

Guidance on managing woodlands with bats in England

1. Background and purpose of document

The Habitats Directive¹ aims to conserve various species of plant and animal which are rare across Europe, and it requires Member States to provide legal protection for these species. Many of the protected species which are found in the UK (European Protected Species, or EPS) are either associated with or can be found in woodland, for instance dormice, otters, all species of bat, great crested newts, smooth snakes and sand lizards. The EU Directive was transposed into UK law by the Habitats Regulations in 1994 and as the Conservation of Habitats and Species Regulations 2010. The Regulations have increased the protection afforded to EPS and does not include the 'incidental result' defence under which many forestry operations were carried out.

The Forestry Commission (FC) and Natural England (NE), with assistance from relevant conservation organisations, have produced a suite of guidance to help you understand the legislation and to use good practice to operate within the law, avoid the need for licensing and benefit EPS. Following the guidance will show that you have taken all reasonable steps to comply with the Regulations. This document is one of a series providing guidance for woodland managers and operators. It focuses on the 17 species of bat known to breed in England (see: http://www.bats.org.uk/pages/uk_bats.html).

Guidance is given on routine and on-going forestry and woodland operations and activities. For more unusual operations, such as development, construction or land-use change (i.e. removal of forest) you should seek further advice from the FC as this permanent loss of woodland would require a different approach and need more intensive surveying for bats. Similarly, whilst it covers low-key recreational usage, expert advice should be sought for more unusual or intensive activities in woodlands e.g. music concerts or motor rallying.

This guidance should be used in conjunction with wider guidance on forestry and woodland management, and should not be followed in isolation. If the guidance has been followed and your decisions based on this documented, but you nevertheless do inadvertently cause damage, disturbance or harm to these protected species, a prosecution is unlikely to be considered to be 'in the public interest'². However, you are reminded that it remains your responsibility to ensure all your actions do comply with the law.

Sources of more detailed information on conserving the species are given in the further reading section.

¹The formal title is: Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora.

²The public interest test is used by the regulators to decide whether it is appropriate to take a matter any further bearing in mind all the circumstances of the case.

2. Complying with the Habitats Regulations through good practice

Conserving rare and protected species present in a wood requires a careful and well-planned approach to woodland management. The 17 species of bat found breeding in Britain are all protected under the Habitats Regulations. All bat species will use woodland and woodland edge habitats, at least during part of the year, whether to forage, roost, breed or hibernate. Six species are woodland specialists, being reliant on woodland to provide key habitats for foraging and/or roosting during important periods of the year. These species are highlighted in Appendix 1. If you manage your woodland according to this guidance you are unlikely to inadvertently commit an offence against bats.

Woodland management should aim to:

- protect all existing confirmed roost sites,
- retain as many potential roost sites as practicably possible,
- ensure a succession or continuity of potential roost sites for the future,
- create a good network of habitats used for roosting, feeding and commuting, avoiding isolating any areas currently used for feeding and ensure good connectivity between sites.

Further information on how to manage your woodland for bats is available here: Woodland Management for Bats (Anon, 2005) (www.forestry.gov.uk/forestry/INFD-6K3CXY).

2.1 What woodland habitats do bats use?

Bats use a wide range of woodland habitats in which to roost and to forage. Mature trees, particularly oak, ash, beech, sycamore, are most frequently used as roosts, but bats will use any tree with suitable cavities or crevices such as occasional use of Scots pine (Appendix 2). Such features are usually found in older trees, therefore mature semi-natural woodland, maturing broadleaf plantations (80+ years) and veteran trees are all likely to be an important resource of roosting habitat in the local landscape. Bats may use conifer woodland to forage, particularly if there are broadleaf trees among the conifer and other insect-rich features such as sensitively managed tracks present and where suitable roost trees are available. Some species of bat will also use buildings and underground structures within woodland, such as mineshafts and caves.

