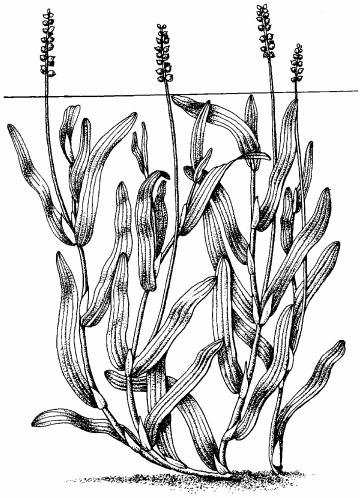
CANALS

DEFINITION

Canals are inland waterways constructed to meet the transport needs of the Industrial Revolution in the 18th and 19th centuries. At the time when canals were built, they were of a similar importance and influence to our modern day motorways. Today, many aspects of canals such as water filled channels, cuttings, embankments and bridges have an important role to play in the conservation of both biodiversity and landscapes. Many canals differ from natural watercourses because of their range of habitats, as well as their controlled levels and slow flows, although not all canals are now in use for boat traffic. The canal corridor forms a linear mosaic of habitats including woodland and scrub offsides, hedgerows, flower rich towpath verges and diverse emergent 'reed' fringes. The corridor helps link habitats fragmented by urbanisation and uniquely forms a wetland corridor between river catchments.

NOTABLE SPECIES

Floating water plantain
Grasswrack pondweed
Frogbit
Whorled water milfoil
Fringed water lily
American pondweed
Flat stalked pondweed
Hair-like pondweed
Long stalked pondweed
Black spleenwort
Rusty back fern
Water soldier
Greater duckweed
Kingfisher
Bats
Water vole
Freshwater sponge
White clawed crayfish



CURRENT STATUS AND IMPORTANCE

International

The Rochdale Canal has been designated as a candidate Special Area of Conservation (cSAC) due to the occurrence of internationally significant populations of floating water plantain *Luronium natans.*

National

There are approximately 4000 miles of canals in the UK.

In UK Biodiversity Action Plan terms, canals are included within the broad habitat of Standing Open Waters and Canals; within this category they are recognised as an individual habitat type.

CANALS

There are presently three canals of national importance in Greater Manchester; Hollinwood Branch Canal SSSI, Huddersfield Narrow Canal SSSI and Rochdale Canal SSSI. All three are part of a national network of designated areas.

Continued overleaf

Identification of Species Interest of Greater Manchester's Canals

	Rochdale	Huddersfield Narrow	Hollinwood Branch	Peak Forest	Ashton	Manchester Bolton & Bury	Leeds Liverpool	Bridgewater	Fairbottom Branch
	cSAC, SSSI, SBI(A)	SSSI, SBI(A)	SSSI, SBI(A)	SBI(A)	SBI(A)	SBI(A)	SBI(C)	SBI(B & C)	SBI(B)
Floating Water plantain	•	•	•	•	•			•	•
Grasswrack pondweed	•	•			•				
Tortula freibergii (a moss)								•	
Frogbit			•			•			
Fringed water lily	•								
Alternate-leaved Water milfoil	•								
American pondweed	•								
Flat stalked pondweed		•							
Hair-like pondweed		•	•		•			•	
Long stalked pondweed		•	•						
Red pondweed	•		•?					•	
Slender pondweed (*P. berchtoldii*)	•		•		•				
Rigid hornwort			•						•
Water soldier	•		•			•			
Water violet	•	•			•				
Kingfisher		•			•?		•		
Bats	•	•	•	•	•	•	•	•	•
Water vole	•								
White clawed crayfish	•	•							
Freshwater sponge	•	•				•			

Greater Manchester Resource and Distribution

Thanks to its industrial heritage, Greater Manchester has a rich resource of canals. There are ten canals in total. These range from actively used canals such as the Leeds/Liverpool and the Ashton Canal to currently disused examples such as the Huddersfield Narrow Canal (now restored and navigable) and the Rochdale Canal. There are proposals to reopen the majority of canals for navigation and active restoration is in progress.

Legal

The following sites receive a degree of protection as SSSIs:

Hollinwood Branch Canal SSSI
Huddersfield Narrow Canal SSSI.
Rochdale Canal SSSI

The Rochdale Canal is also a candidate SAC as designated under the Conservation (Natural Habitats, etc.) Regulations 1994.

