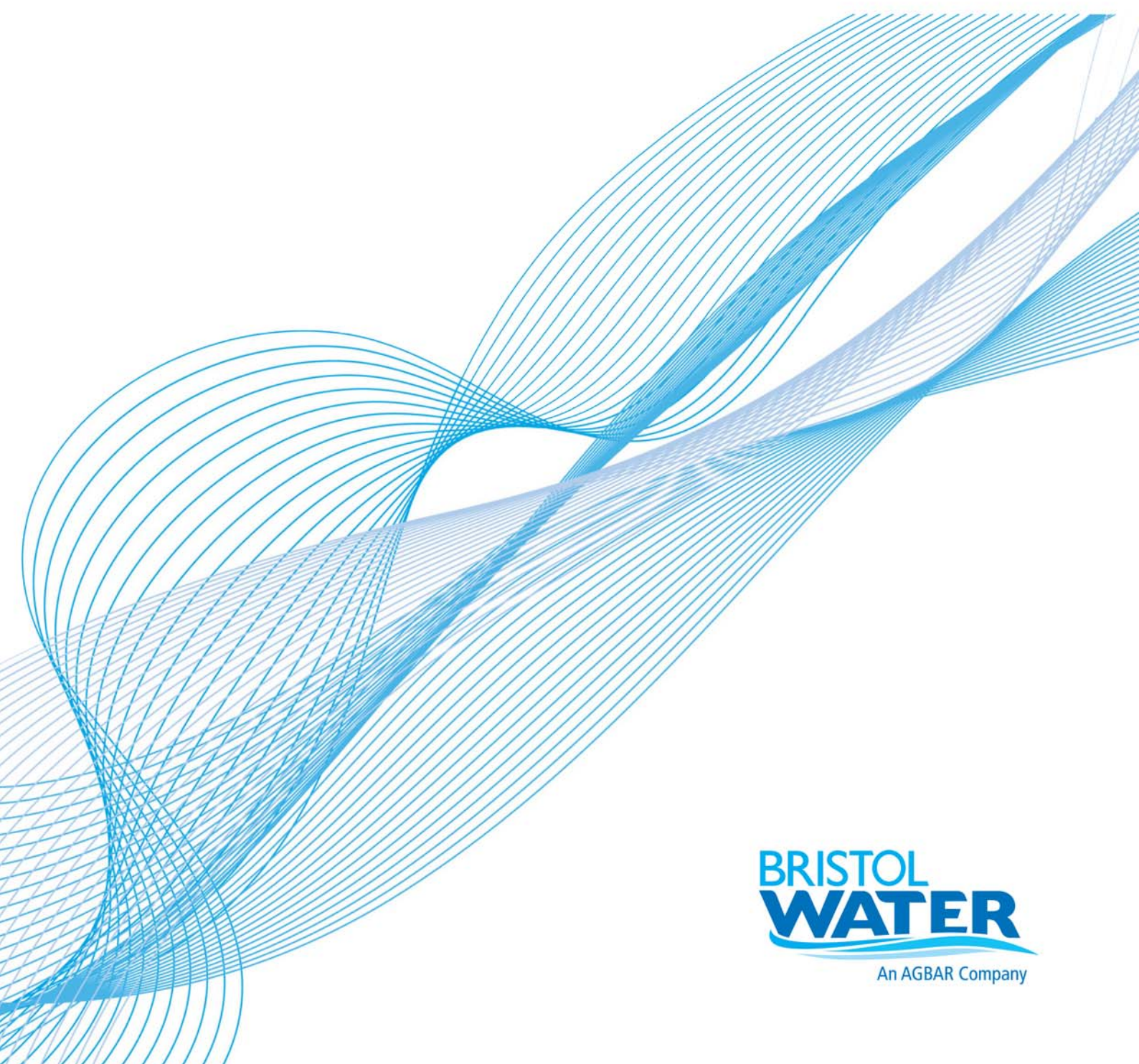


Conservation Report 2008



**BRISTOL
WATER**
An AGBAR Company

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

This is a report of projects carried out over the past year to improve habitats for wildlife and to provide increased enjoyment for people who visit the reservoirs owned by Bristol Water. It also describes regular maintenance work carried out to plans designed to be wildlife friendly; and reports of bird, insect and plant records which provide evidence of the effectiveness of this good environmental stewardship by the company.

