ATW ECOLOGY

The Coach House, Spring Hill,
Nailsworth, Stroud,
Gloucestershire, GL6 0LX

for Ian Collier

BAT SURVEY REPORT

November 2023

5281 V2.1

ATW Ecology

MHSP, Malvern, Worcs. WR14 3SZ

[redacted]

Report control

Site address	The Coach House, Spring Hill, Nailsworth, Stroud, Gloucestershire, GL6 0LX
Survey date	05 December 2022, 30 August 2023, 13 September 2023
Surveyor	[redacted]

Version	Date	Ecologist	Action
1.0	07 December 2022	[redacted]	Document created
1.0	14 December 2022		Document completed & issued
2.0	24 September 2022		Update following surveys
2.0	26 November 2023		Document completed & issued
2.1	29 November 2023		Minor correction

Executive summary

On 05 December 2022, The Coach House, a detached residential bungalow was assessed for its potential for and evidence of use by bats. The building is subject to planning for insertion of dormer window with re-roofing.

The property was assessed as offering 'moderate' roost suitability. In line with currently accepted guidelines to determine presence / absence of a bat roost with sufficient confidence in a negative result, two dusk emergence surveys were conducted on 30 August and 13 September 2023. No bats were observed emerging from, nor returning to roost within, any part of the building.

No bat roosts have been identified, no further surveys are recommended, and bats are not expected to pose a constraint on the development. However, as a precaution a soft-strip of roofing materials is recommended, in the unlikely event that bats are discovered during works all work shall halt while the project ecologist is consulted.

No evidence of nesting birds was identified, however tiles provide suitable access for nesting birds. No clearance of areas that may be used by breeding birds shall take place between 1st March and 31st August inclusive, unless a competent ecologist has undertaken a careful, detailed check for active birds' nests immediately before the area is cleared and provided written confirmation that no birds will be harmed and/or that there are appropriate measures in place to protect nesting bird interest on site. Any such written confirmation should be submitted to the local planning authority.

In line with local planning policy as enhancement for local biodiversity one general purpose bat box (Beaumaris woodstone bat box or suitable alternative) and one general purpose bird nest box (Vivara Pro Seville woodstone nest box or suitable alternative) shall be installed at suitable locations within the site and maintained in perpetuity.

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IMPORTANT

[redacted]

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Methods & Objectives

Methods

A thorough inspection was undertaken of The Coach House, Spring Hill, Nailsworth, Stroud, Gloucestershire, GL6 0LX on 05 December 2022 for any bat field signs or evidence of, or potential for bat roosting. The inspection was conducted by [redacted] a suitably experienced and licensed (Natural England Level 2 Bat Class Licence registration number 2020-48784-CLS-CLS) ecologist.

An inspection was made of all interiors and exterior using 8x42 binoculars, LEDLenser P7 torch, CentBest Red LED torch, telescopic mirror, AlpKit Gamma 111 headtorch, Ridgid CA-350x endoscopic inspection camera, telescopic ladder, and Panasonic Lumix camera for any bat field signs or evidence of, or potential for, bat roosting such as faeces, feeding remains, oil staining, scratch marks, access points, loose claddings, cavities, and hollows, etc.

The building was subject to a dusk emergence surveys on 30 August 2023, and 13 September 2023; these dates fall within the optimal survey period for surveys to locate maternity roosts. Each survey was conducted by one licensed surveyor [redacted] Natural England CL18 Level 2 Bat Class Licence registration number 2020-48784-CLS-CLS), and one appropriately experienced assistant [redacted] Each surveyor was equipped with one Echo Meter Touch 2 Pro full spectrum bat detector.

In addition to surveyors IR cameras were deployed to record the full survey to ensure clear footage capture covering possible emergence points. A Sannce DE41N CCTV system with Sannce C51ER cameras and Nightfox Whiskers deployed to record 1080p high-definition infrared footage at 30fps. On each occasion a total of four cameras were deployed each with additional JC 15-LED 90° wide angle high-powered 850nm illuminators and Nightfox XB5 850nm illuminators. Software of cameras are forced into permanent IR mode and daylight sensors on illuminators are covered to ensure continual IR filming with no loss of coverage. Cameras recorded for the whole duration of the survey and footage was reviewed at 1:1 speed or below to confirm surveyors' observations and identify any emerging bats not witnessed by surveyors.

Dusk emergence surveys recorded all bats seen or heard 15 minutes before sunset to 1.5 – 2 hours after sunset. The species of bat, type of activity, direction of flight and time of observation were noted. The surveyors were positioned on site to gather the most accurate data on bat roosts and the use of the site by bats. Weather conditions for each dusk survey were optimal.

Methods followed those outlined in the Bat Conservation Trust's 2016 survey guidelines (Collins 2016) and the latest BCT interim guidance note on the use of night vision aids for bat emergence surveys and further comment on dawn surveys.

Objectives

The objectives of this survey were:

- to provide specialist advice on the possible presence of protected species (bats) in relation to planning requirements;
- to inspect all built structures proposed for development for evidence of roosting bats;

[redacted]

- to report the survey findings, make any appropriate recommendations and point out actions that may be required to ensure compliance with wildlife law and recognised best practice;

Survey findings

Known history of bats

None known.

Habitat description

Located at OS grid reference ST 84757 99748, the building subject to planning is a detached residential bungalow located in the Forest Green area of Nailsworth, approximately 5.5km south of Stroud town centre.

Immediate surrounding land use is a mixture of suburban residential, opening out to extensive agriculture, lowland calcareous grassland, and broadleaved woodland including some ancient and semi-natural, and ancient replanted.

