

Bat Advice Note: 29 Windy Street, Chipping

Introduction

Bowland Ecology Ltd was commissioned by JYM Partnership LLP to undertake an external building inspection survey at 29 Windy Street, Chipping, Lancashire (NGR: SD 62320 43216), to assess the potential of the building to support roosting bats. The building is subject to maintenance works, comprising the following:

- Raking out and repointing areas of cement mortar with lime mortar on the north facing gable end and the front elevation of the building;
- Removing cement plaster and replacing with lime based plaster in bedroom;
- Replacement of lead flashings on both chimney stacks;
- Replacement of damaged stone flags on the front roof pitch and replacement of damaged slate flags on the rear roof pitch; and
- Removal of small damaged area of ridge beam, adjacent to the northern gable end.

This advice note presents the survey results and makes an assessment of potential impacts to bats, with particular reference to legal requirements (Appendix A) and constraints to the proposed works. A plan showing the location of potential bat roosting features is shown in Appendix B.

Methodology

External Building Inspection

The inspection survey was undertaken by Claire Wilson MSc, BSc (Hons), MCIEEM (Natural England Licence No: 2015-16761-CLS-CLS) and Jack Taylor on the 29th March 2018. The weather during the inspection was dry, with scattered clouds, no breeze (Beaufort Scale 0) and an approximate temperature of 9°C. The survey followed the Bat Conservation Trust's 'Good Practice Guidelines' (Collins, 2016)¹. The external inspection involved checking for field signs of bats on external features of the building with particular attention being paid to ledges, walls, doors and the surrounding ground. The survey was aided with high powered torches and close focusing binoculars. An assessment of the potential of the building to support roosting bats was made during the survey i.e. searching for suitable roosting crevices.

Natural England's Bat Mitigation Guidelines (A.J. Mitchell-Jones, 2004)² states that a significant bat roost can normally be determined on a single visit at any time of the year, provided that the entire structure is accessible and that signs of bats have not been removed by others. An internal inspection could not be completed as no access into the roof void is present within the property. Using the information collected during the internal assessment, a 'roost potential' score was given to the building according to the criteria shown in Appendix C (Collins, 2016). An assessment of the suitability of the site for bats was also undertaken,

¹ Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd Edition). The Bat Conservation Trust, London.

² Mitchell-Jones, A.J. (2004) *Bat Mitigation Guidelines*, English Nature, Peterborough.

including the identification of potential foraging and roosting areas, potential flight lines and important commuting corridors.

Dusk Emergence Survey

Dusk emergence surveys were undertaken on the 1st May 2018 by Claire Wilson and Alice Helyar PhD, MSc, BSc (Hons), MCIEEM (Natural England Bat Licence No. 2015-15679-CLS-CLS) and on the 14th June 2018 by Jo Bates-Keegan BSc (Hons) (Natural England Bat Licence No. 2015-13046-CLS-CLS) and Dave Fisher BSc (Hons) (Natural England Bat Licence No. 2015-12106-CLS-CLS). The survey methodology followed the guidelines as described in Collins, 2016.

The survey on the 1st May commenced at 20:25 and ended at 22:10 and sunset was at 20:40. The weather during the survey was mild, with a moderate breeze (Beaufort Wind Scale 4/5) and occasional light rain showers. The temperature at the start of the survey was 9.7°C and 8.1°C at the end of the survey. The second survey on the 14th June commenced at 21:20 and ended at 21:15, sunset was at 21:42. The weather during the survey was bright, clear and dry, with a light breeze (Beaufort Wind Scale 1). The temperature at the start of the survey was 15°C and 12.2°C at the end of the survey

The surveyors positioned themselves to get the best coverage of the building, and focused in on those areas with the most potential as roosting habitat (Appendix D). The survey was aided by the use of the following bat detectors: Bat Box Duet, Baton XD, Anabat Express and Petterson D230.

