

# Reedbeds & Bittern

*25% of the North West  
freshwater reedbeds are found  
in Greater Manchester*



## Ecology

Nationally the largest reedbeds are found in river floodplains and low lying coastal areas such as estuaries, but can occur wherever water levels seasonally fluctuate and/or are no more than a metre in depth, such as lake margins, ditches and slow flowing rivers. In Greater Manchester the largest reedbeds are associated with waterbodies created by mining subsidence known locally as Flashes.

Without management or regular flooding, dead reed builds up reducing the depth of water. This enables colonisation and succession, first by species such as greater willowherb, followed by willow scrub and finally woodland.

Factors including size, age, water quality and geographical distribution will lead to differences in the plant, animal and

invertebrate communities found in reedbeds. For example, Bittern (*Botaurus stellaris*) require a matrix of reedbed in excess of 20ha to breed. Wintering Bitterns will often use smaller sites but move on in spring.

Characteristic birds of reedbeds in Greater Manchester include:

Reed Bunting	<i>Emberiza schoeniclus</i>
Water Rail	<i>Rallus aquaticus</i>
Reed Warbler	<i>Acrocephalus scirpaceus</i>
Bittern	<i>Botaurus stellaris</i>

Marsh Harrier (*Circus aeruginosus*) and Bearded Reedling (*Panurus biarmicus*) may also occur.

There are 700 invertebrate species in the UK associated with reedbed. Some 40 of these

are entirely dependent upon them, several of which occur in Greater Manchester.

Common reed is the dominant plant species associated with the priority habitat when it is good condition. Other species found include Reedmace, Lesser Reedmace, Yellow Iris, Sweet Flag, Branched Bur-reed and Duckweed. In drier areas stands undergoing the first stages of succession species, such as bittersweet, rushes, stinging nettle and marsh cinquefoil start to become increasingly common. Small areas of Carr woodland, usually of Willow and Alder, may also start to develop.

**Bittern**

The Bittern is confined almost entirely to wetlands dominated by reeds, where it feeds on fish, amphibians and other small water animals. The bird re-colonised the UK after extinction last century but has declined steadily as a breeding species in the last 30 years. The decline is due to direct habitat loss and habitat degradation through lack of appropriate management and eutrophication. In recent years there has been an increase in the number of Bitterns over-wintering in the UK and within the north west of England.

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**Notable species**

Common Reed	<i>Phragmites australis</i>
Common Reedmace	<i>Thypha latifolia</i>
Lesser Reedmace	<i>Typha angustifolia</i>
Yellow Iris	<i>Iris pseudacorus</i>
Branched Bur-reed	<i>Sparganium erectum</i>
Bittersweet	<i>Solanum dulcamara</i>
Marsh Cinquefoil	<i>Potentilla palustris</i>
Bittern	<i>Botaurus stellaris</i>
Marsh Harrier	<i>Circus aeruginosus</i>
Grey Heron	<i>Ardea cinerea</i>
Water Rail	<i>Rallus aquaticus</i>
Reed Bunting	<i>Emberiza schoeniclus</i>
Reed Warbler	<i>Acrocephalus scirpaceus</i>
Bearded Reedling	<i>Panurus biarmicus</i>
Water Vole	<i>Arvicola terrestris</i>
Water Shrew	<i>Neomys fodiens</i>
Common Frog	<i>Rana temporaria</i>
Common Toad	<i>Bufo bufo</i>
Silky Wainscot	<i>Chilodes maritimus</i>
Green Brindled Crescent	<i>Allophyes oxyacanthae</i>
Bulrush Wainscot	<i>Nonagria typhae</i>
Brown-veined Wainscot	<i>Archanara dissoluta</i>
Obscure Wainscot	<i>Mythimna obsoleta</i>
Small Wainscot	<i>Chortodes pygmina</i>
Large Wainscot	<i>Rhizedra lutosa</i>
Small Rufous	<i>Coenobia rufa</i>

**Priority Habitat Description**

Reedbeds are wetlands dominated by stands of Common Reed (*Phragmites australis*) where the water table is at, or above ground

level for most of the year. They include areas of open water and ditches, and may be associated with small areas of wet grassland and carr woodland (wet, swampy woods dominated by Alder and Willow).

