
PHASE 1 BAT & NESTING BIRD SURVEY

**Coalbourn Cottage, Whitwick Road,
Copt Oak, Markfield, Leicestershire,
LE67 9QB**

31st March 2025

Ridgeway Ecology Ltd
36 Chichester Lane, Hampton Magna, Warwick,
Warwickshire, CV35 8TG, UK

Tel: 01926 259182

Mob: 07973445101

Email: enquiries@ridgewayecology.co.uk

Web: www.ridgewayecology.co.uk



Control Sheet

General Report Information	
Report title	Phase 1 Bat & Nesting Bird Survey
Client	Mr Indi Johal
Location	Coalbourn Cottage, Whitwick Road, Copt Oak, Markfield, Leicestershire, LE67 9QB
Prepared by	Dr Jon Russ
Issue Date	31/03/2025
Document Reference	RE2025-414b

Disclosure:

This document has been prepared by Ridgeway Ecology Ltd for the sole use of the commissioning client/s. It has been provided in accordance with the agreed scope and intended purpose. No other warranty is made as to the professional advice included in this document. It does not purport to give legal advice.

This report should not be copied or relied upon by any third party without the express prior written agreement of Ridgeway Ecology Ltd and the commissioning client/s.

The evidence gathered, and the opinions provided, have been prepared in accordance with the Chartered Institute of Ecology and Environmental Management Code of Professional Conduct.

Where any appraisal is based upon information provided by third parties, it is assumed that this information is relevant, correct and complete; there has been no independent verification of information obtained from third parties unless otherwise stated. Where field investigations have been carried out these have been appropriate to the agreed scope of works and carried out to a level of detail required to achieve the stated objectives

Contents

1	Introduction	4
1.1	Background to activity/development	4
1.2	Site description	4
1.3	Proposed works	4
1.4	Planning and legislative context	4
1.5	Objectives	7
2	Methods	8
2.1	Pre-survey data search	8
2.2	Surveyor information	8
2.3	Field surveys	8
2.3.1	Habitat survey	8
2.3.2	Bat roost survey/Nesting bird survey(s)	8
2.3.3	Bat activity survey(s)	10
3	Results	11
3.1	Pre-survey data search	11
3.1.1	Designated sites	11
3.1.2	Protected species	11
3.2	Field Surveys	11
3.2.1	Habitat description	11
3.2.2	Bat roost survey/Nesting bird survey(s)	11
3.2.3	Bat activity survey(s)	12
3.2.4	Interpretation and evaluation of survey results	13
4	Assessment	14
4.1	Constraints	14
4.2	Potential impacts of the development	14
5	Recommendations and mitigation	15
6	References	17
7	Figures	18
8	Photographs	20

1 Introduction

1.1 Background to activity/development

This report has been prepared by Dr Jon Russ at the request of Tom Matthews of ESP Design acting on behalf of their client Mr Indi Johal. Planning consent is being sought from Hinckley and Bosworth Borough Council to demolish an outbuilding at Coalbourn Cottage, Whitwick Road, Copt Oak, Markfield, Leicestershire, LE67 9QB and construct a replacement, and add an orangery and two-storey extension to the cottage (Planning Ref: 25/00126/HOU). The local planning authority has requested that a bat and nesting bird survey is carried out to inform the planning process.

1.2 Site description

The site proposed for development, Coalbourn Cottage (GR: SK485116), is located on the eastern side of Whitwick Road 1.6km north of the village of Markfield in Leicestershire (Figure 1). The site is primarily surrounded by farmland comprising arable cropland and pasture bordered by hedgerows and treelines although there are some dwellings with gardens nearby. There are numerous patches of woodland nearby, all well connected to the site. There are a few ponds within 1km of the site, the nearest being 260m to the south-east. The ponds, woodland, gardens, hedgerows and treelines represent good foraging habitat for bats and the variety of habitats is likely to support a relatively diverse bird population.

1.3 Proposed works

Planning consent is being sought from Hinckley and Bosworth Borough Council to demolish an outbuilding at Coalbourn Cottage, Whitwick Road, Copt Oak, Markfield, Leicestershire, LE67 9QB and construct a replacement, and add an orangery and two-storey extension to the cottage (Planning Ref: 25/00126/HOU).

1.4 Planning and legislative context

The information below is intended only as guidance to the legislation relating to these species. The Acts themselves should be referred to for the correct legal wording.