The foraging habits of the various species vary greatly but there is a general requirement for a steady supply of insects through the seasons, 'safe' corridors along which to fly between roosts and feeding areas and a local source of water. Most species will forage within woodland and also the wider landscape, but Bechstein's bat tends to forage solely in woodland, generally requiring a minimum woodland size of 40-50 hectares. This can be composed of smaller woods if they are well connected by woods and hedgerows. Appendix 1 provides detailed information on the type of woodland and roosts that are used by different species.

Further information on distribution and habitat requirements of these species is available from the Bat Conservation Trust (www.bats.org.uk).

3 Forest operations and bats – avoiding committing an offence

Bat roosts can be situated in any part of a woodland, including areas under active management, but as described above most roosts are likely to be in older trees or in those exhibiting damage that provide roost features. Consequently, any proposed operations that require felling of such trees or those which surround them could

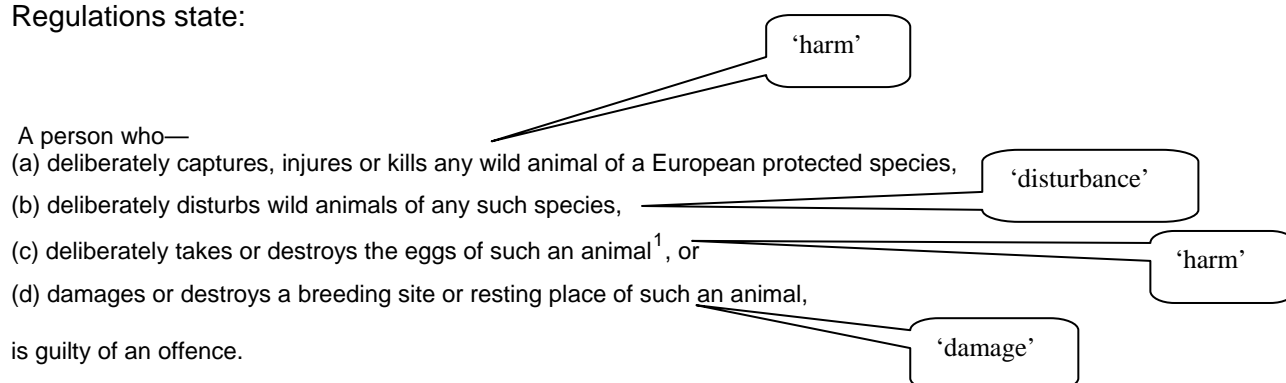
cause damage to unidentified roosts, and disturbance or harm to animals, and therefore requires careful forethought.

Any operation that opens up the woodland canopy around the roost site could subtly change the local environmental conditions making the roost unfavourable for bats. Equally, the removal of sheltering trees immediately adjacent to a roost will make the resident bats more vulnerable to predation and might force them to abandon the roost.

A systematic approach can be used to minimise the risk of committing an offence when conducting necessary forest operations. This guidance is structured around the following five stages:

- Are bats **present** in the wood?
- Could proposed activities and operations potentially cause **damage, disturbance or harm** to the species?
- Are operations planned to take place in habitats that these species use and at times when the species use them?
- Are other parts of the woodland being managed using good practice for bats?
- When and how should I seek a **licence**?

The phrase ‘causing damage, disturbance or harm’ is actually a simplification, and it is important to understand the precise offences that can be committed. The Habitats Regulations state:



(2) For the purposes of paragraph (1)(b), disturbance of animals includes in particular any disturbance which is likely—

- (a) to impair their ability—
 - (i) to survive, to breed or reproduce, or to rear or nurture their young, or
 - (ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate; or
- (b) to affect significantly the local distribution or abundance of the species to which they belong.

Causing ‘damage’, even when the animal is not present, is an absolute offence but ‘disturbance’ or ‘harm’ is only considered an offence when caused deliberately. In the Directive, the term ‘deliberate’ is interpreted as being somewhat wider than just intentional and could be thought of as including an element of recklessness. A person would be acting recklessly if they could reasonably have been expected to foresee that an operation could cause disturbance or harm to a protected species but took no action to assess the risk and consider what to do about it. Where an

¹ Not relevant to bats.

operation is carried out with sensible precautions then the risk of deliberate disturbance and harm can be greatly minimised.

