Isle of Wight Biodiversity Action Plan

Woodland Bats Species Action Plan

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1. Introduction

The Woodland Bat HAP covers a suite of old forest bat species, which are dependent upon woodland and wood-pasture habitat for their survival. It is mainly relevant to Bechstein's Bat (*Myotis bechsteinii*) and Barbastelle Bat (*Barbastella barbastellus*), which are particularly important and considered to be rare both in the UK and throughout their range. Much remains to be discovered about the autecology of individual species but, on current knowledge, it is considered that an action plan to cover all bat species which are highly dependent upon trees will benefit a number of species.

All British bat species are protected under UK and European legislation. Bechstein's and Barbastelle bats have been classified as Priority Species by the UK Biodiversity Group and have their own national Species Action Plans, published in volume 1 of the UK Biodiversity Group *Tranche 2 Action Plans* (1998). Both Bechstein's and Barbastelle bats have been identified in the Isle of Wight Biodiversity Audit (July 2000) as species requiring urgent action.

2. Current Status

2.1 Ecology and Habitat Requirements

Woodland bats and, in particular Bechstein's and Barbastelle bats, are poorly understood species. Recent technological advantages have assisted studies of these species in the field and advanced our knowledge of their ecological requirements but, these are still early days in developing an understanding of their habitat needs. Studies of this nature are costly and can only be carried out by experienced, licensed bat workers, who are few and far between. Advances in our understanding will result from studies both here and elsewhere and to enable this, it is essential to build-up good communication links with organisations and bat workers to disseminate and share knowledge.

Bechstein's bat is a nationally rare tree dwelling bat, mostly associated with mature and veteran trees, usually in broadleaved woodland. A few individuals have been found in underground sites during hibernation, but most are believed to roost in trees all year. They appear to be a relatively sedentary species, with few individuals travelling more than 1 km. They feed on invertebrates, including spiders and resting day-flying insects, which are picked from branches and leaves. Maternity roosts are small, generally less than 30, but exceptionally up to 60.

Barbastelle bat is primarily a woodland species. It will use hollow and storm damaged trees for summer roosts and for hibernation. Old buildings, such as churches, timber framed barns and underground structures such as railway tunnels and stone mines are also used for roosting. Little is currently known about foraging habitats of this species, although recent research suggests that they will frequently travel more than 5 km to forage, using hedgerows and riparian corridors as flight lines. They specialise on moths as prey items.

Noctule bats (*Nyctalus noctula*) are highly dependent upon trees for roosting and foraging. They are much easier to detect and identify than other woodland bats and their local abundance and distribution appears to be dependent upon the availability of large old trees providing suitable roosting cavities as well as suitable feeding habitat.

Natterer's bat (*Myotis natteri*), Whiskered bat (*M. mystacinus*), Brandt's bat (*M. brandtii*), Daubenton's bat (*M. daubentoni*) and Brown Long-eared bat (*Plecotus auritus*) all occur on the Isle of Wight and are known to use trees for roosting. They are likely to benefit from the Actions in this plan although they are not wholly dependent upon trees and woodland for roosting and feeding.

2.2 Population and Distribution

The **Bechstein's bat** is considered to be rare in the UK. Nationally, it occupies a restricted distribution across the south of England, with population centres in Devon, Dorset, Gloucestershire, Hampshire, Isle of Wight, Somerset and Wiltshire. Very few maternity roost sites have been identified but these include several in Surrey and on the Island. Less than 20 hibernation roosts are currently known in the UK. The overwhelming majority of records are of isolated individuals. The UK population size is unknown but the most recent population estimates are of around 1500 individuals, with overall population trends unknown. Bechstein's bat is widespread but rare throughout continental Europe.

