

m3 Dimensions

Recycled Water: The Future of New Residential Developments?

February 2005

A prolonged drought in Australia has led to unprecedented shortages of water supplies and resultant water restrictions, which is now impacting on metropolitan areas as much as regional areas were first affected. Forecast climate change and population growth suggest that the shortages will continue to be a major issue in the future. This series of events has increased interest and awareness of various water saving measures. One such measure is the use of grey water, which is likely to become increasingly common in future residential subdivisions and other newly constructed buildings in the future.

Put simply, grey water is re-used or recycled water from sinks and showers. It does not include water from toilets (i.e. black water). The purpose of grey water is to re-use water for other purposes, such as garden watering and toilet flushing; around 30% of households' drinking quality water is used on gardens and 20% is used flushing toilets. Due to the potential environmental damage and health issues associated with grey water, its use is governed by a number of criteria. In addition, some water such as kitchen water and laundry water may be unsuitable for reuse, due to harmful detergents and the like, although grey water treatment systems minimise the risk and low environmental impact detergents which provide garden safe grey water are now available.

In May 2003 the Victorian Government increased the rebate offered to households that purchase and install a \$1,500 grey water recycling system, from \$100 to \$500. However, further measures announced since suggest that the incentive measures to increase grey water usage will be combined with new compliance requirements.

In June 2004 the Victorian Government released the *Our Water Our Future* document, a White Paper on water. The document points out that unless we undertake further measures to reduce water usage, there will not be enough water to fulfil the State's needs in 15 years. The White Paper announced new funding of \$225 million and a number of other measures to secure future water supplies. It also committed the government to investigating other water saving measures.

One such measure was the introduction of mandatory water efficient measures for new houses from 1 July 2005 (in conjunction with all new homes from 1 July 2005 facing stricter requirements to attain the mandatory 5 star energy rating). The proposal, subject to a regulatory impact statement, also sets a 25% water saving target for new housing developments, apartment complexes and commercial buildings. While the exact measures to achieve this target are yet to be decided, suggested ways residential developers can reduce water demand include through efficient plumbing and appliances, drought resistant plants and irrigation systems, urban drainage across subdivisions, rainwater tank connections to toilets and the use of stormwater as a water resource.

In particular, new residential estates located near existing water treatment plants are likely to be encouraged (or possibly mandated) through the planning scheme to include dual supply systems, or third pipe systems, which are used to deliver treated recycled water to urban areas. There are several examples of residential developments which will contribute towards reductions in the rate of growth of drinking water consumption due to urban growth.



Dual supply system taps

Continued Page 2

The information contained in this report is provided in good faith and has been derived from sources believed to be reliable and accurate. However, the report is not intended to be comprehensive or render advice. Neither m3property nor any persons involved in the preparation of this report accepts any form of liability for its contents. This report is Copyright and cannot be reproduced without the written permission of m3property.

m3 Dimensions

Recycled Water: The Future of New Residential Developments?

Continued

The Sandhurst Club is a 'private master planned club community' currently being developed in Skye by Links Club Living. The 310 hectare Estate will contain 1,850 residential dwellings, two 18 hole golf courses and various other recreational facilities. Recycled water from the Eastern Treatment Plant will be used to water golf courses and parks while there are also plans for using recycled water in watering residential gardens and for toilet flushing.

VicUrban's Aurora residential estate is set to become one of the largest and the most environmentally sustainable residential subdivisions in Victoria. Aurora will be situated over 668 hectares of land in Epping North and contain 9,000 homes. All homes will have a six-star energy rating and the Estate will contain its own water recycling plant. It is expected that water saving measures, such as the use of a third pipe system for recycled water for toilet flushing and watering gardens, and a further proposal for the use of rainwater for hot water purposes, will provide water savings of 60%. VicUrban, in conjunction with Melbourne Water, will also develop the 190 hectare proposed Werribee Field estate along similar lines. The 2,000 dwelling estate is expected to commence construction in 2006. In addition, VicUrban launched 'EcoHome' in its Cairnlea Estate in June 2004, Victoria's first ecologically sustainable house for the mainstream market which includes rainwater tanks and grey water systems.



Cairnlea EcoHome

Efficient use of stormwater and using grey water in residential estates to water gardens and parks will result in greener, more attractive surrounds by guaranteeing a supply of water, even during droughts. Anecdotal evidence suggests estates with more attractive presentation attract higher lot prices and potentially better selling rates, which will become increasingly important as the market has slowed and competition amongst developers remains intense.

The cost premium in residential estates for houses which contain recycled water systems is generally between \$2,000 and \$3,000 per lot. However, water saving measures within houses are likely to be viewed favourably by an increasingly environmentally conscience public and result in long term cost savings to occupiers as water bills increasingly penalise excessive users of drinking quality water. There are established examples of successful Estates in other cities using recycled water for domestic garden watering and toilet flushing, such as Rouse Hill in Sydney and Mawson Lakes in Adelaide.

Given the increasing attention being paid to this area by governments, such as the Victorian Government aiming to use 20% recycled water by 2010, developments which are compliant before compulsion may also avoid more expensive alterations in the future, while occupiers realise marketable cost-savings in the meantime.

The benefits to the environment and the operating expenses of buildings from efficient water use are demonstrable. As some new residential estates are voluntarily setting a new standard in ecologically sustainable development we expect to see an increase of water-efficient measures incorporated into Estates in the future.

CONTACT DETAILS

Darren Krakowiak
Research Manager

Email darren.krakowiak@m3property.com.au

Wendy Lane
Associate Director

Email wendy.lane@m3property.com.au

The information contained in this report is provided in good faith and has been derived from sources believed to be reliable and accurate. However, the report is not intended to be comprehensive or render advice. Neither m3property nor any persons involved in the preparation of this report accepts any form of liability for its contents. This report is Copyright and cannot be reproduced without the written permission of m3property.