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Report prepared for: Smug Oak Lane limited

For the Site of: Smug Oak Lane, Bricket Wood, St Albans, AL2 3PN

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Cherryfield Ecology has prepared this report for the named clients use only.
Ecological reports are limited in shelf life, Natural England usually expect reports for licences to be from the most recent or current season. Therefore, should the project not proceed within 12 months of this report an updated survey should be undertaken in order to check for changes that may have occurred on site. Information is believed to be accurate at the time of survey; recommendations are made without bias based on good practice guidelines within the industry. However, species presence and ecological parameters can change over time.

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Contents

Emergence and Activity Bat Survey (EBS)

0.0 Non-Technical Summary

0.1 Background

This report follows national guidelines Collins (2023) allowing for dusk and dawn surveys and recommends mitigation and compensation if considered necessary. If a deviation from the guidelines has been made, this will be detailed in the Method Section.

The following report details the findings and recommendations for the site of Smug Oak Lane, Bricket Wood, St Albans, AL2 3PN.

The client commissioned Cherryfield Ecology to undertake an EBS as the proposals include for the demolition of the existing building and the construction of 9 residential dwellings.

0.2 Results and Findings

Following a Stage 1 Ecological Assessment undertaken on 06/02/2023 (Cherryfield Ecology, 2023), a single dusk emergence survey was recommended on the building on site (referred to as B1).

The survey has shown no emergences from the building with minimal bat activity observed on site.

Since the Stage 1 Ecological Assessment undertaken on 06/02/2023 (Cherryfield Ecology, 2023), the southwestern corner of B1 suffered damage and is partially collapsed. Upon inspection of the building prior to the emergence survey, a bat dropping was found on the exterior wall of the western elevation.

Based on the results of the emergence survey it is concluded that this is likely from a passing bat rather than a roosting bat.

0.3 Impact Assessment and Recommendations

No impacts are foreseen; however, if bats are found during the development, all works must stop, and advice sought.

The findings outlined in this report are valid for one year, after which updated surveys will be required.

Enhancements and mitigation are recommended (please see Section 4.3 for further details).

1.0 Introduction

1.1 Aim

The aim of this survey is to gather additional information from the site to establish species, population and entry/exit points of bats to aid in the design of mitigation and compensation for bats in the development. The information is used to help inform a licence application (if required) and to inform the client and their architect/planner of necessary changes in the design that may be required to ensure bats are protected during works. It should be read in conjunction with the Ecological Appraisal (Cherryfield Ecology, 2023) and the Full Common Reptile Survey (Cherryfield Ecology, 2023).

1.2 Background Information

The client, Smug Oak Lane limited, has commissioned Cherryfield Ecology to undertake an EBS for the site of Smug Oak Lane, Bricket Wood, St Albans, AL2 3PN. Planning permission is being sought for the demolition of the existing building and the construction of 9 residential dwellings.

This survey has checked all buildings, trees (from ground level only) or structures due to be affected by the proposals for bats, signs of bats or habitat value e.g. crevices, gaps or holes that cannot be checked for a variety of reasons. In addition, surveyors have been positioned around the building, tree or structure to allow for emerging/re-entering bats to be watched for.

The inspection was conducted on 21/09/2023.

The survey can only ever provide a 'snapshot' of the site at the time of the survey and circumstances may change following this report. Health and Safety restrictions or obstructions may limit the ability to find or see emergence, re-entry and/or evidence.

Biological records have been requested to give the report context and allow a study of the surrounds. The information is often sensitive and, therefore, a synopsis is provided.

The survey can be conducted between May and September with the optimal season for surveying maternity colonies limited to mid-May to August inclusive, however it can also be limited due to bad weather, when bats are less active.

All 18 species of bat common in the UK (17 known to be breeding) are fully protected under the Wildlife and Countryside Act (as amended) 1981 through inclusion in Schedule

V of the Act. All bat species in the UK are also included in Schedule II of The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, which transpose Annex II of the Directive 92/43/EEC 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora ("Habitats Directive") which defines United Kingdom protected species of animals.