On the Isle of Wight, there have been around 45 records of Bechstein's bat (up to August 2004). The first record dates from 1901 and one or two records are now made in most years. The majority of records are of single, grounded individuals and sites are well distributed across the Island, with no obvious concentration of records. As a result of radio tracking carried out in Briddlesford Copses in 2002, 2003 and 2004, several maternity roost sites have been located within the Briddlesford Copses woodland complex. Early indications are that these roost sites are used by a single breeding group of bats. To date, all breeding roosts at Briddlesford have been located in woodpecker holes in mature ash trees.

The **Barbastelle bat** is considered rare in the UK. Nationally, this species is widely distributed in England and Wales, with population centres in southwest and mid-west England and Norfolk. In the UK, less than five breeding roosts and less than 30 hibernation sites have been currently identified. The UK population size is unknown but the most recent population estimates are of around 5000 individuals with overall population trends unknown. Barbastelle bat is widespread in Continental Europe, but appears to be rare almost everywhere.

On the Isle of Wight there are far fewer records for this species compared to Bechstein's bat. There have been just 12 records (up to August 2004), the first of these in 1911. In 2004, the first maternity roost was located, in the Briddlesford Woods complex. Records have come from various parts of the Island.

The **Noctule bat** appears to be widely distributed but very local. On the Island, most records are from the well-wooded areas in the north. Several tree roosts have been located.

2.3 Important Sites

Briddlesford Copses SSSI was proposed as a candidate SAC by UK Government in January 2004 for Bechstein's bat, following the

discovery of a maternity roost in 2002. Further surveys of the Briddlesford woodland complex, commissioned by the owners, the People's Trust for Endangered Species, has indicated that a number of tree roosts in several of the smaller woods surrounding Briddlesford Copse are used by the same group of Bechstein's bats. The cSAC also includes some Forest Enterprise managed woodlands in Firestone Copse and Combley Great Wood. These have not been surveyed for Bechstein's bat, but they are highly likely to occur.

In 2003 and 2004, some limited mist netting has been carried out in two privately owned woods, Chillingwood Copse near Havenstreet and Wroxall Copse near Ventnor. Bechstein's bats were caught in both these woods and this, together with the information from grounded bats, raises the distinct possibility that this species may well be widespread on the Island in suitable woods. It has been suggested, on current information, that the Isle of Wight and Wiltshire may be core areas for Bechstein's bat in this country.

Even less is known about the status of Barbastelle bat on the Island but this species has been regularly mist netted in Briddlesford Copses since 2002 and a maternity roost was located here in 2004 (just outside of the SSSI and cSAC). In 2003, a male Barbastelle bat was mist netted in Wroxall Copse, near Ventnor.

2.4 Protection

Both Bechstein's and Barbastelle bats are listed on Appendix II of the Bonn Convention (and its agreement on the Conservation of Bats in Europe, 1994), Appendix II of the Bern Convention, and Annexes II and IV of the EC Habitats and Species Directive. They are protected under Schedules 5 and 6 of the Wildlife and Countryside Act 1981. The 1996 IUCN Red List of Threatened Animals classifies this species as *Vulnerable* (VU A2c).

3. Current Factors Affecting Woodland Bats

Threats to these species are poorly understood. A low population density, exacting habitat requirements and low rates of reproduction make woodland bats particularly vulnerable to the following factors:

- Loss and fragmentation of suitable CC deciduous woodland habitat.
- Loss, destruction and disturbance of roosts or potential roosts, particularly in old trees.
- A reduction in numbers of insect prey due to habitat simplification acting through factors such as conversion of broadleaved to coniferous woodland, fertiliser use, pesticide residues in livestock dung, intensive grazing regimes and loss of wetlands and other suitable habitats.
- Loss and in appropriate management of linear landscape elements (flight line features, river corridors, tree lines and hedgerows).

