

Old Colonists invest in new ways to save

Resource Efficiency Co-Funding Case Study

Cleaner Production 

Project Overview

PARTNER

Old Colonists' Association of Victoria

PROJECT TITLE

Old Colonists' Water Saving Project

OBJECTIVE

To reduce water consumption at the site (in amenities and irrigation) and offset energy use through solar power.

HOW THE SAVINGS WERE ACHIEVED

Amenities were upgraded to dual flush toilets, flow restrictors on taps and water efficient showerheads. A drip irrigation system connected to rainwater tanks has also been installed to increase water efficiency and provide an alternative fit-for-purpose supply for the heritage listed site. The increase in energy use – required for pumping water through the drip system – has been offset by energy generated by solar panels.

TECHNOLOGY UTILISED

- Two 5000 litre water tanks
- Taps with flow restrictors
- Three dual flush toilets
- Water-efficient showerheads
- Solar power system

WATER VOLUME SAVING

1.72 million litres

RENEWABLE ENERGY OFFSET

Additional energy use of 3.12kWh (kilowatt hours) per year, created by the use of a pumped irrigation system (as opposed to hoses), is generated by the use of a solar panel.

GREENHOUSE GAS OFFSET

If the project used conventional electricity, as opposed to solar, it would have generated an additional 4.09kg of CO₂e annually (around 80 black balloons). This has been offset by the use of solar power.

TOTAL PROJECT COST

\$35,226

PROJECT FUNDING

\$17,613 from City West Water

PROJECT PAYBACK

- 11.1 years without funding
- 5.5 years with funding



The Old Colonists' Association of Victoria (OCAV) is a not-for-profit organisation that operates multiple aged care facilities, and has been doing so since 1869. Their largest site, located in Fitzroy North, is situated within the City West Water service area. The Fitzroy site consists of 135 individual cottages suitable for single residents and couples.

Water is used in a number of ways across the site: by residents in their self-contained cottages and personal garden area, for the care of residents in the low-care and high-care facilities and for irrigation of communal gardens throughout the site including the nursery.

As part of their Water Management Action Plan, the maintenance team identified a

number of ways in which water could be saved at the site, without increasing energy use.

Dual flush toilets were installed to help reduce water use. Similarly, flow restrictors on taps and water efficient showerheads have resulted in a reduction of water and energy use (due to a decrease in quantities of hot water required).



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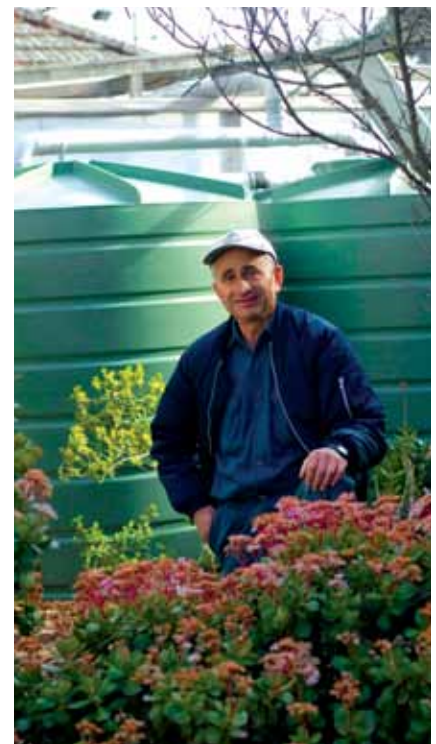
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Furthermore, a new and more water-efficient drip irrigation system using rainwater harvested from the site was installed at the Fitzroy site (previously, the gardens were watered by mains water spray irrigation). Drip irrigation systems are significantly more water efficient than spray irrigation systems, as water is not lost through wind, over-spraying or surface evaporation.

While the new irrigation is more water-efficient, it did result in an increase in energy use at the site as energy is required to power the rainwater irrigation pump. To offset additional energy use, the maintenance team had a solar panel installed on-site. Energy from the sun is used to power the pump, which operates the irrigation system for one hour a week.

The Old Colonists' Association of Victoria continues to explore further ways to save water – a potential future project is the capture and use of stormwater.

City West Water can provide information on gardening practices such as converting spray irrigation systems to drip irrigation.



Contact

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