You should be aware that there is the potential for more than one protected species in your woodland, which for example may support bats and dormice, and you will need to follow the good practice guidance for each of the species present.

A series of tools have been developed to help support and advise woodland owners and managers on how to manage woodland where there are protected species present. This guidance is in compliance with sustainable forestry management practices as promoted in the UK Forestry Standard and the Habitats Regulations.

A checklist - **European Protected Species and woodland operations v3** (PDF 104 kb) has been developed to guide woodland owners and managers through the decision-making process of seeking grant or felling permission approvals.

Immediately prior to woodland management operations taking place an **Operational Site Assessment Form** should be filled in. This has also been developed to help woodland owners and managers consider the potential impacts of operations on site features including EPS and identify the measures required to follow good practice.

For more information on EPS (including access to the above checklists) and the steps land managers should take to safeguard them please see our EPS web page. www.forestry.gov.uk/england-protectedspecies

3.1 Are bats present in the wood?

There are a number of ways of determining the likelihood of bats being present in your wood:

a. Is your woodland approximately within the current known range of bats?

The maps below (figure 1) show the distribution of some of the more common bats known to use woodlands as well as some of our rarest bat species (please note that not all recent occurrences of bats may be shown on the maps). You will see that it is highly likely that at least one species of bat will have been recorded in your local area, and there is also a significant likelihood that bats will be living in or visiting your woodland. What it is critical to establish is whether there are any bats roosting in the woodland you intend to carry operations out in.

