The Old Rectory, Newtown Tony, Wiltshire, SP4 0HA

Preliminary Bat Roost Assessment



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The results of the survey and assessment work undertaken by All Ecology are representative at the time of surveying.

Every endeavour has been made to identify the presence of protected species on site, where this falls within the agreed scope of works.

The flora and fauna detailed within this report are those noted during the field survey and from anecdotal evidence. It should not be viewed as a complete list of flora and fauna species that may frequent or exist on site at other times of the year.

Up to date standard methodologies have been used, which are accepted by Natural England and other statutory conservation bodies. No responsibility will be accepted where these methodologies fail to identify all species on-site.

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Reference to sections or particular paragraphs of this document taken out of context may lead to misrepresentation.

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1.0 Introduction

Background

1.1 In June 2023, All Ecology was commissioned to undertake a Preliminary Bat Roost Assessment of a garage outbuilding at The Old Rectory, Newtown Tony, Wiltshire, SP4 0HA. The building is the subject of a planning application for its conversion to an office and games room including a new roof incorporating conservation roof lights.

Objectives and Aim

1.2 The main objectives and aim of the surveys were to establish the following:

- Presence/absence of bat roosts.
- Status of roosts if present.
- Whether additional surveys are required.
- Whether a European Protected Species (EPS) licence is required to ensure legal compliance.
- Which type of mitigation measures would need to be employed.

Site Location



Figure 1: Site location plan.

