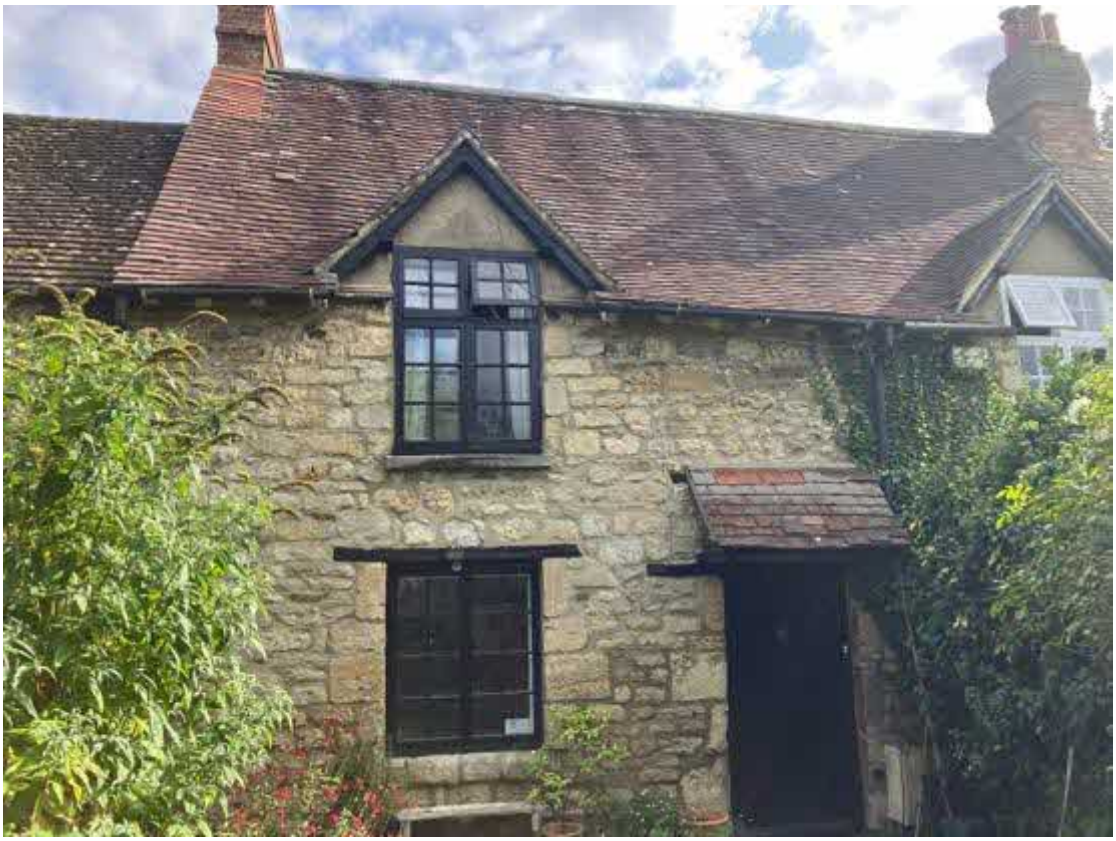
Bat Survey Report for 1a Mill Lane, Old Marston, Oxford, OX3 0PY



Cotswold Wildlife Surveys

26th September 2023

QUALITY CONTROL

Date	Version	Name
26.09.23	Daytime inspection	Mollie Paxford – BSc (Hons), MSc Associate
10.11.23	Report prepared	Mollie Paxford – BSc (Hons), MSc Associate
10.11.23	Checked	Caroline Warren – BSc (Hons) Director
15.11.23	Reviewed and issued	Andy Warren – BSc (Hons), MA (LM), Tech Cert (Arbor A), MCIEEM, TechArborA Director

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* (4th edition, Collins, 2023). If there has been deviation from recognised practice, justification/explanation has been given.

CONTENTS

Page No.

