

**Bat Survey Report for
Dower House garage, Chastleton,
Moreton-in-Marsh, GL56 0SU**



Cotswold Wildlife Surveys

23rd April and 8th & 23rd June 2021

QUALITY CONTROL

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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 the Dower House in Chastleton, Moreton-in-Marsh, planning permission is being sought to re-develop the detached garage.

As this could impact on features typically used by bats as roosting places, a diurnal inspection was undertaken on 23rd April 2021 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* and/or other crevice dwelling species was considered moderate, as a number of gaps in the timber boarding were observed. No access was possible into one of the roof voids.

Since the suitability was considered moderate, and one of the roof voids had no access, two nocturnal surveys were undertaken, these on the evening of 8th June and the morning of 23rd June 2021.

During the emergence survey a single Common Pipistrelle Bat *Pipistrellus pipistrellus* emerged from the garage, with moderate Common Pipistrelle activity noted in the area. Single passes from Soprano Pipistrelle *P. pygmaeus* and Noctule Bats *Nyctalus noctula* were also recorded.

During the second nocturnal survey on the morning of 23rd June 2021, no bats returned to roost inside the garage, although foraging Common Pipistrelles were noted until quite late, suggesting they were roosting somewhere nearby.

Taking all the visits into account, the status of bats at the site is considered thus:

- Common Pipistrelle – day roost used occasionally by a single animal.

Since the roost will be lost with the conversion of the garage, suitable mitigation 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 roof void by the RC, supervision of the destructive works by the RC, the latter undertaken by hand, and the provision of a Schwegler 2f bat box or similar installed on suitable tree in which to relocate a bat if one is discovered before or during works.

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 is correctly installed.

*

A Barn Swallows' *Hirundo rustica* nest was observed inside the garage.

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 will be undertaken prior to clearance.

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 early April 2021, Cotswold Wildlife Surveys was instructed by Tyack Architects, to undertake a bat survey of the garage at the Dower House in Chastleton, Moreton-in-Marsh. On 23rd April 2021, a visit was made to the property to carry out a diurnal inspection of the building to check for signs of bat occupation.

As bat roost suitability was considered moderate, and no access was possible into one of the roof voids, two nocturnal surveys were undertaken, these on the evening of 8th June and the morning of 23rd June 2021.

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), which adds 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 1994, (or Northern Ireland 1995) (the Habitats Regulations), which defines 'European protected species of animals'.

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 suitability of roosting is considered to be 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 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 23rd April 2021 a thorough inspection of the garage 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 8th June and morning of 23rd June 2021, nocturnal surveys were undertaken by Mollie Paxford (Natural England bat licence number (2020-47378-CLS-CLS) and assistant, to confirm the presence or absence of roosting bats.

The emergence survey began 15 minutes before and continued for one and three quarter hours after sunset. The dawn return survey commenced in the dark two hours before sunrise and continued for 10 minutes after sunrise.

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 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 3.0 km of Dower House the following development licences for bats were issued by Natural England:

- 2011 0.30 km south for Brown Long-eared Bat and Common Pipistrelle;
- 2011 1.25 km northwest for Brown Long-eared Bat, Common Pipistrelle, Natterer's Bat and Soprano Pipistrelle *Pipistrellus pygmaeus*.

3.2 Location

Chastleton is a village located approximately 5.0 km southeast of Moreton-in-Marsh. Dower House lies 60 north of the junction of Kitebrookend Road and Evenlode Lane on the east side of Kitebrookend Road. The garage is situated 3.0 m to the north of the house. The Ordnance Survey Grid Reference of the garage is SP 24734 29194 (Appendix 1).

3.3 Site Description

The survey site comprised a detached, pitched roofed garage (Figs. 1 and 2).



Figs. 1 & 2 Aspects to the front (L) and rear (R)

To the front of the garage was a Cotswold stone gravel drive with mature trees beyond.

The rear garden was laid to lawn with mixed shrubs and large mature trees on the boundaries (Figs. 3 and 4 – overleaf).

The site was surrounded by open fields and mature trees.



Figs. 3 & 4 Views of the rear garden

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

3.4 Buildings Survey

The daytime inspection was carried out on 23rd April 2021 commencing at 09:45. The weather conditions during the time of the survey were recorded and are presented in Table 1 below.

Parameter	Value
Temperature (°C)	10.0
Cloud cover (%)	20
Precipitation	None
Wind speed (Beaufort scale)	0

Table 1 Weather conditions during the diurnal survey

3.4.1 Bats

The ridge had some ridge tiles missing and there were gaps. The roof tiles were mainly tightly overlapping, although broken, dislodged and missing tiles were , whilst the whole roof was covered with chicken wire to stop the roof tiles falling off (Figs. 5-8).