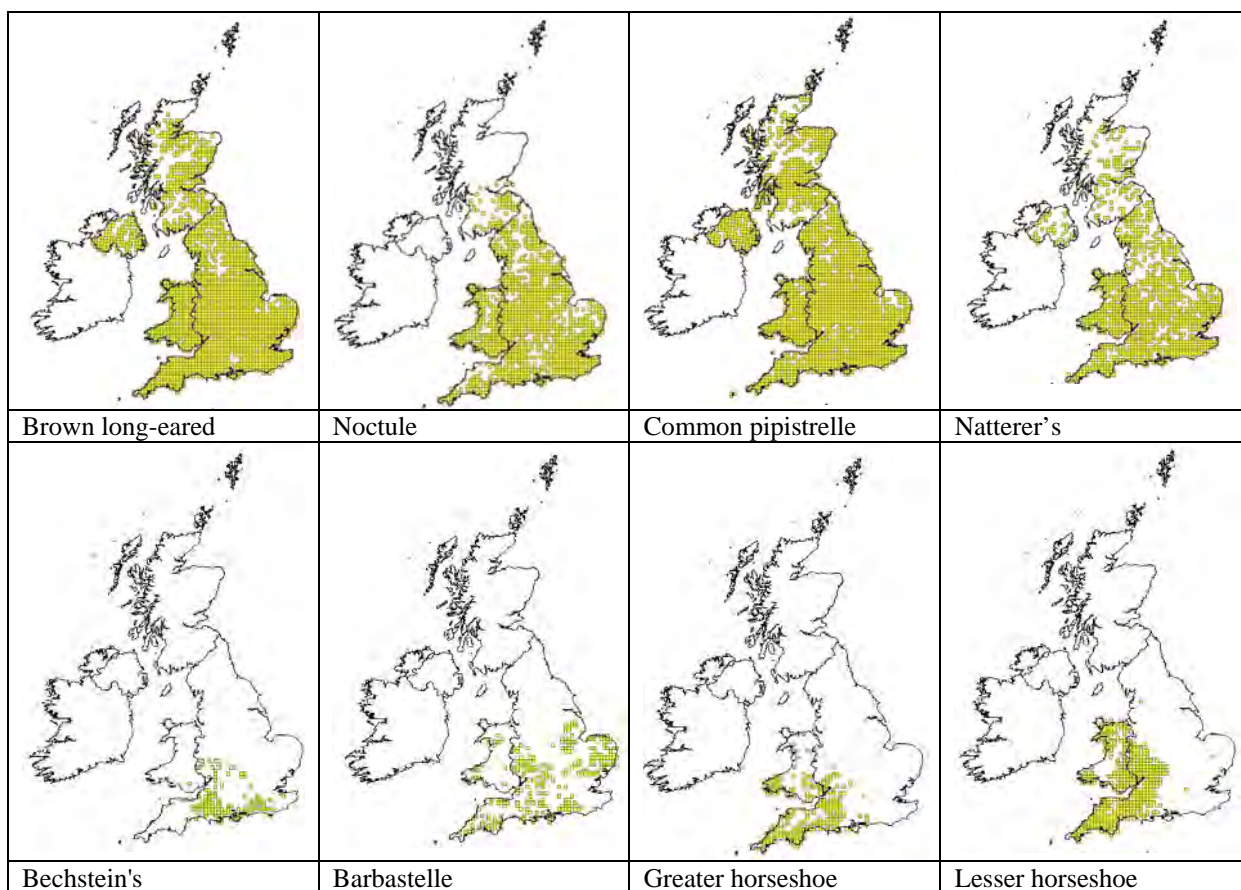


Figure 1: Distribution maps for some of the more common bats known to use woodlands as well as some of our rarest bat species.

Source: JNCC (2013) Article 17 Reporting

b. Are there records of bats in your woodland?

The National Biodiversity Network (NBN) is available on the web. Search for records of bats near or in your woods by using the interactive maps available for each bat species via <https://data.nbn.org.uk/imt/> to zoom to your area of interest. Please note that not all recent occurrences of bats may be shown on the map, and a lack of records does not confirm absence of these species. Your local NE or County Wildlife Trust representative may also be able to give site specific information on bat presence (or their likelihood), as may the Local Biological Records Centre (follow 'LRCs' link at: www.nfbr.org.uk), Natural History Societies and local Bat Groups (contact details from: www.bats.org.uk).

c. Does your woodland contain potential roosts?

Bats use trees as breeding sites in summer or resting places throughout the year. Because bats return to the same places year after year, a bat roost is protected even if it is unoccupied and therefore can be thought of as a permanent feature. Trees may serve as maternity roosts, mating roosts, hibernation roosts and/or temporary/transitory roosts (see section 2.1). During the summer a colony may have multiple roosts and depending on the site and the species may switch roosts frequently.

In the woodland compartments where you intend to undertake management activities, conduct a winter or spring walk-through survey (before trees come into leaf) to identify potential bat roosts. Identify veterans and any other trees with such features described in section 2.1 and Appendix 2. Where safe and possible to do so, also check any buildings or structures (above or below ground) for presence of bats.

Any buildings that contain live or dead bats, droppings, staining, etc. are evidence of a roost and the observer should leave the roost immediately as only licensed individuals can enter a known bat roost.

It is very difficult, even for a bat specialist, to find bat roosts in a wood since even large bat roosts in trees can leave very little evidence. To be cautious, you may simply wish to assume that the trees identified with potential roosts do contain bats, and plan operations around these accordingly.

d. Are bats actually using these roosts?

If you want to be more confident whether or not bats are present, a more careful inspection will be needed, using binoculars to identify signs of use. In the winter, in a few cases, you might be able to see scratches and/or brown staining around a potential roost site, and during the summer evidence of active use might include droppings below the hole and squeaking/chittering noises from the bats inside. In summer, a walk through the woodland at dawn to observe swarming bats around roosts can also be an effective survey method. However, in many cases the presence of bats will be virtually undetectable. Remember not to intrude on roosting bats, e.g. by examining the inside of occupied cavities with a light or inserting your hand, as this is likely to disturb bats and you could therefore be committing an offence. Some training and experience is necessary to be able to reliably ascertain whether or not a roost site is in use. Sightings of unidentified bats flying and feeding in woodlands do not necessarily mean they are roosting in the wood.

e. Do I need to get a bat expert in?

