

CONSERVATION, ACCESS, RECREATION And ENVIRONMENT REPORT 2004



INTRODUCTION

Welcome to the Bristol Water Conservation, Access, Recreation and Environmental Management report for 2004. The report covers the company's conservation activities and achievements as well as our environmental work. It demonstrates our continuing commitment to allowing access to many of our sites as well providing a range of recreational facilities and amenities.

2004 was a busy year in all our traditional areas of CAR as you will see when reading the report. Additionally, this year we have added a section on Environmental Management. This is in recognition of the successes the company has achieved in this area.

We continue to meet our duties under the Water Industry Act 1999 and the Code of Practice on Conservation, Access and Recreation.

Note on dates:

The time period that each section covers varies in some instances. The conservation element, for example, includes parts of 2003. At the top of each section is noted the period covered.

CONTENTS

CONSERVATION

Policy – Overview – Projects	3
Routine work	4
Surveys	5-6
Wildlife records	7-8
Bird ringing	9
Plans for next year	9

ACCESS

Open Days – School talks and tours	10
Chew Lake picnic area and tea shop	10
Woodford Lodge – Cheddar Reservoir	11
Heritage Conservation – Birdwatching	11

RECREATION

Trout fishing 2004 season	12
Pike fishing – Sailing – Leased fishing	13-14

CORPORATE SOCIAL RESPONSIBILITY	15-16
--	-------

ENVIRONMENTAL MANAGEMENT	17-19
---------------------------------	-------

ENVIRONMENT POLICY	20-21
---------------------------	-------

MANAGEMENT AGREEMENT TABLES	22-23
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LANDHOLDING AND RESERVOIRS	Back page
Area map	Back page

CONSERVATION

Period covered – June 2003 – July 2004

Policy

We will manage our land to further the conservation and enhancement of natural beauty and the conservation of flora, fauna and geological features of special interest.

OVERVIEW

The summer of 2003 was hot and dry and reservoir levels fell to expose considerable areas of the margins by late summer. At Chew this presented the opportunity to employ a large tracked excavator to reshape some bunds and channels in the reed beds to improve this habitat and to grub out some mature willows growing into the lake. The exposed margins also attracted an excellent number and variety of migrant waders, which stayed for some time to feed on insects, snails, mussels and worms in the soft mud at the water's edge. The spring was relatively poor for nesting reed warblers at Chew but average for other species.



A number of surveys were carried out, either to evaluate the quality of habitats or to investigate the variety of animals and plants in areas under current management regimes. A number of rare insects were found including the first record of a red eyed damselfly and bird records included some notable sightings including a golden oriole at Chew and a corncrake (heard but not seen) at Blagdon.

PROJECTS

At Chew an excavator was used to repair a large bund holding back a half acre pool within the reed bed in front of the bird ringing station. The bund had been eroded by wave action over ten or more years and was failing to hold water. The sluice within the bund was also improved and a feeder stream, intended to flow into the pool but which had become silted up, was cleared out and redirected. This pool provides a wet haven for birds during periods when the lake level falls. It is surrounded on three sides by reeds so birds do not suffer disturbance from human recreation on the lake. It is also a successful nesting area for birds and supports good numbers of insects, particularly dragonflies.

The machine was also used to clear out two of the three channels cut into the reed beds on the south east edge of Chew. The reeds growing along one side of each channel were cleared back from the channel, to provide a clear bank for birds and mammals, and silt removed from the bed. One channel, previously with an open connection to the lake, was provided with a bund near its lakeside end so that water is retained in the channel when lake

levels fall. These channels are now all bunded, and have proved very attractive to many water birds which like to feed, nest or shelter near to a water-to- reed bed margin.

Some areas of reeds have, over time, been invaded by willow trees, which have grown large and difficult to remove by hand. The excavator was used to grub up a number of these and the root ball of each was removed to an area above water level to prevent regrowth. This action will help to keep the reed bed in a healthy state and reduce the growth of invading plants such as bramble and bindweed.

At Herons Green Pool the stone spit, constructed three years ago to attract more birds particularly waders, was further improved by having fine pebbles added in patches to the surface. This is intended to make the spit more suitable as a nest site for little ringed plovers, which have occasionally been seen here, and the edges of the spit were made less steep to help ducklings clamber up and down from the water. Volunteers, led by Keith Vinicombe, kindly helped carry out this manual work.

The bird hide at Twycross Point at Chew was improved during the year. A rear wall containing a door was added to the previously three sided hide, to provide better weather protection to bird watchers and bird identification panels were put up inside.

ROUTINE WORK

Avon Wildlife Trust volunteers held two workdays at the Herriotts Pool reserve and cut back reeds and other tall vegetation on the duck nesting islands. A volunteer also set out and monitored dormouse sampling tubes in trees and bushes around the perimeter, but results were negative.



Reeds previously planted out in the side pool created to attract bitterns are at last beginning to spread to create the desirable mix of shallow open water and dense reed beds which the birds prefer. Previous plans to cut through the bund separating this area from the main Herriotts Pool were not carried out as surveys showed this would have raised the water level in the side pool for much of the year. The purpose was to allow coarse fish such as roach, perch and rudd to swim into the side pool to provide food for bitterns and these will now be stocked to the pool instead.

