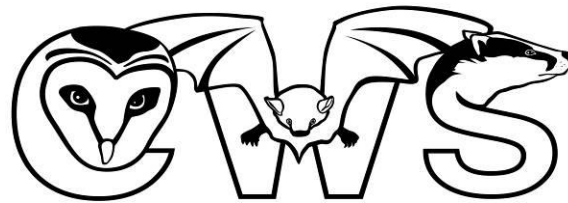


**2023 Updated Bat Survey Report for
North Arms House, Mills Lane, Wroxton,
Banbury, Oxfordshire, OX15 6PY**



Cotswold Wildlife Surveys

17th August and 5th September 2023

QUALITY CONTROL

Date	Version	Name
17.08.23 05.09.23	Daytime inspection and nocturnal surveys	Andy Warren – BSc (Hons), MA (LM), Tech Cert (Arbor A), MCIEEM, TechArborA Director James Warren Director + assistant
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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

At North Arms House on Mills Lane in Wroxton near Banbury, planning permission is being sought to convert a redundant barn into ancillary residential accommodation.

As this could impact on features typically used by bats as roosting places, a diurnal re-inspection was undertaken on 18th August 2023, to re-assess the barn, adjoining sheds and nearby outbuilding for signs of bat occupation.

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

In the sheds a small number of scattered very old bat droppings were found. These were previously confirmed in June 2019 as being from a Brown Long-eared Bat *Plecotus auritus*, with a single animal found roosting in the sheds, and a second Brown Long-eared Bat in the barn.

Although no other evidence of bat activity was found, the suitability for roosting pipistrelles *Pipistrellus sp.* was considered to be low, as there were a few gaps in the stonework and around timbers. Previous surveys in 2019 confirmed the presence of two roosting Common Pipistrelles *Pipistrellus pipistrellus* in the barn.

Given the current low suitability, the presence of the bat droppings, and the previous records of roosting bats, two nocturnal emergence surveys were carried out on the evenings of 17th August and 5th September 2023. The surveys began 15 minutes before sunset and continued for up to one and three quarter hours after sunset.

A single Common Pipistrelle emerged from the interior of the barn on 17th August 2023, but there were no roosting bats on 5th September 2023.

No pipistrelles, or other crevice dwelling bats, were recorded in the adjoining sheds or the main building, although a small number of Common and Soprano Pipistrelle Bats *Pipistrellus pygmaeus* were noted flying round the site and neighbouring properties, having emerged elsewhere.

Also noted was a Noctule Bat *Nyctalus noctula* flying overhead, and a passing Natterer's Bat *Myotis nattereri*.

The few scattered Brown Long-eared Bat droppings found in the shed were very old, with no roosting bat present during the pre-survey inspections and nocturnals. Indeed, it was clear that no Brown Long-eared Bat had roosted in the shed since 2019, and the previous roost site was cobwebbed over.

Since the proposed works will cause the loss of the bat roost in the barn only, a licence from Natural England will be required.

Given the low status of the roost, the site is eligible for registration under Natural England's Bat Mitigation Class Licence (BMCL) scheme.

Mitigation measures will include a 'toolbox talk' by a Registered Consultant (RC) to contractors about bats and what to do if one is unexpectedly encountered, a pre-works inspection of the building by the RC, supervision of any destructive roof works by the RC, the latter undertaken by hand, and the provision of a Harlech Bat Box on the southern gable end of the barn in which to relocate a bat if one is discovered before or during works. The box will be retained in position for a minimum of five years.

It should be noted that under BMCL there will be no timing constraints, and an ecologist will be present at all key stages to ensure the replacement roosting provision listed above is correctly installed.

*

There were no in-use birds' nests in the buildings, although very old nests were noted.

Since all in-use bird's nests and their contents are protected from damage or destruction, any works which affect the building should ideally be undertaken outside the period March to August inclusive. If this time frame cannot be avoided, a close inspection of the building affected will be undertaken prior to works commencing. Work will not be carried out in close proximity to any in-use nest, and a minimum buffer of 5.0 metres will be established, although this could be more depending on the sensitivity of the species. Any in-use nest will be allowed to fledge before it is disturbed.

1. INTRODUCTION

In August 2023, Cotswold Wildlife Surveys was instructed by Quay Associates, to undertake a bat survey of the barn, sheds and former public house at North Arms House on Mills Lane in Wroxton near Banbury. On 17th August 2023, a visit was made to the property to carry out a diurnal re-inspection of the buildings to check for signs of bat occupation.

Given the current low suitability for roosting bats, the presence of old bat droppings, and the previous records of roosting bats, two nocturnal emergence surveys were carried out on the evenings of 17th August and 5th September 2023.

