



# Canals Habitat Action Plan

## 1. Introduction

Canals provide a green corridor into urban areas, consisting of a mixture of freshwater and terrestrial habitats that may be less intensively managed than the surrounding land and can be very important for wildlife.

## 2. Current Status

### 2.1 Description of habitat

Wetland habitats often occur adjacent to the canal, with the towpath, hedge or other boundary feature adding further wildlife value to the canal environment. These associated habitats are often rich in species, some of which are relicts of formerly widespread habitats such as unimproved grassland, marsh and carr. Supply reservoirs and feeder streams are also often rich habitats. All of the county's canals have extensive bankside tree resources. Canals can help in the re-colonisation of the countryside by *Lutra lutra* otter and canal tunnels can provide roosting, foraging and hibernation sites for bat species. If the climatic conditions within the tunnel are right and suitable cracks and crevices are present bats are also known to use canal tunnels for breeding.

On heavily used canals the turbid water caused by boat traffic results in a generally poor submerged aquatic flora, although in places some good marginal emergent vegetation including *Typha* sp. reedmace, *Schoenoplectus lacustris* bulrush and *Lythrum salicaria* purple loosestrife exists. Canal sections with soft banks and fringing vegetation can support *Arvicola terrestris* water vole populations although in Worcestershire this species is now restricted to the canals (and other watercourses) in and immediately around the Bromsgrove area. *Triturus cristatus* great crested newts are occasionally found in canals and also in overflow ponds at locks, although the presence of fish in most of our canals is generally a deterrent. *Bufo bufo* common toads are regularly found in canals: this species appears to be in an overall decline nationally and so canals may be important in the species' survival.

### 2.2 Distribution and extent

Construction of canals in the UK took place predominantly between 1750 and 1830 although some were built much earlier and others later. The network covers much of the country with a concentration of canals in the London area and the Midlands. British Waterways owns much of the network and has responsibility for 2,000 miles of canals and navigable rivers; the remaining canals are in private or local authority ownership.

There are three canals that pass through the county of Worcestershire. The Worcester and Birmingham Canal starts at the River Severn in Worcester and leaves the county at West Hills near King's Heath. The Staffordshire and Worcestershire Canal starts at the River Severn at Stourport-on-Severn and follows the River Stour for 13km to the county boundary. The third is the Droitwich Canal, which starts at the River Severn and follows the River Salwarpe to Droitwich where the Droitwich Junction Canal connects it to the Worcester and Birmingham Canal at Hanbury.

### 2.3 Legislation

British Waterways has a duty under the British Waterways Act 1995 to further the conservation and enhancement of natural beauty and the conservation of plants, animals and geological or physiographical features of special scientific interest and to balance this against the requirements of canal users.

Canals fall under the Water Framework Directive legislation that requires all inland and coastal waters within each defined river basin district to reach at least good status by 2015 through the establishment of environmental objectives and ecological targets for surface waters. This legislation will be a big driver of conservation work once targets and objectives are set.

Watercourses in the UK are given Statutory Water Quality objectives. The classification system aims to describe the chemical quality required to support different river ecosystems, known as the River Ecosystem Classification Scheme. RE1 is the highest objective but most canals have low RE4 or RE5 objectives. It is the responsibility of the Environment Agency to implement these objectives.

Otters, bats and water voles are all protected by the Wildlife and Countryside Act 1981 (as amended). This should be taken into account during all maintenance and management works.

Over 100 canals in the UK are designated as SSSIs and many more as local Wildlife Sites.

### 2.4 Summary of important sites

The **Staffordshire and Worcestershire Canal** does not in general have a very rich flora, however some of the lock gates and walls support occasionally notable species of fern, liverwort and moss. Where the River Stour runs close to the canal there are important wetland sites such as Wilden Marsh and Meadows, Puxton Marsh and Stourvale Marsh (all designated SSSI and SWS) and Wolverly Marsh SWS. The canal provides additional habitat to species like the otter. During routine maintenance works on this canal British Waterways have often encountered crayfish once the water has been drawn down around lock gates but it is not known what species. *Austropotamobius pallipes* white-clawed crayfish are found further up the canal in Staffordshire.

