

Nethercourt, Hyde, Chalford

Bat Survey Report

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Executive Summary

1. This report describes the results of a bat survey carried out by Cotswold Ecology Ltd at Nethercourt, Hyde, Chalford, GL6 8NZ (Ordnance Survey Grid Reference SO 885 017). A site location map is given in Figure 1.
2. A detailed daytime bat survey was carried out on 12th January 2024 in connection with proposals to construct a single storey extension and renovate the interior, including the replacement and creation of dormer windows and roof lights.
3. The building has good connectivity to trees and other habitat which lead to the Frome Valley and other excellent bat foraging and commuting habitat.
4. No evidence of bats was recorded during the survey and the building was classified as having Negligible Bat Roosting Potential. No further surveys to determine presence or likely absence are therefore recommended as per best practice guidelines (Collins, 2023).
5. The roof was only surveyed from ground level using binoculars and a high powered torch. It is therefore possible (although unlikely) that there are locations where potential bat-access points are present, but hidden from view. Contractors should therefore be vigilant when dismantling the dormer roofs and soffits. In the unlikely event that bats or evidence of roosting is recorded, a licensed and appropriately qualified ecologist should be contacted for advice. Otherwise construction works are able to continue without further regard to bats.
6. The boundaries of the site are suitable for foraging and commuting bats, including light-sensitive species such as Lesser Horseshoe and Brown Long-eared Bat. However, there are currently existing windows on all elevations, including dormer windows on both pitches of the roof. New external lighting should be avoided and where new internal lighting is proposed, this should be limited where possible within the constraints of the design.

1 Introduction

1.1 Purpose of the Report

This report describes the results of a bat survey carried out by Cotswold Ecology Ltd at Nethercourt, Hyde, Chalford, GL6 8NZ (Ordnance Survey Grid Reference SO 885 017). A site location map is given in Figure 1 and an aerial photograph is provided in Figure 2.

The proposals include the construction of a single storey extension and amendments to the roof including the replacement and creation of dormer windows and roof lights.

A detailed daytime bat survey was carried out on the building to assess the potential for works to impact upon bat populations and determine if further surveys and/or a Natural England licence application would be required for works to proceed.

1.2 Ecological Context

Nethercourt is located in the rural village of Hyde which largely comprises sparsely located, detached housing with large gardens and trees. There is a hedgerow close to the house on the south-western boundary with mature trees. There is an amenity lawn with shrubs and borders to the north of the house, beyond which lies trees leading down to woodland and pasture on the side of the Frome valley. The River Frome lies approximately 411 m to the north and the Stroudwater Navigation canal lies immediately beyond the river. The watercourses and associated habitats along the valley provide excellent foraging and commuting habitat for bats.

1.3 Structure of the Report

The remainder of this report is structured as follows:

- Section 2 describes the survey and assessment methods;
- Section 3 presents the survey results;
- Section 4 provides relevant legislation;
- Section 5 gives an evaluation of the results;
- Section 6 lists the references; and
- Section 7 provides figures.

2 Methods

2.1 Background Data Search

Aerial photographs and Ordnance Survey maps were reviewed to assess the site in the context of surrounding habitats. In addition, the MAGIC (the Multi-Agency Geographic Information for the Countryside) website was searched for records of European Protected Species (EPS) bat licence applications in the area. The MAGIC website was also searched for any statutory sites designated for bats within 10 km of the site.

2.2 Habitat Assessment

Habitats on and surrounding the site were assessed for their suitability for foraging and commuting bats. Although foraging requirements differ between species, good bat foraging habitat generally includes sheltered areas and habitats with good numbers of insects, such as woodland, scrub, hedges, watercourses, ponds, lakes and more species-rich or rough grassland. For commuting, well-connected hedgerows, woodland edge, watercourses and other linear features are generally considered to be of high value.

The suitability of habitats forms part of the classification of the site for bat roosting potential, as detailed in Table 1, section 2.3.3.

