2019 Updated Bat Survey Report for Crockwell Farm, Manor Road, Great Bourton, Banbury, OX17 1QT

Cotswold Wildlife Surveys

15th April 2016 and 6th, 8th & 24th September 2019

QUALITY CONTROL

Date	Version	Name
06.09.20 08.09.20 24.09.20	Daytime inspection Nocturnal survey I Nocturnal survey II	Andy Warren – BSc (Hons), MA (LM), Tech Cert (Arbor A), MCIEEM, TechArborA Director + assistants
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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 Crockwell Farm in Great Bourton, Oxfordshire, outline planning permission has been granted for the conversion of existing barns and agricultural buildings into residential dwellings. The works will also include the demolition of a large, open barn at the northern end of the site.

As this could impact on features typically used by bats as roosting places, a diurnal inspection was undertaken on 15th April 2016, to assess the buildings for signs of bat occupation. All the internal and external structures, especially those associated with the roofs and walls of the buildings were examined.

The suitability for roosting pipistrelles *Pipistrellus sp*., was considered to be negligible, as there were no suitable external cavities.

Although no evidence of pipistrelle activity was found, a single Brown Long-eared Bat *Plecotus auritus* was found within a gap in a timber rafter in the open barn. The bat was originally considered to be hibernating as there was no evidence of any droppings, urine stains or feeding remains nearby. Having reviewed the observation in lieu of the 2019 surveys, it was considered to be roosting rather than hibernating.

In addition, there was an old Swallows' *Hirundo rustica* nest inside the stable block.

As the proposed works will result in the loss of the Brown Long-eared Bat hibernation site, appropriate mitigation will be needed, along with a licence from Natural England consenting to the loss of the roost.

It is therefore suggested that a large timber garden store, with an open front, is erected at the northern end of the site, potentially straddling the two gardens.

The structure will contain two Schwegler 1FF bat boxes (one in each gable end) to act as hibernation/roosting sites, whilst it will also provide a replacement nest site for the Swallows.

As no re-development works were carried out following the original inspection, on 6th September 2019, the site was re-inspected to check the current status of bats.

A roosting Brown Long-eared Bat was again present in a rafter gap in the open barn, but a different gap to 2016.

There were no signs of activity by other bat species, but a small cluster of moth wings and a couple of droppings was evidence of a Brown Long-eared Bat feeding perch in the garage block.

The suitability for roosting pipistrelles continued to be negligible.

Two nocturnal surveys were subsequently carried out on the evenings of 8th and 24th September 2019. These commenced 15 minutes before sunset and continued for one and three quarter hours after sunset.

On 8th September 2019, the Brown long-eared Bat was still roosting, and was observed and detected as it emerged from the open barn. At least two Common Pipistrelle Bats *Pipistrellus pipistrellus* were recorded as they flew onto the site from the village, and a Natterer's Bat *Myotis nattereri* was also noted, again flying in from elsewhere.

On 24th September 2019 the Brown Long-eared Bat was again present, and again two Common Pipistrelle Bats were recorded on site. In addition, a Whiskered/Brandt's Bat *Myotis mystacinus/M. brandtii* was detected as it flew into the garage block and began foraging around inside. A Noctule *Nyctalus noctula* also flew over.

Taking all the surveys into account, the status of bats at Crockwell Farm is considered thus:

- Brown Long-eared Bat – day roost for a single animal;
- Common Pipistrelle – foraging site only;
- Natterer's Bat – foraging site only;
- Whiskered/Brandt's Bat – foraging site only;
- Noctule Bat – overflying only.

Given the presence of a roosting bat, and 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 roof works by the RC, the latter undertaken by hand, and the provision of a Schwegler 1FD bat box or similar on a retained tree at the site in which to relocate a bat if one is discovered before or during demolition.

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.

1. INTRODUCTION

In March 2016, Cotswold Wildlife Surveys was instructed by Roger Coy Partnership, on behalf of their client Ms L Bywaters, to undertake a bat survey of Crockwell Farm in Great Bourton, Oxfordshire. On 15th April 2016, a visit was made to the property to carry out a diurnal inspection of the buildings to check for signs of bat occupation.

