

## Western Treatment Plant ERW7 Recycled Water Scheme

### Date

April 2011 to March 2012

### Location

Western Treatment Plant – Melbourne Water

### Project Value

\$9.73M

### Project Description

The Class C Recycled Water Supply Reliability Improvement Project involves constructing a new pump station, situated between 25 West and 55 East Lagoons and approximately 5.2km of 1050mm GRP pipeline alongside 15 East Road between the 25W/55E pumping station up north to the Head of Road Storage (HORS).

This project aims to increase the Class C recycled water supply reliability for Melbourne Water at

Western Treatment Plant Werribee.

The project includes the following three key project zones or elements:

- Pipeline construction
- Pump station and inlets from lagoons 25E and 855W
- HORS separation pond and pipe outlet

### Key Considerations

- Pipeline Design & Construction
  - Scheduling to minimise impacts on flora and fauna such as the breeding season for the “Growling Grass Frog”

- Two trenchless sections involving pre-installation of pipe sleeves under critical Melbourne Water assets that are an integral part of the Western Treatment Plant
- Interactive design management process to minimize dewatering by avoiding ground water zones.
- Installation of pipes, bedding, backfill and removal of spoil and logistic management through an operational waste water treatment plant
- Pump station and inlets from lagoons
  - Construction of inlets from lagoons involved sheet-piling cofferdams within an operational wastewater treatment lagoon.
  - Re-designing the crossing of 15E drain to be via an above ground pipe bridge to remove environmental risk of working within an environmentally sensitive drain.
- HORS separation pond and pipe outlet
  - Works limited to 5-week winter shutdown
  - Project team re-designed sheet pile wall to a concrete separation wall to create a far superior solution at no additional cost to the project

### Sustainability and Environment

The Project team explored the use of recycled glass as a structural embedment material to support the GRP pipe. Through design research and constructability trials and analysis the project team were successful able to use the 100 % recycled product, this has proven to be a great innovation for the project.



### JAYDO CONSTRUCTION

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