SUMMARY **4**

1. INTRODUCTION **5**

2. METHODOLOGY **6**

3. RESULTS **8**

3.1 Desk Study 8

3.2 Location 8

3.3 Site Description 8

3.4 Building Survey 9

3.4.1 Bats 9

3.4.2 Other species 11

4. CONCLUSIONS AND RECOMMENDATIONS **12**

5. REFERENCES **13**

APPENDICES **13**

Appendix 1: Location plan 14

Appendix 2: Site layout 15

SUMMARY

At 1a Mill Lane in Old Marston, Oxford, planning permission is being sought for alterations to the house.

As this could impact on features typically used by bats as roosting places, a diurnal inspection was undertaken on 26th September 2023, to assess the building for signs of bat occupation.

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

The suitability for roosting pipistrelles *Pipistrellus sp* was considered to be negligible. Although there were a few gaps under the roof tiles on the west roof slope, this section was unlined and as such all gaps led directly into the roof void and not into a small cavity. No evidence of bat activity or occupation were found.

At the time of the survey, 1a Mill Lane was not identified as a bat roost, and as such no further surveys or mitigation measures are required.

*

No birds' nests were found in or on the building.

1. INTRODUCTION

In September 2023, Cotswold Wildlife Surveys was instructed by Nicolas Crombie, to undertake a bat survey of 1a Mill Lane in Old Marston, Oxford. On 26th September 2023, a visit was made to the property to carry out a diurnal inspection of the building to check for signs of bat occupation.

The result of the survey is 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 (2023) 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 emergence surveys.

The preliminary roost assessment (PRA) is usually in the form of a diurnal walkover and can be carried out at any time of the year. It provides an opportunity to check for signs of bat occupancy and/or the suitability for bat roosting.

Evidence of bat activity includes droppings, scratch marks, feeding remains, carcasses, or even roosting animals, whilst suitability is determined by the type and number of potential roost features (PRFs) typically used by bats.

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 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.

Where bats are found, or there is evidence of bat occupation or activity, i.e. that bat use is confirmed, a roost characterisation survey is undertaken. The results are used to inform the impact assessment and design of mitigation measures. Roost characterisation includes nocturnal emergence surveys, unless sufficient information has already been collected using robust survey methods with no significant constraints.

Nocturnal emergence surveys allow numbers and species of bats to be confirmed, and should only be undertaken when bats are out of hibernation and in their summer roosts.

The bat active period is generally considered to be between April and October, although particularly cold weather will affect the level and extent of bat activity. Indeed, the air temperature at the start of each survey should be at least 10°C or above, with no strong wind or heavy rain. The survey starts 15 minutes before sunset and continues for one and a half to two hours after sunset.

Visits will be a minimum of three weeks apart, and the number of surveys and timing is dependent on the evidence found or the suitability of the site to bats. This will be determined by the ecologist.

In general, at least two emergence nocturnal surveys will be carried out, but a third visit may be necessary if the results are inconclusive or further information is required.

Nocturnal emergence surveys 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, moderate or high.

For a site with no evidence but low suitability, just one nocturnal emergence survey is required, this to be in the period May to August.

For moderate suitability a minimum of two visits are needed between May and September, of which one must be in the period May to August.

With high suitability, three visits will be necessary between May and September, of which two must be in the period May to August.

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

The number of surveyors and/or the use of night vision aids (NVAs) is determined by the ecologist, and is dependent on the complexity of the structure. For simple structures just one surveyor using an appropriate number of NVAs will be sufficient, but for larger sites and/or more complex or irregularly shaped structures, e.g. those with multiple elevations and/or roof slopes, more surveyors will be required.

On 26th September 2023 a thorough inspection of the house was made by Mollie Paxford (Natural England bat licence No. 2020-47378-CLS-CLS), including the exterior and interior walls, roof covering, roof void, eaves, gables, window casements and door frames.

10x42 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 gaps which could not be inspected with a torch or by use of binoculars from a ladder.

