

Bat Roost Potential Report

Barn at Hillybarn Farm

The Mount

Ifield Crawley

West Sussex, RH11 0LF

NGR: TQ 23100 38229



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1	SUMMARY	4
2	INTRODUCTION	5
	<i>Aim of this Study</i>	5
	<i>Legal Status of Bats</i>	5
3	METHODOLOGY	6
	<i>Bat Records Search</i>	7
	<i>Lead Surveyor</i>	7
	<i>Equipment Used</i>	7
4	RESULTS	7
	<i>Granted Mitigation Licences</i>	8
	<i>Barn</i>	8
	<i>Summary of the Bat Roost Potential</i>	9
5	DISCUSSION AND RECOMMENDATION	9
	<i>Lighting</i>	10
	<i>Nesting Birds</i>	10
	<i>Ecological Enhancement</i>	11
6	REFERENCES	12

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It is the duty of the landowner, developer and operations managers to act responsibly and to comply with current environmental legislation if protected species are suspected or found prior to, or during works.

The recommendations and information contained within this report are based on the information provided on the development works prior to the surveys being carried out. Should the development proposals change then the findings and recommendations contained within would potentially require revision.

The findings within this report do not constitute legal advice. Should this be required, then a suitably qualified professional practitioner should be contacted.

Approved by	Signed	Contact
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1 SUMMARY

- 1.1 This report presents the findings of a bat roost potential survey of a barn building located at Hillybarn Farm, The Mount, Ifield, Crawley, West Sussex, RH11 0LF. A planning application is to be made to demolish the current building and replace with an alternative building.
- 1.2 This survey was carried on the 15th June 2023 using standard guidance and best practice methodology outlined in the Bat Workers Manual (Mitchell-Jones & McLeish, 2004), the Bat Mitigation Guidelines (English Nature, 2004) and Bat Surveys Guidelines for Professional Ecologists – Good Practice Guidelines (BCT 2016).
- 1.3 A 2km search of bat data has been made from the National Biodiversity Network. A search of the Multi-Agency Governmental Information Centre (MAGIC) was made for previously granted Natural England Mitigation Licences within 2km of the proposed development site.
- 1.4 Two species of bat were present within the 2km historical search radius. 39 records of common pipistrelle were present, with a single record of brown long eared bat being present. The absence of records of species does not necessarily mean an absence of bat, but is often a result of limited survey effort within a given area. The results of any biological records search must be taken in this context. There were not any granted mitigation licences within the 2km search radius.
- 1.5 No evidence of bats was observed within the building. The cavity behind the wooden cladding was inspected and there was not any evidence of bats present behind this feature. Therefore, no further surveys in relation to roosting bats are recommended. This endoscope inspection, should, be repeated if a period of 12months passes between this inspection and any demolition works and consideration for the presence of nesting birds would be required.
- 1.6 Recommendation has been incorporated into this report regarding adhering to a sensitive lighting scheme to preserve foraging habitat of bats, locally. Recommendation has also been made regarding the avoidance of impact on any nesting bird and for the installation of ecological enhancement features in the form of bat boxes and swift nest boxes.

2 INTRODUCTION

Aim of this Study

2.1 This report presents the findings of a bat roost potential survey of a barn building located at Hillybarn Farm, The Mount, Ifield, Crawley, West Sussex, RH11 0LF. A planning application is to be made to demolish the current building and replace with an alternative building.

2.2 **Figure 1: Location of Building and Surrounding Landscape**



Legal Status of Bats

2.3 The potential presence of bat roosts within a proposed development site has to be considered as all eighteen of the UK's bat species are protected under Section 9 of the Wildlife and Countryside Act (WCA) 1981 (as amended). The WCA states that '*a person is guilty of an offence if intentionally or recklessly they disturb [a bat] while it is occupying a structure or place which it uses for shelter or protection; or he obstructs access to any structure or place which [a bat] uses for shelter or protection*'.