The **Worcester and Birmingham Canal** has frequent though generally narrow stands of *Typha latifolia* common reed and a good diversity of other emergents in its margins. Other valuable habitat includes occasional wetlands associated with winding holes, marginal ditches, weirs and reservoirs. Mature woodland is found in tunnel cuttings and on embankments and much of the canal has a continuous established hedge boundary. The canal is particularly important as it maintains some of the last known water vole populations in Worcestershire.

The **Droitwich Canal** has been abandoned since 1939. The Barge Canal section was opened in 1771 to connect Droitwich with the River Severn, followed by the Junction Canal in 1854 that joined the Barge Canal to the Worcester and Birmingham Canal at Hartlebury. It supports frequently channel-wide reedbeds of county significance and the value of the canal corridor is enhanced further where it runs close to the River Salwarpe. The reedbeds hold the largest colony of *Acrocephalus scirpaceus* reed warbler in the county and provide breeding

habitat for otter, waterfowl and a range of invertebrates including several species of dragonfly and damselfly. Otters are known to use the canal close to where it joins the River Severn. Great crested newts certainly occur in the disused arm of the Droitwich Canal by the Droitwich Rugby Club.

### 3. Current factors affecting the habitat

- The restoration work to the Droitwich Canal will involve major changes to the canal environment and surrounding habitats, including the near total loss of an extensive existing reedbed. It must be ensured that the biodiversity value of the canal corridor is maintained and that all losses of and damage to existing habitat are appropriately mitigated for.
- Installation of sheet and steel piling jeopardises water vole populations by reducing the amount of habitat available for possible expansion of existing colonies. Alternatives to such features exist for most situations and should be preferred.
- Increasingly canal towpaths are being used for recreation, particularly walking, fishing and cycling. They are often promoted as 'green routes' and in many places conflicts between user groups occur. Associated towpath improvement can result in serious loss of habitat. Widening or installing hard surfacing may necessitate hard channel bank protection, the loss of unimproved grass verges and impact on boundary hedges. The use of towpaths as convenient places to lay utility cable links also has the potential to damage the wildlife value of the canal corridor. British Waterways' vision is to double the amount of visitors to our canals by 2012 and they are actively encouraging the responsible recreational use of canals and their towpaths. This requires responsible management and monitoring to ensure that this is not at the cost of biodiversity.
- Canals are a significantly different freshwater system compared with still or natural running water habitat. Water quality, especially in navigable canals, is generally perceived as poorer though much of the difference is due to higher turbidity and lack of flow. Canals often show poor chemical quality despite maintaining healthy fish populations. As a result of this canals tend to be given lesser conservation objectives due to naturally low dissolved oxygen levels. However, other parameters that have the potential to harm wildlife such as ammonia, pH, copper and zinc are found at low levels in canals.
- The contribution that canals make to biodiversity in the county and UK in general is not fully appreciated. This stems from both a lack of systematic survey and from a commonly held belief that they are generally too polluted to sustain wildlife. This view may undermine efforts to improve their worth for wildlife.
- Although canals were constructed to take boats, the passage of powered boats does damage the flora through direct physical contact, wash and increased turbidity. The growth of the boating industry is likely to place pressure on canal biodiversity through increased turbidity, disturbance and bank erosion. There is also an increased pressure for tidy and well-managed towpath vegetation, which may conflict with biodiversity.

- Most canals currently have a 12-month fishing season (apart from designated SSSI's and SAC's that have a closed season) and this may adversely affect bankside vegetation, birds and other wildlife on the canal. British Waterways are considering a closed season policy on sections of canal that are important to biodiversity and fish spawning. Leased angling is regulated and issues such as damage to the banks can be addressed, whilst unregulated angling can cause conflict with biodiversity. Litter from angling is an issue, often encouraging *Rattus norvegicus* brown rat.
- Over feeding of waterfowl, especially *Branta canadensis* Canada geese, results in excessive fouling, which impacts on local water quality, and damage to canal bank vegetation. Left over food can encourage the brown rat, which in turn can have serious impacts on species such as the water vole.
- The canal bank opposite to the towpath, known as the off-side, is commonly in different ownership to the canal itself. Where canals are embanked or in cuttings, ownership usually changes at the toe or top of the bank. The offside edge may suffer from the same problems that rivers suffer from such as overgrazing or ploughing to the bank resulting in erosion, excessive nutrient inputs and loss of riparian habitat.
- Non-native plant species entering the canal system, either as escapees from garden ponds or by people deliberately placing them in the canal, cause problems by out-competing native vegetation and smothering the open water habitat. The most serious threats come from *Hydrocotyle ranunculoides* floating pennywort and *Crassula helmsii* New Zealand stonecrop. *Heracleum mantegazzianum* giant hogweed, *Fallopia japonica* Japanese knotweed and *Impatiens glandulifera* Himalayan balsam are other invasive non-natives.
- Alien species such as *Mustela vison* American mink and *Pacifastacus leniusculus* signal crayfish pose threats to the native wildlife within our canals.