The emergence surveys were completed at an appropriate time of year and the weather conditions were suitable, therefore a full assessment of the potential of the building to support roosting bats was undertaken.

Results

Surrounding Habitats

29 Windy Street is situated in the small village of Chipping, within the Forest of Bowland. The surrounding landscape is dominated by semi-improved grazed pasture and scattered blocks of woodland, with open moorland to the north and south-east. Based on a review of aerial photographs and Ordnance Survey maps, bat foraging habitat in the surrounding area includes frequent blocks of woodland and the tree lined, Chipping Brook. The woodlands offer favourable foraging habitat for species which prefer 'closed' habitats, including brown long-eared (*Plecotus auritus*) and Natterer's bats (*Myotis nattereri*). Open areas of grazed pasture provide suitable habitat for foraging noctule bats (*Nyctalus noctula*) who show a preference for 'open' habitats. The edges of the woodland blocks potentially provide suitable foraging and commuting habitat for bat species which show a preference for utilising 'edge' habitats. Such species include common pipistrelle (*Pipistrellus pipistrellus*) and whiskered (*Myotis mystacinus*) bats, which are flexible in their foraging habitat. Chipping Brook provides suitable foraging habitat for Daubenton's bats (*Myotis daubentonii*) which show a preference for foraging over water.

Scattered traditional buildings, mature trees, caves and kilns in the area provide potential roosting sites for a range of bat species.

The Forest of Bowland is considered to be an important area for bats. Surveys undertaken by Bowland Ecology Ltd, in addition to a research project currently being undertaken by Bowland Ecology staff and associates within the Hodder Valley, have found bats to be present within numerous lime kilns and caves close to the Site (within 5 km), which are used annually by hibernating bats. These sites are also known to form important autumn swarming sites for a number of bat species and are used sporadically at other times of the year.

Buildings in the wider area including the Inn at Whitewell (located approximately 5 km north east), Laundwood Pumping Station, Slaidburn Village Hall and Hodder Treatment Works are all known to house significant bat maternity roosts for a variety of species including common and soprano pipistrelle, myotis bats and brown long-eared bats.

In addition to the maternity, swarming and hibernation roosts in buildings, caves and kilns it is likely that many of the farm buildings in the Forest of Bowland are used by roosting bats during the summer and transitional periods.

External Building Description

The building is a two storey, stone built, traditional building comprising three separate residential dwellings with solid stone walls providing negligible hibernation potential (Plate 1). The roof is pitched with slate tiles and stone ridge tiles with solid stone walls. Timber framed windows and doors are present on the northern and southern building elevations with guttering present along the wall tops. Two chimney stacks, in good condition are located in the centre of the roof. Lead flashing present at the base of each chimney is slightly raised (Plate 2), offering potential roosting habitat for crevice dwelling bats.

The mortar between the stonework on the walls is generally well sealed, except on the wall tops where the eaves of roof are not flush with wall tops, creating a gap potentially allowing access into the internal space (Plate 3). House sparrows (*Passer domesticus*) were noted entering a gap above the lintel on the first floor window of number 31. The roof is lined with bitumen felt, some of which is coming away from roofing tiles at the eaves of the building creating a gap suitable for roosting bats and potentially providing access into the roof void.

Gaps are present beneath the ridge tiles on northern gable end, and several of the slate roof tiles are also raised creating roosting crevices for bats (Plate 4). Mortar is missing beneath the ridge tiles along the buildings southern elevation. Light ivy cladding is located on the north-eastern gable end (Plate 5).



Plates 1 and 2: North-west and eastern elevations of farmhouse & lifted lead flashing



Plates 3 and 4: Gaps on wall tops & gaps beneath tiles on northern gable end



Plate 5: Ivy cladding

The building is considered to provide **moderate potential** to support roosting bats, in accordance with guidance (Collins 2016). However, no bats or their field signs were found during the external inspection of the property.