2.4 Bats are also protected under the Conservation of Habitats and Species Regulations 2017. Bats are listed as European protected species under which it is an offence if;

- *a person deliberately captures, injures or kills any wild animal of a European protected species;*

- *deliberately disturbs wild animals of any such species;*
- *damages or destroys a breeding site or resting place of such an animal.*

2.5 Disturbances of animals include in particular any disturbance which is likely to impair their ability to;

- *survive, breed or reproduce, or to rear or nurture their young;*
- *in the case of animals of a hibernating or migratory species, to hibernate or migrate; or*
- *to affect significantly the local distribution or abundance of the species to which they belong.*

3 METHODOLOGY

3.1 This survey was carried on the 15th June 2023 using standard guidance and best practice methodology outlined in the Bat Workers Manual (Mitchell-Jones & McLeish, 2004), the Bat Mitigation Guidelines (English Nature, 2004) and Bat Surveys Guidelines for Professional Ecologists – Good Practice Guidelines (BCT 2016). **Table 1** below details the specific categories for bat potential against the features within the building. This assessment classification has been made in accordance to these criteria.

3.2 **Table 1: Criteria for the Classification of Buildings for Bats (BCT 2016)**

Suitability	Description of Roosting habitats
Negligible	No suitable habitat features on site to be used by roosting bats
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bates (i.e. unlikely to be suitable for maternity or hibernation)
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 (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
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.

Bat Records Search

- 3.3 A 2km search of bat data has been made from the National Biodiversity Network. A search of the Multi-Agency Governmental Information Centre (MAGIC) was made for previously granted Natural England Mitigation Licences within 2km of the proposed development site.

Lead Surveyor

- 3.4 The survey work and reporting has been led by Richard Law BSc MRes CEnv MCIEEM FLS. Richard has been undertaking ecological survey work within the last 20 years on a number of differing locations throughout the United Kingdom for a variety of protected species, including bats (Class 2 2015-12576-CLS-CLS) reptiles, amphibians including great crested newt (*Triturus cristatus*) (Class 1 2016-20290-CLS-CLS) and terrestrial mammals including dormice (*Muscardinus avellanarius*) (2015-13188-CLS-CLS) and birds including barn owl licence (*Tyto alba*) (CL29/00236). Richard is also qualified in track and sign and trailing *via* an international system of assessment (www.trackercertification.com).

Equipment Used

- 3.5 A high-power torch (1 million candle power) was utilised to illuminate any external areas of interest, with a less intrusive head torch used for assessing internal spaces. Crevices were checked using a DDENDOCAM dual lens P50 endoscope. Eagle optics 8x42 binoculars were used to further assess external areas from the ground.

4 RESULTS

- 4.1 This section provides an account of the results from the survey carried out on the buildings and provide the justification for any further recommendations outlined within this report.

4.2 Table 2: Weather Conditions at Time of Survey

Temperature	Precipitation 24hrs Prior to Survey or during the survey	Wind Direction	Wind Speed (Beaufort Scale)	Cloud Cover
14.5°C	None	SW	1	25%

- 4.3 The weather conditions at the time of the survey were suitable for a preliminary bat roost potential survey. There was not any heavy rain immediately prior to or during the survey. There was heavy rain the day before.

Historical Records Search

4.4 **Table 3: Summary of 2km Radius Bat Records Search**

Common Name	Latin Name	Records
Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	39
Brown Long Eared Bat	<i>Plecotus auritus</i>	1
<i>Total Number of Records</i>		40

4.5 Two species of bat were present within the 2km historical search radius. 39 records of common pipistrelle were present, with a single record of brown long eared bat being present. The absence of records of species does not necessarily mean an absence of bat, but is often a result of limited survey effort within a given area. The results of any biological records search must be taken in this context.

Granted Mitigation Licences

4.6 There were not any granted mitigation licences within the 2km search radius.

Summary of Habitats Present on Site

4.7 The site was located within an agricultural setting, surrounded by a mix of open agricultural land, woodland edges and hedgerow field boundaries. There was a mixture of farmland and woodland blocks within the wider landscape with some residential and farm buildings. There was a large area of woodland, approximately 200m to the north west.

Barn

4.8 There was a single large and long building within the application area, which comprised of a corrugated sheeted wall, which was single layered on the western and eastern aspects. The roof was pitched but comprised of a single layered corrugated metal sheeting. The internal space was divided into workshop rooms (**Plate 1**), which were all relatively interconnected. No evidence of bats was observed within this internal space and there was also layers of dust and cobweb throughout this building, indicating no recent sweeping or clearing.

