

Bittern (*Botaurus stellaris*)



1 Definition

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 in the last 30 years due to degradation of its habitat through lack of appropriate management as well as eutrophication. The population is showing signs of recovery following targeted management at key sites, former sites and new sites. It is still one of the rarest UK breeding birds. Suffolk is by far the most important county in the UK for this species.

There are strong links between this plan and those of reedbed, eutrophic open water, and white-mantled wainscot. Sea-level rise issues that are also featured in plans for the coastal habitats affect many key reedbeds.

2 Current status

2.1 National

Declining, localised and rare in the UK, confined almost entirely to lowland marshes in East Anglia, Lincolnshire, and Lancashire. It is a red list species having declined by over 50% in the last 25 years. The UK population peaked at c.80 booming males in 1954 and declined to about 11 in 1997. Since 2002 the population has increased to 31. The number of nesting females in the UK has increased from 15 in 1997 to 26 in 2002. Continental immigrants boost numbers in winter.

2.2 Local

In 1997, eleven booming males were heard from two reedbeds on the Suffolk coast. In 2001 there were 26-32 booming males. The number of nesting females increased from 15 in 1997 to 21 in 2001. Nesting occurs in all five sites.

In 2002 the Suffolk coast supported 45% of the booming males, 65% of the nesting females, and over 76% of the fledged young in the UK.

These percentages are slowly decreasing as Suffolk birds continue to re-populate other parts of the country. The continued success of the Suffolk reedbeds is the most vital component of the UK bittern recovery programme.

The Suffolk Coast supports 57% of the booming males, 76% of the nesting females, and over 76% of the fledged young in the UK and is the most vital component of the UK bittern recovery programme.

	UK 1997	UK 2002	Suffolk 1997	Suffolk 2002
No of booming males	11	31	4	14
No of reedbeds with booming males	7	20	2	5
No of nesting females	15	26	8	17
No of reedbeds with nesting females	7	11	2	5

3 **Current factors affecting the bittern in Suffolk**

- Loss of suitable breeding and feeding areas in fens and reedbeds through natural succession and lack of appropriate management (particularly cutting and water management) and loss of appropriate open water/reedbed interface.
- Sea level rise impacting upon the reedbeds
- Policies for flood defence and the impact of managed retreat
- Degradation of habitat and fisheries through eutrophication
- Food availability, especially eels, affected by inappropriate management of watercourses
- Un-seasonal freshwater flooding, especially during the nesting season
- Vulnerability of species to severe winter weather
- Predation on nesting bittern

4 **Current Action**

4.1 **Legal Status**

- The Bittern is listed on Annex I of the EC Birds Directive and Appendix II of the Berne Convention.
- It is protected in the UK under Schedule 1 of the Wildlife and Countryside Act 1981.
- All remaining Bitterns breed on SSSIs and SPAs, which are managed as nature reserves.

4.2 Management, research and guidance

- RSPB continues to carry out detailed ecological studies of Bitterns.
- Successful management work has been carried out by EN and NGOs to benefit Bittern on all current breeding sites. EN has operated a Bittern Recovery Project and LIFE funding had been granted for three years to support management for bitterns at four sites in Suffolk. A second Bittern LIFE project includes improving management at two sites in Suffolk.
- The RSPB has created a large new reedbed (1997) to benefit bitterns at Lakenheath in the Suffolk Fens

Key requirements for bittern:

- A breeding site should include at least 20 hectares of wet reedbed, with 250 metres of open water/reedbed margin for each hectare of reed. Pool margins are better than ditch margins. Scrub should be minimal in these areas.
- Water depths should be 20-30cm within the reedbed for nesting and feeding, and these levels should be maintained from February onwards.
- Fish are the most nutritious food and so the fishery should be carefully managed.
- The water quality should be good enough to support high biomass of surface-feeding fish such as Rudd. The water should remain clear enough to enable bitterns to hunt fish.
- Eels are a preferred prey, so water control structures should enable eels to migrate into the site.
- Foraging bitterns use reeded ditches in adjacent habitats, if they support a good fish population.
- Wet reed is an early successional habitat, and so needs active management to prevent the habitat degrading.
- Efforts should be made to maintain areas of open water during prolonged freezes. Alternatively, supplementary feeding sites could be provided at such times.