The site was re-visited on 6th September 2019 for the new owner, March Projects, with nocturnal surveys subsequently undertaken on 8th and 24th September 2019.

The results of the surveys and inspections 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, Myotis bats (Natterer's and Whiskered/Brandt's), 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 the 15th April 2016 and 6th September 2019, thorough inspections of Crockwell Farm were made by Andy Warren (Natural England bat licence No. 2015-16489-CLS-CLS), including the exterior and interior walls, roof coverings, roof spaces, eaves, gable, roof and ceiling timbers, fascias, window casements and door frames.

10x42 Nikon binoculars and a Fenix TK75 torch were used for the inaccessible/unreachable areas. On these occasions 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 8th and 24th September 2019, nocturnal emergence surveys of the buildings were undertaken by Andy Warren and three assistants, 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 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.

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

3. RESULTS

3.1 Desk Study

A review of the publicly available data on the Cherwell District Council planning website was carried out. Despite a large number of planning applications in Great Bourton, none were accompanied by any bat reports. Furthermore, an Extended Phase 1 Habitat Survey of land in the village carried out by Martin Ecology in 2013 confirmed that no records of protected species were held by Thames Valley Environmental Records Centre (TVERC) within 1.0 km.

The absence of records should not be taken as an indication that the species is not present, rather it is a reflection of under-recording. As such, a search of the wider area revealed bat surveys carried out on two areas of land 2.0-2.5 km south in May 2012.

Species of bat confirmed using the site included Common Pipistrelle, Soprano Pipistrelle *Pipistrellus pygmaeus*, Noctule *Nyctalus noctula*, Daubenton's *Myotis daubentonii* and a Myotis species (considered to be a Daubenton's or possibly a Brown Long-eared). A search of TVERC data at that time for the site contained just two bat records, a Brown Long-eared and a pipistrelle species, both from sites further south.

A survey of land at Cropredy in May 2016 included a TVERC 1.0 km data search, this overlapping Great Bourton. The only records were of a pipistrelle roost and a Myotis species roost in the roof of Cropredy Primary School 1.2 km east-northeast in 2008.

In addition, personal observations of bat species between 2012 and 2019 at Hornton 6.0 km to the west have included Common and Soprano Pipistrelle, Brown Long-eared, Whiskered/Brandt's and a Myotis species.

3.2 Location

Great Bourton is a small village located approximately 4.0 km north of Banbury in Oxfordshire. Manor Road lies to the north of the village, with Crockwell Farm situated on the corner with Stanwell Lane, at Ordnance Survey Grid Reference SP 45510 45679 (Appendix 1).

3.3 Site Description

The site comprised six buildings, which included a garage block, a storage barn, a pigsty, a stable block, an open barn and a derelict barn (Figs. 1 and 2).

The buildings were a combination of stone, brick and block construction, with a range of different roofs.


Figs. 1 & 2 Crockwell Farm in 2016

The surrounding area was dominated by pastoral farmland, with the village to the southeast (Figs. 3 and 4).


Figs. 3 & 4 Surrounding area

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

3.4 Bats

3.4.1 2016 Diurnal inspection

The initial daytime inspection was carried out on 15th April 2016, commencing at 10:00 hrs. The weather conditions during the time of the survey were recorded and are presented in Table 1 below.

Parameter	Value
Temperature (ºC)	10.0
Cloud cover (%)	100
Precipitation	Light drizzle at times
Wind speed (Beaufort scale)	0

Table 1 Weather conditions during the 2016 diurnal survey

Despite the number and style of buildings, none of the barns or other structures contained any features suitable for roosting bats apart from the large, open barn at the

northern end of the site, in which a Brown Long-eared Bat was found roosting within a timber rafter gap.

All the buildings were unlined and the majority were brightly illuminated inside, and although there were gaps under some of the roof tiles, these were in buildings with no roof lining, and the gaps led straight into the interiors. The latter were all heavily cobwebbed, especially the roof timbers and corners where bats would usually roost.

There were no suitable cavities for roosting bats within the block, brick or stonework, despite several large cracks, and the windows and doorframes were all tightly fitting, with no gaps or crevices.

