



Inverclyde Renfrewshire East Renfrewshire LBAP



MIRES

Habitat Definition

This plan covers peat-forming vegetation, generally occurring on peat greater than 0.5m depth, with the water table at or just below the surface for most of the year. The main focus of the plan is the minerotrophic mires, often called fens, which receive water from rainfall as well as drainage from the catchment area; the latter source results in a varied input of nutrients and minerals to the fen water table. This is an important distinguishing factor separating fens from other mires such as blanket or raised bogs which receive their water mostly from direct precipitation. Raised bogs may be integral features of mire complexes and, where present, need to be considered as part of the management regime. Blanket bogs are upland features, but may grade into minerotrophic mires at their margins or in depressions, often associated with bog pools; however they are not considered central to this plan, but are partly covered within the Dwarf Shrub Heath plan.

The LBAP partnership area supports a number of mires of high nature conservation interest. Notable fens include several near Kilmacolm (including Glen Moss, Corsliehill, Shovelboard and Barmufflock). Fens associated with bogs occur at Hartfield, Knockmade and Moyne Moor, and other scattered examples include Dargavel, Carsewell, Dykehill, Loch Libo and a number of sites on the Liboside hills.

Ecology and Management

Fens are considered to be dynamic, seminatural systems and in general management is needed to maintain open fen communities and their associated species richness, and to prevent succession to carr woodland. Traditional management has included grazing, cutting for hay, burning, peat cutting or scrub clearance. Fens support internationally and nationally significant species of birds, insects, snails, butterflies, and wild flowers .

Mires act in a number of different ways to regulate our environment. These functions include water purification, flood prevention, and carbon storage. Carbon storage is particularly important to offset the increase in carbon dioxide which contributes to global warming.

Factors Causing Loss or Decline

Little information is available on recent or past losses of mires within the LBAP Partnership area, although it is likely that there has been a substantial loss in area and quality over recent history. In terms of lowland mire in Scotland as a whole, the trends are as follows:

- ★ 1940s baseline - less than 0.3% of the area of Scotland
- ★ 1940s-1980s change - 44% reduction in area
- ★ Dynamics of change - biggest reductions due to afforestation and through drainage to rough grassland
- ★ 1980s outcome - less than 0.2% of the area of Scotland.

Key threats include scrub succession, hydrological change caused by drainage works for agricultural intensification, global warming, nutrient enrichment (e.g. input from agricultural run-off or pollution) and direct loss from infilling or urban spread.

Mires

Recognition of fens as distinct units can be difficult with various gradations to bogs, swamps in deeper water or rush dominated pastures or marshes, often derived from modified fens, on agricultural land. Elements of the latter, dominated by Sharp-flowered Rush (*Juncus acutiflorus*) or Soft-rush (*J. effusus*) are covered by this plan.

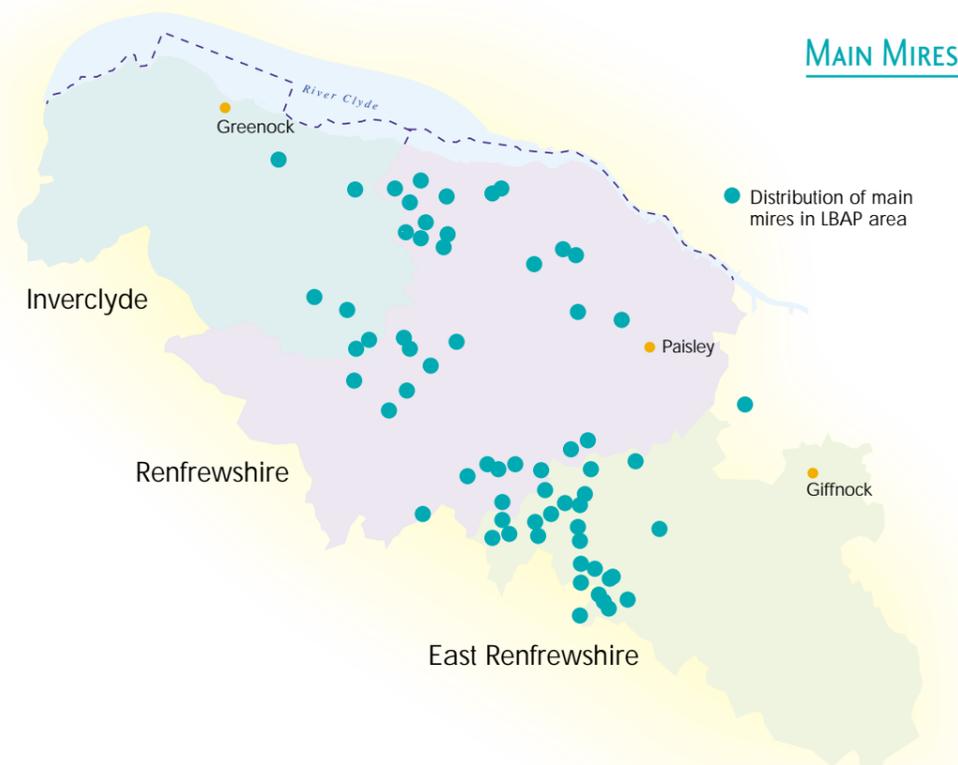
The fine classification of minerotrophic mires or fens is extremely complicated due to a number of factors such as vegetation composition, local geology, chemical and nutrient status of the water supply and the pattern of water movement within the fen. However, there are two broad types that are often recognised:

- ★ Poor fens occur in acidic waters (pH<5), are typically deficient in minerals (such as calcium) and are usually found in upland north and west Britain. Their vegetation is normally composed of short sedges, rushes and *Sphagnum bog-mosses*.
- ★ Rich fens, in contrast, are well supplied with mineral enriched calcareous water (pH>5) sourced from base rich (alkaline) rocks (notably chalk and limestone). The vegetation may appear similar to that of poor-fens, but differs in species composition and is usually much more diverse.

A further distinctive type of fen, occurring on more nutrient rich fen peats, is Tall Herb Fen. This is a visually attractive type dominated by tall herbaceous species but sensitive to grazing pressure; typical species are Meadowsweet (*Filipendula ulmaria*), Angelica (*Angelica sylvestris*) and Valerian (*Valeriana officinalis*).

Current Status - UK and Local

The UK is thought to host a large proportion of the fen surviving in the European Union. Many of these are isolated depressions in rural landscapes, but large examples exist such as in Norfolk (Broadland), Fermanagh (Lough Erne) and Speyside (Insh Marshes).



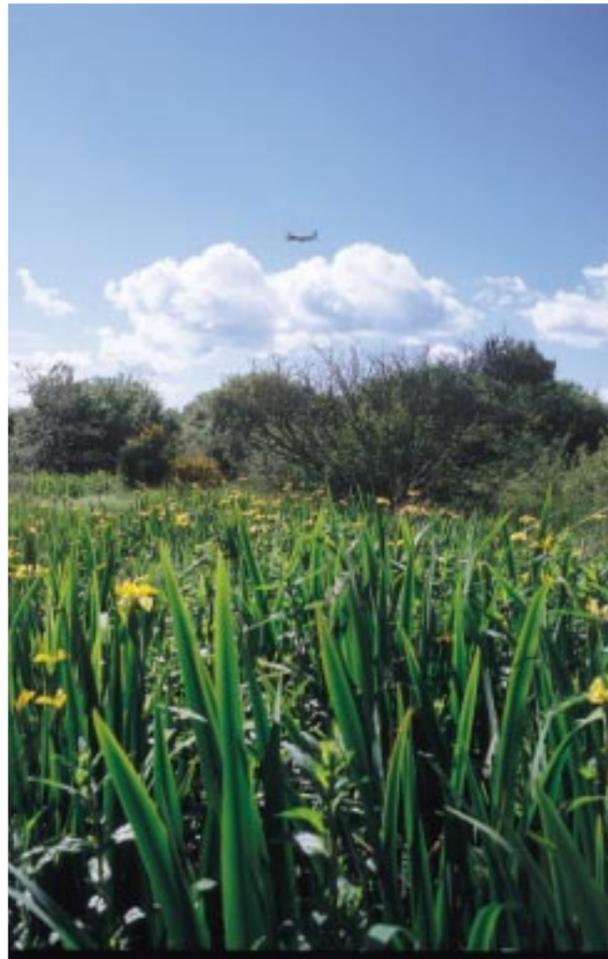
Opportunities and Current Action

The quality of the mires at Glen Moss, Shovelboard, Barmufflock, Loch Libo, Dargavel, Brother and Little Lochs are recognised through their designations as SSSIs. Most of the other larger fens or mires within the Local Authority areas are identified as SINCs, within the relevant Local Plans, where there is a presumption against damaging development.

★ SEPA's Habitat Enhancement initiative (HEI) provides grants for groups or individuals to pay for habitat restoration at local sites.

Action Plan

Mires (including Ferns) 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 LBAP Partnership area, 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.



Pailsey Moss LNR © Graham Burns

Objectives and Targets

- Objective 1 Establish the area and quality of all key mire sites.
- Objective 2 Maintain the current extent and quality of key mire sites.
- Objective 3 Promote sympathetic management of all mires.
- Objective 4 Increase the total area of mires throughout the LBAP Partnership area.
- Objective 5 Review this plan on an annual basis, beginning in 2005.

We will achieve these objectives by:

Action	Actioned by	Timescale
Surveying existing and potential mire sites to assess ecological status and conservation needs	LAs BSBI UoP	2004-05
Ensuring no further loss in extent and quality of existing mire habitat	LAs SNH	2004-07
Encouraging sympathetic, site-specific management regimes	FWAG LAs	2004-07
Encouraging the creation of new mires at urban or agricultural wetland creation schemes	FWAG SNH	2004-07
Monitoring and recording actions towards these objectives	LBAP Steering Group LBAP Officer Local Records Centre	Annual

Links with Other Action Plans

Black Grouse, Dwarf Shrub Heath, Hen Harrier, Standing Waters.

Further Information can be obtained from The Biodiversity Officer 0141 842 5281

