

## **Towards Water Neutrality in the Thames Gateway Environment Agency**

*Water efficiency in a  
high growth area*



In December 2006 Entec was commissioned by the Environment Agency on behalf of the Agency, Communities and Local Government and the Department for Environment, Food and Rural Affairs to undertake a study investigating the feasibility of achieving water neutrality within the Thames Gateway.

The Thames Gateway is an area characterised by low rainfall and high water use and lies within an area classified as 'seriously water stressed'. The Government has outlined plans for the construction of two million new homes by 2016, with at least 160,000 of these houses to be constructed within the Thames Gateway. The Thames Gateway development presents the opportunity for the area to be an exemplar for sustainable development and encourage ambitious levels of water efficiency.

For this study it was considered that water neutrality would be achieved 'if the total water used after new development is equal

to or less than total water use in the Thames Gateway before the development'.

Entec developed a scenario based approach to modelling water demand in the Thames Gateway, which explored the feasibility of water neutrality by:

- making new developments more water efficient;
- offsetting new demand in the Thames Gateway by retrofitting existing homes and other buildings with more efficient fixtures and fittings; and
- increasing domestic metering and introducing innovative tariffs for water use which encourage households to use water more efficiently.

The project found that achieving water neutrality within the Thames Gateway by 2016 is technically feasible, but is a challenging target for policymakers, consumers and those involved in delivery.

There are a number of ways in which neutrality could be achieved using different combinations of the uptake of water efficient devices in new buildings, retrofitting existing properties with more water efficient fixtures and fittings and through the use of other demand management mechanisms such as domestic metering and variable tariffs.

The study showed that it may be possible to go 'beyond neutrality' with a high level of water efficiency in new buildings and an extensive retrofitting programme. The study also showed that the costs of achieving neutrality are comparable with those of other options such as leakage reduction.

This project will be used by Government to inform policy around the concept of water neutrality. The issues explored in this study are readily transferable to other regions where substantial growth is planned.