2.3 Daytime Bat Survey

2.3.1 General

A daytime bat survey was undertaken by [REDACTED] on 12th January 2024. The bat survey was carried out according to standard bat surveying guidelines issued by the Bat Conservation Trust (Collins, 2016).

[REDACTED] holds a Natural England survey licence for bats (Class 2 licence number 2015-106-CLS-CLS and Bat Low Impact Class Licence, CL21 - RC162, Annex B and D) and has held over 50 bat mitigation licences from Natural England and Natural Resources Wales (NRW). [REDACTED] is also a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and has 19 years of experience in ecological surveying for developments.

2.3.2 Weather

Weather conditions during the survey were dry, sunny intervals with light winds. Cloud: 8/8 Octas;
Wind: 1 Beaufort; Temperature: 5°C.

2.3.3 Method

As bats are crevice-dwelling mammals it is often difficult to thoroughly inspect buildings for bats and evidence of bats without a destructive search, which is not generally practical or acceptable. An example of this would be where bats roost in between the roof tiles and the lining. These areas cannot be inspected, but a surveyor would know that bats might roost here because there are places where bats could gain entry from the outside.

The building was therefore assessed for bat roost potential according to the following factors that influence the likelihood of bat roosting:

Surrounding habitat: whether there are potential flight-lines and bat foraging areas nearby.

Construction detail: the type and construction of architectural features such as attics, soffit boxes, lead flashing and hanging tiles that could be used by roosting bats. Some construction details and materials are more favourable to bat occupation than others.

Building or structure condition: whether the building has no roof or has a sound roof without any potential bat-access points.

Internal conditions: bats favour sheltered locations with a stable temperature regime, protection from the elements and little wind/light/rain penetration.

Potential bat-access points: whether there is flight and crawl access.

Potential roosting locations: descriptions of all bat-accessible voids, cracks and crevices.

A description of the building was recorded onto specially-designed survey sheets, and digital photographs were taken as a record. The development was categorised into a standard scheme as follows:

Table 1. Classification criteria for Bat Roosting Potential (BRP) of Buildings and Built structures, based on the presence of habitat features within the landscape, adapted from Collins, 2023.

Potential suitability	Description	
	Roosting habitats in structures	Potential flight-paths and foraging habitats
None	No habitat features on site likely to be used by any roosting bats at any time of year.	No habitat features on site likely to be used by any commuting or foraging bats at any time of the year.
Negligible	No habitat features 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.	No obvious habitat features on site likely to be used as flight paths or by foraging bats; however, a small element remains in order to account for non-standard bat behaviour.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of year. Not suitable to be used on a regular basis or by larger numbers of bats.	Habitat that could be used by small numbers of bats as flight paths such as gappy hedgerows or unvegetated stream, but isolated.
Moderate	A structure with one or more potential roost sites that could be used by bats but unlikely to support a roost of higher conservation concern (e.g. maternity or hibernation).	Continuous habitat connected to the wider landscape that could be used by bats for flight paths or foraging such as lines of trees or linked back gardens.
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 longer periods of time. Potential for high conservation status roosts e.g. maternity or classic hibernation sites.	Continuous high quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for commuting and foraging. Site is close to and connected to known roosts.

External and internal features of the building were then inspected for evidence of bats.

In this case, visual, systematic examinations were made for bats and evidence of bats, both internally and externally, of the following:

- wall, window and door surfaces;
- window and door frames;
- wall bases;

wall ledges and wall tops (where accessible);
cracks, crevices and sheltered voids;
loft spaces; and
floors and stored items.

Evidence of roosting bats includes droppings, urine stains, staining from fur-oils, scratch marks, wear marks, feeding remains, dead bats, odour, squeaking and chattering, and in some cases the absence of cobwebs.