Bats – Legislative context

All bats are included in Schedule 2 of The Conservation of Habitats and Species Regulations 2017, which implements the requirements of the Habitats Directive in England, Scotland and Wales and in Schedule 2 of the Conservation (Natural Habitats, &c.) Regulations (Northern Ireland) 1995 (as amended) which implement the requirements of the Habitats Directive in Northern Ireland. Bats and their breeding sites or resting places are protected under Regulation 39. An amendment to the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 came into force in Northern Ireland on 21st August 2007 (Conservation (Natural Habitats, etc.) (Amendment) Regulations (Northern Ireland) 2007).

It is an offence for anyone without a licence to:

- Intentionally or recklessly/deliberately injure, take or kill a bat;
- To possess a bat (unless obtained legally) whether alive or dead;

- Intentionally or recklessly/deliberately damage, destroy or obstruct access to any place that bats use for shelter or protection whether bats are present or not;
- Intentionally or recklessly/deliberately disturb a bat while it is occupying a structure or place that it uses for shelter or protection.
- deliberately disturb bats in such a way as to be likely significantly to affect—
 - (i) the ability of any significant group of bats to survive, breed, or rear or nurture their young; or
 - (ii) the local distribution or abundance of that species;

Prosecution could result in imprisonment, fines of £5,000 per animal affected and confiscation of vehicles and equipment used.

Recent amendments to the Habitat Regulations in 2007 have removed many of the defences. This includes the commonly relied upon 'incidental result defence', which previously covered acts that were the incidental result of an otherwise lawful activity and which could not reasonably have been avoided. As the incidental result of a lawful operation defence has been removed from legislation (Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007) operators are now open to this strict liability offence, whether the damage occurs by accident or not. An offence will only be committed if the deliberate disturbance is likely to significantly affect a significant group of animals of that species' ability to survive, breed, or rear or nurture its young or is likely to significantly affect the local distribution or abundance of that species. Deliberate disturbance of a protected animal (species on Schedule 5 which includes EPS) in its place of shelter or protection will continue to be an offence under the Wildlife and Countryside Act 1981. However, the incidental result of a lawful operation defence will be available for that offence where the disturbance could not have been reasonably avoided.

In England, Scotland and Wales all bat species are protected under the Wildlife and Countryside Act 1981 (WCA) (as amended) through inclusion in Schedule 5. The existing offences under the Wildlife and Countryside Act (1981) as amended which cover obstruction of places used for shelter or protection, disturbance and sale still apply to European protected species.

In England and Wales, the WCA was amended by the Countryside and Rights of Way Act 2000 (CRoW), which adds an extra offence ('or recklessly' to S9(4)(a) and (b)), makes species offences arrestable, increases the time limits for some prosecutions and increases penalties.

Exemptions can be granted from the protection afforded to bats under the Habitat Regulations, by means of a EPS (European Protected Species) Habitats Regulations licence obtained from Natural England.

A 'EPS Habitats Regulations Licence' could be required for:

- Demolition of a building known to be used by bats prior to development of a site
- Conversion of barns or other buildings known to be used by bats
- Removal of trees known to be used by bats as well as tree pruning
- Significant alterations to roof voids known to be used by bats
- Road building or widening
- Bridge strengthening

There are three tests, which must be satisfied, before a licence can be issued to permit otherwise prohibited acts;

- Regulation 53(2)(e), for the purpose of preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment; or
- Regulation 53(2)(f) for the purpose of preventing the spread of disease; or
- Regulation 53(2)(g) for the purpose of preventing serious damage to livestock, foodstuffs for livestock, crops, vegetables, fruit, growing timber or any other forms of property or to fisheries; subject to Natural England being satisfied that the application additionally meets:
 - Regulation 53(9)(a) that there is no satisfactory alternative; and
 - Regulation 53(9)(b) that the action authorised will not be detrimental to the maintenance of the species concerned at a favourable conservation status in their natural range.

A European Protected Species License is required before the commencement of any development that might impact on bats or their roosts.

Birds – Legislative context

All birds, their nests and eggs are protected by law under the Wildlife and Countryside Act 1981 (as amended). It is an offence, with certain exceptions, to:

- Intentionally kill, injure, or take (handle) any wild bird.
- Intentionally take, damage or destroy any wild bird nest whilst in use or being 'built'.
- Intentionally take or destroy a wild bird egg.
- Have in one's possession or control a wild bird (dead or alive), or egg, (unless one can show that it was obtained legally).

Some species of bird listed under Schedule 1 (e.g. Barn Owls, of the Act receive extra protection. For these species it is an offence to:

- Intentionally or recklessly disturb any wild bird whilst 'building' a nest or whilst in, on, or near a nest containing eggs or young.
- Intentionally or recklessly disturb any dependent young of wild birds.

