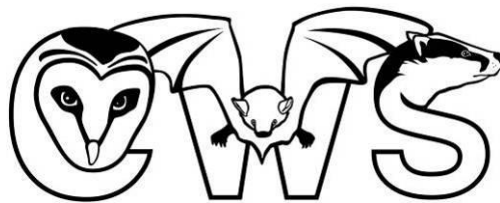


Nocturnal Bat Survey Report for Highover Farm, Highover Way, Hitchin, Herts, SG4 0RQ



Cotswold Wildlife Surveys

15th August and 12th September 2024

QUALITY CONTROL

Date	Version	Name
15.08.24 12.09.24	Nocturnal surveys	Andy Warren – BSc (Hons), MA (LM), Tech Cert (Arbor A), MCIEEM, Director + eight assistants
18.11.24	Report prepared	Innis Greenwood – BSc (Hons)
06.02.25	Checked	Caroline Warren – BSc (Hons) Director
06.02.25	Reviewed and issued	Andy Warren – BSc (Hons), MA (LM), Tech Cert (Arbor A), MCIEEM, Director

The information in this report has been prepared in accordance with the Chartered Institute of Ecology and Environmental Management’s (CIEEM) Code of Professional Conduct. The conclusions and recommendations expressed are reasoned judgements based on the evidence.

Every reasonable attempt has been made to comply with BS42020:2013 *Biodiversity – Code of practice for planning and development*, CIEEM *Guidelines for Ecological Report Writing* (CIEEM, 2017) and Bat Conservation Trust’s *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (4th edition, Collins, 2023). If there has been deviation from recognised practice, justification/explanation has been given.

CONTENTS

Page No.

SUMMARY4

1. INTRODUCTION6

2. METHODOLOGY7

3. RESULTS9

 3.1 First Emergence Survey 9

 3.2 Second Emergence Survey 12

4. CONCLUSIONS AND RECOMMENDATIONS14

5. REFERENCES16

SUMMARY

At Highover Farm in Hitchin, planning permission is being sought to re-develop the farm.

An initial daytime bat inspection of the site was carried out by Andy Warren from Cotswold Wildlife Surveys on 29th July 2024. This revealed a single Brown Long-eared Bat *Plecotus auritus* roosting in the farmhouse extension, with moderate suitability for roosting crevice and void dwelling bats in the other buildings on the site.

To characterise the farmhouse roost and to determine the presence or absence of bats elsewhere on the site, two emergence surveys were carried out by nine observers on the evenings of 15th August and 12th September 2024.

A pre-survey inspection on 15th August revealed no evidence of bat activity or any roosting bats, but around thirty Feral Pigeons *Columba livia domesticus* were present in the main barn northwest of the farmhouse.

During the nocturnal survey two Common Pipistrelles *Pipistrellus pipistrellus* emerged on the northeast side of the southernmost barn, and one from the house on the southeast side. Common Pipistrelles were active around the site. Soprano Pipistrelles *Pipistrellus pygmaeus* flew by twice having appeared from the adjacent residential area, and a Natterer's Bat *Myotis nattereri*, a Noctule *Nyctalus noctula*, and a Brown Long-eared Bat were each recorded once, all flying through or over the site. The latter was not roosting at the farm.

The second nocturnal survey revealed two Common Pipistrelles emerging; one from the southeast side of the house, and one from the northeast side of the southernmost barn. No other bats emerged, but small numbers of Common Pipistrelles flew around the site.

From the results of the daytime inspection and nocturnal survey, the status of bats at the site is considered thus:

- ❑ Brown Long-eared Bat – day roost for a single animal in the farmhouse;
- ❑ Common Pipistrelle – day roost for one bat in the farmhouse, and two bats in the southernmost barn.

Since the proposed works will cause the loss of the bat roosts, a licence from Natural England will be required.

Given the low status of the roosts, the site is eligible for registration under Natural England's Bat Mitigation Class Licence (BMCL) scheme.

