

BOX 5

# CONSTRUCTIVE THINKING

## Save Water, Save the Environment

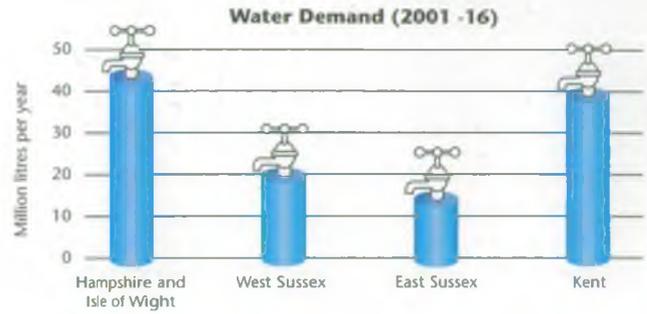
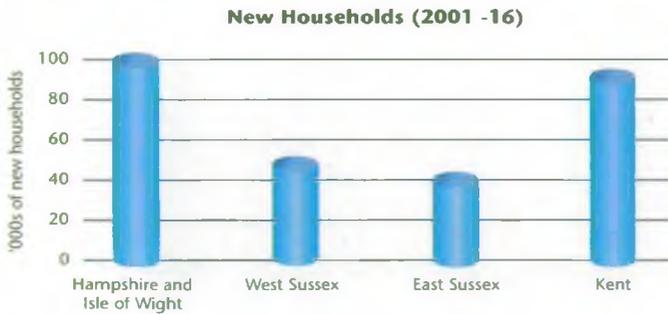


ENVIRONMENT  
AGENCY

# The Demand For Water

Major housing and economic growth is planned for the South East. Developers have the potential to include water efficient measures in new buildings, promoting and encouraging water conservation.

All new households should now be fitted with a water meter. To help customers to save water and money, developers can install devices in new homes that will minimise water consumption without introducing any practical difference to the user. We believe that environmentally friendly houses such as these will have a good market value now and in the future.

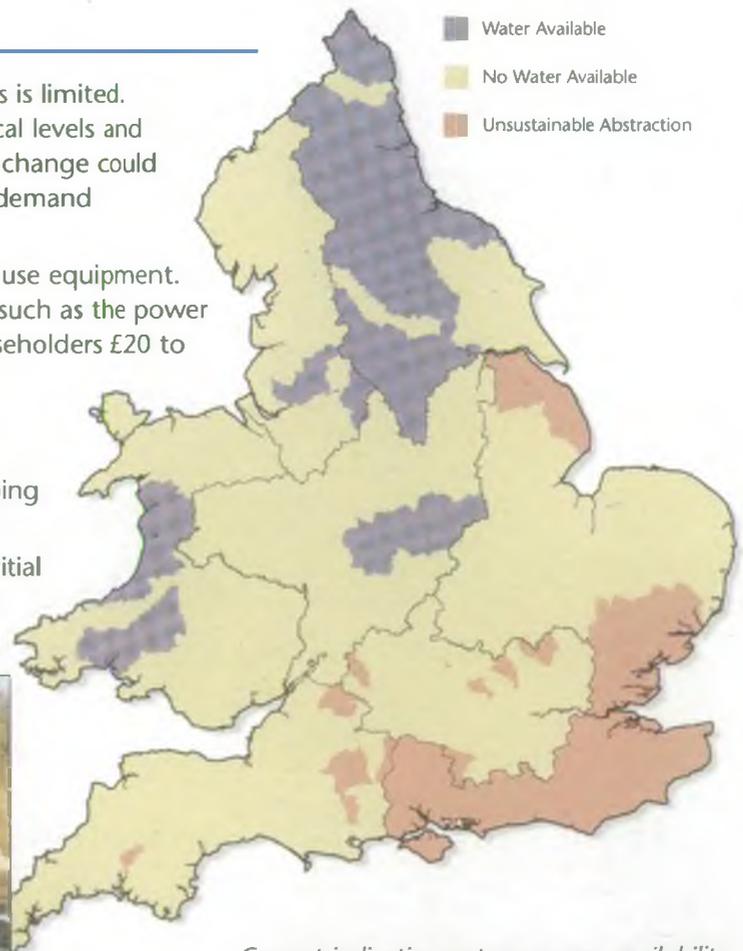


## Q. Why save water?

- The amount of water that can be abstracted from rivers is limited. Over abstraction can cause river flow to fall below critical levels and environmental and ecological damage occurs. Climate change could increase this risk and have implications for supply and demand throughout the year.
- It is important to remember there are choices in water use equipment. Some devices can have very high water consumption, such as the power shower. Water efficient technology can easily save householders £20 to £30 per annum on household water and sewage bills.
- Reducing the use of water using simple measures in the home can help prevent low river flows occurring. This is less damaging to the environment than developing new resources, such as reservoirs.
- Most water conservation devices can be fitted at the initial development stage with the cost being comparable to conventional appliances.