More details are included in 'Reedbed Management for commercial and wildlife interests' (Hawke & Jose, 1996, published by RSPB). Advice can sought from the RSPB's Advisory Department.

5 Action Plan Objectives and targets

1. *Increase the population to 25 booming males by 2010 by ensuring appropriate management of the existing large reedbeds where Bittern once occurred.*
2. *Increase the population of nesting females to 25 females by 2010 and 35 by 2020, including new reedbeds such as Lakenheath, and any on the coast.*
3. *Initiate work to secure the long-term future of Bitterns in Suffolk by providing suitable habitat for a population of not less than 35 booming males by 2020.*
4. *Allow movement and expansion of population to areas secure from the threat of sea level rise, by creating suitable habitat further inland.*
5. *Develop new reedbeds and broad reed-dominated pool margins as means of developing new populations away from the coast.*

6 **Bittern: Proposed Action with Lead Agencies**

Action	Date	Partners
POLICY AND LEGISLATION		
Promote development and enhancement of suitable Bittern habitats through all partner organisations' policies and plans.	2004 2005 2006 2007	EA, IDBs, EN, Local Authorities, RSPB, SWT,
SITE SAFEGUARD AND MANAGEMENT		
Ensure reedbeds contain sufficient pools and ditches with wet reed margins for feeding Bitterns.	2006	RSPB, EN, SWT
Consider designation as SSSI, any sites which become important for Bittern.	2004 2005 2006 2007	EN, SBRC
Ensure all significant breeding and over-wintering sites are in favourable condition for Bittern by 2007 (see management, research, and guidance in section 4 above).	2007	RSPB, EN, SWT, EA, BA, DETR, IDBs
Promote creation of 2 new suitable sites for Bittern by 2007 such as mineral extraction sites, long term set-aside etc.	2007	RSPB, LAs, EN, SCC, EA
SPECIES MANAGEMENT AND PROTECTION		
Organise a co-ordinated mink culling programme along the Suffolk coast to form a protective umbrella for key sites (this will also benefit several other key species, notably water vole).	2005	RSPB, EA, EN, SWT
Maintain ice-free areas in reedbeds during spells of cold weather.	On-going	RSPB, EN, SWT
Consider desirability of supplementary feeding in severe winters (Guidance available from RSPB & EN).	On-going	EN, RSPB, SWT
Improve fisheries management to enhance population at key sites.	2004	RSPB, EN, SWT, EA

RESEARCH AND MONITORING		
Monitor reedbed habitats, food availability and water quality at key Bittern sites as part of the National monitoring programme.	2005 2007	RSPB, EN, EA, SBRC
Monitor and record number of booming Bitterns and number of nesting attempts.	2004 2005 2006 2007	RSPB, EN, SWT, SBRC
Undertake trial monitoring of east coast eel runs (food supply).	2006	Wetland Habitat Working Group
Assess the suitability and management of new and potential sites for Bitterns. Identify the features of each site and the principal actions required to create them.	2005 2006 2007	SBRC, RSPB, EN, SWT, BA, EA, , LAs
ADVISORY		
Advise reedbed owners and managers of Bittern requirements in order to take appropriate management for this species through site inspections, literature and advice.	On-going	BAP Wetland Working Group, EN, RSPB, BA,
Seek opportunities to promote reedbed creation schemes and provide management and creation advice to landowners, industry & Local authorities.	2004 2005 2006 2007	BAP Wetland Working Group, EN, RSPB, SWT, BA, SCC
COMMUNICATIONS AND PUBLICITY		
Use the Bittern to promote the importance of reedbeds and their conservation in Suffolk and raise awareness of the huge contribution Suffolk's reedbeds make towards the UK Bittern population.	2004 2005 2006 2007	BAP Wetland Working Group, EN, RSPB, BA, SWT, EA