The great greywater challenge

By trialing six households and six different systems, the Alternative Technology Association is helping to unravel the uncertainties around greywater. Alison Sutherland outlines how

Water conservation is a hot topic at the moment and more people are empowering themselves to do something to help reduce their impact on the earth. Greywater systems which take waste water (excluding blackwater, waste from the toilet) from a household and reuse it either on lawns, gardens, or for toilet flushing are an obvious choice for those serious about their water saving.

Not only have some people managed to reduce their potable water consumption by a significant 30%, many find that the nutrients in greywater stimulate and improve their gardens.

However, using greywater is not always the blissfully perfect and easily implemented solution to using water wisely—yet. Greywater also has the potential to damage plants, be harmful to human health (through transmission of disease) and contaminate soil and groundwater if inappropriately managed. As a consequence most bodies involved in approving greywater systems are taking a rather cautious approach, which can be frustrating to the serious water saver.

Too many questions, not enough answers

Here at the Alternative Technology Association (ATA) the feedback we have received from people wanting to install a greywater system is that finding reliable information is not necessarily easy. Common questions people encounter are: Which systems are legal? Which systems are safe? How long is my system going to last? And will the energy used to make and run my greywater system be worth the potential water savings?

With many of these questions yet to be answered by regulators and the industry themselves, it is no wonder that people find it difficult to access this sort of information.

The greywater trial

The ATA, with assistance from the Smart Water Fund, is helping to alleviate some of the uncertainty surrounding greywater by testing different systems. We have selected six different commercially available (Environment Protection Authority [EPA] approved or compliant) systems and will install them in six households in Melbourne. With the help of the householders we will monitor these systems over a 12-month period to measure their water savings, sustainability, usability and safety. These systems will also be displayed to the public through a series of open days.

Selecting the households was a tough choice because of the overwhelming number of applications we received. The successful participants are from different areas of Melbourne and differ in age and lifestyles.

Choosing the greywater systems has also been difficult, because of the limited number which meet the Victorian EPA regulations and Department of Health and Safety (DHS) guidelines. The six systems differ in complexity and in how they use the greywater.

By the end of the trial we will hopefully be able to provide comprehensive first-hand information on how to go about getting your very own safe, efficient, effective and sustainable greywater system. *ReNew* will also track the progress of the systems and keep you up to-date with developments.

Meet the greywater trial participants on the following pages.

Greywater recycling survey - every drop is precious

Greywater recycling is a relatively new frontier for water conservation in Australia and the ATA needs your information. Tell us about your experiences by completing the ATA greywater survey. Participants in the survey can be anyone using mains water who is recycling waste water from their kitchen, laundry or bathroom. Your system may be as simple as bucketing water to your garden or a more complex system that may use filters, pumps, tanks and drainage garden beds.

Fill in the Greywater survey and enter the draw to win:

- **a 12 month subscription to *ReNew* and**
- **a copy of *The Water Efficient Garden* by Wendy Van Dok**

You can download a copy of the survey from the ata website: www.ata.org.au
For more information or to register interest in any of the above areas please contact the ATA on (03) 9415 2105 or greywatersurvey@ata.org.au

Location: Fairfield

Cas, health researcher, and Chris, a doctor, live with Lilly (21), one of their three children in a house set back 100 metres from the banks of the Yarra. They have a wonderfully lush, green property with some of the produce from the garden going into Cas's jams and chutneys. They have a long standing interest in environmental issues; their solar hot water and solar electric systems have served them well. They have also been reusing their water in the garden since the last drought (approximately 20 years ago), but would like a more automated system.

System: pool diverter

Location: East Malvern

Susan, a part-time teacher, and Trevor, a retail chain owner, live with their three children Tessa (13), James (15) and Jonathon (10). Trevor has been thinking about ripping up the back garden to put in a greywater system or rainwater tank for a while now. They would like to do something that can be used as a model of sustainability, especially as it is a more prominent issue these days and their children learn about water saving at school.

System: greywater saver

Location: Maidstone

Andrew, a pilot, and Karen, a nurse who is currently on maternity leave, live in Maidstone with their gorgeous seven-month-old son Christopher. They have only been there 14 months and their long-term goal is to convert their typical late 60s red brick house into an environmentally sensitive home. A greywater system was high on the list of priorities.

System: greywater saver and pump

Location: Frankston

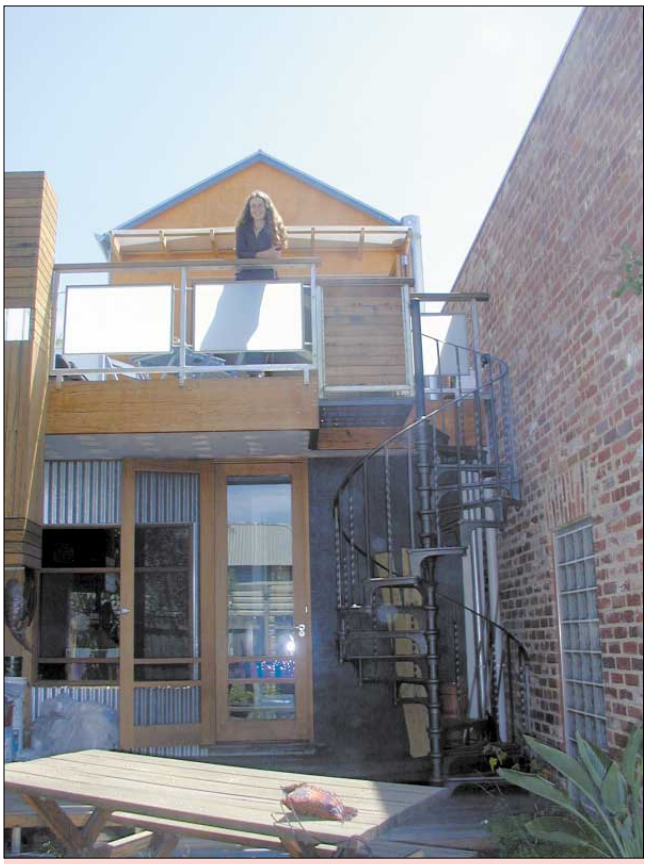
Norman, a teacher, and Marian, a nurse manager, live down in Frankston on a wonderful 4000 square metre property. They too have been conscious of energy and water efficiency and now that their five children have left home, they have found more time and money to put into such things as a solar hot water system and a rainwater tank. They are very keen to have a greywater system so they can keep their wonderful garden looking good without feeling guilty.

System: waterwise system

Location: Highett

Carolyn, a homemaker, and Jeff, a consulting engineer, have recently moved out of their home in Highett with their three daughters Elizabeth (9), Olivia (4) and Siobhan (6) so they can demolish it and rebuild. They spent a lot of time investigating renovating opportunities, but decided it would be cheaper to rebuild to achieve the energy efficiency they desired. They are now committed to showing just what you can do sustainably with a display home. They shopped around for a company that was prepared to work with them to make their display home a sustainable one and finally found Inform. It would be nearly impossible to put in a greywater system for a house on a concrete slab so Jeff has organised to have all the plumbing on the exterior so the pipes can still be accessed.

System: sand filter



Location: Kensington:

Martin, a theatre-set builder and Ceridwen, an architect, live in Kensington in a home Ceridwen designed. The clean lines and warm colours of their home are highlighted by the natural light that meanders through the whole building. Ceridwen designed the plumbing to go through the concrete slab, so that it would be easy to take the wastewater from the shower and use it to flush the toilet, and also out to their small garden in the backyard. They have had too many problems with their original greywater system to keep it running and are now looking forward to replacing it with something that works better.

System: peat biofilter