A search using DEFRA's Magic Map online revealed the site to lie outside of the Cotswolds AONB, three statutory designated sites were identified within a 2km search radius:

- Woodchester Park SSSI (home to a nationally important breeding population of greater horseshoe bats)
- Minchinhampton Common SSSI
- Box Farm Meadows SSSI

A search for granted EPS licenses revealed six licences granted for works affecting bat roosts within a 2km radius:

- 2019 licence for works impacting a roost of brown long-eared, common pipistrelle, greater horseshoe, and lesser horseshoe bats
- 2016 licence for works impacting a lesser horseshoe bat roost
- 2017 licence for works affecting a roost of common pipistrelle, lesser horseshoe, and serotine bats
- 2012 licence for works affecting a roost of common pipistrelle, brown long-eared, and serotine bats
- 2017 licence for works affecting a common pipistrelle roost
- 2016 licence for works affecting a roost of brown long-eared and serotine bats

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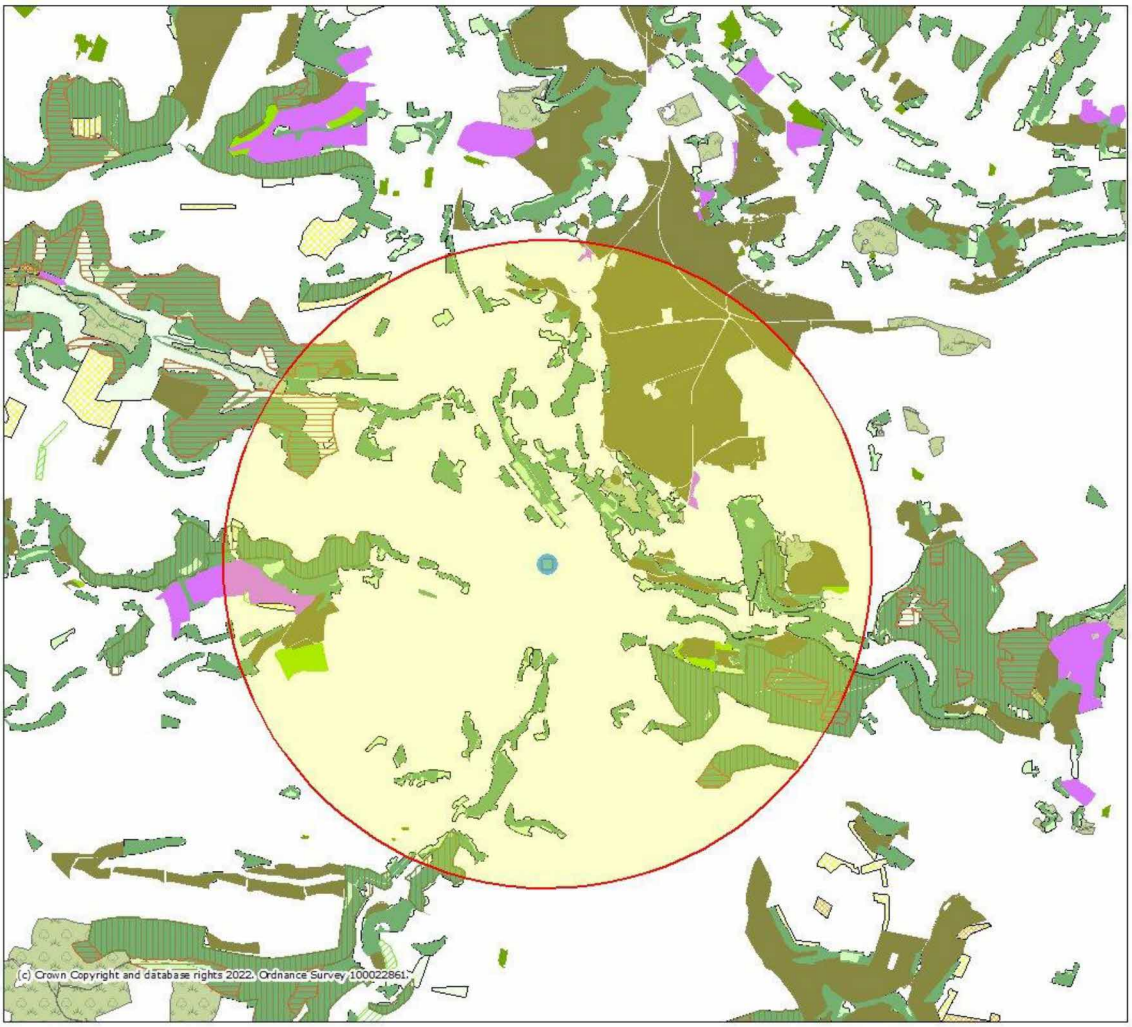
MAGiC

Priority habitats 2km



Legend

- Priority Habitat Inventory - Calaminarian Grassland (England)
- Priority Habitat Inventory - Coastal and Floodplain Grazing Marsh (England)
- Priority Habitat Inventory - Good quality semi-improved grassland (Non Priority) (England)
- Priority Habitat Inventory - Lowland Calcareous Grassland (England)
- Priority Habitat Inventory - Lowland Dry Acid Grassland (England)
- Priority Habitat Inventory - Lowland Meadows (England)
- Priority Habitat Inventory - Purple Moor Grass and Rush Pasture (England)
- Priority Habitat Inventory - Upland Calcareous Grassland (England)
- Priority Habitat Inventory - Upland Hay Meadows (England)
- Priority Habitat Inventory - Lowland Heathland (England)
- Priority Habitat Inventory - Mountain Heaths and Willow Scrub (England)
- Priority Habitat Inventory - Upland Heathland (England)
- Priority Habitat Inventory - Limestone Pavements (England)
- Priority Habitat Inventory - Blanket Bog (England)
- Priority Habitat Inventory - Lowland Fens (England)
- Priority Habitat Inventory - Lowland Raised Bog (England)
- Priority Habitat Inventory - Reedbeds (England)
- Priority Habitat Inventory - Upland Flushes, Fens and Swamps (England)

