

Canals

“I remembered how on an April evening Fred had rowed us dreamily along part of the Regent’s Canal. Overhead the buds were breaking on the elms, the rooks were cheerfully sorting themselves into pairs. My wife and I sat in the stern of the dinghy, she trailing her fingers in the water and I myself looking up dreamily at the silhouette of the trees against the evening sky, amazed that such peace and beauty could exist right here in London.” (Roger Pilkington’s foreword to *Slow Boat* through England, 1970)

1. Aims

- To increase knowledge and understanding of canals and associated habitats in London.
- To ensure the protection, enhancement and appropriate management of canal habitats in London for the benefit of biodiversity and enjoyment of current and future generations.
- To realise the potential of the canal and its biodiversity as an accessible resource for education, recreation and public involvement.

2. Introduction

Canals, constructed to meet the transport needs of the Industrial Revolution, were the motorways of their day, and their construction made a major impact on the 18th and 19th century landscapes. However, once established, canals soon developed their own flora and fauna and today many are designated as important wildlife sites at local, national and international level.

The London canal network was cut between 1767 and 1830 to provide a transport link within London and between the capital and the industrial towns of the Midlands and the north. This Habitat Action Plan covers artificial waterways for which British Waterways London has management responsibilities; Grand Union Canal (Main Line and Paddington Arm), the Regent's Canal, the River Lee Navigation, Hertford Union Canal and the Limehouse Cut, including the Docklands water spaces. Although initially a success, their importance waned with the advent of railways in the latter part of the 19th century.

Today, the network of canals has developed into a unique asset for nature conservation in London, whilst becoming an increasingly important amenity and recreational resource.

The canal network brings linear wetlands into the heart of London, creating an important wildlife resource within an otherwise urban area. This proximity to London's human population creates a unique opportunity to provide public access to wildlife.

3. Current Status

London has approximately 80 km of canal corridor, covering an area of about 260 ha. The canal system passes through 15 boroughs - Brent, Camden, Ealing, Enfield, Hackney, Hammersmith and Fulham, Haringey, Hillingdon, Hounslow, Islington, Kensington and Chelsea, Newham, Tower Hamlets, Waltham Forest and Westminster.

Up to date information about the plant and animal communities of the London canals is currently incomplete. The majority of the system was last comprehensively surveyed in the 1980s, for the GLC, by the London Wildlife Trust, and this data provides a useful base-line. There have been subsequent re-surveys by the London boroughs.

Although aquatic and emergent vegetation is limited in distribution, good diversity occurs where conditions are suitable. Species include spiked water-milfoil, rigid hornwort, hemlock water-dropwort and flag iris. The system also supports a great variety of wetland invertebrates, for example the common blue, azure and blue-tailed damselflies, and fish including roach, bream, gudgeon and tench.

Birds breeding on or by the canals and docks include kingfisher and sand martin while the water vole is still present in a few locations. Otters have been confirmed on the upper reaches of the River Lee Navigation and are thought to use this down as far as Walthamstow Reservoirs. They may even reach the River Thames by this route.

The open water and emergent fringes provide good feeding habitat for bats, such as Daubenton's bat. As well as wetland habitats, the canal corridor also supports a range of terrestrial habitats including towpath verges, woodland, scrub, cuttings, embankments

and dredging tips. Tunnels, bridges, walls and other structures can support specialised plants and animals, which include the black redstart.

In addition to the canal corridor, a number of non-navigable channels – including the canal feeder – are physically diverse and supportive of a wide range of habitats and species, some of which favour faster flowing conditions.

4. Specific Factors Affecting the Habitat

4.1 Amenity use

The passage of powered boats along the canal causing can cause physical damage, wave wash and increased turbidity, all of which affects the capacity to support plants and animals.

Habit continues to be lost to developments associated with increasing levels of boat use, including for example use of hard bank protection, erosion and leakage controls, moorings and marina developments. Similarly, there is pressure to widen towpaths and increase hard surfacing with consequent loss of towpath grassland and canal bank habitat.