The results of the re-inspections and nocturnal 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

In order 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 the suitability for bat roosting is considered to be low, medium or 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, Myotis bats (Natterer's and Whiskered/Brandt's *Myotis mystacinus/M. brandtii*), and Lesser Horseshoes *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 these 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.

Visits will 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. that bat use is confirmed, the number and timing of visits 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 but low suitability, just one nocturnal emergence survey is required, this to be in the optimum period.

For medium suitability a minimum of two visits are needed, of which one must be in the optimum period, and one must be a dawn re-entry survey. With high suitability, three visits 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 17th August 2023, a thorough inspection of the redundant barn and sheds, and the house, was made by Andy Warren (Natural England bat licence No. 2015-16489-CLS-CLS) and James Warren (Natural England bat licence No. 2023-10988-CLS-BAT), including the exterior and interior walls, roof coverings, roof spaces, eaves, gables, fascias, roof and ceiling timbers, window casements and door frames.

10x42 Nikon 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.

On the evenings of 17th August and 5th September 2023, nocturnal emergence surveys of the buildings were undertaken by Andy Warren, James Warren and assistant, to determine the presence or absence of roosting bats.

The surveys began 15 minutes before sunset and continued for up to one and three quarter hours after sunset.

The surveys were aided by the use of electronic Echo Meter Touch Pro and BatBox Duet bat detectors and i-pads. This facilitates the detection of bats, and computer analysis of recordings aids in the identification of individual species, in particular those which might be utilising different frequencies simultaneously.

Pulsar Accolade LRF XP50 Pro Thermal Binoculars were also used to check for roosting bats and to assess bat activity around the site.

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

3. RESULTS

3.1 Desk Study

In this instance a search of bat data was not considered necessary, as the site had previously been surveyed in June and July 2019. Bat species recorded included Common and Soprano Pipistrelles, Brown Long-eared Bat, a *Myotis* species, and Noctule.

3.2 Location

Wroxton is a village located 4.5 kilometres west-northwest of Banbury town centre. Mills Lane runs south off the A422 Stratford Road, with North Arms House lying about halfway down the lane. The Ordnance Survey Grid Reference is SP 41479 41784 (Appendix 1).

3.3 Site Description

The survey site comprised a former public house with thatched roof and single storey extension (Fig. 1), a redundant barn with a pitched metal covered roof, and adjoining sheds (Fig. 2).



Figs. 1 & 2 Extension (L) and barns with adjoining sheds (R)

The buildings were set within a lawned garden and asphalt hardstanding (Fig. 3).



Fig. 3 Lawned garden

The former public house fronted Mills Lane.

The layout of the site is shown in the aerial photograph in Appendix 2.

3.4 Building Survey

The daytime re-inspection was carried out on 17th August 2023, commencing at 18:00. The weather conditions during the time of the survey were recorded and are presented in Table 1 below.

Parameter	Value
Temperature (°C)	22.0
Cloud cover (%)	100
Precipitation	None
Wind speed (Beaufort scale)	1-2 SW

Table 1 Weather conditions during the diurnal survey

3.4.1 Bats

The barn was built of stone and had a pitched corrugated metal roof, this intact with no panels missing.

There was an opening at the front of the building where a door had been removed, and there was a row of vent holes along the front elevation (Figs. 4 and 5).



Figs. 4 & 5 Barn

Although the gable ends were partially smothered with Ivy *Hedera helix*, the stonework was sound throughout, with no external gaps or crevices suitable for bat roosting (Figs. 6 and 7).

Internally the roof was unlined and supported by relatively modern timbers, these lightly cobwebbed (Figs. 8 and 9).

The first floor had been removed, and the building was now open to the roof (Fig. 10).

No sign of bat activity was found in the barn.



Figs. 6 & 7 Gable ends of barn



Figs. 8 & 9 Interior of middle barn



Fig. 10 Interior of barn

The adjoining sheds were single storey, with gently sloping roofs covered by corrugated fibre cement panels. The panels were largely intact, but there was a hole in the panel in the southeastern corner.

One shed was enclosed and the other was open-fronted (Figs. 11 and 12). The latter had an open window in the rear and the aforementioned hole in the roof. The roof was heavily cobwebbed and the whole interior was brightly illuminated and drafty.

The enclosed section was equally thickly cobwebbed, in particular the roof timbers and the rear wall stonework (Fig. 13).

No roosting Brown Long-eared Bat was observed in the corrugations, but the droppings noted in 2019 were still present, although now they were very old and crumbling to dust (Fig. 14). There were no recent droppings, and the building was not thought to have been used by the bat since 2019.



