



BAT EMERGENCE REPORT

FOR

LOMER FARM, MEOPHAM

Date of report	17 th September 2021
Date of survey	July & August 2021
Author	
Reviewer	
Client Name	Hawkspare Ltd
Corylus reference	

Gravesham Borough Council

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1.0 INTRODUCTION

- 1.1 Corylus Ecology has undertaken update bat surveys to inform a planning application to redevelop Lomer Farm, hereinafter referred to as 'the Site'. The survey area is approximately 0.7ha and supports a collection of commercial buildings, located approximately 0.6km to the south-west of Meopham village, centred at grid reference TQ 6416 6562. The Site is located to the west of the A227 with the local landscape dominated by arable fields and hedgerows.
- 1.2 The proposals involve the demolition of the buildings and replacement with a new build mixed-use scheme, including commercial and residential use.
- 1.3 Previous bat emergence surveys have been undertaken; two emergence surveys of B2, B3 and B11 were undertaken on 4th September and 18th September 2017. Two common pipistrelle bats emerged from B2 on 4th September 2017 and five common pipistrelle bats emerged from B2 on 18th September 2017 (Corylus Ecology September 2017¹ & Corylus Ecology, October 2017²).
- 1.4 An update bat building assessment was undertaken in April 2021 (Corylus Ecology July 2017¹, Corylus Ecology, April 2021). The subsequent report recommended a single emergence survey during May-August for B3, B9, B11 and B12. Two emergence surveys during May-September were recommended for B1, B2, B7 and B8.
- 1.5 The aim of the bat emergence surveys was to determine the size and significance of any bat roost within the Site and suggest appropriate mitigation and compensation where necessary, including assessing the need for an EPS mitigation licence.

2.0 METHODOLOGY

2.1 An emergence survey of the buildings was undertaken on 17th July 2021 and 11th August 2021. The surveys commenced 15 minutes before sunset and continued until 1hr 30 mins after sunset. Elekon Batlogger M detectors were used with analysis on BatExplorer software. All surveyors used headphones, and radios were used for communication during the survey. A thermal camera 'Guide Track IR Pro 19' was used to view B2b alongside a surveyor. There are two sections of B2 which are shown as B2a and B2b on Figure 1.

2.2 The key licensed surveyors were [REDACTED] (licence number [REDACTED]) [REDACTED]. Assistance was provided by additional ecologists from Corylus Ecology experienced in undertaking bat emergence surveys.

2.3 The sonograms were compared to identification parameters given in Parsons and Jones (2000) and Russ (2013) as well as compared to library recordings made by the surveyors. It should be noted that it is not always possible to identify each bat pass to species level due to either poor recordings of their echolocations or due to similarities between echolocations of bat species. It should also be noted that bats will vary their echolocation in different habitats. Where identification has not been possible, suggestions of likely bat species have been provided.

2.4 In terms of survey constraints, due to the close arrangement of the buildings, not all elevations can be clearly viewed, for example the eastern side of B7, B8 and B9 and the southern roof pitch of B1 and northern roof pitch of B2 which face each other. It was more difficult to accurately determine roost locations in these areas.

3.0 RESULTS

14th July 2021, sunset 21:10hrs

- 3.1 During the survey there was no rain, no wind (BF 0) and 75% cloud cover. The temperature was 21°C at the start of the survey and 19°C at the end.
- 3.2 A total of three bats emerged during the survey. The first bat to emerge was a common pipistrelle bat *Pipistrellus pipistrellus* at 21:36hrs, 26 minutes after sunset which emerged from the eaves on the eastern side of B2b, to the south of the archway. A common pipistrelle emerged from the western roof pitch of B8 at 21:39hrs, 29 minutes after sunset then a common pipistrelle emerged from the western roof pitch of B7 at 21:58hrs, 48 minutes after sunset. The locations of the roosts are shown on Figure 1.

11th August 2021, sunset 20:29hrs

- 3.3 During the survey there was no rain, light wind (BF 2) and 10% cloud cover. The temperature was 18°C at the start of the survey and 16°C at the end.
- 3.4 Three common pipistrelle emerged during the survey; the first was from the western eaves of B2b at 20:34hrs, 5 minutes after sunset. A common pipistrelle then emerged from the northern gable of B1 at 20:52hrs, 23 minutes after sunset and the third common pipistrelle emerged from the northern gable of B2 at 20:57hrs, 28 minutes after sunset.

4.0 EVALUATION

- 4.1 Bat emergence surveys have been undertaken at Lomer Farm on 14th July 2021 and 18th August 2021. The surveys were undertaken to guidelines set out by the BCT (Collins, 2016) and during the key maternity season. There were bat roosts detected in B1, B2, B7 and B8.