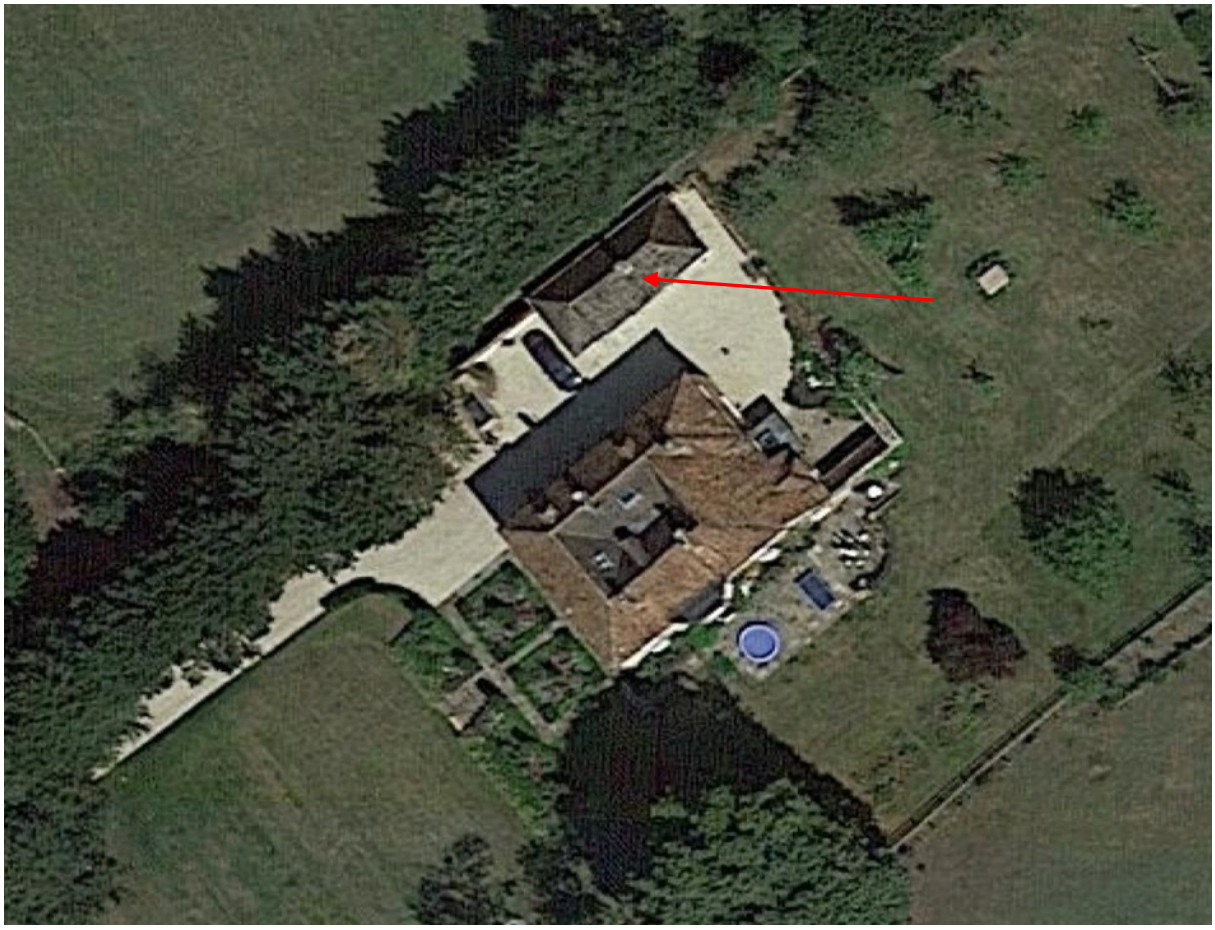


Figure 2: Building location.

2.0 Legislation and Status

Bats

2.1 All species of bat are listed on Schedule 5 of The Wildlife and Countryside Act (1981) and as such receive protection under Section 9 of this Act. This has been amended several times, most recently by the Countryside and Rights of Way Act 2000, which added 'or recklessly' to Section 9(4) (a) and (b). In summary, it is a criminal offence to:

- Intentionally kill, injure or take a wild bat.
- Be in possession of, or control, any live or dead wild bat or part of, or anything derived from a wild bat.
- Intentionally or recklessly damage, destroy or obstruct access to any place that a wild bat uses for shelter or protection.
- Intentionally or recklessly disturb any wild bat whilst it is occupying a structure or place that it uses for shelter or protection.
- Transport for sale or exchange, or offer for sale or exchange, a live or dead bat or any part of a bat.

2.2 The Conservation of Habitats and Species Regulations 2010, consolidate all the various amendments made to the Conservation (Natural Habitats, &c.) Regulations 1994, in respect of England and Wales. It is an offence to possess, sell or offer or transport for sale any European species of bat or any part derived from such a species. These Regulations also remove the 'incidental result defence'. In other words, it is no longer a defence to show that the killing, capture or disturbance of a species covered by the Regulations or the destruction or damage of their breeding sites or resting places was the incidental and unavoidable result of a lawful activity. Natural England can grant European Protected Species (EPS) licenses in respect of development to permit activities that would otherwise be unlawful.

2.3 Under Section 40 of the Natural Environment and Rural Communities Act (2006) public bodies, including Local and Regional Planning Authorities have a duty to 'have regard' to the conservation of biodiversity in England when carrying out their normal functions, which includes consideration of planning applications. In compliance with Section 41 of the Act, the Secretary of State has published a list of species considered to be of principal importance for conserving biodiversity in England. This is known as The England Biodiversity List, all of which make up the UK BAP Priority Species. This list forms the basis of the UK Biodiversity Framework, and in England, Biodiversity 2020: A strategy for England's wildlife and ecosystem services (Defra, 2011). Regional Planning Bodies and Local Planning Authorities will use it to identify the species that should be afforded priority when applying the requirements of the National Planning Policy Framework (NPPF) to maintain, restore and enhance species and habitats.

2.4 Seven bat species are NERC Priority Species (JNCC, 2007). These are:

- Barbastelle *Barbastella barbastellus*
- Bechstein's *Myotis bechsteinii*
- Noctule *Nyctalus noctula*

- Soprano Pipistrelle *Pipistrellus pygmaeus*
- Brown Long-eared *Plecotus auritus*
- Greater Horseshoe *Rhinolophus ferrumequinum*
- Lesser Horseshoe *Rhinolophus hipposideros*

2.5 Greater Horseshoe, Lesser Horseshoe, Barbastelle and Bechstein's, are afforded greater protection under European legislation, being listed under Annex II of the EC Habitats Directive which lists species whose conservation requires the designation of Special Areas of Conservation (SACs).

