

Bats (Chiroptera)

Sixteen species of bats are resident in Britain. Bats are colonial and roost in groups in trees, buildings, caves, mines and other structures. Large numbers of bats may congregate at a particular roost site. Different roosts are used at different times of year; these can be within the same building or several kilometres apart.

All British bats are insectivorous and rely mainly on habitats providing a large biomass of insect food, such as woodland and wetland. Bats commute between roosting sites and feeding areas that may be quite distant, using echolocation as a means of navigation.

Bats can travel over significant distances between roosts or in the course of a night's foraging activity, and will cross less favourable habitat to reach preferred sites. Bats can therefore be found in almost any habitat that occurs on the soft estate.

UKBAP priority habitats of particular importance to bats are: ancient and/or species-rich hedgerows, all woodlands, and all wetland habitats.

Current status

National status

All species of bats are protected under Schedule 5 of the Wildlife and Countryside Act (1981, as amended) and the Conservation (Natural Habitats, &c.) Regulations (1994). All bats are listed on Appendix 3 of the Bonn Convention, and all except the common and soprano pipistrelles on Appendix II of the Bern Convention. Of the sixteen species of bats resident in Britain, at least half are rare or endangered. Even those that are relatively common, have undergone massive population declines in the last 50 years. Seven species of bat are identified as Priority

Species in the UK Biodiversity Action Plan: the greater horseshoe bat; the lesser horseshoe bat; the greater mouse-eared bat; Bechstein's bat; the barbastelle; and the 'pipstrelle' (common and soprano). Special Areas of Conservation (SACs) can be designated on the basis of the presence of lesser and/or greater horseshoe bats.

Status on the network

Bats are present in all areas of the network. Trees potentially suitable for bats and potential foraging sites are referred to in the Highways Agency network ecological information for all areas.



79% Fragmentation of woodland leaving isolated, non-viable populations, new roads.

Species	Status	Distribution
Greater horseshoe bat	Endangered	SW England
Lesser horseshoe bat	Endangered	SW & W England
Whiskered bat	Local	England
Brandt's bat	Local	W & N England
Natterer's bat	Fairly common	England

Species	Status	Distribution
Bechstein's bat	Very rare	S & W England
Greater mouse-eared bat	Extinct	Formerly S England
Daubenton's bat	Fairly common	England
Serotine	Locally abundant	S & SE England
Noctule	Uncommon	England
Leisler's bat	Scarce	S, C & E England
Common Pipistrelle	Common	England
Soprano Pipistrelle	Common	England
Nathusius' pipistrelle	Occasional records	throughout England
Barbastelle	Rare	England
Brown long-eared bat	Common	England
Grey long-eared bat	Very rare	S England

Current factors affecting the species

Loss of habitat through land-take, pollution or fragmentation

The loss of bat roosts can have a significant effect on bat populations over a wide area since bats can roost in large groups at certain times of year. Loss of foraging habitat (woodland, water features or hedges) due to the land-take of road construction or improvement schemes can also be significant, as can the deterioration of such habitats due to polluted run-off or hydrological changes. These effects can be particularly severe if close to roosts or if important linear features are severed.

Road traffic related mortality

Bats are occasionally found dead on road-side verges having apparently been swept into the path of the traffic. No systematic records of bat road casualties are kept in England and the scale of this effect is not known.

Road-side lighting

Lit roads can form a barrier to the movement of horseshoe bats. Whilst some species of bats (such as pipistrelles) utilise the insects attracted to street lights as a valuable and predictable food source, most of the very rare and endangered species do not benefit from road lighting.

Current action

A Bat Advice Note has been published as part of DMRB Volume 10 (HA 80/99 The Good Roads Guide Nature Conservation Management in Relation to Bats).

The TRMM states that EN must be informed well in advance (to take account of seasonal factors) where potential bat roosting trees may be affected by highway works. Bat surveys of bridges and trees are carried out for all new infrastructure and maintenance work on the network. Where appropriate, new roosting sites are created.

The National Bat Monitoring Programme is collating baseline data on several species of bats and is the basis of long-term national monitoring.

Objectives

The aim of the Highways Agency Species Action Plan for Bats is to avoid mortality to bats or loss of bat habitat as a result of construction and operation of the network, and to enhance habitats for bats where this can be achieved safely.

	Objective	Proposed actions
A	To avoid impact of new road schemes or improvements on bats.	4
B	To mitigate unavoidable impacts on bats, their roosts or their habitats.	5
C	To raise awareness of bat issues among HA staff, Managing Agents and consultants.	1, 7
D	To maintain detailed records of known bat roosts on and close to the network.	2, 3
E	To safeguard and enhance known bat populations on and close to the network.	3, 5, 6

Proposed action

The following table lists the actions required to achieve the objectives set out in this Plan. For some of the actions, potential partners have

been assigned as likely sources of cooperation. Targets are provided to give an indication of the timescale for the proposed action.

	Action	Potential partners	Target
	<i>Policy, guidance and advice</i>		
1	Quinquennial review of DMRB Bat Advice Note.	-	2004
	<i>Surveying</i>		
2	Collate records of bats on and close to the network as part of the Environmental Database. (SSSIs and cSACs for bats should be recorded within 10km of the network).	English Nature	2003
	<i>Research and monitoring</i>		
3	Collate all records of bats in bridges or trees in the soft estate and enter into Environmental Database to ensure maintenance works occur at the right time of year.	Local record offices/NBN	Ongoing
	<i>Mitigation and Management</i>		
4	For all new schemes and road improvements include a search for records of bats as part of the desk study at stage 1 and during surveys at stage 2. (Early identification of constraints may allow impacts to be avoided.)	-	From 2002
5	Where impacts of new schemes and road improvements on bats are unavoidable, consider options for roost replacement, enhancement of feeding habitats and mitigation of fragmentation by maintaining 'green links' across the road. Install 200 roosting/hibernation bat boxes.	-	2010

	Action (continued)	Potential partners	Target
	<i>Mitigation and Management (continued)</i>		
6	Where adverse impacts associated with existing roads are likely (particularly road mortality or pollution), review the possibilities for alleviating these effects.	-	From 2002
	<i>Communications and publicity</i>		
7	Information on bats should be included in environmental training for HA staff and Managing Agents.	-	From 2002

Links with other plans

This Species Action Plan should be considered in conjunction with the Habitat Action Plans for woodland and for boundary features.

Bats are considered Priority Species in a large number of LBAPs.

Greater and lesser horseshoe bats are also listed as Regional Biodiversity Indicators in English Nature's South-West region.

Bat	Number of LBAPs
General	13
Noctule	1
Leisler's	2
Natterer's	3
Greater horseshoe	5
Pipistrelle	16

Bat	Number of LBAPs
Bechstein's	2
Lesser horseshoe	2
Brown long-eared	1
Serotine	1
Daubenton's	2
Whiskered	2

Lead partners

Lead partners for the seven species of bat mentioned in the UKBAP are:

Greater horseshoe - English Nature/CCW

Lesser horseshoe - BCT

Greater mouse-eared - English Nature

Barbastrelle - BCT

Bechstein's - BCT

Pipistrelle (common and soprano) - BCT.