

# *Bat Roost Characterisation and Mitigation Report*

Of

Southern Barn at Stoke Farm Barns, Battisford Tye,  
Suffolk, IP14 2HA

Carried out for:

Craig Skinner

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## **Executive Summary**

Abrehart Ecology was commissioned by Craig Skinner, to conduct a bat survey as part of a Protected Species Assessment of the southern barn at Stoke Farm, Battisford Tye, Suffolk.

Potential roost features had been identified and so bat surveys were required to inform assessment of the potential impact of the proposals on them, and the degree of mitigation required to offset any impacts to roosting bats. It has been stated that planning permission has already been granted previously under Q scheme.

Emergence and return to roost surveys were carried out on the 12<sup>th</sup> of June and 1<sup>st</sup> of August 2023 – with the building concluded to have moderate bat roost potential.

No bats were seen to emerge from or return to roost within the barn and so there are no further constraints with regards to roosting bats.

Surveys will need to be updated if a period of two years passes between this report and the commencement of construction works.

# **1 Introduction and background**

## **Purpose and brief**

- 1.1. Bat (emergence/return to roost) surveys of the cold store and former garage at Stoke Farm (the southern barn within the complex) were undertaken on behalf of Craig Skinner in June and August 2023 at Stoke Farm, Straight Road, Battisford, Tye, Suffolk (central grid reference TM 02720 53819; Figure 1;).
- 1.2. The surveys were required to form an assessment of the ecological impacts that works on the Site may have on bat populations in the area.

## **Description of Site and Local Area**

- 1.3. The site is located at the southern end of Stoke Farm Drive, a private road to the south of Straight Road, Battisford, Tye, Suffolk that serves a commercial fruit orchard, businesses, and residential properties.
- 1.4. The proposed development boundary includes a barn used as cold stores and former garage (now used as storage) on an operational apple orchard at Stoke Farm. The barn is a large brick construction building with corrugated sheet roofing. Surrounding the buildings is a concrete hardstanding yard (that serves all buildings), a small pottery studio, access tracks, residential houses, and the apple orchard. The northern boundary is formed by a poplar tree windbreak and dry ditch.
- 1.5. The wider landscape includes agricultural land, residential areas of surrounding villages – such as Battisford Tye, Battisford, and Little Finborough, woodlands, and airfields (Figure 1).

## **The proposed development**

- 1.6. The survey was required to inform a planning application at the Site; to include the demolition of an existing cold store and former garage and construction of a residential dwelling and associated infrastructure. It has been stated that under Q scheme planning permission has already been granted for the conversion of the building.

## **2 Legislative Context and Planning Policy**

- 2.1 All bat species and their roosts are protected under the Wildlife and Countryside Act 1981 (as amended) (WCA) and the Conservation of Habitats and Species Regulations 2010 (as amended). Under this legislation it is an offence to intentionally or recklessly:
- Capture, injure or kill a bat;
  - Disturb a bat;
  - Destroy or obstruct access to a bat roost.
- 2.2 The National Planning Policy Framework (NPPF) 2021 places responsibility on Local Planning Authorities (LPAs) to aim to conserve and enhance biodiversity in and around developments. Section 40 of the NERC Act requires every public body to “have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity”. Biodiversity, as covered by the Section 40 duty, is not confined to habitats and species of principal importance but refers to all species and habitats. However, the expectation is that public bodies would refer to the Section 41 list (of species and habitats) through compliance with the Section 40 duty.

### 3 Previous Survey Results and Background

- 3.1 Records of common pipistrelle (*Pipistrellus pipistrellus*) and brown long-eared bats (*Plecotus auritus*), within 2km of the Site.

