



3-5 CHURCH STREET, CAWTHORNE.

OS REF: SE 28512 08091.

BAT SURVEY.

Ref No:- 160866.

Date: 15th September 2016.

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1. INTRODUCTION.

1.1. There are plans to develop a derelict building within Cawthorne, Barnsley. No plans are currently available for the proposed development.

1.2. Whitcher Wildlife Ltd has been commissioned to carry out a bat survey of the site to establish whether there are any issues that may affect the proposed works.

1.3. The daytime site inspection survey was carried out on 31st August 2016 with a bat dusk emergence survey immediately following. This was followed by a dawn swarming survey on 15th September 2016. This report outlines the findings of those surveys and makes appropriate recommendations.

1.4. Appendix I of this report provides additional information on bats and the protection afforded to them and is designed to assist the reader in understanding the contents of this report.

2. SURVEY METHODOLOGY.

2.1. The buildings were thoroughly checked internally and externally for potential bat roosting sites by looking for the following signs:-

- * Holes, cracks or crevices.
- * Bat droppings.
- * Prey remains.
- * Staining on external walls.

2.2. Unless otherwise stated, all lofts were accessed and inspected using a high powered torch and where necessary an endoscope.

2.3. A thorough external inspection was carried out from ground level for any gaps or openings in the roof and ridge tiles, behind soffits and fascias and in the walls of the structure for suitable roost access points and field signs to indicate possible use by bats.

2.4. All window cills, walls and the ground around the structure were checked for signs of bat droppings or staining to indicate possible use by bats. Where necessary, ladders were utilised to gain access within the limits of health and safety. Any access constraints encountered are outlined within the following report.

2.5. All survey work was carried out in line with Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition)*.

2.6. This survey was not followed by a dusk emergence survey.

2.7. This survey was carried out by Steven Whitcher, MCIEEM, Laura Hobbs BSc, MRes, MCIEEM and Lewis Wright BSc, Grad CIEEM.

2.7.1. Since 2002 Steven has gained extensive experience in a professional capacity as an ecological consultant carrying out ecology, protected species and Phase 1 Habitat surveys. Steven's knowledge has been supplemented through the attendance of a variety of courses run by the Chartered Institute of Ecology and Environmental Management (CIEEM), the Bat Conservation Trust (BCT) and the Field Studies Council (FSC) in the relative protected species, plant species and in carrying out Phase 1 Habitat Surveys. Steven holds Natural England Survey Licences in respect of bats, great crested newts, crayfish and barn owls, CCW Survey Licences in respect of

bats and great crested newts and an SNH Survey Licence in respect of bats. Steven is also a Registered Consultant with Natural England and is confined spaces trained and qualified in tree climbing and aerial rescue.

2.7.2. Since 2013 Laura has had experience in a professional capacity carrying out ecology, protected species and phase 1 habitat surveys. Laura holds degrees in Zoology (BSc) and Evolutionary Biology (MRes); Natural England, Scottish Natural Heritage and Natural Resources Wales survey licences for Great Crested Newts and Bats; a Natural England licence for Schedule 1 Birds; and is a full member of CIEEM. Laura has also completed numerous professional courses run by National Biodiversity Network (NBN), Field Studies Council (FSC), Yorkshire Wildlife Trust (YWT), Bat Conservation Trust (BCT), CIEEM and others in relative protected species and phase 1 survey methodologies; and has completed a traineeship with YWT focusing on conservation and survey methods for water voles.

2.7.3. For Lewis Wright, BSc Environmental Conservation covered all aspects within the ecology sector including fauna and flora identification, environmental legislation and ecological monitoring. Post- university Lewis has worked within environmental roles for various environmental organisations, including Lincolnshire Wildlife Trust, Hull City Council and Yorkshire Water. Lewis has extensive experience of environmental management on a range of habitat types. Lewis has worked within professional consultancy carrying out the following ecological surveys; phase 1 habitat, bat, badger, great crested newt, barn owl and water vole. Lewis currently holds Natural England licences for bats, barn owls and great crested newts and Scottish Natural Heritage and Natural Resources for Welsh licenses for bats and great crested newts.

3. SURVEY RESULTS.

3.1. Data Search Results.

3.1.1. South Yorkshire Bat Group was contacted to carry out a data search to identify any records of known bat roosts and/or species within the area surrounding the site. The records provided by SYBG included information gathered as part of the National Bat Monitoring Program (NBMP) via the Bat Conservation Trust (BCT).