Nest boxes for tawny owls were replaced at two sites, one at Chew Stoke pumping station and another at Holt Copse at Blagdon. Both sites had supported nesting owls in the past but the boxes were falling to bits. A new

barn owl nest box was erected in an oak tree on the Parklands at Chew and owl pellets were found there in the spring of 2004 showing the box was in use at least as a feeding platform.



Woodlands at All Saints, overlooking Blagdon Lake, were thinned some 20 years after they were planted so that ash and oak trees will grow into standards. The extra light penetrating to the wood floor has started to stimulate a diverse ground flora and a new scrub under-layer will be allowed to grow. Hedges were cut on a planned rota and to a wildlife friendly shape and hay meadows were cut after mid-July to allow grasses and wildflowers to set seed. This regime also allows most butterflies and other insect species to complete the summer phase of their lifecycles and some marginal areas have been left to suit other species.

SURVEYS

Bristol Water undertakes or commissions wildlife surveys to monitor the effectiveness of management routines in maintaining biodiversity and to search for new, unrecorded species for which amendments need to be made to the routines. Surveys conducted in summer 2003 and spring 2004 are reported below.



- A contractor surveyed grassland invertebrates at Chew in 2003 and found 6 red data book species and a further 10 nationally scarce species. Most of these were flies (Dipteran spp) with some micromoths, a soldier beetle and a weevil. The advice arising from the survey was that the current management of the grassland was about right in some areas but an even later hay cut, either of selected margins or of “islands”, would benefit these species and consideration will be given to amending the hay cutting programme in these areas. The same contractor has been engaged to carry out similar surveys of grassland at Blagdon and his findings will be used to assess the management here.
- During the period of draw-down last Autumn, a consultant surveyed areas of exposed foreshore at Blagdon to assess the likely impact of plans to remove silt from certain areas and scrape weeds from others. The volume of silt is considered excessive at the inflow to the lake and in the region of the dam where it obscures controls for valves moderating the flow of water through the dam. The fisheries department also planned to scrape some bank areas free of weeds to allow easier access for trout angling over the next two or three seasons. The surveys showed the locations of the most valuable plant

communities and gave advice on how to avoid damaging these. Suitable locations for depositing the silt were identified. Part of the silt removal was done in 2003 and more will be carried out in autumn 2004 in accordance with the advice contained in the survey report. The weed scrapes were not done last year, because water levels rose, but the work will be done, and in accordance with the advice given, when conditions allow.

- The large population of green-winged orchids at the Parklands at Chew were surveyed in May 2004 and numbers were found to be very good. Over 11,400 flower spikes were estimated in the main field and over 2,500 in a secondary field. This indicates the grazing and hay cutting regimes for these fields were satisfactory.
- The route of a planned new water main between Pucklechurch and Tolldown in South Gloucestershire was surveyed to address concerns expressed by the planning authority. Surveys for great crested newts found none present and the habitat was assessed as unsuitable. No signs of water vole activity were found on two water courses in the region of proposed crossing points but a single otter spraint was found near a crossing on one stream. The planning authority accepted the findings of the survey together with changes made to the planned work to minimise the risk of any disturbance to wildlife.
- Habitat surveys were carried out at Stowey Water Treatment Works south of Bristol. The works include sludge lagoons, fringing vegetation and small areas of woodland and grassland together with some veteran trees and species rich hedges. The findings will be used to help develop a site biodiversity action plan.
- Fields surrounding Herons Green Pool have been included in an area managed for conservation over the past eight years. The objective to date has been to manage the area to encourage lapwing, redshank and snipe to breed but none of these has so far nested. The hedges and an area planted as woodland have been surveyed by David Warden for nesting passerines and an RSPB officer, who has considerable expertise in the management of meadows for waders and other wildfowl, has given advice on grassland management. The results and advice will be used to develop an updated biodiversity action plan for this area.
- Volunteers again surveyed for the presence of harvest mice in reed beds on the eastern side of Chew Lake. Happily they found firm evidence of the presence of these small mammals and their results, though not quantitative, suggested a widespread population.
- The Avon Bat Group inspected 44 bat boxes around Blagdon Lake and found characteristic bat droppings in 13 indicating both that the boxes are proving useful to the bats and that there is a population of bats present. A female soprano pipistrelle was found in one box.

WILDLIFE RECORDS

As ever, the variety and abundance of wildlife recorded at Bristol Water's landholdings is the best evidence of the success of the management regime. David Warden, an assiduous nest recorder at Chew, found nests of 33 species last year. Most numerous was reed warbler with 159 nests found; a low number for the species which probably lost nests during windy and wet spells in May and June. His other records are shown below together with records for Blagdon.

Nests recorded at Chew and Blagdon Lakes 2003

Species	Nests at Chew	Nests at Blagdon	Comments
Reed warbler	159		Good survival to fledging
Reed bunting	1		
Coot	116	8	
Moorhen	37	4	
Heron	32		
Mute swan	12		Unusually none at Blagdon
Gt crested grebe	4	4	
Little grebe	7	2	
Mallard	2	11	
Pochard	8		
Gadwell		1	
Land birds			
Wood pigeon	75	Nr	
Blue tit	47	Nr	
Great tit	44	Nr	
Song thrush	18	Nr	
Blackbird	16	Nr	
Gt spotted woodpecker	2	Nr	
Tawny owl	1	Nr	
Barn owl	1	1	
Buzzard	1	Nr	
Tree creeper	2	Nr	

Nr = not recorded

These results, which are by no means complete records for the sites, show how important Chew and Blagdon are to a range of bird species.

