

Technical Fact Sheet

Mildura Rural City Council Stormwater Recycling Project at the Mildura Landfill Complex

Project Description

The Mildura Rural City Council uses a significant amount of water for suppressing dust at the Mildura Landfill Complex.

The project aims to access stormwater from an existing adjacent wetland, via the overflow channel, as a substitute for fresh drinking quality water, for dust suppressant purposes. Stormwater is to be treated with iodine and pumped into storage tanks with a capacity of 90,000 litres. Water tankers can then access the water from the tanks and proceed to wet down the road network within the landfill complex.

The volume of stormwater accessed from the open overflow channel would be approximately 6 ML of water per year. This would save on using the equivalent potable water supply, and also a cost saving of \$3500 per year.

Other environmental considerations include the use of solar power to supply energy to the pumps operation.

The project demonstrates the benefits of harvesting fit for purpose stormwater, using it for a specific purpose that does not require the use of potable water.

This project demonstrates leadership in the local government sector and will be used in a demonstrational capacity for other businesses with similar needs to learn from.

This Fact Sheet will detail the design of the process and the construction and commissioning of all project elements in accordance with the approved detail design.

Detailed Design Process and Construction of all project elements report

1. Sump in stormwater channel

A 110,000 litre sump was excavated at the stormwater channel adjacent to the Mildura Landfill Complex.



Open drain before excavation



Open drain after excavation

2. Solar pump and panel installation

A solar pump and panel was installed with the capacity of pumping 27,000 litres per solar day. The pump is a 40 mm positive displacement pump, transferring stormwater 170 metres to the storage tanks through a 80 mm PVC pipe which then reduces to 50 mm and runs through a 50 mm stainless steel screen filter.



Solar pump and panel



50 mm stainless steel screen filter

3. Iodine treatment tank

The water then enters a 30,000 litre treatment tank where it is tested and dosed with iodine to the appropriate levels. The level of treatment can be altered to suit the end use functions.

After two hours of treatment, water is automatically pumped into holding tanks with the capacity of 90,000 litres with a standpipe facility to fill the water trucks.



30,000 litre iodine treatment tank

Iodine treatment facility

Trucks access the treated water supply from the two holding tanks

Project Summary

The entire process is fully automated. The solar pump only starts when the treatment tank has been emptied.

In addition the entire system shuts down when the 90,000 litre holding tanks are full. The system will not start up again until there is enough room to pump the treatment tank water into the holding tanks.

All water level sensors have electronic optical sensors, which require less maintenance than probe type sensors. The optical sensors can be recalibrated if a dose of extremely dirty water is detected. So far the water quality has been better than expected.

Ongoing monitoring of the wetlands will also be undertaken to ensure there are no adverse effects on the local environment.

Since Friday the 25th of August 2006 the process became fully operational with 15,000 litres per day being applied to the landfill complex as a dust suppressant.

This project was made possible by the funding from the Smart Water Fund. The Fund is an initiative of Victoria's metropolitan and regional water authorities and the Victorian Government.

**For more information about this project, contact:
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**For more information about the Smart Water Fund:
<http://www.smartwater.com.au> or Freecall 1800 882 432**