4.2 Development

Unsympathetic canal-side development results in the loss of terrestrial and aquatic habitat. Natural habitats are often replaced with inappropriate landscaping schemes.

New housing developments beside canals can cause increased disturbance to wildlife. The activities of nocturnal wildlife, particularly bats may be inhibited through increased lighting along towpaths and developments adjoining canals.

4.3 Management

The use of 'hard' bank protection, such as metal piling, can have a significant impact on waterside habitats and species such as water voles, while inappropriate timing and phasing of dredging can also impact on the aquatic and bankside wildlife. Intensive mowing regimes and the widening of towpaths for multi-use cycleways results in the loss and deterioration of verge grasslands. Fish populations and associated species and habitats are also affected by intensive fishery developments.

4.4 Problem species

Colonisation by certain plants and animals species causes problems for native species. These include American mink, Japanese knotweed, floating pennywort, giant hogweed, exotic crayfish species, Chinese mitten crab, red-eared terrapin and zander.

4.5 Water Quality and Pollution

Discharge from surface drainage into canals or navigations can have a negative effect on wildlife. This can be particularly serious when summer storms dislodge organic matter trapped in gully pots. The resulting depletion of oxygen can be very damaging to animal life. Treated effluent from sewage treatment works can also deplete water of

oxygen, to the detriment of aquatic fauna. Illegal discharge of substances such as engine or cooking oil down drains is another harmful practice, and can (for example) seriously affect water birds.

Leaky boat engines, and spillages when refuelling, contribute to the total pollution load, and this is exacerbated when certain boat owners (contrary to recommended good practice) deliberately discharge oily bilge water. Some other boat users mistakenly believe they are helping by applying detergent to accidental fuel spills.

In some places, especially when locks are heavily used in periods of dry weather, the water level in side channels can be lowered to an extent that damages their sensitive flora and fauna.

In their industrial past, sediments on the canals and navigations often suffered heavy contamination. Some such sediments probably remain. It is possible that they affect rooted aquatic plants and, if disturbed, could contaminate the water with resulting damage to fish and invertebrates.

4.6 Public awareness

There is a general lack of awareness of the importance of waterways for biodiversity.

5. Current Action

5.1 Legal status

The majority of London's canal system has been identified as a single generic Site of Metropolitan Importance for nature conservation. The canals associated with the River Lea corridor are included within the Lea Valley London Site of Metropolitan Importance, however, a number of Sites of Special Scientific Interest adjoin the canal corridor, such as Walthamstow Marshes.

Several protected species are associated with canals in London, including kingfisher, water vole, several bat species and the otter.

5.2 Mechanisms Targeting the Habitat

These current actions are ongoing. They need to be supported and continued in addition to the new action listed under Section 7.

5.2.1 Canal Policy

British Waterways has a responsibility to further the conservation and enhancement of natural beauty and the conservation of flora, fauna and geological or physiographic features of special interest, and to balance this against its management and development needs. To this end the organisation has developed an Environmental Code of Practice which provides detailed guidance in assessing and implementing all activities to high environmental standards.

British Waterways produced a corporate Biodiversity Action Plan in 2000. Implementation, by the development of a biodiversity approach for each waterway management unit, will follow over the next 5 years.

5.2.2 Strategies

Several corridor studies, action plans and waterspace strategies have been produced with several more currently in preparation. These plans, which take a comprehensive view of the canal corridor, identify sites and opportunities for benefiting wildlife conservation through habitat enhancement and appropriate management.

Examples of such localised strategies include Enfield, Hackney Wick and Bow Back Rivers. London's canals will also be covered by the Mayors Blue Ribbon Network.

The London Canals Committee, now incorporated into the GLA, has developed a strategy for London's Canals which incorporates guidance regarding nature conservation and biodiversity.

5.2.3 Management

Canal management is guided by British Waterways' Environmental Code of Practice to ensure operational needs are met whilst sustaining and, where possible, increasing habitat potential.

