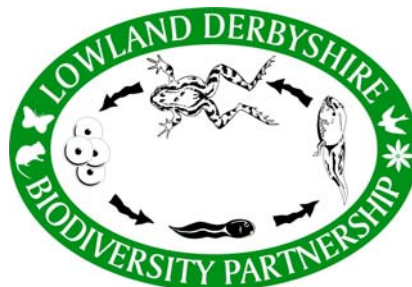


**LOWLAND DERBYSHIRE
LOCAL BIODIVERSITY ACTION PLAN**

**LOWLAND SWAMP, MIRES, FENS AND REEDBEDS
HABITAT ACTION PLAN
2005 – 2010**



Prepared by the Lowland Derbyshire Biodiversity Partnership



Finalised September 2005

LOWLAND SWAMP, MIRES, FENS AND REEDBEDS HABITAT ACTION PLAN

TREND IN LOWLAND DERBYSHIRE:

It is difficult to estimate the historic loss of swamps, reedbeds, mires and fens as there are few comparative datasets. However, it is likely that these habitats have declined due to agricultural intensification and urbanisation.

ESTIMATED EXTENT IN LOWLAND DERBYSHIRE:

A recent audit of swamps and fens estimates that there are around 118 sites supporting these vegetation communities covering an area of approximately 165 ha. In addition it is estimated that there are 27 ha of reedbed within 19 sites and between 10 – 20 ha of fen meadow and mire. However, it is thought that more detailed survey work is likely to identify additional areas of mires associated with semi-natural grassland sites.

NATIONAL BAP HABITATS: Fens and Reedbeds.

ASSOCIATED NATIONAL BAP PRIORITY SPECIES THAT HAVE BEEN RECORDED IN LOWLAND DERBYSHIRE:

Otter, great crested newt, water vole, bittern (not breeding) and reed bunting.

ASSOCIATED LOWLAND DERBYSHIRE BAP AUDITS: Reedbed, swamp and tall herb fen, fen-meadow and mire habitat audit 2005

SPECIES FOR WHICH LOWLAND SWAMP, MIRES, FENS AND REEDBEDS ARE KEY HABITATS IN LOWLAND DERBYSHIRE: See Appendix 1 of the document 'Wetland habitats in Lowland Derbyshire'.

A vision for the future of swamps, reedbeds, mires and fens in Lowland Derbyshire

A landscape in which swamps, reedbeds, mires and fens have been allowed to naturally reappear or have been actively restored and created, as appropriate, to form links with other semi-natural habitats such as rivers, lakes, flower-rich grasslands, heaths and wet woodlands. They will occur in a wide variety of situations from large river valley floodplains to small valley side flushes and be managed extensively with grazing animals and traditional harvesting methods. Restoration schemes along the Trent valley have the potential to create a spectacular series of wildlife rich wetlands filled with reedbed, swamp, marshes and open water. These habitats will once again make a significant contribution to the diversity and distinctiveness of our landscapes.

1. INTRODUCTION

This Habitat Action Plan deals with:

- Lowland swamps (as defined by the National Vegetation Classification)
- Mires (as defined by the National Vegetation Classification)
- Fens (as defined by the National Vegetation Classification)
- Reedbeds

Background information on mires, fens, reedbeds and swamps and their known distribution in lowland Derbyshire can be found in the document ‘Wetland habitats in Lowland Derbyshire’.

