Bat Survey
of
Grove Barn
Lakehouse Farm
Hempstead

On behalf of:

Humphreys Homes Limited
New House Farm
New House Lane
Ashdon
Saffron Walden
Essex
CB10 2LX

Prepared by:

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1) Summary

As part of a planning proposal involving a barn at Grove Barn, Lakehouse Farm, Finchingfield Road, Hempstead, CB10 2PR, a site visit was conducted on 25th May 2022 to determine whether bats were using the building. Following an inspection of the barn, a bat activity and emergence survey was undertaken to monitor any bat activity within the barn.

Photo 1: Northern (with midstrey) and eastern elevations

The survey building is a traditional, 3-bay, timber-framed barn with a corrugated asbestos roof and weather-boarded walls above a brick plinth. The barn is aligned E-W with a midstrey to the north. The barn is currently unused. There were very few gaps around mortise joints along the wall plates, and the wall braces were bolted to the beams rather than jointed, thereby reducing further the potential for roosting by bats. The floor of the barn was difficult to search as it was of sticky mud, perhaps indicating recent flooding. Externally, there was a tight seal to the eaves and gables, and no evidence of bats on the external surfaces.

During the survey on **25th May**, bat activity was first recorded at twenty-two minutes after sunset when a Common Pipistrelle (*P. pipistrellus*) emerged from the north-western corner of the barn. Subsequently, a second Common Pipistrelle was seen to emerge from the same area of the barn after which time, single bats were observed during the survey. A Common Pipistrelle foraged in the barn from 21.34 – 21.35pm.

Since bats were found to be using the barn as a place of shelter, a European Protected Species Licence (EPSL) will be required to work on the building. It is therefore recommended that a total of three dusk/dawn bat activity and emergence surveys should be conducted between mid-May and the end of September 2022 prior to any works taking place. These surveys should be conducted at least two weeks apart and should take place in appropriate weather conditions. The bat activity and emergence surveys would be required to confirm how the bats are using the building and the population of bats that may be affected by any changes. Ultimately, Natural England, in conjunction with the licence applicant, would confirm the level of mitigation required to retain or enhance the population of bats at the site. Planning consent would be required before a EPSL could be granted.

2) Introduction

Essex Mammal Surveys were requested to carry out a bat emergence survey of a barn at Lakehouse Farm, Hempstead to investigate for signs indicating the presence of bat colonies and their roosts. The identification of protected species is vital in the proposed development of a site to comply with existing legislation and also allows any work that may otherwise be detrimental to bats to be appropriately scheduled. John Dobson, a bat worker and trainer licensed by Natural England (Licence No. 2015-15258-CLS-CLS) and author of *Mammals of Essex* (Essex Field Club, 2014), carried out the survey on 25th May 2022. John Dobson has been elected a Fellow of the British Naturalists' Association and received the David Bellamy Award for natural history in 2015. The site is located at Grid Reference: TL661380.

This report has been compiled in accordance with the Bat Conservation Trust's *Bat Survey Guidelines for Professional Ecologists: Good Practice Guidelines.*

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

However, the first page of all three editions includes the following: *The guidelines should be interpreted and adapted on a case-by-case basis according to site-specific factors and the professional judgement of an experienced ecologist. Where examples are used in the guidelines, they are descriptive rather than prescriptive.*

3) Legislation and planning policy relating to bats in the UK

All bat species in Britain are protected under the Wildlife and Countryside Act 1981 through inclusion on Schedule 5. They are also protected under the Conservation (Natural Habitats &c.) Regulations 1994 (which were issued under the European Communities Act 1972), through inclusion on Schedule 2. From January 31st 2020 these Regulations were consolidated into the Conservation of Habitats and Species (Amendment) (EU exit) Regulations 2019.

European protected animal species and their breeding sites or resting places are protected under Regulation 39. It is an offence for anyone to deliberately capture, injure or kill any such animal or to deliberately take or destroy their eggs. It is an offence to damage or

destroy a breeding or resting place of such an animal. It is also an offence to have in one's possession or control, any live or dead European protected species.

The threshold above which a person will commit the offence of deliberately disturbing a wild animal of a European protected species has been raised. Now, a person will commit an offence only if he deliberately disturbs such animals in a way as to be likely significantly to affect (a) the ability of any significant groups of animals of that species to survive, breed, or rear or nurture their young, or (b) the local distribution of abundance of that species. However, please note that the existing offences under the Wildlife and Countryside Act (1981) as amended which cover obstruction of places used for shelter or protection (for example, a bat roost), disturbance and sale still apply to European protected species.