Disturbance may be deemed reckless if it is committed by someone who could be expected to know that the bird(s) might be present but failed to check.

Under the 1981 Act (Part 1, section 25) local authorities are given the function of bringing this legislation to the attention of the public and may institute proceedings for any offence committed within their area. The police are empowered to enter onto any land and search, or stop and search, any person where an offence is suspected (section 14). Anyone found guilty of an offence is liable to a fine of up to £5,000 or imprisonment for a term not exceeding six months, or both.

Planning policy and Biodiversity Action Plan context

The National Planning Policy Framework (NPPF) is guidance for local planning authorities on the content of their Local Plans but is also a material consideration in determining planning applications. The NPPF has replaced much of the existing planning policy guidance, including Planning Policy Statement 9: Biological and Geological Conservation. However, the government circular 06/05: Biodiversity and Geological Conservation - Statutory Obligations and Their Impact within the Planning System, which accompanied PPS9 remains valid.

The Natural Environment and Rural Communities (NERC) Act 2006, in particular Section 40, places a duty on public bodies to have regard to the conservation of biodiversity. This duty is guided by the habitats and species lists in Section 41 of the Act, within which seven bat species are included: barbastelle (*Barbastella barbastellus*), Bechstein's (*Myotis bechsteinii*), noctule (*Nyctalus noctula*), soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared (*Plecotus auritus*), greater horseshoe (*Rhinolophus ferrumequinum*) and lesser horseshoe (*Rhinolophus hipposideros*) bats. These seven species are also listed as Priority Species within the UK Biodiversity Action Plan (UKBAP), (the UK Government's response to the Convention on Biological Diversity).

1.5 Objectives

The bat survey was commissioned to assess:

- what species of bat are present at the site;
- what types of bat activity are occurring within the site;
- whether or not bats are roosting within the site; what population levels (size and importance) are present at the site;
- and to make recommendations on any further action that may be required to provide sufficient information for the local planning authority to support a planning application

A nesting bird survey was commissioned to:

- determine the use or otherwise of the site by nesting birds;
- determine the value of the site to nesting birds;
- make an assessment of the potential impacts and effects of the proposed development of the site on nesting birds;
- determine the legal implications of the proposed development; and
- recommend appropriate mitigation measures to remove or reduce impacts.

2 Methods

2.1 Pre-survey data search

As the scale of the proposed development is small a pre-survey data search of biological records was not carried out in accordance with Section 4.1.5 of the current guidelines (Collins 2023). A search using the MagicGov and Nature on the Map (Natural England) websites was performed to identify sites of nature conservation.

2.2 Surveyor information

The survey was carried out by Dr Jon Russ CEnv, MIEEM. Jon is a terrestrial and behavioural ecologist with a specialist interest in bats. As Director of Ridgeway Ecology Ltd and through his academic research and work with the Bat Conservation Trust he has managed, designed and carried out large- and small-scale bat surveys and bat monitoring programmes in the UK and the tropics. He has extensive experience with the United Kingdom and European Union legislation regarding bats and has been a fully licensed bat worker for over 30 years, holding bat conservation, education and scientific licences for radio-tracking, mist-netting, ringing, harp-trapping, ultrasonic playback and DNA sampling. His publication record includes a large number of articles in scientific journals as well as other publications including the widely used book, “The Bats of Britain and Ireland: Echolocation, Sound Analysis, and Species Identification”, “Review of ASSI designation for bats in Northern Ireland”, “The Northern Ireland Bat Action Plans” which he coordinated and delivered, “British Bat Calls: A Guide to Species Identification” and the recently published “Bat Calls of Britain & Europe”. In addition, Jon has a great deal of experience in avoidance, mitigation and compensation measures relating to bats and development. He has undertaken over 4500 Preliminary Roost Assessments and 1200 bat emergence surveys, has been the named ecologist on over 200 EPS licences and has over 170 sites registered under his Bat Mitigation Class Licences. Licences include Natural England Class 3 (CL19 - 2015-11383-CLS-CLS) & Class 4 (CL20 - 2015-11384-CLS-CLS), Bat Mitigation Class Licence (CL21 - RC011), HS2 Bat Low Impact Class Licence for Trees (CL40 - B40RC016), HS2 Bat Low Impact Class Licence for Buildings (CL39 - B39RC016), Bat Earned Recognition (Ref: cBER0254).

2.3 Field surveys

The bat survey was undertaken in accordance with current best practice guidelines, which include: UK Bat Mitigation Guidelines (Reason & Wray 2023); The Bat Workers Manual (Mitchell-Jones & McLeish, 2004); and Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins 2023).