Bats species are afforded further protection by the Countryside and Rights of Way Act 2000; and the Natural Environment and Rural Communities Act 2006.

This combined legislation makes it an offence to:

- Intentionally or deliberately kill, injure or capture bats.
- Deliberately disturb bats, whether at roost or not.
- Damage, destroy or obstruct access to bat roosts.
- Possess or transport bats, unless acquired legally.
- Sell, barter or exchange bats.

A bat roost is well-defined by the legislation as the 'resting place' of a bat. However, the word roost is used to describe this resting place and is generally accepted as the word describing where a bat or bats rest, feed or sleep.

2.0 Methods

The survey follows the national guidelines Collins (2023) and Interim Guidance Note: Use of night vision aids for bat emergence surveys and further comment on dawn surveys (Bat Conservation Trust, May 2022) the following equipment is available for the inspection:

- Torches (e.g. LED Lensar type).
- Ladders (Standard 4m telescopic surveying ladder).
- Endoscope where holes, cracks and crevices are accessible.
- Mirrors (extendable and movable mirror face).
- Binoculars (Pentax close focus).
- Thermometer/hygrometer.
- Camera.
- Sample bags for collecting dropping and feeding evidence.
- Echo Meter Touch, EM3, and Pettersson D240X.
- IR night vision HD Camcorder, 12v IR flood lights.
- FLIR one Thermal Imaging Camera (when required).

Night Vision Aids (NVA's) are used to cover the building alongside surveyors. These are not designed to replace surveyors, rather provide night vision, allowing for more accurate survey effort and when found, roost locations. **The cameras may not always capture bats entering/exiting roosts due to the size of the building, terrain, narrower field of view and other factors**. Video is processed in Openshot video editor and checked in the office after the survey is completed, stills and snapshots are taken and used in reports, as per the guidelines.

Surveyors are positioned around the building(s), tree or structure in order to cover all elevations. The survey then observes for emerging or entering bats from suitable features such as holes, cracks and crevices. Notes on commuting and foraging bats are also made in the surrounds.

If a deviation from the guidelines has been made, the reason and justification will be explained below:

No deviation from the standard guidelines has been made for this survey set.

2.1 Limitations

This survey provides a snapshot of the site at the time of the survey(s) only. Bats are highly mobile and can turn up from time to time unexpectedly. All care has been taken to ensure the results and recommendations are suitable to the context of the development and the information gathered on surveys.

Table 1: Roosting features (likelihood) of bat presence assessed against Collins et al (2023) guidelines *Source: Adapted from Collins (2023) pp 44, Table 4.1.*

Likelihood of bat presence (Habitat Value)	**Features that bats can use, regardless of evidence being present.**
Confirmed Bat Presence	Bats are found to be present during the survey. Evidence of bats is found to be present during the survey.
Higher likelihood of bat presence.	Pre-20th century or early 20th century construction. Agricultural buildings of traditional brick, stone or timber construction. Large and complicated roof void with unobstructed flying spaces. Large (>20 cm) roof timbers with mortice joints, cracks and holes. Entrances for bats to fly through. Poorly maintained fabric providing ready access points for bats into roofs, walls, bridges, but at the same time not too draughty and cool. Roof warmed by the sun, in particular south facing roofs. Weatherboarding and/or hanging tiles with gaps. Low level of disturbance by humans. Bridge structures, follies, aqueducts and viaducts over water and/or wet ground.

Moderate and Lower likelihood of bat presence.	Modern, well-maintained buildings or built structures that provide few opportunities for access by bats. Small, cluttered roof space. Buildings and built structures comprised primarily of prefabricated steel and sheet materials. Cool, shaded, light or draughty roof voids. Roof voids with a dense cover of cobwebs and no sections of clean ridge board. High level of regular disturbance. Highly urbanised location with few or no mature trees, parkland, woodland or wetland. High levels of external lighting.
Negligible likelihood of bat presence.	No obvious features suitable for roosting, minor foraging or commuting.
None	No features suitable for roosting.

