



BATS

1. INTRODUCTION

Sixteen species are currently known in Britain and over half of these have been recorded in the sub-region. Each species has its own ecological niche, but they share certain basic features and requirements: insect-rich feeding habitat; summer roosting sites and winter hibernation sites.



Whiskered bat
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Bats forage where insects are most abundant: woodlands (especially broad-leaved), over ponds, lakes and slow flowing water, meadows and along the margins between these habitats.

Bats are generally most abundant where these habitats are unpolluted (there is some evidence that Daubenton's bat hunts in greater abundance below sewage discharge points) and managed to maximise general species richness. Some species are aerial hawkers (eg. pipistrelle species), some glean their food from vegetation (eg. brown long-eared) and others take most of their food on the ground (eg. lesser horseshoe).

There is good evidence that the smaller species rely on linear landscape features, such as hedgerows, to commute from their roost sites to foraging areas.

From spring to late autumn bats are active. During this time they occupy summer roosts. A summer roost may be home to a small number of males, or, especially during June to August, quite large maternity colonies composing mostly of females and their single pups. A maternity colony may consist of several hundred females and their young. Summer roosts are usually found in tree holes or buildings. Bats make use of all sorts of human structures, including houses, churches, farm buildings and bridges.

During the winter months insects are in short supply and bats enter hibernation. During this time they need a site that is safe from predators, with a high humidity, at a low temperature (ideally 4°C.) but frost-free. Such sites are often underground (eg. caves, mines, grottoes) but hibernating bats are also found in wall cavities or substantial tree hollows.

Although bats represent a significant portion of the British mammal fauna they are under-recorded; what data exists indicates that the populations of most species have suffered severe declines in the post-war decades. Some bat species will happily live in urban and suburban areas of the sub-region, feeding in gardens and parks. Others are associated areas of woodland and other semi-natural habitats and are therefore more likely to be found in areas such as Local Nature Reserves. The Daubenton's bat, for example, feeds almost exclusively over water and so is associated with lakes, ponds, rivers, reservoirs and canals. The lesser horseshoe bat needs a roost site with an entrance large enough to fly through and easy access to broad-leaved woodland.

The following species have been identified in the subregion:

<i>Species</i>	<i>Habitat requirements</i>
Common Pipistrelle	Feeds in gardens, parks, woodland and hedgerows. Roost in tree holes, buildings
Soprano Pipistrelle	Feeds in gardens, parks, woodland and hedgerows. Roost in tree holes, buildings
Brown Long-eared	Woodland. Roost in trees and buildings with large roof voids close to woodland. Often roosts in churches
Noctule	Feeds above woodland and over meadows, parkland etc. Roosts exclusively in tree holes
Daubenton's	Feeds almost exclusively over water. Roosts in trees and buildings (including bridges) near water
Whiskered	Feeds mainly in woodland. Roosts in trees and buildings
Brandt's	Feeds mainly in woodland. Roosts in trees and buildings
Natterer's	Feeds mainly in woodlands. Roosts in trees and buildings, especially in large joints in old timbers
Leisler's	Feeds in similar habitat to noctule. Roosts in tree holes but also in buildings.
Serotine	Feeds in similar habitat to noctule. Roosts in trees and frequently in buildings, especially under ridge tiles.
Barbastelle	Feeds and roosts in woodland.
Lesser horseshoe	Feeds over unimproved pasture near rivers and woodland. Mostly roosts in buildings with access points large enough to fly through.

The following species may also be present:

Bechstein's
Nathusius's pipistrelle

2. OUR OBJECTIVES & TARGETS	Target
A. Maintain extent, maintain / improve condition and where possible restore the available/important feeding habitats.	2005-2015
B. To increase population size and range by maintaining and increasing opportunities for roosting (particularly in buildings, trees and underground sites) as maternity roosts, hibernation roosts and as roosts for other purposes.	2005-2015
C. Ensure adequate landscape elements to provide flight lines between roosts and foraging sites: hedgerow protection.	2005-2015
D. Establish a sub-regional programme to monitor populations at key sites to supplement data from the National Bat Monitoring Programme.	2006

ASSOCIATED HABITAT PLANS

- All the habitats covered by HAPs are relevant to bats

ASSOCIATED SPECIES PLANS

3. NATIONAL BAP OBJECTIVES & TARGETS

eg. for the barbastelle bat:

- *Maintain the known range*
- *Maintain the size of the known populations*
- *Increase the total population size of this species in the UK.*

Full details are available from the UKBAP website (see section 8)

4. CURRENT STATUS

Bat populations have suffered because of problems with foraging habitat, summer and winter roost sites. Little is known about the current status of most species, although the available evidence suggests an overall decline in populations. The pipistrelle is thought to have declined by an estimated 70% between 1978 and 1993 (National Bat Colony Survey, Harris et al 1995). The problems of estimating populations trends have been compounded by the recent discovery that there are two distinct species of pipistrelle bat in the UK.

