

## **Corporate social responsibility, environmental and sustainability report 2005/06**

Bristol Water recognises and meets its environmental, social and ethical responsibilities.

The regulated water business, Bristol Water plc, delivers an essential service to over a million people and businesses every day. We recognise the impacts of our activities on the wider society and seek to make these as sustainable and positive as possible. Our vision is to be a water company balancing all stakeholders' interests, delivering world-class performance at best value.

Among the ways we aim to deliver this are by:

- Understanding the current and future needs and priorities of all stakeholders
- Understanding risks and managing them to an optimum position
- Minimising water abstractions if there is a risk of environmental damage; encouraging others to use water resources in a sustainable way
- Reviewing other impacts on the environment to minimise adverse effects
- Having open, honest and full communication throughout the business
- Motivating and developing staff, recognising their key role in the success of the company and dealing positively with poor performance
- Keeping health and safety issues a high priority
- Operating with integrity in a professional manner at all times and within well thought out principles taking specific care in planning for the future
- Maintaining ISO 9000 certification and investing further in business excellence, continually learning from, and not hiding, any mistakes made
- Maintaining programmes of community involvement and encouraging, where possible, the public to visit our facilities and understand our business
- Providing open and honest channels of communication with the media, local government and others
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- Dealing with suppliers in an ethical way but demanding high standards and full contractual compliance from them.

Our corporate responsibility activities fall into three main categories:

### **Environment**

- Bristol Water fulfils - and in many areas exceeds - all the requirements of conservation and environmental duties stipulated by the Water Act 1999 and the Code of Practice on Conservation, Access and Recreation. Our activities in this respect are detailed in our annual Conservation, Access, Recreation and Environment Reports, which can be read/downloaded here on this website. We comply fully with the requirements of the new

Environmental Information Regulations. (see conservation, access and recreations areas of this site for further details)

- We have a well-established environment policy and demonstrate a strong commitment to the sustainable management of water resources and our assets. (see below for further details on sustainability) We consistently meet or beat our leakage control targets. We carefully assess the risks associated with any potential environmental impact of our work and ensure that these risks are mitigated and managed through appropriate management and contingency planning. When a rare problem does arise the reaction is swift, effective and positive.
- The Government's Public Service Agreement target is for 95% of Sites of Special Scientific Interest land to be designated as in 'favourable' or 'recovering' condition by 2010. Bristol Water's three concentrations of SSSIs – Chew and Blagdon Lakes plus Cheddar Reservoir – were classified 100% 'favourable' some time ago and remain in this category.
- We use environmental key performance indicators covering factors from fuel use through to recycling quantities. These indicators mean the company already has the first stage of a formal environmental management system.
- Our Environment Committee promotes best practice in a range of areas from recycling waste materials to energy efficiency. (see below)

## **Community**

We provide the best possible access for people at our major reservoirs, such as Chew and Blagdon Lakes, and other suitable sites, while still preserving the optimum balance between recreation and wildlife conservation.

- We have active programmes to support and engage with local communities, reflecting our role as an essential part of those communities. We regularly provide support, in cash or kind, such as providing water bowsers to a wide range of community events and ventures (over 100 groups, schools or clubs helped in 2006).
- As part of a major water industry initiative to promote the health benefits of drinking tap water when exercising, we sponsored the Sainsbury Sport Relief mile in Bristol which saw over 6,000 people take part. We provided free tap water to all and we entered a company team.
- Our recent work to make FairTrade products available to staff and visitors was the "final piece of the jigsaw" needed by Bristol City Council to register Bristol as a FairTrade city, and we were very proud to be invited to the SS Great Britain in 2005 to celebrate the launch of this new initiative.
- A structured programme of educational support for all age groups is provided, with the main thrust being to encourage all customers to use water wisely. (see access section of web site for further details)
- The award –winning education programme features open days, visitor centres, public information advertising and web sites. In 2006, there were 19 open days, attracting over 16,000 visitors. In addition, approximately 75 talks and tours were undertaken, including more than 40 school visits. (see access section for further open day details)

- We have a programme of providing bottles for children in schools to promote drinking tap water as an initiative to promote health. A further 15,000 bottles have been distributed this year.
- We continually seek to find out what our customers think of our services and their requirements through regular market research and face-to-face contact. The most recent research, involving 1,000 interviews, showed domestic customer satisfaction with Bristol Water was very high, at 87% in 2006.

## **Sustainability 2005/2006**

The business of water supply has always been closely linked with the natural world, but our activities as a Company can have a significant effect on the environment. We believe it is one of our key responsibilities as a water company to understand this and to reduce this impact wherever possible.

Of course, the effect of our activities can also be positive: the Mendip lakes were created solely for the purpose of water supply, but are now an internationally important area for wildlife. For us to operate as a sustainable company, we have to meet the needs of the present without compromising our environment for the future.

Working with industry organisations such as Water UK, we have identified our most significant environmental impacts, and we measure these on a monthly basis for report to the Company Board. The key impacts we have identified are described below and summarised in a table at the end of this report.