The result of the survey is 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 2.5 km of 1a Mill Lane, the following development licences for bats were issued by Natural England:

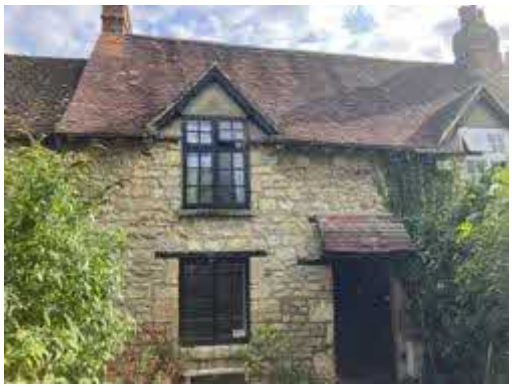
2016-22411-EPS-MIT – 1.6 km east for Common Pipistrelle *Pipistrellus pipistrellus* and Soprano Pipistrelle *P. pygmaeus*;
2019-41811-EPS-MIT – 2.4 km south for Common Pipistrelle and Brown Long-eared;
2016-22076-EPS-MIT – 2.0 km southwest for Common Pipistrelle;
2018-38241-EPS-MIT – 2.0 km southwest for Soprano Pipistrelle;
2014-2499-EPS-MIT – 2.1 km west for Common Pipistrelle;
EPSM2012-4539 – 2.3 km northwest for Common Pipistrelle.

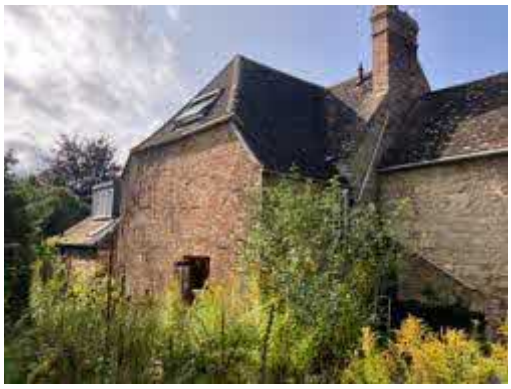
3.2 Location

Old Marston is a village situated approximately 3.0 km northeast of Oxford city centre. Mill Lane runs north out of the village, with 1a situated on the east side, at the junction with Elsfield Road. The Ordnance Survey Grid Reference is SP 52669 08849 (Appendix 1).

3.3 Site Description

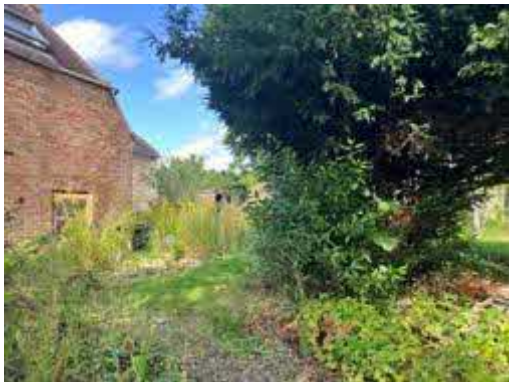
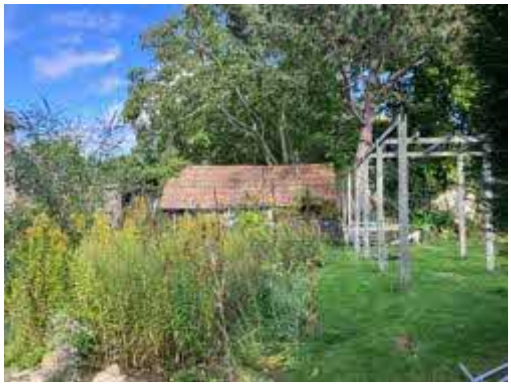
The survey site comprised a terraced cottage with a pitched roof and a hipped roofed rear extension (Figs. 1 and 2)





Figs. 1 & 2 1a Mill Lane

There was a small mature garden to the rear (Figs. 3 and 4), which contained trees and shrubs, as well as mown lawn.

Figs. 3 & 4 Garden

The site was set within a village on the edge of Oxford.