Ancient Woodland (England)

- Ancient and Semi-Natural Woodland
- Ancient Replanted Woodland
- Priority Habitat Inventory - Deciduous Woodland (England)
- Forestry Commission Legal Boundary (England)

National Forest Inventory (GB)

- Assumed woodland
- Broadleaved
- Cloud \ shadow
- Conifer
- Coppice
- Coppice with standards
- Failed
- Felled
- Ground prep
- Low density
- Mixed mainly broadleaved
- Mixed mainly conifer
- Shrub
- Uncertain
- Windthrow
- Young trees
- Priority Habitat Inventory - Traditional Orchards (England)

Projection = OSGB36
xmin = 379800
ymin = 197600
xmax = 389900
ymax = 202500

Map produced by MAGIC on 7 December, 2022.
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km

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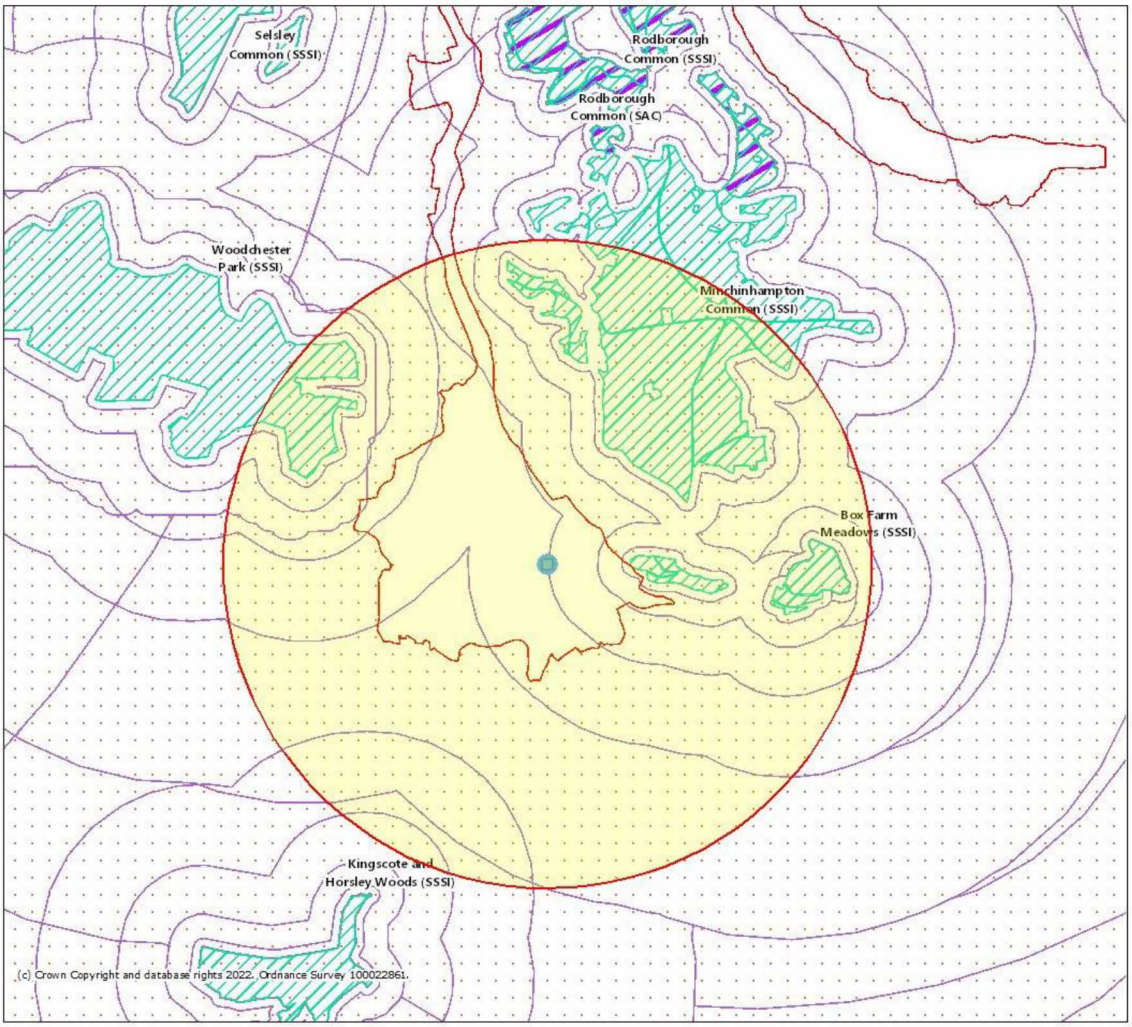
MAGiC

Designated sites 2km



Legend

- Areas of Outstanding Natural Beauty (England)
- Limestone Pavement Orders (England)
- Local Nature Reserves (England)
- National Nature Reserves (England)
- Sites of Special Scientific Interest (England)
- SSSI Impact Risk Zones - to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites (England)
- Special Areas of Conservation (England)
- Special Protection Areas (England)
- Community Forests (England)
- National Forest (England)
- RSPB Reserves (GB)