#### Previous surveys – Preliminary Ecological Appraisal (PEA) – July 2022

- 3.2 A PEA of the barns to the north, including a desk study and preliminary roost assessment, was undertaken by Abrehart Ecology Ltd on the 20th of July 2022 (Abrehart Ecology Ltd., 2022).
- 3.3 The windbreak for the orchard on the northern boundary would be a suitable commuting corridor (as well as providing foraging opportunities) for bats, providing a connection to the wider landscape for foraging. The immediate surrounding habitat included large areas of apple orchard which could offer foraging habitat for bats, although this was surrounded by large expanses of arable farmland. The current management of the orchard is likely going to increase invertebrate populations at the Site due the orchard management is transitioning into organic farming (Organic registration number UKF004901).
- 3.4 Features on the southern barn were also considered during the initial assessment and during the first emergence survey carried out on the northern barns. Like the northern barns, there were ingress features noted at the tops of the external walls (missing bricks) and gaps under overlapping roofing panels at the southern gable end. The former garage (now storage area) was accessed and assessed for its potential to support roosting bats. No droppings were found, and the internal space was found to be largely unsuitable for roosting bats – well-sealed single skin walls, unlined corrugated roofing, and no roof space.
- 3.5 It was recommended that two surveys were carried out, due to the ingress and external features, and as it was not possible to access internal areas of the southern half of the structure.





# MAGiC

## Magic Map

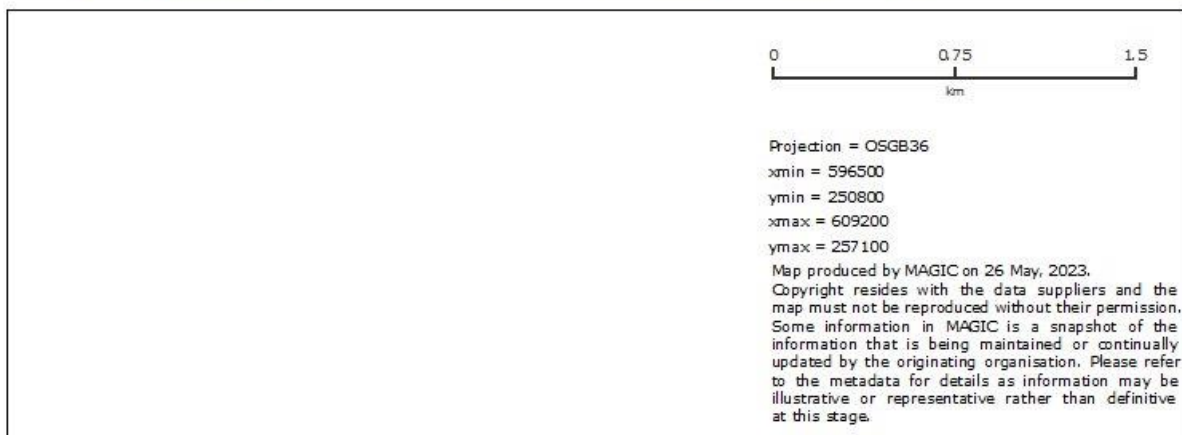
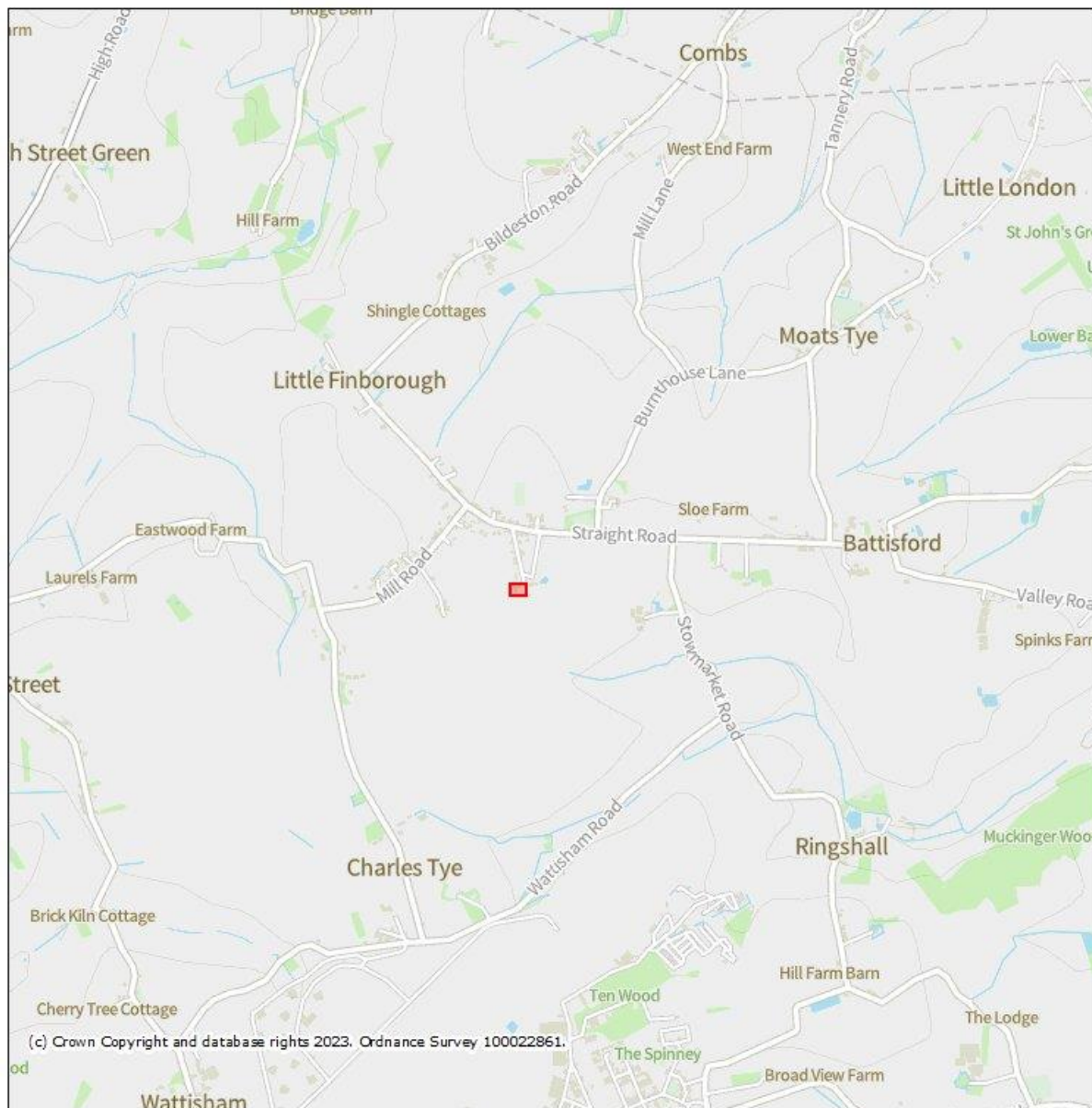