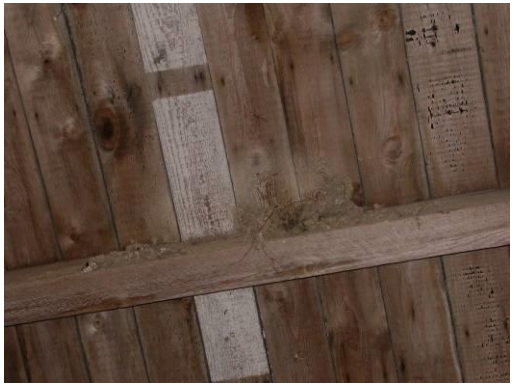
Excluding the Brown Long-eared Bat, no signs of bat activity or occupation were found in or around any of the buildings.

Images of the barns with descriptions are given overleaf.

Building Name	Description	Figures
Garage block	The garage block was a brick building with a pitched tiled roof (Figs. 5 and 6). This was generally sound throughout, with just a few slipped tiles on the roof verge. There were no suitable gaps for roosting bats and the brickwork was sound throughout. The front was open to the inside of the building. Internally the garage block was open to the underside of the roof which was unlined (Figs. 7 and 8). The building was brightly illuminated through the open front and was very heavily cobwebbed. The open nature of the building also made it very cold and quite drafty.	  **Figs. 5 & 6 Garage block**   **Figs. 7 & 8 Unlined roof of garage block**

Storage barn	The storage barn was a brick building with a pitched tiled roof (Figs. 9 and 10). This was generally sound throughout, with just a few slipped tiles on the roof verges and ends. There were no suitable gaps for roosting bats and the brickwork was sound throughout. There was also a small, corrugated metal lean-to on the north elevation which was highly unsuitable for roosting bats. Internally the garage block was open to the underside of the roof which was unlined (Figs. 11 and 12). The building was quite brightly illuminated and was very heavily cobwebbed. The open nature of the building also made it very cold and quite drafty.	  **Figs. 9 & 10 Storage barn and lean-to**   **Figs. 11 & 12 Interior of storage barn**

Pigsty	The pigsty consisted of two adjoining brick structures with a sloping corrugated metal roof (Figs. 13 and 14). The walls were in a very poor state of repair, with areas which had collapsed. However, despite this, there were no suitable crevices for roosting bats. Internally the pigsty was cold and damp due to the poor state of repair and gaps and holes in the roof.	  **Figs. 13 & 14 Pigsty**
Derelict barn	On the western side of the stable block were the remains of a derelict barn which had since collapsed (Fig. 15). There were several timber posts left, but these held no suitable roosting features for bats.	 **Fig. 15 Derelict barn**

Stables	The stables were a combination of block, brick and stone (Fig. 16), with the rear brick wall having collapsed in one corner (Fig. 17). The roof was covered with corrugated metal sheets, which had some gaps between the panels and along the ridge. The building was lined with timber sarking, the boards tightly fitting. On one of the beams an old Swallow's nest was noted. The walls were in a poor state of repair and there were no suitable crevices for roosting bats.	  **Figs. 16 & 17 Stable block**   **Figs. 18 & 19 Timber sarking lined roof of stable block**

Open barn	The open barn was a large structure which had been extended several times (Figs. 18 and 19). It had a timber and metal frame, with a corrugated metal roof and walls in places. There were a number of skylights in the roof, which along with the open sides made the barn very brightly illuminated (Figs. 20 and 21). The open barn was generally highly unsuitable for roosting bats, given the bright interior and exposed nature. However, some of the timber rafters were made from two boards, separated by blocks (Fig. 22). The latter were recessed creating deep, triangular shaped gaps. These appeared suitable for bats and in one of the gaps a single Brown Long-eared Bat was found (Figs. 22 and 23 overleaf).	  **Figs. 18 & 19 Open barn**   **Figs. 20 & 21 Interior of open barn**

Figs. 22 & 23 Roosting Brown Long-eared Bat in gap in rafter (arrowed)

3.4.2 2019 Diurnal inspection

An updated daytime inspection was carried out on 6th September 2019, commencing at 16:00 hrs. The weather conditions during the time of the survey were recorded and are presented in Table 2 below.

