

**Bat Survey Report for
The Bothy,
58 Main Street, Coln St. Aldwyns,
Cirencester, GL7 5AN**



NKM Associates

2nd August and 22nd August 2023

QUALITY CONTROL

Date	Version	Name
2.8.23	Daytime inspection	Neil Musgrave – BEng (Hons)
22.8.23	Nocturnal survey	Neil Musgrave – BEng (Hons)
20.9.23	Report prepared	David Musgrave
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The information in this report has been prepared in accordance with the Chartered Institute of Ecology and Environmental Management's (CIEEM) Code of Professional Conduct. The conclusions and recommendations expressed are reasoned judgements based on the evidence.

Every reasonable attempt has been made to comply with BS42020:2013 *Biodiversity – Code of practice for planning and development*, *CIEEM Guidelines for Ecological Report Writing* (CIEEM, 2017) and Bat Conservation Trust's *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edition, Collins, 2016). If there has been deviation from recognised practice, justification/explanation has been given.

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SUMMARY

For The Bothy at 58 Main Street in Coln St. Aldwyns planning permission is being sought to redevelop the building.

As this could impact features typically used by bats as roosting places, a diurnal inspection was undertaken on 2nd August 2023, to assess the building for signs of bat occupation.

All the external and internal structures, especially those associated with the roof and walls of the building were examined.

The suitability for roosting pipistrelles *Pipistrellus sp* was considered low, as a small number of suitable crevices were observed.

As the suitability was considered low a nocturnal survey was undertaken on the evening of 22nd August 2023.

The nocturnal survey recorded Common Pipistrelles *Pipistrellus pipstrellus* and Noctules *Nyctalus noctula* flying round and over the site. No bats emerged from The Bothy.

From all the surveys undertaken of The Bothy is considered not to be a bat roost or hibernation site and as such no further surveys or mitigation are required.

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No birds' nests were found either in or on The Bothy.

1. INTRODUCTION

In late July 2023, NKM Associates was instructed by David Perkins to undertake a bat survey of The Bothy at 58 Main Street in Coln St. Aldwyns. On 2nd August 2023, a visit was made to the property to carry out a diurnal inspection of the building to check for signs of bat occupation.

As the suitability was considered low a nocturnal survey was undertaken on the evening of 22nd August 2023.

The results of the surveys are contained in this report.

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

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

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

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

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

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

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

2. METHODOLOGY

To fully assess bat occupation of a particular site, the Bat Conservation Trust (2016) recommends that information gathered from a desk study of known bat records, and a daytime site walkover, is used to inform the type and extent of future bat survey work, potentially including nocturnal surveys.

The diurnal walkover provides an opportunity to check for signs of occupancy, such as droppings, scratch marks, feeding remains, carcasses, or even animals in residence, whilst nocturnal surveys (if required) allow numbers and species of bats to be confirmed. The latter are also used to determine the presence or absence of bats, where signs of bat activity are indeterminate or absent, but suitability of roosting is considered medium to high.

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

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

Diurnal walkovers can be carried out at any time of the year, but nocturnal surveys should only be undertaken when bats are out of hibernation and in their summer roosts. The recommended period is from May to September inclusive, with May to August optimum and September sub-optimum. The season can be extended into October, although particularly cold weather will render this inadvisable. Indeed, the air temperature at the start of each survey must be at least 10°C or above.

Nocturnal surveys must be a minimum of two weeks apart, and the number of surveys is dependent on the evidence found or the suitability of the site to bats.

Where bats are found, or there is evidence of bat occupation or activity, i.e., bat use is confirmed, the number and timing of nocturnal surveys will be decided by the ecologist and will be appropriate for the type of roost. In general, at least two nocturnal surveys will be carried out, both of which can be emergence surveys, or one emergence and one dawn re-entry.

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

For a site with no evidence of bats but low suitability for bats, just one nocturnal survey is required, this to be in the optimum period, and either an emergence or a dawn re-entry.

For sites with medium suitability for bats a minimum of two nocturnals are needed, of which one must be in the optimum period, and one must be a dawn re-entry survey.

With high suitability sites, three nocturnals will be necessary, of which two must be in the optimum period. At least one of these must be a dawn re-entry survey, with the third visit either an emergence or a dawn re-entry.

For sites < 5 ha in size, and/or regularly shaped structures, at least two surveyors must be present, with more surveyors at larger sites and more complex buildings, e.g., those with multiple elevations and/or roof structures.

On 2nd August 2023 a thorough inspection of The Bothy was made by Neil Musgrave (Natural England bat licence No. 2020-44602-CLS-CLS), including the exterior and interior walls, roof covering, eaves, gables, window casements and door frames.

8x42 binoculars and a Fenix TK75 torch were used for the inaccessible/unreachable areas. On this occasion an endoscope was not used, as there were no crevices and cavities that could not be inspected with a torch or by use of binoculars from a ladder.

