

# 'Take this great opportunity for water efficiency'

This was the message of Defra's Head of Water Supply & Regulation Division, **Richard Wood** at the end of *Waterwise's* first annual conference. There were a particular set of circumstances, including the current intensifying drought and the new *Code for Sustainable Homes*, that mean we should all "make the most of it".

Certainly the mood of the conference, held on *World Water Day*, was to do exactly that and the presenters, from key stakeholders in delivering water efficiency, showed the commitment and the willingness to share effort and information.

Perhaps the most significant news to reflect this positive mood was when **Anne Hemming**, Head of Buildings Division at ODPM, expanded on the Government's recent press release that stated "... it will strengthen the *Code for Sustainable Homes* alongside the introduction of new tougher *Building Regulations*, in order to address climate change".

She added that Ministers were 'minded' to make energy efficiency rating assessments mandatory, not only for new homes, but also when homes are sold or let. They were also considering mandatory assessments against the whole Code, including water efficiency. This would mean that not only will householders be able to judge running costs when buying a home, but they will also have access to advice about further improvements, so they can make informed decisions. The Government is also looking at the issue of non-domestic premises as many people spend a great deal of their time at work.

## ODPM & Defra working in tandem

Anne Hemming also announced that ODPM and Defra are now working closely together to make sure the *Code for Sustainable Homes* and the *Water Regulations* are used in tandem to ensure that water efficiency is effectively applied.

Summing up the conference, **Maria Adebawale**, Director of Capacity Global and Chair of Waterwise, said that "*Waterwise has an 'open door policy' and has already made many friends in creating solutions. The political will is there and, if we do it properly, people will respect us*".

## Conference Programme

### Session 1: People and Water Efficiency

Chaired by *Pamela Taylor*, Chief Executive, Water UK

#### Water efficiency and the consumer

*Dame Yve Buckland*, Chair, Consumer Council for Water

#### Water - a scarce resource

*Ian Barker*, Head of Water Resources, Environment Agency

#### Not a drop to spare!

*Yvonne Orgill*, Commercial Director, Bathroom Manufacturers Association and *Richard Moss*, Training/Marketing Manager, Bathroom Manufacturers Association

#### Traces of water: developing the sociology of domestic water consumption

*Will Medd*, Research Associate, Centre for Sustainable Water Management and Department of Sociology, Lancaster University

#### Sustainable homes

*Anne Hemming*, Head of Buildings Division, Office of the Deputy Prime Minister

### Session 2: Evidence for Water Efficiency

Chaired by *Walter Menzies*, Chief Executive, Mersey Basin Campaign

#### Economic case for water efficiency

*Philip Fletcher*, Director General of Water Services, Ofwat

#### The metering opportunity

*George Archibald*, Director of Business Development, Severn Trent Water

#### Forthcoming and existing projects on water efficiency

*Mike Farrimond*, Director, UKWIR

#### WATERSAVE - where to now?

*Professor David Butler*, Co-director, Centre for Water Systems, School of Engineering, Computer Science and Mathematics

#### Concerted action - the work of the Water Saving Group

*Richard Wood*, Head of Water Supply & Regulation Division, Defra

Full presentations are available from Waterwise on request.



The Waterwise team outside Lady Margaret Hall

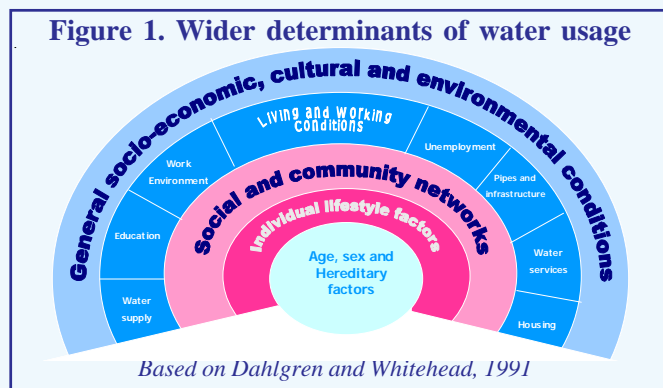
Water UK's Chief Executive, **Pamela Taylor**, chaired the morning session that had the theme of *Water Efficiency and People*. There is great interest in water at present, especially in the south east of the country, due to the recent introduction of hosepipe bans and declaration of 'water scarce status' in Folkestone. This is compounded by the expected increase in demand for water, mainly as a result of the anticipated homebuilding programme.

Pamela added that the water sector had been very good at cost effective design, introducing incentives and framing legislation and regulation but "*it is really people who use water and we need to consider the human factor in more detail*".