2. FACTORS WHICH HAVE AN ADVERSE IMPACT ON LOWLAND SWAMPS, MIRES, FENS AND REEDBEDS.

An impact ✓ *A significant impact* ✓ ✓

	Historic	Current
Land Management		
Flood prevention measures, including removal of river features such as bars and riffles, over deepening and widening, loss of connectivity between rivers and floodplain, leading to loss of natural processes and succession and small areas of swamp and reedbeds	✓✓	✓
Intensification of agriculture, draining floodplain wetlands and filling in low areas of fields. Filling in of back waters which are important areas for swamps.	✓✓	✓
Overgrazing cattle and sheep, leading to increased disturbance, siltation and reduced habitat from species such as water voles.	✓✓	✓✓
Lack of management and undergrazing leading to succession to wet woodland	✓	✓✓
Pollution, Climate Change		
Water pollution, diffuse or point specific. <ul style="list-style-type: none"> • Inorganic and organic pollution as a result of agriculture (e.g. silage effluent, slurry, dairy washings) leading to eutrophication affecting flora and fauna. • Toxic pollution (e.g. pesticides, sheep dip or metals in mine water) which may poison flora and fauna directly. • Sewage effluent from private discharges, sewage works and sewer overflows at times of storm water flow from storm drains. • Industrial effluent. • Physical pollution such as silt, the result of soil erosion, can smother invertebrate and fish habitat or reduce plant growth. 	 ✓✓ ✓✓ ✓✓ ✓✓ ✓	 ✓✓ ✓ ✓✓ ✓ ✓
Climate change, leading to increased instances of drought and severe flooding.		✓
Invasive species		
Increase in non-native invasive species such as Himalayan balsam, giant hogweed, Japanese knotweed, signal crayfish, and others.		✓
Others		
Over abstraction of surface and ground water for water supply or use in industry or agriculture	✓	✓
Increased recreational pressure on swamps, tall herb fens and reedbeds on canals by boating and fishing in lakes and ponds.		✓
Public misconception. Lack of understanding of how swamps, reedbeds, mires and fens work and their ecological value.	✓	✓
Insufficient water supply to reedbeds sites due to flood protection schemes, land drainage and abstraction, and development	✓	✓✓
Most sites are small and are being threatened with further fragmentation.	✓	✓✓
Increased airborne pollution	✓✓	✓

3. CURRENT ACTION

3.1 Designated Sites

A number of SSSI's have the fen, mire, swamp and reedbed as a notifiable feature of the SSSI designation such as Mercaston Marsh and Hulland Moss. The table below shows the area of swamp, reedbed, mire and fen habitat within each SSSI. This represents 7.81ha of fen/mire , 0.1ha of reedbed and 9.91ha of swamp which is approximately 9% of the resource is designated within SSSIs.

The table below shows the areas (in hectares) of mire/fen, reedbed and swamp in the SSSIs in Lowland Derbyshire, the codes refer to the National Classification System.

SSSI	Swamp	Mire/Fen	Reedbed
Carver's Rocks	0.76ha (S14)		
Crabtree Wood		0.04 (M23)	
Cromford Canal	4 (S5) 2 (S14)		
Ginny Spring		0.09 (M10)	
Hilton Gravel Pits	1.5 (S14)		0.1
Hulland Moss		0.17 (M25)	
Mercaston Marsh	0.32 (S3) 1.03 (S6)	0.2 (M6) 5.52 (M23)	
Morley Brickpits	0.2 (S10) 0.1 (S12)	0.1 (M23)	
Moss Valley		1.69 (M23)	

Over 100 Wildlife Sites support swamp, tall herb fen, reedbed and/or mire. Wildlife Sites are afforded a degree of protection through planning policies set out in Regional and Local Plans.

80% of the resource is within a Wildlife Site. Many of the remaining sites have been identified as candidate Wildlife Sites.

There are a number of Local Nature Reserves (LNRs) which have areas of reedbed, swamp, mire and fen including Oakerthorpe LNR (swamp), Doe Lea LNR (reedbed), St Chads Water LNR (swamp), Wessington Green LNR (mire), Brearley Park LNR (swamp), Allestree Park LNR (swamp), and Fox Covert LNR (swamp).

In addition there are several relatively large areas of swamp, mire, fen and reedbed which are Derbyshire Wildlife Trust Reserves these include Wyver Lane, Erewash Meadows, Carr Vale, Golden Brook Storage Lagoon and the Avenue Washlands.

3.2 Current Initiatives

- The Environment Agency (EA) regulates activities that may have an impact on the water environment. These include;
 - Abstraction from surface and ground water
 - Discharge onto land and into water
 - Fish introduction and removal
 - Herbicide use near water
 - Waste management and transfer
 - Works affecting watercourses (which includes bank reinforcement, diversion, and loss of floodplain, bridge or culvert construction.)