## Current status and distribution

### National

In the UK there are approximately 900 reedbed sites, with a total of 5000 ha. Of these 900 sites only 50 are larger than 20ha (UKBAP).

The Bittern is a declining breeding species. It is confined almost entirely to lowland marshes in Norfolk, Suffolk and Lancashire. The UK population in 2001 increased for the fourth year in a row to thirty males at a total of eighteen sites. This compares to a peak of seventy pairs in the late 1960's when it bred in eight counties. Numbers are boosted in winter by continental immigrants.

### Greater Manchester

Although uncommon in the county, approximately 25% of recorded freshwater reedbed habitat in North West England lies in Greater Manchester, usually in man-made wetlands on former industrial sites.

Reedbed however covers < 1% of Greater Manchester and many are small and fragmented. The most extensive reedbeds

occur in the series of subsidence "flashes" in the Wigan area. The most significant of these are within Wigan Flashes Local Nature Reserve, part of which is designated as a SSSI. The site contains approximately 70 ha of reedbeds. Most reedbeds are designated as SBI's and managed as Local Nature Reserves.

### IMPORTANT REEDBED SITES IN GREATER MANCHESTER

Wigan Flashes	LNR	Wigan
Pennington Flash		Leigh

Bitterns do not currently breed in Greater Manchester. Winter visitors are, however, regularly recorded in the Wigan Flashes. Numbers are uncertain due to the secretive nature of the bird. But they are considered to be a rare but increasing non-breeding visitor.

### Legal

Reedbeds have no legal protection, except where it occurs in designated sites. However some species associated with this habitat are covered by a degree of legal protection including, Marsh Harrier and Bearded Reedling (Schedule 1, Wildlife and Countryside Act, 1981) and Water Vole (Schedule 5, Wildlife and Countryside Act, 1981). The Bittern is listed on Annex 1 of the EC Birds Directive and Appendix III of the Bern Convention. It is also protected in the

UK under Schedule 1 of the Wildlife and Countryside Act (1981) as amended.

## Factors affecting the habitat and species

- ◆ Lack of management, which accelerates seral succession that leads to overall deterioration of the quality of the reedbed.
- ◆ Excessive water abstraction causing lowering of water levels within existing reedbeds.
- ◆ Eutrophication caused by fertiliser run-off increases levels of nitrates and phosphates in the water. Whilst reeds can grow well in eutrophic water it can have significant impact on other wildlife, including the ability of the Bittern to feed.
- ◆ Disturbance caused by recreational users of water bodies and dog walkers.
- ◆ Water pollution caused by pesticides and heavy metals.
- ◆ Small and fragmented reedbeds increase the vulnerability of animal species to local extinctions, although they can provide stepping-stones to other larger blocks.

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- ◆ Recent declines of Bittern have been caused by a reduction in the availability of reedbeds and other swamps and marshes. Much of this land has been lost to drainage, but the abandonment of traditional management and uses of reed areas has also caused degradation of suitable sites. Water pollution has also adversely affected fish populations in some reedbeds.

## Current actions

- ◆ Formal designation of sites as SSSI and SBI's.
- ◆ Recent schemes in Wigan have been implemented to bring reedbeds into more positive management regimes. These schemes have allowed a total of 50 ha of reedbed to be brought into active management. Approximately 24ha of this is newly created reedbed (WLCT).
- ◆ Increasing use of Sustainable Urban Drainage Systems (SUDS) where reedbeds are an integral element of design.
- ◆ Ongoing reedbed planting, extension and management schemes at Amberswood, Bickershaw and Wigan Flashes.

