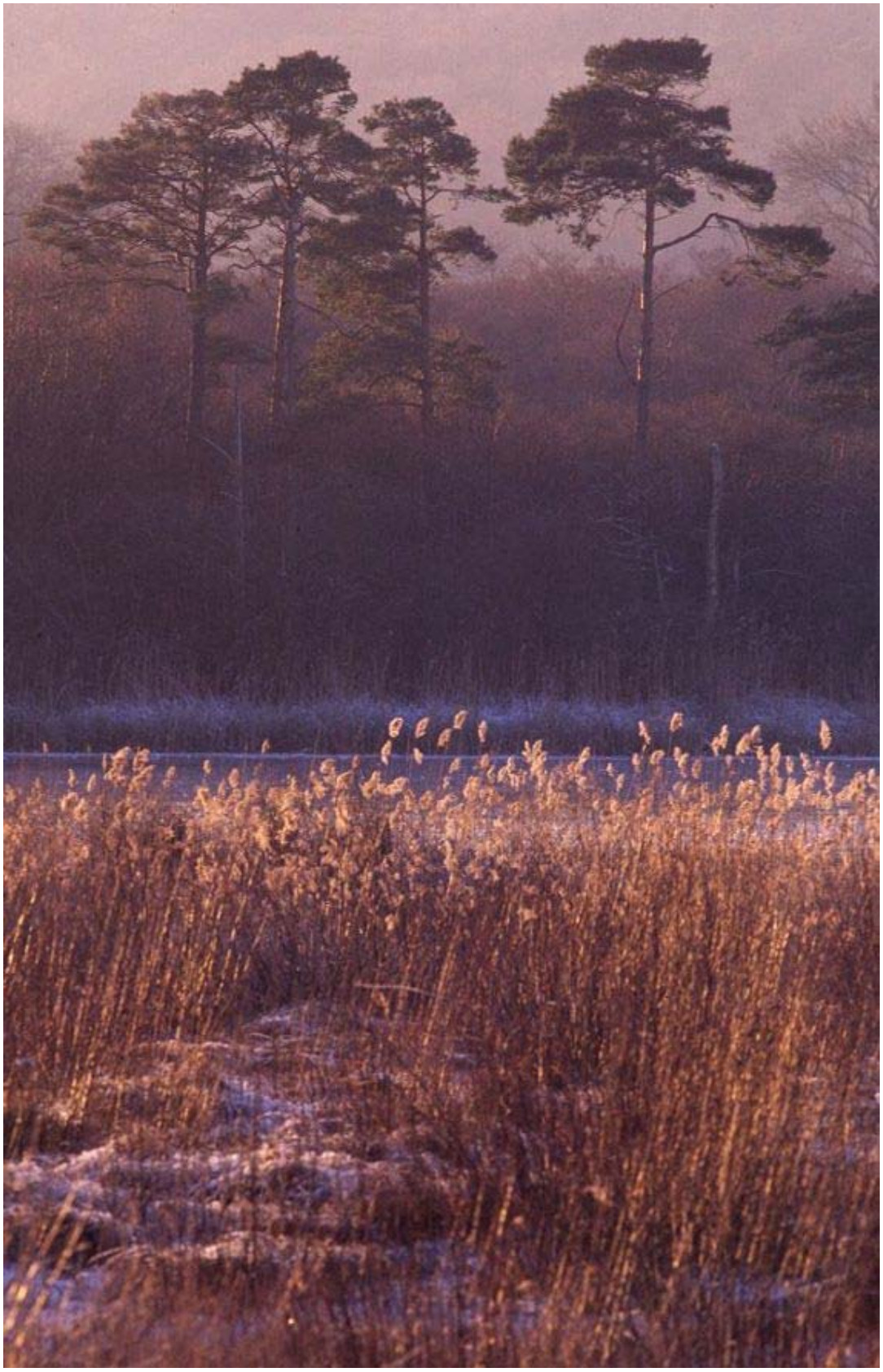
Reedbed



Reedbed at Hawes Water, part of Gait Barrows NNR, Silverdale.