Parameter	Value
Temperature (ºC)	16.0
Cloud cover (%)	50
Precipitation	None
Wind speed (Beaufort scale)	0

Table 2 Weather conditions during the 2019 diurnal survey

The site was virtually unchanged since 2016, although it was more overgrown with vegetation (Figs. 24 and 25).

Figs. 24 & 25 Farm in September 2019

A roosting Brown Long-eared Bat was again present in a rafter gap in the open barn, but a different gap to 2016 (Fig. 26).

Figs. 26 & 27 Roosting Brown Long-eared Bat (L) and moth wings (R)

There were no signs of activity by other bat species, but a small cluster of moth wings and a couple of droppings was evidence of a Brown Long-eared Bat feeding perch in the garage block (Fig. 27).

The suitability for roosting pipistrelles continued to be negligible.

3.5 First Emergence Survey

The first emergence survey was carried out on 8th September 2019, commencing at 19:20 and finishing at 21:20. The weather conditions during the time of the survey were recorded and are presented in Table 3.

Parameter	Value
Temperature (ºC)	17.0 start, 15.5 finish
Cloud cover (%)	40
Precipitation	None
Wind speed (Beaufort scale)	0
Sunset	19:37

Table 3 Weather conditions during the first emergence survey

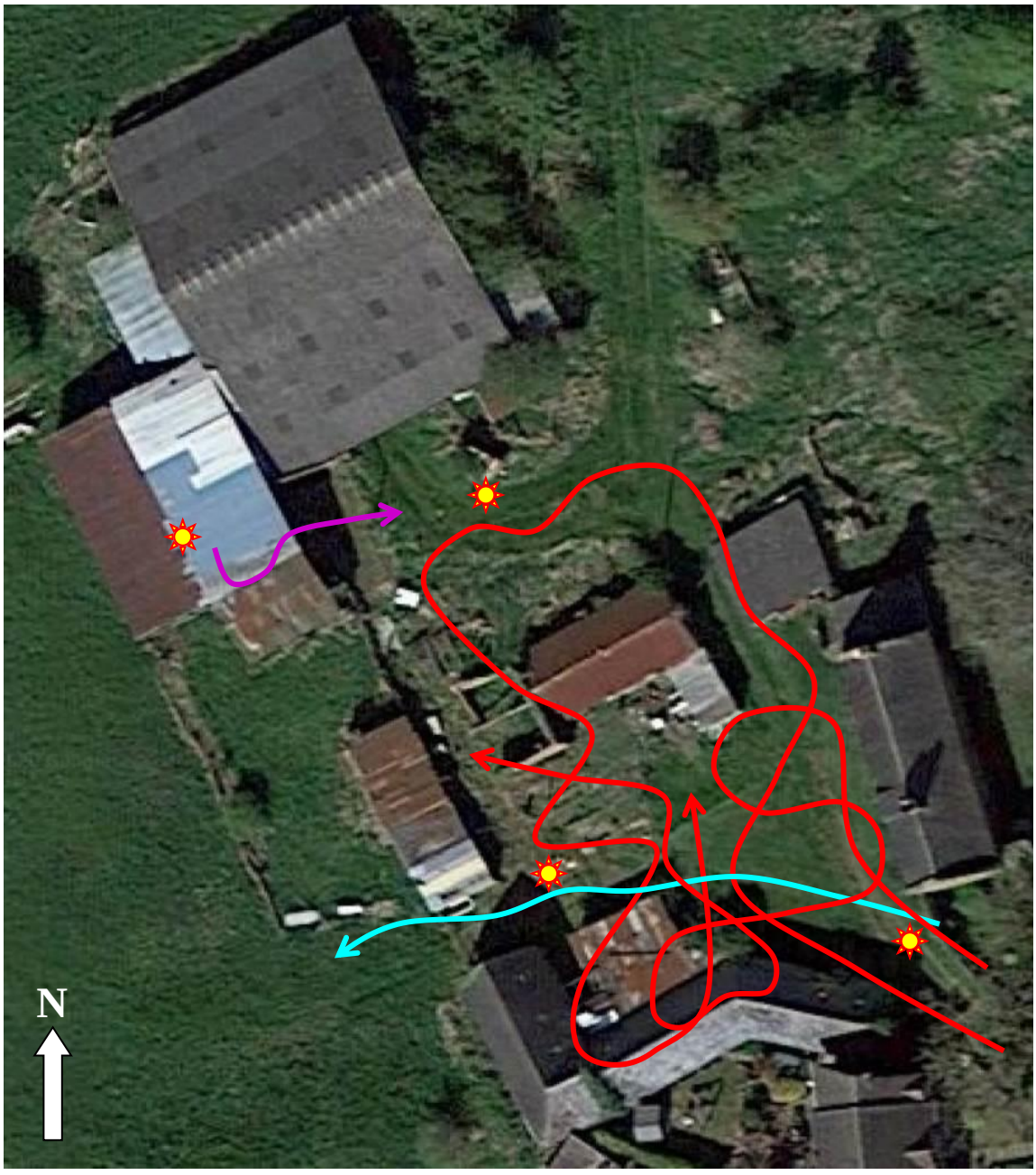
The Brown long-eared Bat was still roosting, and was observed and detected as it emerged from the open barn. At least two Common Pipistrelle Bats were recorded as they flew onto the site from the village, and a Natterer's Bat was also noted, again flying in from elsewhere.

