



# EASTERN IRRIGATION SCHEME

Water Infrastructure Group's Eastern Irrigation Scheme delivers 5GL per year of Class A recycled water to farming, recreational, industrial and residential customers around Cranbourne in Melbourne.

The scheme is jointly funded by Water Infrastructure Group and Melbourne Water and is operated by Water Infrastructure Group on a 25-year contract.

## Project Drivers

The original drivers behind the scheme were security of water supply for growers and sporting facilities so that these businesses could continue to develop, as well as making a significant contribution to Melbourne's water recycling targets. As a result of ongoing drought, many customers now find that their businesses are totally reliant on recycled water over summer.

## Our Solution

Water Infrastructure Group developed the recycled water market for the Eastern Irrigation Scheme by building relationships with end-users and signing long-term agreements for supply of recycled water to 60 customers at 70 locations. Water Infrastructure Group then designed, built and operates Australia's largest ultrafiltration water recycling plant and a 60km pipeline distribution network.

## CLIENT

Melbourne Water

## LOCATION

Melbourne

## VALUE

\$24.8 million

## CONTRACT

DBFO

## COMPLETION

2005

## AWARDS

International Water Association 2006  
Project Innovation Award



...continued

### Delivery Timeline

The scheme was designed, built, commissioned and validated within a very tight 10 month delivery timeframe.

### Technology

As well as being the largest ultrafiltration water recycling plant in Australia, the plant features both Norit and Pall membranes as a result of Water Infrastructure Group's focus on reliability and regulatory compliance.

#### Ultra-Filtration System 1.

Number of skid units 7+1  
Pressure vessels per skid unit 20  
Membrane modules per skid unit 80  
Total membrane modules 640  
Installed area 25,600 m<sup>2</sup>  
Feed Flow 34 MLD  
Waste Flow <4 MLD  
Yield > 86%

#### Ultra-Filtration System 2

Number of racks, 4  
Modules per rack, 116  
Total membrane modules, 464  
Installed area, 23,200 m<sup>2</sup>  
Feed Flow, 20 MLD  
Waste Flow <2 MLD  
Yield >90%

With prior chemical dosing and filtration, it is expected that the log reductions will be:

#### Typical Permeate Quality

> 5 log reduction of E coli  
> 4 log reduction of viruses  
> 5 log reduction of protozoan parasites & Helminths  
BOD < 10 mg/l, and suspended solids < 5 mg/l  
Filtrate turbidity < 2 NTU

### Client Contact

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