Case Study

TREADWELL

Recycled Water Storage Dam Access Staircase

South Melton, Melbourne – As one of three water corporations that service Melbourne's metro region, Greater Western Water has undertaken a project for a new recycled water supply system for framers in Melbourne's west. Known as the Western Irrigation Network (WIN), an important milestone that was completed was a recycled water storage dam at the Melton Recycled Water Plant. By 2023, the water stored at this dam will irrigate thousands of hectares of farmland, supporting agricultural production in the Parwan-Balling region. This project future-proofs water supplies across communities experiencing strong population growth and warmer, drier climate conditions.

Treadwell was engaged by Max Bright & Sons to fabricate and supply the access staircase for this dam.

Project Challenges

- Structure would be submerged based on fluctuations in water levels – the material had to be corrosion-resistant and rot-proof.
- Structure had to be safe for user when wet or dry.
- Being in an exposed water environment, the material had to be electrically non-conductive for user safety.

PROJECT INFORMATION

Project Category:	Water Infrastructure
Scope of Work:	Fabricate & supply FRP structure
Treadwell Products:	INDUSTRUCT™ FRP Solution ArchitEX™ FRP Structural Profiles EX-Series® GratEX® FRP Square Mesh Grating RailEX® ROUND FRP handrails

Treadwell Solution:

1. Treadwell's FRP products are available in a range of resin systems, and can also be customised to the application. Using the correct resin system optimises corrosion-resistance.
2. Treadwell's FRP products are termite- and rot-proof.
3. EX-Series® GratEX® FRP Square Mesh grating and stair treads were used for the steps and landings. These have a grit anti-slip surface, with the added security of a solid leading edge on the stair treads.
4. RailEX® FRP Handrails have a unique finish that eliminates the risk of being exposed to fibreglass shards.
5. ArchitEX™ open channel profiles were utilised in this structure to eliminate the risk of stagnant water within the structure.
6. Treadwell FRP is naturally electrically non-conductive.