Water efficiency measures can reduce abstraction and help prevent damaging low river flows



Current indicative water resource availability: summer surface water. Efficient use of water is particularly important in the South East to ensure sustainable abstraction.

## SUPPLIERS LIST — A sample of just some of the water efficient products available

Product	Supplier and Contact Details	
<b>Low Flush Toilets</b>		
DAL Surf 6 litre flush cistern & DAL Lux cisterns	Grohe Ltd. 1 River Road, Barking, Essex, IG11 0HD	David Doust (Marketing Manager) Tel: 020 8594 7292 Fax: 020 8594 8898
Water Saving System – the 4 litre flush system	Sphinx Gustaysberg, Eikenburglaan 9, 5248 BJ Rosmalen, Netherlands	Tel: +31 73 521 7080 Fax: +31 73 521 2052 Website: www.wisa-sanitar.com
Ifo Cera Low Water Volume WC's	Elemental Solutions, Oaklands Park, Newnham-on-Severn, Gloucestershire, GL14 1EF.	Mark Moodie (Partner) Tel: 01594 516063 Fax: 01594 516 821 Email: mark.es@aecb.net
	<i>Also available from:</i> Rainharvesting Systems Ltd. Cheltenham Road, Bisley, Nr Stroud, Glos. GL6 7BX	Tel: 01452 772000 Fax: 01452 770115 Email: sales@rainharvesting.co.uk Website: www.rainharvesting.co.uk
Low Flush Toilets	Sanivac, Hafenstrasse 32a, 22880 Wedel, Germany	Tel: +49 4103/91 6890 Fax: +49 4103/91 6890
<b>Spray Taps and Tap controls</b>		
The Sirus Solo Tap; 1000 Economy Flow Control	A&J Gummers Ltd. Unit H, Redfern Park Way, Tyseley, Birmingham, B11 2DN	Nicholas McGrellis (Sales Director) Tel: 0121 706 2241 Fax: 0121 706 2960
Pegler Spray - Lever Operated Monobloc Spray Mixer	Pegler Ltd. St. Catherine's Avenue, Doncaster, South Yorkshire, DN4 8DF	Lisanne Hartshorne (Product Manager) Tel: 0870 120 0284 Fax: 01302 560459 Email: uksales@pegler.co.uk
Ecospray Tap; Cormorant Self Closing Tap	Howard Bird & Co. Ltd. 26, The Avenue, Rubery, Birmingham, B45 9AL.	Tel: 0121 457 6650/1 Fax: 0121 457 6682
<b>Supply Restrictor Valves</b>		
Tap Flow Regulator & Restrictaflow	Dart Valley Systems Ltd, Units 1&2 Alders Way, Yalberton Tor Industrial Estate, Paignton, Devon, TQ4 7QN	Tel: 01803 529021 Fax: 01803 559016 Email: sales@dartvalley.co.uk
Waterfuse Domestic 22 Model - Leak Detection Unit	Waterfuse Ltd. PO Box 48, Fishponds, Bristol, BS16 6LA	C.V. Day (Sales Dept.) Tel: 0117 956 1247 Fax: 0117 970 1453
Tap Flow Regulator	Flow control Ltd. Conservation House, Brighton Street, Wallasey, Merseyside CH44 6QJ	Mrs Victoria Cliff (Marketing Manager) Tel: 0151 638 8811 Fax: 0151 638 4137
WaterGuard – Leak detection/auto shut off-system	The Phoenix Group, Phoenix Trade Centre, 14 Broadfield Road, Sheffield S8 0XC	Tel: 0114 255 5319 Fax: 0114 255 5944 Email: enquiries@waterguard.co.uk Website: www.waterguard.co.uk
<b>Outside &amp; Garden</b>		
Rainsaver Kit	Blackwall Ltd, Seacroft Estate, Coal Road, Leeds, LS14 2AQ	Grant Blakemore (Director) Tel: 0113 209 1000 Fax: 0113 271 3083 Email: info@blackwall-ltd.com
Water Butt	Various Suppliers e.g. Blackwall	(details as above)
<b>Showers</b>		
Automatic 2000 Shower Mixer	Grohe Ltd. 1 River Road, Barking Essex, IG11 0HD	David Doust (Marketing Manager) Tel: 020 8594 7292 Fax: 020 8594 8898
Eureco Safety Mixer	Grohe Ltd. (details as above)	(details as above)
The Rodin Shower System	The Rodin Group, 61 Silverdale, New Milton, Hampshire, BH25 7DE	Tel: 01425 622 581 Fax: 01425 629 220