### **Abstracting water**

#### ***Why does this occur?***

Water abstracted (taken) from the environment is the “raw material” for water supply. With over a million customers, normal daily demand is about 290,000,000 litres, although this can increase by more than 50% in hot weather. We use up to fifty different sources of water throughout the year, all of which are licensed for use by the Environment Agency.

#### ***What is the impact?***

Excessive abstraction can lead to reduced flow in rivers or from local wells and affect other users of water in the area. Reduced river flows can lead to a deterioration in river quality.

#### ***What do we do about it?***

All abstraction licences are strictly controlled by law. In 2005/2006 we complied with all the requirements of all our abstraction licences, and we have gone beyond these requirements, reducing the abstraction from our sources at Long Newton, to improve river flows in the Tetbury Avon.

To reduce demand we provide water-saving advice to businesses and private customers, and we provide water-saving equipment such as water butts at a discount rate. All of us can help to reduce the impact by reducing the amount of water we use, whether at work or at home. This website provides tips on many water saving ideas. See the related for links to this section.

## **Chemicals used in water treatment**

### ***Why does this occur?***

99% of the water we supply needs “complex treatment”, which requires chemicals to remove potentially harmful micro-organisms, chemicals, and to maintain quality in the water mains system. The water we supply is of extremely high quality once treated, but chemicals remain an essential part of the treatment process. We do not add fluoride to any of the water we supply.

### ***What is the impact?***

Producing treatment chemicals uses natural resources and energy, and the chemicals have to be transported from the manufacturing site. Staff have to handle and manage chemicals to strict levels of control, and chemicals used to remove solids from untreated water create “sludge” which requires proper disposal.

### ***What do we do about it?***

Through the most efficient use of the different water sources available, we can minimise the amount of chemicals needed. This must however be balanced with the need to plan ahead for water supply throughout the year and our absolute requirement that the quality of the drinking water we supply is never compromised.

## **Energy use and CO<sub>2</sub> emissions**

### ***Why does this occur?***

Water is a heavy material and we treat and supply nearly a third of a million tonnes per day. This requires almost 10 megawatts of power, and the power stations which produce this burn fossil fuels. Our calculated CO<sub>2</sub> emissions include fuel use from transport, but almost 95% of our CO<sub>2</sub> emission arises as a result of power use.

### ***What is the impact?***

Climate change and consumption of raw materials such as gas, oil and coal.

### ***What do we do about it?***

Energy is expensive and our power bill runs into millions of pounds, so it has always made business sense to keep our power consumption down. For several years we have worked to reduce this through computer modelling of our treatment systems and networks, but this is extremely complex. We have been able to decommission some small pumping sites, and are looking at sustainable power generation at some of our remote sites. We are also planning to increase the number of staff working on power management in the next year.

## **Leakage**

### **Why does this occur?**

Our water mains system is 6,500 km long and buried in the ground – sometimes where the soil progressively eats away at the pipe material, usually for well over 50 years. Our systems have literally millions of joints and connections, each one of which is under stress from the pressure of water in the mains. Additionally during extremes of weather ground movement can cause leakage, and contractors working near our apparatus can also cause damage.

### ***What is the impact?***

Water lost through a leak in our pipes, or yours, is wasted water. The leaking water will eventually return to the natural environment, but it has already cost money to collect, treat and pump. Unnecessary waste of water harms our environment and adds to the climate change problem.

We have a very active leakage control programme and sophisticated continuous monitoring systems but even these cannot detect the background leakage from the “seeps and weeps”. This sort of leakage makes up half the reported leakage. Even if we could replace the mains and connections more frequently the full problem would not be resolved and the cost and disruption to customers would not be acceptable.

The high profile leaks when a main bursts and sends up a fountain of water into the street often cause damage to road surfaces and may even flood properties. These spectacular bursts show the pressure within the mains that is seeking out every weak spot on the system. These sorts of bursts, and the many we find by our careful monitoring of our system, are dealt with as quickly as possible.

They have to be prioritised to deal with the most important bursts first. In the majority of cases we have repaired a leak even before it is noticed by the public.

About one fifth of leakage is from customers’ pipes. These are not our responsibility although they are included in published leakage figures. If we detect such a leak we will ask the customer to get it fixed and in many cases will contribute to the repair or replacement cost.

We could reduce the level of leakage still further – but it would be very expensive and so customer bills would go up significantly.

### ***What do we do about it?***

We meet the leakage target set by our regulator and have done so year after year. We invest heavily in leakage detection work and are constantly working to improve detection rates and response times. We have programmes of replacing or refurbishing mains where we see the highest burst rates. We would like to do more of this work but our regulator has kept tight control on the level of money we can spend. We believe in the future more money will be required in this area.

We are controlling leakage to below what is called the economic level. The easiest way of describing this is to say we spend more on leakage control than the full cost of the water saved. We do this because we appreciate that it is unacceptable to allow the level of reported leakage to increase. The calculations used in this assessment include allowances for environmental and social costs.