3.1.2. Numerous roosts were identified within the area surrounding the site, as shown in figure 1. The closest known roost to the site lies within 200m to the south of the surveyed area. Two additional roosts lie within 500m to the south west of the site, the furthest a Whiskered bat roost and the other of unknown species. Other known roosts within the area include numerous Brown Long Eared roosts and Natterer's roosts, along with unknown Myotis sp. (Whiskered) species and Pipistrelle species roosts.

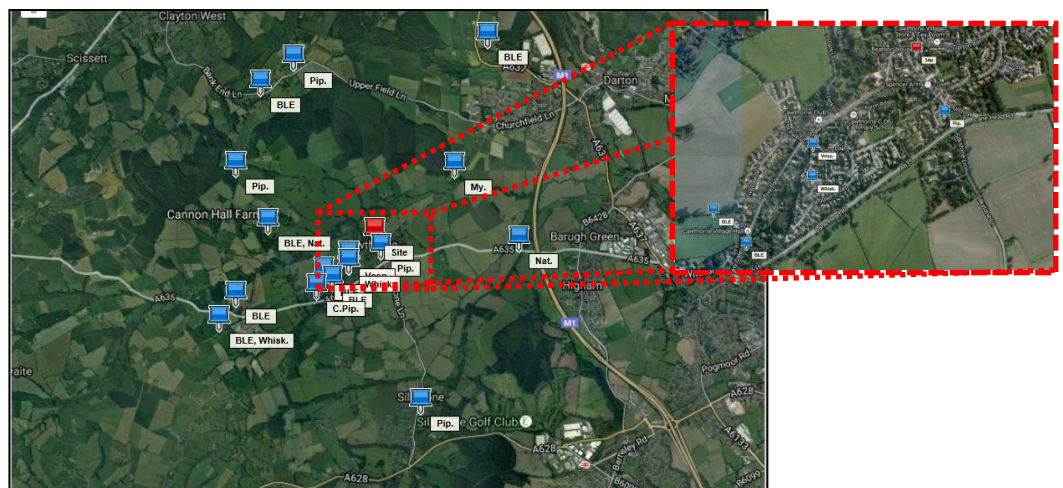


Figure 1. Aerial view of known bat roosts.

BLE – Brown Long Eared, C.Pip – Common Pipistrelle, Whisk – Whiskered Bat, Nat – Natterer's Bat, Pip. – Pipistrelle species, My. – Myotis sp. (Whiskered) species species, Vesp. – Vesper Bat species.

3.1.3. The records show that there are numerous known roosts present within the area surrounding the site with high species diversity.

3.2. Site Description.

3.2.1. The surveyed area covered a derelict barn building currently used for storage within the village of Cawthorne (fig 2). The building is associated with residential properties 3-5 Church Street.

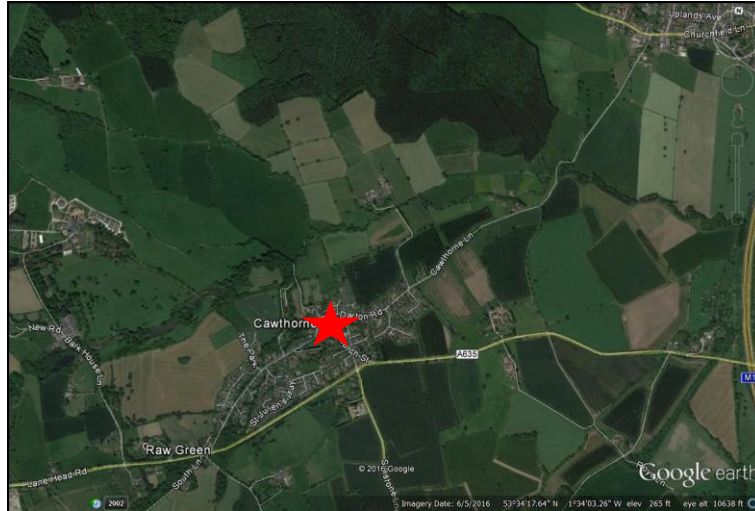


Figure 2. Ariel view of surveyed area and surrounding land.