The EA has a duty under Section 7 of the Environment Act (1995) when carrying out its functions to "Further the Conservation and enhancement of Natural beauty and the

conservation of flora, fauna and geological or physiographical features of special interest". In addition there are internal policies relating to operations such as culverting or gravel removal. The general policy is against culverting and promoting the removal of existing culverts.

- Phase I of the restoration scheme at Witches Oak Waters, Aston on Trent, has been implemented, this includes a large area of reedbed.
- The Wildlife Sites initiative and the Water for Wildlife Project run by Derbyshire Wildlife Trust aim to survey a proportion of these sites each year. Management advice and where possible assistance is provided to Wildlife Site owners.
- The Farming and Wildlife Advisory Group (FWAG) also provide management advice to owners of land.
- Severn Trent Water have recently carried out some habitat creation and enhancement work at Carsington Water including the planting of an area of reedbed at the northern end of the Reservoir.
- Severn Trent have recognised reedbeds as an important habitat in their BAP.
- English Nature have negotiated management agreements with the owners of the SSSIs and have recently introduced Highland cattle to graze the marsh at Mercaston.
- The East Midlands Development Agency, in partnership with Derbyshire Wildlife Trust, will be constructing an area of reedbed and swamp on species-poor low lying grassland adjacent to the River Rother as part of the reclamation of Avenue Coking Works, near Chesterfield.
- The OnTrent Initiative aims to conserve and enhance the natural and historic environment of the Trent Valley. It is a partnership project involving a wide range public, statutory, voluntary and commercial organisations working along the River Trent between Stoke-On-Trent and the Humber Estuary.
- The River Rother Wildlife Strategy, written in 1994 is an initiative recognising the value of the landscapes and wildlife of the River Rother catchment throughout Bolsover, Chesterfield, Sheffield and parts of Rotherham. The valley has a concentration of reedbed, and swamps associated with the former coalfield area.
- The Pools Brook and River Doe Lea Wildlife Strategy focuses attention on the Pools Brook and Doe Lea valleys within the River Rother catchment. The strategy suggests that as many of the reedbeds and swamps within the valleys are within Local Authority ownership they would make ideal Local Nature Reserves which would secure their future management.
- Nationally the RSPB produced a Reedbed Management handbook in 1996.

3.3 New initiatives

- A number of large mineral restoration schemes which have planning permission and agreed restoration schemes but are yet to be fully implemented include areas of swamp, and reedbed including Witches Oak Water, Elvaston Pit, Smotherfly, Doe Hill, and Barrow on Trent.
- Derbyshire Wildlife Trust is currently negotiating management agreements on two large sites, Willington wetlands and Drakelow Nature Reserve in the Trent Valley with significant areas of swamp and reedbed.
- There are a number of sites which are proposed LNRs which include swamps, mires, fens and reedbeds which will hopefully become designated in the next 5 year, including Williamthorpe Ponds (reedbed) and Blue Bank Pools (swamp).
- The new Environmental Stewardship Scheme has targets and payments for managing, grazing and creating swamps, reedbeds, fens and mires.
- Recent Local Plan policies encourage the retention of existing wetlands, where they are not covered by the Wildlife Sites system, and their management. They also encourage the creation of additional wetlands.
- Sustainable Urban Drainage Schemes are being discussed for major development sites in the county. If these are incorporated into the final designs they will add a small but significant amount of additional habitat.
- The Environment Agency are currently preparing Catchment Abstraction Strategy's (CAMS) for the area. These which will look at the issues of over abstraction of water courses by agriculture and industry and will provide a consistent and structured approach to local water resource management.
- The Environment Agency are currently preparing a Catchment Flood Management Strategy (CFMS) for the River Dove. This will look at the possible options for defending those communities where flood defences are currently inadequate.