Projection = OSGB36
xmin = 379800
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km

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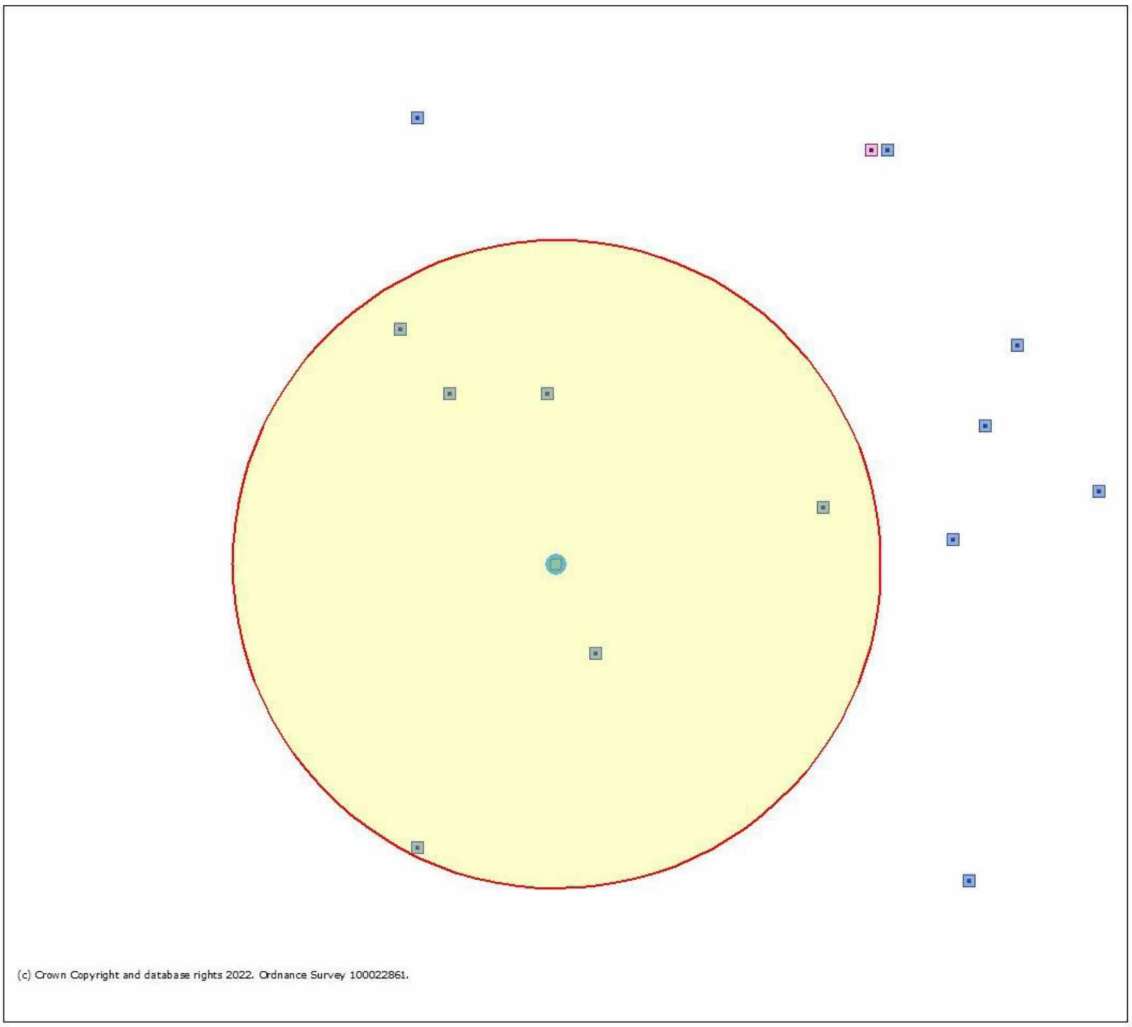
MAGIC

Granted EPS 2km



Legend

Granted European Protected Species Applications (England)

- Amphibian
- Bat
- Cetacean
- Invertebrate
- Other Mammal
- Plant
- Reptile

Projection = OSGB36
xmin = 379800
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0 0.55 1.1
km

[redacted]

Limitations

A third-party data search was not commissioned as part of this appraisal.

Dusk emergence surveys were conducted at the tail end of the peak season however conditions were good and bat activity levels remained high.

These limitations are not considered to have altered key recommendations detailed within this report.

Results – Diurnal survey 05 December 2022

The building subject to inspection is a detached residential bungalow formerly a coach house with multiple phases of extension forming a roughly L-plan.

Constructed of squared Cotswold limestone, stonework and pointing are in good condition all round with some repointing evident. Windows and doors are a mixture of modern PVCu and timber framed all in good condition and tight to apertures with stone lintels and slate sills, timber doors on the façade are set within gauged stone surrounds indicating the original coach entrance. Timber facia are tight to stonework and moderately cobwebbed. A circular encasement with gauged stone surround is present in the northern gable.

The property features a gable and valley roof with rustic Cotswold stone covering, tiles are in largely good condition and well seated, however due to their rustic nature there are multiple potential access points between and beneath stone tiles on eastern and western aspects. A gable dormer is present on the southern aspect, featuring rendered sides and hanging stone tiles to the apex. Individual 'Velux' style windows are located on the western, northern, and southern aspects including southern aspect of the garage.