### Water efficiency and the consumer

*Dame Yve Buckland*, Chair of the Consumer Council for Water, reminded the audience that, although there are short term behavioural changes during a drought, we need to consider customer behaviour in the longer term. Our water use is habitual and we have a right to choose the lifestyle we wish to lead, but there are also responsibilities. People give little thought to water use unless challenged.

She had adapted the *Dahlgren and Whitehead Model of Health* to the water sector (see figure 1) to illustrate the complex factors that influence behaviour. It had proved difficult even to discriminate between water use behaviour and factors such as people's age and their type of property.



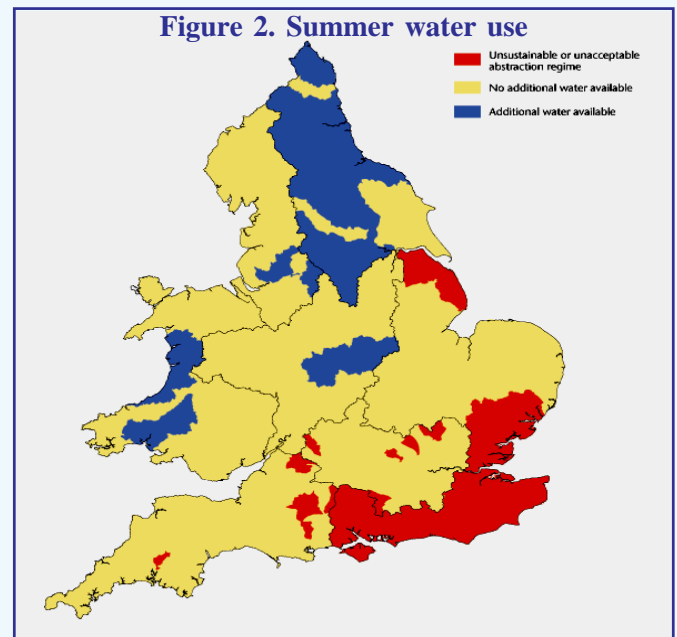
Surveys had shown that customers do put care for the environment below concerns for hygiene, comfort, energy, transport, pollution and recycling.

We have to consider all aspects of life as we will never change behaviour if we do not understand all the factors. We need to use social marketing approaches in a joined up and penetrating way, whilst understanding the implications and thinking through things very carefully. We need to use civic society, such as plumbers and involve the community, such as schools, to raise awareness.

### Water - A scarce resource

**Ian Barker**, Head of Water Resources at the Environment Agency, dismissed the myth that we live

on a wet island where water is abundant by showing that summer water use in parts of England and Wales is already unsustainable (see figure 2).



He was pleased to see that water companies are planning to increase their level of metering significantly over the next 25 years (see figure 3 on page 4) but questioned whether this would translate into reality as recent progress.

Ian said that a relaxation of the 'water scarce status' criteria would help the supply/demand balance. The resulting increase in metered billing would present the opportunity to offer customers vital information. He cited Yarra Valley in Australia whose water bills listed water use over the last four quarters, compared with benchmark water use. Customers are then directed to a website that gives water conservation information.

He hoped the *Code for Sustainable Homes* will mandate higher quality standards for both new and 'retro-fit' homes. Combined with good labelling this would give consumers a proper choice.

Industrial water use should not be neglected and savings of 30 per cent are achievable by very simple means. He used this message to announce the Environment Agency's *Water Efficiency Awards 2007* (see page 6).

Finally, he noted that the only currently targeted water use component is leakage. The Environment Agency is now looking at a range of water targets that can provide incentives to people, water companies and stakeholders.

### Not a drop to spare!

The Bathroom Manufacturers Association have been active recently in promoting water efficiency. Their members include most major household names and cover 87 per cent of the market. The BMA is influential in discussions with government, standards bodies, industry bodies and international organisations.

**Yvonne Orgill**, the Commercial Director and **Richard Moss**, the Training and Marketing Manager, asserted that changing customer habits is a central issue as it is “*commercial suicide to try and supply a market that is not there*”. Water efficiency must be wanted by people in both new and old properties.

A market can only be achieved if all parties, suppliers, plumbers, retailers, merchants as well as water companies and government ‘*come to the party*’.

They took the audience through their *Water Efficiency in the Bathroom* initiative (*WaterHog*, see below), that was launched in January. This microsite [www.bathroom-association.org/watersaving](http://www.bathroom-association.org/watersaving) has been set up as a ‘unbiased information source’.

