

Ecological Advice Note: 12 Somerset Avenue

Introduction

Bowland Ecology Ltd was commissioned by Chelsea Leach to complete a daytime internal and external building inspection for bats of a single storey residential property at 12 Somerset Avenue, Clitheroe. Planning permission is sought for extension works to the property.

This advice note presents the survey results and makes an assessment of the value of the building for bats, with particular reference to legal requirements and potential constraints to the proposed works.

Survey methodology

A data search was undertaken with Dave Fisher of South Lancashire Bat Group who holds records of bat roosts and bat activity within the Clitheroe area.

Ordnance Survey (OS) maps and aerial photographs (<http://maps.google.co.uk/maps>) were reviewed to help identify any continuous habitat and any other notable habitats for bats within the surrounding area.

An internal and external inspection of the building was undertaken by Matt Clifford MSc, BSc (Hons), ACIEEM (Natural England Bat Licence Number: 2016-20858-CLS-CLS) on the 3rd January 2018. The weather during the inspection was cloudy and dry with a strong breeze (Beaufort scale 6) and an approximate temperature of 7°C. The assessment followed and is in line with the Bat Conservation Trust 'Bat Surveys for Professional Ecologists: Good Practice Guidelines' (3rd edn) (Collins, 2016). The survey involved checking for bats and the field signs of bats such as bat droppings, urine stains, bat feeding remains (moth wings, insect cases), bat staining, distinctive smell of bats, scratch marks and smoothing of surfaces which would indicate a roost site. An assessment of the potential of the building was also made during the survey i.e. searching for suitable roosting crevices/features and access points. High power torches (LED Lenser T7.2 320 lumens) and close focus binoculars were used to aid the survey.

Natural England's Bat Mitigation Guidelines (A.J. Mitchell-Jones, 2004) state 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.

Using the information collected during the assessment, a 'roost potential' category was assigned to the building according to the criteria shown in Appendix A.

Results

Results from previous bat emergence surveys of buildings within the neighbourhood recorded low levels of activity suggesting that no significant roosts are located within the immediate area (Fisher, 2018). However, a number of roosts have been recorded within 1 km of the property, the closest being at Clitheroe Royal Grammar School, approximately 0.25 km to the north-east (Fisher, 2018). Additional roosts recorded within 1 km of the property are of common pipistrelle (*Pipistrellus pipistrellus*) and soprano pipistrelle (*Pipistrellus pygmaeus*), both of which are widespread and commonly occurring species.

The property is a semi-detached bungalow constructed of brick and breezeblock with stone cladding and pebble-dash render with a tall, pitched tiled roof and a brick chimney.

Western elevation

The western elevation forms the front of the house with stone cladding and two windows. A wooden fascia board and soffit runs around the base of the roof, beneath plastic guttering. There are no gaps within the stonework, window frames or within the fascia board and soffits providing potential roosting features for bats (PRF). The roof appears to be in moderate condition with no missing or lifted tiles. However, the shape of the tiles provides a small gap underneath which may provide a PRF.



Figure 1: Western elevation



Figure 2: Western and southern elevation

Southern and eastern elevations

The southern elevation comprises the properties front door and two small windows with the eastern elevation comprising two large windows. The walls of both elevations have a pebble-dash render with no gaps or crevices observed. The fascia board, soffits and window frames are in a moderate condition with no gaps allowing internal access for bats. The roof appears to be in moderate condition with no missing or lifted tiles. However, the shape of the tiles provides a small gap underneath which may provide a PRF.



Figure 3: Southern elevation



Figure 4: Southern elevation



Figure 5: Eastern elevation



Figure 6: Eastern elevation

No evidence of bats was observed around the exterior of the property during the external building inspection survey.

Internal

The loft area comprises the entire roof space, with a layer of insulation throughout. The vertical wall separating the property from the adjoining property comprises breezeblock and brick (Figure 8). The roof is constructed of timber beams and rafters with a lining between these and the tiles (Figure 7). The lining is mostly in good condition, however a number of small holes were observed within the roofs southern elevation (Figure 10). The cause of these holes is unknown, however it is likely that they were created to investigate the roof construction prior to the proposed works. A small hole in the roof tile at the location of one of these holes was observed, potentially allowing bats to access to the loft area. Furthermore, with the lights off, daylight was observed at the base of the roofs eastern elevation, suggesting that a gap allowing potential internal access for bats is present at this location.