Dusk Emergence Survey

The initial emergence survey was carried out on the 1st May 2018. The survey commenced at 20:25 and ended at 22:10, sunset was at 20:40. The first bat recorded during the survey by surveyor 1 was a common pipistrelle was observed foraging in the mature sycamore (*Acer pseudoplatanus*) trees directly north of the building at 20:52. Only a single bat was observed at any one time and the foraging activity was relatively constant throughout the duration of the survey within the tree canopy. Occasionally, individual common pipistrelle

bats were observed commuting up and down the track to St. Mary's Church, located directly north of the building.

Surveyor 2, located to the north west of the building, on Windy Street observed more bat passes during the survey. The first bat, a common pipistrelle was observed emerging from houses on the opposite side of Windy Street, the bat then flew over the building into the mature sycamore trees. At 21:00 a soprano pipistrelle (*Pipistrellus pygmaeus*) was observed emerging from the roof tiles between the two chimneys on the building. During the survey a number of bats were recorded by surveyor 2 foraging and commuting around the building, these are detailed in Table 1 below.

The second dusk emergence survey was completed on the 14th June. The survey commenced at 21:20 and ended at 23:15, sunset was at 21:42. The first bat recorded during the survey was a common pipistrelle bat which emerged from a nearby building on the opposite side of Windy Street, recorded by surveyor 1. Surveyor 2 located on the street side of the building recorded their first bat, a common pipistrelle at 22:03. From 22:03 until 22:36 common pipistrelles were frequently noted foraging and commuting along the road and over the building. At 22:39 and 22:44 individual noctule bats were recorded commuting along Windy Street. Throughout the duration of the survey common and soprano pipistrelles were recorded foraging and commuting within the vicinity of the building, detailed results can be viewed in Table 1 below. No emergence from the building was recorded during the second survey.

Table 1: Bat activity

Survey 1: 1 st May 2018		
Time	Species	Activity
20:56	Common pipistrelle	Bat emerged from houses on opposite side of street, flew over building into trees
21:00	Common pipistrelle	Foraging around houses on opposite side of street
21:06	Soprano pipistrelle	Emerged from roof of building
21:10	Common pipistrelle	Foraging over wall into trees behind building
21:12	Common pipistrelle	Foraging along street
21:14	Common and soprano pipistrelle	Foraging around houses on the opposite side of the street
21:15	Noctule	Foraging around edge of building
21:25	Common and soprano pipistrelle	Continual foraging in trees behind building
21:48	Myotis sp.	Foraging over building into trees behind building
21:57	Myotis sp.	Foraging (heard, not seen)
21:58	Soprano pipistrelle	Foraging between woodland and street
21:59	Myotis sp.	Foraging in area

Survey 2: 14 th June 2018		
Time	Species	Activity
21:56	Common pipistrelle	Emerged from building on opposite side of Windy Street
21:58	Soprano pipistrelle	Foraging (heard, not seen)
22:03	Common pipistrelle	Commuting over building to the west
22:09	Common pipistrelle/soprano pipistrelle	Constant foraging over rear garden of building until 22:22
22:15	Common pipistrelle	Commuting west to east over building
22:25	Common pipistrelle	Commuting east to west just to the north of No. 29 Windy Street
22:26	Common pipistrelle	Two bats continuously foraging in garden until 22:40
22:27	Silent pass	Bat observed commuting west to east over building
22:28	Common pipistrelle	Two bats observed foraging in gardens on the opposite side of the road
22:31	Common pipistrelle	Two bats foraging along Windy street
22:32	Common pipistrelle	Foraging along street
22:36	Common pipistrelle	Four bats foraging along street
22:39	Noctule	Commuting along street to the south
22:44	Noctule	Commuting along street to the north west
22:45	Common pipistrelle	Brief foraging
22:52	Common pipistrelle	Brief foraging

Conclusions and Recommendations:

No evidence of roosting bats was observed during the external inspection of the building; however, a number of bat roosting opportunities were identified, including:

- Raised roofing tiles;
- Gaps in masonry between the eaves of the building and the wall tops on the northern and southern building elevations;
- Gaps beneath ridge tiles; and
- Light ivy cladding.