Habitat Description

Reedbeds are wetlands dominated by stands of common reed, where, for most of the year, the water table is at, or above, ground level.

Although common reed predominates in a true reedbed, there may also be large stands of other wetland plants such as reed canary grass and yellow iris. Often areas of open water and ditches are present. Small areas of wet grassland and carr woodland may also be associated with reedbeds.

Reedbeds vary in the species they can support, depending on water levels within the wetland system. Those that normally have 20 cm or more of surface water during the summer are referred to as ‘reed swamp’. These often have high invertebrate and bird interest but little botanical interest. Reedbeds with water levels at or below the surface during the summer are often more complex botanically and are known as ‘reed fen’.

The term 'reedbed' has been used to describe areas ranging in size and structure from narrow fringes of reed along river margins to extensive blocks on flood plains. Extent and form influence the species that they support. For example, reedbeds more than 20 ha in area are able to maintain breeding bittern as long as they support a healthy eel population. Wintering sites for bitterns, however, are often much smaller. Both marsh harrier and bearded tit are able to nest in smaller reedbeds, their main requirements are for a secure nesting site and wet ditches to forage along. Bearded tits also require well-established, drier reedbeds where litter has accumulated.

A large number of insect species rely upon reedbeds. Some have larvae that feed in reed stems, others feed on the reed leaves while still others live in the litter. Reedbeds also provide shelter during the winter for many other species that do not feed or breed in them at other times of the year.

National status

In the UK there are 5,000 ha of reedbed habitat, located within approximately 900 sites throughout the country. No more than 5% of these have an area greater than 20 ha. Most reedbeds in England & Wales are less than 2 ha.

Regional status

Extensive stands of reedbed are rare in north west England but there are important examples associated with the Cheshire meres, a few Cumbrian lakes (e.g. Esthwaite Water), Leighton Moss, north Lancashire and at the Wigan Flashes. The latter complex of sites (which includes Bryn Marsh and Ince Moss SSSI) contains a substantial area of reedbed that is being actively restored. New reedbed is also being created at the Flashes and at Leighton Moss.

Local Status

The 1993 Phase I Habitat Survey of the county reported c.200 ha of ‘reed swamp’ and ‘reed fen’ habitat within Lancashire[9]. This figure has more recently been recalculated and is nearer 160 ha [(7)].

By far the greatest concentration of the habitat and the largest reedbeds are within the Arnside/Silverdale AONB at Leighton Moss and Hawes Water.

Small reedbeds can be found in scattered locations across the coastal plain between Lancaster in the north and Altcar in the south west. A few reed canary grass dominated 'reedbeds' occur within the industrial valleys of the West Pennines where they are located primarily around the edges of reservoirs, old millponds and sewage works.

Important Sites ([7])

52 sites throughout the county support reedbeds.

Leighton Moss RSPB Reserve in Silverdale is the largest reedbed (93 ha) within north west England.

Internationally and nationally important populations of bittern, marsh harrier and bearded tit occur at Leighton Moss. There are also regionally important numbers of reed warbler (close to the northern limit of its range on the west coast of Britain), sedge warbler, water rail and reed bunting. Otter bred at Leighton Moss until 1999.

Near Leighton Moss lies Hawes Water Moss, the second largest reedbed in the county (7.6 ha). It is managed together with Hawes Water, which has a fringing reedbed, as part of Gaitbarrows National Nature Reserve.

In order of occurrence from north to south, other significant reedbeds are found at the following sites in the coastal plain: Crag Bank SSSI (1.6 ha); Marton Mere LNR, Blackpool (8 ha); Croston Marsh (1.5 ha) and Martin Mere WWT Refuge. In each case, where known, the areas of reedbed are given in brackets. There is also 1.2 ha of the habitat at Fleetwood Marsh in three separate stands and over 4 ha spread along the length of the Wyre Estuary SSSI in ten small stands of some 0.2-0.5 ha each.

In the West Pennines area, reedbed is found at the Rivington reservoirs (2 ha) and Withnell Fold (1.2 ha).

Reedbed habitat also occurs below Clougha, within the Forest of Bowland AONB, at Quernmore Park in three separate reedbeds of 3.7 ha in total.