**Figure 3. BMA’s Twit and WaterHog**



The BMA admitted that for the past 100 years “*we haven’t been truly concerned with how much water we’ve used in the bathroom*” but now the BMA’s focus is to “*encourage customers to enjoy their water – but not to waste it*”.

### **Traces of water: Developing the sociology of domestic water consumption**

Lancaster University’s **Will Medd** explained how this project has linked predominately engineering based water industry experts with sociologists experienced in working in related sectors on customer attitudes and behaviour. Indeed, previously there has been “*no sociology of water conservation*”.

There have been four workshops on different aspects of water use behaviour with the final one due in early April.

Will emphasised the need to cast aside implicit assumptions and rephrase questions. He cited dishwashing as a typical example.

Is there such a thing as ‘normal’ dishwashing and do we know the variability? We need to understand how dishwashers relate to changing routines and changing practices of eating. Also, where are the opportunities for increasing uptake? Is it possible that even with water efficient dishwashers there could be an increase water consumption?

### **Sustainable homes**

ODPM’s presentation was greatly anticipated as the consultation on the *Code for Sustainable Homes* had recently been completed.

**Anne Hemming**, Head of Buildings Division at ODPM, issued the good news, as reported on the front page. She added that the Government was “*minded to limit tradability in the key environmental areas of the Code which includes energy efficiency and water efficiency*”. This means that minimum standards for water efficiency would be set for every level of the Code.

There has to be a response to the ever increasing gap between supply and demand. The housing market, though, is not responding to an ageing and growing population. This means there is an ‘affordability gap’ and need to increase the rate of house building and the associated infrastructure.

The scale is illustrated by new projections showing that 209,000 households will be formed each year to 2026 of which 60 per cent will be in the four Southern regions.

Anne said we need a fresh approach to encourage developers to offer innovative solutions and also empower homebuyers, but without overburdening regulations.

She also announced that there will be a summer consultation on water fittings and fixtures in new and refurbished homes.

**Walter Menzies**, Chief Executive, Mersey Basin Campaign chaired the afternoon session on *Evidence for Water Efficiency*.

### **Economic case for water efficiency**

**Philip Fletcher**, Director General of Water Services at Ofwat, said he expected the current drought to be a driver for water efficiency this year and probably into next year.

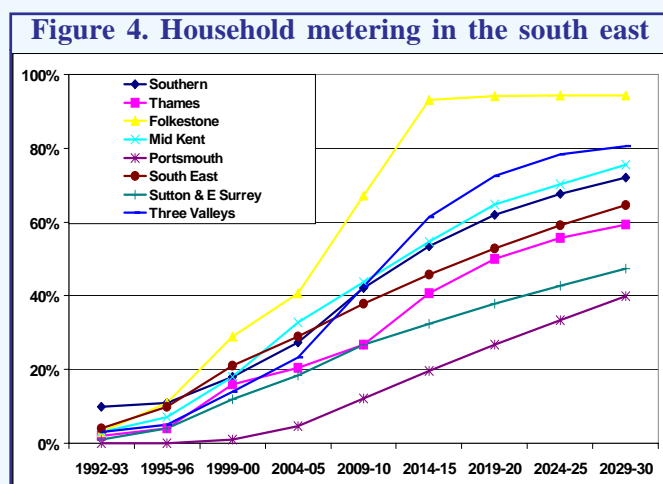
Water resource plans are required to be over a twenty five year horizon. In 2009, such plans will again be scrutinised by Ofwat and the Environment Agency. The water companies can balance their supply and demand by using a combination of methods including leakage reduction, development of existing resources, development of new resources and demand management, including water efficiency initiatives.

He pointed out that at the last periodic review in 2004 thirteen companies put forward specific water efficiency projects whose costs would be allowed through the price settings. In the event Ofwat only accepted six projects that were only expected to realise up to 8Ml/d water savings by 2009-10. However, six companies intended to carry out water efficiency projects within base operating expenditure, while three companies made no reference at all to water efficiency. For the PR09 review, water efficiency projects need to be clearly defined, realise clear and quantifiable water

savings, constitute service enhancement or improve the supply/demand balance position. Additionally Ofwat expects all companies to carry out water efficiency activity within their base operating expenditure.

He concluded that the evidence base for water savings attributed to water efficiency measures is not robust at present. To address this the *Water Saving Group* and *Waterwise* are aiming to develop a robust evidence base in which Ofwat can have confidence when setting price limits.

