Ecological Advice Note: Byre Barn, Clitheroe

Introduction

Bowland Ecology Ltd was commissioned by Lea Hough Surveyors to complete a preliminary bat roost assessment of a garage at Byre Barn, Edisford Road, Clitheroe (central Ordinance Survey grid reference: SD 72436 41327). This relates to the proposed extension of the existing single garage to a triple garage.

The site is situated on the outskirts of the Clitheroe town within a semi-rural area dominated by grazed pasture fields with a network of hedgerow and tree lines forming filed boundaries. The building in a wider context is shown in Figure 1 below.

Figure 1: Building location.

This advice note includes a description of survey methods, survey results and evaluation, and outlines recommendations for further surveys and/or mitigation measures where appropriate.

Methodology

Desk Study

Ordnance Survey maps and aerial photographs were reviewed online, to help identify any continuous habitats and any other notable habitats suitable for bats within the surrounding area.

Building Inspection Survey

A daytime inspection of the building was carried out on 6th February 2019, by Jack Driver BSc (Hons), in accordance with the Bat Conservation Trust Good Practice Guidelines (Collins 2016). The weather during the survey was dry and cool (approximately 6°C) with light breeze.

The external inspection was conducted using close-focusing binoculars and a high-powered torch to search for signs of bats, such as droppings, and for potential access points such as cavities in the exterior walls and roof structure. Potential access points and/or roost sites were recorded and photographed (the photographs are included in Appendix C).

The internal inspection of the building was undertaken, in which all accessible areas that health and safety considerations allowed, to search for field signs such as; bats, bat droppings,

urine stains, bat feeding remains (moth wings, insect cases), bat staining, the distinctive smell of bats, scratch marks and smoothing of surfaces which would indicate a roost site. The inspection comprised a visual search of floors and flat surfaces, cracks, gaps and crevices around walls, doors, windows and timber frames, where present.

The building's suitability for roosting bats was categorised using the current guidance (Collins, 2016) and given a value in line with table 4.1 on page 35 of the guidance, as adapted and present in Appendix B.

Survey limitations

External field signs of bats can be lost over time due to weathering and damp conditions. Droppings and other field signs are not always visible through nonintrusive inspection. Inspection of rooftops is limited to inspection from ground level using close-focussing binoculars and high-powered torchlight only, due to the health and safety restrictions of accessing a rooftop.

Lack of evidence of a bat species does not necessarily preclude it from being present at a later date. In relation to use of structures by bat species, use of a particular structure or area of land can significantly vary not only on a seasonal basis but also from day to day.

Results

Desk Study

The garage is immediately surrounded by converted farm buildings with associated hard standing and gardens. The wider surrounding landscape is a mixture of woodlands, grazed pastures and cultivated land bound by hedgerows and tree lines that provide suitable commuting and foraging habitat for a range of bat species. The River Ribble with its wooded corridor, that lies approximately 100 m to the east of the building, acts as a feeding and commuting corridor for bats.

Building Inspection

The garage is a small single storey building of a stone construction and has a pitched roof covered with slates. Both the roof and the stonework are in a good condition with undamaged slates and well-sealed mortar providing no suitable roosting features for bats.

Eaves with exposed roof joints occurs on the southern elevation and a timber fascia is present on the norther elevation. Gaps were recorded behind the fascia; these gaps could be utilised as roosting sites for bats. Upon close inspection, no evidence of bats was found behind and/or below the fascia; however, the northern elevation could not be accessed fully due to presence of neighbouring wall and hedgerow.

There is a small window present on the western elevation, a uPVC garage door with a wooden lintel on the southern elevation and a uPVC door on the eastern elevation of the building. All of these features were well fitted to the surrounding walls, offering no opportunities for roosting locations for bats. A ventilation grill is present on the eastern elevation of the building; this could provide a potential access point into the inside of the building. However, this feature had very dense historic cobwebs, indicating that it has not been used as an access points for bats. Security lighting is fixed onto the garage on western and southern elevations.

Internally, the garage is open to the roof and use for storage. The roof has exposed ridge beams and supporting beams and is lined with breathable roof membrane. The internal walls

are of breeze block construction and white painted. The entire southern and northern walls between breathable roof membrane and top of breeze block structure are covered with cobwebs. No evidence of bats was found within the interior of the building.

Evaluation and Recommendations

The surrounding area provide high quality foraging and commuting habitat for a range of bat species which utilise differing habitat types. However, no bats or evidence of roosting bats was found during the building inspection of the garage. The building exterior was found to be generally in good condition. The gaps behind the fascia on the northern elevation, could provide potential roosting locations for an individual or small number of bats, were inspected (where accessible) but no evidence of bats was found.

Internally, the exposed wooden beams of the roof may potentially provide some roosting opportunities for bats. The only possible access for bats into the interior of the building is via a ventilation grill, however, this was not used due to the presence of very dense historic cobwebs. The building has been categorised as having low/negligible potential to support roosting bats.