3.4 Land management of LBAP partners

- **Derbyshire Wildlife Trust** have a number of existing reserves have areas of reedbed, swamp, mire and fen including Carr Vale Flash (reedbed and swamp), Carvers Rocks (mire), Cromford Canal (swamp), Erewash Meadows (swamp), Hilton Gravel Pits (swamp, reedbed), Mapperley Wood (fen), Oakerthorpe LNR (swamp), Barton Pool (fen), Morley Brickpits (swamp, reedbed, fen), Wyver Lane (Fen and swamp), and Golden Brook Storage Lagoon (Reedbed and swamp).
- **Derbyshire County Council** has a number of countryside sites with reedbed, swamp, mire and fen including Pewit Carr LNR (swamp), Williamthorpe Ponds (reedbed), Doe Lea LNR (reedbed), Markham Reedbed (reedbed), Peter Fidler Reserve (reedbed), Cromford Canal (swamp and tall herb fen), Nutbrook Canal (swamp), Elvaston Castle LNR (reedbed and swamp) and Pleasley Pit Country Park (reedbed).
- **Chesterfield Borough Council** own a number of sites with reedbed, swamp, fen and mire interest including Poolsbrook Country Park (reedbed and tall herb fen and swamp), Poolsbrook Flash (reedbed), and Mastin Moor Flash (swamp and reedbed).
- **Erewash Borough Council** own a number of Local Nature Reserves with reedbed, swamp and tall herb interest including Fox Covert LNR (swamp), Forbes Hole LNR (swamp) and Trowell Marsh LNR (swamp). These are managed in partnership with **Groundwork Erewash Valley**
- **Heanor Town Council** own Red River LNR which has a swamp interest. It is managed by **Friends of Red River** in partnership with **Groundwork Erewash Valley**
- **Derby City Council** own a number of countryside sites with reedbed, swamp and tall herb fen, interest including Markeaton Brook and lakes (reedbed and swamp), Nutwood and Darley Tip (swamp), The Sanctuary at Pride Park (new reedbed and swamp), High View Community School Nature Reserve (swamp), Sinfin Golf Course pond (swamp), Spondon Canal Pond (swamp) and Sinfin Moor Park (swamp). Some of these sites are managed in partnership with **BTCV**.
- **Severn Trent Water** own a number of sites which have reedbed, swamp, fen and mire interest including Carsington Water (reedbed and swamp), Ogston Reservoir (swamp), Foremark Reservoir (swamp), Staunton Harold (swamp) and Linacre Reservoirs (swamp) as well as a number of water treatment works with reedbed and swamp habitats including Derby Sewage works.
- **National Trust** own estates at Calke Abbey, Kedleston and Hardwick Hall, small amounts of swamp and reedbed exist on these site fringing the main lakes.
- **Wessington Parish Council** own Wessington Green LNR which has an area of mire. It is managed by the **Wessington Green Management Group**.

3.5 Research and Surveys

The RSPB produced a Reedbed Inventory for the UK in 1993.

- Nationally the RSPB are continually doing research into reedbed management.
- The Wildlife Sites initiative and the Water for Wildlife Project run by Derbyshire Wildlife Trust aim to survey a proportion of these sites each year.

4 ACTION PLAN OBJECTIVES AND TARGETS

4.1 National Targets

The UK Biodiversity Action Plan HAP for Fens aims to ensure that 1200 hectares of fen is appropriately maintained and improved between 1997 and 2010.

The UK Biodiversity Action Plan HAP for Reedbeds sets targets to rehabilitate by the year 2000 the priority areas of existing reedbed (targeting those of 2ha or more). To maintain priority areas of existing reedbed by active management and to create 1,200 ha of new reedbed on land of low nature conservation interest by 2010.

4.2 Regional targets

Regional Planning Guidance for the East Midlands (RPG8) sets the following targets.

- In addition to any existing management agreements, manage 500ha of existing fen by 2005
- In addition to any existing management agreements, manage 100ha of existing reedbed by 2005
- Create 1,000ha of new fen.
- Create 280ha of reedbed by 2005.

4.3 National Forest

There are targets in the National Forest LBAP to create 40ha of reedbed by 2010.

Since the National Forest Tender Scheme began in 1998, 3ha have been created, mostly outside Derbyshire. There are also targets to achieve management on reedbeds over 0.5ha in size for wildlife

4.4 Lowland Derbyshire

Objective 1

To identify and maintain the current extent and distribution of lowland swamp, mire, fen and reedbed resource in the LBAP area and achieve favourable condition.