3.0 Methodology

Personnel

3.1 The survey was carried out by Daniel Roberts BSc Hons QCIEEM and was overseen by James Godbeer BSc Hons MCIEEM, an ecologist with over 16 years' experience working as a consultant. James has extensive experience of managing environmental contracts, and particular experience in surveying, assessment and mitigation for rare and protected species. He has considerable knowledge of the development and planning process including Ecological Impact Assessments, sustainable ecological design and he has completed ecology chapters of Environmental Statements. James holds a number of protected species licences including bats (all species, all counties, Class Licence Registration No. 2015-12313-CLS-CLS), and Great Crested Newts (Class Licence Registration No. 2019-44282-CLS-CLS). He has successfully obtained European Protected Species mitigation licences for a number of bat species including Lesser Horseshoe, Greater Horseshoe, Serotine, Brown Long-eared, Common Pipistrelle and Natterer's bats, for a number of roost types including maternity and hibernation sites.

Inspection Survey for Bat Roost Potential

3.2 An internal and external inspection survey of the building was conducted on the 15th June 2023.

3.3 All bat species resident in the UK have been recorded using buildings and built structures as roosts at some time during the year (Collins, 2016). The building was inspected externally and internally following the methodology set out in the Bat Conservation Trust – Bat Surveys for Professional Ecologists: Good Practice Guidelines. 3rd Ed (Collins, 2016).

3.4 In summary, a building is searched externally and then internally, where access is available, for any evidence of use by bats and notes are made on the following:

- Location and number of any live bats.
- Location and number of any corpses or skeletons.
- Location and number of droppings.
- Notes on relative freshness, shape and size of droppings.
- Location and quantity of feeding remains.
- Location of clean, cobweb-free timbers, crevices and holes.
- Location of characteristic staining from urine and/or grease marks.
- Location of known and potential access points to the roost.
- Location of the characteristic smell of bats if no other evidence is recorded.

3.5 Notes are also made on the characteristics and features of the building as follows:

- Type, age and aspect.
- Wall construction, in particular the type of brick or stone used to build the walls and whether it has cavity walls or rubble- filled walls.

- Form of the roof, in particular the presence of gable ends, hipped roofs, etc. and the nature and condition of the roof covering.
- Presence of hanging tiles, weather boarding or other forms of cladding.
- Nature of the eaves, in particular if they are sealed by a soffit or boxed eave and the tightness of the fit to the exterior walls.
- Presence and condition of lead flashings.
- Gaps under eaves, around windows, under tiles, lead flashings etc.
- Presence and type of roof lining.
- Presence of roof insulation.
- Presence of water tanks in loft (note if covered or uncovered).
- Structure of the roof including the truss type, age and nature of timber work.
- Information or evidence of work having been undertaken that could affect use of the structure by bats.

3.6 The presence or evidence of nesting birds is also recorded.

Equipment

3.7 Equipment used to aid the inspection survey included low and high-powered torches, ladders, endoscope, mirrors, binoculars and a camera.

Assessment

3.8 Where a building cannot fully be inspected or the presence of bats entirely ruled out, the potential roost suitability of the building for bats is assessed and classified as follows (Collins, 2016):

- Negligible – Negligible habitat features on site likely to be used by roosting bats.
- Low – A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).
- Moderate – A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status.
- High – A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.

3.9 The surveyed building is evaluated to assess which of the following categories it falls into, if any (Mitchell-Jones, 2004 & Collins, 2016):

- Transitional roost (April-September/October) - On waking from hibernation or in the period prior to hibernation, bats search for roosts in which they stay for only a few days

or on some occasions several weeks. These transitional roosts can be occupied by a few individuals or occasionally small groups. The transitional roosts used prior to hibernation are generally cool and thus may allow bats to reduce their energy requirements before going into hibernation.