Mitigation measures will include a 'toolbox talk' by a Registered Consultant (RC) to contractors about bats and what to do if one is unexpectedly encountered, a pre-works inspection of the buildings by the RC, supervision of the destructive roof works by the RC, the latter undertaken by hand, and the provision of two Harlech and one Large Multi-chamber Bat Boxes on trees in the grounds in which to relocate a bat if one is discovered before or during works.

The boxes will be retained in position for a minimum of five years.

It should be noted that under BMCL there will be no timing constraints, and an ecologist will be present at all key stages to ensure the replacement roosting provision listed above is correctly installed.

*

A Barn Owl *Tyto alba* was roosting in one of the barns at the time of the first nocturnal, and flew out to forage across the neighbouring farmland. It was not present during the second nocturnal.

1. INTRODUCTION

At Highover Farm in Hitchin, planning permission is being sought to re-develop the farm.

An initial daytime bat inspection of the site was carried out by Andy Warren from Cotswold Wildlife Surveys on 29th July 2024. This revealed a single Brown Long-eared Bat roosting in the farmhouse extension, with moderate suitability for roosting crevice and void dwelling bats in the other buildings on the site.

To characterise the farmhouse roost and to determine the presence or absence of bats elsewhere on the site, two emergence surveys were carried out by nine observers on the evenings of 15th August and 12th September 2024.

The results of the nocturnal surveys are contained in this report.

In England, Scotland and Wales, all bat species are fully protected under the Wildlife and Countryside Act 1981 (WCA) (as amended), through inclusion in Schedule 5. In England and Wales this Act has been amended by the Countryside and Rights of Way Act 2000 (CROW) and the Natural Environment and Rural Communities Act 2006 (NERC), which add an extra offence, makes species offences arrestable, increases the time limits for some prosecutions, and increases penalties.

All bats are also included in Schedule 2 of the Conservation (Natural Habitats, & c.) Regulations (the Habitats Regulations), which defines ‘European protected species of animals’. In England this is the Conservation of Habitats and Species Regulations 2010, in Scotland the Habitat Regulations 1994 (as amended), and in Northern Ireland the Conservation Regulations 1995.

All bats are also protected under the Bern Convention Appendix II, the Bonn Convention Appendix II, and the Wild Mammals (Protection) Act 1996.

The above legislation can be summarised thus (Mitchell-Jones and McLeish, 2004):

- ❑ *Intentionally or deliberately kill, injure or capture (or take) bats;*
- ❑ *Deliberately disturb bats (whether in a roost or not);*
- ❑ *Recklessly disturb roosting bats or obstruct access to their roosts;*
- ❑ *Damage or destroy roosts;*
- ❑ *Possess or transport a bat or any part of a part of a bat, unless acquired legally;*
- ❑ *Sell (or offer for sale) or exchange bats, or parts of bats.*

The word ‘roost’ is not used in the legislation, but is used here for simplicity. The actual wording is ‘any structure or place which any wild animal...uses for shelter or protection’ (WCA), or ‘breeding site or resting place’ (Habitats Regulations).

As bats generally have both a winter and a summer roost, the legislation is clear that all roosts are protected whether bats are in residence at the time or not.

2. METHODOLOGY

In order to fully assess bat occupation of a particular site, the Bat Conservation Trust (2023) recommends that information gathered from a desk study of known bat records, and a daytime site walkover, is used to inform the type and extent of future bat survey work, potentially including nocturnal emergence surveys.

The preliminary roost assessment (PRA) is usually in the form of a diurnal walkover and can be carried out at any time of the year. It provides an opportunity to check for signs of bat occupancy and/or the suitability for bat roosting.

Evidence of bat activity includes droppings, scratch marks, feeding remains, carcasses, or even roosting animals, whilst suitability is determined by the type and number of potential roost features (PRFs) typically used by bats.

Roosting places vary depending on the species. Pipistrelles usually inhabit narrow cracks or cavities around the outside of buildings, but they will roost in similar niches inside larger barns. Typical sites include soffit spaces, gaps behind fascia boards and end rafters, crevices around the ends of projecting purlins, under warped or lifted roof and ridge tiles, or in gaps in stone and brickwork where mortar has dropped out.