Details of the bat observations and detections are listed below.

Time	Observation
19:46	Common Pipistrelle (CP) appeared on site from the south and began foraging around, including flying in and out of the buildings
19:52	2nd CP flew in and joined the first
19:55	Still 2 x CP foraging around the site
20:02	Both CPs still present
20:10-20:28	Both CPs still foraging around the site, but not interacting with each other
20:31	Brown Long-eared Bat emerged inside open barn and flew off. Just one CP now present
20:40	CP foraging around
20:41	Natterer's Bat flew past and CP still present
20:45	CP flew off
21:20	No further detections were made and survey ended

The flight paths of the bats during the first emergence are shown on Plan 1 overleaf.

Plan 1 Bat flight paths during first emergence on 8th September 2019



Common Pipistrelle Bats

Brown Long-eared Bat

Natterer's Bat

Positions of surveyors

3.6 Second Emergence Survey

The second emergence survey was conducted on 24th September 2019, commencing at 18:45 and finishing at 20:45. The weather conditions during the time of the survey were recorded and are presented in Table 4 below.

Parameter	Value
Temperature (ºC)	15.5 start, 15.0 finish
Cloud cover (%)	70
Precipitation	None
Wind speed (Beaufort scale)	<1W
Sunset	19:00

Table 2 Weather conditions during the second emergence survey

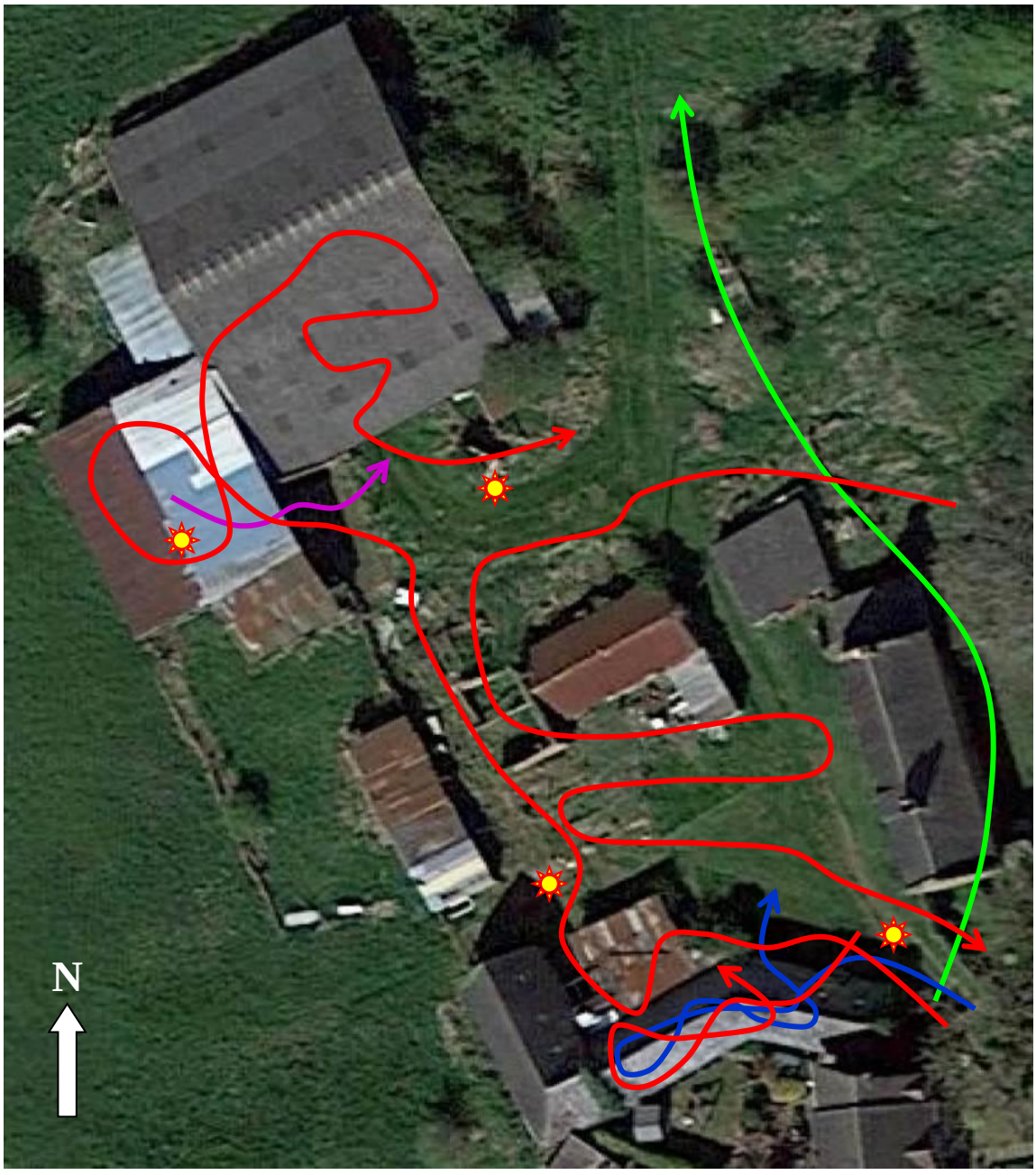
The Brown Long-eared Bat was again present, and again two Common Pipistrelle Bats were recorded on site. In addition, a Whiskered/Brandt's Bat was detected as it flew into the garage block and began foraging around inside. A Noctule also flew over.