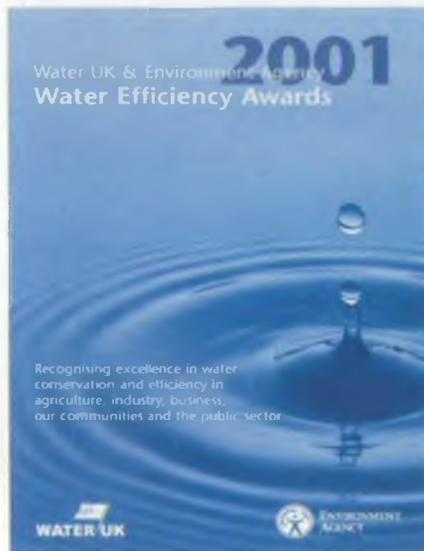
All suppliers provided in this leaflet have been collated from the Environment Agency's 'Conserving Water in Buildings' Fact Cards, the Groundwork directory and 'Aguaspec' (Water Conservation Catalogue developed by EDC). The Environment Agency has not verified any of the water savings associated with any of the products listed in the table. Inclusion in the table does not imply that the Environment Agency endorses any of these products.

# Q. What help and advice is available?

## Example case study – Essex and Suffolk water sustainable new homes

The Heybridge Housing development was commissioned in order to compare the effectiveness of selected water efficiency measures, examine user reaction, investigate practical issues and produce a specification for water efficient homes.

The project was winner of the Water UK and Environment Agency's annual Water Efficiency Awards in the Ofwat Economic Research category 2001. These awards reward and celebrate good practice in water efficiency and water conservation. A publication is produced each year showcasing the winning, commended and shortlisted entries and is intended as a case study resource of good practice in water saving initiatives.



### Heybridge Housing Development

37 houses were monitored

12 houses had water efficient appliances

3 houses had a greywater system

The rest remained as control houses

Water efficient baths and showers saved 10% per person.

Spray taps in washbasins saved 31% per person.

The mean savings for WC flushing with greywater saved between 24% and 65%

### Environment Agency National Water Demand Management Centre

The centre provides information and technical advice on all aspects of water conservation. It produces numerous publications such as "Conserving water in buildings" fact cards, which includes a comprehensive suppliers list. NWDMC also issue a bi-monthly "Demand Management Bulletin" and have a help desk service.

Phone: 01903 832 073

[paula.wood@environment-agency.gov.uk](mailto:paula.wood@environment-agency.gov.uk)

### Envirowise The Environment and Energy Helpline

This is a free advice service available as part of The Energy Efficiency Best Practice Programme (EEBPP) and Envirowise. It can help planners and developers reduce, amongst other things, water and effluent costs. Envirowise offers support through all stages of planning, design, implementation and management.

Phone: 0800 585794

[Helpline@eebpp.org](mailto:Helpline@eebpp.org)

### Construction Resources

Suppliers of complete rainwater systems and water saving devices. Their London centre displays working systems and provides showroom tours and CPD presentations. Product specialists are available for system design, advice and information.

Phone: 020 7450 2211

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

### Building Research Establishment (BRE)

BRE's Water Centre offers advice to developers on water efficient technology and equipment and will provide up-to-date guidance with regulatory and health and safety issues.

Phone: 01923 664300

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

### Construction Industry Research and Information Association (CIRIA)

CIRIA is an independent organisation undertaking research and promoting best practice in the water, environmental and construction sectors. CIRIA are developing guidance to encourage sustainable water use in planning and new developments (RP627)

Phone: 020 7222 8891

[www.ciria.org.uk](http://www.ciria.org.uk)

### AquaSpec

This software program can be downloaded from the web site and estimates savings that can be made in water efficient buildings. There is also a catalogue listing products and suppliers. [www.ecde.demon.co.uk/aquaspec](http://www.ecde.demon.co.uk/aquaspec)

### Groundwork Water Saving Device and Contractor Directory

Published by Groundwork Wales and partners this free booklet details available water efficiency equipment for homes and businesses.

[www.groundworkwales.org.uk/water](http://www.groundworkwales.org.uk/water)

### BSRIA

Offers authoritative, independent research in the field of water conservation and reuse.

Phone: 01344 426 511

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

### The Bathroom Manufacturers Association (BMA)

Provides a list of product lines including a range of dual flush toilets.