- Maternity roost (May-August) - Breeding females gather together around the beginning of May to form nursery colonies. During this period gestation begins with births typically occurring between June and July. The females and their young remain within the maternity roost until the young are weaned and independent (late July-August). These roosts tend to break up between August and September. Adult males are rarely found within these colonies. However, the adult males of long-eared bats, Daubenton's, Natterer's, and horseshoe bats can be found roosting within maternity colonies with their numbers increasing throughout the active season.
- Satellite roost (May-August) - Breeding females may have alternative roost sites in close proximity to the main nursery colony. These are referred to as 'satellite roosts'. The numbers of bats using these roosts can vary greatly, from a few individuals, to small groups.
- Mating roost (September-November) - All British bats are polygynous i.e. males mate with several females. Mating generally takes place from late summer and can continue through the winter. A number of different mating strategies are used by bats, though males of some species establish mating roosts, whereby they defend territory and display/call to females to mate.
- Hibernation roost (October-March) - Depending on the weather and food availability, bats tend to move to hibernation sites from October. Hibernation roosts can vary greatly in terms of the number of individuals and the diversity of species that occupy them. However, they tend to have a constant cool temperature and high humidity, which allows the bats to use less energy regulating their temperature. Bats will wake occasionally during hibernation to drink and feed.
- Night roost (March-November) - Bats may use roosts other than traditional day roosting sites to rest in during the night. These roosts vary in their conservation significance. Night roosts may be used by a single individual on occasion or they could be used regularly by the whole colony. Studies have shown that night roosts may be of particular importance to some species i.e. the Lesser Horseshoe, providing key resting places within core foraging areas.
- Day roost (March-November) - These roosts are used during the day to rest in. Males of most British species spend the summer roosting alone or in small groups with other males in such roosts. Bats may regularly use a number of day roosts, switching between them on a daily basis, though conversely, they may occupy the same roosting site for several weeks.
- Feeding roost (May-November) - These roosts can be occupied by a single animal or a few individuals throughout the active season. They vary in their significance as they may be used by the whole colony or just a few individuals to feed, to shelter from the weather or to rest temporarily. Feeding roosts are often used by long-eared and horseshoe species.
- Other considerations, Swarming sites - Swarming takes place between August and November, whereby large numbers of bats from several species gather, generally around

caves and mines. They are often dominated by the *Myotis* species and appear to be important mating sites with some bats travelling several kilometres to reach these areas. A proportion of the bats that travel to these sites will remain to hibernate.

Limitations

3.10 The roof was found to be lined with bitumen felt that creates a void between felt and tiles that could not be inspected. The building was otherwise fully accessible and there were no restrictions to carrying out the survey according to the stated methodology.

4.0 Results

Preliminary Roost Assessment

Surrounding Habitat

4.1 The following table presents the nature of the habitats surrounding the building and connectivity into the wider area in relation to their potential importance to bats.

Table 1: Details of habitats in relation to foraging and commuting bats.

Habitats	Description
Immediate surroundings	Gravel driveway extending southwest away from the building to the road with the main dwelling a short distance to the southeast. Gardens dominated by lawn with an orchard to the northeast and a line of trees parallel to the northwest.
Connectivity	Linked gardens connect to the countryside that surrounds the village.
Wider Landscape	The site is located within the village of Newtown Tony with the surrounding area being a mosaic of pasture and arable land with a network of field boundary hedgerows and small pockets of woodland.
Potential for presence on site and site value	The site provides typical garden habitat where invertebrates will be present and at least small numbers of common urban species will forage. However, overall, the site is small and any significant value of the site for bats is associated with any potential for roosting.

Buildings

4.2 The following tables present a description of the building in terms of general characteristics, and potential for roosting bats.

Table 2: Building descriptions and details in relation to potential for roosting bats.

Garage/ Outbuilding	Description
External	**General:** Single storey detached garage outbuilding. **Roof:** A hip end roof covered with 'Broseley' type tiles and clay ridge. **Dormers/roof windows:** None present **Verges:** N/A **Chimneys:** One brick chimney with lead flashing. **Walls:** Flint and brick with brick quoins; rendered **Cladding:** None. **Eaves:** Open eaves part obstructed with rolled sarking felt.

