

HABITAT ACTION PLAN: Rivers and Streams
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Associated Species Action Plans
Amphibians
Bats
Floating water plantain
Great-crested newt
Snipe
Water vole
White-clawed crayfish

1. Current status

In their natural state rivers are dynamic systems, continually modifying their form. The mosaic of features found along rivers and streams and their associated habitats support a diverse range of plants and animals. Rivers and streams provide an essential wildlife corridor link between fragmented habitats in both urbanised and rural areas.

There are over five hundred miles of flowing watercourse in Birmingham and the Black Country. The River Tame and its tributaries, the Rea and Cole, drain the central and eastern parts of the area to join the river Trent. The Stour drains most of Dudley, west Sandwell and Wolverhampton to join the River Severn at Stourport. Many of these watercourses suffer from poor water quality and have been subjected to intense riparian management. Large proportions of the smaller watercourses have been culverted to allow development over or close to them. Many have been diverted, straightened and canalised and so are entirely different from their original natural form.

Associated Habitat Action Plans
Canals
Eutrophic urban pools
Lowland wet grassland

2. Current factors affecting habitat

Intense urbanisation and industry have meant that water quality in the majority of rivers and streams in Birmingham and the Black Country is poor. The large extent of impermeable surface such as roads, pavements and car parks results in frequently contaminated surface water run off. Domestic effluent reaches watercourses from combined sewer overflows and wrong sewer connections. The lack of sewage treatment in the past and heavy metal pollution resulting from metal industries add to water quality problems.

Pressure of development throughout Birmingham and the Black Country has led to the culverting and modification of many small and even larger watercourses and ditches. The majority of the natural floodplain and bankside habitat has been lost.

Development has often occurred over the top of, or immediately adjacent to, river and stream corridors. The very large area of impermeable surfaces causes rivers and streams to rise quickly in response to rainfall, meaning flows are extremely variable and pulses of pollution occur. In addition, Birmingham and the Black Country are unique in being built over the headwaters of small rivers. In order to prevent flooding, the river systems have been very heavily modified and regularly managed thus reducing in-stream and bankside features. These factors have led to a major reduction of natural habitat and geomorphological features.

The amount of previously unregulated industry in the area has left a legacy of contaminated land. A characteristic of Birmingham and the Black Country is the

complexity of some of the sites, which can include mine workings, tipping from past industries and occasionally old infilled canals or disused railway lines. Slacky Lane and Bentley Mill Way in Walsall, where toxic metal contaminated water from historical tipping discharges via old mine workings to the Rough Brook and the River Tame respectively, are examples of such sites where effects are currently detected many miles downstream.

Redevelopment provides the opportunity to remediate sites and ensure the water environment is enhanced by redevelopment.

Groundwater levels beneath parts of Birmingham city centre continue to rise toward their natural, pre-abstracted levels. As water levels rise they will come into contact with contaminated land and so potentially cause water pollution. However rising groundwater will also permit a better baseflow in rivers thus increasing dilution of pollutants.

Invasive plant species are becoming increasingly common throughout parts of the area. They provide poor habitat for insects and birds, grow extremely densely, shade out native species and increase the rise of riverbank erosion when they die back in the autumn. Japanese knotweed and Himalayan balsam are particularly common in parts of Birmingham and the Black Country.

Public perception of rivers, streams and wetlands in the area is often low and public reactions are negative. This is due to the amount of watercourses that are out of sight, the lack of natural features and poor water quality. Development in the past has largely been designed with its back to the river thereby limiting access.

Riparian landowners and businesses should be encouraged to consider the river as an asset. As improvements in water quality occur the river will become such an asset. Opportunities occur during riverside development to carry out enhancement work and ensure development incorporates rivers and streams as a feature. Improved public access to watercourses with projects such as the Tame Walkway will further improve the public's access to and knowledge of rivers. The Kingfisher Project on the River Cole, Birmingham is an excellent example of the local community, local authorities and conservation organisations working together to carry out enhancement work to a river and improve local public interest.

3. Current action

3.1 Legal status

The Environment Agency, Severn Trent Water Ltd. and Local Authorities have a statutory duty to further conservation in all aspects of their regulatory duties. These responsibilities have been notified as part of the Water Resources Act 1991, the Land Drainage Act 1991 and the Environment Act 1995. The Environment Agency also has responsibilities for pollution control, waste disposal and regulation.