The native White-clawed Crayfish *Austropotmobius pallipes* is protected under The Conservation (Natural Habitats &c.) Regulations 1994 and The Wildlife & Countryside Act 1981 (as amended).

Nationally the water vole is given a degree of protection in British law under the Wildlife and Countryside Act of 1981. The protection relates to intentional activities that damage or destroy water vole habitat, or obstruct access to any place that the species uses for shelter or protection. The legislation also covers intentional disturbance of water voles whilst they are using their habitats.

Floating water plantain is listed on Annexes II & IV of the EC Habitat Directive and Appendix I of the Bern Convention. In Britain it is protected under Schedule 4 of the Conservation (Natural Habitats, etc.) Regulations 1994 and Schedule 8 of the Wildlife and Countryside Act 1981 (as amended).

The EC Water Framework Directive (2000) encompasses canals and other still waters. This aims to prevent further deterioration of waterbodies and protect such ecosystems. The Environment Agency plans to commence implementing the Directive from 2003 onwards. The initial deadline for meeting the Environmental Objectives is the end of 2016.

CURRENT FACTORS AFFECTING THE HABITAT

International

The presence of internationally important species such as floating water plantain and the potential designation of Rochdale Canal as a SAC.

National

Positive factors	Negative factors
Restoration and reconnection of the canal system throughout England, Wales and Scotland.	Large scale developments such as marinas.
Development of conservation guidelines by British Waterways and the Environment Agency.	Development of plant succession where lack of disturbance is a factor; this has led to the loss of open water and associated species in some localities.
Presence of nationally important protected species such as bats.	Growth and management of native invasive species such as Greater reedmace.
Commitments made by bodies such as British Waterways and the Environment Agency with regard to conservation of BAP species that may utilise canals e.g. freshwater crayfish and water vole.	Boating use leading to damage to aquatic and emergent vegetation through wash. Impacts upon other aquatic life and water quality through fuel oil and effluent from boats.
	Fluctuation of water levels from maintenance activities and boat usage (improper use of locks leading to the dewatering of pounds).
	Pollution from adjacent agricultural and industrial sources.
	Angling usage, leading to introduction of fish species, artificially high densities of fish and clearance of bankside vegetation. Local eutrophication is also a problem.
	Management of towpath habitats such as mowing of vegetation.
	Developments adjacent to Canal sites where precautions to protect the site are not taken

Greater Manchester

In addition to the above factors affecting canals, those listed below are particularly relevant to the Greater Manchester area. The negative factors are those that are thought to contribute to the decline of biodiversity interest associated with canals. The positive factors are those measures that may already be assisting in biodiversity conservation:

CANALS

Positive factors	Negative factors
All British Waterways' work is subject to an Environmental Code of Practice Appraisal designed to highlight the broad range of environmental issues associated with British Waterways' work. Examples of how this has helped maintain conservation interest of the canal corridor include the assessment of bank protection schemes resulting in the use of soft engineering solutions with coir rolls and native UK provenance planting instead of sheet piles. This was undertaken on the Huddersfield Narrow Canal near Division Bridge and throughout restoration work on the Rochdale Canal.	Most of the factors in the national list are relevant for Greater Manchester, in particular: The work and proposals to reopen a number of the canals to navigation pose a major threat to their wildlife interest unless the work is undertaken sympathetically. A number of colonies of freshwater sponge have already been lost due to such work. The aquatic vegetation in the heavily used Leeds Liverpool Canal is much less diverse than that in the canals currently largely unused although parts of the Rochdale Canal exhibits a less diverse flora where it is dominated by floating water plantain.
Impacts as a result of the activities of local canal societies, e.g. Manchester, Bolton and Bury Canal Society: small-scale management of vegetation, increased awareness through interpretation (guided walks, boat trips, publishing of guides).	Natural vegetation succession can result in a loss of scarce plant populations.
All restoration works considered to have "likely significant effect" on the Rochdale Canal are subject to Appropriate Assessments and English Nature assent as required under EU and UK legislation. British Waterways, English Nature and GMEU worked in partnership to deliver this work on the Rochdale Canal restoration.	Canal dredging creates problems of spoil disposal that can impact on adjacent waterside habitats. Dredging can also result in the loss of aquatic vegetation and invertebrates.
In addition to British Waterways' Environmental Code of Practice Appraisal process, all development work affecting floating water plantain requires a DEFRA licence. British Waterways has developed standard impact avoidance measures and translocation methods and has a licence from DEFRA that ensures that issues concerning floating water plantain and other species are addressed during operational activities.	Recreational pressures such as fishing can cause damage to marginal vegetation.
Any other activities (monitoring, research, etc) affecting the species is subject to a license from English Nature.	Invasion by non-native species such as *Crassula helmsii* and Himalayan balsam can swamp aquatic plants or result in the decrease of diversity of marginal vegetation.
	Development of the M60 motorway; this has affected the Hollinwood Branch Canal SSSI in particular.