## 4. Current Action

### 4.1 Local protection

It should be noted that since British Waterways do not own the Droitwich Canal, the British Waterways Act does not apply until 2009/10, when the canal becomes the responsibility of British Waterways.

All three canals in Worcestershire as well as the Tardebigge Reservoir, created to maintain canal levels, are designated as Special Wildlife Sites. Bittell Reservoir, which supplies the Worcester and Birmingham Canal, is a SSSI.

### 4.2 Habitat management and programmes of action

- Droitwich Canal fell into disrepair after it was abandoned in 1939. Some sections have been blocked or lost to development but the majority remains intact and since the 1960s the canal has been subject to various restoration efforts. The Droitwich Canals Trust was formed in 1973 and since that time they have been working to gradually reopen both the

towpaths and the canal sections themselves to the public and recreational boat traffic. The Droitwich Canals Restoration Partnership, with British Waterways as lead partner, has now secured almost £10 million for the completion of the restoration project by 2008, creating a 22-mile navigable river and canal route called the Mid Worcestershire Ring.

- Soft bank protection is installed and monitored on some canal sections as an alternative to steel piling to combat soil erosion and maintain riparian emergent vegetation ideal for water voles. British Waterways always aim at using alternatives to hard bank protection where it does not reduce the safety, water management or heritage value of the canal. To date this has included the use of coir rolls and geotextiles on various stretches of the Staffordshire and Worcestershire, Trent and Mersey, Birmingham and Fazeley and Coventry Canals. For example, 25m of coir matting have recently been installed on the canal at Tardebigge Reservoir that will shortly be planted with native vegetation.
- British Waterways intends to investigate current towpath cutting regimes and alter these where biodiversity benefits can be gained.
- British Waterways produced an environmental code of practice (ECP) in 1996 that is reviewed annually, designed to instigate more sympathetic operating procedures and to protect and enhance wildlife habitat on canals. The current ECP applies to all of British Waterways works with the aim of protecting the environment and heritage. This is likely to be replaced in the near future by an Environmental Management System.
- British Waterways plans to produce a Conservation Plan for the Staffordshire and Worcestershire Canal to provide a management programme for the canal and its key species and habitats. An integrated programme of tree management on this canal by British Waterways has begun and, with the support of Worcestershire Wildlife Trust, otter holts were built in winter 1998/99.

#### **4.3 Survey, research and monitoring**

- A number of botanical and habitat surveys have been carried out by British Waterways although coverage is incomplete. British Waterways is committed to ensuring that the monitoring of key BAP species is carried out at suitable intervals.

### **5. Associated Plans**

Reedbeds, Rivers and Streams, Otter, Water vole, Great Crested Newt.

### **6. Vision Statement**

To maintain and enhance the natural environment of the canal corridors in Worcestershire and their associated wetland habitat, maximising their potential for acting as green corridors for the movement of wildlife across the county.

## 7. Targets

Target Type	Target Text	Baseline value	Target Value	Target Timescale
Achieve condition	Programme of mink control completed along Worcester and Birmingham Canal	0	48km of canal	2010
Achieve condition	Habitat creation / restoration scheme completed to link up currently fragmented water vole colonies on Worcester and Birmingham Canal through Bromsgrove District between Stoke Works and Bittell Reservoirs	0	15km of canal	2012

