



### Current factors causing loss or decline

Fens are dynamic systems and past management activities have helped to prevent natural succession to carr woodland. However, many of these practices have either ceased, with subsequent scrub succession, or damage has occurred through drainage and intensification of agriculture or direct loss from infilling. In the City, water quality is an issue with nutrient enrichment or toxic chemicals potentially leading to the loss of invertebrates and fish and amphibian prey for some key species, such as herons and kingfishers.

### Current action

The fens within Possil Marsh and Bishop Loch are protected by their status as SSSIs. All of the other fen areas within the City are currently designated as City-wide SINCS. These receive protection under Glasgow City Council's policies from damaging developments. A number of wetland site management plans have been produced which will help to achieve the conservation of the remaining fen areas.

Recent wetland creation projects, such as at Hogganfield Park LNR, Cardowan Moss and smaller park ponds, are helping to increase the abundance of fen and associate habitats within the City.

# LOCAL HABITAT ACTION PLAN

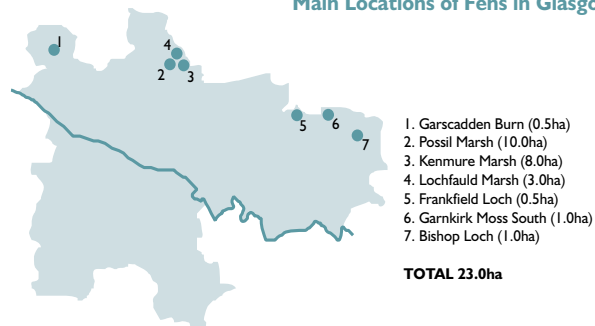
## Current status

**Fens** are peatlands, which receive water direct from rainfall as well as drainage from the catchment area; the latter source results in a varied input of nutrients and minerals into the fen water table. The fine classification of fen types is extremely complicated due to a number of factors such as vegetation composition, local geology, nutrient status of the water supply and on the pattern of water movement within the fen. There are two broad types recognised. Poor-fens are usually deficient in minerals (such as calcium) and are usually found in the wetter, upland north and west of the Britain. Their vegetation is typically composed of short sedges and *Sphagnum* bog-mosses. Rich-fens, on the other hand, are well supplied with minerals and support a wide range of vegetation types and can be extremely species rich. A further important and attractive fen type is the tall herb fen, which is sensitive to grazing pressure; typical common species are Meadowsweet (*Filipendula ulmaria*), Angelica (*Angelica sylvestris*) and Valerian (*Valeriana officinalis*).

Recognition of fens can be difficult with various gradations to deeper water swamps or, on agricultural land, rush dominated pastures or marshes. However, in Glasgow there are a number of wetlands supporting fen habitat, many are poor-fens, but a few are species rich, such as at Possil Marsh and Kenmure Marsh.

The range of fens within the City support a great diversity of plants, including a number of locally rare and threatened species. Fens provide a good habitat for many invertebrates, including aquatic beetles and dragonflies, support mammals and provide breeding habitats for a range of birds.

Main Locations of Fens in Glasgow



## Objectives and targets

Fens are becoming an increasingly rare habitat nationally and many have suffered due to neglect in recent years. If fens are to remain as important habitats within the city, and have their wildlife interest enhanced, they will need to be protected from further loss and receive sympathetic management. Management plans for the main wetland sites will help to recognise the value and needs of fens within the larger habitat mosaics. Further wetland creation projects could be an important source of new sites.

The Fens national HAP has two main objectives: to identify priority sites (and initiate management if needed) by 2005 and to ensure water quality and quantity for all SSSIs or ASSI fens by 2005.

**Objective 1:** Establish area and quality of all fens within the City.

**Target 1:** Survey all key fen areas and assess quality by 2004.

**Objective 2:** Ensure no net loss in area and quality of key fens within the City.

**Target 2:** Retain all existing key fens.

**Objective 3:** Promote sympathetic management of all key fen sites.

**Target 3:** Establish existing management and investigate ideal regimes at key sites.

**Objective 4:** Increase the total area of fen within the City.

**Target 4:** Create, or encourage development of, new fens as part of wetland creation schemes.

## Proposed Action with Lead Authorities

Action	Lead	Delivery	Objective
<b>Policy and Legislation</b>			
Ensure the importance of fens is recognised in Local Plans and Policy Guidelines.	GCC-LS(CG)	GCC-DRS	1
Seek to ensure Policy Planning Guidelines include adequate protection policies for water levels and quality.	GCC-LS(CG)	GCC-DRS, SEPA	1, 2
<b>Site Safeguard and Management</b>			
Oppose, or propose alternatives to, development applications for land use, which will damage or destroy key areas of fens.	GCC-LS(CG)	GCC-DRS, SEPA, SNH	1, 3
Encourage landowners and farmers to implement sympathetic management of fens.	GCC-LS(CG)	FWAG, GCC-LS(CG), SNH, SWT	3
Encourage the creation of new fens at urban or agricultural wetland creation schemes.	GCC-LS(CG)	FWAG, GCC-LS, GfC, SEPA, SNH, SWT	4
<b>Advisory</b>			
Provide guidance on fen management.	GCC-LS(CG)	FWAG, GCC-LS(CG), SNH	3
<b>Future Research and Monitoring</b>			
Survey main fen sites to assess vegetation and condition.	GCC-LS(CG)	GCC-LS(CG), SWT	1
Seek to carry out hydrological and/or water quality surveys at key sites where possible.	GCC-LS(CG)	SEPA	2
<b>Communication and Publicity</b>			
Encourage awareness and appreciation of fen habitat.	GCC-LS(CG)	GCC-LS(CRS), SEPA, SNH	1, 3
Liaise with Lead Agency for national Fens Habitat Action Plan.	GCC-LS(CG)	GCC-LS(CG)	1, 2, 3, 4
Review progress on Action implementation.	GCC-LS(CG)	GCC-LS(CG)	1, 2, ,3, 4

Glasgow City Council: Development and Regeneration Services(**GCC-DRS**), Glasgow City Council: Land Services(Conservation Group) (**GCC-LS(CG)**,

Glasgow City Council: Culture and Leisure Services (**GCC-CLS**), Glasgow City Council: Education Services (**GCC-ES**), Glasgow City Council: Land Services Countryside Ranger Service (**GCC-LS(CRS)**,

Scottish Ornithologists' Club (**SOB**), Greenspace for Communities(**GfC**), British Waterways (**BW**), Forestry Commission (**FC**), Farming Wildlife Advisory Group (**FWAG**), The WISE Group (**TWISE**)

Glasgow Natural History Society (**GNHS**), Royal Society for the Protection of Birds (**RSPB**), Scottish Environment Protection Agency (**SEPA**), Scottish Natural Heritage (**SNH**), Scottish Wildlife Trust (**SWT**).

Clyde Amphibian and Reptile Group (**CARG**), Butterfly Conservation (**BC**), Concern for Swifts (**CfS**)