A nesting bird survey was also undertaken in accordance with reference to *Field Guide to Nests, Eggs and Nestlings of British and European Birds* (Collins Field Guide 1985); *Survey techniques* (Barn Owl Trust 2010); and *Barn owls on site: A guide for developers and planners 2nd Edition* (English Nature 2002).

2.3.1 Habitat survey

A survey of the habitats that may be used by roosting bats was carried out.

2.3.2 Bat roost survey/Nesting bird survey(s)

On the 28th March 2025, the buildings were surveyed for potential roost sites and signs of bats. The survey utilised a ladder, a high-powered torch, binoculars and an endoscope (Ridgid CA-300 with

6mm and 9mm camera heads). The external inspection involved looking for bat droppings on the ground, stuck to walls or roof tiles and on windows and sills and recording suitable entry and exit points. The internal inspection focused on those areas which may be suitable for roosting bats, such as ridge tiles, gable walls, joints and crevices in wood, crevices in walls as well as searching for bat droppings and feeding signs on the floors and other surfaces.

The following criteria were used to determine the roosting potential of the buildings

Table 1. Description of roosting potential categories (Collins 2023) with a minor addition (underlined) to avoid nearly all buildings with low numbers of crevices being categorised as being of high roosting potential.

Potential suitability	Roosting habitats in structures
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).
Negligible^a	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions ^b and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats ^c). They could be used on a sporadic or occasional basis for feeding or solitary day roosting.
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions ^b and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed) <u>although this cannot be ruled out.</u>
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 ^b and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation site.

^a Negligible is defined as ‘so small or unimportant as to be not worth considering, insignificant’. This category may be used where there are places that a bat could roost or forage (due to one attribute) but it is unlikely that they actually would (due to another attribute).

^b For example, in terms of temperature, humidity, height above ground level, light levels or levels of disturbance.

^c Evidence from the Netherlands shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten et al., 2016 and Jansen et al., 2022). Common pipistrelle swarming has been observed in the UK (Bell, 2022 and Tomlinson, 2020) and winter hibernation of numbers of this species has been detected at Seaton Delaval Hall in Northumberland (National Trust, 2018). This phenomenon requires some research in the UK, but ecologists should be aware of the potential for larger numbers of this species to be present during the autumn and winter in prominent buildings in the landscape, urban or otherwise.

A general search was made in and around the building for signs of nesting birds such as pellets, feathers, droppings, nests and nest debris.

2.3.3 Bat activity survey(s)

n/a

3 Results

3.1 Pre-survey data search

3.1.1 Designated sites

There are no statutory designated sites within 1 km of the site.

3.1.2 Protected species

See 2.1.

3.2 Field Surveys

3.2.1 Habitat description

The focus of the survey is a large two-storey detached house and outbuilding. For detailed descriptions see 3.2.2.

3.2.2 Bat roost survey/Nesting bird survey(s)

House (Photographs 1-5)

Large two-storey stone house comprising a main section, orientated east-west, with 2 two-storey gabled projections to the south and a single-storey extension at the south-west corner. The gable roofs are covered with slates and are lined with a traditional bitumen lining except for the mansard roof of the single-storey extension which is lined with a breathable roofing membrane.

The lower parts of the roof in the main part of the house are relatively well sealed but higher up the main roof, on the gable projections to the south, and on the single-storey extension there are numerous openings under slates and ridge tiles (e.g. Photographs 7-10). These openings lead to the cavities between slates, battens and lining which are suitable for crevice-dwelling species such as those of the genus *Pipistrellus*. In addition, they may lead into the enclosed roof voids.

The dormer windows are covered with hanging slates (e.g. Photograph 11). There are many openings under these leading to the cavity underneath (e.g. Photograph 12-14).

The soffits and fascias appear to be completely sealed (e.g. Photographs 15 and 16) except for an opening between the wall and the soffit to the east of the westernmost north-facing dormer window which has previously been filled with expanding foam but is currently partly open (Photograph 17). The cavity beyond was inspected using an endoscope and although there were no obvious signs of bats near the entrance (Photograph 18) it was not possible to inspect further into the cavity. Below this opening is the boiler room and within this part of the building, there was a large quantity of bat droppings, probably produced by pipistrelle bats, caught in wire mesh above the boilers (Photograph 19) as well as some droppings underneath this (e.g. Photograph 20). The bats are clearly roosting

above this area but further investigation is needed to determine the exact location and to confirm where the access point is.