On the evening of 22nd August 2023, a nocturnal survey was undertaken by Neil Musgrave and assistant, to confirm absence or presence of bats and if in use by bats, what species and in what numbers.

The emergence survey began quarter of an hour before and continued for one and three quarters hours after sunset.

The surveys were aided by electronic Echo Meter Touch bat detectors and iPads.

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

3. RESULTS

3.1 Desk Study

In view of the small scale of the proposed works, the likely low impact on bats, and in line with current guidance on accessing and using biodiversity data (CIEEM, 2016), a detailed background data search was not carried out in this case.

However, within 2.0 km of 58 Main Street, the following European Protected Species licences for bats were issued by Natural England:

- 2015 0.5 km east for Lesser Horseshoe bat
- 2019 0.6km east for Common Pipistrelle and Lesser Horseshoe bats

3.2 Location

Coln St. Aldwyns is a village located approximately 4.0 km north of Fairford. Main Street lies to the southeast of the village with number 58 approximately 120 m south from the central village crossroads on the west side of the street. The Bothy is to the south of the garden of the number 58. The Ordnance Survey Grid Reference of the building is SP 14590 05052 ([Appendix 1](#)).

3.3 Site Description

The survey site comprised of a detached pitched roofed tiled building (Figs. 1).



Figs. 1 Pitched roof building

To the east of the building was number 58's garden with pitched roofed houses on the other side of the street, to the south were mature trees (Figs. 2 and 3).



Figs. 2 & 3 Views to the east and south

To the west were open fields with mature trees in the distance.

The layout of the site is shown in the aerial photograph in [Appendix 2](#).

3.4 Building Survey

The daytime inspection was carried out on 2nd August 2023 commencing at 13:00. The weather conditions during the time of the survey were recorded and are presented in Table 1 below.

Parameter	Value
Temperature (°C)	15.5
Cloud cover (%)	100
Precipitation	Intermittent rain
Wind speed (Beaufort scale)	0

Table 1 Weather conditions during the diurnal survey

3.4.1 Bats

The ridge was intact with two missing tiles at the gable ends, the roof tiles were tightly overlapping, (Fig. 4).



Figs. 4 Ridge and roof tiles to the east

The south gable was sealed with the roof verge cement sealed to the gable wall plates (Fig. 5). The north gable had gaps under the roof verges which opened straight into the inside of The Bothy (Fig. 6).



Figs. 5 & 6 Sealed south gable (L) and gaps under the roof tiles north gable (R)

The eaves were open.

The stone walls were sound throughout, whilst all the window casements and door frames were tightly fitting with no gaps or crevices.

No signs of bat activity were found around the outside of The Bothy.

Internally the building was divided into three spaces.

The room against the south gable wall was divided from the rooms to the north by a dividing wall running east to west, the roof was partially lined and cobwebbed on its ridge and gable ends (Fig. 7).



Fig. 7 Partially lined room against the south gable wall

Light penetrated the room through the gaps in the ridge tiles and open eaves.

The room against the north gable wall was divided by a full height wall running north to south.

The room to the east was open sided and was cobwebbed along the ridge (Figs. 8 and 9).



Figs. 8 & 9 East room against the north gable wall

The room to the west was enclosed and was cobwebbed along the ridge (Figs. 10 and 11).



Figs. 10 & 11 West room against the north gable wall

Light penetrated both rooms.

No evidence of bat activity was found inside The Bothy.

3.4.2 Emergence Survey

The emergence survey was carried out on 22nd August 2023, commencing at 20:00 and finishing at 22:00. The weather conditions during the time of the survey were recorded and are presented in Table 2.

Parameter	Value
Temperature (°C)	17.5 start; 17.0 finish
Cloud cover (%)	10
Precipitation	None
Wind speed (Beaufort scale)	0
Sunset	20:17