## 8. Actions

Action Code	Action Category	Action Text	Location	Complete Action By	Lead Organisation	Support Organisations
WRC CAN CA 01	2.12	Work with Droitwich Canals Partnership during the restoration of the canal to secure best possible biodiversity outcomes.	Droitwich Canals	2017	BW	WWT WCC EA
WRC CAN CA 02	2.13	Maintain communication and liaison with Droitwich Canals Trust post completion of restoration works to ensure continuation of appropriate nature conservation management.	Droitwich Canals	2017	BW	WWT WCC WDC
WRC CAN HC 01	7.3	All canal works in the county to be preceded by an ecological survey and involve mitigation against identified habitat losses and additional habitat creation where possible.	Worcestershire	2017	BW	
WRC CAN HC 02	7.6	Create or restore habitat and improve bank side management in order to link up fragmented water vole colonies.	Worcester and Birmingham canal	2012	BW	WWT
WRC CAN AP 01	1.1	Support British Waterways in following their Environmental Code of Practice for all canal works to ensure best biodiversity outcomes are achieved.	Worcestershire	2017	WWT	WCC
WRC CAN HC 03	7.3	Use the development control system to ensure that the best outcomes for biodiversity are achieved through the use of planning conditions, where impacts on the wider canal environment are identified.	Wychavon District	2017	WDC	

<b>WRC CAN HC 04</b>	<b>7.3</b>	Use the development control system to ensure that the best outcomes for biodiversity are achieved through the use of planning conditions, where impacts on the wider canal environment are identified.	Bromsgrove District	2017	BDC	
<b>WRC CAN HC 05</b>	<b>7.3</b>	Use the development control system to ensure that the best outcomes for biodiversity are achieved through the use of planning conditions, where impacts on the wider canal environment are identified.	Worcester City	2017	WorcsCC	
<b>WRC CAN HC 06</b>	<b>7.3</b>	Use the development control system to ensure that the best outcomes for biodiversity are achieved through the use of planning conditions, where impacts on the wider canal environment are identified.	Wyre Forest District	2017	WFDC	
<b>WRC CAN CP 01</b>	<b>3.7</b>	Produce a leaflet for distribution through canal boat hire businesses and other relevant leisure and tourism outlets to raise awareness of canal biodiversity in worcestershire amongst tourists and boat hire operators	Worcestershire	2009	BW	WWT WCC
<b>WRC CAN CA 03</b>	<b>2.11</b>	Provide management guidance for canalside veteran trees.	Worcestershire	2009	WR	
<b>WRC CAN ID 01</b>	<b>8.1</b>	Instigate survey to record canalside veteran trees.	Worcestershire	2009	WR	
<b>WRC CAN AP 02</b>	<b>1.1</b>	Contact owners of land on the off-side of the canal to request support and cooperation in a programme of mink control.	Worcester and Birmingham Canal	2008	BW	
<b>WRC CAN AP 03</b>	<b>1.1</b>	Contact angling groups using the canal and nearby watercourses / waterbodies to request support and cooperation in a programme of mink control	Worcester and Birmingham Canal	2008	BW	
<b>WRC CAN SM 01</b>	<b>12.11</b>	Carry out programme of mink control using rafts (as part of a wider catchment-area initiative).	Worcester and Birmingham Canal	2010	BW	WDC
<b>WRC CAN SU 01</b>	<b>13.2</b>	Two water vole surveys to be carried out at	Worcester and	2015	BW	WWT

		each site with recent records (post-1990).	Birmingham Canal			
<b>WRC CAN SU 02</b>	<b>13.2</b>	Prioritise historical water vole records (pre-1990) and re-survey sites with existing suitable habitat.	Worcester and Birmingham Canal	2012	BW	WWT
<b>WRC CAN SU 03</b>	<b>13.2</b>	Crayfish survey to be carried out at key lock gates to determine species.	Staffordshire and Worcestershire Canal	2010	BW	WWT
<b>WRC CAN CA 04</b>	<b>2.11</b>	Ensure lock keepers receive information on the importance of lock gates and canal walls to biodiversity and advice on ensuring the floral interest of these is protected and maintained.	Worcestershire	2017	BW	WWT

**BW** – British Waterways

**WCC** – Worcestershire County Council

**WorcsCC** – Worcester City Council

**WR** – Worcestershire Recorders

**BDC** – Bromsgrove District Council

**DCT** – Droitwich Canals Trust

**WFDC** – Wyre Forest District Council

**WWT** – Worcestershire Wildlife Trust

**WDC** – Wychavon District Council

**NE** – Natural England