Status within Warwickshire:

Common pipistrelle	Widespread and common
Soprano pipistrelle	Widespread and common
Brown long-eared	Widespread and common
Noctule	Widespread and common
Daubenton's	Widespread and common
Whiskered	Widespread but less common
Brandt's	Local, rare, central
Natterer's	May be widespread, but uncommon
Leisler's	Local, rare, south Warwickshire
Serotine	Local, rare, south Warwickshire
Barbastelle	Local, rare, south Warwickshire
Lesser horseshoe	Local, rare, south Warwickshire.

4.1 Legal and Policy Status

Bats are protected nationally by the Wildlife and Countryside Act 1981 and under Schedule 2 of the Conservation (Natural Habitats, etc) Regulations, 1994. Internationally there are several obligations. Firstly, the EC Habitats and Species Directive 1992: all species are included in Annex IVa and lesser horseshoe, greater horseshoe, greater mouse-eared, Bechstein's and barbastelle are included in Annex II. The Bern Convention (1979) lists all UK species in Appendix III, and all except the pipistrelle are listed in Appendix II. All species are included in the Convention on the Conservation of migratory Species of Wild Animals (Bonn, 1980) and the Agreement on the Conservation of Bats in Europe (London, 1991). Locally, impact on bats can be limited by activities in accordance with PPG9 (Planning Policy Guidance: Nature Conservation, 1994) and through the Local Agenda 21/The Biodiversity Action Planning Process.

Natural England is the lead body on implementation of the legal protection.

4.2 Current Factors Affecting The Species

There are many threats to bats and it is the combination of these that appears to have led to such severe population declines. They include:

- **loss of summer roosts** -eg. roof repairs, cavity wall insulation, barn conversions, replacement of hanging tiles, replacement of fascia and barge boarding, felling or surgery to trees with holes and crevices; repairs to bridges

Warwickshire, Coventry and Solihull Local Biodiversity Action Plan

- **loss of hibernation sites** - eg. blocking of caves and capping of mines, heating of cellars
- **loss of and degradation of foraging habitats** - eg. changes in land use, loss of woodland, destruction of ponds, reduction and contamination of the insect population by insecticides
- **loss of linear landscape features**, in particular hedgerow removal, which can isolate a colony from its main foraging habitat
- **use of timber treatment pesticides**, many of which are toxic to bats

Legislation exists to protect bats from most of these threats. However, lack of awareness and difficulties enforcing the legislation often leads to the consultation process being ignored.

5. Current Local Action

- Regular surveying and monitoring is being developed - Warwickshire Bat Group, Coombe Country Park rangers and interested individuals contribute to the National Bat Monitoring Programme (co-ordinated by the Bat Conservation Trust);
- Public awareness and educational activities are undertaken to improve the understanding and tolerance of bats . Various groups including the Warwickshire Bat Group, Warwickshire Country Parks, Coombe Country Park, and Warwickshire Wildlife Trust organise bat walks
- Consultation system of Natural England and Bat Group volunteers to protect threatened roosts
- Records for bats are held by Warwickshire Bat Group and Warwickshire Museum.
- Promotion of Standing Deadwood by FC as good woodland Management.
- Various bat box schemes are being run by the Warwickshire Bat Group for Stratford District Council, Warwickshire WildlifeTrust, the Friends of Brandon Wood, The Friends of Abbey Fields etc.

