Waste Management

South Windsor Recycled Water Scheme

Why is recycled water being used?

Recycled water will help reduce the impact of urban development on water resources, reduce water extraction and save up to 100 mega litres of potable water per year for personal use and drinking. It will also help protect South Creek by reducing the nitrogen and phosphorous being discharged into South Creek and thus the Hawkesbury River. Recycling produces a secure and sustainable source of water that is less dependent on climate and rainfall. The availability of a continuous source of water to irrigate playing fields will improve playing surfaces and increase safety for players and sports ground users.

How safe is recycled water?

Recycled water is very safe when guidelines are followed and it is only used for its intended purpose. Recycled water undergoes high standards of treatment to ensure it is fit for its intended use. Regular monitoring is required to ensure the quality of water being supplied.

A multiple barrier treatment process is used to ensure high quality recycled water is produced. This approach is supported by agencies such as the US Environmental Protection Authority and World Health Organisation in their guideline documents as well as the NSW Office of Environment and Heritage and NSW Health. Constant online monitoring and water quality testing will also be used to alert Council if any one of the treatment process barriers is compromised.

Specific control measures to be implemented include:

- Irrigation only to be undertaken at night.
- Irrigation not permitted during windy conditions.
- Irrigation not permitted during wet weather.
- The non-potable recycled water system will be kept completely separate from the potable Sydney Water supply.
- Reclaimed water taps turn in the opposite direction to drinking water taps. The tap handles are required to be removed when not in use. All taps will have signs advising people not to drink the recycled water.
- Recycled water will only be supplied to selected businesses and sporting fields. User agreements will be implemented at each site which outline the responsibilities of Council and the Recycled water users.
- Specially trained plumbers will be used to connect the recycled water to these properties.

Where will it be used?

The following sites have either been connected to the recycled water or have the potential to be connected in the future:

Site	Recycled water use
Berger Road Lake	Irrigation
Berger Road Reserve	Irrigation and toilet flushing
Bounty Reserve	Irrigation and toilet flushing
Bradley Road Reserve	Irrigation
Colonial Reserve	Irrigation and toilet flushing
South Windsor Park	Irrigation and toilet flushing
Bede Polding College	Irrigation and toilet flushing
Bligh Park Primary	Irrigation and toilet flushing
Chisholm Primary	Irrigation and toilet flushing
Windsor Park Primary	Irrigation and toilet flushing
Windsor Leagues Club	Irrigation and toilet flushing
Windsor Golf club	Irrigation

Where else is water being reused?

There are currently over 230 schemes where municipal use of recycled water is practiced across Australia. These schemes include irrigation of public parks, gardens, roadsides, sporting facilities, and golf courses. In greater Sydney, recycled water is used for irrigating farms, golf courses, sports fields, parks and racecourses.

The Process

A multi-barrier treatment process is used to produce the recycled water.

The project was part of the Hawkesbury-Nepean River Recovery Program which consisted of seven projects and improved river health below the major water supply dams by increasing the water available for environmental flows in the river and reducing nutrient loads. The Hawkesbury-Nepean River Recovery Program was funded by the Australian Government through its Water for the Future initiative.

	Process Step	Description
1	Pre-treatment	The sewage is filtered - large solids and grit is removed.
2a	Biological treatment	Bacteria grow and work to remove nutrients from the sewage.
2b	Clarification	Solids (excess sludge) and floating material (scum, fat, oil) is separated from the sewage.
3	Media filtration	A coagulated is added and the clarified water is filtered through beds of coal to reduce nutrient concentration and suspended solids.
4	Ultraviolet Light Disinfection	The recycled water passes through an ultraviolet light disinfection Unit which breaks down organic chemicals. UV light can kill viruses and bacteria and inactivate parasites such as Cryptosporidium and Giardia.
5	Sodium Hypochlorite Disinfection	The water is treated with sodium hypochlorite (similar to bleach) to inactivate any remaining viruses and bacteria and keep it clean on its journey through the new pipe network to the sport fields and schools where it will be used for irrigation and toilet flushing.

The Hawkesbury-Nepean River Recovery Program is funded by the Australian Government through the Water for the Future initiative.

Australian Government
Water for the Future

NSW GOVERNMENT

Hawkesbury-Nepean River Recovery Program

This document contains important information.
If you do not understand it, contact the
Telephone Interpreter Service on 131 450.

Hawkesbury City Council

Address:	366 George Street Windsor NSW 2756
Mailing Address:	PO Box 146 WINDSOR NSW 2756
Phone:	(02) 4560 4444
Fax:	(02) 4587 7740
Email:	council@hawkesbury.nsw.gov.au
Council Website:	www.hawkesbury.nsw.gov.au
Office Hours:	Monday to Friday 8:30am-5pm

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