Current factors affecting the Habitat

Nutrient enrichment from agricultural fertilisers and run-off can lead to the direct loss of characteristic species associated with this habitat. Another result may be the weakening of reedbed stems because plants grow in spurts rather than in a gradual fashion. This can threaten the long-term viability of reedbeds.

Throughout Lancashire, most reedbeds receive little active management with the exception of the largest and most important sites such as Leighton Moss and Hawes Water. Natural succession to woodland occurs in the medium to long term unless management prevents this from taking place.

Water levels may be reduced quite substantially by surface and ground water abstractions and the lowering of water levels through agricultural operations. The drying out of reedbeds leads to the loss of certain species and encourages the development of alder/willow carr woodland, hastening the overall process of succession towards broadleaved woodland. Losses have occurred in the past due to landfill and waste disposal.

Routine management of ditches and riverbanks is still carried out in some instances in a fashion that causes the complete removal of reeds and other vegetation from whole stretches of watercourses.

Increasing recreational use of waterbodies and waterways (notably canals) can result in erosion of reedbeds.

The small size of most reedbeds and their isolation increase the potential for habitat loss or degradation.

Current Action / Mechanisms

The reedbeds at Leighton Moss, Hawes Water, Martin Mere and those along the Wyre estuary all occur within sites that have been designated as important at an international level for nature conservation.

Leighton Moss is designated as a Special Protection Area (SPA) under the EC Birds Directive and as a 'Wetland of International Importance' under the Ramsar Convention. The reedbeds at Hawes Water Moss and fringing Hawes Water are included within a candidate Special Area of Conservation (cSAC) notified under the EU Habitats Directive. Martin Mere is both SPA and Ramsar site. The reedbeds within the Wyre estuary are an integral part of the Morecambe Bay SPA/cSAC.

Marton Mere and Crag Bank are also notified under the Wildlife and Countryside Act as Sites of Special Scientific Interest (SSSIs).

These statutory designations are recognised in government planning guidance and in relevant planning authority documents such as the County Structure Plan and district Local Plans. In addition, eight non-statutory Biological Heritage Sites (BHSs) contain reedbed. These have been 'notified' to land owners/occupiers and to relevant local authorities.

MAFF's Countryside Stewardship scheme provides potential funding for land management for key UK BAP Priority habitats within each Natural Area. For the Lancashire Plain and Valleys Natural Area reedbeds are prioritised, especially those located within SSSIs or Biological Heritage Sites (BHSs). Countryside Stewardship has payments for reedbed and water level management.

The Environment Agency encourages the protection and appropriate management of reedbeds in its Local Environment Agency Plans. The Agency has also produced Water Level Management Plans for Leighton Moss SPA and Martin Mere SPA sites and draft one for Mere Sands Wood SSSI.

Regular reed cutting and/or burning prevents the accumulation of litter which helps rejuvenate reeds and also allows the colonisation of reedbeds by other plants which would otherwise become suppressed. This type of management also slows willow scrub invasion and helps maintain open water areas for feeding bitterns and other reedbed birds.

At Leighton Moss the RSPB carry out reed cutting and burning annually every autumn. A percentage of the reedbed is left uncut for at least five years, since a certain amount of litter in the reedbed is important for a variety of insects and birds.

At Hawes Water Moss, reedbed habitat has recently been restored by English Nature through scrub removal, the raising of water levels, and the dredging of new ditches and dykes to provide areas of open water.

30 ha of new reedbed is being created by the RSPB at Scout Barrow close to its Leighton Moss reserve. The project is taking place on land previously drained for agricultural purposes. It is funded by the Heritage Lottery Fund and by English Nature under its "Action for Bitterns" scheme. A further 2 ha of reedbed is being created by the Wildlife Trust at its Mere Sands Wood nature reserve near Rufford. A small area of reedbed has been established at a Lancashire County Council site near Scorton.

Though applying planning conditions the County Council has required the creation of reedbeds at a number of waste disposal and mineral extraction sites. For example, reedbed has been created around a newly-formed waterbody at Ulnes Walton. It is intended that reedbed creation should be part of the final restoration at Simonswood Moss and Brockholes.