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

3.4 Building Survey

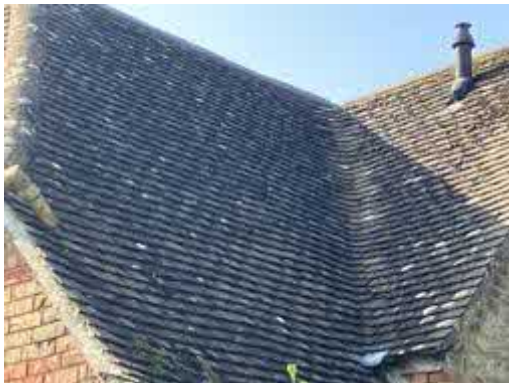
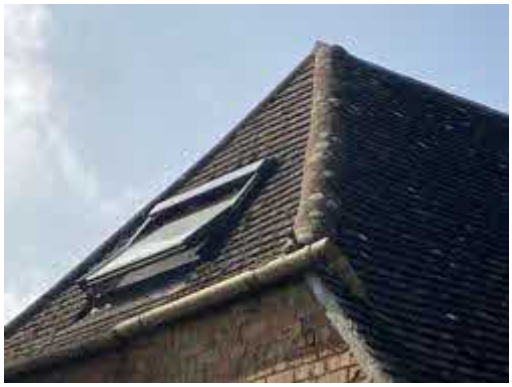
The daytime inspection was carried out on 26th September 2023 commencing at 13:00. The weather conditions during the time of the survey were recorded and are presented in Table 1 below.

Parameter	Value
Temperature (ºC)	17.0
Cloud cover (%)	30
Precipitation	None
Wind speed (Beaufort scale)	0

Table 1 Weather conditions during the diurnal survey

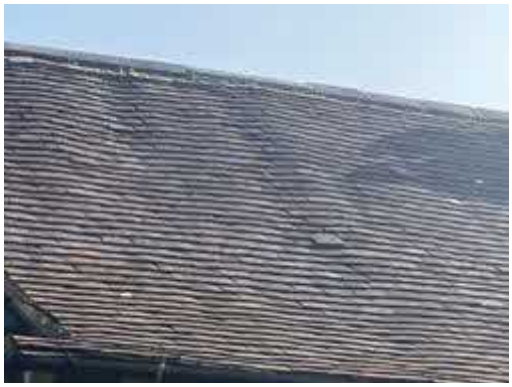
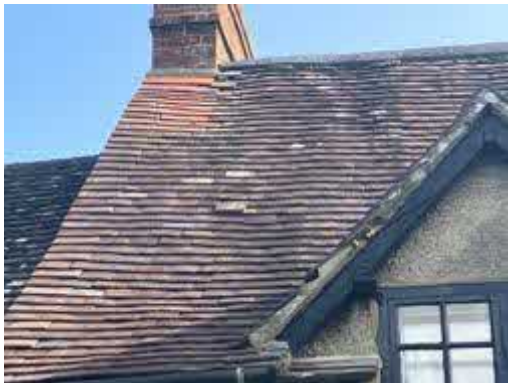
3.4.1 Bats

The ridge and hipped ridges were intact, whilst the roof tiles to the rear were tightly overlapping, with none raised, missing, broken or dislodged (Figs. 5 and 6).

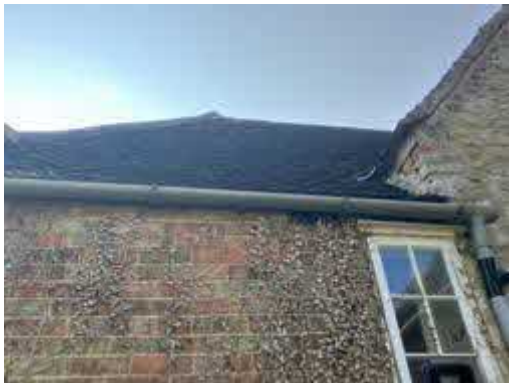
Figs. 5 & 6 Ridge and roof tiles to the rear

The roof tiles to the front were much older and unlined, with several raised and a few slipped tiles (Figs. 7 and 8).