Details of the bat observations and detections are listed below.

Time	Observation
19:15	Noctule passed overhead
19:18	Common Pipistrelle (CP) flew onto site and began foraging in open barn
19:23	Whiskered/Brandt's Bat (W/B) flew into garage block through open front
19:24	W/B left garage block and flew off, with CP flying in
19:26	Now 2 x CP on site
19:29-19:36	2 x CPs foraging around the site and then away
19:43	CP returned and flying round
19:46	CP still present
19:50	CP still present
19:51	Brown Long-eared Bat emerged inside open barn and flew off
19:52	CP still present
19:53	Last detection of CP
20:45	No further detections were made and survey ended

The flight paths of the bats during the second emergence are shown on Plan 2 overleaf.

Plan 2 Bat flight paths during second emergence on 24th September 2019



Common Pipistrelle Bats

Brown Long-eared Bat

Noctule Bat

Whiskered/Brandt's Bat

Positions of surveyors

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 negligible, and the absence of roosting pipistrelles was confirmed by the nocturnal surveys, when no bats emerged from the buildings, although at least two Common Pipistrelles were noted flying round the site having appeared from the direction of the village.

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.

A single Brown Long-eared Bat was found roosting within gaps in the rafters in the large, open barn. It was present throughout September 2019, and what was presumably the same animal was noted in April 2016.

In addition, there was an old Swallows' nest inside the stable block.