This legislation provides defences so that necessary operations may be carried out in places used by bats, provided the appropriate Statutory Nature Conservation Organisation (in England this is Natural England) is notified and allowed a reasonable time to advise on whether the proposed operation should be carried out and, if so, the approach to be used. The UK is a signatory to the Agreement on the Conservation of Bats in Europe, set up under the Bonn Convention. The Fundamental Obligations of Article III of this Agreement require the protection of all bats and their habitats, including the identification and protection from damage or disturbance of important feeding areas for bats.

Paragraph 98 of Circular 06/2005 states that '*the presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat*'.

Section 15 of the National Planning Policy Framework 2018 (NPPF) states that '*the planning system should contribute to and enhance the natural and local environment by ….minimising impacts on and providing net gains for biodiversity….*'

Since August 2007, building development that affects bats or their roosts needs a Protected Species Licence under The Conservation (Natural Habitats &c.) (Amendment) Regulations 2007 administered in England by Natural England.

4) Methods

4.1 The barn

The exterior surfaces of the building were examined for any signs of use as bat roosts, such as the presence of droppings on walls, windows or staining around roost entrances. The use of a crevice by a colony of bats produces droppings on brickwork and adjacent surfaces close to the crevice, together with an accumulation of droppings beneath the roost entrance. However, upon examination, many surfaces will have one or two droppings, randomly placed, caused by bats seeking out new roost sites.

The internal survey was conducted using a powerful torch. The roof of the building was searched for evidence of roosting, the floor areas for droppings and the beams for crevices and staining indicative of the presence of roosting bats. An Xtend & Climb Pro Ladder and a ProVision 300 endoscope were available to inspect crevices in brickwork and around beams.

4.2 Bat activity survey

The weather conditions for the surveys, at which time there was visible flying insect activity, were as follows:

Date	Sunset Time	Temperature	Weather	Cloud cover
25th May	20.58	15ºC	westerly breeze	40%

During the survey, the surveyor was located on the northern side of the building from where any bats emerging from the western and northern sides might be observed. Also, from that side, it was possible to monitor bat activity in the barn via the open door. The survey was conducted until ninety minutes after sunset.

Bat activity was recorded using a BatBox Duet frequency division bat detector connected to a Sony Minidisk recorder. Recordings were later analysed using Bat Sound sound analysis software.

5) Results

5.1 The barn

The survey building is a traditional, 3-bay, timber-framed barn with a corrugated asbestos roof and weather-boarded walls above a brick plinth. The barn is aligned E-W with a midstrey to the north. The barn is currently unused. There were very few gaps around mortise joints along the wall plates, and the wall braces were bolted to the beams rather than jointed, thereby reducing further the potential for roosting by bats. The floor of the barn was difficult to search as it was of sticky mud, perhaps indicating recent flooding. Externally, there was a tight seal to the eaves and gables, and no evidence of bats on the external surfaces.

Photo 2: Northern elevation

Photo 3: Western elevation

Photo 4: Southern elevation

Photo 5: Looking eastwards in the barn

Photo 6: Looking westwards

Photo 7: Showing roof area

5.2 Bat activity survey

During the survey on **25th May**, bat activity was recorded as follows:

- at 21.20 (twenty-two after sunset), a common pipistrelle emerged from the north-western corner of the barn
- at 21.30, a common pipistrelle emerged from the north-western corner of the barn
- at 21.33, a common pipistrelle was heard briefly to the north
- at 21.34 – 21.35, a common pipistrelle foraged in the barn
- at 21.38, a common pipistrelle flew W-E along north side of barn

- at 21.47, a common pipistrelle was heard briefly to the north
- at 22.01, a common pipistrelle was heard briefly to the north

After this time, no further bat activity was recorded.

6) Discussion

Bats are inquisitive, highly mobile animals, which constantly investigate their surroundings, evaluating good feeding areas and potential roosting opportunities. Where suitable habitat such as woodland, woodland edge or sheltered pasture occurs, bats will travel up to several kilometres to take advantage of this resource. To reach favoured sites, small bats will follow linear landscape features such as hedgerows, streams and lanes etc. The absence of such features can make an otherwise suitable site inaccessible to bats. In addition, new roosts will become established in such areas - examples being the rapid colonisation of artificial roost boxes placed in conifer forests or the occupation of new houses by nursery colonies of pipistrelle bats within a year or two of their completion.