Figs. 11 & 12 Interior of sheds



Figs. 13 & 14 Interior of shed and Brown Long-eared Bat droppings

The former public house had very recently been re-thatched, and as a result the roof covering was in good condition. There were still a few small gaps along the eaves, and the chimneys had not been re-pointed, suggesting that bat roosting sites were still present.

The single storey extension had a pitched, slate tiled roof, this also in good condition, with just one dislodged slate (Figs. 15 and 16).



Figs. 15 & 16 Extension of house

The external stonework was sound throughout, and the window casements and door frame were tightly fitting.

Internally the extension was open to the roof, this lined with 1F felt (Fig. 17). It was heavily cobwebbed and no signs of bat occupation were found.



Fig. 17 Interior of extension

3.4.2 Other species

There was an old Blackbirds' *Turdus merula* nest in the sheds, this taken over by a Wren *Troglodytes troglodytes* (Fig. 18), but no sign of nesting birds in the barn or house.



Fig. 18 Old Wrens' in Blackbirds' nest in shed

3.5 Emergence Re-surveys

3.5.1 1st Emergence Survey

The first emergence survey was carried out on 17th August 2023, commencing at 20:10 and finishing at 22:15. The weather conditions during the time of the survey were recorded and are presented in Table 2.

Parameter	Value
Temperature (°C)	21.0 start, 19.0 end
Cloud cover (%)	100
Precipitation	None
Wind speed (Beaufort scale)	1-2 SW
Sunset	20:24

Table 2 Weather conditions during the first emergence survey

No roosting bats were found during a pre-survey inspection.

The nocturnal survey revealed one Common Pipistrelle emerging from the interior of the barn. Low levels of Common Pipistrelle and Soprano Pipistrelles were also observed, with a Noctule passing overhead.

Details of the bat observations and detections are listed below.

Time	Observation
20:39	Common Pipistrelle emerged from the interior of the barn
20:45	Common Pipistrelle flying in the trees behind the barn
20:45	Soprano Pipistrelle flew by
20:45	Common Pipistrelle flew along the lane, at the edge of the beer garden
20:49	Soprano Pipistrelle recorded behind the barns
20:50	Soprano Pipistrelle flew along the front of the barn, into the open section, back out and away again
20:58	Noctule flew over the site
20:58	Common Pipistrelle passed by
21:01 – 21:05	Common Pipistrelle foraged around the gardens
21:08	Soprano Pipistrelle flew by
21:09	Common Pipistrelle passed by
22:15	No further detections were made and survey ended

The bat flight paths at emergence on 17th August 2023 are shown on Plan 1 below.

Plan 1 Bat flight paths at emergence on 17th August 2023



- Common Pipistrelle →
- Soprano Pipistrelle →
- Noctule Bat →
- Positions of observers *
- Brown Long-eared Bat droppings *

3.5.2 2nd Emergence Survey

The second emergence survey was carried out on 5th September 2023, commencing at 19:30 and finishing at 21:25. The weather conditions during the time of the survey were recorded and are presented in Table 3.

Parameter	Value
Temperature (°C)	25.0 start, 22.5 end
Cloud cover (%)	0
Precipitation	None
Wind speed (Beaufort scale)	0
Sunset	19:45

Table 3 Weather conditions during the second emergence survey

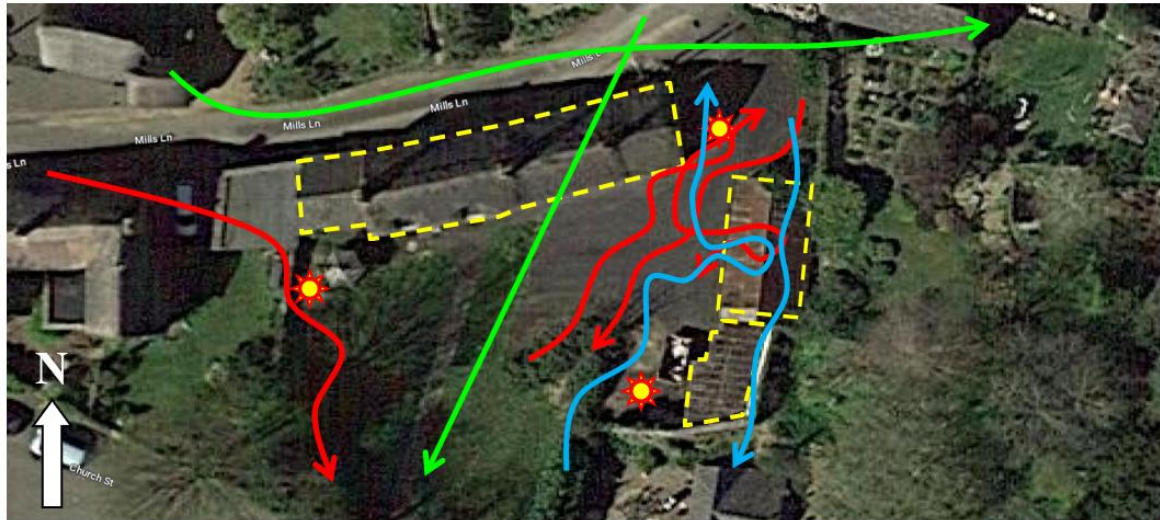
During the nocturnal survey, no bats emerged from any of the buildings. Common Pipistrelles were active around the site, with Noctules and Soprano Pipistrelles passing by infrequently. A Natterer's Bat flew through the site, briefly entering the barn and then flying off. It or another passed by.