There are two separate sections of enclosed roof void within the main part of the house which lead into the gabled projections to the south (Photographs 21-26). Within both these sections, plasterboard has been attached to the underside of the rafters to create a ceiling. There was no evidence of bats within the eastern section or the easternmost gabled projection to the south but within the western section there were several small-sized droppings underneath and caught in an opening by the chimney (Photographs 27 and 28). It is likely that bats are getting into this area via openings under slates near the base of the chimney (e.g. Photograph 29).

Within the single-storey extension at the south-west corner of the house, there is a very small enclosed roof void (Photograph 30). There was no evidence of bats within the space.

There was no evidence of nesting birds in the building although it was not possible to inspect underneath the slates.

Outbuilding (Photographs 31-34)

L-shaped timber-clad building. The hipped roof is covered with slates and is lined but it was not possible to determine with what material.

There are numerous openings under the slates and ridge tiles leading to the cavity between slates/tiles, battens and lining (e.g. Photographs 35-37). Such cavities are suitable for crevice-dwelling species.

There were no openings under the eaves of the building (e.g. Photograph 38).

There is an enclosed roof void within the building but it was not possible to access this as there is no loft hatch. Roof voids are suitable for those species of bat that require a large flying area within the roosting space.

There was no evidence of nesting birds in the building although it was not possible to inspect underneath the slates.

3.2.3 Bat activity survey(s)

n/a

3.2.4 Interpretation and evaluation of survey results

Bats

The house is considered to be of high bat roosting potential (confirmed roost) as there are numerous openings under roof slates and hanging slates providing access to the cavities between the slates, battens and lining (Table 1). Two roost sites were identified during the visual inspection - one near the base of the west chimney and the other above the boiler room on the northern side of the building (Figure 2). However, the vast majority of suitable potential roosting sites under slates could not be visually inspected.

The outbuilding is considered to be of moderate bat roosting potential as there are several openings under slates and ridge tiles leading to the cavity underneath and potentially the enclosed roof void that could not be visually inspected.

Nesting Birds

There was no evidence of nesting birds within either building although it was not possible to inspect underneath the slates.

4 Assessment

4.1 Constraints

None.

4.2 Potential impacts of the development

Planning consent is being sought from Hinckley and Bosworth Borough Council to demolish the outbuilding at Coalbourn Cottage and construct a replacement, and add an orangery and two-storey extension to the cottage (Planning Ref: 25/00126/HOU). It is not possible to determine what impact this work will have on bats without undertaking additional survey work to determine whether bats are roosting under the slates in those parts of the house affected by the proposed extensions and under the slates and in the roof void of the outbuilding. In addition, it will be necessary to determine exactly where the roost and the access points at the base of the west chimney are located as the proposed roof of the two-storey extension joins very close to this area.

There are no obvious signs of nesting birds but it is possible that they nest under the slates on the house and outbuilding.

5 Recommendations and mitigation

Bats

The described house (Coalbourn Cottage) is considered to be of high bat roosting potential (confirmed roost) as there are numerous openings under roof slates and hanging slates providing access to the cavities between the slates, battens and lining (see 3.2.2 and 3.2.4). Two roost sites were identified during the visual inspection - one near the base of the west chimney and the other above the boiler room on the northern side of the building (Figure 2). However, the vast majority of suitable potential roosting sites under slates could not be visually inspected. The outbuilding is considered to be of moderate bat roosting potential as there are several openings under slates and ridge tiles leading to the cavity underneath and potentially the enclosed roof void that could not be visually inspected. To characterise the roosts and to determine whether bats are roosting in those parts of the house and outbuilding that could not be visually inspected, particularly in those areas where the proposed extensions/demolition will occur, it is recommended that nocturnal surveys are carried out between May and August (inclusive) in accordance with the guidelines produced by the Bat Conservation Trust (Collins 2023). In addition, DNA analysis of the bat droppings from the two roost sites should be carried out to confirm the species present.

Planning consent is being sought from Hinckley and Bosworth Borough Council to demolish the outbuilding at Coalbourn Cottage and construct a replacement, and add an orangery and two-storey extension to the cottage (Planning Ref: 25/00126/HOU). It is not possible to determine what impact this work will have on bats without undertaking the additional survey work described above.