Figure 1. Site location.

## 4 Methods

### Presence/Likely Absence and Roost Characterisation

#### Overview

- 4.1 The surveys were carried out according to good practice guidelines (Collins, 2016).
- 4.2 Both surveys were undertaken using infra-red (IR) cameras and static detectors based on the Interim Guidance Note on the use of night vision aids for bat emergence surveys (BCT, 2022).

#### Personnel

- 4.3 Surveyor details of each of the surveys is detailed in Table 1 below.

**Table 1. Personnel Details**

Roost Characterisation Surveys	
Date	Surveyors Present
12.06.2023	Alister Killingsworth - Natural England Bat Class Survey Licence WML-CL17 James Roberts, Thomas Jordan, Terry Stopher Larissa Cooper – Natural England Bat Class Survey Licence
01.08.2023	Alister Killingsworth - Natural England Bat Class Survey Licence WML-CL17 Terry Stopher - Natural England Bat Class Survey Licence WML-CL17 Thomas Jordan

#### Equipment

- 4.4 2 IR cameras (Canon XA60 with 2 high intensity infra-red LED lights) were used. This was used in conjunction with an Anabat Scout bat detector and 3 EMT Pros with surveyors. The wider site was also watched by numerous experienced ecologists to cover the entire survey area.

#### Equipment deployment and monitoring

- 4.5 The IR cameras were placed in a position which covered identified potential roost features or ingress points (see appendix for locations), to view potential roost features, to observe any emerging bats, in conjunction with visual monitoring by experienced ecologists.
- 4.6 The cameras were periodically checked throughout the survey to ensure the cameras were operational.