3 Results

3.1 Background Data Search

Woodchester Park Site of Special Scientific Interest (SSSI) lies approximately 5.02 km to the west. The SSSI is designated for its nationally important breeding colonies of Greater Horseshoe bats (*Rhinolophus ferrumequinum*).

The closest European Protected Species (EPS) development licence (EPSM2013-5858) issued was for work affecting a non-breeding Common Pipistrelle (*Pipistrellus pipistrellus*) bat roost at Ordnance Survey Grid, Reference SO 8758 0110 located approximately 1.1 km to the south-west of the site.

It is also likely there are other unrecorded bat roosts in tree and buildings closer to the site that remain unrecorded.

3.2 Habitat Assessment

As described in Section 1.2, there is suitable bat foraging habitat immediately adjacent to the house which is close to well-connected habitat likely to be used by bats. The wider landscape provides excellent habitat for bats and is well connected to the site. As a result, the suitability of the foraging and commuting habitat on the site is considered to be High.

3.3 Daytime Bat Survey

A description of the building and results of the daytime inspection are provided below. Photographs of the building are provided in Plates 1-4 below.

3.3.1 Description

Nethercourt is a two storey house with the roof space converted into living space. The walls are constructed of stone and the roof is pitched and covered in concrete roof and ridge tiles. There are three existing dormer windows on the northern pitch and one dormer window on the southern pitch. There are windows on all elevations and the building is currently occupied. The dormer windows have a rendered finish with wooden bargeboards at the edges of the dormer roofs. There are plastic drainpipes fixed to plastic soffits. There is a stone chimney present and there is metal flashing where the dormers and chimney meet the roof.

Internally the building is occupied and in use on all floors. The roof space is converted into living space but there is a small loft void present at the very apex of the roof. The loft void can be accessed via a loft hatch but is only approximately 0.6 m from floor to apex and contains obstructions (e.g. chimney, internal partition wall) and was therefore not able to be fully inspected.



Plate 1. View of the northern elevation.



Plate 2. View of the southern elevation.



Plates 3 and 4. Internal views of the loft void.

Potential Bat-access Points and Roosting Locations

The ridge and roof tiles are in a good condition and no potential bat-access points were observed that would allow bats to access the space between the tiles and the lining, or access the open space of the loft void. The rendering around the dormer windows does not provide any gaps around the apex or edges that would also allow potential roosting locations. The bargeboards are also tight fitting with no gaps between the boarding and the walls that would allow potential bat-access.

Internally, the loft void is suitable for roosting but given the lack of access points, it could not be used for roosting. The loft void is full of old cobwebs and it is clear that bats have not been flying around the open space of the void.

Evidence of Bats

Although the entire extent of the loft void could not be viewed, no evidence of bats was observed from the accessible areas of the loft void or any other area of the building. The loft void is full of cobwebs and the lack of potential bat-access points would mean that the loft could not be used for roosting. As a result, the lack of full access for survey is not considered a constraint in this instance.

Given the lack of potential bat-access points, the building has been classified as having Negligible Bat Roosting Potential according to the Classification criteria for Bat Roosting Potential (BRP) of Buildings and Built structures.

3.4 Survey Constraints

The loft void was not able to be fully inspected. However, given the lack of potential bat-access points into the loft void from under the tiles, this is not considered to be a significant constraint and would not affect the conclusions of the assessment.

This data can be considered to be accurate for a maximum of 12-18 months. Bats frequently move around and adopt new roosting sites and therefore if more than one year elapses prior to commencement of the works it may be advisable to conduct a further inspection to insure up-to-date information.

4 Legislation

All species of British bat are protected by The Wildlife and Countryside Act 1981 (as amended) extended by the Countryside and Rights of Way Act 2000. This legislation makes it an offence to:

- intentionally kill, injure or take a bat;
- possess or control a bat;
- intentionally or recklessly damage, destroy or obstruct access to a bat roost; and
- intentionally or recklessly disturb a bat whilst it occupies a bat roost.