Larger species such as Brown Long-eared Bats, Myotis bats (Natterer's and Whiskered/Brandt's *Myotis mystacinus*/*M. brandtii*), and Lesser Horseshoes *Rhinolophus hipposideros*, like to roost in the roof voids of buildings, and can often be found hanging singly or in small groups from ridge boards or roof timbers, especially where these butt up against gable walls or chimney breasts. They especially favour older structures with timber frames. Here they squeeze into tight crevices making them difficult to observe.

Where bats are found, or there is evidence of bat occupation or activity, i.e. that bat use is confirmed, a roost characterisation survey is undertaken. The results are used to inform the impact assessment and design of mitigation measures. Roost characterisation includes nocturnal emergence surveys, unless sufficient information has already been collected using robust survey methods with no significant constraints.

Nocturnal emergence surveys allow numbers and species of bats to be confirmed, and should only be undertaken when bats are out of hibernation and in their summer roosts.

The bat active period is generally considered to be between April and October, although particularly cold weather will affect the level and extent of bat activity. Indeed, the air temperature at the start of each survey should be at least 10°C or above, with no strong wind or heavy rain. The survey starts 15 minutes before sunset and continues for one and a half to two hours after sunset.

Visits will be a minimum of three weeks apart, and the number of surveys and timing is dependent on the evidence found or the suitability of the site to bats. This will be determined by the ecologist. In general, at least two emergence nocturnal surveys will be carried out, but a third visit may be necessary if the results are inconclusive or further information is required.

Nocturnal emergence surveys are also used to determine the presence or absence of bats, where signs of bat activity are indeterminate or absent but the suitability for bat roosting is considered to be low, moderate or high.

For a site with no evidence but low suitability, just one nocturnal emergence survey is required, this to be in the period May to August.

For moderate suitability a minimum of two visits are needed between May and September, of which one must be in the period May to August.

With high suitability, three visits will be necessary between May and September, of which two must be in the period May to August.

Where there is no evidence of bat presence, and no suitability for roosting, no nocturnal surveys will be needed.

The number of surveyors and/or the use of night vision aids (NVAs) is determined by the ecologist, and is dependent on the complexity of the structure. For simple structures just one surveyor using an appropriate number of NVAs will be sufficient, but for larger sites and/or more complex or irregularly shaped structures, e.g. those with multiple elevations and/or roof slopes, more surveyors will be required.

On 29th July 2024, a thorough inspection of the buildings was made by Andy Warren (Natural England bat licence No. 2015-16489-CLS-CLS), including the exterior and interior walls, roof coverings, roof voids, eaves, gables, roof and ceiling timbers, window casements and door frames.

10x42 Swarovski binoculars and a Fenix TK75 torch were used for the inaccessible/unreachable areas. On this occasion an endoscope was not used, as there were no crevices and cavities that could not be inspected with a torch or by use of binoculars from a ladder.

On the evenings of 15th August and 12th September 2024, nocturnal emergence surveys were undertaken by Andy Warren and eight assistants to characterise the roost in the farmhouse and determine the presence or absence of roosting bats in other structures.

The emergence surveys began 15 minutes before sunset and continued for up to one- and three-quarter hours after sunset.

The surveys were aided by the use of electronic Echo Meter Touch and BatBox Duet bat detectors and i-pads. This facilitates the detection of bats, and computer analysis of recordings aids in the identification of individual species, in particular those which might be utilising different frequencies simultaneously.

Pulsar Accolade LRF XP50 Pro Thermal Binoculars were also used to check for roosting bats and to assess bat activity around the site.

The results of the nocturnal surveys are detailed in Section 3.

3. RESULTS

3.1 First Emergence Survey

The first emergence survey was carried out on 15th August 2024, commencing at 20:10 and finishing at 22:15. The weather conditions during the time of the survey were recorded and are presented in Table 1.

