

Nubian Water Systems Case Study

Cranbrook School adopts a sustainable 'OASIS'

One of the greatest challenges that our society faces in the 21st century is the maintenance of adequate supplies of water for irrigation and general use.

Australia has the lowest rainfall of any inhabited continent, combined with a very high evaporation rate. Per head, Australians are also amongst the highest consumers of water in the world. These facts pose a unique dilemma for the future of Australia's water supplies.

For any establishment, whether commercial or residential, a water management programme that includes reducing water consumption, water recycling and the use of alternative water sources, can significantly relieve the pressure on the existing urban infrastructure.

In recent years, decreasing rainfall and increasing water restrictions across the country, have resulted in escalating demand for new technology to help reduce our water consumption and increase our capacity for water recycling.

In particular the importance of developing greywater recycling systems has become pertinent. Greywater is defined as water that comes from hand-basins, showers and washing machines. Capturing this greywater for irrigation and general household use has become the major focus of many water harvesting plans.

Nubian Water Systems is an Australian owned, Sydney based company that has focused on this pressing issue of water management, and the development of effective water recycling systems. Nubian's intent is to provide local, practical solutions that address the increasing global shortage of drinking water.

Nubian has brought a depth of technical skills and knowledge to the category to offer new systems for customers who are faced with tightening water restrictions or would simply like to regain the freedom to use water freely for their homes and gardens.

Nubian's flagship product, '**OASIS**' harnesses the very latest technology in greywater recycling. The patented system was developed in Sydney and offers consumers a low maintenance and cost effective way of taking control and saving water.

The OASIS is a completely natural and biological treatment system that has a minimal effect on the environment and does not require the use of added chemicals. Its robust treatment system does not restrict users with lists of pre-approved detergents, washing powders and soaps, and it copes with variations of water flow.

The system is extremely effective. After pre-treatment through a self-cleaning lint filter, water enters a processor via the top of a treatment column and flows, under gravity, through two different forms of media before UV disinfection. The resulting treated water can be used for irrigation or in household washing machines and toilets.

In order for Nubian to obtain accreditation for OASIS in NSW under NSW Health guidelines, the system had to be put to the test in a residential establishment, where a sufficient flow of the water could be regularly monitored and sampled.

A suitable establishment had to be found, and Nubian entered into a unique, collaborative relationship with **Cranbrook School**. The partnership evolved from a meeting of minds between the Cranbrook Headmaster Jeremy Madin, and the Nubian Board of Directors who shared a similar outlook with regard to the future of water sustainability.

Over the last two years, the Cranbrook School Council's Building and Development Committee has highlighted the importance of establishing a water harvesting strategy to secure the future water supply for Cranbrook. Taking a proactive stance, the School employed consultants to recommend new strategies for its water management, and was one of the first schools in Sydney to make this issue a priority.

Cranbrook's OASIS greywater system, donated by Nubian, was part of the school's integrated approach. Cranbrook installed the OASIS prototype unit at Street Boarding House as part of a six month trial programme. The system was independently monitored by SIA Global, with the regular testing of water samples to be used as part of the accreditation process.

The trial was completed successfully, and the water produced from the OASIS prototype was tested with extremely positive results. In fact the prototype system exceeded the NSW Health Department's grey water treatment accreditation requirements, and in July 2006 OASIS was accredited for use in NSW by the Health Department.

Jeremy Madin, the Headmaster of Cranbrook School, said, "I am thrilled with the water harvesting strategies that Cranbrook has established with the help of Nubian Water Systems. We are already seeing significant benefits, which will ensure a more sustainable water supply for Cranbrook, both now and in the future".

Not content with just this success, Cranbrook took the OASIS trial one step further, by integrating the project into the school's curriculum and creating educational outcomes for the school. The OASIS project was introduced to the Year 12 Chemistry class, by Senior Chemistry Teacher Dr Sue Kidd, who used the system as an environmental prototype, to bring elements of the HSC Chemistry curriculum to life.

The success of this integrated approach was evident, by the enthusiasm that it received from Cranbrook staff and pupils. The progress of the OASIS project has been mentioned in school assemblies and even featured in the school newsletter.

Dr Kidd said, "We have seen great practical benefits for the Senior School students. The boys have particularly enjoyed the opportunity to observe and study the OASIS system. As a result, they have taken extremely complex chemical concepts, and applied this knowledge within a practical framework. The boys tell me that this has made the study of Senior Chemistry significantly easier".

Following the accreditation of OASIS, Cranbrook lodged a Development Application with Woollahra Council. Once this is lodgement is approved, the resulting recycled greywater will be used for watering the school grounds, and creating a source of water for irrigating the oval and the playing fields.

It is estimated that the OASIS system will save Cranbrook between 350,000 and 400,000 litres a year. In its role as an advocate for greywater recycling, the school would like to see the system extended over time with additional systems installed on other buildings.

Nubian has also benefited significantly from the Cranbrook trial. The prototype system used at Cranbrook has helped to create the domestic version of the OASIS, which is now available for customers to purchase. Its unique selling points include its affordability, compact size and modular design which make it easy to install above ground. The system also has the flexibility to suit a range of establishments from domestic to commercial.

John Huggart, CEO Nubian Water Systems, said “The Australian water management and treatment industry is in a state of change and the major impacts of climate change, government legislation and market demand will result in significant shifts in consumer behaviour. Greywater recycling puts the consumer back in control of their water supply and allows them to manage their water requirements in a sustainable way,” said John.

“The Cranbrook experience has only served to reinforce for us that greywater recycling is a practical and sustainable water solution for the future. Interest is running at an all time high due to tightening water restrictions and we believe that the unique positioning of OASIS as an environmentally sound and robust system that suits a number of domestic applications, will create a significant demand in this developing market,” said John

The OASIS System is now available for customers to purchase. For enquiries or details of how to order, visit www.nubian.com.au.

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