Once you have undertaken the survey for potential roosts as outlined above, and if you are able to follow the good practice outlined here (e.g. retaining confirmed and potential roosts), you should not require a bat expert. However, you may choose to seek assistance from a licensed bat expert to confirm the presence of bats in any potential roosts.

If by self-assessment and survey (using the information above) or by specialist survey you are confident that proposed woodland operations will not result in damage to roosts or disturbance or harm to animals, then no further action is necessary and the operation may proceed. It is important to keep a record of your decision and information used to reach it. Should you discover a bat roost during operations, you should immediately alter your felling plans by retaining the roost and a buffer of trees around it (see Section 3.4). If this is not possible you must stop work, and seek advice from Natural England (0845 600 3078) or National Bat Helpline (0845 1300 228). It is therefore important for operators to remain vigilant for bats and other protected species while undertaking work.

For more information on surveying for bats see such publications as Woodland Management for Bats (Anon, 2005) (www.forestry.gov.uk/forestry/INFD-6K3CXY), Bat Surveys – Good Practice Guidelines (2nd edition) by the Bat Conservation Trust or alternatively contact the Trust at www.bats.org.uk.

3.2. Could proposed activities and operations potentially cause damage, disturbance or harm to the species?

Carrying out any operations that do not comply with this good practice guidance constitute an offence or carry a significant risk of committing an offence. Some possible examples are:

- Felling a tree with a confirmed bat roost.
- Surgery to a tree that contains a confirmed bat roost.

- Operations that would significantly disturb bats in hibernation or maternity roosts.
- Felling buffer trees around a known roost site where this operation would knowingly affect the suitability of the site for roosting.
- Felling trees to comply with plant health notices.
- Loss of woodland as a result of restoration to open habitat.

Activities that fall outwith the guidance, but could cause such damage or disturbance to bats or their roosts, would also necessitate an application for a licence.

3.3. Are operations planned to take place in habitats that these species use and at times when the species uses them?

By recording locations of areas being used by bats as described in section 3.1, on forest design plans and then integrating into work plans it will be possible to see where operations are likely to have impacts on bats. It will also be possible to plan ahead and adjust timings of operations to avoid impacts.

3.4. Good practice guidance for woodlands with bats

This good practice guidance for routine woodland operations should maintain or improve the habitat for bats and minimises the risk of harming and disturbing animals or damaging their breeding sites or resting places. If you follow this good practice, and carry out the operations as described here, we would not expect you to require a protected species licence.

Forest design and operation planning:

Include known locations of bat roosts and forage areas on your Forest Design Plans (FDP) or Woodland Management Plans (WMP) and proposed felling maps so that a) where possible, roosts can be protected. and b) when developing work plans the location and timing of operations can be scheduled to avoid impacting on species.

Stand management where the presence of a bat roost has been confirmed:

- Clearly mark and protect any trees that contain confirmed bat roosts.
- Retain a buffer or ring of trees and understorey around these roosts in order to maintain the environmental conditions of the roost; this will usually mean a ring with a width of one to two canopies around the tree. Ensure these trees do not become isolated from woodland, but maintain wooded 'corridors' or links to the wider woodland.
- Retain a similar buffer ring of trees and understorey around any underground structure or building likely to be used by bats, again ensuring that links are maintained to adjoining woodland.
- Within coppice, where roosts of Bechstein's bats have been confirmed, try to avoid coppicing work in close proximity (50m) to the major roost site so as to reduce disturbance to their immediate flightlines and foraging area.