Parameter	Value
Temperature (°C)	21.0 start, 19.0 end
Cloud cover (%)	100
Precipitation	None
Wind speed (Beaufort scale)	3 southwesterly
Sunset	20:24

Table 1 Weather conditions during the first emergence survey

A pre-survey inspection revealed no evidence of bat activity or any roosting bats, but around thirty Feral Pigeons were present in the main barn northwest of the farmhouse.

During the nocturnal survey two Common Pipistrelles emerged on the northeast side of the southernmost barn, with another one from the house on the southeast side. Common Pipistrelles were active around the site. Soprano Pipistrelles flew by twice having appeared from the adjacent residential area, and a Natterer's Bat, a Noctule, and a Brown Long-eared Bat were each recorded once, all flying through or over the site. The latter was not roosting at the farm.

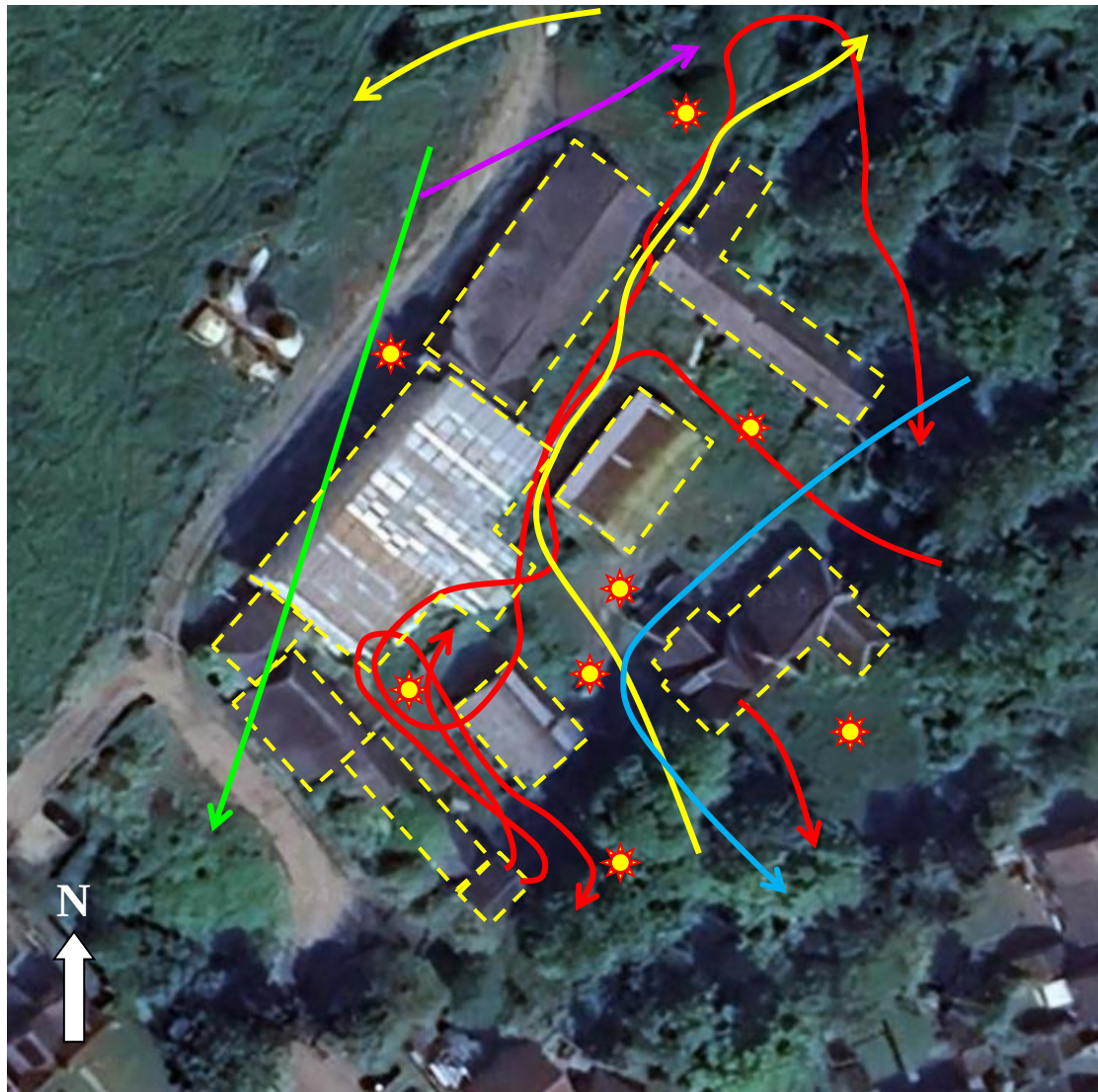
Details of the bat observations and detections are listed below.