A large hole in the floor of the loft space was observed above the room at the south-western corner of the property (Figure 9). Construction works are currently underway within ground floor rooms and is likely to cause light and noise disturbance to the loft area. In addition, the property is currently occupied providing further disturbance. Furthermore, the large gap in insulation will create fluctuating temperature conditions further reducing the suitability for roosting bats, including for hibernation.

No bats or evidence of bats was observed within the loft area during the internal inspection.



Figure 7: Loft space



Figure 8: Loft space showing breeze block wall



Figure 9: Hole in floor of loft space



Figure 10: Hole in roof lining

The property is located within a residential area. Habitats suitable for foraging and commuting bats in the immediate area limited to small gardens. Agricultural land with small areas of woodland, hedgerows and scattered trees providing higher quality habitat for foraging and commuting bats is located beyond the residential area (>0.1 km).

Conclusions and Recommendations

Due to the absence of evidence of bats during the external and internal inspection of the building together with the lack of records within the neighbourhood, it is concluded that the property does not comprise a significant bat roost (A.J. Mitchell-Jones, 2004). Despite two gaps providing potential access points for bats into the loft space, the presence of a large hole in the floor removing the barrier to noise and light disturbance from the ground floor greatly reduces the suitability of the space for roosting bats. Furthermore, the large gap in insulation will create fluctuating temperature conditions further reducing the suitability for roosting bats, including for hibernation. Brown long-eared bats (*Plecotus auritus*) particularly seek loft spaces for roosting. However, considering the largely unsuitable nature of the loft for roosting as described above, the lack of records for this species in the area and the lack of nearby foraging habitat suggests the presence of brown long-eared bats in the building is highly unlikely.

Despite no missing or lifted tiles being observed, the design of the tiles on the roof includes a small gap underneath each tile which may provide a location suitable for small numbers of crevice dwelling bats such as pipistrelle species. However, it is understood that the gap extends only a short distance and is likely to only provide limited shelter for roosting bats.

Overall, the property is assessed as having **negligible to low potential** to support roosting bats. However, due to the presence of 1) a small gap beneath tiles throughout the roof, and 2) known pipistrelle maternity roosts in the area, the presence of opportunistic, crevice dwelling bats utilising these features cannot be entirely ruled out.

The ODPM Circular (2005) paragraph 99 states that:

“Bearing in mind the delay and costs that may be involved, developers should not be required to undertake surveys for a protected species unless there is reasonable likelihood of the species being present and affected by the development”.

In addition, whilst it is considered that an EPS licence is not required for this scheme due to the low/negligible risk of encountering bats on site, the following recent consultation by Natural England on ‘Proposed New Policies for European Protected Species Licensing’ (2016, section 4) described below corroborates our recommended approach with regards to works to the building:

“Natural England will be expected to ensure that licensing decisions are properly supported by survey information, taking into account industry standards and guidelines. It may, however, accept a lower than standard survey effort where: the costs or delays associated with carrying out standard survey requirements would be disproportionate to the additional certainty that it would bring; the ecological impacts of development can be predicted with sufficient certainty; and mitigation or compensation will ensure that the licensed activity does not detrimentally affect the conservation status of the local population of any EPS.”

It is therefore considered in this case that additional dusk/dawn emergence/re-entry surveys would not return any additional information on the level of use of the building by roosting bats and if the aforementioned surveys were required it would substantiate a disproportionate level of survey for what is considered to be low to negligible value habitat for small numbers of pipistrelle bats.

As outlined above, the likelihood of bats roosting within the buildings on site is considered to be low to negligible. However, as bats are mobile species there is the potential for small numbers of crevice dwelling bats to utilise the tiles occasionally, at any time. As a precautionary measure works to remove the roof tiles should be undertaken using Reasonable Avoidance Measures (RAMs) as described below. RAMs are considered appropriate to mitigate the risk of encountering a low number of bats within the building and therefore entirely eliminate the potential of direct impacts to bats.