3.0 Results

The following section details the results of the desk study, inspection and survey; it includes MAGIC information, biological records data and map/aerial photo information. The results detail the building, structure or tree (numbered for reference) description of any evidence found and habitat value if no evidence has been located.

3.1 Desk Study

The desk study is centered on Grid Reference – TL148022 and Postcode – AL2 3PN.

Table 2: Weather Records

Date	Survey	Time: from/to	Weather: Start	Weather: Finish
21/09/2023	Dusk Emergence	18:48 to 20:33 SS: 19:03	Temp: 15℃ Humidity: 84% Cloud: 100% Wind: 1/12 Precip: None	Temp: 13℃ Humidity: 87% Cloud: 100% Wind: 1/12 Precip: None

3.2 MAGIC

The following statutory sites and Natural England Protected Species (NEPS) have been located within the 2km search area (Figure 1).

- There are two statutory sites located within the search area:
  - Bricket Wood Common (SSSI)
  - Moor Mill Quarry, West (SSSI)
- There are seven NEPS licences granted for bats and GCN within the search area:
  - Brown Long-Eared *Plecotus auritus*, Common Pipistrelle *Pipistrellus pipistrellus* and Soprano Pipistrelle *Pipistrellus pygmaeus*, approx. 900m from the site (Licence 2019-39056).
  - Soprano Pipistrelle, approx. 950m from the site (Licence 2019-39750)

- Common Pipistrelle, approx. 350m from the site (Licence 2010-2620)
- Common Pipistrelle, approx. 1700m from the site (Licence 2010-1663)
- Great Crested Newt *Triturus cristatus*, approx. 1700m from the site (Licence 2015-16251)
- Great Crested Newt, approx. 450m from the site (Licence 2009-1313)
- Great Crested Newt, approx. 350m from the site (Licence 2009-690)