Since bats were found to be using the barn as a place of shelter, a European Protected Species Licence (EPSL) will be required to work on the building. It is therefore recommended that a total of three dusk/dawn bat activity and emergence surveys should be conducted between mid-May and the end of September 2022 prior to any works taking place. These surveys should be conducted at least two weeks apart and should take place in appropriate weather conditions. The bat activity and emergence surveys would be required to confirm how the bats are using the building and the population of bats that may be affected by any changes. Ultimately, Natural England, in conjunction with the licence applicant, would confirm the level of mitigation required to retain or enhance the population of bats at the site. Planning consent would be required before a EPSL could be granted.

7) Review of existing records of bats in the area

Since the early 1980s, the Essex Bat Group has monitored the status and distribution of bats in this area. Records occurring within a 2km radius of the site are as follows:

TL670369	22 Jan 2015	Brown Long-eared Bat found by member of public
TL680366	24 May 2011	Common Pipistrelle recorded foraging
TL684400	15 May 2019	Common Pipistrelle recorded foraging
TL662394	10 Jun 2006	Common Pipistrelle recorded foraging
TL662394	25 Jun 2005	Common Pipistrelle recorded foraging
TL683365	10 Sep 2008	Brown Long-eared Bat roost in building
TL661380	11 Jul 2018	Common Pipistrelle recorded foraging
TL661380	11 Jul 2018	Brown Long-eared Bat roost in building
TL661380	28 Jun 2018	Brown Long-eared Bat roost in building
TL661380	26 Jul 2018	Common Pipistrelle recorded foraging
TL661380	26 Jul 2018	Soprano Pipistrelle recorded foraging
TL661380	08 Aug 2021	Common Pipistrelle recorded foraging
TL661380	11 Jul 2018	Soprano Pipistrelle recorded foraging

TL661380	08 Aug 2021	Brown Long-eared Bat roost in building
TL661380	08 Aug 2021	Western Barbastelle roost in building
TL661380	09 Sep 2021	Common Pipistrelle roost in building
TL661380	09 Sep 2021	Brown Long-eared Bat roost in building
TL661380	09 Sep 2021	Western Barbastelle roost in building
TL661380	26 Jul 2018	Western Barbastelle roost in building
TL661380	28 Jun 2018	Soprano Pipistrelle recorded foraging
TL661380	28 Jun 2018	Common Pipistrelle recorded foraging
TL661380	28 Jun 2018	Western Barbastelle roost in building
TL661380	06 Jun 2018	Brown Long-eared Bat roost in building
TL661391	15 Aug 2001	Daubenton's Bat recorded foraging
TL661391	15 Aug 2001	Pipistrelle roost in building
TL662381	07 Jul 2018	Common Pipistrelle recorded foraging
TL662381	07 Jul 2018	Western Barbastelle recorded foraging
TL662381	15 Apr 2008	Pipistrelle roost in building

8) Recommendations for reasonable biodiversity enhancements

1: It is recommended that the existing gaps along the site boundaries are retained to allow hedgehogs and common toads to forage across the site as, potentially, at present. However if any boundary fences are to be introduced, see below:

Photo 8: Hedgehog pathway at base of fence

A gap 13cm by 13cm is sufficient for any hedgehog to pass through. This will be too small for nearly all pets.

Hedgehogs travel around **one mile** every night through our parks and gardens in their quest to find enough food and a mate. If you have an enclosed garden this can prevent hedgehogs from dispersing throughout their territory. It is now known that one of the main reasons why hedgehogs are declining in Britain is because our fences and walls are becoming more and

more secure, reducing the amount of land available to them. Developers can make their life a little easier by removing the barriers within their control – for example, by making holes in or under our garden fences and walls for them to pass through.

Alternatively:

- Remove a brick from the bottom of the wall
- Cut a small hole in your fence if there are no gaps
- Dig a channel underneath your wall, fence or gate

2: Two bird nesting boxes to be sited on trees or buildings at the site.

3: A Hedgehog nesting box to be sited at base of a boundary hedge.

4: Two solitary bee hives to be erected at the site.

Photo 9: Solitary bee hive

A range of designs are commercially available, but they may be manufactured from durable FSC timber and provide valuable habitat for bees in modern gardens. They are designed specifically to attract non-swarming bees like the Red Mason Bee, Leafcutter Bee and other solitary bees which are naturally attracted to holes in wood.

Attracting solitary bees to the garden is not only safe, but beneficial to pollination of flowers, fruit and vegetables.

Siting: Site in a visible warm place ideally oriented to face between southeast and south and to catch some sun. It is helpful to have soil nearby, and food sources such as flowers, orchards and fruit.