LONG TERM TRENDS AND POTENTIAL THREATS

Water shortages on the Huddersfield Narrow Canal have been identified in a recent report by Dr Chris Newbold to be one of the largest issues to address to maintain and enhance current biodiversity. British Waterways is undertaking repairs to the feeder from Diggle Reservoir to enable increased flow from this traditionally used feeder.

CURRENT ACTION

International

- Designation of SACs as part of the Natura 2000 series of sites. The Rochdale Canal is a candidate SAC because of the presence of internationally significant populations of floating water plantain. The SSSI/cSAC is in favourable condition.

- All work considered to result in "likely significant effect" on the Rochdale Canal is subject to Appropriate Assessment.

- The Environment Agency as competent authority are currently in the process of reviewing every licence, authorisation, consent and activity permitted by them and will be appropriately assessing any activities determined to have the potential to adversely affect the Rochdale Canal.

National

- English Nature is in the process of developing detailed conservation objectives and assessment guidelines for all SSSIs. These guidelines will enable more accurate monitoring of the condition of SSSIs, including habitats such as canals.

- British Waterways has a corporate commitment to Biodiversity Action Planning. This is reflected in its role as lead Partner in the writing of the UK BAP for both floating water plantain and Grasswrack Pondweed.

- British Waterways' document "*A Framework for waterway wildlife strategies*" highlights the key habitats and species of biodiversity interest within the waterway network. This document together with the accompanying "*Biodiversity Manual*" sets out British Waterway's national biodiversity framework. Following on from this initiative waterway management teams will develop biodiversity action plans and incorporate biodiversity considerations into the management of canals and associated habitats.

Greater Manchester

<u>Research Relevant to British Waterways policy.</u>

The Rochdale canal monitoring of key aquatic species programme is up and running and involves an annual survey of each kilometre of the Rochdale canal or each lock pound where less than 1 km. Water quality data is being collected at eleven sites along the canal in order to establish and monitor the requirements of key aquatic species in relation to water quality.

CANALS

British Waterways Locally

- All British Waterways' work is subject to an Environmental Code of Practice Appraisal designed to highlight the broad range of environmental issues associated with British Waterways' work. Where major engineering works are planned each scheme has an assessment made of the ecological impacts. Methods of avoiding or minimising and ameliorating adverse impacts are identified and specified in the contract documentation.

- A waterway BAP is being prepared in Greater Manchester to highlight the special interest features along the canal and provide management regimes to ensure that the conservation interest is maintained and furthered. This is already underway on the Huddersfield Narrow Canal with grass cutting regimes agreed with English Nature that aim to maintain the diversity of the towpath bank and boundary verges.

- An Ecologist is employed by British Waterways who considers impacts on restoration of the canal in Greater Manchester.

- The possibilities of restoring the Manchester, Bolton & Bury Canal are currently being investigated.

- British Waterways has agreed grass cutting regimes with English Nature for the SSSI section of the Huddersfield Narrow Canal. This involves regular cutting at one mower width either side of the trodden surface with a clear cut from the boundary to the wash wall in late summer. This allows a clear safe path with verges for wild flowers with an annual clear cut preventing encroachment of scrub. This method is being adopted elsewhere on the SPR Waterway.

OBJECTIVES

National

There is presently no national BAP for canals, however, British Waterways has published and launched "*British Waterways and Biodiversity: A framework for waterway wildlife strategies*" covering the varied habitats and species associated with waterway corridors, as well as British Waterways' wider estate including tunnel spoil heaps, reservoirs and reservoir feeders.

