

T4 ECOLOGY LTD

ECOLOGY CONSULTANCY SERVICES, MALDON, ESSEX



Bat Survey Report

66, The Plain

Epping

CM16 6TW

Prepared for:

Manor Properties (Bishops Stortford)
Ltd.

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1) Summary/Background

In March 2019, as part of a Preliminary Ecological Appraisal (PEA) survey at 66 The Plain, Epping, Essex CM16 6TW, a site visit was conducted to determine whether the building had been used by bats. At that time, the survey found that a roof void that extended along the length of the building had several old droppings of Brown Long-eared Bats (*Plecotus auritus*) on the floor of the loft and on stored items. None of the evidence was of recent origin, and there was also a covering of cobwebs on the rafters, conditions that are usually a deterrent to colonisation by bats.

The subsequent PEA report by T4 Ecology Ltd (Ref: MH979 Version 1-Dated 26/03/19) concluded that:

- Since old evidence of bats was found in the survey building, two dusk/dawn surveys should be conducted from mid-May onwards (season mid-May – September inclusive) to determine the extent of the bat population using the building/identify absence and that bats are no longer using the building. If bats are identified, a third survey would be required, and mitigation designed accordingly.
- Surveys should be undertaken in suitable conditions, should be at least two weeks apart and carried out with a licenced bat worker. The results of these surveys will determine whether a European Protected Species Licence is required, and what level of mitigation will be required to satisfy Natural England that the bat population can be maintained or enhanced at the site.



Photo 1: Front (western) elevation

After a lapse of two months, a second survey comprising a further inspection (followed by an evening bat activity and emergence survey) was undertaken on 13th May 2019. This follow-up survey found that the house is now unoccupied and had no further evidence of bats in the roof void. A further identical survey was conducted on 3rd June 2019, when, again, no further evidence of bats was found in the roof void. The surveys, which took place prior to sunset, were followed by a bat activity and emergence survey to monitor bat activity at the site.

During the survey on 13th May, bat activity was first observed at twenty-five minutes after sunset when a Common Pipistrelle (*P. pipistrellus*) was observed and heard briefly over the rear garden of the house. Subsequently, single Common Pipistrelles were occasionally heard for the duration of the survey. During this period, no bats were observed to emerge from the house. During the survey on 3rd June, bat activity was first observed at eleven minutes after sunset when a Common Pipistrelle flew E-W over the house. Subsequently, single Common Pipistrelles were regularly heard for most of the survey. During this period, no bats were observed to emerge from the house.

With the surveys undertaken producing no evidence of roosting bats in the building on site, it is considered that a European Protected Species Licence will not be required as there is not a bat population that will be affected by the proposal. No further surveys have been advised. However, as an enhancement, it is recommended that two Schwegler 2F bat boxes are erected on trees on the developed site.

Contents

1 Summary/Background	3
2 Introduction	6
3 Legislation and planning policy relating to bats in the UK	7
4 Methods	9
5 Results	10
6 Discussion/Conclusions	17
7 Review of Bat Records in the area	18

2) Introduction

T4ecology Ltd working with Licenced bat worker and trainer John Dobson of Essex Mammal Surveys were requested to carry out a bat survey (two bat emergence and activity surveys following inspection in March 2019 as part of a Preliminary Ecological Appraisal - PEA) at 66, The Plain, Epping, Essex, CM16 6TW to investigate for signs indicating the presence of bat colonies and their roosts.

In March 2019, a site visit was undertaken by T4 ecology Ltd to conduct a PEA. It is recommended that this bat report be read in conjunction with the March 2019 report (MH979 Version 1-Dated 26/03/19) as this report provides an addendum to the March 2019 report.

The March 2019 report concluded that bat surveys should be conducted to see whether a European Protected Species (EPS) Licence would be required to complete the project. The recommended surveys were conducted on the 13th May and 3rd June 2019.

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.

Survey Personnel

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), together with Pete Harris, an experienced ecologist with T4ecology, carried out the surveys on the 13th May and 3rd June 2019. John Dobson has been elected a Fellow of the British Naturalists' Association and received the David Bellamy Award for natural history in 2015.

Peter Harris a full member of the Chartered Institute of Ecology & Environmental Management (CIEEM) and subject to the CIEEM Professional Code of Conduct. The surveyor is licensed by Natural England Licensed for surveying great crested newts. The surveyor is an ecologist with over 12 years experience, and has been involved in a wide range of projects from single dwelling developments to large strategic urban renewal schemes subject to full Environmental Impact Assessment (EIA).

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. On 1st April 2010, these Regulations, together with subsequent amendments, were consolidated into the Conservation of Habitats and Species Regulations 2010.

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 or 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 9 of the National Planning Policy Framework 2012 (NPPF) states that *'the planning system should contribute to and enhance the natural and local environment byminimising impacts on biodiversity and providing net gains in biodiversity where possible.'*

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

This report has been compiled in accordance with the Bat Conservation Trust's *Bat Survey Guidelines for Professional Ecologists: Good Practice Guidelines*¹.

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'.

4.1 Building survey

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 property 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
13 th May	20.42	12°C	Mild and still	0%
3 rd June	21.10	16°C	mild and still	30%

During the surveys, one surveyor was located in the front garden and one to the rear from where all sides of the roof could be observed. The surveys were conducted until ninety minutes after sunset.

Bat activity was recorded using BatBox Duet frequency division bat detectors connected to a digital recorder and Batbox Batton XD. Recordings were later analysed using Bat Sound analysis software (Bat Scan 9).