#### Analysis of footage and static detectors

- 4.7 The infra-red camera footage was reviewed after the survey to record emergence of any bats surveyed. Emergence was cross-checked using the Anabat bat detector recordings to confirm species identification.

#### Bat call analysis

- 4.8 The sound recordings from the Anabat bat detectors were analysed in Kaleidoscope to record bat species and calling at time of emergence. This is cross-checked with IR footage providing an accurate species ID and emergence time.

## 5 Limitations and Caveats

- 5.1 There were no limitations to the survey.



## 6 Survey Results

### Emergence & Return to Roost Surveys

6.1 Surveys were carried out in June and August 2023. Weather conditions, activity levels, and any important activity (emergences or returns to roost) are detailed below.

#### 12.06.2023 dusk survey

6.2 Weather: 21°C, 0% cloud cover, Beaufort 0, dry.

6.3 Species recorded common pipistrelle, soprano pipistrelle, noctule, and brown long-eared bats. There were no emergences recorded during the survey (see appendix for survey sheets, analysis, and emergence locations). Activity was mostly foraging and commuting common pipistrelles, seen over the orchard and barn, with occasional commuting passes of other species listed above.

#### 01.08.2023 dawn survey

6.4 Weather: 14°C, 10% cloud cover, Beaufort 3, dry.

6.5 No bats were seen or heard near to the southern barn. Several common pipistrelle passes were recorded at the north of the wider site boundary – these were seen foraging over adjacent gardens or commuting near the northern boundary.

### Proposed Mitigation and Licensing Strategy - Bats

6.6 There are no constraints with regards to roosting bats.

6.7 The Site contains, and is adjacent to, suitable foraging habitat and so the development should incorporate sensitive lighting – ensuring the site is not illuminated in a detrimental way to bats during works and post construction. This will follow guidance provided by the Bat Conservation Trust (Bats and Artificial Lighting at Night, 2023), to ensure foraging and commuting bats using adjacent habitats are not negatively impacted. Lighting measures should also be applied to temporary security lighting used during the construction phase. This will include low pressure sodium lamps, with hoods, cowls, or shields, to prevent light spillage.

## 7 Conclusion & Enhancement Opportunities

- 7.1 **There are no constraints to the development with regards to roosting bats.**
- 7.2 Sensitive lighting will be implemented to prevent disturbance to nocturnal animals, particularly bats which were recorded using the orchard, boundary tree lines, and yard area. This lighting will consider the bat roost confirmed within the barns to the north – which will be subject to a Low Impact Class Licence.
- 7.3 The addition of bat roost features, such as access tiles, ridge access, or bat boxes (both external and integral) would retain and increase roosting opportunities for bats in the local area.
- 7.4 Should bat access be encouraged within roof or beneath tiles then it is recommended that bituminous roofing felt is used. Breathable Roofing Membranes (BRMs) can create an entanglement threat to bats.
- 7.5 Below are example images of enhancement features. Boxes should be sited at least 3m from ground level and be clear of obstructions – allowing for a clear flight path to the box entrance i.e., not obscured by tree limbs or foliage. All features shown below do not require maintenance as the design encourages droppings to fall out of the bricks or access features. Bat roosts are protected from disturbance and so should be left undisturbed once installed – unless maintenance/remedial works are carried out by a suitably licenced ecologist at correct times of year – this should be discussed with an ecologist prior to being undertaken.



- 7.6 New planting – in the form of bushes, shrubs, and trees – will provide opportunity to increase foraging and sheltering potential for a range of wildlife, including birds, invertebrates, and mammals. Any planting should be of local provenance and of native species.
- 7.7 Trees and shrubs can provide year-round habitat for wildlife; the dense canopy formed by shrub beds offer protection from predators and foraging opportunities for butterflies, birds, and mammals; and trees provide additional nesting and foraging for birds – including resident and migratory bird species.
- 7.8 Trees – these should be planted 2-3m apart and avoid planting within 4m of buildings. Further details on planting can be found online (such as the RSPB website (<https://www.rspb.org.uk/birds-and-wildlife/advice/gardening-for-wildlife/plants-for-wildlife/garden-trees/>)) or from the supplier of the trees. Trimming should be avoided throughout the bird nesting season (March to end of August) to prevent disturbing nesting birds or harming eggs/young birds.
- 7.9 Shrubs – should be planted 0.5-1.2m apart and to specifications/details provided by the supplier or found on the RSPB website (<https://www.rspb.org.uk/birds-and-wildlife/advice/gardening-for-wildlife/plants-for-wildlife/shrubs-for-gardens/>). Management of shrub growth should take place in winter months –

both avoiding the nesting bird season and ensuring greatest benefit to local wildlife, as species detailed below will provide berries and seeds for animals to forage on.