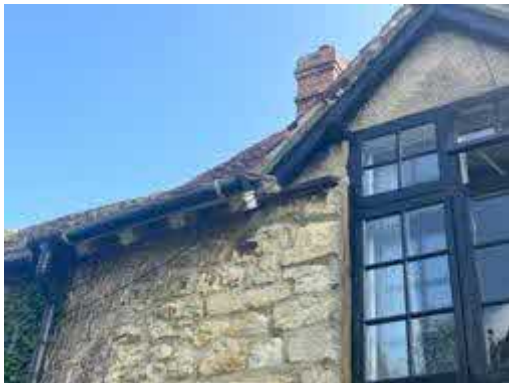
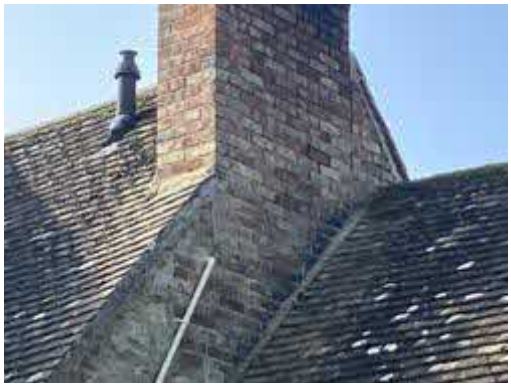
Figs. 7 & 8 Ridge and roof tiles to the front

The eaves were clipped and closed all round (Figs. 9 and 10).

Figs. 9 & 10 Eaves

The dormer windows were finished with a timber barge board tightly fitting to the wall, whilst the north gable end of the house was finished with the roof verges cement sealed (Figs. 11 and 12). A couple of areas of missing cement on the roof ends of the dormer windows was noted, but these gaps were all found to be unsuitable for roosting bats due to either being too shallow or choked with cobwebbing.

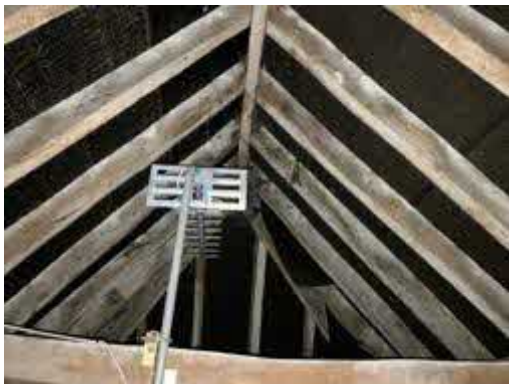



Figs. 11 & 12 Gables

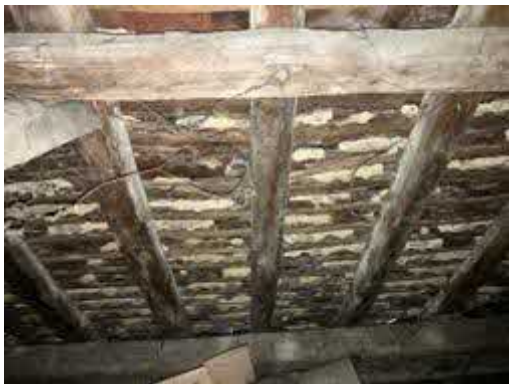
The stone and brickwork were sound throughout, with no gaps or cracks, whilst the window casements and doorframes were all tightly fitting.

Internally there was a single roof void which measured approximately 2.0 metres high and ran the full length and width of the building, including the hipped roofed extension.

The roof was lined with tarred felt, apart from the western roof slope to the front which was unlined (Figs. 13, 14, 15 and 16).



Figs. 13 & 14 Roof void



Figs. 15 & 16 Roof void

Light penetrated through gaps in the unlined section of the roof.

No evidence of bat activity or occupation was found, although there were rat droppings throughout the roof void.

3.4.2 Other species

Apart from spiders and insects, there were no signs of other species using the building, and there were no old or in-used bird's nests.

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 to be negligible, as the only gaps were unsuitable for roosting or led directly into the roof void. Certainly no evidence of bat activity or occupation were found.

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.