4.9 The northern gable end of the external wall had an area of wooden cladding (**Plate 2**). This cladding had a small cavity behind, with some gaps leading to this area. This area was small and accessible to inspection with an endoscope. The cavity was relatively dirty within and had large areas of old cobwebbing (**Plates 3 & 4**). There were not any areas that had been cleared by what could have been ingress and exit of a bat. A small section had evidence of use by a nesting bird, but this was not inspected completely to prevent disturbance of a nesting bird. No evidence of bats were observed during the endoscope inspection.

4.10 **Table 4: Photographs of Building**

<p>Plate 1: Internal Work Space</p> 	<p>Plate 2: Northern Wooden Cladding</p> 
<p>Plate 3: Cobwebbing and Dust</p>  <p>2023/06/15 11:02:16</p>	<p>Plate 4: More Thick Cobwebbing</p>  <p>2023/06/15 11:03:27</p>

Summary of the Bat Roost Potential

4.11 Overall, the building did not offer any potential to support roosting bats. The cavity at the wooden cladding at the northern end of the building was full of cobweb and other detritus. There was also a nesting blue tit (*Cyanistes caeruleus*) present within this location.

5 DISCUSSION AND RECOMMENDATION

5.1 No evidence of bats was observed within the building. The cavity behind the wooden cladding was inspected and there was not any evidence of bats present behind this feature. Therefore, no further surveys in relation to roosting bats are recommended. This endoscope inspection, should, be repeated if a period of 12months passes between this inspection and any demolition works and consideration for the presence of nesting birds would be required.

- 5.2 In the highly unlikely event that a bat is found during the development works, then works should cease, the bat left undisturbed *in situ* and consultation be made with a suitably qualified ecological consultant as to the most appropriate way to proceed. If the bat is injured, then contact should be made with the National Bat Helpline on 0345 1300 228..

Lighting

- 5.3 Bat species have been recorded within 2km of this location. These are particularly sensitive to light spill and require dark commuting/ foraging corridors to maintain flightlines to roosts, breeding sites and foraging locations. The development proposals will need to incorporate a bat sensitive lighting scheme to ensure that there are no negative impacts to the surrounding habitat.
- 5.4 Any lighting installed as a result of this development will conform to the specifications which are outlined within BCT Guidance Note (2018). This will reduce any light pollution that could impact nocturnal activity of fauna, namely bat species, some of which are extremely sensitive to light pollution. Light spill into adjacent habitats will be reduced and avoided by the following:

- *All luminaries will lack UV elements; metal halide and fluorescent sources will be avoided,*
- *A warm white light spectrum on external lighting will be adopted (<2700kelvin) to reduce the blue light component*
- *LED luminaries will be used where a sharp cut off is required to avoid light spill into adjacent habitat*
- *External luminaries will feature wavelengths higher than 550nm to avoid the component of light most disturbing to bats*
- *Column heights of external lighting will be limited*
- *Luminaries will be mounted on the horizontal plane, with no upwards tilt*
- *Security lighting will be set on motion sensors and on short timers (<1min)*

Nesting Birds

- 5.5 Nesting birds are offered protection in the Wildlife and Countryside Act (1981). This prohibits any disturbance/ destruction of these birds while they are nesting, including disturbance/ destruction of the nests. Therefore, any works would have to take place outside of the bird nesting season (March to August inclusive). If works are carried out within this nesting season, then a check must be carried out by a suitably experienced ecological consultant. If active nests are present, then the net must remain undisturbed until the young have fledged.

Ecological Enhancement

5.6 It is possible to provide ecological enhancement opportunities by installing suitable habitat features within any newly built structure. These features provide enhancement but are also discrete and don't adversely alter the aesthetic quality of any new building. They can be installed into the structure of any building and can be self-maintaining and matched to the brickwork or stonework used. The recommended enhancement features are listed below and would be located at least 5m above ground and placed under the eaves of the roof on the south-western or south-eastern aspect.

- *Built in Swift Box x 2,*
- *Built in Bat Boxes x 2.*

6 REFERENCES

BCT (2016) Bat Survey Guidelines for Professional Ecologist – Good Practice Guidelines 3rd Edition.

BCT (2018) Bats and Artificial Lighting in the UK. Guidance Note 8.

English Nature (2004) Bat Mitigation Guidelines IN13.6.

HMSO (1981) The Wildlife and Countryside Act 1981 (as amended) HMSO, London.

HMSO (2017). The Conservation (Natural Habitats, &c). (As amended) Regulations 2017.

Michell-Jones, T & McLeish, A. P (2004) Bat Workers Manual, JNCC.