He added that Ofwat believes that customer metering (projections are given for companies in the south east of England in figure 4) is essential for the wider acceptance and efficacy of water efficiency measures, particularly in areas of water stress. Ofwat supports well founded applications for ‘water scarcity status’, but he warned that widescale metering should take place at a cost efficient rate.



Ofwat’s new sustainable development duty (now under consultation) will require water efficiency measures to be cost effective but should include an assessment of the environmental and social impacts.

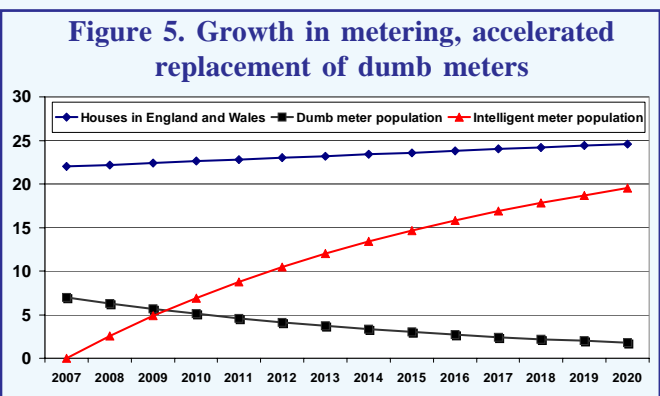
### The metering opportunity

**George Archibald**, Director of Business Development at Severn Trent Metering Services Ltd., put forward the case for using ‘intelligent’ rather than the current ‘dumb’ meters.

He expressed doubt over the business case approach to metering, due to the impossibility of securing solid data on the effects on demands, uncertainty of forecasts of underlying demand growth and untargetted metering costs. Additionally the cost of meters is high due to uncertainty and the fact that there is a relatively small market for intelligent meters.

Intelligent meters help in detecting supply pipe leakage, providing more data for the same reading cost and in supporting tariffs to redistribute the charging burden. This can assist in solving the affordability issue. Such meters also support variable tariffs to deal with drought emergencies, can supply customers with information and provide data to resolve billing disputes.

He set out the costs of an accelerated programme (14 million meters by 2014 rather than 6 million currently proposed) of intelligent metering (see figure. 5). He estimated that, by charging households an additional £20 a year (there was the possibility to offset this by £5) for innovative metering (as opposed to the additional £7 in current plans for dumb metering) we could manage severe water shortages. There would be additional benefits in the reduction of bad debts and improved efficiency in leakage detection.



The critical issue is that the stakeholders – legislators, regulators, companies, manufacturers, should now try to agree on the data that metering must provide to support the tariffs required for demand control and redistribution of charging income. That step will open up the real metering opportunity.

### Forthcoming & existing projects on water efficiency

**Mike Farrimond**, Director of UKWIR, explained how UKWIR “develops and delivers, in collaboration with other sponsors, regulators and researchers, a research programme that meets the priority needs of the UK water service industry”.

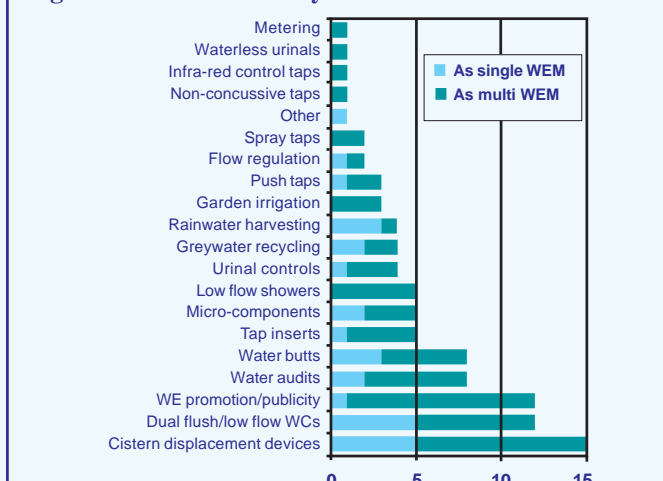
Thirty five of its sixty two current projects are being carried out with a wide range of collaborators in the water sector.

He began his presentation by publicising the new report *Critical Review of Relevant Research Concerning the Effects of Charging and Collection Methods on Water Demand, Different Customer Groups and Debt* which is available via [www.ukwir.org](http://www.ukwir.org). He then expanded on three major water efficiency projects *The Sociology of Water Use*, *The Quantification of the Savings, Costs and Benefits of Water Efficiency* and *Sustainability of Water Efficiency Measures*.

The latter had examined forty four water efficiency measures (see figure 6) from twenty one projects and produced a range of long run marginal costs. A website has been established so that users can add new projects and update information and costs.