As reported earlier, the lake levels fell by late summer exposing areas of muddy margins and these attracted good numbers of migrant waders. Recorded numbers are shown below.

Waders seen at Chew and Blagdon in autumn 2003

Wader	Chew	Blagdon	Comments
Little ringed plover	Y	Y	
Ringed plover	Y	Y	In addition, Pectoral sandpipers were seen at both Chew and Blagdon and American golden plover was seen at Blagdon.
Grey plover		Y	
Golden plover	Y	Y	
Lapwing	Y	Y	
Knot		Y	
Sanderling	Y		
Dunlin	Y	Y	
Little stint	Y	Y	
Turnstone		Y	
Common sandpiper	Y	Y	
Wood sandpiper	Y	Y	
Green sandpiper	Y	Y	
Redshank	Y		
Spotted redshank	Y		
Greenshank	Y		
Black-tailed godwit	Y		
Bar-tailed godwit	Y	Y	
Curlew	Y		
Wimbrel	Y		
Snipe	Y	Y	
Jack snipe	Y		
Ruff	Y		

In May a corncrake was heard calling at Blagdon and although expectant viewers gathered to see the rare bird, it was only heard. One person recorded the call on his video camera and it was confirmed as the call of a corncrake making this the first record at Blagdon probably since 1953.

A singing male golden oriole was seen at Chew, also in May, and this is the first record since the 1950s.

Bearded tits were seen at Chew in five months of the year but sadly no sign of breeding was observed. A pair of garganey seemed likely to breed but let us down, and although bittern were seen in December no booming male was heard in the spring. A white headed duck was present at Chew, and during the winter and spring of 2004 a pair of ferruginous duck were regularly seen. They appeared to be nesting on an island in Herriotts Pool but no young were ever seen and it is concluded that the nest attempt failed. This is a shame as this duck is a rarity and has never before been observed to nest in the UK.

The low water levels in the autumn gave excellent views of a number of water rails and spotted crake at Chew and one observer reported seeing a dormouse on the bird feeder near Stratford hide.

At Blagdon, a male hen harrier over-wintered and at least one cuckoo was heard in the spring after an absence of one year. A red eyed damselfly was seen, and it is believed to be the first recorded at Blagdon.

BIRD RINGING

The ringing station at Chew is run by dedicated volunteers who operate under British Trust for Ornithology licences. They caught and ringed 5870 birds last year; reed warblers being the most numerous (661), followed by swallows (248), sedge warblers (213), sand martins (97), cetti's warblers (33), treecreepers (31), and 15 kingfishers. 200 Canada geese were caught and ringed during the annual round-up when the birds are moulting and unable to fly.

Capture of birds ringed elsewhere included 3 sedge warblers, one from Belgium, 2 reed warblers, one from France and one sand martin from Spain.

Long term studies indicate declines in the numbers of sedge warbler and lesser whitethroat and surprisingly, blue tit. The decline of the first two species might be a consequence of the gradual maturing of the marginal vegetation and the increasing size of trees around the lake margins, making the habitat less favourable for these birds.

PLANS FOR NEXT YEAR

- To survey invertebrates of the grassland around Blagdon Lake
- Management plans will be developed for Herons Green grassland, hedges and woodland.
- Management plans will be developed for Stowey Treatment Works.
- A site Biodiversity Action Plan will be produced for Cheddar reservoir.
- Capital works at Purton Treatment Works will be subjected to voluntary environmental impact assessment to ensure no detrimental impact, particularly on the nearby land owned by the Wetlands and Wildfowl trust at Slimbridge.
- Bat boxes will be erected around the extended works at Barrow Treatment Works.
- Areas of Company owned grassland around Barrow No 2 reservoir will be assessed and advice given on minimising the impact of depositing silt here when the reservoir is cleaned out in 2005.

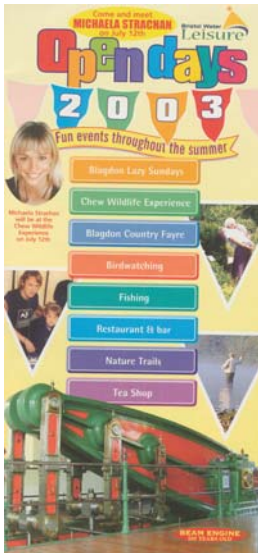


ACCESS

Period covered – calendar year 2003

Policy

We will allow access to picnic sites, nature trails, footpaths and permissive paths. Access to bird hides and for special interest groups is available by permit. Historic buildings may be visited on Open Days and by arrangement.



OPEN DAYS

The company held 18 open days during the 2003 season with over 21,000 visitors attending. Blagdon Pumping Station and visitor centre was the focus for most of the events. The pumping station was opened regularly throughout the summer and included a two-day charity country fayre. Inside the pumping station is a beam engine run nowadays by electricity. In the centre is an extensive range of themed rooms covering all aspects of the water cycle and incorporating educational material and hands-on displays for all ages. Outside the landscaped grounds offer room for picnics as well as a nature trail walk.