3.2.2. The site is consequently surrounded by built up residential areas of Cawthorne, with areas of open arable and pastoral farmland further afield. To the north lies an extensive area of woodland associated with Cawthorne Park. Large areas of open water are also present to the north, associated with Cawthorne Dike, Tanyard Beck and Daking Brook within Canon Hall Country Park.

3.2.3. The surveyed building itself lies within a residential garden vegetated with numerous bushes and mature trees. The road on which it is situated also consists of large mature trees.

3.2.4. The surveyed building is a two storey stone built building with large rubble filled walls. The southern section of the building is one level which is open to the roof, whereas the northern section comprises a single room separated by a brick wall with a timber and paneled ceiling (fig 3). Occasional areas of brick were present within the building where repairs have previously been undertaken, most notably along the eastern aspect. Some recent pointing had also been carried out on the southern gable end of the building.



Figure 3. View of surveyed building.

3.2.5. The roof is pitched and stone tiled with king beam timber rafters supporting (fig 4). The windows and doors frames are timber with glass window panes and timber doors, most of which were in situ at the time of the survey.



Figure 4. Internal structure of roof.

3.2.6. The south eastern gable end and eastern aspect of the building was heavily vegetated with common ivy; with the western gable end vegetated with Boston ivy. In

addition large mature trees associated with the property to the rear to the building grew over the pitch of the roof (fig 5).



Figure 5. View of rear of building.

3.3. Daytime Survey Results.

3.3.1. Upon inspection, numerous gaps were identified within the stone walls, many leading into the cavity and there is evidence of them being used by nesting birds (fig 6). Thorough inspections could not be conducted of these crevices due to the depth to which they extend.



Figure 6. Gaps, cracks and cavities within the walls of the building.

3.3.2. Inspection of the roof found it to be generally in a good condition with occasional lifted roof and ridge tiles and areas of slipped tiles which will provide access underneath and into the building (fig 7). The eastern gable end was found to be densely vegetated with ivy.



Figure 7. View of roof.

3.3.3. Within the internal structure of the roof, gaps were observed in between joints of timber rafters. These could not be thoroughly assessed safely at the time of the survey due to their height and the lack of safe place to erect ladders.

3.3.4. No bats or bat field signs were observed within any part of the building, internally or externally. Occasional insect remains were found within the building; however there is no evidence to suggest that these are feeding remains from bats.

3.3.5. Despite there being no evidence of bats using the building, there are numerous potential access points to the building, most notably through slipped tiles and eaves of the building. This would allow bats access to the building to roost within timber rafters. The walls on site also provide numerous areas of potential for bats to access rubble filled cavities. These areas provide potential roosting features for a number of bats; consequently the building has been assessed to provide **moderate** potential for roosting bats in accordance with BCT Good Practice Guidelines.

3.3.6. Swallows were identified to be using the building, potentially along with other species of bird. No active nests were observed at the time of the survey.

3.4. Dusk Emergence Survey Results 31st August 2016.

3.4.1. Immediately following the daytime inspection of the site, a bat dusk emergence survey was conducted by two surveyors who both hold Natural England class 2 survey licences for bats.

3.4.2. The weather at the time of the survey was fine, clear and still with no breeze; the temperature recorded at 19:45 was 21°C. Sunset was at 20:01.

3.4.3. Surveyor 1 was equipped with an Anabat Walkabout bat detector and Surveyor 2 was a BatBox Duet bat detector. In addition four stand alone Anabat SD1/2 bat detectors were placed around site and a video camera was placed inside the building to increase the survey findings.

3.4.4. Figure 8 shows the location of surveyors and equipment used on site.



Figure 8. Location of surveyors and equipment during dusk emergence survey S = surveyor, AB = Anabat, V = Video camera.

3.4.5. Below is a brief outline of the bat activity recorded by each surveyor on site:

3.4.5.1. Surveyor 1.

20:08 – a Noctule was heard but not seen.

20:18 – a Common Pipistrelle was seen to fly from east to west along to the south of the building and towards surveyor 2.

20:20 – a Common Pipistrelle was seen to be flying back and forth from east to west.

20:24 – a Common Pipistrelle was heard but not seen.