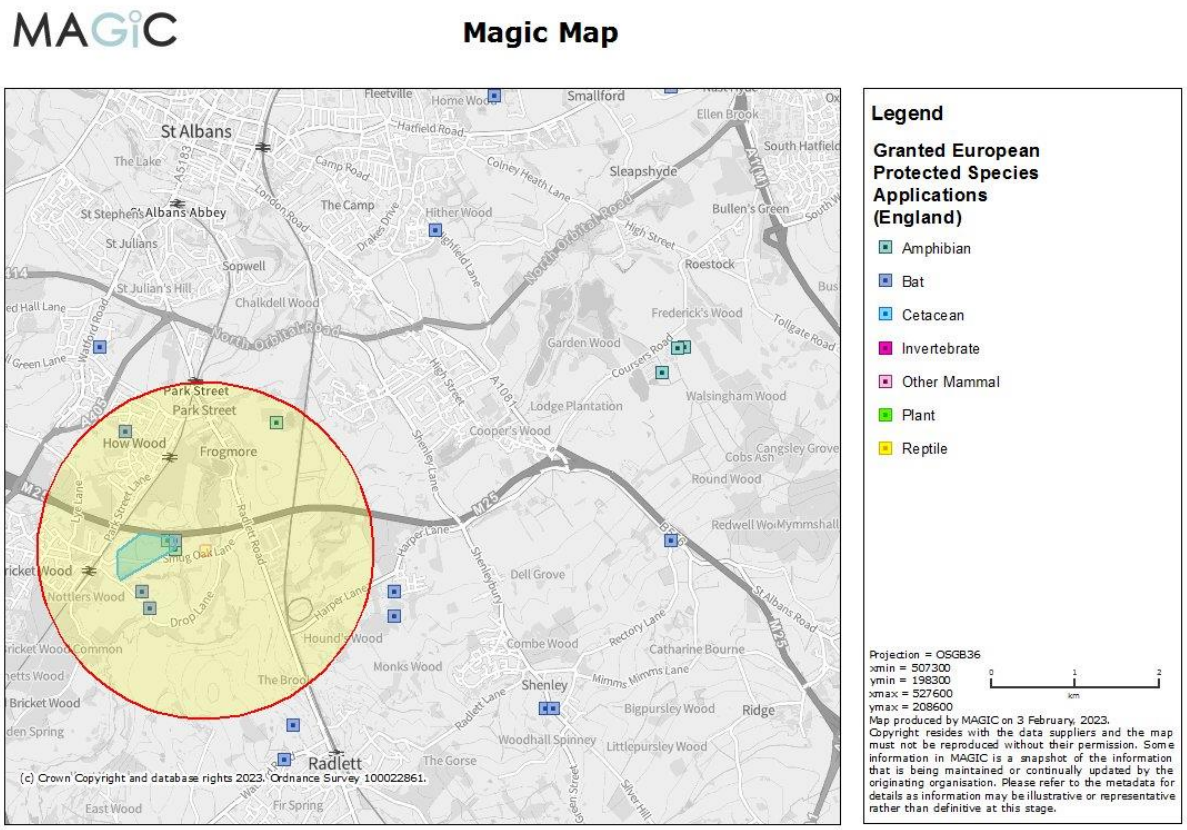

Figure 1: Magic Map Search

3.3 Biological Records Data

A 1km data search of existing records for protected species and nature reserves has been commissioned, below details the results and site context.

Biological records were obtained from Herts Environmental Record Centre (2023).

Table 3: Biological Records

Species	Number of Records	Closest Record (accuracy)	Most Recent Record (year)
Bats			
Barbastelle *Barbastella barbastellus*	1	160m (1km)	2012
Brown Long-Eared *Plecotus auritus*	10	160m (1km)	2018
Common Pipistrelle *Pipistrellus pipistrellus*	43	0m (1km)	2021
Daubenton's *Myotis daubentonii*	9	160m (1km)	2018
Leisler's *Nyctalus leislerii*	1	160m (1km)	2012
Nathusius' Pipistrelle *Pipistrellus nathusii*			
Natterer's *Myotis nattererii*	15	160m (1km)	2018
Noctule *Nyctalus noctula*	19	150m (1km)	2013
Serotine *Eptesicus serotinus*			
Soprano Pipistrelle *Pipistrellus pygmaeus*	29	0m (1km)	2013
Unidentified Bat *Chiroptera sp.*	16	150m (1km)	2020
Unidentified Long-Eared *Plecotus sp.*	4	160m (1km)	2012
Unidentified Myotis *Myotis sp.*	13	160m (1km)	2012
Unidentified Pipistrelle *Pipistrellus sp.*	2	160m (1km)	2012
Unidentified Vesper *Vespertilionidae*			
Whiskered *Myotis mystacinus*			

3.4 Site Location and Surrounds

The site is located in St Albans, Hertfordshire and is surrounded by pasture and arable fields in the immediate locale. Table 4 details the commuting, feeding and habitat features in a 1km radius of the site.

Table 4: Habitat features suitable for bat use.

Feature	Description
Water course	River Ver is located approx. 58m east at its closest point. River Colne is located approx. 1,000m south at its closest point.
Water bodies	A large water body is located approx. 550m southwest. A group of waterbodies are found approx. 840 to the north, on the other side of the M25. Other small water bodies are found throughout the search area, most connected via tributary to the River Ver, and none within 500m of the site.
Woodland	A small area of woodland is found adjacent to the east of the site. Larger woodlands are located approx. 176m southeast, 200m southwest and 275m north, on the other side of the M25.
Linear e.g. hedgerows	Two train tracks are located approx. 1,000m west and 900m east. The search area is dominated by field margin hedgerows.
Pasture/arable/grassland	The search area is dominated by pasture, with arable fields found to a slightly lesser extent.
Other	N/A

3.5 Building, Tree or Other Structure

The following section details the structure(s) reference, bats located, evidence located and observed emergence/re-entry (see Figure 3 for Site Plan).

Building/tree/structure reference – B1 (Building)

3.6 Observations

Table 5: Results and observations of the building, tree or structure.