Phone: 01782 747 123

[info@bathroom-association.org.uk](mailto:info@bathroom-association.org.uk)

Developers are encouraged to seek partnerships and funding for projects promoting domestic water efficiency. The Environment Agency can offer advice on funding opportunities, and may wish to be involved in water efficiency projects. Phone: 01903 832201 or email: [southern.water.resources@environment-agency.gov.uk](mailto:southern.water.resources@environment-agency.gov.uk)

# Q. What can I do?

A. Install equipment that will increase water efficiency in new houses and ensure your business is helping the environment. Many of the examples given below are simple and low cost.

## 💧 Tap fittings

These are ideal for installation in new build developments as the majority of systems entail the whole system being fitted/ replaced. Fittings can range quite significantly in price, but it is claimed that spray taps can save up to 80% of the water used by standard taps. Spray tap

controls that allow different flow patterns are particularly suitable for household washbasins.



## 💧 Dual flush WC's

Dual flush toilets have been legally permitted in the UK since January 2001. New build houses present the perfect opportunity to install these water saving WC's. The Water Research Council estimates savings can be up to 16% for those that use a 6 and 3 litre dual flush volume. It is now illegal to fit a WC where the cistern maximum flush exceeds 6 litres. It is advisable to seek further information regarding specific regulations on the fitting of dual flush toilets.

## 💧 Greywater collection

This involves recycling water from wash basins, baths and showers for tasks such as toilet flushing. Greywater systems are not yet widely accepted and although there are some systems on the market, these are relatively expensive (about £1000) and currently require regular maintenance. It is important that all systems comply with the Water Supply Regulations. The National Water Demand Management Centre can offer further information on domestic greywater recycling (see "help and advice")

## 💧 Flow regulators and restrictors

These are ideally suited for fitting on showers and tap controls. They can significantly reduce water use by maintaining the flow at the tap or the showers optimum efficiency rate and cost very little to install. However, flow regulators should not be used in conjunction with spray taps or aerator taps and showerheads.

## 💧 Rainwater collection

Large rainharvesting systems can provide a water supply for household use, but 90% of collection systems are usually in the form of a water butt connected to a downpipe from the roof. On average, 10 litres a day is used for watering the garden, however, on warm summer evenings, this can increase to as much as 50% of total domestic water demand.

By harvesting rainwater, this figure can be significantly reduced. The Rainsaver Kit claims to achieve average savings of 1600 litres per year.



## 💧 Domestic appliances

Washing machines and dishwashers account for 14% and 7.7% of domestic water use respectively (with the latter likely to increase as more are fitted). The energy label now makes it easy to identify the most efficient appliances for both the amount of water used and the amount of energy consumed. Appliances rated 'A' for energy efficiency are generally water efficient as well.



## 💧 Other Devices

As well as the equipment already mentioned other water saving devices are also available. These include urinal controls, tap controls, washroom controls and waterless urinals. Some of these may be more applicable to public buildings, offices and schools.

EA - Southern



# ENVIRONMENT AGENCY

## SOUTHERN REGION ADDRESSES

### REGIONAL OFFICE

Environment Agency, Guildbourne House, Chatsworth Road, Worthing, West Sussex BN11 1LD  
Tel: 01903 832 000 Fax: 01903 821 832

### HAMPSHIRE AND ISLE OF WIGHT AREA OFFICE

Environment Agency  
Wessex Business Park  
Wessex Way  
Colden Common  
Winchester  
Hampshire SO21 1WP  
Tel: 01962 713 267  
Fax: 01962 841 573

### KENT AREA OFFICE

Environment Agency  
Orchard House  
Endeavour Park  
London Road  
Addington  
West Malling  
Kent ME19 5SH  
Tel: 01732 875 587  
Fax: 01732 875 057

### SUSSEX AREA OFFICE

Environment Agency  
Saxon House  
Little High Street  
Worthing  
West Sussex  
BN11 1DH  
Tel: 01903 215 835  
Fax: 01903 215 884

### ISLE OF WIGHT

Tel: 01983 822 986  
Fax: 01983 822 985

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

ENVIRONMENT AGENCY  
GENERAL ENQUIRY LINE

**0845 933 3111**

ENVIRONMENT AGENCY  
FLOODLINE

**0845 988 1188**

ENVIRONMENT AGENCY  
EMERGENCY HOTLINE

**0800 80 70 60**

This leaflet aims to offer guidance and promote awareness of the equipment and help available to housing developers. The table below has been left blank so it can be completed and used as an easy reference guide.

Product	Supplier and Contact Details



ENVIRONMENT AGENCY

NATIONAL LIBRARY &  
INFORMATION SERVICE

SOUTHERN REGION

Guildbourne House, Chatsworth Road,  
Worthing, West Sussex BN11 1LD

ENVIRONMENT AGENCY



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