Projects

Play equipment at Chew picnic area

Chew picnic area No.1 is very popular with local people and attracts approximately 250,000 visitors a year. Many come regularly, particularly mothers, or grandparents, with young children and in order to provide another activity we have constructed a new junior play area here. The equipment consists of two circles of linked activity; "stepping stone" logs, swing bridges, tilting logs, a transverse climbing wall



and more. Nearly all is made of timber so that it blends well into this rural location and, to reduce risk of injury at this unsupervised location, there are no high structures. The equipment is designed to be quite challenging for 5 to 11 years olds, testing their balance skills, their co-ordination and helping to build body strength. The play area is already proving popular and if funds become available the company hope to be able to add extra equipment in future.

Nesting habitat for little ringed plovers and sand martins at Barrow No2 reservoir

Over the last four years the Reservoirs Engineer has drained down one or more of the Barrow reservoirs in order to install new equipment and to allow huge quantities of silt to be removed. During the periods when they have been empty the exposed reservoir beds have been used as nest sites by several pairs of little ringed plovers and four broods have been raised successfully. These ground nesting birds are relatively rare in the UK and nearly always nest at inland sites on disturbed ground close to water. The work on the reservoirs has now finished and the reservoirs filled again with water. All that remains of the work is a huge quantity of silt piled up in an

adjacent field to drain and settle. In the Spring several pairs of the plovers returned to the Barrows evidently seeking to reuse nest sites where they had previously been successful. Alerted by a keen bird watcher, the Engineer has now constructed, within the silt deposit area, a patch of ground which should be suitable for the plovers to use for nesting and rearing young. It is surrounded by a wet ditch, in an attempt to deter mammalian predators, and the substrate reproduces that of the reservoir bed. This year, however, the birds chose not to nest on the new area but did so on a disused sand filter at the nearby Water Treatment works where their chicks hatched but were taken by predators. We hope that in future little ringed plovers will use the new area and continue to rear broods successfully at the Barrows. The Engineer also took advantage of the high silt mound to construct a sand martin nesting bank. He installed unwanted concrete slabs against a steep face of the mound and drilled small holes through the concrete leading to the soft sand and silt behind. Within a week or two of making this bank several sand martins were seen inspecting the holes and it is believed one or two pairs are nesting there and the site could become home to a regular colony in future.



Tern nesting islands at Herons Green, Chew Lake



Several species of terns visit Chew lake regularly over the summer months, though none stay to breed. It is known that common terns will breed at large reservoir sites away from the coast and to encourage this to happen at Chew we have built and installed three small islands in the pool within the conservation area at Herons Green. The design for the islands was taken from the Wildfowl and Wetlands Trust at Slimbridge, where it has attracted terns to nest and is based on wooden pallets buoyed up by a

flotation collar and covered with a thin layer of gravel and soft sand to provide the substrate favoured by terns. The islands are anchored out on the open water so as to provide protection from mammalian predators and are made to float so that should the water level rise after heavy rain the islands and nests will not be flooded. The sides have wire netting all round which is intended to make it difficult for black-headed gulls and crows, active predators of other birds' nests, to land while the smaller and more agile terns should be able to come and go. The islands have not been colonised this year and are being viewed as a low cost experiment at first. Should they prove successful then more islands can be built in future.

Bittern habitat creation at Chew

Over the last two years a proposal to create a significant area of ideal bittern nesting habitat has been developed. The plan depended on purchasing a small area of land from a neighbouring farmer. Plans were drawn up and surveys carried out to enable the design to be developed but unfortunately the land purchase eventually fell through and this scheme has now been dropped. However, a smaller scheme to create channels with bunded ends within existing reed beds at the edge of the main lake is now being considered and may be included in the list of work for 2008/09. Such channels have been created before in Chew and provide benefit to many bird and insect species and help to keep areas of reed in healthy condition. They should also prove attractive to bitterns, which like to hunt, roost and nest in reed edges close to shallow open water.

Bird hide at Barrow No.2 Reservoir

A small number of bird watchers specialise in making regular observations at the Barrow reservoirs and treatment works and have amassed a significant amount of data over many years. To help these and other watchers we have now built a small bird hide overlooking No. 2 reservoir which has the greatest area of natural bank and usually the most interesting birds. The hide is available to all who obtain a bird watching permit covering all Bristol Water's reservoirs.

Woodford pond, Chew Lake

This project was described in last years report but is updated here. The pond was largely completed last year and has been allowed to fill and mature over winter. The banks have been seeded and water and marginal plants have now been collected from around Chew and Blagdon reservoirs and planted out in the pond. Further planting with locally sourced, native plants is planned and some branches and stones will be added to create more habitat variety on the rather bare clay bed. The pond is already looking attractive and is attracting dragonflies, pond skaters and water boatmen and should develop into a valuable wildlife pond in the years to come.