Time	Observation
20:10	Survey commenced
20:39	Common Pipistrelle emerged from the southernmost barn and flew into the yard
20:39	Common Pipistrelle emerged from the house on the southeast side
20:42	Noctule flew over the site
20:43-20:50	Common Pipistrelles active all around the farmyard
20:51	2 nd Common Pipistrelle (third animal) emerged from the southernmost barn and flew into the yard
21:00	Natterer's Bat recorded on site as it flew through
21:08	Brown Long-eared Bat flew by north of the buildings
21:09	Common Pipistrelle foraged around the house and northern barns

21:11-21:16	Common Pipistrelle foraged in the yard
21:15	Soprano Pipistrelle flew through the yard
21:20	Soprano Pipistrelle flew by north of the buildings
22:15	No further detections were made and survey ended

The bat flight paths at emergence on 15th August 2024 are shown on Plan 1 overleaf.

Plan 1 Bat flight paths at emergence on 15th August 2024



Common Pipistrelle Bat →

Soprano Pipistrelle Bat →

Noctule Bat →

Brown Long-eared Bat →

Natterer's Bat →

Positions of surveyors *

3.2 Second Emergence Survey

The second emergence survey was carried out on 12th September 2024, commencing at 19:00 and finishing at 21:00. The weather conditions during the time of the survey were recorded and are presented in Table 2.

Parameter	Value
Temperature (°C)	12.0 start, 11.0 end
Cloud cover (%)	30
Precipitation	None
Wind speed (Beaufort scale)	2 N
Sunset	19:22

