

# Freshwater reedbed

## 1. A Definition

Reedbeds are made up of stands of common reed, *Phragmites australis*, which can form dominant stands in both fresh and brackish water. Fresh water reed beds are found where there is little flow of water, but where there is a high water table creating anaerobic soil conditions which only a few plants can tolerate. Although reedbeds are species poor in their nature this by no means the only plant species found, and a diversity of aquatic and emergent plants can be found.



Within reedbeds there are often open ditch systems, often with their origin in the economic activity of reed cutting, but which also create an edge effect and add to the diversity of the habitat. Larger reedbeds tend to incorporate areas of open water and ditches, and small areas of wet grassland and carr woodland.

Devon's topography does not lend itself to the natural development of large fresh water reedbeds, and the few that have developed are on more gentle south coast valleys. Elsewhere, small beds have developed, around reservoir margins, in flooded quarries, along river banks or in back waters with long thin fringes of reed and other tall emergents.

## 2. Why an Action Plan?

Reedbed is a very rare habitat in the UK, and in Devon large areas are not common. However, those that are found are an important resource for the wildlife they support.

Reedbed is vulnerable to the factors in the environment which are affecting most other wetland habitats; pollution, drainage and over abstraction of water all threaten reedbeds.

The extent of individual reedbeds is a very important factor in the ecology of those species for which the habitat is critical. A strategic plan can play the vital role of ensuring that where possible every opportunity to expand and link areas of reedbed is taken. An action plan can help different organisations to work together to achieve protection of existing reedbeds and make the most of opportunities for the creation of significant new areas of this important habitat.

### 3. Characteristic wildlife

Reedbeds are characteristically a species poor habitat but to a number of the species it does support it is critical. The most characteristic amongst these is the bittern a secretive bird which feeds on fish, particularly eels, and requires extensive areas of reedbed (over 10 ha) in which to breed. Other characteristic breeding birds are the reed warbler and bearded tit.

Reedbeds can support large numbers of amphibians especially if there are areas of open water such as ditches associated with them as there often are. Predators such as grass snakes and grey herons are then attracted to these areas and can provide an appealing spectacle to visitors.

Colour is also added to the reedbed habitat by the presence of adult dragonflies and butterflies in the summer months.



### 4. Special species

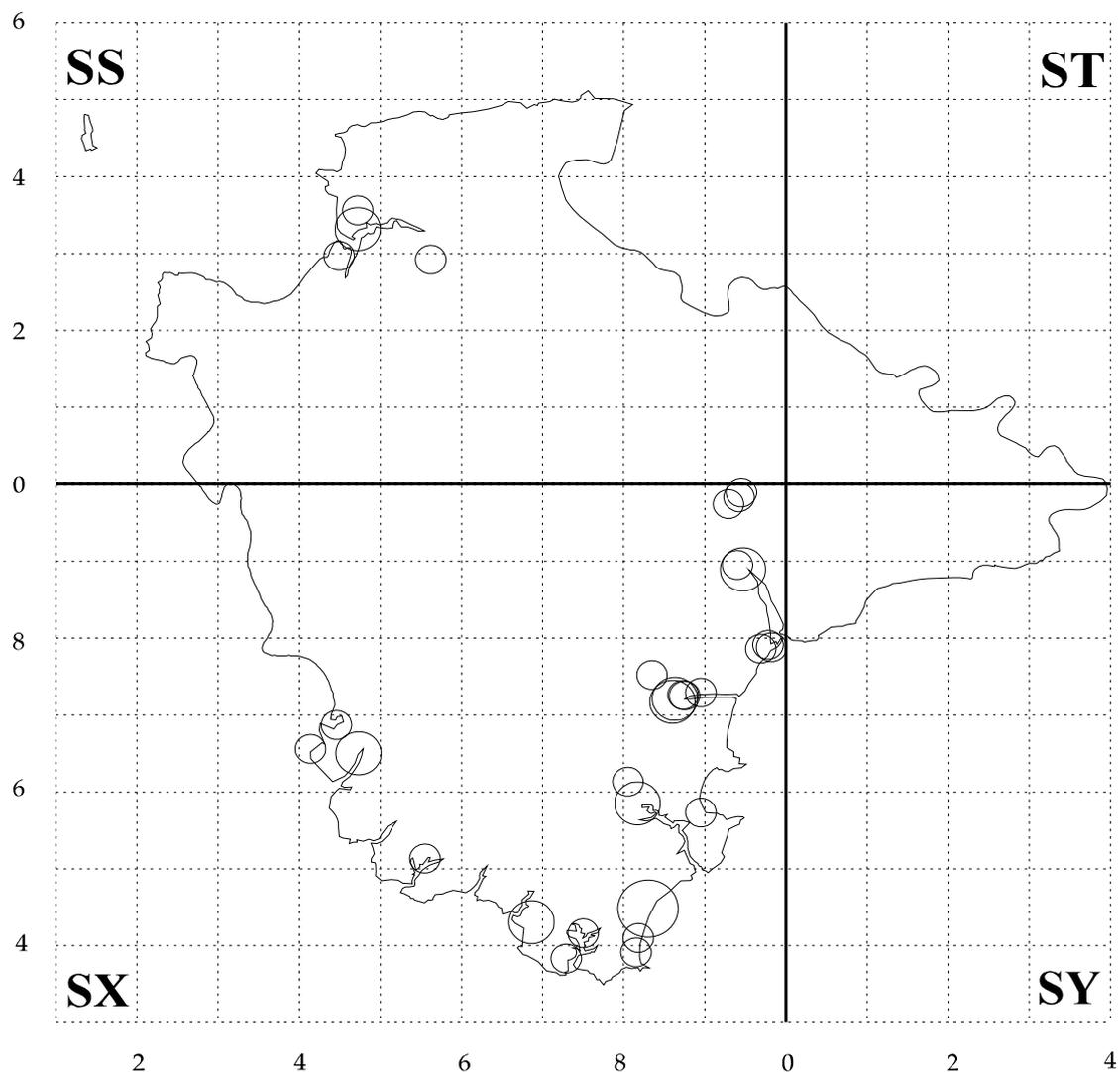
The following species of conservation concern are associated with lowland reedbeds. Species marked (p) are 'Species of Principal Importance in England' (NERC Act, S.41).