6. PROPOSED LOCAL ACTIONS (some dates amended - Core Steering Group - Feb 2008)

ACTION	Lead	Partners	By	Meets objective
Policy & Legislation				
PL1. Ensure that all relevant species policy is included in Local Planning Documents (see ODPM Planning Policy Statement PPS9) and Industry Best Practice.	LBAPSG	LAs	Within period of consult'n	B,C
PL2. Continued monitoring of planning applications.	LBAPSG	LAs WM NE	2005- 2015	B,C
PL3.				
Site / Species Safeguard & Management				
SM1. Organisation of surveys followed by appropriate action where roosts or important foraging habitat may be threatened.	WBG	LAs NE	2005- 2015	D
SM2. Identify and protect important roosts.	WBG	NE WWT	2005- 2015	D
SM3. Identify and survey potential underground hibernation sites and protect by grilling if appropriate.	WBG	NE WWT	2005- 2015	D
Advisory				
A1. Provide guidance on favourable management of roosts and foraging habitats where needed.	NE	WBG BCT WWT	2005- 2015	A, C
A2. Liaise with landowners and managers to alert them to the importance of prime roosts, feeding areas and hibernacula. Ensure that advice is available on conservation management of roosts and foraging habitat around roosts.	WBG	NE FC LAs WWT	2005- 2015	A, B, C
A3. Promote and develop good practice in consultation with the building industry, tree surgeons, foresters, highway department etc.	WWT	LAs FC FWAG BCT NE WBG	2005- 2015	A, B, C
A4. Promote the use of safe methods for timber treatment including the use of least toxic chemicals.	WBG	NE LAs	2005- 2015	B

A5. Support training schemes for volunteer bat workers.	WBG	BCT NE	2005-2015	B
A6. Provide advice and guidance for others whose work could affect bats (ie. vets, pest control firms, tree surgeons etc.)	NE	BCT WBG	2005-2015	B
Research & Monitoring				
RM1. Survey for tree roosts, giving particular attention to waterside trees.	WBG		2005-2015	D
RM2. Review and improve effectiveness of data storage and handling.	WBRC	WBG	2007	D
RM3. Continue and expand survey and monitoring efforts of the local bat population to establish distribution and population data.	WBG		2005-2015	D
Communication & Publicity				
CP1. Encourage acceptance and understanding of existing roosts by their owners and site managers and stress their importance and value.	WBG	FC LAs NE WWT	2005-2015	B
CP2. Appeal to public for identification of roosts.	WBG	LAs WWT	2005-2015	D
CP3. Increase number of bat box schemes using farm contacts to get schemes into place.	WBG	FWAG PD WWT FC CCP	review 2008	B
CP4. Maintain and enhance a programme of publicity and education activities aimed at building trades, conservation volunteers, children, educators, arboriculturalists and the wider public.	WBG	UW NE LAs WWT CCP	2005-2015	A, B, C

Abbreviations: BCT – Bat Conservation Trust, CCP – Coombe Country Park, PD – Parks Dept., EA – Environment Agency, NE – Natural England, FC – Forestry Commission, FWAG – Farming & Wildlife Advisory Group, LA – Local Authority, UW – University of Warwick, WBG – Warwickshire Bat Group, WBRC – Warwickshire Biological Record Centre, WM – Warwickshire Museum, WWT – Warwickshire Wildlife Trust

7. REFERENCES (also see LBAP Bibliography web page)

Harris, S. et al. (1995) *National Bat Colony Survey*.

8. FURTHER INFORMATION (see separate **Links** web page for links to web sites)

UK Biodiversity Action Plan no.133 (barbastelle)
UK Biodiversity Action Plan no. 465 (Bechstein's)
UK Biodiversity Action Plan no. 519 (common pipistrelle)
UK Biodiversity Action Plan no. 551 (lesser horseshoe)

Bat Conservation Trust
Warwickshire Bat Group

Natural England (2005) *Development of good practice guidelines for woodland management for bats* . Report no. 661, available from 01733 455100 or email: enquiries@english-nature.org.uk

RSPB (2007) '*Farm Wildlife Handbook*' from Publications, RSPB, Unit 17, St Martin's Business Centre, St Martin's Way, Bedford MK42 0LF, tel. 01234 263616 or email: publications@rspb.org.uk .

Report on managing the effects on bats of habitat fragmentation caused by roads - from Jean Matthews, Countryside Council for Wales, Bangor, 01248 385500, email: J.Matthews@ccw.gov.uk

M.Baron (ed.) (2007) '*On a Bat's Wing - poems about bats*'. ISBN 978-190551227-0. Five Leaves Publications, Nottingham. £7.99

- D.Hill & F.Greenaway (2008) '*Conservation of Bats in British Woodlands*'. A new technique that overcomes the difficulties of surveying woodland for bats (British Wildlife, vol.19, no.3, p161-169).
- Creating artificial bat hibernacula to provide roost sites in areas with good foraging opportunities (British Wildlife, vol.19, no.3, February 2008, p170). Email: mogulickx@hotmail.com
- L Garland & S Markham (2008) Discussion of the legal protection afforded to bats which does not currently cover important foraging habitat and connecting corridors by (British Wildlife, vol.19, no.3, p197)

9. CONTACT

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