If bats are found or suspected, as a legal requirement, works in that area should cease immediately until further advice has been sought from Natural England or the scheme ecologist. The following RAMs are advised:

- Before any work proceeds, all contractors will be made aware of the possible presence of bats and the signs to look for (Appendix B);
- Roof tiles will be removed by hand and the space behind each tile checked prior to removing the next one;
- Work will cease immediately if bats are encountered at any stage and works can only resume once advice from a suitably qualified ecologist has been sought; and
- If bats are in imminent danger, carefully move the bat(s) **wearing gloves**, and place within a suitable container (a covered box such as a shoe box) with air holes. Place in a safe, dark and quiet location and contact the project ecologist for further instruction.

If no works are undertaken on site within 12 months of this survey or if any changes to the proposal timescales are made, a further ecological survey is recommended (because of the mobility of animals and the potential for colonisation of the site).

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Date: 11/01/2018

References

- A.J. Mitchell-Jones. 2004. *Bat Mitigation Guidelines*, Natural England.
- Collins, J. (ed). 2016. *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edn)*. The Bat Conservation Trust, London.
- Fisher, D. *Personal communication*, January, 2018.
- Natural England, 2004. *Bat Mitigation Guidelines*.
- Natural England. 2016. *Proposed new policies for European Protected Species licensing*. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/575709/eps-consultation-outcome.pdf.
- ODPM. 2005. *Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System*.

Appendix A - 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 known roosts.</p>

Appendix B - Information Sheet for Contractors on Bats

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:

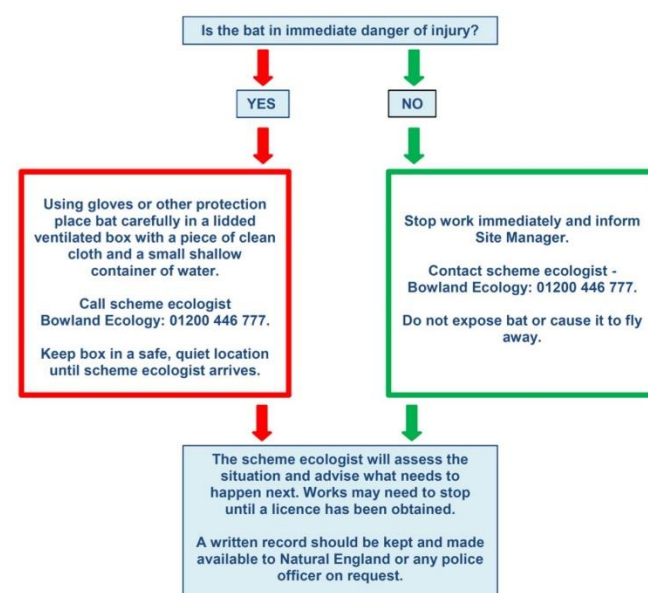
- Deliberately capture, injure or kill a bat;
- Deliberately disturb bats;
- Damage or destroy a breeding site or resting place (even if bats are not occupying the roost at the time);
- Intentionally or recklessly obstruct access to any structure or place used for shelter or protection or disturb a bat 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?

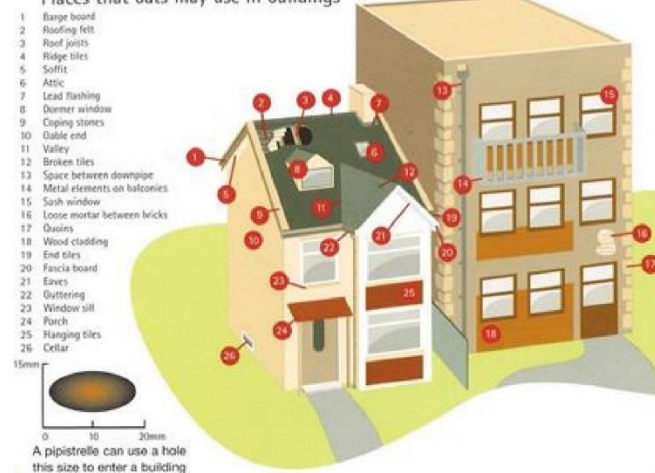


Field signs of bat presence:

- 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

version 1 August 2017