Although the chances of finding bats during the works to the building are considered unlikely, there are gaps present behind fascia on the northern elevation that could be potentially used by individual roosting bats and given that the northern elevation could not be fully accessed, the following precautionary measures should be implemented during the works:

- All site staff should be made aware of the potential presence of bats and what to do if signs of bats are found. A Tool Box Talk should be given to all contractors (see Appendix D).

- The wooden fascia on the northern elevation of the building should be removed by hand with care in such a way that it is able to be replaced if bats are found. If bats or any signs of bats are found during the works, then all works must cease immediately, and a suitably experienced bat ecologist contacted. The legal position in relation to bats is contained within Appendix A.

Re-survey of the Site
If no works are undertaken on site within 12 months of this survey or if any changes to the proposals are made, a further ecological survey may be necessary (because of the mobility of animals and the potential for colonisation of the site).

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Appendix A – Legal Information

Species	Legislation	Offences	Notes on licensing procedures and further advice
Species that are protected by European and national legislation			
Bats *European protected species*	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. https://www.gov.uk/bats-protection-surveys-and-licences *European Protected Species: Mitigation Licensing- How to get a licence* (NE 2010) *Bat Mitigation Guidelines* (English Nature 2004) *Bat Workers Manual* (JNCC 2004) *BS8596:2015 Surveying for bats in trees and woodland* (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.

[1]Deliberate capture or killing is taken to include "accepting the possibility" of such capture or killing

[2]Deliberate 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 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.

Lower levels of disturbance not covered by the Conservation of Habitats and Species Regulations 2017 remain an offence under the Wildlife and Countryside Act 1981 although a defence is available where such actions are the incidental result of a lawful activity that could not reasonably be avoided. Thus deliberate disturbance that does not result in either (a) or (b) above would be classed as a lower level of disturbance.

[3]The term 'reckless' is defined by the case of Regina versus Caldwell 1982. The prosecution has to show that a person deliberately took an unacceptable risk, or failed to notice or consider an obvious risk.

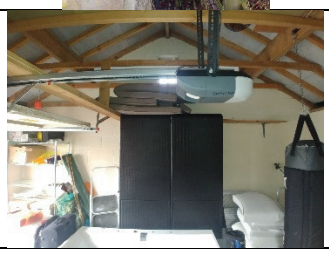
[4] The Wildlife and Countryside Act (1981) has been updated by various amendments, including the Countryside and Rights of Way Act 2000 and the Natural Environment and Rural Communities Act 2006. A full list of amendments can be found at http://jncc.defra.gov.uk/page-1377.

Appendix B – Bat Roost Potential and Habitat Suitability Categories

Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape (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	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).	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated i.e. not very well connected to the surrounding landscape by other habitat. 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.
Moderate	A structure 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.	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. Habitat that is connected to the wider landscape that could be used by bats for foraging, such as trees, scrub, grassland or water.
High	A structure 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.	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. 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. Site is close and connected to known roosts.

Appendix C – Photographs

Ref	Description	Photograph
1	Eastern and southern elevation of the building.	
2	Western elevation of the building.	
3	Eastern elevation of the building with gaps behand fascia.	
4	Interior of the garage.	

Appendix D – 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:

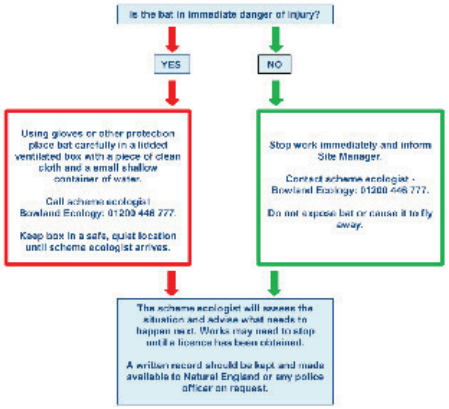
- Deliberately capture, injure or kill a bat;
- Deliberately disturb bats;
- Damage or destroy a breeding site or resting place (even if bats are not occupying the roost at the time);
- Intentionally or recklessly obstruct access to any structure or place used for shelter or protection or disturb a bat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

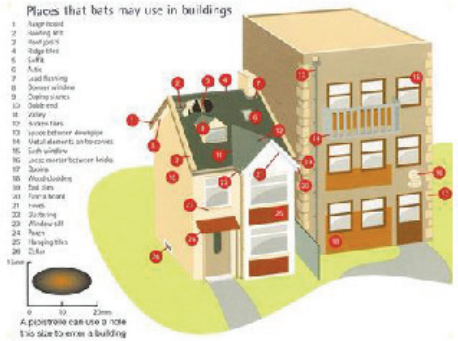
1. Tending/caring for a bat solely for the purpose of restoring it to health and subsequent release.
2. Mercy killing where there is no reasonable hope of recovery (provided that person did not cause the injury in the first place – in which case the illegal act has already taken place).

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.



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

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