Internal	**General:** Well-lit storage space. Partially separated into two sections by and internal wall and chimney with gaps over walls adjacent to the chimney stack. Internal area open to the roof structure. **Enclosed/Separate Roof Voids:** None present. **Roof Structure:** Hipped structure of rafters, purlins hip and ridge timbers. **Roof Lining:** Bitumen felt in fair condition. One torn area near the northeast end of the roof. **Insulation:** None present. **Other e.g. Water Tanks, Boilers, AC Units:** None present.
Potential access points	Numerous gaps under tiles and ridge tiles. Open eaves leading direct to the building interior. Gaps under lead flashings.
Potential roosting features	The main interior is unsuitable for bats being well-lit and expected to be frequently disturbed. Gaps under tiles and lead flashings offer roosting potential for crevice dwelling bat species with most potential for bat roosts associated with the small void between tiles and lining felt. No evidence of bats was found within the roof void which has been undisturbed for some time.
Evaluation	It can be concluded that roosting bats are absent from the building interior due to the absence of any evidence where evidence would persist, following a full inspection. In the absence of any evidence of bats but taking into account the number and nature of potential roosting features, the building is deemed to have low potential to support roosting bats.
Birds	**Interior:** Gaps may be of sufficient size to allow access for small birds but no evidence that they have done so recently although very old nesting material was recorded in the main roof void. **Eaves:** Open, allowing access to the building interior; however, no evidence of birds entering the building. Height of eaves is low and considered to be sub-optimal for House Martins and Swifts with no evidence of current or past nesting. **External ledges/crevices:** Gaps under tiles could be of sufficient size for small birds such as House Sparrows. **Evaluation:** Nesting birds are currently absent but birds may nest in future nesting seasons.

Photographs



1: View of the building from the southwest.



2: Front elevation.



3: View of the building from the northeast.



4: Rear elevation.



5: Room in the northeast portion of the building.



6: Room in the southwest portion of the building.



7: Roof structure lined with bitumen felt.



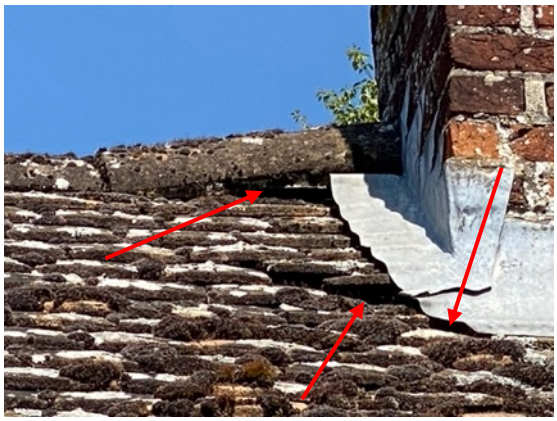
8: Partly obstructed eaves.



9: Example of open eaves.



10: Gaps under tiles.



11: Gaps under tiles, ridge and lead flashing.



12: East roof void in the main house – south end.

5.0 Impact Assessment and Required Actions

Impacts

5.1 The building is the subject of a planning application for its conversion to an office and games room including a new roof incorporating conservation roof lights.

5.2 In the absence of mitigation, the following impacts and potential impacts with regard to bats have been identified:

Table 3: Impact Assessment.

Building	Impact Assessment
House	**Roost damage/destruction:** Removal of roof materials and alterations resulting in the destruction of bat roosting features but for which the presence/absence of bats could not be determined. Impact unknown. **Roost modification:** Potential for modification of potential roosting features for which the presence/absence of bats could not be determined. Impact unknown. **Roost disturbance:** Potential for disturbing bats, if present when the works take place, through noise and vibration, causing them to fly during the day making them vulnerable to predation. Impact unknown. **Effect on foraging/commuting:** Potential for impacts from changes to external lighting, which can be mitigated. No other changes that would result in any disruption of adjacent foraging and commuting habitats. **Birds:** The disturbance of nesting birds resulting in the abandonment of nests and death of young, if works are carried out when nesting birds are present.

Further Surveys

5.3 Where a building cannot fully be inspected or the presence of bats entirely ruled out, and the proposed works could impact on potential roosting features, the building should be subject to presence/absence surveys, which take the form of dusk emergence surveys with the use of night vision aids as described in the "Bat Conservation Trust Interim Guidance Note: Use of night vision aids for bat emergence surveys and further comment on dawn surveys" (BCT, 2022). This supersedes the Bat Surveys for Professional Ecologists Good Practice Guidelines 3rd Edition and the previous requirement for pre-dawn re-entry surveys for buildings of moderate or high potential, pending the publication of Bat Surveys for Professional Ecologists Good Practice Guidelines 4th Edition.