Surveyor	Building, Tree or Structure	Dates, Times and Survey Type	Bat Activity Observed
HS	B1	21/09/2023 18:48 to 20:33 Dusk	Common pipistrelle (CP) *Pipistrellus pipistrellus* was heard but not seen four times throughout the survey between 19:37 and 19:53.
CF	B1	As above	CP was heard between 19:34 and 19:57, with a bat observed passing back and forth over the hard standing area on site, west to east.
LB	B1	As above	As above.

Summary of surveys and supplementary observations:

21/09/2023 – No emergences observed.

Since the Stage 1 Ecological Assessment undertaken on 06/02/2023 (Cherryfield Ecology, 2023), the southwestern corner of B1 suffered damage and is partially collapsed. Upon inspection of the building prior to the emergence survey, a bat dropping was found on the exterior wall of the western elevation. Based on the results of the emergence survey it is concluded that this is likely from a passing bat rather than a roosting bat.

IR image:

Figure 2: IR image of western elevation

Figure 3: Site Plan

4.0 Conclusions, Discussion, Impacts and Recommendations

The following section details the conclusions, discussion and recommendations in the context of the proposed works.

Building/tree/structure reference – B1 (Building)

4.1 Conclusion and Discussion

The proposals include for the demolition of the existing building and the construction of 9 residential dwellings.

The surveys have shown no emergences from the building with minimal bat activity observed on site.

4.2 Potential Impact

Impact assessments must be proportionate to the scale of the development (CIEEM, 2018) and the following details a proportionate impact assessment based on current information.

Table 6: Impact Assessment.

Impact	N/A
Characterisation of unmitigated impact on the feature	N/A
Effect without mitigation	N/A
Mitigation and or enhancement	See Table 7 and 8
Significance of effects of residual impacts (after mitigation)	N/A

4.3 Recommendations

No impacts are foreseen; however, if bats are found during the development, all works must stop, and advice sought.

Table 7: Mitigation and Compensation.

Work	Specification
Precautions to be undertaken during works.	As no roost has been found, works can proceed, however, if at any time bats are found during works, **works must stop, and further advice sought from a licensed bat worker.**
Lighting	Any lighting near or shining onto any trees will be designed to minimise the impact it has on potential bat roosting and commuting. Lighting will be in line with the BCT lighting guidelines (Bats and Lighting in the UK (Bat Conservation Trust, 2018) *https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/* This lighting where possible will be of low level, be on downward deflectors and be on PIR sensors. Using LED directional lighting can also be a way of minimizing the light spill affecting the habitat. No up-lighting should be used. This will ensure that the roosting and commuting resources that the bats are likely to be using is maintained.

The local planning authority has a duty to impose enhancements. The following table details the affordable and simple enhancements suitable for the site.

Table 8: Enhancements to allow a net gain for protected species.

Work	Specification
Enhancements to provide a net gain as per the LPA's duty.	Nine bat tubes can be built into the new buildings (one per building); these require no maintenance and can be hidden by facing the tube with the cladding/brick etc. for aesthetics.  Figure 4: Example of bat tube

5.0 References

Cherryfield Ecology (2023), Ecological Appraisal Report

CIEEM (2018), Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal, September 2018. Chartered Institute of Ecology and Environmental Management, Winchester, online at https://www.cieem.net/data/files/ECIA%20Guidelines.pdf

Collins, J. (ed) (2023), Bat Surveys for Professional Ecologists: Good Practice Guidelines 4th Edition, BCT, London

Eassah et al (2020), Method for evaluating the snagging propensity of roofing membranes in buildings by roosting bats, online

Google Earth (2022), Located on site postcode, online

MAGIC (2022): Magic maps, NEPS licences and designated sites, online http://www.magic.gov.uk/Login.aspx?ReturnUrl=%2fMagicMap.aspx accessed at report date.

Reason, P.F. and Wray, S. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Chartered Institute of Ecology and Environmental Management, Ampfield

National Planning Policy Framework, 2023 http://www.communities.gov.uk/publications/planningandbuilding/nppf

Office of the Deputy Prime Minister (2005), Circular 06/2005: Biodiversity and Geological Conservation. Para.99 http://www.communities.gov.uk/documents/planningandbuilding/pdf/147570.pdf

Records: Herts Environmental Record Centre (2023).