Bats are also European Protected Species listed on The Conservation (Natural Habitats, & c.) Regulations 2017 (as amended). This legislation makes it an offence to:

- deliberately capture, injure or kill a bat;
- deliberately disturb a bat (in such a way as to be likely to significantly affect, (i) the ability of a significant group of bats to survive, breed or rear/nuture their young; and (ii) the local distribution or abundance of the species concerned);
- damage or destroy a breeding site or resting place of a bat; and
- possess, control, transport, sell, exchange a bat, or offer a bat for sale or exchange.

The above legislation has been amended by the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019 which continue the same provision for European Protected Species, licencing requirements and protected areas after Brexit.

All bat roosting sites receive legal protection even when bats are not present.

5 Evaluation and Conclusions

5.1 Impacts to Roosts

No evidence of bats was recorded during the survey and the building has been classified as having Negligible Bat Roosting Potential. As a result, no further surveys are recommended in order to confirm presence or likely absence of roosting bats, which is in line with best practice guidance (Collins, 2023).

The roof was only surveyed from ground level using binoculars and a high powered torch. It is therefore possible (although unlikely) that there are locations where potential bat-access points are present, but hidden from view. As a result, the building was classified as having Negligible Bat Roosting Potential, not 'None'. Contractors should therefore be vigilant when dismantling the dormer roofs and soffits. In the unlikely event that bats or evidence of roosting is recorded, a licensed and appropriately qualified ecologist should be contacted for advice. Otherwise works should be able to continue without further regard to bats.

5.2 Lighting

The boundaries of the site are suitable for foraging and commuting bats, including light-sensitive species such as Lesser Horseshoe and Brown Long-eared Bat. Lesser Horseshoes are known to be disturbed by the introduction of artificial lighting (Stone et al, 2009). However, there are currently existing windows on all elevations, including dormer windows on both pitches of the roof. The northern elevation faces a garden lawn and as such, a small increase in illumination on this elevation is unlikely to have a significant effect on any potential bat foraging or commuting routes.

Where new lighting is proposed within the renovation of the building, this should be limited where possible within the constraints of the design. This should include measures such as the following, as detailed in Bats and Artificial Lighting at Night - Guidance Note 08/23 (ILP and BCT, 2023).

- Increasing the spacing of lanterns and fitting them further into the room away from the windows;

- Light fixings adjacent to windows will be recessed e.g.

- <https://www.astrolighting.com/products/1248023-trimless-round-fixed>;

- All luminaires should lack UV elements when manufactured. Metal halide, compact fluorescent sources should not be used;

LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability;

A warm white light source (2700Kelvin or lower) should be adopted to reduce blue light component; and

Light sources should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone, 2012).

There are no plans for the introduction of any external lighting as part of the proposals. However, should any external lighting be introduced in the future, the guidance below should be followed:

No mercury or metal halide lamps (LEDs are preferred);

Lighting should be directed to where needed and spillage should be avoided e.g. lighting directed only into doorways and luminaire designed appropriately, including the use of hoods, cowls, shields etc to avoid spillage;

Downward-facing wall-mounted lighting should be used to keep light spill below 3m from ground level;

Only light areas which need to be lit, and use the minimal level of lighting required to comply with guidance such as Institute of Lighting Engineers Guidance Notes for the Reduction of Obtrusive Light (2005);

Use movement sensors and short (1 minute) timers; and

No lamps greater than 150W for security lighting.

6 References

Bat Conservation Trust and Institute of Lighting Professionals. Bats and Artificial Lighting at Night - Guidance Note 08/23 (ILP and BCT, 2023).

Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition). The Bat Conservation Trust, London. ISBN-978-1-7395126-0-6.