20:26 – a bat was seen to fly from west to east, the bat was not echo locating.
20:28 – a Common Pipistrelle was briefly heard making social calls but not seen.
20:30 – a Common Pipistrelle was seen to fly from south to north.
20:31 - a Common Pipistrelle was seen to fly from the west, to forage over the surveyor then fly east.
20:35 – a Myotis species bat was briefly heard but not seen.
20:40 – a Myotis species bat was seen to fly from east to west.
20:47 – a Myotis species bat was seen to fly from the east and forage around to the south of the building.
20:47 – a Common Pipistrelle was heard but not seen.
20:50 – a Myotis species bat was seen to fly from the east and forage around to the south of the building.
20:52 – a Myotis species bat was still foraging around the south side of the building and being picked up occasionally.
20:52 – a Common Pipistrelle was seen to be foraging around the south of the building.
20:53 – a Common Pipistrelle was seen to fly from east to west.
20:59 – a Myotis species bat was seen to fly from east to west and forage before flying back east.
21:00 – a Myotis species bat was seen to fly from east to west and forage before flying back east.

3.4.5.2. Surveyor 2.

20:07 – a Noctule was heard but not seen.
20:18 – a bat was seen to fly from east to west.
20:20 – a bat was seen to fly from the south and forage around the building.
20:20 – foraging activity around the building and adjacent garden continued until the end of the survey.
20:25 – a bat was seen to fly over the building from east to west, the bat was not echo-locating.
20:30 – a bat was seen to fly from east to south foraging over the garden.
20:32 – a bat was seen to fly from east to west, foraging over the garden.
20:34 - a bat was seen to fly from east to west, foraging over the garden.
20:36 – a bat was seen to fly from the south to the north.
20:41 – a bat was heard but not seen.
20:42 – a bat was heard foraging but not seen.

20:46 – a bat was seen to fly from south to north.

20:47 – a bat was heard but not seen, thought to be a *Myotis* sp. (Whiskered) species bat foraging around surveyor 1.

20:50 - a bat was heard but not seen, thought to be a *Myotis* sp. (Whiskered) species bat foraging around surveyor 1.

20:57 – a bat was seen to fly from south to north.

3.4.6. Below is brief outline of the recording from each of the Anabat SD1/2 units utilised during the survey. A full copy of the data from the Anabat SD1/2's is included in Appendix II of this report.

3.4.6.1. *Anabat 1* recorded a total of forty bat calls from 20:05 to 21:11. These comprised of:

- Two Noctule calls at 20:05.
- Fourteen Common Pipistrelle calls between 20:15 and 21:09.
- Twenty three *Myotis* species calls from 20:33 to 21:11.
- One unidentified bat call at 20:59.

3.4.6.2. *Anabat 2* recorded a total of ninety seven bat calls from 20:05 to 21:11. These comprised of:

- One Noctule call at 20:05.
- Seventy two Common Pipistrelle calls between 20:16 and 21:09.
- Twenty four *Myotis* species calls from 20:33 to 21:11.

3.4.6.3. *Anabat 3* recorded a total of three bat calls from 21:03 to 21:11. These comprised of three *Myotis* species calls.

3.4.6.4. *Anabat 4* recorded a total of seven bat calls from 20:19 to 21:11. These comprised of:

- Four Common Pipistrelle calls between 20:19 and 21:06.
- Three *Myotis* species calls between 21:03 and 21:11.

3.4.7. The video camera did not record any bat activity within the building during this survey.

3.4.8. During this survey there was a moderate level of bat activity with Common Pipistrelles and *Myotis* species bats identified to be foraging around the large mature trees adjacent to site and foraging over the garden associated with the surveyed

building and over gardens associated with adjacent properties. A single Noctule bat was identified to fly over the site at 20:05. No bats were seen to emerge from the building during this survey.

3.4.8.1. The Myotis species bats which were identified during the survey have been assessed to be Whiskered bats, although many of the calls were too brief to accurately identify species, with many of the Common Pipistrelle calls comprising social calls.

3.4.8.2. Although the video camera did not pick up any bat activity within the building, the Anabats in this location recorded Myotis species bats at 21:03 and 21:11 and Common Pipistrelles throughout the survey. These recordings are thought to be from bats outside of the building, flying close to the open doors but not entering the structure.

3.5. Dawn Swarming Survey Results 15th September 2016.

3.5.1. A dawn swarming survey was conducted by two surveyors who both hold Natural England class 2 survey licences for bats.

3.5.2. The weather at the time of the survey was misty and still with no breeze; the temperature recorded at 05:00 was 14°C. Sunrise was at 06:41.