“Main River” designation covers those watercourses for which the EA has drainage and flood control management responsibility. Local authorities and landowners are responsible for non main river stretches.

Watercourses in the UK are given River Water Quality objectives. The classification scheme aims to describe the chemical quality required to support different river ecosystems, known as the River Ecosystem Classification Scheme (RE scheme). RE1 is the highest objective, capable of supporting all fish species; RE5 is the lowest, limiting even coarse fish species. Watercourses within Sutton Park and Edgbaston Pool are designated as SSSI's and several others have been identified as SINC's by English Nature, Local Authorities and the Wildlife Trust.

3.2 Management, research and guidance

Non-statutory Local Environment Agency Plans, produced by the Environment Agency, have been written for the West Midlands Tame and the West Midlands Stour catchments, which, between them, cover the whole of Birmingham and the Black Country. These include objectives and targets for water quality, nature conservation, recreation, fisheries and many other functions of the EA. Water level management plans may be prepared for sites in the area of conservation importance.

River Corridor Surveys have been carried out for all stretches of Main River within the area.

There is much advisory literature available, including

The New Rivers and Wildlife Handbook (RSBP/NRA/WTs) provides invaluable advice on river management for wildlife.

Guidance on sustainable treatment of water e.g. EA and Groundwork leaflets and "Nature's Way" an Environment Agency advice / video.

4. Action plan objectives and targets

Objective	Target
1. To maintain and increase biodiversity in rivers and streams within Birmingham and the Black Country.	Ongoing
2. Wherever possible allow the natural processes of erosion and deposition to occur.	Ongoing.
3. To promote sympathetic management of rivers and their floodplains and restore natural systems where possible.	Ongoing
4. To increase knowledge and understanding of the functions and values of watercourses.	Ongoing
5. To improve public perception and reaction to rivers and streams.	Ongoing

5. Proposed action with partners to meet objectives

ACTION	POTENTIAL DELIVERERS		YEAR							Meets objective number
	Lead	Partner	2001	2002	2003	2004	2005	2006	2011	
5.1 Policy and legislation										
Ensure Rivers meet their River Water Quality Objectives according to their RE classification.	EA		•	•						1
Ensure the EA fulfils its duty to further conservation in all its regulatory functions as set out in the Water Resources Act 1991, the Land Drainage Act 1991 and the Environment Act 1995.	EA		•	•	•	•	•	•	•	1
Review the role of sewage undertakers with respect to the adoption of source control measures such as swales and detention ponds.	EA	LA's, sewage undertakers	•	•						1
Develop an urban river restoration strategy for Birmingham and the Black Country.	LA's,	WT, EN, EA		•	•					1, 3
Establish a legislative protocol between the Environment Agency and Local Authorities to ensure the regulation and control of contaminated land.	EA	LA's	•							1

ACTION	POTENTIAL DELIVERERS		YEAR							Meets objective number
	Lead	Partner	2001	2002	2003	2004	2005	2006	2011	
Seek the inclusion of effective measures for the protection and enhancement of rivers and watercourses in the preparation of UDPs and other policy documents.	BCC, LA's	All	As UDPs and other policy documents are prepared.							1, 3
Ensure LEAPS contain adequate provision for the protection and restoration of aquatic/wetland biodiversity, implement and monitor effectiveness.	EA	All	•	•	•	•	•	•		1, 3
5.2 Habitat and species safeguard and management										
Establish a protocol between the EA, ST and Local Authorities to deal with wrong sewer connections.	EA STW	LA's	•	•	•	•	•	•		1
Improve river and stream habitat as wildlife corridors wherever possible, especially during re-development.	All	Developers	•	•	•	•	•	•	•	1, 2, 3
Seek to reduce the pollution load in urban run-off where possible by improving pollution control measures and promoting best environmental practise and by correcting wrongly connected sewers.	EA, LA's	LOs, Developers, Sewage undertakers	•	•	•	•	•	•	•	1
Restore culverted watercourses to open channels wherever possible.	LA's, EA	LOs, Developers	•	•	•	•	•	•	•	1, 2, 3