A single car garage built circa 2014 sits on the eastern gable, constructed of squared Cotswold stone with standard aluminium up-and-over door and gable roof, roof covering is modern Cotswold stone tiles all in good condition and well seated.

Internally the western part of the property features a partially divided roof void. Timbers are modern machine-cut rough-sawn with moderate to heavy cobwebbing. Tiles are lined with a mixture of Type 1F bituminous felt and a string-reinforced polythene sarking material. Floors are fully insulated with glass-fibre roll with minimal boarding. Eastern part of the property features vaulted ceilings with no void.

The garage features a partial void open to the interior of the garage. Timbers are modern machine-cut rough-sawn, tiles are fully lined with modern non-bituminous breathable roofing membrane (BRM) and the 'Velux' window provides light to the void. The floor is boarded and uninsulated.

All interior and exterior surfaces were inspected for evidence of bat activity including live and dead bats, faeces, oil and urine staining, scratch marks, pilling of membranes, feeding remains etc. but none were found.

Endoscopic inspection of some access points identified between / beneath tiles found the cavities between tiles and sarking membrane to be dry and sufficiently large as to provide roosting opportunity. While no endoscopic inspection of select crevices identified no evidence of bat roosting the roof offers too many opportunities to inspect fully.

[redacted]

Results – Dusk emergence survey 30 August 2023

No bats were observed emerging from, or entering to roost within, the building.

Low numbers of common pipistrelle were actively foraging in the area during the later stages of the survey. Incidental passes by noctule and brown long-eared bat were also recorded.

Detailed observations

Time	Surveyor	Observation
19:45	Survey start. Air temperature was measured at 16.1˚C, relative humidity 64.2%, 3.6kph NW wind, no precipitation.	
20:00	Sunset	
20:17	2	Soprano pipistrelle pass west of building from north-west to south-east
20:27	2	Common pipistrelle heard not seen, brief
20:39	2	Common pipistrelle foraging in garden south of house
20:44	2	Noctule heard not seen
20:52	2	Noctule heard not seen, feint
21:03	2	Myotis sp. Heard not seen, brief
21:10	2	Pipistrelle foraging and social calls intermittent to end of survey
21:10	1	Noctule heard not seen
21:14	1	Common pipistrelle heard not seen
21:17	1	Common pipistrelle heard not seen
21:18	1	Common pipistrelle pass along roadside hedge
21:23	1	Common pipistrelle heard not seen
21:24	1	Common pipistrelle heard not seen
21:25	1	Brown long-eared heard not seen
21:27	1	Common pipistrelle heard not seen
21:28	1	Brown long-eared heard not seen
21:31	Survey finish. Air temperature was measured at 11.7˚C, relative humidity 85%, 2.8kph NW wind, no precipitation.	

Results – Dusk emergence survey 13 September 2023

No bats were observed emerging from, or entering to roost within, the building.

Low numbers of common pipistrelle were actively foraging around the building throughout the survey, all arriving from the north. An incidental pass by a Myotis species was also recorded.