3.5.3. Both surveyors were equipped with BatBox Duet detectors. In addition four stand alone Anabat SD1/2 bat detectors were placed around site and a video camera was placed inside the building to increase the survey findings.

3.5.4. Figure 9 shows the location of surveyors and equipment used on site.



Figure 9. Location of surveyors and equipment during dusk emergence survey S = surveyor, AB = Anabat, V = Video camera.

3.5.5. Below is a brief outline of the bat activity recorded by each surveyor on site:

3.5.5.1. Surveyor 1.

- 05:25 – A bat was seen to fly from south to north across the car park.
- 05:34 – A bat was heard but not seen.
- 05:43 – 3 bats were seen to fly from west to east alongside the building.
- 05:48 – A bat was seen to fly from east to west.
- 05:50 – A bat was seen to fly from east to west.
- 05:51 – A bat was seen to fly from east to west.
- 05:54 – A bat was seen to fly from east to west.
- 05:56 – A bat was seen to fly from east to west.
- 06:02 – A bat was heard but not seen.
- 06:06 – A bat was seen to fly from south east to northwest alongside the building.

3.5.5.2. Surveyor 2.

- 05:19 – A bat was heard but not seen, thought to fly from north west to south east over garden.
- 05:25 – A bat was seen to fly from northwest, forage over the garden and fly to the south east.
- 05:31 – A bat flew from east to west.
- 05:32 – A bat was foraging over the garden. This bat was not echolocating.

05:34 – A bat flew from the north east and foraged over the garden, potentially into the building. This bat was echo locating very quietly.

05:35 – A bat was foraging over the garden.

05:41 – A bat flew from the west and foraged over the garden.

05:43 – 3 bats foraged over the garden and flew to east.

05:45 – A bat was heard but not seen.

05:48 – A bat flew from the north and foraged over the garden.

05:54 – Two bats flew from the north and foraged over the garden, one bat flew to the west.

05:55 – Two bats flew to the west.

05:57 – A bat foraged over the garden. This bat was echo locating very quietly.

05:59 – A bat flew from north west to south east. This bat was not echolocating.

6:00 - A bat flew from north west to south east. This bat was not echolocating.

- A bat was foraging over the garden. This bat was echolocating very quietly.

6:01 – A bat flew from east to west.

6:06 – A bat flew from south to north, foraging over the garden. This bat was not echolocating.

6:10 – A bat flew from north east to south west over the building.

3.5.6. Below is brief outline of the recording from each of the Anabat SD1/2 units utilised during the survey. A full copy of the data from the Anabat SD1/2's is included in Appendix II of this report.

3.5.6.1. *Anabat 1* recorded a total of fourteen bat calls from 05:31 to 06:02. These comprised of:

- Two Common Pipistrelle calls at 05:41 and 05:47.
- One unidentified Pipistrelle species call at 05:31.
- Eleven Myotis species calls between 05:41 and 06:02.

3.5.6.2. *Anabat 2* recorded a total of twenty nine bat calls from 05:08 to 05:54. These comprised of:

- Four Common Pipistrelle calls between 05:08 and 05:48.
- Twenty five Myotis species calls between 05:23 and 05:54.

3.5.6.3. *Anabat 3* did not record any bat calls.

3.5.6.4. *Anabat 4* recorded a total of twenty eight bat calls from 05:07 to 05:53. These comprised of:

- Four Common Pipistrelle calls between 05:07 and 05:53.
- Twenty two Myotis species calls between 05:22 and 05:52.
- Two unidentified bat calls at 05:38 and 05:53.

3.5.7. The video camera did not record any bat activity within the building during this survey.

3.4.8. During this survey there was a lower level of bat activity compared to the previous survey with Common Pipistrelles and Myotis species bats identified to be foraging around the large mature trees adjacent to site and foraging over the garden associated with the surveyed building and over gardens associated with adjacent properties. No bats were seen to enter the building to roost, although there is potential for some foraging to have occurred within the building due to the doors being left open prior to and during this survey.

3.4.8.1. The Myotis species bats which were identified during the survey have been assessed to be Whiskered bats with some potential Daubentons' bats, although calls were often too brief to accurately identify species, with many of the Common Pipistrelle calls comprising social calls.