7.10 Suitable species for shrub beds and tree planting include:

- Birch (*Betula* sp.)
- Holly
- Rowan
- Crab apple
- Berberis
- Spindle
- Dogwood
- Guelder rose
- Hawthorn
- Cornelian cherry

## **8 References**

### **Literature**

Abrehart Ecology Ltd (2022). Preliminary Ecological Appraisal of Stoke Farm Barns, Suffolk; carried out for Craig Skinner.

Abrehart Ecology Ltd (2023). Bat Survey Report of Stoke Farm Barns, Suffolk; carried out for Craig Skinner (in production).

Dietz, C. & Kiefer, A. (2016) *Bats of Britain and Europe*, Bloomsbury Publishing, ISBN 978-1-4729-2202-1

Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3<sup>rd</sup> ed). The Bat Conservation Trust, London. ISBN-13 978-1-872745-96-1.

Michell-Jones, A.J. (2004) *Bat Mitigation Guidelines*, English Nature, ISBN 1 85716 781 3

## Appendix I – Site Maps

Indicative surveyor and infra-red camera locations 12.06.23





Indicative surveyor and infra-red camera locations 01.08.23



## Appendix II – Survey Results

### Surveyor Results – 12/06/2023 Dusk Survey (Sunset 20:56)

Surveyor: JR			
Time	Species	# Bats	Activity
20:58	-	-	SURVEY START
22:05	<i>Pipistrellus pipistrellus</i>	1	Heard not seen (HNS)
22:12	<i>Pipistrellus pipistrellus</i>	1	Foraging – flew over barn towards surveyor
22:13	<i>Pipistrellus pipistrellus</i>	1	Foraging - HNS
22:16	<i>Pipistrellus pipistrellus</i>	1	Multiple foraging passes until 22:20 from around barn to the orchard and back
22:23	<i>Pipistrellus pipistrellus</i>	1	Multiple passes over the orchard.
22:28	<i>Pipistrellus pipistrellus</i>	1	HNS
22:37	<i>Nyctalus noctula</i>	1	HNS
22:38	<i>Pipistrellus pygmaeus</i>	1	HNS
22:38	<i>Nyctalus noctula</i>	1	HNS
22:44	<i>Plecotus auritus</i>	1	HNS – check recordings
22:46	<i>Pipistrellus pipistrellus</i>	1	HNS
22:47	-	1	Commuting bat seen not heard – flew in straight line over orchard
23:00	<i>Nyctalus noctula</i>	1	HNS
23:09	<i>Pipistrellus pipistrellus</i>	1	Foraging until 23:13
23:18			SURVEY END

Surveyor: TS			
Time	Species	# Bats	Activity
20:58	-	-	SURVEY START
22:05	<i>Pipistrellus pipistrellus</i>	1	HNS
22:15	<i>Pipistrellus pipistrellus</i>	1	HNS
22:19	<i>Pipistrellus pipistrellus</i>	1	Foraging in front of surveyor's position.
22:33	<i>Pipistrellus pipistrellus</i>	1	HNS
22:43	<i>Pipistrellus pipistrellus</i>	1	HNS
23:03	<i>Pipistrellus pipistrellus</i>	1	HNS
23:09	<i>Pipistrellus pipistrellus</i>	1	HNS



23:18			SURVEY END
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**Surveyor results 01/08/2023 (Sunrise 05:16)**

<b>Surveyor: TS</b>			
<b>Time</b>	<b>Species</b>	<b># Bats</b>	<b>Activity</b>
03:16		-	SURVEY START
			No bats seen or heard during the survey
05:31			SURVEY END