Bat Mitigation and Licensing

- 4.2 There were a total of three common pipistrelle which emerged from the buildings on both survey occasions. A roost of high conservation value such as a maternity site has not been recorded and the non-breeding roosts of common pipistrelle are considered to be of low conservation significance. The proposals for the scheme include the demolition of B1, B2, B7 and B8, therefore a licence from Natural England will be required to lawfully disturb or destroy the roosts identified. The legislation relating to bats is provided in Appendix 1.

- 4.3 The Conservation Regulations 2017 place local authorities under the obligation to consider the three European protected species licensing tests when considering a planning application which impacts on these species. The three licensing tests, which Natural England also has to apply later when considering the licence application, are (i) whether there are imperative reasons of overriding public interest for the planning application; (ii) whether there are any satisfactory alternatives; and (iii) whether the species' favourable conservation status has been maintained.

- 4.4 It is considered that the third test can be met by implementing a mitigation strategy. In relation to the other two tests, both are matters which concern planning law rather than ecology. A mitigation strategy for bats is provided in section 5.0 below.

Breeding Birds

- 4.5 It is noted that there is potential for breeding birds as well as evidence of nesting birds in the buildings. The works to the buildings should therefore be undertaken outside the bird breeding period, limiting this work to between 1st September to 1st March, or the area should be checked for active nests before works commence. If an active nest is found, works will have to cease until fledging has occurred.

5.0 BAT MITIGATION STRATEGY

- 5.1 The mitigation strategy for the bat licence will be fully developed once the build program and methods are confirmed however the following strategy has been provided to aid detail design and timings of certain works:

Legislation

- 5.2 No development works to the garage can begin until the Site has been registered with Natural England under a European Protected Species (EPS) Bat Mitigation Licence.

Methods for Demolition

- 5.3 Once the Site has been given approval by Natural England and prior to any works starting on the buildings, all site contractors will be given an induction by the project ecologist to ensure the appropriate methods and level of care are taken when carrying out the work which could affect bat roost features, such as removal of roof tiles. This induction will include the location of the bat roosts, timings of certain work and the protocol should any bats be found when the project ecologist is not on-site.
- 5.4 All roof tiles will be stripped by hand and under the supervision of the project ecologist. Additional features such as lead flashing, barge boards or soffits may also need to be removed by hand but this will be done under the instruction of the ecologist. Once the features of bat roost potential have been removed, works to demolish the buildings can continue without further supervision.
- 5.5 Any bats found will be checked over by the project ecologist for signs of injury and standard biometrics including species, sex and breeding status will be recorded. Any bats found will be either released that evening or placed in a bat box mounted to a nearby tree. If more than one species is found an additional box will be put up to keep species separate. Any bats needing to be kept in temporary captivity during the day would be placed in a bat rescue kit which will include a basket with a lid and a small capsule to hold water and kept in an appropriate cool, dry location until it is released.

Timings

- 5.6 In relation to bats, it is recommended that the timing of the works is planned for spring (1st March - 1st May) or the autumn period (1st September to 1st November). This timing is to reduce the risk of encountering bats which are hibernating, pregnant or with juveniles. Although no maternity roost was identified, this advice is provided under good practice guidelines as bats can move roosts during the year.

5.7 It should also be taken into consideration that birds are protected from disturbance whilst breeding and the main breeding season for birds is 1st March – 1st September. Works to the buildings during this time period could be subject to delays due to nesting birds.

5.8 Therefore the optimum time for undertaking the work would be 1st September to 1st November. If planned to start in spring, the work should be planned for early spring 1st March onwards and may be subject to delays as any breeding birds would need to be left undisturbed until the birds have fledged.

Temporary Roost Provision

5.9 A tree-mounted bat box such as the *Schwegler 2F bat box* will be installed on a tree near to the building prior to the supervised demolition works. If any bats are found they would be put into the bat box and allowed to fly away later of their own accord. If more than one species is found, an additional box will be put up to keep species separate.

Roost Compensation

5.10 Under the National Planning Policy Framework (NPPF), opportunities for biodiversity should be maintained and enhanced. It is recommended that there are provisions for crevice-dwelling bat species mounted onto existing buildings and integrated into the new buildings. The boxes should be positioned away from any windows or doors at a minimum height of 5m, close to the eaves on the western elevation of B1 and B2 and the eastern or southern elevation of B7 and B8. The following is considered sufficient to compensate for the loss of three common pipistrelle roosts:

- Two *Schwegler 1FQ bat boxes* mounted onto the external walls of retained buildings
- Two *Habibat 3S built-in bat boxes* integrated into the walls of the proposed buildings

5.11 To maintain suitable foraging and commuting habitat, a sensitive lighting strategy will be required. Guidance is provided in Appendix 2. Generous native planting, including tree and hedgerow planting will help to maintain and enhance the Site for bats.