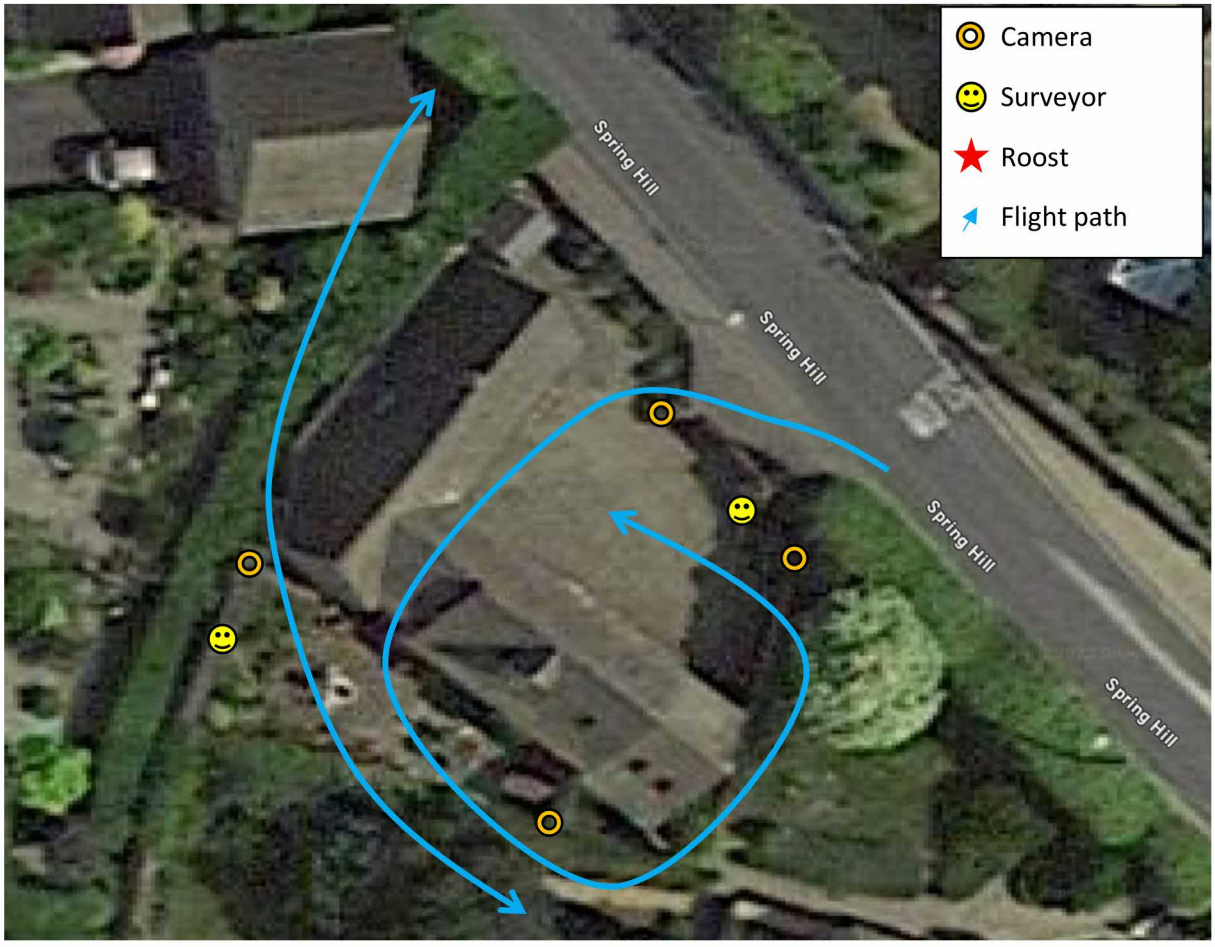
Detailed observations

Time	Surveyor	Observation
19:14	Survey start. Air temperature was measured at 13.6˚C, relative humidity 84.2%, cloud cover was 50%, 2kph S wind, no precipitation.	
19:29	Sunset	
19:53	2	Common pipistrelle pass south of building from west to east, with social calls
19:54	2	Common pipistrelle pass south of building from north-west to south-east
	1	Common pipistrelle foraging for three minutes

[redacted]

19:55	2	Three common pipistrelles pass over building from north-west to south, then forage in garden
19:57	2	Common pipistrelle pass south of building from north-west to south-east
19:58	1, 2	Common pipistrelle along roadside hedge, pass over building from north to south-east, then around south of building back to north-west
19:59	1, 2	Continual common pipistrelle foraging and social calls, occasional passing over / around building
20:07	1, 2	Continual common pipistrelle foraging and social calls, occasional passing over / around building
20:11	2	Common pipistrelle foraging south-west of building to 20:27
20:22	1	Myotis sp. heard not seen
20:39	1, 2	Common pipistrelle heard not seen
20:54	1	Common pipistrelle heard not seen, social calls
21:00	Survey finish.	

Activity plan



Legislation & protection

Bats and their habitats are protected under The Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulation 2010. Formal policies and recognised best practice include the UK Post-2010 Biodiversity Framework (former UK Biodiversity Action Plan),

[redacted]

PAS2010 Planning to Halt the Loss of Biodiversity, Circular 06/2005 Biodiversity and Geological Conservation, BS 42020: 2013 and BS 8583: 2015 on Biodiversity, the National Planning Policy Framework.

All bat species are designated and protected as European protected species (EPS). EPS are protected under the Conservation of Habitats and Species Regulations 2017.

It is an offence to:

- deliberately kill, injure, disturb or capture them
- damage or destroy their breeding sites and resting places (even when bats are not present)
- possess, control or transport them (alive or dead)

It is also an offence under the Wildlife and Countryside Act 1981 to intentionally or recklessly:

- disturb bats while they occupy a structure or place used for shelter or protection
- obstruct access to a place of shelter or protection

Several species of bats are listed as rare and most threatened species under Section 41 of the Natural Environment and Rural Communities Act (2006). You must have regard for the conservation of Section 41 species as part of your planning decision.

Bats may use a variety of structures for roosting including but not limited to buildings (including modern and ancient structures), caves, mines, tree hollows, and purpose-built bat boxes. Bats change roosts seasonally with different roosts serving different purposes (breeding, hibernating, maternity) and some roosts such as day roosts and transitional roosts may only be used briefly and infrequently, however unoccupied roosts are still protected by law. Due to multiple factors including loss of roost sites, loss or degradation of foraging habitat, predation by domestic pets, and persecution by humans, UK bat populations have suffered significant decline leading to them being considered of conservation concern.

National Planning Policy

In accordance with the National Planning Policy Framework 2012, the planning system should contribute to and enhance the natural environment by minimising impacts on biodiversity and providing biodiversity net gain where possible, promote the preservation, restoration and re-creation of priority habitats, and the protection and recovery of priority species populations and ecological networks.

Local planning authorities should aim to conserve and enhance biodiversity by applying the following principles when determining planning applications:

- Planning permission should be refused if harm resulting from a development cannot be avoided, adequately mitigated, or compensated.
- Opportunities to incorporate biodiversity in and around developments should be encouraged.
- Planning policies and decisions should limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes, and nature conservation.

Additional advice set out in the National Planning Practice Guidance (2014) section 'Natural Environment' emphasizes the need for biodiversity to be taken into account when preparing a planning application, as detailed above, and sets out how biodiversity can be protected and enhanced by: seeking to include habitat restoration; re-creation and expansion; improved links between existing sites; buffering of existing important sites; new biodiversity features within a development; and securing management for long term enhancement.