No signs of Brown Long-eared Bat activity were found, nor indeed signs of other species which are commonly found in roof spaces.

At the time of the survey, 1a Mill Lane was not identified as a bat roost, and as such no further surveys or mitigation measures are required.

*

No birds' nests were found in or on the building.

5. REFERENCES

Collins, J. (ed.), 2023. *Bat Surveys for Professional Ecologists: Good Practice Guidelines. (4th edition).* The Bat Conservation Trust, London.

Mitchell-Jones A. J. & McLeish, 2004. *Bat Workers' Manual*. Joint Nature Conservation Committee, Peterborough.

Reason, P.F. and Wray, S. (2023). *UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats*. Chartered Institute of Ecology and Environmental Management, Ampfield.

Russ, J., 1999. *The Bats of Britain and Ireland. Echolocation Calls, Sound Analysis and Species Identification*. Alana Ecology Ltd., UK.

Stebbings R.E., 1986. *Which bat is it?* The Mammal Society and The Vincent Wildlife Trust, London.

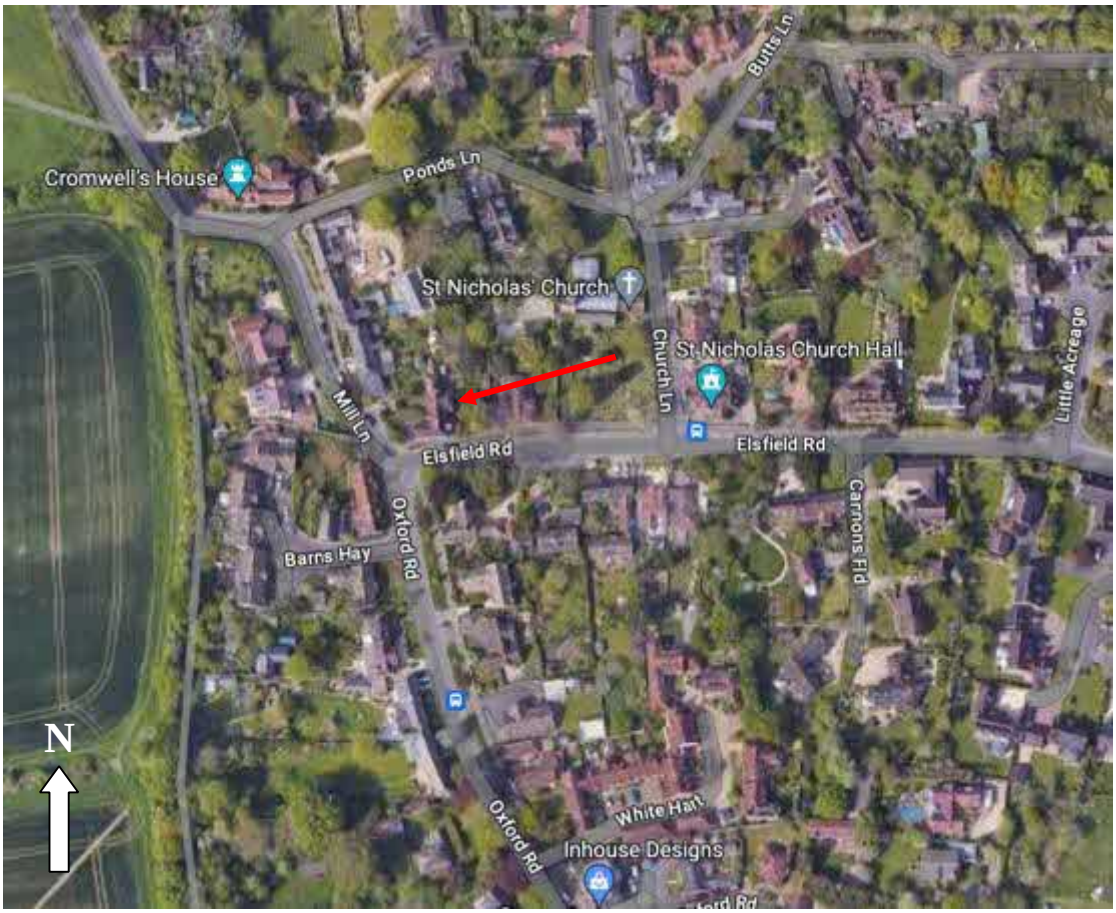
The Vincent Wildlife Trust, 2003. *The Bats of Britain and Ireland*. The Vincent Wildlife Trust, Ledbury.