Figs. 5 & 6 Ridges and roof tiles to the front



Figs. 7 & 8 Ridges and roof tiles to the rear

The chimney was sealed with tightly moulded lead flashing (Figs. 9 and 10).



Figs. 9 & 10 Tightly moulded lead flashing

Both gables were finished with the roof verges cement sealed to the gable wall plates, although gaps were observed at the gables (Figs. 11 and 12).



Figs. 11 & 12 Gables with crevices and gaps

The clipped eaves were finished with the roof ends tightly fitting against the timber wall plates all round (Fig. 13 – overleaf).

The feathered edged timber walls had numerous gaps and lifted boards (Fig. 14 – overleaf).



Figs. 13 & 14 Sealed eaves

No signs of bat activity were found around the outside of the garage.

Internally the garage section was open to the tarred felt lined roof. The ridge and gable ends were cobwebbed, whilst a section of missing roof tiles was noted (Figs. 15 and 16).



Figs. 15 & 16 Cobwebbed ridge and hole in the roof

No access was possible into the roof void in the workshop section. No evidence of bat activity or occupation was found inside the garage.

3.4.2 Emergence Survey

The emergence survey was carried out on 8th June 2021, commencing at 21:05 and finishing at 23:00. The weather conditions during the time of the survey were recorded and are presented in Table 2.

Parameter	Value
Temperature (°C)	15.0 start, 13.5 finish
Cloud cover (%)	20
Precipitation	None
Wind speed (Beaufort scale)	0
Sunset	21:23

Table 2 Weather conditions during the emergence survey

A single Common Pipistrelle Bat was seen to emerge from the garage, with moderate Common Pipistrelle activity in the area. Single passes from Soprano Pipistrelle and Noctule Bats were also recorded.

The times of bat observations and detections are shown below.

Time	Observation
21.38	Common Pipistrelle (CP) foraging in the rear garden
21.39	2 x CP flew over the garage from the east
21.40	2 more CP flew over the garage
21.44	CP flew over
21.47	CP emerged from the cladding on the north gable end of the garage
21:53	CPs flying around having come from the east
21.58	SP foraging in the garden
22.10	Noctule flew over the site
22:34	Intermittent CP activity around the garden
22:45	Intermittent CP activity but less frequent
23:00	No further detections were made and survey ended

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

Plan 1 Bat flight paths at emergence on 8th June 2021



Common Pipistrelle Bats →

Soprano Pipistrelle Bat →

Noctule Bat →

Positions of observers *

3.4.3 Dawn Return Survey

The dawn re-entry survey was carried out on 23rd June 2021, commencing at 02.45 and finishing at 05:00. The weather conditions during the time of the survey were recorded and are presented in Table 3.

Parameter	Value
Temperature (°C)	19.0 start, 17.5 finish
Cloud cover (%)	5
Precipitation	None
Wind speed (Beaufort scale)	0
Sunrise	04.47

Table 3 Weather conditions during the dawn re-entry survey

No bats returned to roost inside the garage, although foraging Common Pipistrelles were noted in the area until quite late, suggesting they were roosting somewhere nearby.

The times of bat observations and detections are shown below.

Time	Observation
02.58	Common Pipistrelle (CP) heard but not seen
03.23	CP flew across the garden
03.45	CP foraging in the rear garden
04:04	CP heard but not seen along the lane
04.17	CP heard in the distance
04.22	CP foraging in the garden
04.31	CP flew along the driveway
04.33	CP heard along the lane
04.36	CP flew over the garage
04.47	No further detections were made, and survey ended

The bat flight paths at dawn re-entry are shown on Plan 2 overleaf.

Plan 2 Bat flight paths at dawn re-entry on 23rd June 2021



Common Pipistrelle Bats →

Positions of observers ✨

3.4.4 Other species

A Barn Swallows' nest was found inside the garage (Fig. 17).



Fig. 17 Barn Swallows' nest

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 building 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 moderate as suitable gaps in the timber boarding and the roof were observed. The presence of a roosting pipistrelle was subsequently confirmed by the nocturnal surveys, when a single Common Pipistrelle was recorded emerging from the garage.

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, nor evidence of other bat species which commonly found inside buildings.

Taking all the visits into account, the status of bats at the site is considered thus:

- Common Pipistrelle – day roost used occasionally by a single animal.

