

Councillor Tony Jones,
Reading Borough Council.
(email to simon.a.hill@reading.gov.uk)

Dear Councillor Jones,

SCRUTINY REVIEW – WATER SECURITY

Thank you for the invitation to participate in the review of Water Security and Water Management. The results will also be of relevance to the current review of Reading's Climate Change Strategy for which I am 'theme lead' for the 'Built and Natural Environment' theme which includes water supply issues.

Climate Change:

There is a need to consider the long-term impacts of climate change on water resources and management in the region. For example, climate variability is likely to lead to extreme events in future decades and may impact on flooding. Some areas of Berkshire are already suffering from vulnerability to flooding, for example the severe flooding in South Reading and in Pangbourne in recent years. At the same time, droughts may also become more prevalent during summer months.

The issue of climate change must now be integrated into long-term planning and modelling of water resources in the region, including ensuring water infrastructure is adapted over a long time scale. Adaptive management is needed to adapt to a range of scenarios due to the inherent uncertainty about the future changes, including raising awareness of communities to promote water efficiency. In the face of uncertainty a conservative approach is appropriate.

The Adaptation Sub-Committee of the Committee on Climate Change has this year produced a report <http://www.theccc.org.uk/reports/adaptation/2012-progress-report> "Climate change – is the UK preparing for flooding and water scarcity?" Its summary says:

The Government and water companies should take further steps to increase efficiency in water use, including through water metering and pricing. Increased uptake of meters will be particularly important in locations with current and future risks of supply-demand deficits.

- More efficient use of water is a powerful way to cope with future deficits in water supply.
- On current trends average water consumption could be reduced from 145 litres per person per day to 130 litres or less per person per day by 2035.
- This is readily achievable by uptake of household efficiency measures, wider use of water metering and raising awareness. Reducing average consumption by 15 litres per day goes further than current water company plans and could halve the projected deficit from climate change and population growth

Biodiversity:

Measures to address human requirements must not be allowed to undermine biodiversity of the area so abstraction of surface water and ground water must be limited and groundwater levels must be maintained.

Ground Sourced Heat:

In the future ground-sourced heat may well become important in Reading – drilling down perhaps 100m to draw on the heat available in the underlying aquifer – so maintenance of levels and flows in the aquifer may become significant for energy supply as well as for water supply and biodiversity.

Supply: Sources and Storage:

From work on development in South Reading we understand that there were boreholes on the former Courage site (now Tesco) adjacent to M4 Junction 11. It could be useful to establish if they are still viable, and if so, what capacity they have and if they could be used as a local emergency supply in case of drought.

Thames Water's proposal for a major new reservoir in South Oxfordshire was recently rejected by the Secretary of State. Any such proposals will be very costly and will use a significant area of (presumably)

useful land which could otherwise be used for forestry, agriculture or wildlife. Reducing demand is likely to be more cost-effective and sustainable.

Rain water harvesting is not generally seen as cost-effective but grey water re-use may be applicable in some instances. An EA report <http://cdn.environment-agency.gov.uk/geho0511btwc-e-e.pdf> says "If used for toilet flushing, a well-designed and fully-functional greywater system could potentially save a third of the water used in the home." This technology should be investigated and – if found to be useful – measures should be taken to get it adopted.

Utilities and Regulators:

Most expertise on supplies and resources presumably resides with Thames Water and the Environment Agency so it will be important to involve them in the Scrutiny Review.

The EA publishes Regional Water Resources Strategies, local Catchment Abstraction Management Strategies, and Water Level Management Plans for particularly sensitive areas. In 1999 actions were in progress to address low flows in the Pang and the impact of the Pangbourne Abstraction. Its 2008 paper "Water Resources in England and Wales - current state and future pressures" shows Reading in an area of 'Serious Water Stress' and says that "When we take population density into account (Figure 4a), we actually have less water per person in South East England than many hotter, drier countries such as Morocco and Egypt."

Key Action Areas:

We must aim to have adequate water supplies to meet domestic, industrial and agricultural demand (including watering gardens and allotments) whilst maintaining and improving biodiversity. If lifestyles and output are not to be disrupted by drought there must be a focus on reducing demand in this area to a sustainable level by reducing water consumption per person, managing the growth of the population, and reducing water use by industry.

The EA target of an average of 130 litres per person per day is not very ambitious but it does cover both new build and existing properties. For new build the Environment Agency report <http://www.environment-agency.gov.uk/static/documents/Utility/SCHO0805BJNS-e-e.pdf> "Sustainable Homes – the Financial and Environmental Benefits" says that for new homes 92 litres is 'achievable' (comparable to EcoHomes) at 'insignificant' cost and that 71-84 litres is an aspirational target at cost in the range £1,000 to £2,000.

Planning and Development Control could target lower consumption in new-build homes – I believe their current target is 125 litres per person per day.

Measures are needed to achieve widespread take-up of water metering and retrofit of water saving measures in existing homes – an education program is called for, and perhaps some equivalent of 'green deal' funding or funding by the utilities.

'Water neutral' development has been suggested – where a new development funds improvements to existing properties to offset the consumption of the new development. However this will only stabilise consumption not reduce it overall.

Businesses will also benefit from technical help and financial incentives to cut use. Thames Water have the power to inspect premises but may not have the resources to be as active in this area as is necessary to maximise water saving. It would be interesting to locate and target particularly water-intensive businesses in Reading.

A lower population density would not only reduce demand for water, but also for food, energy, forestry products and recreational space – sustainable living requires that we take account of environmental capacity. This feeds in to wider strategic planning issues for which there is no longer a national forum. The Council could press for a return to national and regional strategic planning to allow such issues to be considered.

I hope this note is useful and I look forward to the review meeting.

Yours sincerely,

John Booth

Reading Friends of the Earth.

(This version with corrected hyperlinks – 13th November 2012)