Conclusion and recommendations

- A preliminary bat roost appraisal was conducted on 05 December 2022.
    - The property was found to be in generally good condition throughout with evidence of on-going maintenance.
    - No evidence of bat roosting was identified within the main roof void which was easily accessed and fully inspected.
    - Rustic Cotswold stone roof tiles provide a significant number of potential access points providing opportunity for bats to roost between tiles and sarking membrane on eastern and western aspects.
        - Endoscopic inspection of select PRF's identified crevices to be of sufficient size and conditions to support roosting bats.
- The building was assessed as having 'moderate' roost suitability; 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.
- In line with currently accepted guidelines to determine presence / absence of a bat roost with sufficient confidence in a negative result, two dusk emergence surveys were conducted on 30 August and 13 September 2023.
    - No bats were observed emerging from or entering to roost within the property.
    - A low number of common pipistrelles were recorded foraging within the area during the surveys, with incidental passes by noctule, brown long-eared, and a Myotis species also recorded.
- The survey effort is considered sufficient to give confidence in the negative result.
- No bat roosts have been identified and no bat roosting activity was observed.
- In line with currently accepted guidelines no further surveys are required and bats are not expected to pose a constraint on the proposed development.
- As a precaution a soft-demolition approach is recommended toward the removal of roofing materials.
- In the unlikely event that bats are found during works, all work must halt immediately, and the project ecologist consulted on how to proceed.
- No evidence of nesting birds was identified, however tiles provide suitable nesting opportunity.
    - No clearance of areas that may be used by breeding birds shall take place between 1st March and 31st August inclusive, unless a competent ecologist has undertaken a careful, detailed check for active birds' nests immediately before the area is cleared and provided written confirmation that no birds will be harmed and/or that there are appropriate measures in place to protect nesting bird interest on site. Any such written confirmation should be submitted to the local planning authority.
- In line with local planning policy as enhancement for local biodiversity one general purpose bat box (Beaumaris woodstone bat box or suitable alternative) and one general purpose bird nest box (Vivara Pro Seville woodstone nest box or suitable alternative) shall be installed at suitable locations within the site and maintained in perpetuity.

[redacted]

Photographs

All photographs taken 05 December 2022.

Plate 1. The northern façade.

Plate 2. Northern gable.

[redacted]

Plate 3. Western aspect roof.

Plate 4. Lifting and parting of Cotswold stone tiles.

[redacted]

Plate 5. Southern rear aspect with dormer.

Plate 6. Parted tiles on southern section of eastern aspect.

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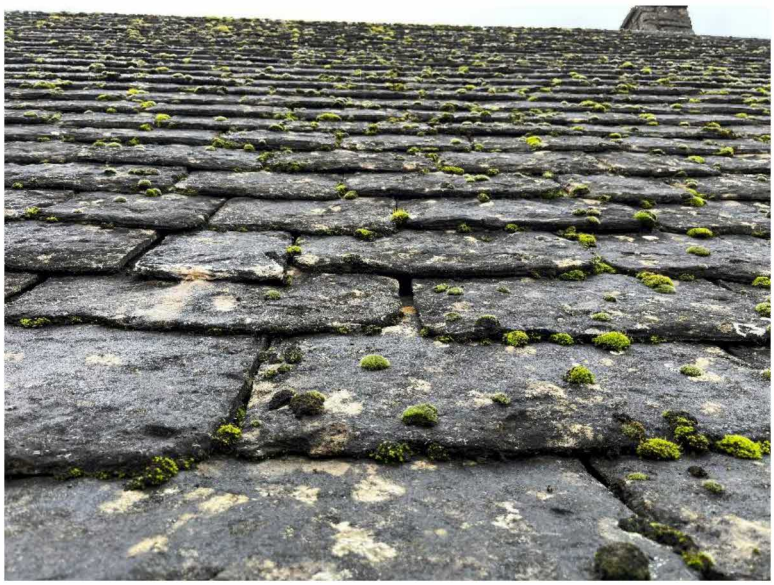

Plate 7. Gaps between tiles on eastern aspect.

Plate 8. Crevice between facia board and stonework.

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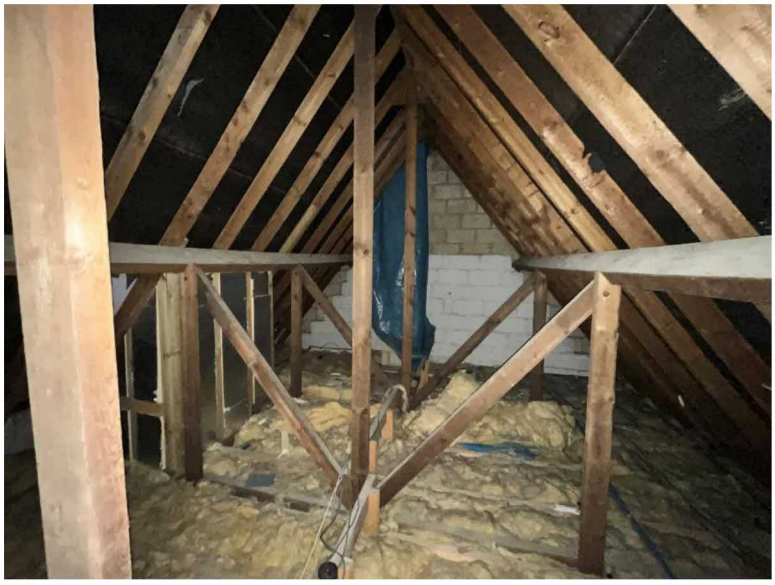

Plate 9. General view of interior roof void, northern end.

Plate 10. Boxing of 'Velux' style window on western aspect.

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Plate 11. General view of interior roof void, southern end.