Since the roost will be lost with the conversion of the garage, suitable mitigation 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 roof void by the RC, supervision of the destructive works by the RC, the latter undertaken by hand, and the provision of a Schwegler 2f bat box or similar installed on suitable tree in which to relocate a bat if one is discovered before or during works.

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 is correctly installed.

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A Barn Swallows' nest was observed inside the garage.

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 will be undertaken prior to clearance.

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

Collins, J. (ed.) (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines. (3rd edn).* Bat Conservation Trust, London.

English Nature, 2004. *Bat mitigation guidelines.* English Nature, Peterborough.

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

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

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

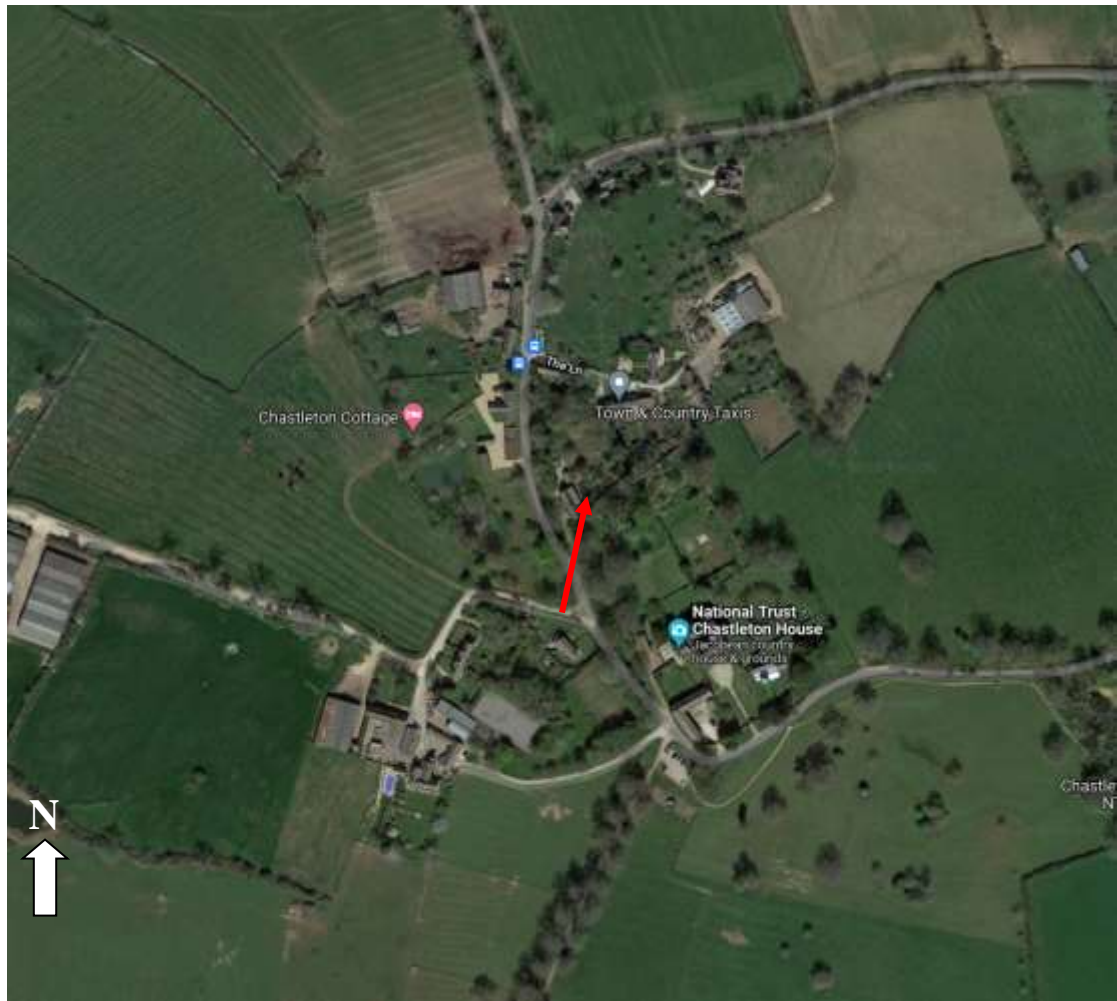
The Vincent Wildlife Trust, 2003. *The Bats of Britain and Ireland.* The Vincent Wildlife Trust, Ledbury.

APPENDICES

Appendix 1: Location plan

Appendix 2: Site layout

Appendix 1: Location plan



Dower House, Chastleton, Moreton-in-Marsh

Appendix 2: Site layout



Garage

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Dower House garage, Chastleton, Moreton-in-Marsh – Bat Survey Report

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