ACTION	POTENTIAL DELIVERERS		YEAR							Meets objective number
	Lead	Partner	2001	2002	2003	2004	2005	2006	2011	
Identify sites for river and floodplain restoration, e.g. River Cole restoration.	EA, LA's	Developers		•	•	•	•	•	•	1, 3
Promote the adoption of sustainable urban drainage techniques for development, e.g. swales, reedbeds, detention ponds etc.	LA's	EA, LOs, Developers	•	•	•	•				1, 3
Ensure remediation of contaminated sites where appropriate through redevelopment of land to improve ground and surface water quality.	LA's, EA	LOs, Developers	•	•	•	•	•	•	•	1
Encourage long term withdrawal of existing developments from the flood plain where possible to allow their sustainable management and prevent new flood plain development.	LA's, EA	WT, LOs, Developers	•	•	•	•	•	•	•	1, 2, 3
Identify sites and undertake control of invasive plants where possible.	EA	LA's	•	•	•	•	•	•	•	1
Promote the conservation and development of surface water features such as ponds and streams as part of post-industrial restoration and other development.	EA	LA's, WT, Developers	•	•	•	•	•	•	•	1, 3
Ensure sensitive flood defence maintenance work on main rivers.	EA		•	•	•	•	•	•	•	1, 2, 3

ACTION	POTENTIAL DELIVERERS		YEAR							Meets objective number
	Lead	Partner	2001	2002	2003	2004	2005	2006	2011	
Ensure water abstraction licences (including licences of right) do not compromise the ecology of watercourses.	EA		•	•	•	•	•	•	•	1, 3
Ensure flow levels are sufficient to sustain characteristic ecosystems especially on SSSI's and SINC's.	EA	EN, WT, LA's	•	•	•	•	•	•	•	1, 3
Complete the production and implementation of water level management plans and ensure they meet conservation objectives.	EA			•	•	•	•	•	•	1, 3
Ensure protection and enhancement of aquatic species and their habitat as part of development and river engineering schemes.	EA, LA's	WT, Developers	•	•	•	•	•	•	•	1, 3
5.3 Advice										
Identify non-main river areas where flood defence works have not yet affected the floodplain and river habitat and advise on protection	EA	LA's	•	•	•	•	•	•	•	1, 2, 3
Produce and disseminate an introductory leaflet for landowners and landowners listing sources of advice.	All			•	•					1, 3, 5

ACTION	POTENTIAL DELIVERERS		YEAR							Meets objective number
	Lead	Partner	2001	2002	2003	2004	2005	2006	2011	
Promote the issue and control methods of invasive weeds to riparian owners.	EA	LA's, LOs	•	•	•	•				1, 5
Establish procedure when liasing with developers to maximise opportunities for riverside enhancement work.	LA's, EA	Developers								1, 3
5.4 Future research and monitoring.										
Develop a programme to assess and monitor impacts of rising groundwater.	EA	WT, MAFF, ER	•	•	•					4
Identify extent and status of resource through a programme of surveys, e.g. RHS, fish, other vertebrates and invertebrates and develops and reviews priorities for conservation.	EA	LA's		•	•	•				4
Establish and implement ecologically acceptable water quality and flow targets, particularly for key sites.	EA	EN, WT	•	•						1, 3
Identify gaps in knowledge and establish priorities for further research.	EA	EN, WT	•	•	•	•				4
5.5 Publicity										
Increase understanding and appreciation of the value of rivers and streams in the wider public using promotional events/materials.	All		•	•	•	•	•	•	•	5

ACTION	POTENTIAL DELIVERERS		YEAR							Meets objective number
	Lead	Partner	2001	2002	2003	2004	2005	2006	2011	
Increase public access along rivers and streams by promoting riverside footpaths e.g. The Tame Walkway.	EA	LA's	•	•	•	•				5
Promote wise use of water through public and landowner information campaigns.	All		•	•						5
5.6 Links to other action plans.										
Canals, lowland wet grassland, eutrophic urban pools, white-clawed crayfish, water vole, great-crested newt, amphibians, snipe.										

6. Co-ordination and review

This Biodiversity Action Plan will be implemented over 10 years with a first review after 5 years. A group will be set up to co-ordinate implementation and to report to the Biodiversity Steering Group. This group will meet at a minimum on a yearly basis.

Review will be carried out in conjunction with related Habitat and Species Action Plans as appropriate.

Review will consist of measuring achievement of targets. The group will, with the support of the Steering Group, develop and implement appropriate monitoring methods, which will inform the review process.

The Action Plan will be revised and updated in the light of review results and any relevant changes in circumstances and/or additional information which becomes available during the review period.

In line with national guidance, the Steering Group will report to the UK Steering Group.