



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. They are an important component of a green infrastructure network.

2. Current Status

2.1 Description of habitat

The UK's canal network comprises a system of artificial waterways, constructed for the conveyance of goods by barge or boat. The canal corridor consists of the water channel itself, with a towpath to one side and an offside bank of varying width to the other. These features may be embanked or in a cutting. A grass verge or bank and a hedgerow may also be part of the corridor. Wetland habitats adjacent to the canal, such as unimproved damp grassland, marsh and carr, add further wildlife value and are often rich in species. Water supply reservoirs and the feeder streams between reservoir and canal can also be rich habitats. Canal corridors often have extensive bankside tree resources.

Canals provide important movement routes for otter (*Lutra lutra*) and bridges and tunnels can provide roosting, foraging and hibernation sites for bats. Daubenton's bats (*Myotis daubentonii*) forage by taking insects close to the water's surface and individuals have been recorded following a single canal corridor for up to 10km. If the climatic conditions within the tunnel are right and suitable cracks and crevices are present bats may also use them for breeding. Historically, canals in Worcestershire have been important for water vole (*Arvicola amphibious*) and still are in other parts of the country, in particular canal sections with soft banks and fringing vegetation.

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 reedmace (*Typha latifolia*), bulrush (*Schoenoplectus lacustris*) and purple loosestrife (*Lythrum salicaria*) exists. The presence of a significant layer of silt and mud on the bed of many canals makes them ideal habitat for eel (*Anguilla anguilla*). Although the presence of fish in canals generally deters great crested newts (*Triturus cristatus*) from breeding, this species is frequently found in disused canal sections and in associated wetland habitats such as overflow ponds at locks. Common toads (*Bufo bufo*) are regularly found in canals and this habitat may be important to 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. The Canal & River Trust owns and has responsibility for around 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 at Caunsall. The third is the Droitwich Canal, of which the 'Barge' section starts at the River Severn and follows the River Salwarpe to Droitwich and the 'Junction' section then connects to the Worcester and Birmingham Canal at Hanbury.

2.3 Protection of the habitat

- Legal protection can be granted through the designation of a Site of Special Scientific Interest (SSSI) under the Wildlife and Countryside Act 1981 (as amended).
- Sites not meriting SSSI status can be listed as a Local Wildlife Site (LWS). Although not a statutory designation LWS status does confer some protection through the planning system.
- The Canal & River Trust has a legal 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 within the remit of the Water Framework Directive (WFD) which was transposed into UK law in 2003. The WFD establishes a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater which aims to prevent further deterioration, and to protect and enhance the status of aquatic ecosystems and the terrestrial ecosystems and wetlands directly dependent on them. The WFD remit includes:
 - a) Artificial Water Bodies if they are entirely man-made (e.g. canals)
 - b) Heavily Modified Water Bodies if they are partially modified (e.g. canalised rivers)

The WFD assigns a lower target status to these waterbodies of having them reach their 'ecological potential', reflecting a water quality standard that they are realistically more likely to achieve.

- Otters, bats and water voles are all protected under the Wildlife and Countryside Act 1981 (as amended). Fish are protected under the Salmon and Freshwater Fisheries Act 1975.
- Historic structures or buildings associated with canals may be listed under the Planning (Listed Buildings and Conservation Areas) Act 1990 (as amended).

2.4 Summary of important sites

The **Staffordshire and Worcestershire Canal** includes lock gates and walls supporting notable species of fern, liverwort and moss. Where the River Stour runs close to the canal there are a number of important wetland sites such as Wilden Marsh and Meadows SSSI, Puxton and Stourvale Marshes SSSI and Wolverly Marsh LWS, enhancing the biodiversity value of the canal corridor.

Recent records suggest there may be a previously unknown population of water voles associated with this canal.

The **Worcester and Birmingham Canal** has frequent though generally narrow stands of common reed (*Typha latifolia*) and a good diversity of other emergent plants in its margins. Taken together these fringe reedbeds represent a significant part of the county reedbed resource. 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. Bullhead (*Cottus gobio*) and stone loach (*Barbatula barbatula*) are present in good numbers.

The **Droitwich Canal** was abandoned as a commercial waterway in 1939. It went on to develop frequently channel-wide reedbeds of county significance, with the value of the canal corridor enhanced further due to it running so close to the River Salwarpe. The reedbeds hold one of the largest colonies of reed warbler in the county and provide breeding habitat for waterfowl, otters and a range of invertebrates including several species of dragonfly and damselfly. The Droitwich Canals Trust was formed in 1973 and began to seek support and funding for the restoration and reopening of the navigation. The Droitwich Canals Restoration Partnership, with British Waterways as lead partner, completed the restoration in 2011. Although significant areas of the existing reedbed fringe habitat were removed during the restoration other areas were created in compensation, including the 2.5 ha Coney Meadow reedbed now managed as a nature reserve by the Canal & River Trust. The wildlife at Coney Meadow, particularly birds, is now regularly monitored by local volunteers. Great crested newts (*Triturus cristatus*) were present in the disused arm of the canal and a series of ponds were created as mitigation for this species when the canal was restored.