Biodiversity Action Plans

As reported last year we have undertaken a revision and upgrading of the Biodiversity Action Plans covering our major reservoirs Chew Valley Lake and Blagdon Lake. These bring our plans and actions into line with recent changes in environmental legislation and set out our management actions aimed at protecting and enhancing wildlife at these already excellent sites. The BAPs are available to the public online.

Crayfish

Bristol Water joined with the Environment Agency and Avon Wildlife Trust in a project to try to curb the dramatic decline of native crayfish across the region.

In October, a population of 340 crayfish from a threatened area near Bristol were transported in cooled tanks to a specially selected refuge stream, at a secret location in Somerset.

White-clawed crayfish are threatened throughout their European range from changes to habitat, water quality and pollution. However, the increasing threat is from non-indigenous crayfish species (NICS) such as the American signal crayfish.

Signal crayfish aggressively push out native crayfish and most devastatingly, carry a fatal fungal disease responsible for wiping out many British populations.

It is hoped by introducing them to more isolated areas they will successfully re-establish as they are regarded as an important part of river ecosystems in the South West.

The project is being carefully monitored to evaluate its success. Scientific tests examining water quality and in-stream and riparian cover will ensure no harm is done to the resident ecology and findings will be available for future strategic conservation.



Routine work

Meadows around reservoirs

The meadows around Chew and Blagdon lakes are excellent examples of the neutral, flower rich type and have important insect communities associated with them. The management is to allow the grass to grow as hay for a cut after mid-July and this is beneficial to the majority of plant and insect species. In contrast, some butterflies and grasshoppers leave eggs or immature stages on grasses overwinter and to benefit these we are trying, with some success, to persuade the tenant farmers to leave uncut strips of vegetation along field edges, varying the locations from year to year. It is hoped this will boost numbers of these insects in future years.

Conservation volunteers

Avon Wildlife Trust conservation volunteers spent two days at Chew nature reserve cutting tall vegetation on a bird roosting island in Stratford Bay and on a nesting island in Herriotts pool.

General work

Woodland clearings were mown in the Herons Green conservation area and tree guards, installed when the trees were planted, were removed. In the same area a further stretch of hedge was laid. Several bird nesting boxes were repaired and others cleaned out to prevent the spread of parasites from one generation to the next.

At the bittern nature trail at Chew, overgrown dogwood shrubs were coppiced to allow in more light and to encourage new, lower growth, which is more useful to small birds and mammals. The sluice controlling levels on a wildlife pond at Wick Green was leaking and this was repaired to allow a higher water level to be retained.

Surveys

The green winged orchid population on the Parklands at Chew was surveyed in May. The estimated number of flowers on the main field was 3,762 with 925 on the smaller

western field. This was a poor result at both sites but within the range of previous counts and indicates that further surveys should be carried out in future to gauge if the population is indeed declining. On a positive note, there is a developing population of heath spotted orchids on the main field, with thousands of individual flowers in a relatively small area. One southern marsh orchid was also found, a first for this site.

The Somerset botany group visited Blagdon lake and surveyed several patches of meadow to assess plant diversity. They counted 118 species and the data have added to the company's existing species records.

The various nest boxes around the lakes were inspected at intervals in the spring. Many blue and great tits nested successfully and three boxes were used by barn owls. Of these a box at Herons Green at Chew held four healthy chicks, which were ringed, another at Herriotts pool held only one small chick and a box on the north shore of Blagdon lake held four chicks, also ringed.



Surveys of Denny Island showed that the number of heron nests was 51, a substantial increase on last year and making this heronry now the largest in the old Avon area. The numbers of small to medium sized coarse fish in the lake seems to have increased in recent years and this may have helped boost food supplies for herons. The island also supported large numbers of coot nests, three moorhen nests and a probable buzzard nest. There were several successful passerine nests including long-tailed tit, blue tit and wren but no mallard or gadwall nests were found, though a mallard brood of 6 young seen at the island probably indicated that the nest had escaped observation. Duck nest boxes were erected in trees on the island in an attempt to provide safe nesting opportunities for ducks but none were used this year.

Volunteers have started to survey several other species at the lakes. Two people are surveying for grass snakes at Chew and one for amphibia. The Avon Wildlife Trust have conducted surveys of the River Chew between Litton lake and Chew lake looking for crayfish, both the native and introduced species. Results for these surveys are awaited though grass snakes have been found on several occasions.



Wildlife records

Records of bird and other wildlife sightings are made by volunteers and provide a useful measure of the value of our reservoirs and surrounding land holdings to wildlife.