Targets

- Ensure that all the sites that qualify are designated and protected, as appropriate, through the SSSI and Wildlife Site processes by 2010.
- To get 100% of all reedbeds over 2ha into appropriate land management by 2010
- To get 50ha of swamp, mire and fen into sympathetic management by 2010

Objective 2

Link existing swamp, fen, mire and reedbeds by restoring, enhancing or creating habitat.

Targets

- Create 30ha of reedbed and 30ha of swamp, fen and mire and secure their future management by 2010. Ideally new areas should be at least 2ha in size.

4.5 Main factors likely to affect achievement of targets

Resources and Land management

- Some sites are in private ownership.
- Lack of or inappropriate management of existing swamps, mires, fens and reedbeds leading to drying, scrub encroachment and succession to woodland.

Lack of knowledge

- We do not necessarily know where the entire resource of swamp, reedbed, mire and fen is in the LBAP area.
- We do not know the condition of much of the resource.

Planning and Regulations

- The Civil Aviation Authority have issues concerned with bird strikes associated with East Midlands Airport. This has led to their objection to schemes which create habitats likely to encourage large numbers of birds including reedbeds and swamps. This has had and will have implications for large restoration schemes within part of the Trent Valley.

Conflicts with other Conservation priorities

- Resolution of conflicts between other habitats of high value.
- Potential conflicts with archaeological interests.

Practical difficulties

- Swamps, mires, fens and reedbeds are perceived as being difficult to manage
- Inadequate survey/base data for many areas of swamp, mire, fen and reedbed and the species they support.

Pollution and climate change

- Enrichment resulting in changing plant communities.
- Pollution of freshwater supplies to the reedbed: siltation may lead to drying; toxic chemicals may lead to loss of fish and amphibian prey for key species; accumulation of poisons in the food chain and eutrophication may cause reed death.
- Climate change

Others.

- Draining of wetlands for agricultural use.
- Abstraction affecting natural ground water levels.

5. ACTIONS

LDWAG= Lowland Derbyshire Wetland Action group (All of the below)

EN = English Nature, EA = Environment Agency, DEFRA = Dept. of Environment, Food and Rural affairs, DWT = Derbyshire Wildlife Trust, NT = National Trust, LA = Local authorities, FWAG = Farming and Wildlife Advisory Group, ST = Severn Trent Water, BW = British Waterways, GEV = Groundwork Erewash Valley

	ACTIONS	TIME-SCALE	LEAD AGENCY & Partners
	DATA COLLATION		
SMFR1	Collate existing information on the distribution of swamps, mires, fens and reedbeds and produce a register and or GIS layer and disseminate to partners. (objective 1)	By 2005	DWT with assistance from LDWAG
SMFR2	Identify gaps in knowledge (objective 1)	By 2005	DWT with assistance from LDWAG
SMFR3	Compile a register/GIS layer of appropriate sites suitable for habitat extension (objective 1)	By 2006	DWT/EA
SMFR4	Compile a register /GIS layer of appropriate sites suitable for habitat creation (objective 1)	By 2006 then ongoing	DWT/EA
	SURVEY		
SMFR5	Survey swamp, reedbed, mire and fen Wildlife Sites and SSSIs on a rolling programme of at least once every 15 years (Objective 1)	Ongoing	EN, DWT with assistance from the LDWAG
SMFR6	Survey potential reedbed, swamp, mire and fen Wildlife Sites and assess them against the WS Selection guidelines and designate if appropriate. (objective 1)	Ongoing	DWT
	EVALUATING THE IMPORTANCE AND CONDITION OF SITES		
SMFR7	Agree methodology for defining favourable condition on swamps, reedbeds, mires and fens (objective 1)	By 2005	LDWAG
	RESEARCH		
SMFR8	Support national research programmes to investigate management techniques and other research associated with reedbeds, swamps, mire and fens. Use results of research in work towards achieving LBAP targets (All objectives)	Ongoing	LDWAG
	CONSERVATION ACTION AND INCENTIVES		
SMFR9	Agree management options for swamp, reedbed, mire and fen so all organisations are giving and using same advice (All objectives)	By 2006	LDWAG
SMFR10	Publish a management booklet / leaflet for owners and managers of reedbeds, swamps, mires and fens (All objectives)	By 2005	LDWAG
SMFR11	Publish a leaflet or booklet on creation of swamp, reedbed, mire and swamps for use by land managers, and developers etc. (Objective 2)	By 2007	LDWAG
SMFR12	Manage swamps, reedbeds, mires and fens in LDWAG's estates to achieve favourable conservation status and use opportunities to extend and create new habitat (All objectives)	Ongoing	LDWAG
SMFR13	Encourage other land managers to manage habitats to achieve favourable conservation status	Ongoing	FWAG and DWT