The company also held an environmental open day where well-known TV wildlife presenter Michaela Strachan was available to meet and talk to visitors. The event gave the nearly 4000 visitors a chance to find out more about the wildlife and conservation work as well as the recreational facilities in and around Chew Valley Lake and the Mendip area. All of the Open Days apart for the two day country fayre were free entry.

SCHOOL TALKS AND TOURS

During the year the company gave 90 tours and talks involving 2870 people. This included school visits and trips to educational facilities like Blagdon Pumping Station and Cheddar treatment works. Additionally, talks were given to a range of groups, clubs and societies.

CHEW LAKE PICNIC AREA AND TEA SHOP

Chew Valley Lake has two large landscaped picnic areas which are open to the public all year round. There is also an information centre and teashop in picnic area no 1. Two nature trails covering a total of 2.7km - The Grebe and Bittern - are accessible from picnic area no 2. The Grebe is an all weather surface suitable for pushchairs and wheelchairs. These facilities are used by thousands of visitors



during the year. (dogs are also permitted but must be kept on a lead)

WOODFORD LODGE

Woodford Lodge restaurant and fishing lodge was also a popular destination for people to enjoy a walk at a beautiful lakeside setting as well as eating at the restaurant.

CHEDDAR RESERVOIR

The company allows public access for walks around the perimeter of Cheddar reservoir which covers a distance of just over 3.5 km. There are two free car parks available with access up to the path. In conjunction with Somerset County Council a new gate was installed at the Axbridge entrance to give improved access for disabled people.

(Dogs are also permitted but must be kept on a lead. Some further restrictions apply when sheep are grazing)

HERITAGE CONSERVATION

The Blagdon beam engines, housed in a listed pumping station, were maintained. One is still in working order running by electricity and is regularly run for visitors at open days and for school visits during the year.

BIRDWATCHING

Season permit sales	461 permits
Day permits	229 permits

One very unusual sighting this year was the appearance of two gannets, one at Chew (immature) and one at Blagdon (adult) on the same day. Others are spotted crake, Osprey, Bittern, and ferruginous duck.



RECREATION

Period covered calendar year 2004

Policy

We aim to provide high quality recreation at reservoirs and land holdings and to achieve a balance both between different activities and between recreation and conservation. We will encourage all sections of the community to use our facilities and we will make special provision for the disabled.

TROUT FISHING 2004 SEASON

This year saw a staggered start for the Bristol Water Lakes with Chew and Barrows opening a week earlier than Blagdon. This proved very successful in the way of attendances but was slightly spoiled by severe weather for days 2,3 & 4. When Blagdon opened the following week things had settled and excellent sport was enjoyed at all the venues.

The mild winter meant warm water temperatures and good fly hatches for March and April and there were more over wintered fish captured than in recent years. This is probably down to more triploid rainbows being stocked in the 2003 season.

2004 goes on record as being one of the dullest and wettest summers, but also being very warm. The water levels remained high at most of the Lakes for much of the year, only falling to normal summer levels at Blagdon in the Autumn. These conditions encouraged good fishing throughout the season especially for the bank anglers at Chew Valley where masses of corixa, snails and buzzers fill the margins and weedbeds. Boat fishing was consistent at both Chew and Blagdon much of the time but very stormy weather resulted in many cancelled boats at Chew Valley.



The modern trend for pulling brightly coloured lures at a rate of knots has produced results at the main Lakes much to many anglers' dismay, but it was encouraging toward the end of the summer to see a return of traditional fishing as enjoyed by many older anglers. Grenadiers, Soldier Palmers, Bibio, Mallard & Claret and Mini Muddlers all made a favourable comeback for the boat fishers. Is this going to be another change in the cycle of trout feeding habits?

At Barrow engineering work restricted the fishing space available. Tank 1 was completely drained and extra fish were stocked into the remaining waters. Fishing there was often difficult but, as always, there were excellent evening rises much of the time, and the anglers who were prepared to rise early or fish 'til last knockings were rewarded with very enjoyable sport.

At Litton a new fishing Lodge was built during the winter giving anglers there a place to rest and have lunch as well as leave their belongings safe and sound.

This year there was no disruption of fishing and sport was consistently good throughout the season. Most anglers love the seclusion and tranquillity found at Litton where the two Lakes are yours for the day, and you are able to fish sedately with no worries of other fishermen spoiling your water or drift.

PIKE FISHING

The Autumn pike trials of 2003 were another great success with 8 fish of thirty pounds or more coming to the scales. As in previous years the boat anglers have enjoyed the best fishing but one fish of 29lb 8oz was captured from Woodford Bank. It now seems that small mackerel and smelt dead-baits fished static or moved slowly is the best way to take Chew Valleys pike. Lures and spinners do account for smaller fish and jack pike but are not favoured as much as in the past. Bookings for 2004 boat fishing have been very good with most being reserved in January!



There were fewer pike taken during the trout fishing season this year although trying to catch them by fly is still very popular.

SAILING

Chew Valley Lake Sailing Club had a very successful year both on and off the water, although the weather at times was not the most favourable for sailing. Membership at 550 remained full with a short waiting list building up as the year progressed. Most of those did however squeeze in at renewal date and the juniors/youth are always accommodated reasonably quickly.