3.4.8.2. Although the video camera did not pick up any bat activity within the building, *Anabat 3* picked up numerous bat calls throughout the survey. These recordings are thought to be from bats outside of the building, flying close to the open doors of the building. The timings of these records are of similar times to those recorded by Surveyor 2 and the recordings on *Anabat 2*.

4. EVALUATION OF FINDINGS.

4.1. South Yorkshire Bat Group held numerous records of bat roosts within the area surrounding the site. The closest known roost lies within 200m to the south of the surveyed area. Two additional roosts lie within 500m to the south west of the site, the furthest a Whiskered bat roost and the other of unknown species. Proposed works will therefore lie sufficient distance from the known roosts to have no impact upon these bats.

4.2. The building was an old barn currently used for storage and subject to disturbance, with doors regularly left open. Although the building was in good condition an initial daytime inspection survey of the site assessed it to provide moderate suitability for roosting bats. This assessment was based on the presence of slipped roof and ridge tiles and access into eaves of the building for bats. The large stone walls with rubble filled cavities will also provide roosting potential for bats. Internal inspection also identified roosting opportunities with timber rafters.

4.3. No bats or bat field signs were identified within any point of the building during this inspection survey.

4.4. The initial dusk emergence survey (31/08/16) identified the majority of bat movement to be from east to west, with foraging over the garden adjacent to the building, and adjacent residential properties. This survey identified a presence of Myotis bats (likely Whiskered, with potential Daubentons although calls were very brief making accurate species identification difficult), Common Pipistrelle bats and Noctule bats within the area. No bats were seen to emerge from the building or show any interest in using the structure.

4.5. The subsequent dawn swarming survey identified the majority of bat movement to be from west to east and from north east to south west, with foraging over the adjacent garden. This survey identified a presence of Common Pipistrelle bats with a dominance of Myotis species bats recorded. No bats were seen to enter the structure to roost.

4.6. The movement of bats on site agrees with the locations of roosts identified by South Yorkshire Bat Group.

4.7. It is therefore assessed that there will be no impact upon roosting bats during proposed development works.

4.8. However, bats are opportunistic and there is potential for individual bats to seek refuge almost anywhere. Therefore there is potential for works to impact upon individual bats should precautions not be put in place.

4.9. The surveys on site identified foraging over the garden adjacent to the property. This consisted of a grass lawn and occasional bushes with some large mature trees along the northern boundary. These features will remain unaffected by proposed works; hence there will be no impact upon foraging bats through the removal of habitat.

4.10. Light pollution onto the habitats following the development of the site may however have some impact upon foraging bats should there be no implementation of a sensitive lighting scheme.

4.11. During the initial survey old swallows and other birds nests were identified within the building. Therefore any works to the building during the bird nesting season, which extends from March to September each year, may have a high impact upon any nesting birds present on site at that time.

4.11. Any additional works which commence on site during this timeframe, in particular any vegetation clearance may also have a high impact upon any birds present within the vegetation at that time.

4.12. Work commencing on the site outside the nesting season will not have a direct impact on nesting birds but will remove areas of suitable nesting habitat for some species of bird, most notably swallows.

5. RECOMMENDATIONS.

5.1. It is recommended that any demolition of the building is undertaken by hand to allow identification of any individual bats which may be seeking refuge within the building at that time. In the circumstance that a bat is identified, all works must cease immediately, the bat protected from harm and professional advice sought.

5.2. It is recommended that additional biodiversity enhancements are created within the new/refurbished building. This should include crevice roosting opportunities being provided in the building in the form of bat bricks installed in the walls or access tiles within the roof, which will provide roosting opportunities for the species identified to be foraging on site.

5.3. It is also recommended that the buildings provide some swallow nesting opportunities to replace the nesting opportunities lost during the development of the site. The opportunities should either comprise suitable sheltered areas that will allow swallows to create natural nests on site or nesting cups installed in suitably sheltered areas, such as underneath the eaves of the buildings, where appropriate.

Prepared by:	
Laura Hobbs BSc, MRes, MCIEEM.	Date: 15 th September 2016.

Checked by:	
Derek Whitcher. BSc, MCIEEM, MCMI.	Date: 16 th September 2016.

6. REFERENCES.

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1981. ***Wildlife and Countryside Act***. <http://www.legislation.gov.uk/ukpga/1981/69> (accessed 18/02/16)

Appendix I. BAT INFORMATION.