Details of the bat observations and detections are listed overleaf.

Time	Observation
19:56	Common Pipistrelle passed by in the distance
20:03	Common Pipistrelle recorded social calling in the distance
20:06	Common Pipistrelle recorded in the distance
20:07	Noctule flew over the site
20:09	Common Pipistrelle flew through the yard near the pitched roofed extension
20:11	Common Pipistrelle flew through the yard in front of the barn
20:12	Common Pipistrelle flew through the yard in front of the barn
20:14	Common Pipistrelle flew in and out of the barn through the open section
20:16	Noctule flew over the site
20:20	Noctule flew over the site
20:20	Common Pipistrelle flew by
20:21	Natterer's Bat flew from the south, into the barn, then out and away
20:23	Common Pipistrelle flying around the site
20:26	Soprano Pipistrelle flew by
20:30	Natterer's Bat flew by
20:33	Soprano Pipistrelle flew by
21:25	No further detections were made and survey ended

The bat flight paths at emergence on 5th September 2023 are shown on Plan 2 overleaf.

Plan 2 Bat flight paths at emergence on 5th September 2023



Common Pipistrelle →

Soprano Pipistrelle →

Noctule Bat →

Natterer's Bat →

Positions of observers ✨

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 suitability for roosting was also assessed.

This was considered to be low, as there were a few gaps in the stonework and around timbers.

The presence of roosting pipistrelle bats was confirmed by the nocturnal surveys, when a single Common Pipistrelle emerged from the interior of the barn on 17th August 2023.

No pipistrelles, or other crevice dwelling bats, were recorded in the adjoining sheds or the main building, although a small number of Common and Soprano Pipistrelle Bats were noted flying round the site and neighbouring properties, having emerged elsewhere.

Another bat frequently encountered in buildings is the Brown Long-eared. 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.

The few scattered Brown Long-eared Bat droppings found in the shed were very old, with no roosting bat present during the pre-survey inspections and nocturnals. Indeed, it was clear that no Brown Long-eared Bat had roosted in the shed since 2019, and the previous roost site was cobwebbed over.

Since the proposed works will cause the loss of the bat roost in the barn only, a licence from Natural England will be required.

Given the low status of the roost, the site is eligible for registration under Natural England's Bat Mitigation Class Licence (BMCL) scheme.

Mitigation measures will include a 'toolbox talk' by a Registered Consultant (RC) to contractors about bats and what to do if one is unexpectedly encountered, a pre-works inspection of the building by the RC, supervision of any destructive roof works by the RC, the latter undertaken by hand, and the provision of a Harlech Bat Box on the southern gable end of the barn in which to relocate a bat if one is discovered before or during works. The box will be retained in position for a minimum of five years.

It should be noted that under BMCL there will be no timing constraints, and an ecologist will be present at all key stages to ensure the replacement roosting provision listed above is correctly installed.

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There were no in-use birds' nests in the buildings, although very old nests were noted.

Since all in-use bird's nests and their contents are protected from damage or destruction, any works which affect the building should ideally be undertaken outside the period March to August inclusive. If this time frame cannot be avoided, a close inspection of the building affected will be undertaken prior to works commencing. Work will not be carried out in close proximity to any in-use nest, and a minimum buffer of 5.0 metres will be established, although this could be more depending on the sensitivity of the species. Any in-use nest will be allowed to fledge before it is disturbed.

5. REFERENCES

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APPENDICES

Appendix 1: Location plan

Appendix 2: Site layout

Appendix 1: Location plan



North Arms House, Mills Lane, Wroxton, Banbury

Appendix 2: Site layout



Barn

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Report

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