living Murray Lindsay-Wallpolla Islands and Floodplain.

## PRODUCT

AWMA were engaged to design, manufacture, supply, install and commission custom gates including:

- 2 off 3000mm wide x 2400mm high marine grade aluminium LayFlat Gates with hydraulic actuation systems
- 1 off 1500mm wide x 2400mm high marine grade aluminium LayFlat Gates with hydraulic actuation systems
- 1 off 3000mm wide x 2400mm high marine grade aluminium (roller) segmented stoplogs
- 1 off 1500mm wide x 2400mm high marine grade aluminium (roller) segmented stoplogs
- 2 off self-engaging lifting frames and storage racks

## SERVICES

AWMA provided 100% of the design, manufacture and installation process to the total value of AUD800,000.

Additionally, AWMA provided extensive documentation, training and support.

As with all design and construct contracts, AWMA regularly liaised with the asset owner and catchment management authority (in conjunction with the head contractor), to ensure all parties were satisfied with final design scope and specifications.

## MANAGEMENT

### Early Contractor Involvement:

Initial site visits by AWMA sales and engineering staff to contribute to conceptual design development (1 week).

### Design and Drafting:

AWMA in-house engineering team (6 weeks).

### Manufacture:

AWMA in-house manufacturing team including purchasing, fabrication, QA, administration (8 weeks).

### Installation:

2 mobilisations by the installation team.

### Commissioning:

AWMA Operations Manager (1 day).

### Documentation:

Including Safety In Design, ITP, QA, MDR, O&M Manuals, Installation Manuals etc, managed by AWMA in-house administrative and QA departments.

### Training:

Onsite by our Operations Manager (1 day), plus documentation and on-phone support as required.

## DELIVERY

AWMA successfully delivered water control infrastructure for three sites within the highly significant environmental floodplain. Delays were experienced due to weather, however the project was commissioned on-time without variation.

## INNOVATIVE SOLUTIONS

The custom designed Stoplogs feature rollers allowing the immersion and removal of gates during full flow. All infrastructure was designed and manufactured to encourage safe fish passage and improved wildlife habitat. The completion of the new and improved environmental water control infrastructure provides resources and opportunities for improved management, monitoring and control of environmental flows.

## RELEVANCE TO FUTURE PROJECTS

The segmented roller stoplogs are inserted and removed with AWMA's self engaging lifting frames, via stainless steel guide frames. Boards were designed and tested to insert and remove against 2m/s flow velocity.

Winch systems for the tilting weir gates were operated via hydraulic motors. The hydraulic power pack was mobile. This mode of powering the winch system has proven successful on numerous projects where mobile/remote actuation power is required.

AWMA have developed a unique lifting frame to mobilise segmented stopboards/roller gates into position safely and efficiently.

The self-engaging lifting frame can autonomously deploy or retrieve segmented gate sections from any depth without operator intervention, other than a direct crane lift.

This capability significantly reduces deployment times, reduces required lifting capacity, reduces WHS risks and minimises adverse hydraulic conditions when removing boards.



## HEAD OFFICE

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