We care passionately on your behalf about controlling leakage - minimising inconvenience to customers, minimising costs to customers and minimising damage to the environment

## **Travel**

### ***Why does this occur?***

We have over 400 staff, more than a million customers and a supply network across an area of 2,400 square kilometres. Planned maintenance, routine operation and repairs involves travel between sites, and this travel is necessary every day of the year, 24 hours a day.

### ***What is the impact?***

Air pollution and congestion are the principal impacts, although manufacture and operation of vehicles also consumes natural resources.

### ***What do we do about it?***

**Business mileage** Our vehicle fleet is maintained to the highest standards and inefficient vehicles are “retired” as soon as economically possible. Mileage is monitored on a monthly basis. We also have a culture of car-sharing for all business journeys.

**Commuter mileage** We provide cycle facilities (showers, changing facilities, safe cycle storage and lockers) to staff, and promote cycling through involvement in bike-to-work day and other local initiatives. We also promote car-sharing and walking to work, and have won a Silver Travel Plan award from Bristol City Council in recognition of the work we have done in this field.

## **Waste and recycling**

### ***Why does this occur?***

We use all the normal office equipment you would expect of a company with over 400 employees, but we also use enormous amounts of pipework, fittings, gravel and tarmac, as well as creating treatment residues at our treatment works.

### ***What is the impact?***

Inefficient use of resources creates an avoidable demand on natural resources as well as creating more waste: waste disposal requires transport; uses landfill space, and can create other environmental hazards as waste breaks down in the landfill.

### ***What do we do about it?***

We follow the Prevent – Reduce – Re-use – Recycle approach to waste, with the intent of preventing waste from occurring before it happens. Recycling and waste management has halved our use of skips and our total waste to landfill has dropped by more than 70% in the last two years.

### **Some examples**

To prevent waste, we no longer accept routine deliveries in non-returnable packaging.

To reduce waste, water supply pipework is now cut to size on-site rather than issued from our stores at unit lengths.

To re-use, we have made available Company mugs to all staff requesting one, for hot drinks (rather than disposable plastic cups). Sludge from waste treatment is re-used as a soil conditioner and we are now looking at using sludge from our newest treatment works as an “ingredient” in brick manufacture.

To re-cycle, we recycle batteries, card, cardboard, gravel, metals, paper, plastic bags, plastic bottles, plastic cups, plastic pipes, timber, toner cartridges, treatment wastes, tyres and water meters.

## **Sites of special scientific interest (SSSI)**

### ***What does this mean?***

These are sites of particular environmental value, often because of the wildlife living at the site. Bristol Water owns eight major sites of special scientific interest, including Chew Valley Lake and Blagdon Lake.

### ***What is the impact?***

Deterioration or destruction of an SSSI means that an important local habitat for biodiversity has been affected, which will have an impact on the ecology of the area.

### ***What do we do about it?***

We maintain and operate all our sites with wildlife in mind, and work closely with regulators such as Natural England (previously English Heritage) and the Environment Agency. As a result of the hard work we have put in we are proud to be able to say that 100% of the SSSI's we own are in “favourable” status, which is the best performance in the water industry.

**Finally, if we reduce the amount of water we use, we reduce the impact on our environment. That's something we can all do.**

## Summary table

<b>Indicator</b>	<b>Bristol Water result 2004/2005</b>	<b>Bristol Water result 2005/2006</b>	<b>Industry average or total 2005/2006</b>
Water abstracted	117,215 MI (MI=1 million litres)	120,425 MI	5,850,000 MI
Chemicals used to treat one cubic metre of water	0.112 kg	0.109 kg	0.070 kg
Energy to treat and supply one cubic metre of water	0.813 kWh	0.82 kWh	0.59kWh
Total CO <sub>2</sub> emissions	38,340 tonnes	38,780 tonnes	4,150,000 tonnes
Leakage	52.8 MI per day  Company target 53.6 MI per day	53.23MI per day  Company Target 53.6 MI per day	4,858 MI per day
Travel on Company business	2,977,863 miles	2,848,937 miles	Not available
<b>Recycling</b>			Recycling figures are not available for these materials
<i>Metal (kg)</i>	<b>30,010</b>	<b>21,200</b>	
<i>Timber(kg)</i>	<b>3,580</b>	<b>9,460</b>	
<i>Plastic(kg)</i>	<b>20,850</b>	<b>16,770</b>	
<i>Excavated material (tonnes)</i>	<b>5,507</b>	<b>15,586</b>	
<i>Batteries (kg)</i>	<b>0</b>	<b>1,410</b>	
<i>Paper( kg)</i>	<b>2,460</b>	<b>49,300</b>	
<i>Sludge (tonnes)</i>	<b>0</b>	<b>1,482</b>	
Condition of SSSI	Favourable 100%	Favourable 100%	Favourable 17% Recovering 72% Deteriorating 11%