Table 2 Weather conditions during the second emergence survey

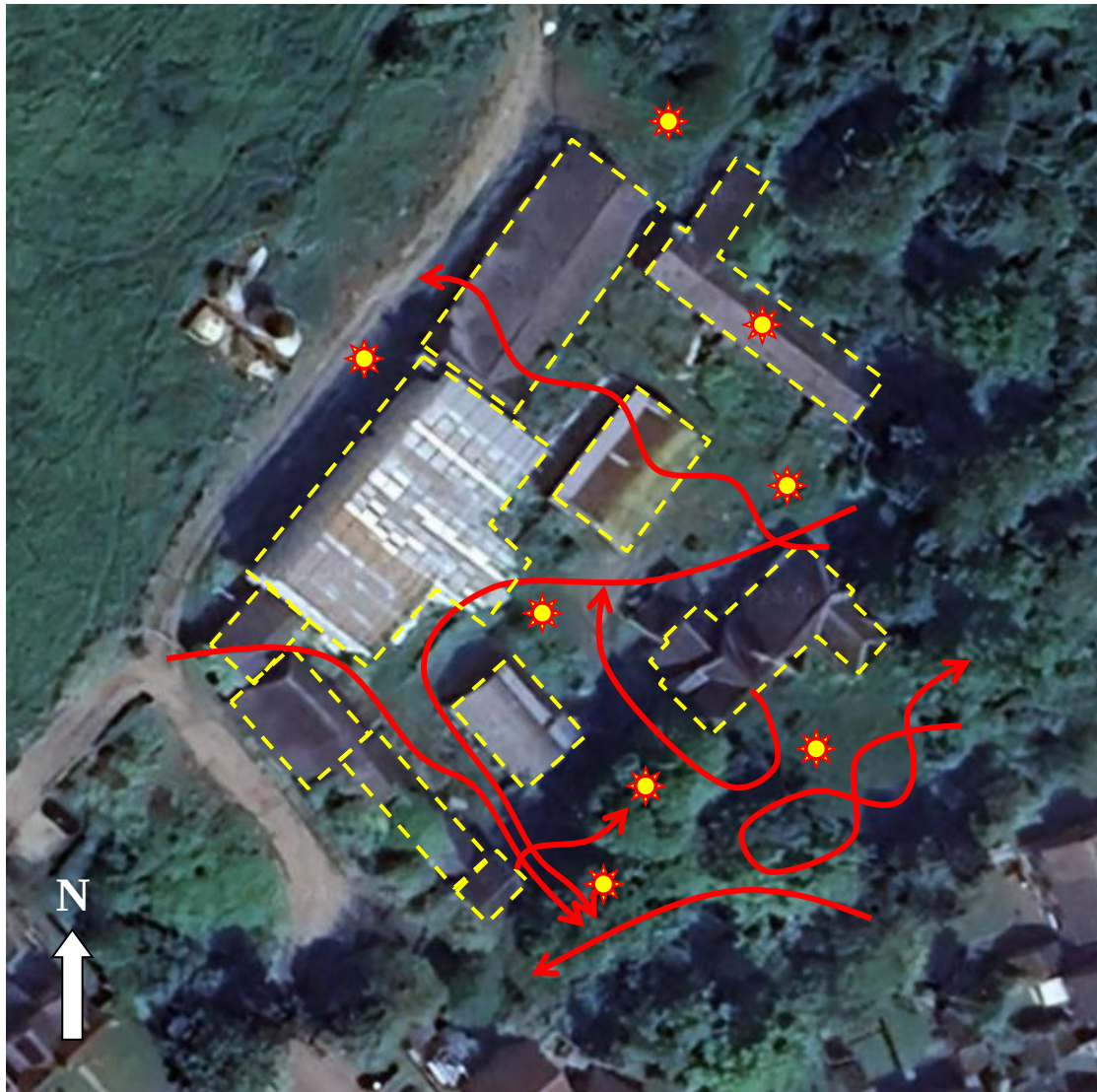
The second nocturnal survey revealed two Common Pipistrelles emerging; one from the southeast side of the house, and one from the northeast side of the southernmost barn. No other bats emerged, but small numbers of Common Pipistrelles flew around the site.

Details of the bat observations and detections are listed below.

Time	Observation
19:00	Survey commenced
19:43	Common Pipistrelle emerged from the house on the southeast side
19:44	Common Pipistrelle flew through the yard
19:45	Common Pipistrelle emerged from the northeast side of the southernmost barn
19:45	Common Pipistrelle foraged south of the house
19:48	Common Pipistrelle flew through the yard
19:50	Common Pipistrelle flew by southwest of the house
19:51	Common Pipistrelle flew by the south barns
19:53	Common Pipistrelle flew by the south barns
19:58	Common Pipistrelle flew through the yard
21:00	No further detections were made and survey ended

The bat flight paths at emergence on 12th September 2024 are shown on Plan 2 overleaf.

Plan 2 Bat flight paths at emergence on 12th September 2024



Common Pipistrelle Bats →

Positions of surveyors ★

4. CONCLUSIONS AND RECOMMENDATIONS

Bats tend to be seasonal visitors to properties, and are not usually in occupation all year round. The females normally form maternity colonies during May or June and then leave for adjacent trees and/or woodland during July or August once the young bats are able to fly and become independent. Here they will spend the winter months in hibernation before returning to the house or barn the following spring.

Male bats generally live alone and have a number of favoured roosts. During the summer they visit each of these for a few days at a time, before moving to their chosen hibernation site in mid-late October.

Different species have different habits, but this seasonal movement is common to all.

Bats choose their roosts carefully. During the summer they look for sites which are warmed by the sun, and as a result are most often found on the south and western side of buildings.