Sailing days are Saturday, Sunday, Wednesday and Thursday and during the summer period there is a very strong contingency of sailors on the water on Wednesday evenings. All aspects of sailing in small craft are covered from the competitive racers to the cruising fraternity who just enjoy pottering in their boats. Great emphasis is placed on junior and youth opportunity to help encourage them whilst they are young so that hopefully they will enjoy a lifetime in a most enjoyable sport.

With the fine facilities and ambience of the lake social activities are on the increase. Further details can be found at:
www.chewvalleysailing.org.uk Training weeks for juniors and National Universities competition held over three days at CVLSC.

It was also a successful year at the Bristol Corinthian Yacht Club (BCYC) which sails on Cheddar Reservoir. For more details go to: www.bcyk.org.uk

LEASED FISHING

Cheddar Angling Club continues to lease the Clay Pits from Bristol Water as well as controlling the fishing on Cheddar Reservoir. The Clay Pits are open to members only and they enjoy two beautifully maintained lakes. The match lake, which is occasionally used for competitions, is mainly used by pleasure fishermen who can catch anything from small roach & rudd to very large carp.

The specimen lake holds mainly carp and tench and fish have been caught weighing well over twenty pounds. There are a few small silver fish and some large trout have been introduced to eat these nuisance fish. These also offer a surprise catch to the dedicated specimen hunters. The season at the Pits has been extended to run from 1st May to March 14th.

The Reservoir is fished as a day ticket water and is famous for its huge tench and very large pike. Tench of under three pounds are seldom caught and double figure bags of fish weighing up to nine pounds are common. In the winter the attention is on the large predators and spinning and dead baiting is the main method.

Knowle Anglers lease Chew Magna, a small reservoir, and a stretch of the Upper River Chew. These are trout only waters, fly fishing only. The reservoir is stocked regularly with rainbows. The river has brown and rainbow trout. It is stocked but a large proportion of the fish caught are 'escapees' from Chew Valley Lake. These can often be fish of six pounds or more and can be challenging on very light tackle in the confined spaces of the tiny river.

CORPORATE SOCIAL RESPONSIBILITY

Bristol Water Group plc recognises 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 recognize 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 pledge 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
- 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 the public to visit our facilities and understand our business
- Providing open and honest channels of communication with the media, local government and others
- 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
- Dealing with suppliers in an ethical way but demanding high standards and full contractual compliance from them

Our corporate responsibility activities fall into two main categories:

- **Environment:** Bristol Water plc 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.
- We have a well-established environment policy and demonstrate a strong commitment to the sustainable management of water resources. 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..

- Bio-diversity Action Plans are being prepared for the Barrow Reservoirs and Cheddar Reservoir, to add to those already well in place for Chew and Blagdon Lakes. In addition, the company is supporting county-wide BAP initiatives.
- 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. BW's three SSSIs – Chew and Blagdon Lakes plus Cheddar Reservoir – are already 100% 'favourable'.
- Environmental key performance indicators have now been introduced covering factors from fuel use through to recycling quantities. Bristol Water plc's Environment Committee promotes best practice in a range of areas from recycling waste materials to car sharing.

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 support, in cash or kind, a wide range of community and charitable events (over 40 in 2003/2004). 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. This programme features open days, visitor centres, public information advertising and web sites. In 2003/04, there were 18 open days, attracting over 21,000 visitors. In addition, over 90 talks and tours were undertaken, including 48 schools.

We continually seek to find out what our customers think of our services and what they want, through regular market research and face-to-face contact.

The non-regulated businesses share the overall group vision of success through sustainability.

All Group subsidiaries operate policies aimed at protecting the environment in which they work. The civil engineering subsidiary **Lawrence**, for example, operates to the demanding standards of ISO 14001 environmental management certification. Lawrence also has an on-going programme of community sponsorship and support.

ENVIRONMENTAL MANAGEMENT

2004

Working towards better environmental management

Over the last twelve months the company has been working hard on its overall environmental management. The business of water supply has a big impact on the environment, and although we have been successful in creating and maintaining a thriving environment in the “traditional” areas such as the Mendip lakes and the land we manage at our sites, we are also aware of the wider, sometimes global, impact companies like us have.

Here are examples of what we now do, together with some of our plans for the future.

TRAVEL

Our total staff mileage is about 2 million miles a year for commuting and just under 3 million miles a year whilst at work. We have now been measuring this for nearly a year and have set up a car-sharing scheme with dedicated car-parking spaces; we've organised presentations by Bristol City Council & LifeCycle UK to staff on reducing their car use; and our cycle facilities are now excellent, with discounts negotiated for Bristol Water staff at local cycle shops. In recognition of our work so far, we have now won a Silver Travel Plan Award from Bristol City Council. We're aiming for Gold in the next two years.

WASTE

As a large organisation we produce normal office equipment waste as you would expect, but as a water company we also use enormous amounts of pipework, fittings, gravel and tarmac. We have been monitoring all this for nearly a year. Amongst the items we now recycle are:

batteries	plastic bottles	card
cardboard	gravel	metals
paper	plastic bags	plastic cups
plastic pipes	timber	toner cartridges
treatment wastes	tyres	water meters

A “bins” survey showed that our office staff are now only throwing away non-recyclable waste - we will look at whether it is feasible to compost some of this. Recycling has halved our use of skips and our aim for the coming year is to make sure this approach is more uniformly applied across all our sites.