Mike mentioned three projects that are about to start. *Future Methods of Charging*, *Automated Meter Reading* (with AwwaRF) and *Cost Effectiveness of Demand Management* (with Ofwat, Defra and Environment Agency) will cost around £0.25m.

**Figure 6. Water Efficiency Measures**



The latter project aims to answer what are the short, medium and long term cost/benefit of water efficiency demand management measures as well as which best practices should be used to reduce the uncertainty of water efficiency measures.

**WATERSAVE - where to now?**

Professor David Butler, Co-director of the Centre for Water Systems at Exeter University, explained to the audience the origins and role of the WATERSAVE network.

It is “a network to support a coherent, forward-looking professional community in the water demand management field by linking university and other researchers with practitioners in industry and government”.

The WATERSAVE network facilitates communication and co-operation, exchange of ideas/insights, data, methods and models between network members. It improves the speed and relevance of the dissemination of new ideas, solutions, methodologies and data.

It also helps in developing new research ideas and facilitates responses to calls for proposals and initiatives, both national and international. It undertakes applied and strategic research through university

**Figure 7. Examples of water efficiency stakeholder groups**



student projects and funded PhD studentships.

The WATERSAVE Network is open to individuals and organisations (examples he gave are shown in figure 7). It is scheduled to meet twice a year and the next meeting will take place on 21 June 2006 in London. Details will be posted at [www.watersave.uk.net](http://www.watersave.uk.net).

**Concerted action - the work of the Water Saving Group**

Richard Wood, Head of Water Supply & Regulation Division at Defra, informed the audience that the WSG first met on 20 October 2005. The Ministerial message is that it is not just a ‘talking shop’ and that it should produce a concerted package of measures. This is in order to reduce consumption of water in households, develop targets, collect the evidence base and spread best practice.

WSG members include the Consumer Council for Water, Defra, Environment Agency, ODPM, Ofwat, Water UK and Waterwise.

The WSG is addressing five basic projects:

*On measuring success*

- defining most appropriate geographical coverage for new initiatives on water efficiency
- investigate possible benchmarks and targets for water efficiency of each household, the overall consumption of water by all households and the quantity of water put into supply by companies

*Information needs, gaps, priorities and funding*

- consolidate and challenge the evidence base
- develop prioritised proposals including well-targeted pilot studies to fill gaps

*Best practice in water efficiency: identifying it and applying it*

- identify best practice in the delivery of water efficiency advice and support
- develop incentives to companies for improving the promotion of water efficiency

*Understanding and changing customer perceptions and raising awareness*

- secure a wider and better understanding of consumer knowledge
- educate consumers on financial benefits of more efficient use
- represent consumers’ views to regulators
- update and improve current sources of advice on resource pressures and the importance of sustainability

*Policy and regulatory framework*

- targeted action for increasing metering in water stressed areas
- studying of the feasibility of a product labelling scheme
- promotion of water efficiency in new buildings

The next steps are for all these workstreams to report progress in May to the WSG, who will review interim outputs and guide future work. The WSG will meet about every 6 months with Water Minister, Elliot Morley, in the Chair.



[www.meconwml.com](http://www.meconwml.com)

Mecon display their water saving device



[www.alchallis.com](http://www.alchallis.com)

Challis stand displaying their products

Tapmagic display boards



[www.tapmagic.co.uk](http://www.tapmagic.co.uk)



[www.environment-agency.gov.uk/savewater](http://www.environment-agency.gov.uk/savewater)

The Environment Agency announcing their Water Efficiency Awards 2007



[www.wrcplc.co.uk](http://www.wrcplc.co.uk)

WRc stand includes the prototype Propelair 1.5 litre flush WC



[www.cranfield.ac.uk/sims/water](http://www.cranfield.ac.uk/sims/water)

Cranfield University's School of Water Sciences Courses



[www.thomasdudley.co.uk](http://www.thomasdudley.co.uk)

Thomas Dudley display their Turbo 88 2 part syphons

**Waterwise would like to thanks all the companies who supported the event and displayed their products**



[www.watergrouppromotions.co.uk](http://www.watergrouppromotions.co.uk)

Water Group Promotions set out their wares



[www.dartvalley.co.uk](http://www.dartvalley.co.uk)

Dart Valley discuss their products

Explaining the Variflush WC



[www.peterton.co.uk](http://www.peterton.co.uk)



Delegates at Lady Margaret Hall

**2nd National Waterwise Conference  
Oxford  
March 2007  
Book early to avoid disappointment**



Pamela Taylor takes delegates' questions