4. Current Action

4.1 National

- A review of all records has been undertaken by the Bat Conservation Trust, funded by English Nature's Species Recovery Programme (SRP). The species is also included in the UK National Bat Monitoring Programme (NBMP), which aims to establish baseline data for the species and propose a long-term monitoring strategy.
- A network of local voluntary bat groups has been established, working closely with the staff of statutory nature conservation organisations. The volunteers are routinely consulted over

actions which may be a threat to bats, and other issues relating to Schedule 5 of the Wildlife and Countryside Act 1981.
- Some known hibernation sites have been physically protected against disturbance (e.g. grilling of entrances to caves). Some of these sites are within SSSIs.
- Research is being carried out in Norfolk, Devon and West Sussex, with the aim of locating roosts and identifying habitat requirements of the Barbastelle and Bechstein's bats.

4.2 Local

- The local Bat Group (IWBG) has gathered together all records of woodland bats and has assisted the Bat Conservation Trust (BCT) in providing records for national assessment.
- Briddlesford Copses has received legislative protection as a SSSI and cSAC. Conservation Objectives for the site include the sensitive management of old trees for wildlife (1).
- Some organisations and private landowners have commissioned woodland bat surveys.

The woodland bat populations on the Isle of Wight form part of a broader native woodland mammal fauna that includes other rare and threatened species, most notably red squirrel and dormouse. Action taken to manage and enhance habitats for woodland bats should also assist this broader assemblage of native woodland mammals.

5. Objectives

The overall aim of this Plan is to protect and, where possible, increase the distribution and population of woodland bats, in particular Bechstein's bat and Barbastelle, in the Isle of Wight. This broad aim translates into the specific objectives set out below. Where feasible, objectives have been allocated targets against which achievement can be measured. The Proposed Action table in section 6 identifies the action to be taken to meet these objectives. The effectiveness, or otherwise, of this plan is heavily dependent upon developing an increased understanding of the distribution and ecological requirements of these species, both at a national and local level.

The 'Proposed Actions' table in Section 6 identifies the action to be taken to meet these objectives.

	OBJECTIVES	**PROPOSED ACTIONS**
A	Maintain the existing populations of Bechstein's and Barbastelle bats through the protection of roost sites and feeding areas.	1,2,4,5
B	Where possible, enhance the present and potential population size and range of Bechstein's and Barbastelle bats.	3,6
C	Improve knowledge and understanding of the ecological requirements, population size and distribution of Bechstein's and Barbastelle bats through research and survey. [Develop and implement a programme of regular monitoring of population size, range and roost sites. Identify more roost sites.]	7,8,9,10,11, 12
D	Communication and education to promote awareness of the status and needs of woodland bats.	5,13,14,15,16

6. Proposed Actions

The following table lists the actions required to achieve the objectives set out in this Plan. Each action has been assigned to one or more 'Key Partners'.
'Key Partners' are those organisations that are expected to take responsibility for the delivery of actions assigned to them, according to the targets set in this Plan. Other organisations may be involved in the delivery of action, and they have been indicated in the 'Other' column.
N.B. organisations have been listed alphabetically.

KEY TO ORGANISATIONS:
BCT Bat Conservation Trust DEFRA Dept of Environment, Food & Rural Affairs EA Environment Agency EN English Nature FC Forestry Commission (including Forest Enterprise) FWAG Farming and Wildlife Advisory Group HIWWT Hampshire & Isle of Wight Wildlife Trust I2K Island 2000 Trust IWBG Isle of Wight Bat Group (a section of the Isle of Wight Natural History & Archaeological Society) IWC Isle of Wight Council PTES People's Trust for Endangered Species

Key to symbols in Action Table:

◆ Review to be completed by the indicated year.

◆⇨ Design or production of a plan/strategy to be completed by this year and then followed by its implementation.
➔ To start by the indicated year and usually followed by ongoing work.

⇨ Work that has already begun and is ongoing.