## Objectives and targets

Objective	Target	Quantity	Target Date
Maintain current extent	Designate all reedbeds that meet the Greater Manchester SBI selection guidelines and create appropriate management strategies for maximum conservation of species.	210ha	2015
Achieve favourable condition	75% of all reedbeds managed for conservation in favourable condition. Reedbed habitat that is above 20 ha should be managed with consideration for Bittern.	210 ha	2015
Create and expand habitat	Identify opportunities to create new reedbeds and expand existing stands, considering bittern in appropriate areas.	32 ha	2015
Determine the current distribution of Bittern in Greater Manchester	Collate existing records and establish baseline data through further surveys to produce a current distribution map.	-	2010

## Proposed actions

1. Ensure that all relevant reedbeds and key Bittern sites are designated and have a current management plan that is being implemented. NE, GMEU, WT's, LA's, EA. 2010
2. All SSSI reedbeds to be in favourable condition and managed in accordance with

Natural England recommendations. NE, EA WT's, LA's. 2015

3. Identify possible areas to expand or create new habitat, and find relevant funding streams and submit bids. WT's, EA, NE, GMBP, LA's. 2010

4. Assist landowners and managers in managing reedbeds sympathetically and promote long-term positive management for Bittern. This could involve carrying out reedbed management training days. **NE, WWT, WT's, EA, LA's. 2009**
5. Establishment of a breeding Bittern population in Greater Manchester. Manage large reedbeds in accordance with best practice. **WT's, EA, RSPB. 2012**
6. Increase reedbed area through the construction of Sustainable Urban Drainage Systems (SUDS). Monitor all relevant planning applications and suggest SUDS where appropriate. **EA, LA's, GMEU. Ongoing**

**Lead partners**

<b>EA</b>	Environment Agency
<b>GMEU</b>	Greater Manchester Ecology Unit
<b>GMBP</b>	Greater Manchester Biodiversity Project
<b>LA's</b>	Local Authorities
<b>NE</b>	Natural England
<b>RSPB</b>	Royal Society for the Protection of Birds
<b>WLCT</b>	Wigan Leisure and Culture Trust
<b>WT's</b>	Wildlife Trusts
<b>WWT</b>	Wildfowl and Wetlands Trust

**Reedbeds & Bittern**

**Best practice guidelines**

Unless reedbeds are managed they will eventually dry out and become colonised by other plant species, leaf litter will accumulate over time, and it will develop into scrub and woodland. The natural processes can be accelerated by drainage and water abstraction, as well as, isolation from watercourses. To slow down or reverse this process a number of management practices can be used such as, rotational reed cutting, controlled burning of the 'litter', or by water level management.

Diversity in reedbed structure often depends on water within the system and it is therefore very important to consider the hydrology before deciding on management strategies. Best practice is to vary water levels, with water around 30 cm deep over the bulk of the reedbed. This allows fish to access the water body and encourages invertebrates, such as Water Hoglouse that helps control the build up of material and prevents drying out. Different depths and flooding regimes are needed for different species and therefore this needs to be considered in the management plan.

**Management for Bittern**

- ◆ A range of reed/fen communities (dependent on site conditions) is

desirable. This can be achieved through rotational cutting.

- ◆ Development of reedbed fringe communities provides suitable feeding for Bittern, increasing the amount of reed/water interface with suitable ditches and pools.



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- ◆ Prevention of seral scrub succession.
- ◆ Monitoring water quality for invertebrate community and flora and fauna.
- ◆ Ensure ice-free areas in severe winters.
- ◆ Control of disturbance by humans, dogs and potential predatory species e.g. mink.

**Further information on best practice management for reedbeds and bittern can be found here:**

[Reedbed Management for Bitterns](#) – RSPB

### Links to relevant BAP's

Grasslands  
Water Voles  
Great Crested Newt  
Ponds and Lodges  
Canals

### References

Hawke, C. J. José, P.V. (1996) Reedbed Management For Commercial and Wildlife Interests. RSPB.

Burgess, N. Ward, D. Hobbs, R. & Bellamy, D (2005) Reedbeds, fens, acid bogs IN *Managing Habitats for Conservation*. Edited by Sutherland, W.J. & Hill, D. A.

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