If following the surveys described above, it is considered that the proposed work will result in the destruction of roost sites and access points and/or disturbance to the colonies present it will be necessary to obtain a European Protected Species Licence (EPSL) or register the site under the Bat Class Mitigation Class Licence (BMCL) (as appropriate). No such work can begin until an EPSL has been obtained or the site has been registered under the BMCL scheme. The application must be completed by a suitably qualified ecologist. The EPSL application or the application to register the site under the BMCL scheme must include details of compensation and mitigation measures to protect the bats that are occupying the buildings and to provide alternative roosting opportunities. Such mitigation could easily be achieved within the proposed scheme and may include the following:

- The provision of bat roosts. For example:
 - Retention of existing roost sites and access points
 - Providing access to cavities between the slates, battens and lining using a lead saddle or a slate with a suitable opening underneath or raising it slightly (Figure 3).
 - Bat boxes built into walls or attached to walls (e.g. Photographs 39 and 40).
 - The creation of a 'bat loft'.
 - Bat boxes installed on trees (Photograph 39).
- Timing of destructive work to avoid those periods when bats are most vulnerable (e.g. between 15th April and 15th September when maternity colonies may be present and between 1st December and 1st March when bats may be hibernating).
- Removal of roofing materials under the supervision of a licensed ecologist.
- The use of a BS747 1F bitumastic lining on those parts of the roof containing bat roosts (as bats become entangled in breathable membranes).

- A lighting scheme across the whole site that takes bats into account. For example, the provision of low-level lights with UV filters and directional shrouding/shields to prevent unnecessary light spill above the top of the ground floor level and the avoidance of floodlighting unless it is on a short timer (<2 mins).
- The avoidance of timber treatments toxic to mammals. Pre-treated timber must only use the CCA (copper, chrome, arsenic) treatment and chemicals used for timber treatment must be based on permethrin and cypermethrin compounds.

Birds

There is no current evidence of nesting although birds could potentially nest under the slates. In Britain, all wild birds are granted legal protection under the Wildlife & Countryside Act 1981 (as amended), the Bern Convention and the EC Birds Directive. The legislation protects the birds and their eggs and nests while being built or in use. This protection makes it an offence to intentionally kill, injure, take or have in possession any wild bird or egg. It is also an offence to intentionally damage or destroy the nest of any wild bird while it is being built or in use. Therefore, the following must be adhered to:

- If nesting birds are observed when a qualified ecologist is not present, work must stop and they must be contacted for advice. A suitable 'no work' buffer zone will need to be created around the nest and work may not be able to continue until the young have fledged.

6 References

- Altringham, J. (2003). British Bats. HarperCollins Publishers.
- Barratt, E. M., Deaville, R., Burland, T. M., Bruford, M. W., Jones, G., Racey, P.A. & Wayne, R.K. 1997. DNA answers the call of pipistrelle bat species. *Nature* 387: 138-139.
- Blake, D., Hutson, A. M., Racey, P. A., Rydell, J. & Speakman, J. R., 1994 Use of lamplit roads by foraging bats in Southern England. *J. Zool. Lond.* 234: 453 - 462.
- Battersby, J. (2005) UK Mammals: Species Status and Population Trends. JNCC/Tracking Mammals Partnership 2005.
- Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition).
- The Bat Conservation Trust, London.
- Elliot, P. (2005). Warwickshire, Coventry & Solihull Local Biodiversity Action Plan: Bats. Warwickshire County Council.
- Entwistle, A.C., Harris, S., Hutson, A., Racey, P.A., Walsh, A., Gibson, S.D., Hepburn, I. & Johnston, J. (2001). Habitat management for bats. A guide for land managers, land owners and their advisors. Joint Nature Conservation Committee, UK.
- IEEM. 2005. Guidelines for Ecological Impact Assessment. Consultation Draft. Institute of Ecology & Environmental Management, UK.
- Joint Nature Conservation Committee (2007). UK Biodiversity Action Plan. www.ukbap.org.uk
- Mitchell-Jones, A. J. (2004) Bat Mitigation Guidelines. English Nature, Peterborough.
- Mitchell-Jones, A.J. & McLeish, A.P. 2004. The Bat Workers Manual (3rd ed.). JNCC, Peterborough.
- Office of the Deputy Prime Minister, under licence from the Controller of Her Majesty's Stationery Office (2005). Planning Policy Statement 9: Biological and Geological Conservation.
- 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. M. (1999). The Bats of Britain and Ireland: Echolocation calls, sound analysis and species identification. Alana Books, Powys, UK.
- Rydell, J. 1992 Exploitation of insects around street lamps by bats in Sweden. *Functional Ecol.* 6: 744 - 750.
- Simpson, P. 2007. New species protection legislation: opportunities and risks for consultant ecologists. In: *In Practice*. Bulletin of the Institute of Ecology and Environmental Management. 58, 24-27.
- Simpson, P. 2009. Ecology legal update. In: *In Practice*. Bulletin of the Institute of Ecology and Environmental Management. 66, 36-38.
- Swift, S.M. 1998. Long-eared bats. Poyser Natural History, London.

