clearwater

case study

# Templestowe Reserve Stormwater Harvesting Project

Manningham City Council
Templestowe Reserve, Templestowe, Victoria

## Overview

A stormwater harvesting system has been constructed at Templestowe Reserve in Templestowe. The reserve is an important community asset in Manningham featuring two sports ovals, a tennis club, a model car club and a scout hall. The recent refurbishment of the main clubrooms for the sports ovals included a number of innovative environmental initiatives achieving a 5 Star environmental performance rating.

The stormwater harvesting system diverts stormwater from stormwater drains into an underground storage tank. Water is then available for use to irrigate of the one of the sports ovals, reducing mains water consumption. The systems will achieve a 70% level of alternate water supply reliability.

The system includes a diversion pit, a gross pollutant trap, a 240 kilolitre underground tank, a pump and a water treatment system. Modelling estimates that the scheme has the potential to harvest up to 2.4 ML annually from the 8 hectare Mandella Street catchment, located to the south of the reserve.

The project was initiated by Manningham City Council as part of a commitment to reduce mains water consumption through its *Water 15 Stainable Water Management Plan, 2005-2015*.

## Organisations

- Manningham City Council
- Federal Department of Sustainability, Environment, Water, Population and Communities (funding partner)
- Comdain Civil Constructions (Construction contractors)

## Objectives

- To develop an alternative water supply for Templestowe Reserve.
- To ensure that the constructed physical assets were consistent with the existing amenity values of the reserve.
- To utilise the top of the underground storage tank as a basketball training facility providing additional recreational opportunities for the local community at the reserve.

*Installing the diversion pipeline*

## Outcomes

The project delivers a broad range of water cycle benefits such as:

- Improving Melbourne's water supply reliability by reducing mains water demand for irrigation purposes.
- Improving waterway water quality in the Yarra River and Port Phillip Bay by removing sediment, nutrients and gross pollutants from stormwater. For example, the system is projected to remove 10 kg of nitrogen per year from stormwater.
- Improving waterway health by reducing peak flows by providing temporary storage capacity for storm surges.

The project compliments the conversion of the Templestowe Reserve sporting ovals to warm season grasses which also reduces mains water consumption for irrigation purposes.

> "The stormwater harvesting scheme contributes to the outstanding environmental performance of the sporting precinct"

## Lessons Learned

- Community expectations around public open space amenity need to be considered early in concept development.
- It is important to inform and consult local residents.
- Maintainability is a very important design consideration.
- Precise and well considered specifications and plans reduce project cost and quality risks.

## Timeframe

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| Conceptual Design: | 2011-2012 |
| Detailed Design: | November 2011- May 2012 |
| Construction: | June - September 2012 |

## Cost

The project was completed for a capital cost of $327,090. Water for irrigation is estimated to be provided at a cost of $3,600 per ML (based on an operational life of 80 years).

## Contact

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*The top of the storage tank is used as a basketball court*

*Inside the underground storage tank*