- **Mammals:** water vole (p<sup>\*</sup>), otter (p)
- **Birds:** aquatic warbler (p), bittern (p), reed bunting (p), water rail, Cetti's warbler
- **Moths:** reed leopard
- **Molluscs:** *Pseudamnicola confusa*, a mud snail

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\* Currently thought to be extinct in Devon.  
Devon BAP  
Version: May 2009

## 5. Freshwater reedbed distribution in Devon (1998)



Freshwater reedbed distribution and area



(Data supplied by Devon Bird Watching and Preservation Society)

## 6. Current extent (1998)

In Devon there are two fresh water reedbeds over 10 hectares in size, at Slapton Ley and South Milton Ley. Other large areas are brackish, being found in estuaries, but are not dealt with in this plan. It is estimated that there are c.100 hectares of the habitat (on sites greater than 5 hectares) in the County, which represents 17% of the Region's resource and 12% of the UK area of about 5,000 hectares.

## 7. Current problems for freshwater reedbed in Devon (1998)

**Poor water quality** and siltation associated with agricultural run-off. Slapton Ley, Devon's largest fresh water reedbed, is fed by water from water courses that are enriched by an arable catchment. This has led to eutrophication and sediment build up in the Ley, causing concern that its biological and wildlife value is being impaired. This will lead to the eventual disappearance of the reedbed if unchecked. The reedbed suffers from a combination of complex problems. In addition, as a dynamic geomorphological feature, changes to the barrier beach at Slapton, including breaching, could have an affect on the habitat.

**Lack of management** following the cessation of traditional management practices can allow natural succession to carr scrub and woodland.

Inappropriate water level **management** can lead to over drying of the reedbed, encouraging willow succession which if unchecked will rapidly spread and increase the drying out of the habitat.

**Infill of flooded quarries**, including 'dormant' areas within working sites, or their restoration without sufficiently shallow areas for the development of reedbeds, may contribute to both direct habitat loss as well as missed opportunities for habitat creation.

**Small areas** of this habitat do not support the wildlife species for which they are critical. For many bird species areas greater than 20 hectares are required. Small isolated pockets will not support long term viable populations of many other species, although may still be important for some invertebrate species.

## 8. Recent changes in extent (1998)

This habitat is not particularly common in Devon, and in terms of area may not have suffered. Its quality is thought to be suffering as a result of many factors discussed in this plan.