Existing reedbed at Mere Sands Wood is part of the Constant Effort Site for bird ringing.

English Nature published a Natural Area profile for the Lancashire Plain and Valleys in 1999. It is has produced a leaflet to accompany this. Both highlight the importance and scarcity of wetland habitats such as reedbed and swamps.

Indicators of habitat quality:

Reedbeds are heading towards favourable condition when:

- Common reed is abundant and widespread throughout;
- Negative indicators such as goose grass, Himalayan balsam and stinging nettle are rare;
- Scrub willow invasion is less than 10% or rare throughout stands;
- No more than 20% of the total area of a wet reedbed shows a transition to fen/carr vegetation;
- At least 50% of the reedbed has a water table some 0.1 - 0.3 m above ground level during the summer;
- The extent of dry reedbed, with water below the surface during the summer is no more than 10-20% of the total area;
- No more than 50% of the reedbed is cut in any one year;
- The percentage of the reedbed uncut for more than 5 years is within the range of 0-10% of the total area;
- Cut material has been removed to prevent the build up of litter.

Table 1: NVC Communities associated with reedbeds in Lancashire [(1)]

Code	Community	Code	Community
S1	Carex elata swamp	S13	Typha latifolia reedbed
S2	Cladium mariscus swamp	S14	Sparganium erectum swamp
S3	Carex paniculata swamp	S19	Eleocharis palustris swamp
S4	Phragmites australis reedbed	S20	Scnoenplectus tabernaemontani swamp
S5	Glyceria maxima swamp	S21	Bolboschoenus maritimus swamp
S6	Carex riparia swamp	S25	P. australis - Eupatorium cannabinum fen
S7	Carex acutiformis swamp	S26	P. australis - Urtica dioica fen
S8	Schoenoplectus lacustris swamp	S27	Potentilla pallustris -Carex rostrata fen
S9	Carex rostrata swamp	S28	Phalaris arundinacea fen
S10	Equisetum fluviatile swamp	M27	F. ulmaria - Angelica silvestris tall-herb fen
S11	Carex vesicaria swamp?	M28	Iris pseudacorus - Filipendula

			ulmaria mire
S12	Typha latifolia reedbed	W2	Salix cinerea - Betula pubescens - Phragmites australis woodland

Table 2: Species associated with reedbeds in Lancashire

Common name	**Scientific name**	**Status**
Vascular plants		
Common reed	Phragmites australis	
Reed canary grass	Phalaris arundinacea	
Yellow iris	Iris pseudacorus	
Reedmace	Typha angustifolia	
Branched bur-reed	Sparganium erectum	
Reed sweet-grass	Glyceria maxima	
Water horsetail	Equisetum fluviatile	
Meadowsweet	Filipendula ulmaria	
Common water-plantain	Alisma plantago- aquatica	
Gipsywort	Lycopus europaeus	
Water dropwort spp.	Oenanthe spp.	
Hemp agrimony	Eupatorium cannabinum	
Divided sedge	Carex divisa	
Tufted sedge	Carex elata	
Bulrush	Schoenoplectus lacustris	
Great water dock	Rumex hydrolapathum	Ff4b
Fen sallow	Salix cinerea ssp. cinerea	
Greater-bladderwort	Utricularia vulgaris	Ff3
Water violet	Hottonia palustris	Ff4b

Invertebrates		
A cranefly	Nephrotoma crocata	NR
A hoverfly	Sphaerophoria loewi	RDB2
A non-biting midge	Orthocladius scanicus	
A non-biting midge	Tanytarsus gracilentus	
Least minor moth	Photedes captiuncula	NR
Barred carpet moth	Perizoma taeniatum	NS
Silky wainscot moth	Chilodes maritimus.	NS
(In addition there are many species of hoverflies [syrphidae], soldier flies [stratiomyidae] and of snail-killing groups [e.g. sciomyzidae].		