Small gaps and crevices, such as those between slates, under ridge tiles and gaps in the wall tops, have the potential to be used by crevice dwelling bats such as pipistrelles, (*Pipistrellus pipistrellus*, *P.pygmaeus*, *P.nathusii*), whiskered bats and Brandt's bats (*M.brandtii*). Void dwelling species, such as brown long-eared bats (*Plecotus auritus*), may also

utilise the loft void within the building, however, as previously described an internal inspection could not be completed.

A single common pipistrelle bat emerged from the building during the first emergence survey. As such, the building is considered to provide conditions to support a small day roost for individual, common species of bat. Therefore building is categorised as a roost of low conservation importance.

Proposed works comprise maintenance works to the walls and roof which supports very small numbers of roosting bats, during the active season (April to September inclusive). As such, works to the building would result in the loss of bat roosting habitat, the killing and injury of bats, and disturbance to roosting bats, which would result in an offence if bats were present at the time of works (see Appendix A).

As the proposed works to the building are temporary and minor, with the implementation of suitable mitigation (described below) impacts to roosting bats from the works will be negligible.

The following Reasonable Avoidance Measures (RAMs) described below will be adhered to throughout the duration of the works in order to ensure that impacts to bats are reduced to a negligible level:

- Before any works proceed, all contractors should be made aware of the possible presence of bats and the signs to look for (Appendix D).
- Prior to the commencement of works, and when scaffold has been erected, gaps in masonry and beneath ridge and roof tiles should be checked using an endoscope by a suitability qualified and licenced ecologist, to ensure no bats are present.
- Careful timing of works is recommended. For works to conform with best ecological practice, repair works will be scheduled to occur within the period of least impact to bats – (between October and March due to absence of hibernation potential). If undertaken in these periods, any roosting bats will be able to relocate to alternative roosts, although individual bats can be found at any time.
- Upon completion of the works gaps along the wall tops should be created to ensure the continuation of bat roosting habitat.
- Work should cease immediately if any bats are encountered at any stage and only resume once further advice from the project ecologist has been sought. If the bat is in immediate danger it should only be picked up with gloved hands and placed in a secure container with air holes in a dark, quiet place until the licenced ecologist arrives at site.

In addition to the potential of the building to support bats, house sparrows were noted during the initial visit to be roosting in the gaps in the eaves of the building. Therefore it is likely they are nesting in the building. As such, the removal and/or disturbance of the roof tiles could result in disturbance to nesting birds if it is carried out within the breeding bird season (March – September). Therefore works to remove the roof tiles will take place outside the nesting season which runs from March until August inclusive, in order to prevent impacts upon nesting birds.

If no works are undertaken on site within 12 months of this survey or if **any changes to the proposals and/or development timescales are made**, further bat surveys may be necessary due to the potential for colonisation of the site.