Current management work includes the implementation of habitat creation and enhancement schemes throughout the canal system. Many of these are undertaken in partnership with the local community, interest groups and other partners, for example the floating reed raft scheme undertaken as a partnership project with the Environment Agency at Enfield on the River Lee, and the Laburnum Boat Club scheme on the Regent's Canal in Hackney.

5.2.4 Partnerships

A particular partnership focussed on London's waterways (including the canals) is London's Waterway Partnership (LWP). Partners include fifteen local authorities, The Groundwork Trust, Environment Agency, Thames Water, London Tourist Board and Lee Valley Regional Park Authority, as well as British Waterways London, which set up the Partnership.

London's Waterway Partnership has enabled opportunities for habitat protection and creation, and through the work of Community Project Managers funded by the Partnership, has enabled schools and community engagement and participation in environmental projects which include habitat creation and improvement.

6. Flagship Species

These special plants and animals are characteristic of canals in London.

Moorhen	<i>Gallinula chloropus</i>	A smallish, black water bird with white tail, long-toed green feet and a smart and red and yellow bill.
Grey Heron	<i>Ardea cinerea</i>	A tall, slender bird with long legs and neck and a sharp, dagger-shaped bill used for spearing fish and amphibians.

Mute Swan	<i>Cygnus olor</i>	An elegant and distinctive bird with Royal connections, which holds a special place in the public's affection.
Blue Damselflies	<i>Enallagma cyathigerum</i> <i>Coenagrion puella</i>	Bright blue, delicate-bodied insects with excellent eyesight, which patrol among fringing vegetation of canals, rivers, lakes and ponds.
Skullcap	<i>Scutellaria galericulata</i>	A tenacious little plant belonging to the nettle family, with a square stem, spear-shaped leaves and lilac-blue flowers, often found growing from cracks in canal walls and on lock gates.
Spiked water- milfoil	<i>Myriophyllum spicatum</i>	A submerged water plant with feathery leaves arranged in whorls of 4 around the stem. Not to be confused with its close relative parrots-feather, which originates from South America and can be an aggressive coloniser if left unchecked.
Daubenton's bat	<i>Myotis daubentonii</i>	Feeds low over water like a hovercraft, and can even take insects from the surface with its proportionally large feet.
Water Vole	<i>Arvicola terrestris</i>	Often mistaken for a rat, the water vole has a blunt nose, a short, lightly hairy tail and small ears which are tucked away within its fur.

7. Objectives, Actions and Targets

Most of these actions are specific to this habitat. However, there are other, broader actions that apply generically to a number of habitats and species. These are located in a separate 'Generic Action' of the London Biodiversity Action Plan, which should be read in conjunction with this document. There are generic actions for Site Management, Habitat Protection, Species Protection, Ecological Monitoring, Biological Records, Communications and Funding.

Please note that the partners identified in the tables are those that have been involved in the process of forming the plan. It is not an exclusive list and new partners are both welcomed and needed. The leads identified are responsible for co-ordinating the actions – but are not necessarily implementers.

Objective 1 To increase knowledge of London's Canals biodiversity

Target: To create a comprehensive position statement for each of London's canals and waterways by 2003

Action	Target Date	Lead	Other Partners
Collate existing information on habitats and management history to establish a baseline for survey, monitoring and action.	2002	BWL	LVRP, LRT, GLA, LWT, HMT, EN, LA, EA, LNHS
Collate existing information on species and management history to establish a baseline for survey, monitoring and action.	2002	BWL	LVRP, LRT, GLA, LWT, HMT, EN, LA, EA, LNHS

Identify key areas, habitats and species and gaps in information.	2003	BWL	LVRP, LRT, GLA, LWT, HMT, EN, LA, EA, LNHS
Set up a research partnership to survey each waterway where there are gaps in knowledge as appropriate.	2003	BWL	LVRP, LRT, GLA, LWT, HMT, EN, LA, EA, LNHS