It is necessary to understand a little about bats, their basic nature, ecology and legal protection in order to evaluate the findings of this report.

18 species of bat currently reside in Britain, 17 of which are known to breed here. They are extremely difficult to identify in the hand and even more so in flight.

All appear to be diminishing in numbers, probably due to shortage of food, caused by pesticides, as insects are their sole diet, and habitat change.

As their diet consists solely of insects, bats hibernate during the winter when their food source is at its most scarce. They will spend the winter in hollow trees, caves, mines and the roofs of buildings.

Certain species, particularly the pipistrelle (the commonest and most widespread British bat) can quickly adapt to manmade structures and will readily use these to roost and to rear their young.

Bats are protected under the Wildlife and Countryside Act 1981, Regulation 41 of The Conservation of Habitats and Species Regulations 2010, and the Countryside & Rights of Way Act 2000.

It is an offence to intentionally or recklessly kill, injure or capture or disturb bats or to damage, destroy or obstruct access to any place used by bats for shelter or protection.

A breeding or resting site of any bat is known as a bat roost. A bat roost is therefore any structure a bat uses for shelter or protection. Because bats tend to use the same roosts each year, legal opinion is that the roost site is protected whether or not the bats are present at that time.

Bat roosts can be identified by looking for:-

- Suitable holes, cracks and crevices.
- Bat droppings.
- Prey remains.
- By carrying out night observations using a bat detector.

Where development proposals are likely to affect a bat roost site, a licence is required from Natural England.

The person applying for that licence has to be suitably qualified and experienced in bat matters. That person is then responsible for ensuring that the measures contained in the licence are carried out.

Appendix II. ANABAT SD1/2 DATA.

1. Dusk Emergence Survey 31/08/16.

1.1. Anabat 1.

Time	Myotis sp.	Noctule	Common Pipistrelle	Unidentified	Total
20:05		2			2
20:15			1		1
20:17			1		1
20:18			2		2
20:20			1		1
20:22			1		1
20:29			2		2
20:33	1				1
20:38	1				1
20:44	2		1		3
20:45	2				2
20:48	3				3
20:50	3		1		4
20:51	3		1		4
20:57	1				1
20:58	1				1
20:59	1			1	2
21:02			1		1
21:03	1				1
21:04	1				1
21:05			1		1
21:08	1				1
21:09	1		1		2
21:11	1				1
Total	23	2	14	1	40

1.2. Anabat 2.

Time	Myotis sp.	Noctule	Common Pipistrelle	Total
20:05		1		1
20:16			1	1
20:18			2	2
20:19			5	5
20:20			5	5
20:21			4	4
20:22			1	1
20:23			2	2

20:24			4	4
20:28			1	1
20:29			2	2
20:30			2	2
20:31			2	2
20:33	1		1	2
20:34			2	2
20:35			2	2
20:36			2	2
20:38	1			1
20:40			3	3
20:41			1	1
20:42			2	2
20:44			1	1
20:45	1		1	2
20:46	1			1
20:47			1	1
20:48	1		1	2
20:49	3		1	4
20:50	2		2	4
20:52			3	3
20:53	1		1	2
20:55			1	1
20:56			1	1
20:57			1	1
20:58	2			2
20:59	2			2
21:00			2	2
21:01			3	3
21:02			2	2
21:03	2		1	3
21:04	3		1	4
21:05			2	2
21:06			1	1
21:09	3		2	5
21:11	1			1
Total	24	1	72	97

1.3.Anabat 3.

Time	Myotis sp.	Total
21:03	1	1
21:11	2	2
Total	3	3

1.4. Anabat 4.

Time	Myotis sp.	Common Pipistrelle	Total
20:19		1	1
20:20		1	1
20:21		1	1
21:03	1		1
21:06		1	1
21:11	2		2
Total	3	4	7

2. Dawn Swarming Survey, 15/09/16.

2.1. Anabat 1.

Time	Myotis sp.	Unidentified Pipistrelle species.	Pip45	Total
05:31		1		1
05:41	2		1	3
05:46	1			1
05:47	1		1	2
05:48	1			1
05:49	2			2
05:52	1			1
05:53	2			2
06:02	1			1
Total	11	1	2	14