Table 2: Species associated with reedbeds in Lancashire (continued)

Birds		
Bittern	Botaurus stellaris	UK SAP
Marsh harrier	Circus aeruginosus	
Bearded tit	Panurus biarmicus	
Reed warbler	Acrocephalus scirpaceus	
Sedge warbler,	Acrocephalus schoenobaenus	
Water rail	Rallus aquaticus	
Reed bunting	Emberiza schoeniclus	UK SAP
Swallow	Hirundo rustica	
Mammals		
Otter	Lutra lutra	UK & LSAP
Water vole	Arvicola terrestris	UK & LSAP
Fish		
Eel	Anguilla anguilla	

Objectives, targets and proposed actions for reedbeds in Lancashire

Broad Objective:	**A. Achieve favourable conservation status on all existing reedbeds by 2015 (c.160 ha)**			
Operational Objective	Action Required (Priority)	Partners	Time-scale	Type
1. Ensure that all significant reedbeds (ie >0.5 ha) in the county are identified and assessed for their biodiversity value.	1. Identify and incorporate into a GIS database all reedbeds in Lancashire. (High)	EN, LCC, WT RSPB	S	RM
	2. Review all reedbed sites and designate significant ones as SSSI or BHS. (High)	EN, LCC, WT	M	SS
2. Protect existing reedbeds from drainage and over-abstraction.	1. Use Environment Agency consents to protect reedbeds from over abstraction, drainage or pollution. (High)	EA, EN, LCC, WT	O	SS
3. Promote appropriate management of existing reedbeds.	1. Review management of reedbeds. (Medium)	RSPB, EN, LCC, WT	S/M	LM
	2. Carry out necessary surveys to undertake this process. (Medium)	RSPB, EN, LCC, WT	M	RM
	3. Promote best practice for reedbed sites through Countryside Stewardship and demonstration days. (Medium)	MAFF, BHSP, FWAG, RSPB	M	A/SS
	4. Raise awareness of the value of reedbeds to landowners. (Medium)	EN, BHSP, FWAG	M	PR
	5. Use planning obligations through the statutory planning process to require appropriate management of sites associated with development proposals. (Medium)	LCC, LAs	O	P, LM
4. Rehabilitate reedbed on sites that have degraded reedbed habitats.	1. Identify mechanisms to facilitate appropriate management. (Medium)	EN, LCC, WT, RSPB, EA	M	SS

Broad Objective:	**B. Create 30 ha of new reedbeds by 2010.**			
Operational Objective	Action Required (Priority)	Partners	Time-scale	Type
1. Create at least one block of reedbed in excess of 20 ha.	1. Identify potential sites and select one for habitat creation. (High)	LCC, RSPB, EN, WT	S/M	LM
	2. Draw up a plan and implement. (High)	RSPB, LCC, EN, WT	M	LM
2. Promote small scale reedbed creation (0.5-2 ha) throughout the Lancashire Plain and Valleys Natural Area.	1. Promote the creation of reedbeds in small water storage reservoirs for irrigation purposes and also the treatment of sewage effluents. (Medium)	EA, FWAG, MAFF, NFU, CLA	S	SS
	2. Provide appropriate management advice on reedbed creation through Countryside Stewardship. (Medium)	MAFF	S	SS
	3. Use planning obligations through the statutory planning process to encourage reedbed creation associated with development proposals. (Medium)	LCC, LAs	O	P, LM
3. Monitor the status and management of reedbeds in Lancashire	1. Develop an agreed monitoring strategy. (Low)	EN, LCC, WT, RSPB, EA	M	RM
4. Promote reedbed creation on used mineral workings	1. Ensure that reedbed creation occurs during the restoration of Higher Brockholes Sand Quarry and Simonswood Peat extraction site. (High)	LCC, WT, EN	M	SS

Broad Objective:	**C. To promote and encourage public appreciation of reedbeds.**			
Operational Objective	Action Required (Priority)	Partners	Time-scale	Type
1. Raise public	1. Use appropriate	RSPB, EN, LAs	O	PR

awareness and understanding of reedbed issues.	means (leaflets, meetings, guides walks, local press and radio etc) to raise awareness. (Medium)	WT		

Other Action Plans:

- Woodland HAP
- Rivers and streams HAP
- Otter SAP
- Reed bunting SAP
- Water vole SAP

References & additional reading:

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