Greater Manchester

In Greater Manchester local aspirations have been translated into the following broad objectives:

Objective	Targets
Maintain current canal habitat and prevent further losses and fragmentation	No further loss of canal habitat. Introduce appropriate management regimes and prepare management plans for all canal sites by 2010.
Achieve favourable condition for canals	Favourable condition to be achieved at 25% of total resource by 2010 (sites to be identified by survey).
Increase the extent of canal habitats, without reducing the area of other valuable habitats and species	Identify the potential for increase in extent by end of 2005 (potential sites to be determined by survey).

Indicators of habitat quality

In general, this habitat will be in favourable condition when:

- Key areas of canal habitat are maintained
- There is continued presence of canal habitats at all known sites
- The habitats are composed of desirable canal communities
- The contribution made by canals to wildlife corridors in Greater Manchester and the wider landscape is maintained
- Undesirable species are reduced to an acceptable level
- Human activities are managed to a sustainable level.

More specific objectives and targets will eventually be set on a site-by-site or case-by-case basis.

PROPOSED ACTIONS

Action	**Lead Body**	**Timetable for Action**
1. Policy		
Ensure the importance of canals is recognised and site protection policies are included in appropriate plans and strategies e.g. UDPs, Community Strategies, nature conservation strategies, supplementary planning guidance.	**EN/GMEU/ LAs/BW**	**2006**
Produce/update Supplementary Planning Guidance notes for canals	**BW/EN/GMEU /LAs**	**Ongoing**
Ensure all planning applications are adequately assessed in relation to their impact on canals: that loss or damage is avoided and that opportunities are taken for enhancement.	**LAs/GMEU/ BW/EN**	**Ongoing**
Ensure that UDPs take full account of the UK Biodiversity Action Plan, A Biodiversity Audit for North West England and the Greater Manchester Biodiversity Action Plan.	**LAs/EN/ GMEU**	**2006**
2. Site Safeguard		
Ensure regular review of canal SSSIs	**EN/BW**	**Ongoing**
Ensure regular review of canal SBIs	**GMEU**	**Ongoing**
Give full consideration to designation of canals within LNR series	**GMEU/LAs/ EN**	**2007**
Ensure that all the best examples of canals are protected by recognised designations	**EN/GMEU/ LAs/WTs**	**2007**
Contribute to the implementation of relevant species action plans for rare and declining species associated with canals.	**All BAP partners**	**Ongoing**

Action	Lead Body	Timetable for Action
3. Land Management		
Promote and encourage positive management of canals with landowners, occupiers and voluntary conservation bodies through the development of long-term conservation management plans.	**All BAP Partners**	**Ongoing**
Contribute to the development and implementation of relevant action plans for rare and declining species associated with canals.	**All BAP Partners**	**Ongoing**
Undertake management to control undesirable species e.g. to bring species to within acceptable limits	**BW/LAs**	**Ongoing**
Complete or update existing conservation management plans to promote long-term positive management of canals with land owners/occupiers and voluntary conservation bodies.	**All BAP Partners**	**Ongoing** (25% of key sites to have management agreements by 2010)
4. Advisory		
Develop and promote best practice for canal management. Ensure guidelines widely available and accessible to interested parties.	**BW/EN/GM Biodiversity Project**	**2006**
Develop and promote training on the conservation and management of canals. Training to be targeted at those involved in canal management.	**BW/EN**	**Ongoing**
Establish demonstration sites to show good practice in canal conservation and management.	**BW/EN Identified by Biodiversity Project**	**2008**
Provide advice to those involved in canal management on appropriate management regimes for canal habitats.	**All BAP partners**	**Ongoing**
5. Future Research and Monitoring		
1. Identify gaps in knowledge of this habitat. 2. If necessary undertake survey of canals in the county using standardised and repeatable methodology.	**Relevant GMBAP Working Group** **All BAP Partners**	**2004** **Start 2004**
Establish and maintain a register of information gathered about canals within Greater Manchester.	**GMEU/ Bolton Museum/ Oldham Museum**	**2004**
Define standard and repeatable methods of establishing the condition of canals and consider the effectiveness of conservation management. Use knowledge to supplement register, management plans, etc.	**EN/Relevant GMBAP Working Group**	**2005**