POWER

Our biggest environmental impact is arguably our power use. Bristol Water uses about 88 million kW hours per year to treat and pump water to customers generating 96% of the 39,000 tonnes of CO₂ emissions associated with the business.

As energy is a significant cost to the company we work hard to keep costs to a minimum. We are now monitoring these more closely than ever before, with a special team working to identify sites where we can reduce our power use. In the next year our objective is identify the sites with the greatest potential for power-saving, and have the equipment in place to make it possible.

PROTECTING BIODIVERSITY

Protecting the habitats we manage is a high priority for Bristol Water as well as being, in many instances, a legal requirement. We often carry out wildlife protection work simply because we believe it's the right thing to do. Here are three examples from 2004 that illustrate the point quite well:

- A pair of Little Ringed Plovers nested on the bed of a reservoir whilst it was drained down for routine maintenance. Rather than refill the reservoir as scheduled, we delayed this for two months until the nestlings had fledged.
- Swallows were found to have nested in new building which would be disturbed by ongoing work: this was delayed until the nestlings had fledged.
- A small spring was found during construction in a boggy area. Rather than pipe this to the drainage system (the cost-effective option) we built a special "bat pond" to boost the insect population, to provide food for bats and other wildlife roosting in the local woods.

DISCHARGES TO THE ENVIRONMENT

During the process of water treatment the solids removed to make the water clean are taken away as waste water which must then be disposed of.

A recently completed waste water treatment system at Barrow Treatment Works, now enables us to recycle this waste water so that it is clean enough to go back to the Lakes. This reduces the total amount of water we have to remove from the environment, and reduces the amount of sediment returned to the lakes. The solids produced will be spread on farmland as a soil conditioner.

EXTERNAL STAKEHOLDERS

This is a very broad topic. Here is an indication of our approach.

- Fairtrade coffee available in vending machines throughout the Company and we are moving to have Fairtrade as the norm for all drinks vending systems
- Working through the “Achilles” network, to ensure all our suppliers have an environmental policy and are working towards proper environmental management
- Promoting the EA “make a pledge” campaign to get our staff and customers to sign up to a more environmentally responsible lifestyle through the EA website at www.environment-agency.gov.uk/wed/campaign/
- Saving water has a real effect on our environmental impact. Every cubic metre of water supplied to our customers uses about 0.83kWh, which causes about 370grammes of CO₂ emission during generation at the power station. To promote wise water use we supply discounted water butts, help with leakage surveys and give advice to all our customers on water saving. This and further advice on water saving can be found on the Bristol Water web site at: www.bristolwater.co.uk .

MEASUREMENTS

	Bristol Water 2003/2004	Water industry total (where available)
Total water abstracted	118, 097 Million litres	6,370,000 Million litres
Total water into supply	105,716 Million litres	4,776,000 Million litres
Total energy used	87,659 MWh	2,875,390 MWh (water supply only)
Total CO₂ emissions	39,069 tonnes	Not available
Total mileage in Company vehicles	2,560,000 miles	Not available
Total amount of treatment chemicals used	10,790 tonnes	Not available
Energy used to supply each cubic metre of water	0.825 kWh (Water industry average 0.602 kWh)	Not applicable
Chemicals used to treat each cubic metre of water	102 grammes	Not available
Excavated material sent to landfill	15,200 tonnes	3 million tonnes
Leakage	52.4 million litres per day	4,981 million litres per day
Material recycled	Results in kg or litres	Not available
Metals	11,750	Not available
Oil	4,496	Not available
Paper	8,700	Not available
Plastics	32,815	Not available
Timber	8,610	Not available
Status of SSSIs	100% in “favourable” condition	20% favourable 66% stable/recovering 14% deteriorating
Drinking water quality compliance	99.93% in 2003	99.88% in 2003

ENVIRONMENTAL POLICY (Revised/re-issued 2002)









At Bristol Water it is our policy to:









Demonstrate a strong commitment to the sustainable management of our water resources.

Recognise our general duty to care for the environment and to seek to avoid adverse impacts both in the area in which we operate and indirect impacts elsewhere.

Pledge ourselves to the management of our reservoirs and land in ways which achieve positive gains both for wildlife and people.

While recognising the need for cost-effectiveness in all our activities, we aim to achieve these policies through the specific commitments given below:

-  *To obtain water for public supply from all suitable sources in compliance with abstraction licences.*
-  *At water sources where an adverse environmental aspect has been identified, to co-operate with the Environment Agency in seeking to minimise the impact.*
-  *To continue to combat leakage both from our mains and customers' pipes, with the aim of keeping leakage down to the agreed economic level.*
-  *To encourage all our customers to use water wisely through educational and information programmes and by setting a good example at our own premises.*
-  *To provide a clean, safe and reliable supply of water to our customers, thus enhancing their environment, and to ensure compliance with the stringent quality standards set by Government and the European Union.*
-  *As development opportunities occur, to adopt water treatment processes which embody good environmental practice by making use of the most appropriate technology currently available. During treatment, to minimise the use of chemicals, without compromising the effectiveness of the process and not to modify natural characteristics such as hardness or fluoride concentrations, unless required to do so by law on public health grounds.*
-  *To ensure all effluents we produce meet their consent conditions, which are set to ensure they do not pollute surface or ground waters or the atmosphere.*
-  *Wherever operationally possible, to undertake our day-to-day work in ways which minimise noise, nuisance and environmental damage.*