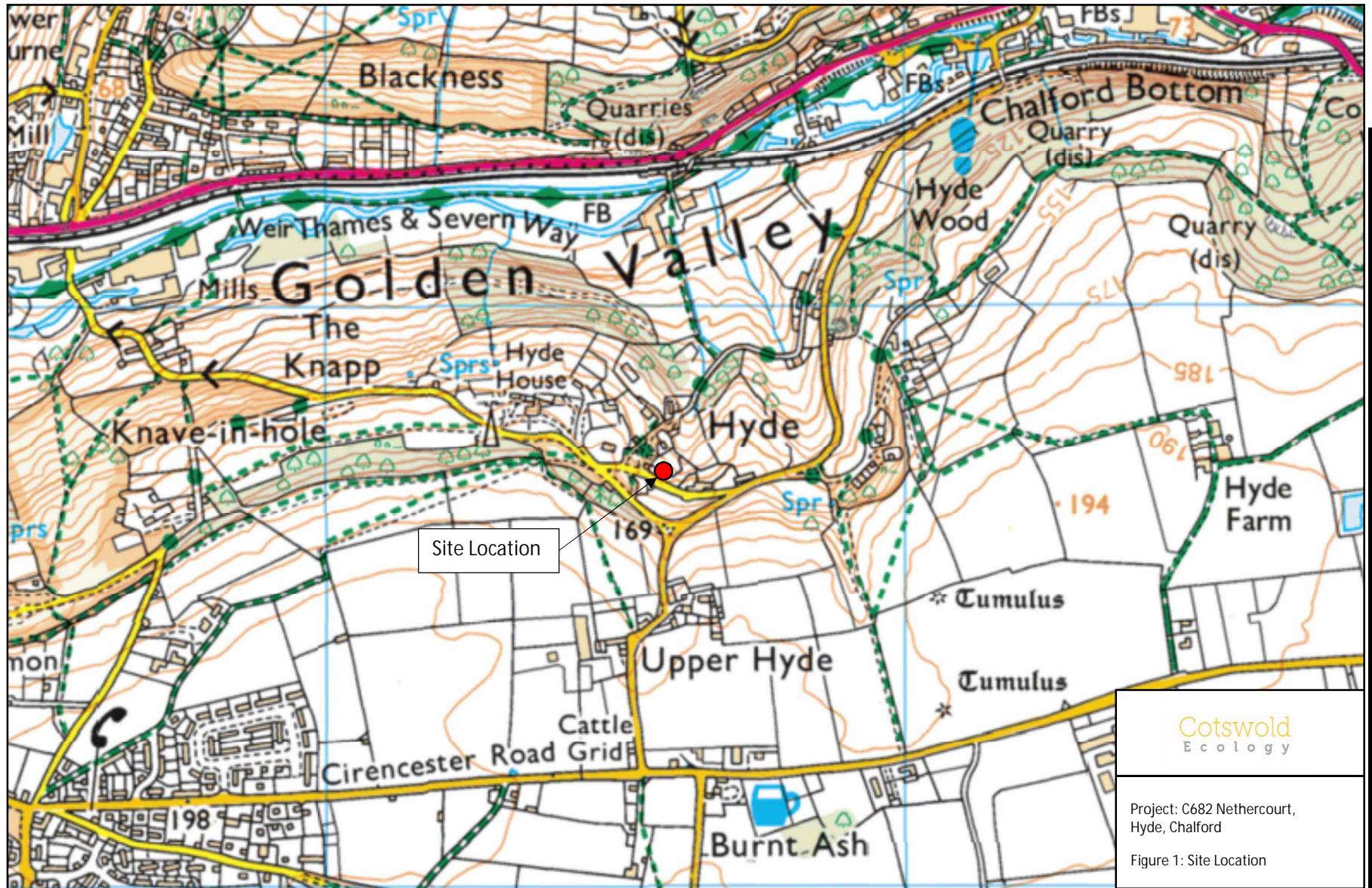
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7 Figures

Figure 1. Site Location Plan

Figure 2. Aerial Photograph





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<p>Figure 2: Aerial Photograph</p>