7 Figures



Figure 1. Location of the site (arrowed). 1:25000

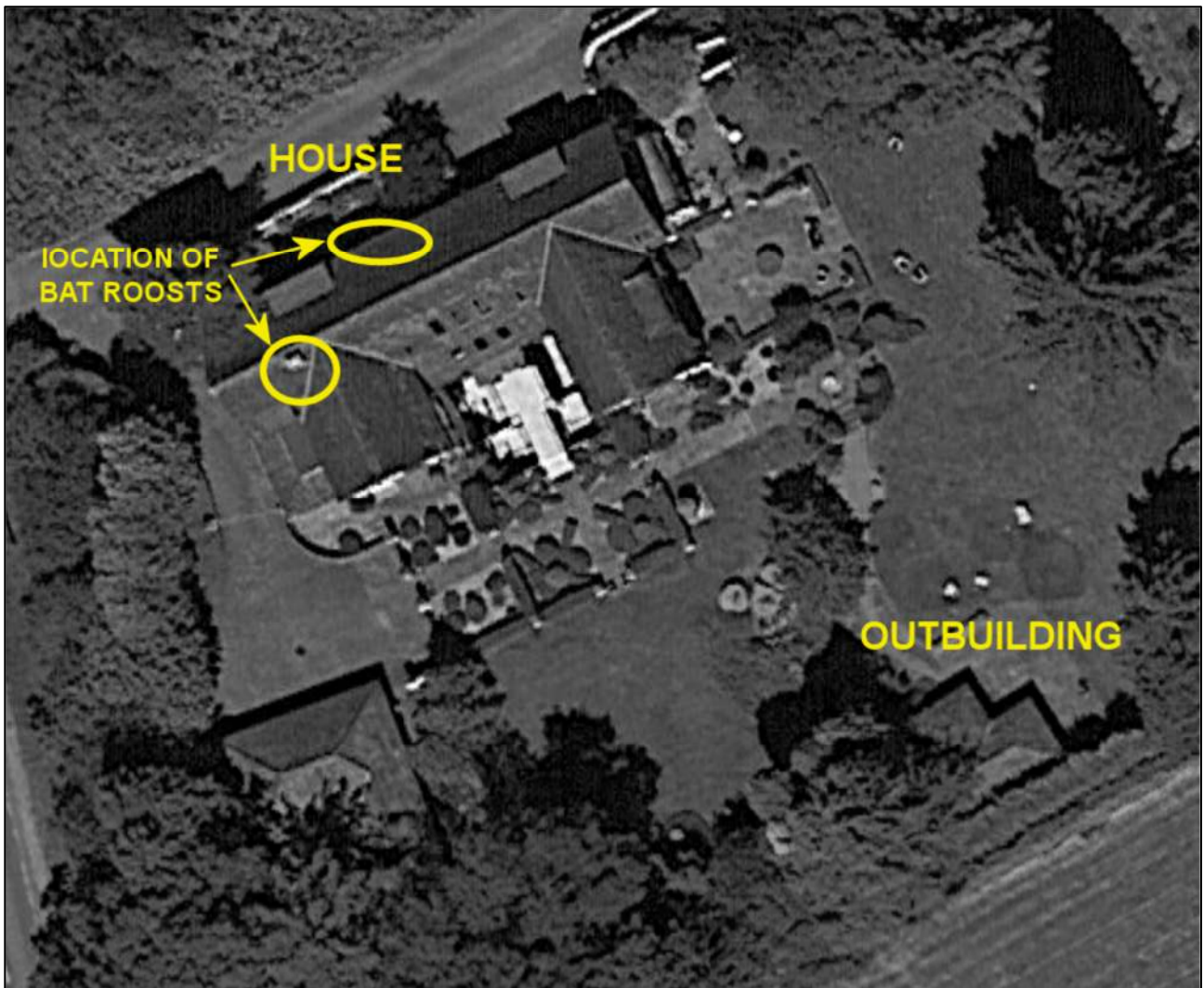


Figure 2. Location of identified bat roosts

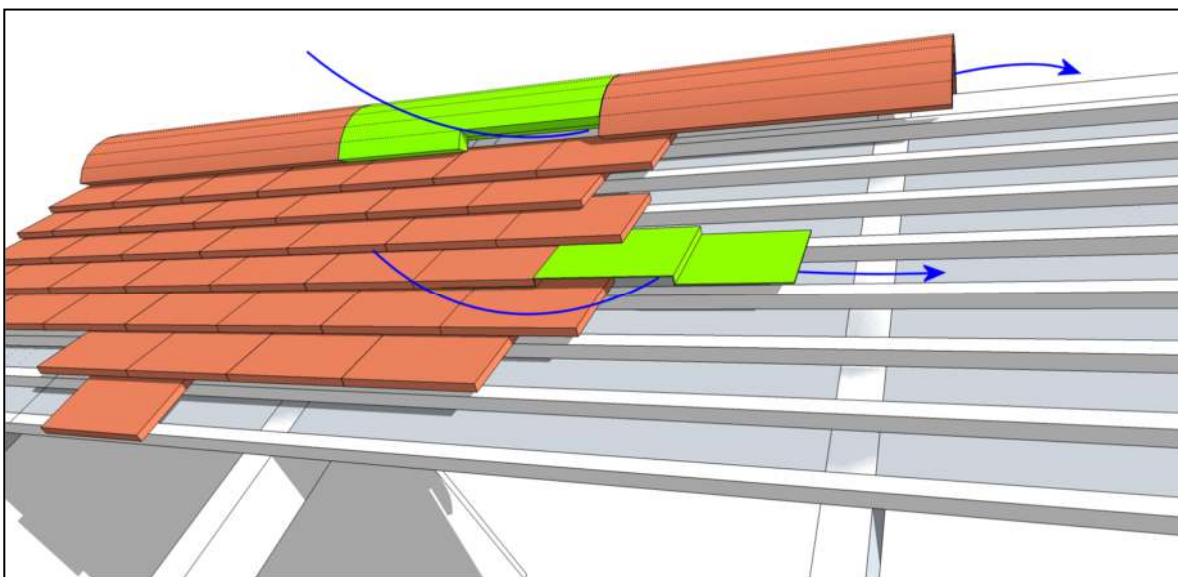


Figure 3. Access to the tile/lining cavity via a modified ridge tile and a lead saddle

8 Photographs



Photograph 1. The western end of the north elevation of the house



Photograph 2. The eastern end of the north elevation of the house



Photograph 3. The east elevation of the house



Photograph 4. The west elevation of the house



Photograph 5. The south elevation of the house



Photograph 6. Example of the slates on the lower part of the roof of the house



Photograph 7. Example of openings under slates on the main roof of the house



Photograph 8. Further example of openings under slates on the main roof of the house



Photograph 9. Example of openings under slates on the roof of the single-storey extension at the south-west corner of the house



Photograph 10. Further example of an opening under slates on the roof of the single-storey extension of the south-west corner of the house



Photograph 11. Example of a dormer window



Photograph 12. Example of openings under hanging slates on the north-facing dormer window



Photograph 13. Example of openings under hanging slates on the south-facing dormer window



Photograph 14. Example of openings under hanging slates on the westernmost north-facing dormer window



Photograph 15. Example of the soffit and fascia



Photograph 16. Example of the soffit and fascia above a gable wall



Photograph 17. Gap between the wall and the soffit to the east of the westernmost north-facing dormer window



Photograph 18. Endoscopic view of the cavity behind the soffit to the east of the westernmost north-facing dormer window



Photograph 19. Large accumulation of bat droppings in the boiler room to the east of the westernmost north facing dormer window



