



**ACT**  
Government

Environment and  
Sustainable Development

# Waterways: Water Sensitive Urban Design Code Review

Issues Paper



AUGUST 2013



## Introduction

Water Sensitive Urban Design (WSUD) can have many benefits to both the community and the environment. The Government released WSUD guidelines in 2007, which were then given further effect as part of the Territory Plan as the Waterways: Water Sensitive Urban Design (WSUD) Code ('the code') in 2009. It has been employed in new developments and redevelopments as well as in the retrofitting of established developments. Progress in the development of new and innovative approaches to WSUD continues apace. The ACT Government aspires to be a leader in innovative urban planning and development, respecting the needs of the environment and creating a liveable and sustainable city. This however has to be balanced against other, possibly competing, Government objectives such as facilitating land development.

The code was seen as a way of encouraging a reduction in mains water use and improvement in stormwater quality and quantity. This was considered important as Canberra continued to grow in population and which had implications for the natural water cycle through:

- Growing demand for mains water
- Increasing wastewater that requires treatment prior to discharge in the Murrumbidgee River
- Increasing rates and volumes of stormwater runoff that can erode and detrimentally effect ecological habitats
- Increased pollutants like nutrients, sediment and litter entering our waterways, ponds and lakes.

Canberrans have become far more water wise over the last decade. The average annual water consumption dropped from 214 kilolitres (kl) per person in 1997–98, to 100kl per person in 2010–11. However, demand will continue to increase in coming years in line with population growth in Canberra and the surrounding regions. Whilst there has been significant investment in improving the ACT's water security, maintaining the momentum on water saving and improving our catchment health are critical.

## The Current Waterways: Water Sensitive Urban Design Code

The purpose of the current code is to provide a method for implementing water sensitive urban design in the ACT and to assist in achieving targets set out in 2004 *Think Water Act Water – a strategy for sustainable water resource management*. The code applies to:

- development of new residential neighbourhoods and estates
- re-development or in-fill development within the existing built environment and
- institutional, commercial and industrial developments (with a site area greater than 2,000m<sup>2</sup>).

The code provides mandatory performance targets for mains water use reduction and for stormwater quality and quantity management which must be met from a range of measures including those described in the code.





Elsewhere, the Territory Plan Water Use and Catchment General Code provides that total discharge (loading) of various stream flow constituents emanating from catchments must not exceed the sustainable loading on receiving waters.

The performance target for mains water use reduction is 40% (compared with 2003 levels) in all new developments and redevelopments.

The performance targets for stormwater quality management require a:

- reduction in average annual suspended solids export load by 60% for development or redevelopment sites and 85% for regional or catchment-wide developments
- reduction in average annual total phosphorous export load by 45% for development or redevelopment sites and 70% for regional or catchment-wide developments and
- reduction in average annual nitrogen export load by 40% for development or redevelopment sites and 60% for regional or catchment-wide developments.

The performance targets for stormwater quantity (for developments over 2,000m<sup>2</sup>) require a:

- reduction on runoff peak flow to no more than the pre-development levels and stormwater release captured for a period of 1-3 days designed to a 3 month Average Recurrence Interval (ARI) and a
- reduction of peak flows to pre-development levels for 5 to 100 year ARI.

## The review

The recent report by the Independent Competition and Regulatory Commission (ICRC) on secondary water use recommended that the Government undertake a detailed review of all regulations that impact on water-related development decisions, including the code. The ICRC further recommended that the analysis should include the merit of the code's mandatory water efficiency requirements within the context of an integrated and adaptive planning framework, including flow-on impacts on the ACT housing market.

The Government tabled its response to the ICRC report in the Legislative Assembly on 6 June 2013. This response included a commitment that the Environment and Sustainable Development Directorate (ESDD) would undertake a review of the code against a continuing commitment to maintain the 40% reduction on water usage in new developments and refurbishments/extensions. This target is central to ACTEW Water's planning for the ACT's future water security.

The review will consider the cost implications of WSUD on housing affordability as well as provide recommendations on increasing the range of permissible options to achieve the targets as well as providing maximum flexibility to developers to lower development costs.

Many of the issues raised in consultation on the code will have applicability to the wider ACT water strategy or the institutional arrangements related to catchment management:

- the recently released draft ACT water strategy *Water for the Future – Striking the Balance* which will, once finalised, replace the current 2004 *Think Water Act Water – a strategy for sustainable water resource management* and
- the Parliamentary Agreement between ACT Labor and the Greens, which commits the Government to establish a statutory water catchment management authority for the ACT.