5.4 The recommended minimum number of survey visits to give confidence in a negative result and their timings are presented in the table below.

Table 4: General presence/absence survey specification for structures.

Roost Suitability	Survey Specification

Negligible	No further surveys required.
Low	**Number of Survey Visits:** One survey visit. **Timing:** May to August.
Moderate	**Number of Survey Visits:** Two survey visits. **Timing:** May to September with a least one of the surveys between May and August. Surveys should be at least two weeks apart.
High	**Number of Survey Visits:** Three survey visits. **Timing:** May to September with a least two of the surveys between May and August. Surveys should be at least two weeks apart.
	Dusk Survey Times: Start at 30 minutes* before sunset and end at 1.5 – 2 hours after sunset. **Dawn Survey Times:** Start at 1.5 – 2 hours before sunrise and end at 15 minutes after sunrise *Bat Conservation Trust – Bat Surveys for Professional Ecologists: Good Practice Guidelines state that dusk surveys should begin 15 minutes before sunset but repeated/the start times of subsequent surveys adjusted if bats are already in flight. 30 minutes is therefore specified to reduce the risk of having to repeat a survey as species such as pipistrelles will often emerge well before sunset.

Table 5: Required presence/absence surveys for the structures on site.

Building	Further Surveys
House	**Number of Surveys:** It has been concluded that the potential/suitability of the building to support bat roosts is low and therefore a single dusk survey is required in order to give confidence in a negative result. If roosting bats are recorded an additional two dusk/dawn surveys will be required in order to reliably characterise the roost(s). **Required Number of Surveyors:** Two

5.5 Nesting birds were not recorded but they nest in the future. No further surveys for birds are required at this time. All nesting birds are protected under The Wildlife and Countryside Act 1981 (and amendments). The commencement of the works should ideally be scheduled to take place outside the nesting season of March to August. Works during this time should be preceded by a nesting bird survey to confirm they are absent. If nesting birds are discovered then the nest and surrounding habitat must be left undisturbed until the young have fledged.

Legal Compliance

5.6 The Wildlife and Countryside Act 1981 as amended by The CRoW Act 2000 and The Conservation of Habitats and Species Regulations 2010 makes it illegal to recklessly damage, destroy or obstruct access to any place that a wild bat uses for shelter or protection, whether the bat is occupying the shelter at the time or not.

5.7 European Protected Species (EPS) Licences to permit the above for the purposes of development must be obtained from Natural England. To gain a licence the scheme must have been issued with detailed planning permission and must not result in a loss of conservation status of the species concerned. The presence/absence of bats has not yet been determined with confidence and the need for an EPS licence to permit the works is therefore currently unknown.

Provision for Bats

5.8 Any specific requirements for roosting bats can only be determined once the required further survey(s) have been carried out. However, consideration should be given to installing roosting features to enhance the site.

5.9 Any new lighting should be designed to limit disturbance of foraging, commuting and potentially roosting bats, and other nocturnal wildlife. Measures should include the use of lighting only where absolutely necessary utilising highly directional warm white LED lighting, an example being down spots at 2.5 m high using warm white (2700 K) 8W LED lamps, 550 lumens, 35 degree beam angle. These could be individually activated by PIR sensors on a 5 minute cut off to further reduce their impacts. These will assist in lighting only the areas where lighting is required and minimising light spill either directly or through reflected light.

Provision for Birds

5.10 Consideration could be given to providing nesting sites for small birds to compensate for the loss of/alterations to nesting habitat and enhance the site. The following options could be explored for inclusion on the sides of the converted building:

- Individual boxes, such as the Schwegler Bird Home 1MR, could be installed at a height of at least 2 m on the north elevation
- Groups of multiple small bird boxes could also be installed at a height of least 2 m on the north elevation or under the eaves to provide nesting sites for House Sparrows.

6.0 References

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