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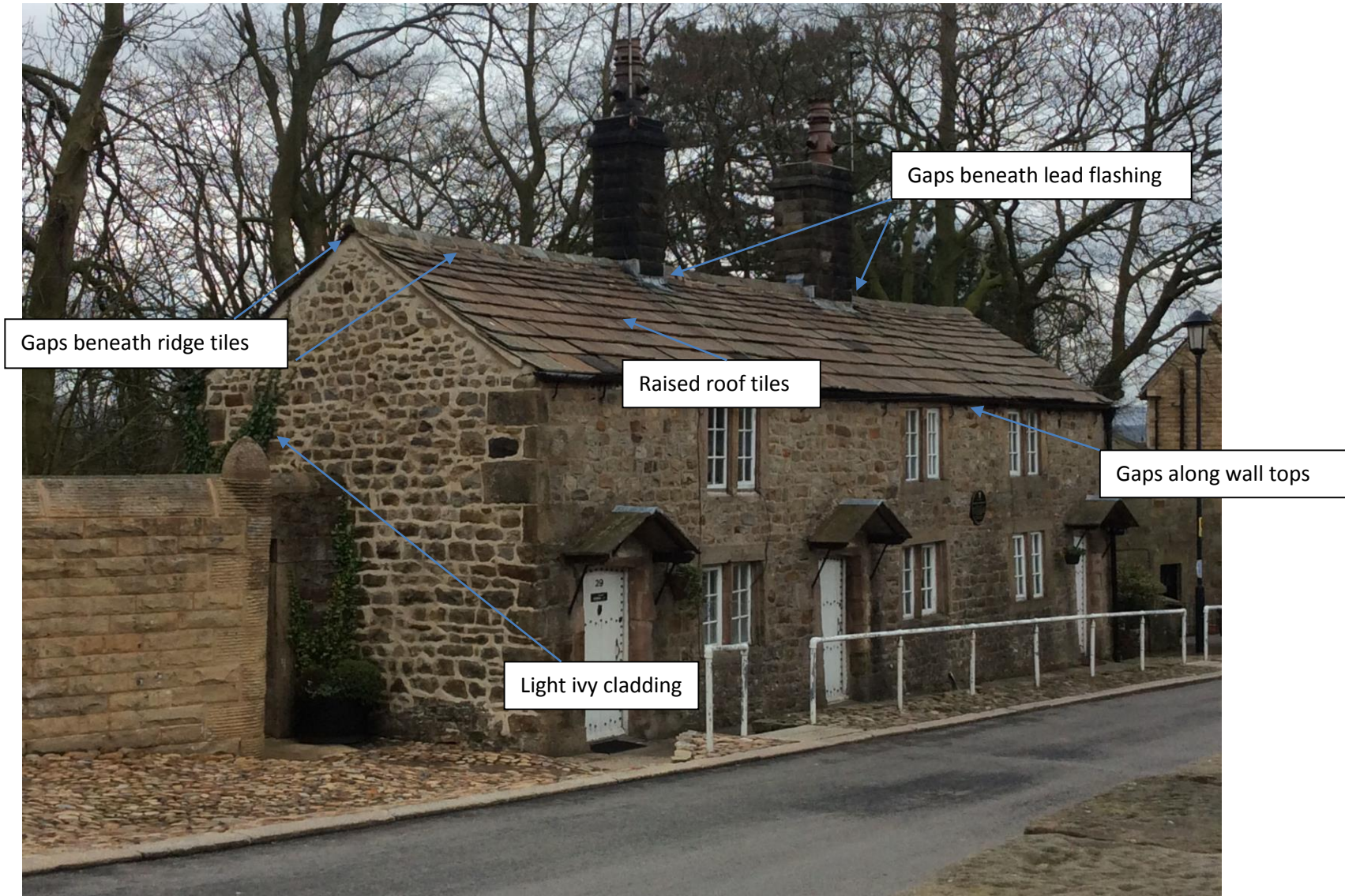
Date: 27/06/2018

Appendix A – Legal Information

This report provides guidance of potential offences as part of the impact assessment. This report does not provide detailed legal advice and for full details of potential offences against protected species the relevant acts should be consulted in their original forms i.e. The Wildlife and Countryside Act, 1981, as amended, The Countryside and Rights of Way Act 2000, The Natural Environment and Rural Communities Act, 2006 and The Conservation of Habitats and Species Regulations 2017.