	ACTION	DELIVERY BY		YEAR						MEETS OBJ.
		Key Partner	Others	2005	2006	2007	2008	2009	2015	
Site and Species Policy and Protection										
1	Take account of the conservation requirements of woodland bats in land management incentive schemes.	FC, DEFRA	WW, IWC, I2K	➔						A
2	Ensure the long-term protection of known roosts and suitable roosting and feeding habitats surrounding these sites.	EN, FC, PTES	IWC, WW, IWBG	⇨						A

3	Ensure that reviews of Forest Design Plans take into account requirements of woodland bats (i.e. implement policy to restore PAWS throughout the IW and seek ways of increasing the number of potential bat roost sites within these woods – retain all old trees, increase number of dead and decaying trees, encourage woodpeckers etc)	FC	EN, IWC, IWBG	➔						B
Site and Species Management										
4	Encourage sympathetic management of land adjacent to known and suspected breeding roosts to benefit foraging bats.	DEFRA, FC, PTES	All	⇨						A
5	Advise tree surgeons, tree wardens and foresters operating in the vicinity of known or suspected roosts of management that will assist the conservation of woodland bats.	IWBG	FC, WW		➔					A
6	Develop guidelines and plans for landscape scale woodland management and creation on the IW that will enhance habitat for woodland bats (and other rare woodland mammals)	???			? ➔					B
Research, Survey and Monitoring										
7	Continue to search for potential bat roosts in trees e.g. at Briddlesford plotting old ash trees with woodpecker holes that provide potential roost sites.	IWBG			⇨					C
8	Undertake mist netting/radio tracking in likely foraging areas to locate roosts.	PTES, FE, EN, landowners.	IWBG	⇨						C
9	Establish and implement monitoring protocols for woodland bats.	BCT			?					C
10	Contribute to national initiatives for population assessments, monitoring and research and facilitate research into habitat requirements.	EN		⇨						C
11	Establish a county database for bat records.	IWBG		⇨						C

12	Develop a partnership project for research and survey of woodland bat ecology and landscape management with funding from EU LIFE Nature fund	EN, FC, PTES, HIWWT, NT, IWC etc.			?					C
Communication, Awareness and Promotion										
13	Develop links with national groups and individuals working with woodland bats.	EN, PTES, FC, IWBG	NT, WW	⇨						D
14	Raise awareness of bat conservation issues and habitat requirements of woodland bats.	EN, WW,			? ➔					D
15	Raise awareness of the importance of old trees as roost and hibernation sites.	IWC, WW			? ➔					D
16	Give advice to landowners in the vicinity of roosts on favourable habitat management of woodlands and riparian habitats.	FC, WW	DEFRA, FWAG	⇨						D

6. Links with other Plans.

It is likely that implementation of this action plan will benefit Red Squirrels (see Red Squirrel Species Action Plan) and Dormice. The plan should be considered in conjunction with the Woodland Habitat Action Plan and Farmland Habitat Action Plan.

1. SAC advice for maintenance of populations of Bechstein's Bat at Briddlesford Copse.

Bechstein's bats use a range of woodland features for foraging, breeding and roosting. Retention of trees with woodpecker holes, cracks and other cavities is essential, including dead or dying trees or limbs. A well-developed woodland understorey, such as hazel coppice, should be maintained around roost sites to ensure humidity and other microclimatic attributes are conserved and to provide foraging habitat. Any coppice should be managed on as long a rotation as 15-20 years. Bechstein's bats tend to forage within 2km of their roost site. They use woodland rides and edges for commuting so it is important to preserve woodland linkages. Woodland management should maintain wooded connections between copses with rides being managed to promote a closed canopy whilst retaining some open rides to maintain butterfly populations. This management will also benefit the other bat species foraging in the woodlands together with the dormice and red squirrels.

7. References

Department of the Environment 1988 UK Biodiversity Group Tranche 2 Action Plans Volume 1
Isle of Wight Biodiversity Action Plan Steering Committee 2000 *Wildlife of the Isle of Wight An Audit and Assessment of its biodiversity*. Isle of Wight Council.