Stand management where presence of bat roosts has not been confirmed:

- Where there are comparatively few trees offering potential roosts sites avoid felling or disturbing any of them. Where there is an abundance of trees offering potential roost sites, ensure you are only felling a small proportion in any 10-year period.
- Where you are felling or thinning in woodlands with an abundance of trees offering potential roosts, leave a significant proportion of the area entirely undisturbed in that 10-year period.
- Similarly, when planning felling coupes retain belts of trees, e.g. along watercourses, and avoid creating isolated blocks of woodland. Avoid opening up

gaps greater than about 20m in any linear features. This will help free movement of bats within the woodland.

Other woodland management practices:

- Retain (and encourage) as much understorey as is possible, in particular where it directly shelters or shades a known roost.
- Avoid opening up large areas of the canopy, particularly in areas containing bat roosts or in areas that may be used for foraging and commuting.
- Cut ride and/or trackside vegetation to sustain an insect-rich environment, but ensure that potential roosts in trackside trees do not become exposed.
- Ensure smoke and/or heat from managed fires does not affect roosts in trees or structures.
- Avoid major increases in the levels of noise and activity around confirmed roost trees (e.g. from rapid increases in recreational use or on-site wood processing).
- Retain deadwood habitats for the insects they support.
- Ensure a succession or continuity of potential roost trees for the future.
- Conserve mature and over-mature trees in the surrounding landscape.

3.5. When and how should I seek a licence?

You can apply for a licence to carry out operations that will risk committing an offence, but your application will have to be able to demonstrate the operation is necessary to either:

- Preserve public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment, for instance by delivering Government's woodland strategy and provide public benefits;
- Prevent the spread of disease; and
- Prevent serious damage to livestock, foodstuffs for livestock, crops, vegetables, fruit, growing timber or any other forms of property or to fisheries.

And you must be able to show:

- That there is no satisfactory alternative; and
- That the action authorised will not be detrimental to the maintenance of the species concerned at a favourable conservation status in their natural range.

Together these criteria make up the 'three tests' and will be considered by Natural England, licenses will only be issued if the three tests can be satisfied. More information is available at:

<http://www.naturalengland.org.uk/ourwork/regulation/wildlife/species/europeanprotectedspecies.aspx#licences>

Two versions of the application form are available: an electronic version and a manual version. We encourage electronic applications wherever possible. Electronic forms can be obtained from www.forestry.gov.uk/england-protectedspecies

A manual application form can be obtained from your local FC office. This will guide you through the process and the information you need to provide. To meet the third 'test' you will need to undertake works in such a way as to minimise harm to the bats and you may be required to carry out additional work to improve the habitat or 'compensate' for any adverse impacts. Sometimes this might mean providing alternative roosting locations for bats if their original roost site has been lost to the

operation. The FC will carry out initial checks but NE will make the ultimate decision and grant the licence.

On the rare occasion where you might need to disturb or remove a confirmed bat roost as part of a licensed operation you will need a bat expert to survey the tree and identify the species present. This information will be essential in support of a species licence application. In the case of barbastelle or Bechstein's bat being present then additional assessment and consideration of these rare woodland bats will be required.

If the package of work you are proposing does not meet the three 'tests' then it will not be possible to grant a licence. You are strongly advised not to proceed with operations that involve a high risk of committing an offence without a licence.

Should you need to undertake emergency works to a dangerous tree with a potential or confirmed bat roost, please contact the BCT or NE immediately for further advice.

Sources of further information and references

Anon (2005) *Woodland Management for Bats*. Forestry Commission England,

Anon (2007) *Guidance document on the strict protection of animal species of Community interest under the Habitats Directive 92/43/EEC*, European Commission. http://ec.europa.eu/environment/nature/conservation/species/guidance/index_en.htm (Accessed October 2013)

Arboricultural Association Guidance Note 1 – *Trees and Bats*

Bat Conservation Trust species leaflets www.bats.org.uk/publications.php (Accessed November 2013)

Bat Conservation Trust (2012). Bat Survey Guidelines 2nd Edition www.bats.org.uk/pages/batsurveyguide.html. (Accessed November 2013)