Submissions provided in relation to the code will, where applicable, also be considered in finalising the *Water for the Future* strategy and options for future catchment governance in the ACT.

## Issues

### Targets or Outcomes

The performance target for mains water use reduction is 40% (compared with 2003 levels) in all new developments and redevelopments. The ACT Government has decided that this target will not be changed as part of this review.

The current requirements were prepared at a time of significant pressure on water storage and availability due to the ongoing drought and the impact of the disastrous 2003 bushfires. Since 2004, initiatives like the enlarged Cotter Dam, construction of the Murrumbidgee to Googong Dam water transfer pipeline and facilitation of interstate water trading to allow transfer of water from Tantangara Dam to Googong Dam have eased concerns about water security. The emphasis has moved to consolidating these achievements and protecting water quality across the range of its sources, including supply catchments, rural and urban streams and water bodies.

The new draft water strategy proposes moving away from specific quantitative targets for water to focus on outcomes relating to environmental water and urban waterways; water supply and meeting demands and people, public health and recreation.

Climate change too will impact on the implementation of the code. Future climate change projections are of a climate with greater uncertainty, decreased winter rainfall, increased summer rainfall and increased rainfall intensities with more risk of flooding and erosion.



1. Are targets for stormwater quality and quantity appropriate?
2. Are the desired outcomes being achieved and is effectiveness being measured appropriately?

### Flexibility

The code presents a range of options for achieving the prescribed performance targets. Applicants are able to complete a checklist appropriate to their scale of development as well as use a calculator to assess the water saving performance of the development.

In submissions to the ICRC review it was claimed that the application of the current code is too prescriptive and inhibits flexibility in the application of innovative techniques to achieve WSUD outcomes. The review is interested in ideas about how to improve the flexibility of the code whilst providing options to lower development costs.

1. Are there aspects of the code where flexibility could be increased?

### Costs

There is some evidence that the application of the WSUD Code imposes additional costs on development and impacts negatively on housing affordability. The main focus of these concerns is rainwater tanks and WSUD stormwater detention measures at the estate level and in urban infill developments.

Concerns have also been raised about the ongoing maintenance and replacement costs of WSUD infrastructure, such as wetlands and ponds. There is concern that the ongoing maintenance costs of WSUD elements may outweigh the benefits for improved water quality and that failure to undertake ongoing maintenance may result in operational failure of elements addressing water quality outcome targets.

1. Are there aspects of the current code that are not cost effective?
2. Should WSUD apply to urban infill development in the same way as Greenfield?

### Application

Concern has been raised about the application of WSUD measures in new estates, especially around the coordination of work as the estate transitions from initial construction, through the build phase to the completion phase. There is a risk that work undertaken in building erosion and sediment control measures is undone by later building work on individual blocks due to the lack of sufficient oversight.

The WSUD Code applies to all developments on individual blocks regardless of whether they are residential, commercial, industrial or institutional, and are required to comply with the mains water reduction target. Any addition or alteration to a residential property, which will increase the floor area by greater than 50%, is also required to comply with the mains water reduction target for the whole property. The stormwater quality and quantity currently applies to single residential development on blocks (with different requirements for blocks under 300m<sup>2</sup>), all multi-unit residential development, all commercial, industrial and institutional development and new estate development.

1. Is the current application of codes and WSUD requirements still an appropriate approach to regulation?
2. Do they apply effectively to all types of developments including infill and redevelopments?
3. What changes, if any, would you recommend?

### How to Make a Submission

Written submissions are preferred. Electronic submissions should be in a MS Word compatible format.

All submissions should be sent to:

Email: [water.policy@act.gov.au](mailto:water.policy@act.gov.au)

Mail: Waterways: Water Sensitive Urban Design Code Review

Policy Branch ESDD  
GPO Box 158, CANBERRA ACT 2601

Delivery: ESDD 16 Challis Street, Dickson ACT 2602

For more information, call 6207 5584

#### **Submissions close: Friday 13 September 2013**

All submissions will be authenticated. Anonymous submissions will not be accepted. To enable your submission to be authenticated you need to include details of your name, address, email contact and if appropriate the organisation you represent and the position you hold in that organisation.

Submissions that cannot be authenticated will not be accepted as will submissions that contain potentially defamatory statements about individuals or organisations.

All authenticated submissions will be considered public documents and be displayed on the ESDD website [www.environment.act.gov.au](http://www.environment.act.gov.au)