Action	Lead Body	Timetable for Action
Contribute to increasing information on UK canals by submitting information from GM canal register to National Biodiversity Network web based catalogue of survey information. Such information should also be widely available locally.	**Biodiversity Project Officer**	**When established**
Encourage the dissemination and use of ongoing research results, and commission further research where necessary, to improve understanding of the ecology of canals. Key research topics will include the presence and distribution of key species, vegetation responses to different management approaches and the ecology and management requirements of invertebrate communities and species.	**BW/EN/ Relevant GMBAP Working Group**	**Ongoing**
Develop and implement appropriate surveillance and monitoring programmes to assess progress towards achieving action plan targets.	**Biodiversity Steering Group**	**2004**
Submit details of relevant conservation achievements to the national biodiversity reporting system, BARS, to meet requested deadlines.	**Biodiversity Project Officer**	**2003 onwards**
Develop links with universities and encourage research on canals and associated flora and fauna	**Relevant GMBAP Working Group/ Academic Institutions**	**2003 onwards**
6. Communication and Publicity		
Produce information aimed at capturing the interest and co-operation of local residents in conserving canals.	**All BAP partners**	**Ongoing**
Make information available through a range of media e.g. Internet, booklets, GM BAP, and at a number of locations	**All BAP partners**	**Ongoing**
Encourage public involvement in conservation initiatives and promote access to demonstration sites.	**All BAP partners**	**Ongoing**
Publicise existing sites demonstrating good practice in the management and conservation of canals ensuring information is widely available to landowners/managers.	**All BAP partners**	**Ongoing**

Abbreviations:

BW	British Waterways
EA	Environment Agency
EN	English Nature
GMEU	Greater Manchester Ecology Unit
LA	Local Authorities
LNR	Local Nature Reserve
SBI	Sites of Biological Importance
SSSI	Site of Special Scientific Interest
WTs	Wildlife Trusts

RESOURCE IMPLICATIONS

UK BAP

Unknown

Greater Manchester BAP

There will be considerable costs involved in undertaking survey and monitoring to provide up-to-date information on canals. However, some work is already underway which will contribute to the knowledge of canals in Greater Manchester.

- Ongoing costs incurred through restoration (e.g. ecological works involved in the Huddersfield Narrow Canal Restoration) are thought to have cost approximately £100,000.

- Costs resulting from additional ecological commitments. Eg: British Waterways allocates three weeks of bank staff time to ecological works for each canal.

Other costs are likely to be incurred through:

- Establishment and maintenance of canal register.
- Promotion of positive management.
- Establishment of monitoring programmes.
- Publicity and awareness raising.
- Staff and volunteer time.

Possible Sources of Funding

Wildlife Enhancement Scheme for SSSIs
The Waterways Trust small grants scheme

LINKS WITH OTHER ACTION PLANS

UK BAP

- There is a UK BAP for water vole, floating water plantain, grasswrack pondweed, white-clawed crayfish various bat species including Pipistrelle bat.

- British Waterways has launched a corporate BAP.

Greater Manchester BAP

Floating water plantain, Water vole, Bats

Proposed for 2nd Tranche: Grasswrack pondweed

Other BAPS

Bolton BAP:	Canals, Water Vole
British Waterways Local Waterway BAPs:	Huddersfield Narrow East, Rochdale Canal East, Floating-water plantain, grasswrack pondweed, Water vole, White-clawed crayfish
North Merseyside BAP:	Canals, Water Vole
Oldham BAP:	Water Vole

CONFLICTS WITH OTHER ACTION PLANS

Actions proposed under the canal action plan could have potentially adverse affects on the following habitats action plans in Greater Manchester:

- Swamp/tall herb fen (in remaindered/dewatered canals)
- Wet woodland (in remaindered/dewatered canals)

CONTACTS FOR CANALS BAP GROUP

Organisation	Contact	Tel. number
GMEU	Teresa Hughes	0161 342 2928
Stockport Urban and Countryside Service	Roger English	0161 474 4552
English Nature	Rebecca Jackson	01942 820342
Bolton Institute of Higher Education	Pat Waring	01204 903150
Oldham Pond Warden Co-ordinator	Alan Price	01457 810828
British Waterways	Jason Leach	0161 819 5847
Environment Agency	Mark Wiseman	01925 840000

PROPOSED REVIEW OF PLAN

The Biodiversity Action Plan for canals will be reviewed in 2008, and thereafter every five years.

REFERENCES

- British Waterways (undated) "*A Framework for waterway wildlife strategies*"
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