Taking all the surveys into account, the status of bats at Crockwell Farm is considered thus:

- Brown Long-eared Bat – day roost for a single animal;
- Common Pipistrelle – foraging site only;
- Natterer's Bat – foraging site only;
- Whiskered/Brandt's Bat – foraging site only;
- Noctule Bat – overflying only.

As the proposed works will result in the loss of the Brown Long-eared Bat roost site, appropriate mitigation will be needed, along with a licence from Natural England consenting to the loss of the roost.

Given the presence of a roosting bat, and 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 roof works by the RC, the latter undertaken by hand, and the provision of a Schwegler 1FD bat box or similar on a retained tree at the site in which to relocate a bat if one is discovered before or during demolition.

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.

In addition, it is also suggested that a large timber garden store, with an open front, is erected at the northern end of the site, potentially straddling two gardens.

The structure will contain two Schwegler 1FF bat boxes (one in each gable end) to act as hibernation/roosting sites, whilst it will also provide a replacement nest site for the Swallows.

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.

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.

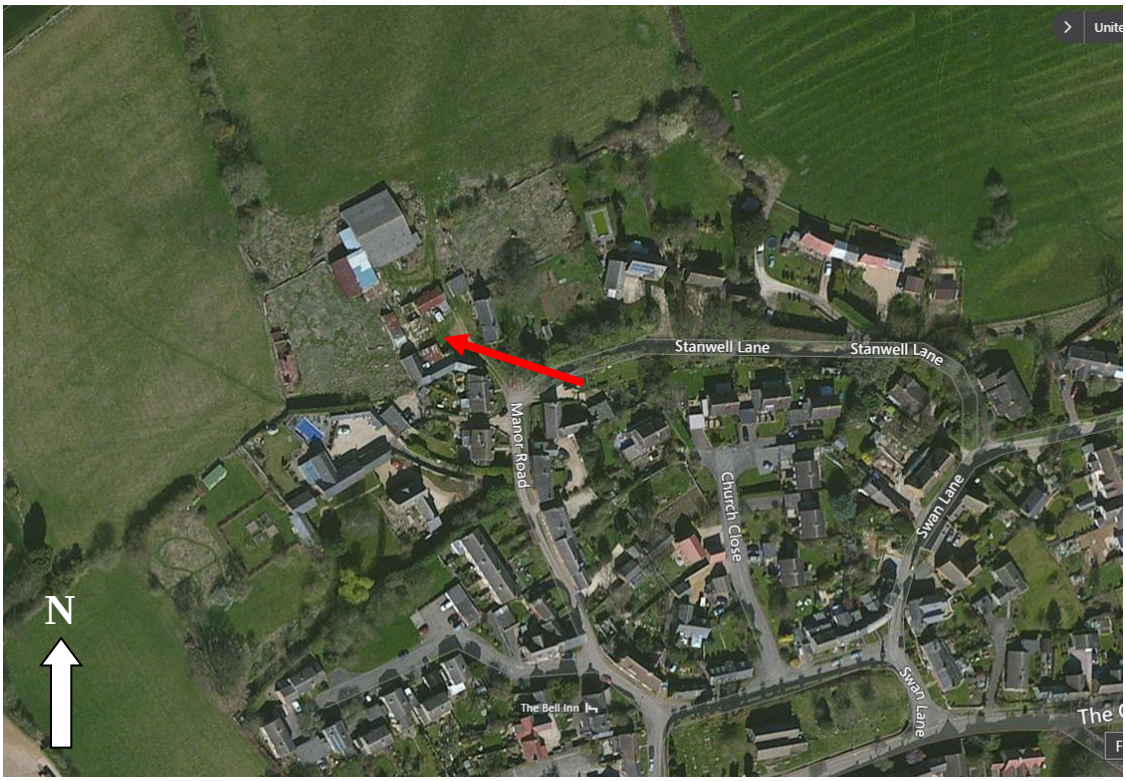
APPENDICES

Appendix 1: Location plan

Appendix 2: Site layout

Appendix 3: Locations of roosting bat

Appendix 1: Location plan



Crockwell Farm, Great Bourton, Oxfordshire

Appendix 2: Site layout

Crockwell Farm

Appendix 3: Locations of roosting bat

Roosting Brown Long-eared Bat in 2016 and 2019

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