Pipistrelles, our smallest and commonest bats, prefer to roost in very confined spaces around the outside of buildings, typical places being behind hanging tiles, weather boarding, soffit, barge and eave boarding, between roof felt and roof tiles or in cavity walls.

As such they can be difficult to find, so suitability for roosting was also assessed.

This was considered to be moderate, and the presence of roosting pipistrelles was confirmed by the nocturnal surveys, when two Common Pipistrelles emerged on the northeast side of the southernmost barn, with another Common Pipistrelle from the farmhouse on the southeast side. Common Pipistrelles were also active around the site, and Soprano Pipistrelles flew by twice during the first survey, the latter having appeared from the direction of the adjacent residential area.

Another bat frequently encountered in buildings is the Brown Long-eared. This is also a common species, but unlike pipistrelles, they prefer the dry, warm space of the loft or roof void, and can often be found hanging from roof timbers, especially rafters and the ridge board next to chimney breasts.

A single Brown Long-eared Bat was found to roosting in the extension of the farmhouse, but it was not seen subsequently, although a single animal was noted flying through the site during the first nocturnal. This could have been the same bat, but it was evidently roosting elsewhere.

From the results of the daytime inspection and nocturnal survey, the status of bats at the site is considered thus:

- Brown Long-eared Bat – day roost for a single animal in the farmhouse;
- Common Pipistrelle – day roost for one bat in the farmhouse, and two bats in the southernmost barn.

Since the proposed works will cause the loss of the bat roosts, a licence from Natural England will be required.

Given the low status of the roosts, the site is eligible for registration under Natural England's Bat Mitigation Class Licence (BMCL) scheme.

Mitigation measures will include a 'toolbox talk' by a Registered Consultant (RC) to contractors about bats and what to do if one is unexpectedly encountered, a pre-works inspection of the buildings by the RC, supervision of the destructive roof works by the RC, the latter undertaken by hand, and the provision of two Harlech and one Large Multi-chamber Bat Boxes on trees in the grounds in which to relocate a bat if one is discovered before or during works.

The boxes will be retained in position for a minimum of five years.

It should be noted that under BMCL there will be no timing constraints, and an ecologist will be present at all key stages to ensure the replacement roosting provision listed above is correctly installed.

*

A Barn Owl was roosting in the north-easternmost barn at the time of the first nocturnal, and flew out to forage across the neighbouring farmland. It was not present during the second nocturnal.

5. REFERENCES

Collins, J. (ed.), 2023. *Bat Surveys for Professional Ecologists: Good Practice Guidelines*. (4th edition). The Bat Conservation Trust, London.

Mitchell-Jones A. J. & McLeish, 2004. *Bat Workers' Manual*. Joint Nature Conservation Committee, Peterborough.

Peterson Elektronik AB, 2003. *BatSound. Real-time spectrogram sound analysis software (version 3.3)*. Peterson Elektronik AB, Uppsala, Sweden.

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.

Russ, J., 1999. *The Bats of Britain and Ireland. Echolocation Calls, Sound Analysis and Species Identification*. Alana Ecology Ltd., UK.

Stebbins R.E., 1986. *Which bat is it?* The Mammal Society and The Vincent Wildlife Trust, London.

The Vincent Wildlife Trust, 2003. *The Bats of Britain and Ireland*. The Vincent Wildlife Trust, Ledbury.

Cotswold Wildlife Surveys Limited
Company Reg. No. 6864285 (England & Wales)

**Andy Warren BSc (Hons), MA (LM), Tech Cert (Arbor A),
MCIEEM, TechArborA
Withy Way, Charingworth, Chipping Campden,
Gloucestershire, GL55 6NU**

Tel: 01386 593056/07879 848449

andy@cotswoldwildlifesurveys.co.uk

Highover Farm, Hitchin – Nocturnal Bat Survey Report

To: Gill Hudson Homes Ltd

Report Number: 4821-CWS-02

Version: 01

Date: 6th February 2025