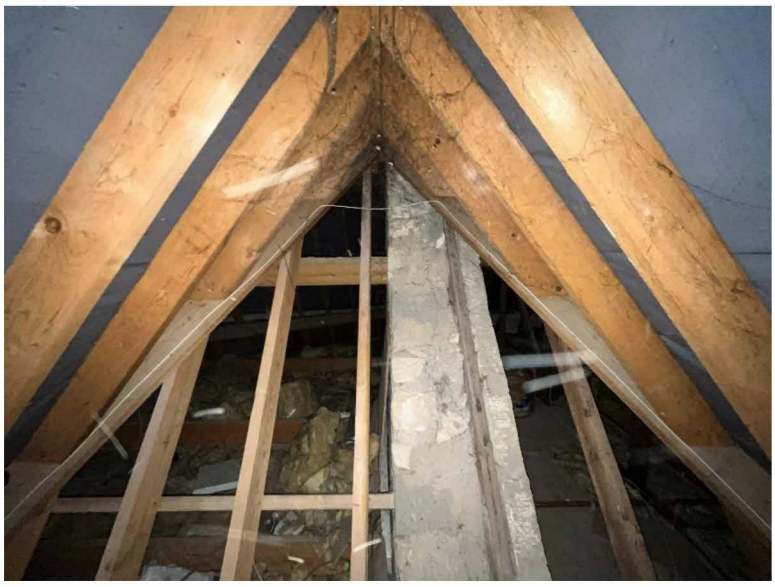

Plate 12. General view of interior roof void, link extension.

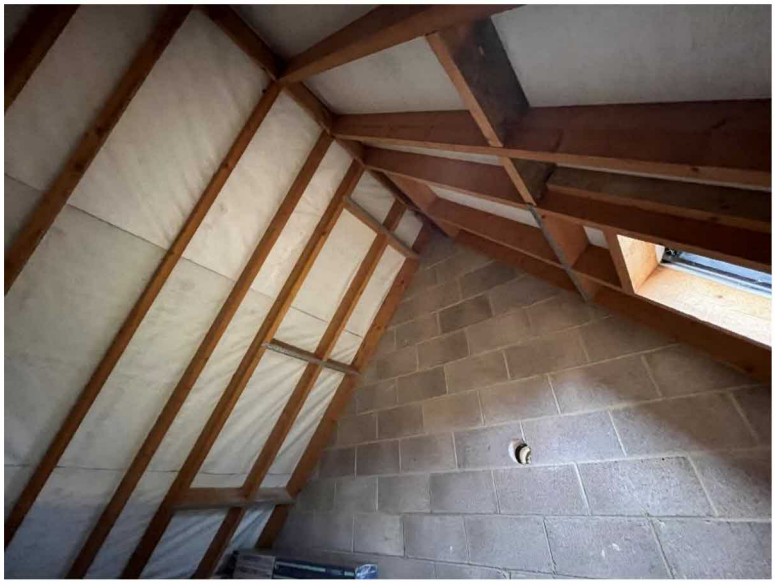

Plate 13. General view of garage interior roof void, note the BRM and ‘Velux’ window.

[redacted]

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- https://osmaps.ordnancesurvey.co.uk/

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Quality Assurance

ATW Ecology Ltd. Registered in England, number 14937736. Registered office: 173 Brookfarm Drive, Malvern, Worcestershire, WR14 3SL.

Originally founded in 2003 as a zoological consultancy dedicated to improving the captive husbandry and propagation of amphibia in zoological, educational, and private collections and established as the UK's leading independent batrachoculture research facility with an international reputation for advancements in herpetology. In 2013 following customer demand we began offering herpetological fieldwork services including freelance ecological surveying and supervision, these services have expanded greatly over recent years working with a network of freelance partners to cover all aspects of ecological consultancy. Other subsidiary companies within the group specialising in entomology, ichthyology, animal nutrition, and media, provide a unique and diverse base of in-house expertise.

Contracts undertaken by ATW Ecology Ltd cover a wide spectrum of projects at local and national levels in the construction, agricultural, leisure, and utilities sectors. All our scientific staff and freelance partners belong to appropriate professional institutes by whose codes of practice they abide. Due consideration of the British Standards on Biodiversity is included in relevant work and applied where appropriate.

[redacted] *Director & principal consultant*

[redacted] is an experienced ecologist, herpetologist, and entomologist with nineteen years' experience as a zoological consultant and eight years as a freelance ecological surveyor before joining full time ecological consultancy four years ago. He holds Natural England survey licences for great crested newt (personal licence), bats (level 2 class licence), and white-clawed crayfish (class licence), a Natural Resources Wales survey licence for great crested newt, is registered under the Construction Skills Certification Scheme (CSCS), is a registered member of the Royal Society of Biology, and Institute of Fisheries Management, a full member of the Chartered Institute of Ecology and Environmental Management, and Royal Entomological Society. In his spare time [redacted]

NB. Whilst all due and reasonable care is taken in the preparation of reports we accept no responsibility whatsoever for any consequences of the release of this report to third parties. Clients are reminded that all work carried out is subject to our Terms of Trading which may be viewed at any time on our web site at www.tillson-willis.co.uk or can be provided on request. Please again be aware that site surveys inevitably miss species not apparent on the date of visit(s) by reason of seasonality, mobility, habits or chance. Results are indicative and given in good faith but they are not a guarantee of presence or absence of any particular taxa.

Please note that this report is a baseline ecological site audit of factors and features that may be significant for regulatory compliance and biodiversity policies relating to change of use or other disturbance. Such reports may not, on their own, contain sufficient information for a planning application and may require further more detailed study to assure compliance.

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