Table 2 Weather conditions during the emergence survey

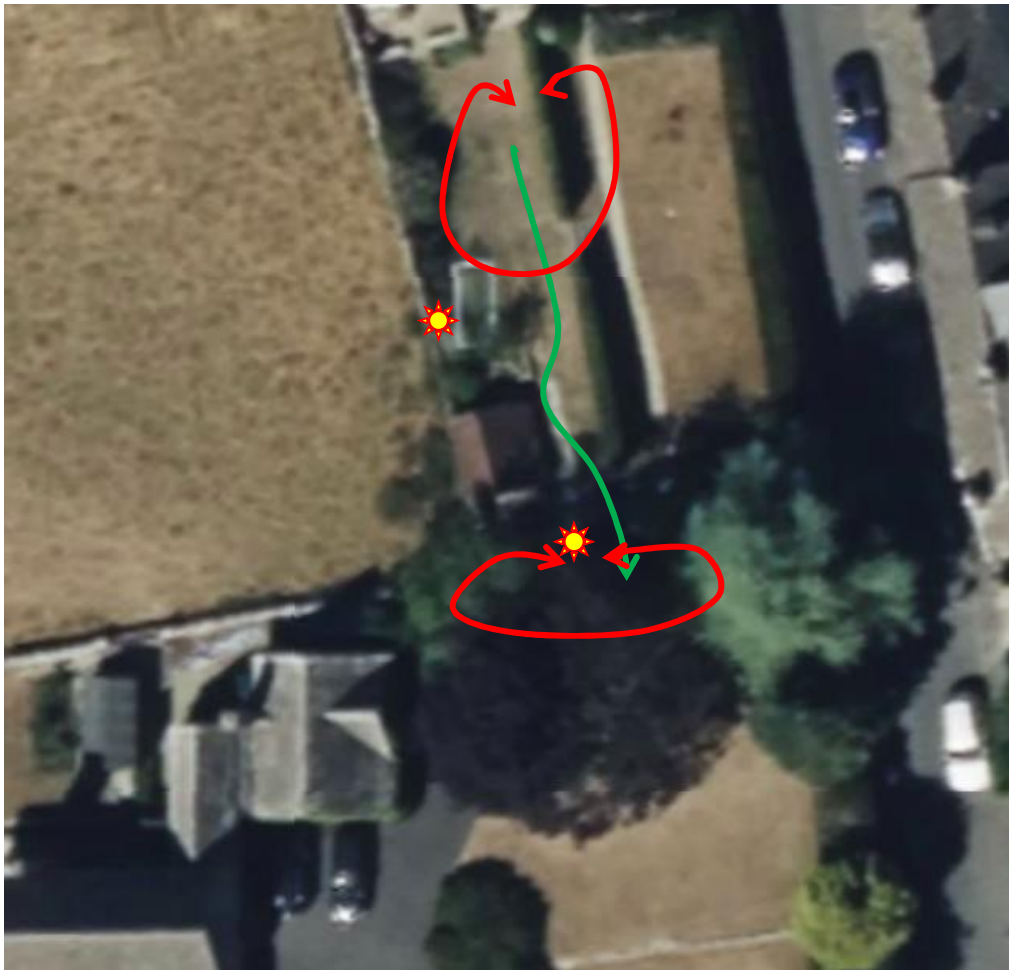
The nocturnal survey recorded Common Pipistrelles and Noctules flying round and over the site. No bats emerged from The Bothy.

The times of bat observations and detections are shown below.

Time	Observation
20:45	Noctule flew overhead – north to south
20:45	Common Pipistrelle flew round the trees to the south of The Bothy
20:50 - 20:58	Common Pipistrelle flew round the rear garden of the house
21:15	Common Pipistrelle flew round the trees to the south of The Bothy
21:28	Noctule heard but not seen
21:39	Common Pipistrelle flew round the trees to the south of The Bothy

The bats flight paths at emergence are shown on Plan 1 overleaf.

Plan 2 Bat flight paths at emergence on 22nd August 2021



Common Pipistrelle Bats →

Noctule Bats →

Positions of observers ✨

3.4.3 Other species

No birds' nests were found either in or on The Bothy.

4. CONCLUSIONS AND RECOMMENDATIONS

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

Male bats generally live alone and have a number of favoured roosts. During the summer they visit each of these for a few days at a time, before moving to their chosen hibernation site in mid-late October. Different species have different habits, but this seasonal movement is common to all.

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

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

As such they can be difficult to find, so the suitability for roosting was also assessed. This was considered low, as a small number of suitable crevices and cavities were observed.

No bats emerged from The Bothy during the nocturnal survey.

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

No signs of Brown Long-eared Bat activity were found.

From all the surveys undertaken of The Bothy it is considered not to be a bat roost or hibernation site and as such no further surveys or mitigation are required.

*

No birds' nests were found either in or on The Bothy.

5. REFERENCES

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APPENDICES

Appendix 1: Location plan

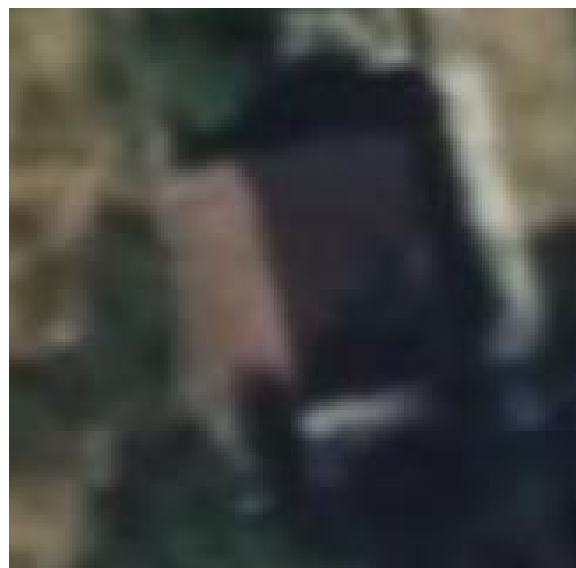
Appendix 2: Site layout

Appendix 1: Location plan



The Bothy, 58 Main Street, Coln St. Aldwyns

Appendix 2: Site layout



The Bothy

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