2.2. Anabat 2.

Time	Myotis sp.	Common Pipistrelle	Total
05:08		1	1
05:09		1	1
05:17		1	1
05:23	1		1
05:41	1		1
05:42	2		2
05:47	4		4
05:48	4	1	5
05:49	3		3
05:50	3		3
05:52	2		2
05:53	4		4
05:54	1		1
Total	25	4	29

2.3. *Anabat 3.*

Time	Total
No calls recorded	

2.4. *Anabat 4.*

Time	Myotis sp.	Common Pipistrelle	Unidentified	Total
05:07		2		2
05:16		1		1
05:22	1			1
05:38	1		1	2
05:40	2			2
05:41	1			1
05:46	4			4
05:47	3	1		4
05:48	4			4
05:51	3			3
05:52	3			3
05:53			1	1
Total	22	4	2	28

Toolbox Talk : Bats

Whitcher Wildlife Ltd

Ecological Consultants



Over 15 species of bat have been recorded in Britain.

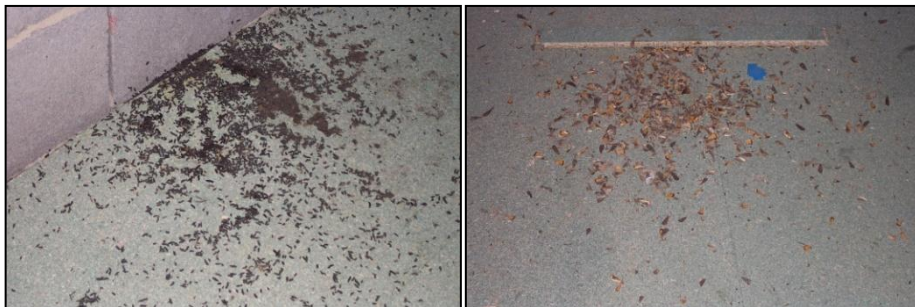
Identification.

Some species can be extremely difficult to identify in the hand and even more so in flight.

Species such as the Brown Long Eared bat pictured above can be more easily identified in the hand. Whereas, the Common Pipistrelle and Soprano Pipistrelle are more difficult to identify.



Bats are more easily identified by field signs such as droppings or feeding remains.



Habitat.

Bats are highly specialised creatures and require a relatively narrow range of suitable conditions in order to sustain a viable population. Bats require an abundant supply of flying insect food in places where they can easily be caught and they need safe and reliable roosting sites, particularly during breeding and hibernation.

Bats are heavily dependent on buildings and trees for their roost sites and therefore extremely susceptible to disturbance from human activities. Development schemes can also isolate bat populations and sever roost sites from favoured feeding areas by removing hedgerows or other features used as commuting routes.

Bats are susceptible to disturbance and have been known to abandon roost sites after instances of disturbance. The effects of disturbance are more pronounced at different times of year. Serious disturbance during breeding can result in the breeding females being killed or the abandonment and subsequent starvation of dependant young. Repeated disturbance during winter hibernation can result in the death of adult animals from starvation.

The level of protection afforded to bats in the UK and European legislation reflects the fact that it is now generally accepted that bats have declined substantially, maybe by as much as 60%, over recent years. Most species are declining and vulnerable with all species being protected.

As their diet consists solely of insects, bats hibernate during the winter when their food source is at its most scarce. They will spend the winter in hollow trees, caves, mines and occasionally the roofs of buildings.

Certain species, particularly Pipistrelle, can quickly adapt to manmade structures and will readily use these to roost and to rear their young.

Legislation.

Bats and their roosts are fully protected at all times (whether the bats are currently present or not). This protection comes from the Wildlife & Countryside Act 1981 (updated by the Countryside Rights of Way Act 2000) and the Habitats Regulations 1994. Under this legislation it is an offence to intentionally or recklessly kill, injure, capture or disturb bats or to damage, destroy or obstruct access to any place used by bats for shelter or protection.

Under the Habitats Regulations, where bats may be affected by development proposals, a licence is required from Natural England. Natural England's published guidelines on the licence procedure indicate that if, on the basis of survey information and specialist knowledge of the species concerned, the proposed activity is reasonably likely to result in an offence then a licence is required. If, on the other hand the proposed activity is reasonably unlikely to result in an offence, then a licence is not required.

If bats or bat field signs are identified during works, stop all works and contact Whitcher Wildlife Ltd directly on 01226 753271 or at info@whitcher-wildlife.co.uk