-  *To understand and assess the risks associated with any potential environmental impact and to ensure that these risks are mitigated and managed through appropriate management systems and contingency plans.*
-  *To use energy wisely by good design and maintenance of buildings and plant and by seeking continual improvements in efficiency.*
-  *To operate our vehicles so as to minimise fuel consumption and the emission of polluting gases and to encourage staff to reduce their use of cars and increase their use of less polluting means of transport.*
-  *To reduce the amount of waste we produce, to send appropriate materials for recycling and to use recycled products or products with low environmental production costs which prove suitable for our needs.*
-  *On the land and reservoirs we own, to maintain and improve habitats for wildlife so as to further the conservation of the natural environment and to preserve biodiversity.*
-  *To protect and conserve buildings and sites of historic or architectural interest and, through careful design and maintenance, to ensure buildings, structures and signs harmonise with local landscapes.*
-  *To minimise the use of pesticides and herbicides and only to use non- persistent types.*
-  *To provide the best possible recreation for people at our reservoirs and other suitable sites in ways which maintain the optimum balance between recreation and wildlife conservation.*

Overall responsibility for achieving our environmental policy lies with the Managing Director of Bristol Water plc. Senior managers have specific responsibility for ensuring the policy is put into practice in the areas for which they are responsible. The Environment Committee is responsible for highlighting areas where improvements can be made and for advising on how the Company can meet environmental performance targets.

The Environment Committee seeks the support of all staff by keeping them fully informed and involved; also, by enlisting enthusiasts to 'drive' local projects and to suggest ideas.

Our environmental policy and information on the progress we make in achieving objectives are made freely available to all.



MANAGEMENT AGREEMENTS

TABLE 1

The Company has agreements with the following number of bodies

Body	Type of Agreement
Avon Wildlife Trust	Management of Herriotts Pool nature reserve, Chew Lake
Somerset Wildlife Trust	Management agreement on land and woods at Holes Ash Pumping Station, near Wells.
Chew Valley Ringing Station	1 Lease on a ringing station building and access to reed beds and lagoons at Chew Lake.
	2 Access to woodland and wetland at Barrow Treatment Works.
Cheddar Angling Club	1 Licence of Cheddar Clay Pits coarse fishery.
	2 Licence on Cheddar Reservoir coarse fishery.
Knowle Angling Association	1 Lease of upper River Chew trout fishing rights.
	2 Licence on Chew Magna reservoir trout fishery.

NATURE CONSERVATION SITES

TABLE 2

Company-owned sites classified as Sites of Special Scientific Interest (SSSI) and Special Protection Areas (SPA)

SSSI Name	Category	Area (Hectares)	Grid Reference
Chew Valley Lake (also SPA)	B	565.2	ST 570600
Blagdon Lake	B	219.2	ST 515595
Cheddar Reservoir	B	105.4	ST 441537

Note: Category symbols B = Biological G = Geological M = Mixed

TABLE 3

Company sites forming part of Sites of Special Scientific Interest (SSSI)

SSSI Name	Cat	Site Name	Area (Hectares)	Grid Reference
The Cheddar Complex	M	Cheddar Cliffs Reservoirs	0.1	ST 474545
		Cheddar Yeo Spring		ST 464538
Brean Down	M	Brean Down Reservoir	0.1	ST 298588
Brimble Pit & Cross Swallet	G	Westbury Pilot Reservoir	0.4	ST 507507
Burrington Coombe	M	Burrington Adit	-	ST 476581
Harpree Coombe	B	Harpree Aqueduct	-	ST 561558
Priddy Caves	G	Priddy Pumping Station	0.3	ST 531516
St Dunstan's Catchment	M	St Dunstan's Well	-	ST 659479
King's Wood & Urchin Wood	B	Rhodyate Reservoir	0.1	ST 449649

TABLE 4

Total Number of SSSI within the Company's area of supply

County/Unitary Council	Number of Reserves
Bath & North East Somerset	8
Bristol City	1
Gloucestershire	4
North Somerset	22
Somerset	48
South Gloucestershire	17

TABLE 5

Local Nature Reserves owned by Bristol Water

Name of Reserve	Area (Hectares)	Managed By
Herriott's Pool, Chew Lake	12.0	Bristol Water and Avon Wildlife Trust
Vigo Wood and Holes Ash	3.0	Somerset Wildlife Trust
Cheddar Clay Pits	3.0	Bristol Water

TABLE 6
Other Local Nature Reserves within the Company's area of supply

Trust Name	Number of Reserves
Avon Wildlife Trust	34
Somerset Wildlife Trust	25
Gloucestershire Wildlife Trust	3
TOTAL	58

TABLE 7 Landscape Conservation

	Number of BW Sites	Area of BW Sites (Hectares)
Areas of Outstanding Natural Beauty	49	901
Environmentally Sensitive Areas	4	14