Objective 2 To secure appropriate management on all waterways

Target: Appropriate maintenance and management on all waterway sites by 2005

Action	Target Date	Lead	Other Partners
Undertake environmental assessment for maintenance, management and development works affecting the canal corridor and associated habitats	Ongoing	BWL	LVRP, LRT, LA, LWT, HMT
Identify examples of best practice for biodiversity management and promote to BW staff and partners	Ongoing	BWL	LVRP, LRT, LA, LWT, HMT, GLA
Inform and educate BW staff and contractors of the value and necessity of appropriate management for biodiversity	2002	BWL	LVRP, LRT, LA, LWT, HMT, GLA
Incorporate awareness raising of biodiversity value of canals to planners and developers	Ongoing	BWL	LA, LCC, LVRP, GLA
Promote opportunities for habitat creation and enhancement as part of any development adjoining the canal	Ongoing	BWL	LVRP, LRT, LA, LWT, HMT, GLA
Undertake audit of problem species	2003	BWL	LVRP, LRT, LA, LWT, HMT, EA
Produce identification cards of problem species for waterways staff and partners and disseminate best practice guidelines	2003	BWL	EA, LVRP, LRT, LA, LWT, HMT
Produce and commence a water quality action plan to achieve improvements in water quality	2003	BWL	EA, TW
Establish a programme to monitor the effect of drought/overuse in sensitive locations	2003	BWL	

Objective 3 To develop and implement habitat improvement and creation initiatives on a number of identified sites throughout London's canals.

Target: A successful program of habitat improvement and creation initiative for each of London's canals by 2008.

Action	Target Date	Lead	Key Partners
Commence identification of sites suitable for habitat creation and enhancement and develop implementation partnerships	2002	BWL	LVRP, LRT, LA, LWT, HMT, GLA, GW
Complete habitat improvement programmes for delivery for each waterway	2008	BWL	LVRP, LRT, LA, LWT, HMT, GLA, GW

Objective 4 To promote the environmental, cultural and educational value of London's canals and participation in their improvement by London's communities

Target: To develop a network of "Friends of London's Canals" and "Canal Adoption Schemes" by 2007

Action	Target Date	Lead	Key Partners
Establish a rolling programme of biodiversity focussed initiatives linked to waterway festivals and community events	2002	BWL	LVRP, LRT, LA, LWT, HMT, GLA, GW, LWP
Establish a network of 4 "Friends of London's Canals" groups	2003	GW	BWL, LVRP, LRT, LA
Develop 10 local "adopt a canal" schemes	2007	GW	BWL, LVRP, LRT, LA
Arrange a conference to promote and publicise biodiversity and London's Canals	2004	BWL	LVRP, LRT, LA, LWT, HMT, GLA, GW
Produce a canal's education pack for all of London	2005	BWL	GW, LVRP, LRT, LA
Produce a directory of canal related organisations in London	2002	BWL	LWP, LTB, LA

Relevant Action Plans

London Plans

Wasteland; Ponds, Lakes and Reservoirs; Tidal Thames

Bats; Water Vole; Grey Heron; Sand Martin; Black Poplar

National Plans

Ancient and/or Species Rich Hedgerows; Boundary and Linear Features; Built Environment and Gardens; Reedbeds; Rivers and Streams; Standing Open Water and Canals

Pipistrelle Bat; Water Vole

Key References

British Waterways (2000). *British Waterways and Biodiversity – A framework for Waterway Wildlife Strategies*.

London Ecology Unit (From 1984). *Ecology Handbooks*.

The London Wildlife Trust and British Waterways (1985). *The Wildlife Habitats of the Regent's Canal and Hertford Union Canal, London*.

Abbreviations

BWL - British Waterways London
EA - Environment Agency
EN - English Nature
GLA - Greater London Authority
GW - Groundwork
HMT - Herts and Middlesex Trust
LA - Local Authorities

LCC - London's Canals Committee
LNHS London Natural History Society
LRT - Lea Rivers Trust
LVRPA Lee Valley Regional Park Authority
LWP - London's Waterway Partnership
LWT - London Wildlife Trust

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