English Nature (2005) EN Research Report 661 *Development of good practice guidelines for woodland management for bats*. See: Natural England publications <http://publications.naturalengland.org.uk/publication/65012?category=31008>. (Accessed November 2013)

English Nature (2005) EN Research Report 658 *Woodland Management Advice for Bechstein's bat and barbastelle bat*. See: Natural England publications <http://publications.naturalengland.org.uk/publication/93012?category=31008>. (Accessed November 2013)

Forestry Commission Wales, Bat Conservation Trust, Countryside Council for Wales and English Nature www.forestry.gov.uk/forestry/INFD-6K3CXY. Free copies also available from Forestry Commission Publications - tel: 0870 121 4180. (Accessed November 2013)

Mitchell-Jones, A.J. (2004) Bat Mitigation Guidelines (Table 4.1), English Nature, Peterborough

Natural England (2007) Focus on bats: discovering their lifestyle and habitats (NE23) <http://publications.naturalengland.org.uk/file/155449> (bats and the law section updated 2010) (Accessed November 2013)

Produced by Forest Research, Forestry Commission (England, and Corporate and Forestry Support Division) and Natural England. We gratefully acknowledge comments from relevant species experts.

Appendix 1

Woodland habitats are important for all UK bat species; for roosting, foraging and/or commuting. This information is based on our current understanding of woodland use by UK bat species










Species	Tree roosts	Foraging preference
Barbastelle * <i>Barbastella Barbastellus</i>	Favoured crevices (flaking bark/splits/cracks)	Edge/open habitat
Bechstein's bat * <i>Myotis Bechsteinii</i>	Favoured cavities (woodpecker holes)	Woodland interior/Closed habitat
Noctule * <i>Nyctalus noctula</i>	Favoured cavities (woodpecker holes and rot holes)	Open habitat
Leisler's bat <i>Nyctalus Leisleri</i>	Favoured cavities (rot holes)	Open habitat
Brown long-eared bat * <i>Plecotus auritus</i>	Some use (can use cavities low on trees)	Woodland interior/Closed/edge habitat
Natterer's bat * <i>Myotis nattereri</i>	Some use	Woodland interior/closed/edge/open habitat
Daubenton's bat <i>Myotis daubnetonii</i>	Some use	Edge habitat
Whiskered/Brandt's/Alcathoe <i>Myotis mystacinus/brandtii/alcaethoe</i>	Some use	Edge habitat
Common pipistrelle <i>Pipistrellus pipistrellus</i>	Occasional use	Edge habitat
Soprano pipistrelle <i>Pipistrellus pygmaeus</i>	Occasional use	Edge habitat
Nathusius' pipistrelle <i>Pipistrellus nathusii</i>	Occasional use	Edge habitat
Lesser horseshoe * <i>Rhinolophus hipposideros</i>	No use	Cluttered interior
Greater horseshoe <i>Rhinolophus ferrumequinum</i>	No use	Open/edge habitat
Grey long-eared <i>Plecotus austriacus</i>	No use	Open/edge habitat
Serotine <i>Eptesicus serotinus</i>	No use	Open habitat

* Woodland specialists



Appendix 2

Some examples of bat roost features in trees

 <p>© BCT/Austin Hopkirk</p>	 <p>© BCT/Aubrey Furner</p>	 <p>© BCT/Aubrey Furner</p>
Trunk cavity	Basal cavity	Cavity in branch
 <p>© BCT/Aubrey Furner</p>	 <p>© BCT/Aubrey Furner</p>	 <p>FC picture library</p>
Flaking bark	Hole in decay	Old growth ivy
 <p>© BCT/Gail Armstrong</p>	 <p>© BCT/Stephen Davison</p>	 <p>© BCT/Aubrey Furner</p>
Knot hole	Woodpecker hole	Splits

Information provided by the Bat Conservation Trust (BCT) www.bats.org.uk