Photograph 20. Further example of bat droppings in the boiler room to the east of the westernmost north facing dormer window



Photograph 21. The western section of enclosed roof void (view to west)



Photograph 22. The western section of enclosed roof void (view to east)



Photograph 23. The section of enclosed roof void within the westernmost gabled projection to the south



Photograph 24. The eastern section of enclosed roof void within the house (view to west)



Photograph 25. The eastern section of enclosed roof void within the house (view to east)



Photograph 26. The section of enclosed roof void within the easternmost gabled projection to the south



Photograph 27. Bat droppings within the western section of enclosed roof void under the chimney



Photograph 28. Bat droppings caught in an opening within the western section of enclosed roof void under the chimney



Photograph 29. Openings under slates near the base of the chimney



Photograph 30. The enclosed roof void within the single-storey extension at the south-west corner of the house



Photograph 31. The east elevation of the outbuilding



Photograph 32. The south elevation of the outbuilding



Photograph 33. The west elevation of the outbuilding



Photograph 34. The north elevation of the outbuilding



Photograph 35. Example of openings under ridge tiles and slates on the roof of the outbuilding



Photograph 36. Further example of an opening under a ridge tile on the roof of the outbuilding



Photograph 37. Further example of an opening under a slate on the roof of the outbuilding



Photograph 38. Example of the sealed eaves on the outbuilding



Photograph 39. Greenwood's EcoHabitats single cavity bat box



Photograph 40. PRO UK Build-in WoodStone Bat Box

END OF REPORT



www.ridgewayecology.co.uk | enquiries@ridgewayecology.co.uk | 01926 259182