TABLE 8 Cultural Conservation

	Number Owned by BW
Listed Buildings	7
Sites of Historical Interest	3

TABLE 9 Recreation Sites

		Chew Lake	Blagdon Lake	Cheddar Water	Barrow Tanks	Blagdon Visitor Centre†	Chew Magna Reservoir	Cheddar Clay Pits	Litton Lakes
AREA	(Hectares)	486	178	95	51	7	4	3	6
WATER BASED	Game Fishing	P	P		P		R		P
	Coarse Fishing			P				R	
	Sailing & Windsurfing	R		R					
	Sub Aqua			R	R				
LAND BASED	Bird Watching	P	P	O	P				
	Walking	part O	part O	O		O*			
	Car Parks	3	3	O	P	O*	R	R	1
	Disabled	O	3	O		O*		R	
	Picnic Sites	P*				O*			
	Info/Visitor Centre	O				O*			
	Tea Shop	O				O*			
	Toilets	O	P		P	O*			P
	Fishing Lodge	P*	P		shelters P				shelters P
	Nature Trails	O				O*			
Bird Hides	P	P							
USAGE		3	2	2	1	2	1	1	1

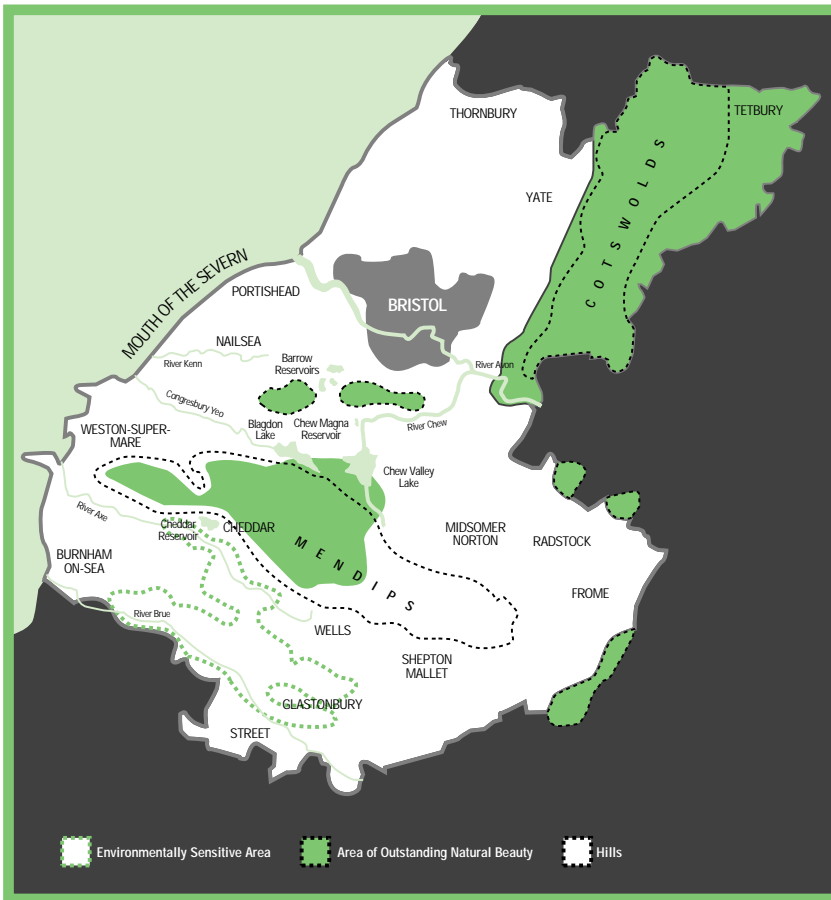
KEY: Access Arrangements

- R = Restricted. Available for club members only or by special arrangement
- P = Permit. Open to everyone upon payment
- P* = Part year charge only
- O = Open. Free access for all for this activity
- O* = On days when open

- USAGE 1 = 1 - 50 people a day
- 2 = 50 - 100 people a day
- 3 = 100 - 200 people a day
- † Blagdon Visitor Centre is only open on selected dates during the year

(For sport or active recreational use - the average number of people per day over the busiest three months).

LANDHOLDING AND RESERVOIRS



Our sources are a mixture of raw water reservoirs, rivers, springs and boreholes. The greatest proportion of total supplies is abstracted from the Sharpness Canal in Gloucestershire and the next

largest from raw water reservoirs fed from the Mendip Hills. Chew Valley Lake is 486 hectares in area and is surrounded by a further 165 hectares of mixed grassland, woods and fen/carr

vegetation. Blagdon Lake at 178 hectares is smaller and its surroundings add a further 67 hectares. These include valuable species-rich meadows and water edge vegetation. Cheddar reservoir and the three Barrow reservoirs are embanked storage reservoirs with a total area of 146 hectares and three other small compensation reservoirs add a further 14 hectares of water and 6 hectares of grass and woodland.

We operate 18 treatment works, 164 pumping stations and 140 covered storage reservoirs but none of these sites is large enough to offer any significant recreation or access opportunities. The management of each site, involving for example grass cutting and hedgerow maintenance, is done to a plan which recognises the conservation value of the land and new discoveries are reported to allow plans to be updated.

The Company owns one small tenanted farm of about 40 hectares and some land in the immediate vicinity of sources is tenanted. Such land amounts to about 50 hectares.



If you would like any more information about any subject covered in this report, please contact Corporate Affairs, Bristol Water plc., P O Box 218, Bridgwater Road, Bristol BS99 7AU or telephone 0117 953 6470
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