Species	Legislation	Offences	Notes on licensing procedures and further advice
Species that are protected by European and national legislation			
Bats <i>European protected species</i>	Conservation of Habitats and Species Regulations 2017 Reg 41	Deliberately ¹ capture, injure or kill a bat; Deliberate disturbance ² of bats; Damage or destroy a breeding site or resting place used by a bat. The protection of bat roosts is considered to apply regardless of whether bats are present.	An NE licence in respect of development is required in England. <i>European Protected Species: Mitigation Licensing- How to get a licence</i> (NE 2010) <i>Bat Mitigation Guidelines</i> (English Nature 2004) <i>Bat Workers Manual</i> (JNCC 2004) <i>BS8596:2015 Surveying for bats in trees and woodland</i> (BSI, 2015)
	Wildlife and Countryside Act 1981 (as amended) ⁴ S.9	Intentionally or recklessly ³ obstruct access to any structure or place used for shelter or protection or disturb a bat in such a place.	Licence from NE is required for surveys (scientific purposes) that would involve disturbance of bats or entering a known or suspected roost site.
Birds	Conservation of Habitats and Species (Amendment) Regulations 2017	N/A	Authorities are required to take steps to ensure the preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the United Kingdom, including by means of the upkeep, management and creation of such habitat. This includes activities in relation to town and country planning functions.
	Wildlife and Countryside Act 1981 (as amended) ⁴ S.1	Intentionally kill, injure or take any wild bird; Intentionally take, damage or destroy the nest of any wild bird while that nest is in use or being built; Intentionally take or destroy the nest or eggs of any wild bird. Schedule 1 species Special penalties are liable for these offences involving birds on Schedule 1 (e.g. most birds of prey, kingfisher, barn owl, black redstart, little ringed plover). Intentionally or recklessly ³ disturb a Schedule 1 species while it is building a nest or is in, on or near a nest containing eggs or young; intentionally or recklessly disturb dependent young of such a species.	No licences are available to disturb any birds in regard to development. Licences are available in certain circumstances to damage or destroy nests, but these only apply to the list of licensable activities in the Act and do not cover development. General licences are available in respect of 'pest species' but only for certain very specific purposes e.g. public health, public safety, air safety. https://www.gov.uk/wild-birds-protection-surveys-and-licences https://www.gov.uk/prevent-wild-birds-damaging-your-land-farm-or-business

Appendix B – Potential Bat Roosting Features Plan



Appendix C – Bat Roost Potential Criteria (Collins, 2016)

Suitability	Description of Roosting Habitat	Commuting & Foraging Habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	<p>A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitats to be used on a regular basis or by a larger number of bats (i.e. unlikely to be suitable maternity or hibernation).</p> <p>A tree of sufficient size and age to contain potential roosting features but with none seen from the ground, or feature seen with only very limited roosting potential.</p>	<p>Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or un-vegetated stream, but isolated i.e. not very well connected to the surrounding landscape by other habitat.</p> <p>Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.</p>
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions, and surrounding habitat but unlikely to support a roost of high conservation status.	<p>Continuous habitat connected to the wider landscape that could be used by bats for commuting, such as lines of trees and scrub or linked back gardens.</p> <p>Habitat that is connected to the wider landscape that could be used by bats for foraging, such as trees, scrub, grassland or water.</p>
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis, and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	<p>Continuous high quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge.</p> <p>High quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats, such as broadleaved woodland, tree-lined watercourses and grazed parkland.</p> <p>Site is close and connected to know roosts.</p>

Appendix D – Bat Information for Contractors

BATS



Information, legal responsibilities and best practice for the construction industry

Legal Protection

All UK Bat species are protected by European and UK law, in practical terms this means it is an offence to:

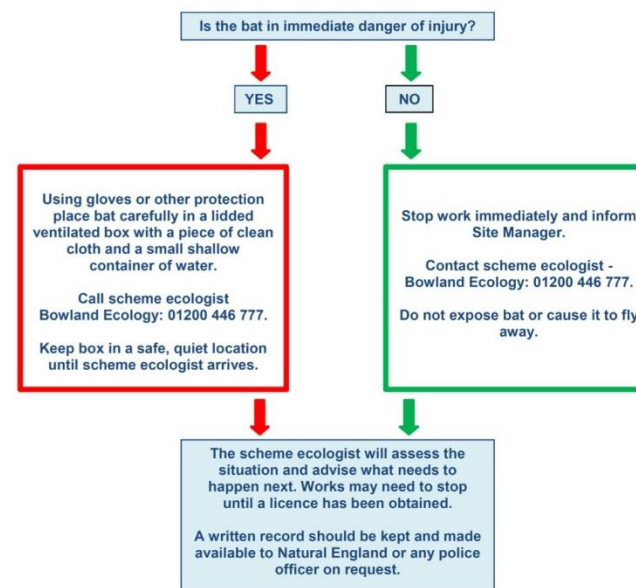
- Deliberately capture, injure or kill a bat;
- Deliberately disturb bats;
- Damage or destroy a breeding site or resting place (even if bats are not occupying the roost at the time);
- Intentionally or recklessly obstruct access to any structure or place used for shelter or protection or disturb a bat in such a place;
- Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat.

Penalties on conviction: the maximum fine is £5,000 per incident or per bat (some roosts contain several hundred bats), up to six months in prison, and forfeiture of items used to commit the offence, e.g. vehicles, plant, machinery.

Defences include:

1. Tending/caring for a bat solely for the purpose of restoring it to health and subsequent release.
2. Mercy killing where there is no reasonable hope of recovery (provided that person did not cause the injury in the first place – in which case the illegal act has already taken place).

Found a bat during unsupervised works?

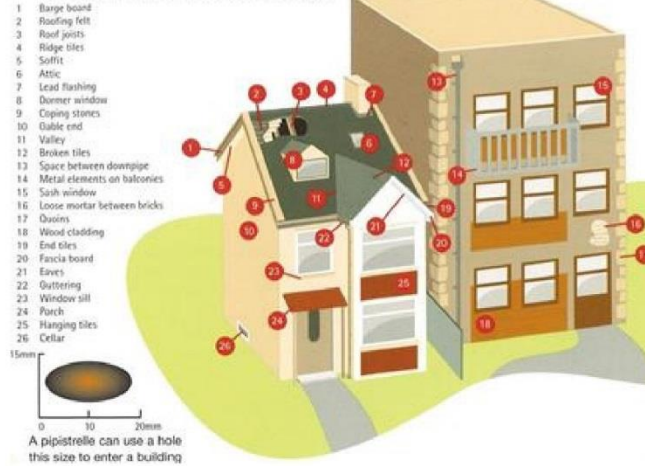


Field signs of bat presence:

- Live or dead bats: the smallest UK bat species, the pipistrelle is only 3.5-4.5cm long.
- Droppings: bat droppings look like mouse droppings but will crumble between your fingers (they are dry and made entirely of insects).
- Feeding remains: piles of butterfly/moth wings are often left below bat feeding perches.



Places that bats may use in buildings



Schematic from www.bats.org.uk

Bats can roost in the following places:

- The top of gable end or dividing wall;
- The top of chimney breasts;
- Ridge and hip beams and other roof beams;
- Mortise and tension joints;
- All beams/ceilings/pipework (free hanging bats);
- The junction of roof timbers, especially where ridge and hip beams meet;
- Behind purlins;
- Between tiles and the roof lining;
- Under flat felt roofs;
- Under barge boards;
- In cavity walls;
- In cracks in stone or concrete;
- Behind peeling paint/wall coverings;
- Gaps behind window and door frames;
- Between window panes and timber boarding.
- In trees (cracks/holes/ivy cladding).

Why wear gloves?

There is a small risk that some bats carry a rabies virus – European Bat Lyssavirus. The purpose of wearing gloves is to reduce the chance of being bitten, as the virus is transmitted via bat saliva. Thick leather gloves are appropriate for removing a bat from imminent danger but these should be clean.



In the event that you are bitten, wash the wound, gently but thoroughly, with soap and water. Speak to a health professional immediately, advising them that you have been bitten by a bat.

References:

- Bat Conservation Trust. August 2016. Why wear gloves when handling bats?
- BCT Bat Surveys for Professional Ecologists, Good Practice Guidelines, 3rd Edition, 2016