APPENDICES

Appendix 1: Location plan

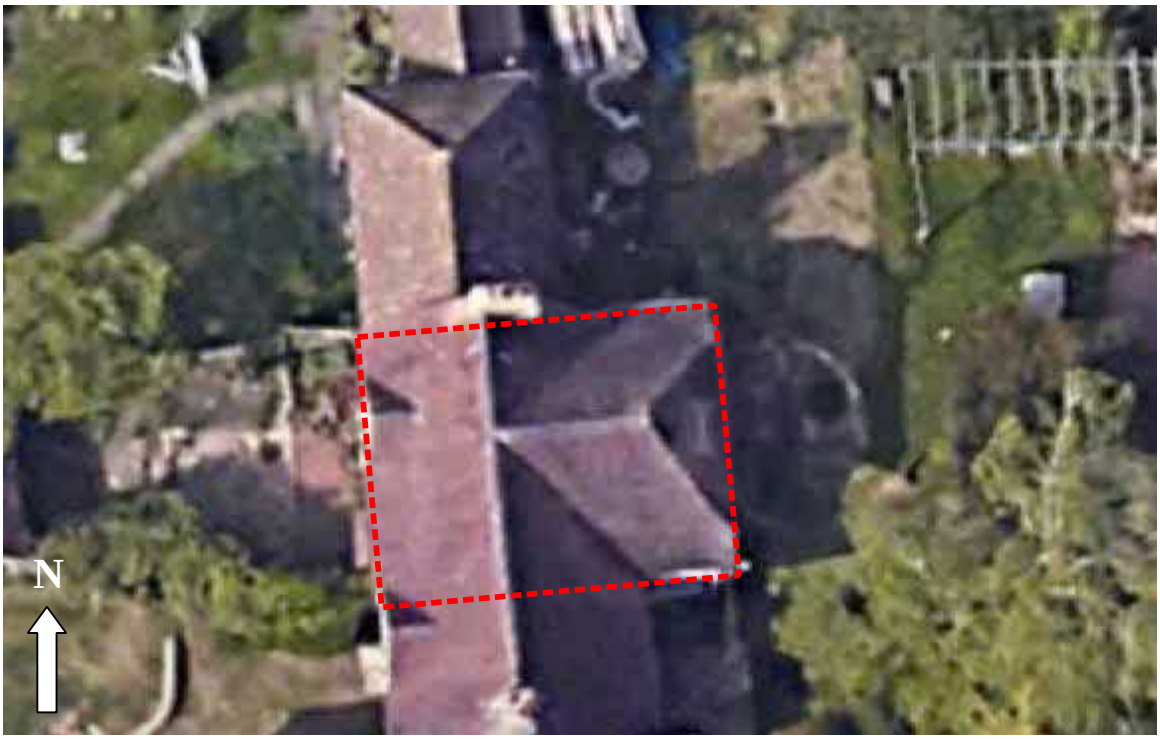
Appendix 2: Site layout

Appendix 1: Location plan



1a Mill Lane, Old Marston

Appendix 2: Site layout



1a Mill Lane

Cotswold Wildlife Surveys Limited
Company Reg. No. 6864285 (England & Wales)

Andy Warren BSc (Hons), MA (LM), Tech Cert (Arbor A), MCIEEM, TechArborA
Withy Way, Charingworth, Chipping Campden, Gloucestershire, GL55 6NU

Tel: 01386 593056/07879 848449

1a Mill Lane, Old Marston – Bat Survey Report

To: Nicolas Crombie

Report Number: 4596-CWS-01

Version: 01

Date: 15th November 2023