6.0 CONCLUSION

- 6.1 Bat emergence surveys have been undertaken at Lomer Farm in July and August 2021.
- 6.2 B1, B2, B7 and B8 have been found to support non-breeding day roosts for common pipistrelle bats, with a peak of three bats across the Site on both survey occasions.
- 6.3 A European Protected Species licence is required to undertake the works to demolish B1, B2, B7 and B8.
- 6.4 A bat mitigation strategy has been outlined, which includes recommendations for timing of work and compensation measures.

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Key

Common pipistrelle roost

Version Description Date Drawn By

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 Ecology & Wildlife Survey and Assessment
 Wildlife, Arboriculture, Tree Management, Planning, Arboriculture, Tree Management

Project
Lomer Farm, Meopham

Title:
Emergence Survey Results

Figure 1

NTS A3 16.08.2021 JP HL

Figure 1.jpg

Appendix 2 - Technical Guidance on Artificial Lighting and Bats

From: Institute of Lighting Professionals (ILP) and Bat Conservation Trust (BCT). 2018. *Guidance Note 8: Bats and Artificial Lighting*.

Luminaires come in a myriad of different styles, applications and specifications which a lighting professional can help to select. The following should be considered when choosing luminaires.

- All luminaires should lack UV elements when manufactured. Metal halide, fluorescent sources should not be used.
- LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability.
- A warm white spectrum (ideally <2700Kelvin) should be adopted to reduce blue light component.
- Luminaires should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone, 2012).
- Internal luminaires can be recessed where installed in proximity to windows to reduce glare and light spill.
- The use of specialist bollard or low-level downward directional luminaires to retain darkness above can be considered. However, this often comes at a cost of unacceptable glare, poor illumination efficiency, a high upward light component and poor facial recognition, and their use should only be as directed by the lighting professional.
- Column heights should be carefully considered to minimise light spill.
- Only luminaires with an upward light ratio of 0% and with good optical control should be used – See ILP Guidance for the Reduction of Obtrusive Light.
- Luminaires should always be mounted on the horizontal, i.e. no upward tilt.
- Any external security lighting should be set on motion-sensors and short (1 minute) timers.
- As a last resort, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed.

Appendix 1 – Bat Legislation

All British bat species receive legal protection in the United Kingdom. The Wildlife and Countryside Act 1981 (WCA) (as amended) transposes into UK law the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention). The 1981 Act was recently amended by the Countryside and Rights of Way (CROW) Act 2000 and the more recent Habitats Regulations amendments (2017). All British bat species are listed under Schedule 5 of the 1981 Act, and is therefore subject to the provisions of Section 9, which makes it an offence to:

- Intentionally kill, injure or take a bat [Section 9(1)];
- Possess or control any live or dead specimen or anything derived from a bat [Section 9(2)]
- Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for shelter or protection [Section 9(4)(b)];
- Intentionally or recklessly obstructs access to any structure or place which a bat uses for shelter or protection [Section 9(4)(c)]
- Sell, offer for sale, possess or transport for the purpose of sale or publish advertisements to buy or sell a bat [section 9(5)]

Bats are also included on Annex IV of Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (known as the Habitats Directive). As a result of the UK ratifying this directive, all British bats are protected under The Conservation of Habitats and Species Regulations 2017 (The Conservation Regulations). Annex IV of the Habitats Directive requires member states to construct a system of protection as outlined in Article 12, this is done through Part 3 of the Regulations whereby Regulation 41 makes it an offence to:

- Deliberately capture, kill or injure a bat [Regulation 41(1)(a)];
- Deliberately disturb bats in such a way as to be likely to significantly affect i) the ability of any significant group of animals of that species to survive, breed or rear or nurture their young, OR
ii) the local distribution of that species. [Regulation 41(1)(b) and 41(2)];
- Damage or destroy a breeding site or resting place of a bat [Regulation 41(1)(d)].

Under the law, a roost is any structure or place used for shelter or protection. This could be any structure, for example, any building or mature tree. Bats use many roost sites and feeding areas throughout the year. These vary according to bat age, condition, gender and species, as well as season and weather. Since bats tend to re-use the same roosts for generations, the roost is protected whether the bats are present or not.

In addition, four species, the two horseshoes, barbastelle and Bechstein's are included within Annex II of the Habitats Directive for which Member States are required to designate Special Areas for Conservation (SAC's) for their protection.

The UK is a signatory to the Agreement on the Conservation of Bats in Europe, established 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.