5) Results

5.1 Building survey

The survey building is a detached residential property with a tiled roof lined with sarking boards and pale, rendered walls. The building is aligned N-S. The survey found that part of the roof volume was taken up by living accommodation, with one dormer at the front of the building and two at the rear. The three dormers had roofs of corrugated tin. The remaining roof space comprised a void that extended along the length of the building. Although the loft was dusty and draughty, there were several old droppings of Brown Long-eared Bats on the floor of the loft and on stored items. None of the evidence was of recent origin, with no additional evidence identified on the visits undertaken on the 13th May and 3rd June 2019. There was also a covering of cobwebs on the rafters, conditions that are usually a deterrent to colonisation by bats. Externally, there was a tight seal along the eaves and gables; however, there were several gaps around the roof tiles, notably near the chimney at the rear of the property. There was no evidence such as droppings or staining on the pale walls where the presence of bats would have been readily apparent.



Photo 2: Rear (eastern) elevation



Photo 3: Southern elevation



Photo 4: Looking southwards in the loft



Photo 5: Looking northwards in the loft



Photo 6: Showing cobwebs on rafters



Photo 7: Showing cobwebs on rafters



Photo 8: Showing potential access points for bats

A brick and block built single garage with a flat, concrete roof is located to the south of the property. The interior receives daylight illumination via two windows in the northern wall, conditions in which bats seek out dark areas or crevices in which to roost. The lack of such features meant that this building was unsuitable as a roosting place for bats. Similarly, a garden shed with an unlined, tiled roof on the northern side of the property had no features that might offer potential roosting places for bats.



Photo 9: The single garage



Photo 10: The interior of the garage had no features that might be occupied by bats



Photo 11: The interior of a small shed had no features that might be occupied by bats

There is no vegetation affected by the project that has crevices, loose bark or woodpecker holes that might be colonised by bats.

5.2 Bat activity survey

During the survey on **13th May**, bat activity was recorded as follows:

- at 21.07 (twenty-five minutes after sunset), a common pipistrelle was heard and seen in the back garden
- at 21.08, a common pipistrelle was heard and seen in the front garden
- at 21.09, a common pipistrelle was heard and seen in the back garden
- at 21.16, a common pipistrelle was heard and seen in the back garden
- at 21.16, a common pipistrelle was heard and seen in the front garden
- at 21.19, a common pipistrelle heard briefly in the front garden
- at 21.22, a common pipistrelle heard briefly in the back garden
- at 21.34, a common pipistrelle heard briefly in the front garden
- at 21.40, a common pipistrelle heard briefly in the front garden
- at 21.56, a common pipistrelle foraging in the back garden

After this time, no further bat activity was recorded. During the survey, no bats were observed to emerge from the property.

During the survey on the **3rd June**, bat activity was recorded as follows:

- at 21.21 (eleven minutes after sunset), a common pipistrelle flew E-W over house
- at 21.22, a common pipistrelle arrived from the west and continued eastwards over the house
- at 21.24, a common pipistrelle flew S-N along gardens to the west
- at 21.26, a common pipistrelle flew E-W over neighbouring garage
- at 21.27, a common pipistrelle flew S-N along the road
- at 21.28, a common pipistrelle a common pipistrelle flew E-W over house
- at 21.28, a common pipistrelle arrived from west and flew south along road
- at 21.29, a common pipistrelle flew eastwards over site
- at 21.33, a common pipistrelle flew S-N along the road
- at 21.34, a common pipistrelle arrived from the west and continued eastwards over the house
- at 21.34, a common pipistrelle heard briefly in the back garden
- at 21.36, a common pipistrelle heard briefly to the west
- at 21.37, a common pipistrelle flew E-W over house
- at 21.38, a common pipistrelle heard briefly to the west
- at 21.38, a common pipistrelle flew E-W over neighbouring garage
- at 21.45, a common pipistrelle heard foraging to the west
- at 21.47, a common pipistrelle foraging along the road to the south
- at 21.52, a common pipistrelle foraging along the road to the south

After this time, no further bat activity was recorded. During the survey, no bats were observed to emerge from the property.

6) Discussion/Conclusion

6.1 Bats

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.

With the surveys undertaken producing no evidence of roosting bats in the building on site, it is considered that a European Protected Species Licence will not be required as there is not a bat population that will be affected by the proposal. No further surveys have been advised. However, as an enhancement for the project, it is recommended that two Schwegler 2F bat boxes are erected on trees on the developed site.

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:

TL465009	24 Jul 1994	Brown long-eared bat found by member of public
TQ450992	27 Jun 1994	Pipistrelle colony in house
TQ435995	24 Jul 2005	Noctule recorded foraging
TQ435995	24 Jul 2005	Common pipistrelle recorded foraging
TQ435995	24 Jul 2005	Soprano pipistrelle recorded foraging
TL456018	09 Jun 2007	Noctule recorded foraging
TL456018	09 Jun 2007	Common pipistrelle recorded foraging
TL440006	09 Jun 2007	Common pipistrelle recorded foraging
TL449013	27 Jan 1989	Brown long-eared bat found at hotel
TL460022	14 Jul 1992	Serotine found in High Street premises
TQ470996	18 Nov 2002	Common pipistrelle found by member of public
TL444009	09 Jun 2007	Common pipistrelle recorded foraging
TL461022	08 Jul 2015	Common pipistrelle recorded foraging
TL461022	11 Jul 2015	Common pipistrelle recorded foraging