At **Chew** some birds were seen in impressive numbers. For example, 10,000 swifts on 16th May and in the autumn 20,000 starlings and some 50 water rails over a number of counts. Unusual records included 2 red kites, several osprey, grasshopper warbler, ring ouzel, baltic gull, 23 common scoter and 3 drake scaup, spotted sandpiper, adult sabinus gull, lesser spotted woodpecker, cattle egret, glossy ibis, tree sparrow, 5 juvenile velvet scoters, Franklins gull and yellow browed warbler. Also notable, but now slightly more expected, were sightings of bittern over the winter, several harrier sightings, both hen and marsh harrier, the male red-breasted merganser back for the 27th winter and red-throated diver and great northern diver.

At **Blagdon** the spring brought sightings of the following birds; female smew, red-breasted merganser, drake lesser scaup, a garganey and a hobby. Two otters were seen for the second year running and this suggests that a female had bred somewhere nearby as a pair are likely to be mother and young. Only one cuckoo was noted in the summer, but on a happier note 13 singing reed buntings were present and this is an increase on previous years. Other records included a wimbrel, 2 slavonian grebes, an Egyptian goose and a drake red-crested pochard.

Bird nesting

Nesting records for 2007 are shown in the table below. This shows either recorded nest or brood numbers for a selection of species. (nr = not recorded)

Species	Nests at Chew	Nests at Blagdon	Comments
Heron	31	0	All on Denny Island
Mute swan	5	3	
Canada goose	2	0	
Moorhen	21	1	
Coot	91	9	
Gt crested grebe	42	Nr	A record number at Chew
Little grebe	5	Nr	
Mallard	29	16	Broods seen rather than nests found
Tufted duck	1	0	Brood
Pochard	6	0	Broods
Shoveler	1	0	Brood
<u>Land birds</u>			
Reed warbler	54	+	A very low number
Reed bunting	(32)	+	Singing males heard
Gt spotted woodpecker	3	0	
Barn owl	1	1	In a nest box
Tawny owl	0	2	In nest boxes
Kestrel	0	1	In a nest box
Buzzard	2	0	
Raven	1	0	

The very low numbers of reed warbler nests was almost entirely due to the very wet early summer. This not only caused a rise in water levels and soaked many nests but strong winds also lashed the reeds and so destroyed nests. The bracketed number of singing male reed buntings is shown as an indication of territories and does not necessarily indicate breeding success. At Barrow little ringed plovers again nested successfully in 2007.

These wildlife records are generally very good news and show how valuable the reservoirs and the surrounding habitats are. However, there have been some declines in bird records over the years, for example wigeon numbers have declined, probably as recreational activity near Woodford bank- their favoured area- has increased over several years. Numbers of smew have also declined, possibly because of milder winters but possibly because of ruddy duck control operations over the last four years. Little owl, marsh tit, yellow wagtail, cuckoo, willow warbler and sedge warbler are all more scarce than in the past, but the reasons for these declines are probably not related to any activity at the reservoirs but reflect changes occurring over a larger scale

Bird Ringing

The ringing station at Chew had another successful year with the number of birds ringed on a par with the previous few years. The total number of new birds handled was 4,106 of which 3,177 were full grown birds and 929 were pullus (ie nestlings). Over 2,350 retrapped birds were recorded. The species mix was quite good and totalled 52 including ravens (a first for the ringing station), a tree sparrow (the first since 1983) and a second buzzard caught in a mist net. The Heligoland trap was in use all year and it contributed 746 birds to the total.

The 2007 Canada goose round-up was not a complete success with only 51 birds caught and ringed. Since this is an annual event it seems likely that some experienced older birds were present and they have learned to avoid being herded into the coral.

Progress in 2008

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| 1. Complete Woodford pond | New pond created, planting will continue in 2009. |
| 2. Construct play area | Completed |
| 3. Negotiate land purchase for Bittern habitat | Purchase failed (See text) |
| 4. Construct bird hide at Barrow | Completed |
| 5. Improve Blagdon hide | Not done. High lake levels prevented bund being built. |

In addition to these planned projects we made nesting habitat for little ringed plovers, for sand martins and for common terns.

Plans for 2009

1. Increase the size of the stone spit in Herons Green pool
2. Create two bunded channels in the reed bed in Stratford bay for bitterns (Note can only be done if water levels fall)
3. Clear willows from the Grebe Trail pond
4. Improve Blagdon Bird hide
5. Augment water vole habitat at Cheddar ponds
6. Assist Natural England and Avon Wildlife Trust with white clawed crayfish conservation project
7. Co-operate with Somerset Wildlife Trust on “Living Landscapes” initiative on the Mendips