3. Current factors affecting the habitat

- Installation of sheet and steel piling has made the canal banks hostile places for wildlife and further use of these materials should be avoided in favour of green, soft bank repairs.
- Canal towpaths are increasingly being used for recreation, particularly walking, fishing and cycling, and are often promoted as 'green routes'. Towpath improvement such as 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.
- The contribution that canals make to biodiversity in the county and UK in general is not fully appreciated and this is exacerbated by negative public perceptions of canals being litter-strewn and polluted.
- The passage of powered, as opposed to horse-drawn, boats can damage 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 interests.

- Canals may suffer from the same problems that rivers suffer from where they pass through cultivated farmland or where livestock have access to the canal. The offside edge (opposite to the towpath) can suffer from overgrazing or ploughing to the bank resulting in erosion, diffuse chemical pollution and loss of riparian habitat.
- Most canals have a 12-month fishing season (apart from SSSI's and Special Areas of Conservation (SAC's)) and this may adversely affect bankside vegetation, birds and other wildlife on the canal. Leased angling is regulated and issues such as damage to the banks can be addressed, whilst unregulated angling can cause conflict with biodiversity.
- Litter can be an issue, often encouraging the brown rat (*Rattus norvegicus*), particularly around bin collection points which are frequently a focus for fly-tipping.
- Over feeding of waterfowl, such as mallard (*Anas platyrhynchos*) and Canada geese (*Branta Canadensis*), results in excessive fouling and algal growth, reducing water quality.
- Non-native plants entering the canal system, either as escapees from garden ponds or by people deliberately placing them in the canal, can out-compete native vegetation or smother the open water habitat. The most serious threats come from floating pennywort (*Hydrocotyle ranunculoides*) and New Zealand stonecrop (*Crassula helmsii*), both of which can be spread around the canal system by boat traffic or on angling equipment. Giant hogweed (*Heracleum mantegazzianum*), Japanese knotweed (*Fallopia japonica*) and Himalayan balsam (*Impatiens glandulifera*) are other invasive non-natives found on canal banksides.
- Alien species such as the American mink (*Mustela vison*), American signal crayfish (*Pacifastacus leniusculus*), zebra mussel (*Dreissena polymorpha*) and the zander (*Sander lucioperca*) pose threats to the native wildlife within our canals. Zebra mussels can be spread around a canal system very quickly by boats.

4. Current Action

4.1 Local protection

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

4.2 Habitat management and programmes of action

- The restoration of the Droitwich Canal was completed and both sections re-opened to boat traffic in 2011. The Coney Meadow nature reserve, including a 2.5 ha reedbed, was created as part of the mitigation works for the canal restoration.
- Soft bank protection is installed on some canal sections as an alternative to steel piling to combat soil erosion and maintain riparian emergent vegetation. Canal & River Trust always aim to use alternatives to hard bank protection where it does not reduce the safety, water management or

heritage value of the canal. Soft bank protection is always used where water voles are known to be present.

- Towpath cutting regimes are regularly reviewed by the Canal & River Trust and altered as necessary. For example, a length of almost 4km of towpath at the Tardebigge flight is now managed to allow vegetation to flower and set seed.
- Canal & River Trust use an Environmental Appraisal system which applies to all works carried out on the canals in order to protect environmental and heritage interests.
- Hedgerow planting and hedge laying has been carried out at several locations on the Worcester and Birmingham Canal.

5. Associated Plans

Reedbeds, Rivers and Streams, Hedgerows, Otter, Water Vole, Great Crested Newt, Bats.

6. Conservation Aim

The wildlife value of Worcestershire's canals is better understood and appreciated. Canal management and use reflects this and contributes positively to biodiversity priorities wherever possible.

7. Conservation Objectives

- Produce interpretation material on canal biodiversity to be distributed to leisure boaters and available online, via hire companies and tourist information centres
- Promote in the media the importance of the canal system as a green corridor for wildlife and the importance to wildlife of that connectivity between rural and urban areas
- Undertake survey work to improve our understanding of the importance to and use of our canal corridors by bats
- Undertake survey work to improve our understanding of the importance to and use of our canal corridors, particularly the Staffordshire and Worcestershire Canal, by water vole
- Undertake survey work to improve our understanding of reed warbler populations within the canal riparian corridors and particularly of the value of narrow stretches of reedbed

References and further information

Canal & River Trust <https://canalrivertrust.org.uk/>

Pond Action (2002). *A guide to Monitoring the Ecological Quality of Ponds and Canals using PSYM*. Pond Conservation 2002.