## 9. Current site protection (1998)

Slapton Ley is an NNR, the Exe estuary, which supports brackish merging into freshwater reedbed is a SSSI, SPA and Ramsar site. Other significant areas of the habitat in Devon which are designated SSSI are South Milton Ley and Braunton Swanpool.

## 10. Biodiversity planning context

The Devon Biodiversity Action Plan forms a key link in the chain of biodiversity planning running from the National UK Plan, through regional guidance, to local delivery.

### National BAP Context

Habitat of principal importance in England (NERC Act, S.41):

- Reedbeds

Current national BAP targets can be viewed on the [Biodiversity Action Reporting System](#) (BARS).

### Regional BAP Context

Regional targets for priority BAP habitats can be found on the website of [Biodiversity South West](#).

Associated Action Plans within the Devon BAP:

- Pits, quarries and cuttings
- Rivers, streams, floodplains and fluvial processes
- Dynamic coastal landforms and habitats
- Water vole
- Otter

## 11. Biodiversity objectives and targets for freshwater reedbed in Devon (1998)

*Please note: objectives and targets have not yet been reviewed.*

### Objective 1

To ensure the survival of all reedbeds over 0.5 hectares.

**Target:** Maintain area and quality of existing reedbeds. Ongoing.

## Objective 2

Ensure that all sites above 10 hectares are managed primarily for their nature conservation interest, and smaller sites are managed for key species of conservation.

Target: By 2000.

## Objective 3

Create new reedbed on land of low nature conservation importance.

Target: Create 40 hectares of new reedbed, in blocks of at least 20 hectares, by 2010.

## Objective 4

Create smaller areas of new reedbed (under 20 hectares) on sites of low conservation importance, prioritising sites adjacent to or near existing reedbeds and wetlands.

Target: Create a further 20 hectares on small sites across the county by 2010.

## 12. Wider benefits from pursuing these objectives

The pursuit of the objectives and targets set out in this plan will not only benefit the biodiversity of freshwater reedbeds. Conservation has wider benefits and advantages for society, by providing a resource which is the basis of many aspects of the local economy, and by adding to the quality of life of the people of Devon in ways which are beyond financial measure. Thus enhancing the interests of biodiversity will also enhance the interests of society as a whole:

- Thatching
- Multi-purpose wetland functioning
- Nutrient stripping
- Fisheries
- Wildlife recreation

## 13. Priority or indicative actions for freshwater reedbed in Devon

Action	Key Partners
1. Ensure existing reedbeds are protected by all catchment management planning (including sympathetic water abstraction policies) and appropriate coastal zone management.	EA; LAs; Estuary Managers; SWWSL
2. Ensure that all sites >0.5 ha are identified as County Wildlife Sites and are identified in Local Plans.	DWT; LAs; EA; NE; DBRC
3. Encourage the creation of new reedbed sites and expansion of existing sites, particularly on land of low nature conservation interest.	DWT; RSPB; NE; FWAG
4. Encourage the conservation management of reedbeds by providing advice to site owners and managers, including funding options and the economic benefits of reedbed management.	DWT; RSPB; NE; EA; LAs
5. Promote and advise on the use of reedbeds for the treatment of pollutants/sewage effluent, ensuring that this takes into account the potential contamination of wildlife species, such as colonising eels, and their predators, such as otters.	EA; SWWSL; HA
6. Encourage research on heavy metal accumulation in reedbeds fed by contaminated water and the availability to, and impacts of, pollutants on wildlife species such as eel.	EA; HA; SWWSL; RSPB; DWT; Universities
7. Provide and publicise material to promote the wildlife importance of reedbeds; their conservation, and their economic use as a market for UK reed.	NE; EA; DWT; RSPB; LAs

Freshwater Reedbed Action Plan Champion: Devon Bird Watching and Preservation Society

Abbreviations used in text and tables:

BAP	Biodiversity Action Plan
CWS	County Wildlife Site
DBRC	Devon Biodiversity Records Centre
DBWPS	Devon Bird Watching and Preservation Society
DWT	Devon Wildlife Trust
EA	Environment Agency
HA	Highways Agency
LAs	Local Authorities
NE	Natural England
RSPB	Royal Society for the Protection of Birds
SSSI	Site of Special Scientific Interest
SWWSL	South West Water Services Ltd

Discontinued body referred to in text:

MAFF Ministry of Agriculture, Fisheries and Food