	through promotion of Environmental Stewardship Scheme (All objectives)		
SMFR14	Encourage other land managers to manage habitats to achieve favourable conservation status through advice and negotiation of management agreements (All objectives)	Ongoing	DWT, EN and FWAG
SMFR15	Using the GIS layers of appropriate sites suitable for habitat extension and creation, take forward some of these sites by talking to owners, and agreeing extensions, creation and management of swamps, mires, fens and reedbeds. (All objectives)	Start 2006	LDWAG
SMFR16	Utilise all opportunities to achieve the creation of new areas of swamp, mire, fen and reedbed, for example using the planning system (Objective 2)	Ongoing	LDWAG/ LA
	REGULATION		
SMFR17	Ensure all planning applications and General Development Orders are adequately assessed in relation to their impact on swamps, reedbeds, mires and fens and that opportunities for enhancement and creation are considered in relevant planning decisions (Objective 2)	Ongoing	LAs/EN/DWT/EA
SMFR18	Ensure policy documents, including Local Development Frameworks include appropriate guidelines for the safeguard, enhancement of wetland habitats. (All objectives)	2005 on	LAs and LDWAG
	AWARENESS RAISING		
SMFR19	Share information with landowners and managers on wildlife importance and management needs of key conservation, restoration and re-creation sites, including feedback from surveys. (All objectives)	2005 on	LDWAG
SMFR20	Consider establishment of demonstration site(s) as a focus for discussion of best practice management, restoration, re-creation and education. (All objectives)	By 2007	LDWAG
SMFR21	Have a public event raising awareness of swamps, reedbeds, mires and fens, eg public walk, demonstration day etc. (All objectives)	By 2010	LDWAG

6. RESOURCES

It is envisaged that the majority of actions proposed will be carried out by the relevant organisations using current resources. These include:

- continuing investment by landowners and managers managing their land sympathetically for wildlife
- continuing management of wetlands in the ownership of conservation organisations or public bodies
- English Nature's Wildlife Enhancement Scheme for public and private statutory sites and Reserves Enhancement Scheme for conservation bodies

The Environmental Stewardship is a two tier scheme comprising of the Entry level and Higher level scheme. The Entry Level Scheme (ELS) is designed to encourage a large number farmers and land owners into environmental management. A number of options under ELS will aim to protect soils and water courses, for example; soil, nutrient and manure management plans; management of grasslands with low inputs and buffer strips/ grass margins. The Higher Level Scheme (HLS) will be highly targeted and discretionary. HLS will offer options to protect watercourses and waterbodies, create and enhance associated wetland habitats and carry out capital works e.g. bank fencing, management of waterside trees. In addition the Organic Entry Level Stewardship (OELS) is a whole farm scheme,

similar to ELS but is open to all farmers who manage all or part of their land organically and who are not receiving aid under the Organic Aid Scheme or the Organic Farming Scheme.

Additional resources will be required to:

- Aid in the production and maintenance of the proposed registers/GIS layers, by carrying out the background work including site survey and administration (2005 onwards)
- Implement effective monitoring (2005 onwards).
- Provide financial incentives for the conservation, enhancement and restoration of watercourses.
- Enhance management of sites in the ownership of conservation organisations.
- Host a public event
- Carry out the habitat management, creation and extension work