

**Whitcher Wildlife Ltd.
Ecological Consultants.**



**CARR HOUSE, ROYD LANE,
THURLSTONE.**

OS REF: SE 220 036.

BAT SURVEY.

Ref No:- 161111 (Rev 1).

Date: 8th May 2017.

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1. INTRODUCTION.

1.1. Plans are being drawn up for works on Carr House, Mill House Green, Thurlstone. The proposed works include removing the existing roof and raising the building by 600mm to allow the conversion to take place within the existing footprint. Works may also involve removing limbs from several mature beech trees which overhang the northern side of the building.

1.2. Whitcher Wildlife Ltd was commissioned to carry out a daytime bat survey of the site to establish whether there are any issues that may affect the proposed works. This survey identified the building to provide low bat roosting potential and therefore recommended that a further dusk emergence survey was conducted between May and August to establish whether any bats are present.

1.3. The initial site survey was carried out on 17th November 2016, with the subsequent dusk emergence survey taking place on 3rd May 2017. This report outlines the findings of both 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)*, with an assessment of the structures suitability for roosting bats made in accordance with these guidelines.

2.6. The subsequent dusk emergence survey was also conducted in accordance with Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition)*. It was conducted by a sufficient number of surveyors to cover all areas of roosting potential, in suitable weather conditions from fifteen minutes before sunset to at least an hour and half after.

2.7. All surveyors were equipped with BatBox Duet bat detectors, or similar. The use of static recording devices such as Anabat SD2's and video cameras with infrared lights were also utilised where appropriate.

2.8. The initial daytime roost inspection survey was carried out by Lewis Wright BSc Grad CIEEM. 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 Wales licenses for bats and great crested newts.

2.9. The subsequent dusk emergence survey was conducted by Steven Whitcher MCIEEM and Laura Hobbs BSC, MRes, MCIEEM.

2.9.1. 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, NRW 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.

2.9.2. 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 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.

3. SURVEY RESULTS.

3.1. Data Search Results.

3.1.1. A data search has been submitted to South Yorkshire Bat Group (SYBG) and Barnsley Biological Records Centre (BBRC).

3.1.2. SYBG provided records of the following species within 2km of the site; Daubenton's bats, Noctule bats, Common Pipistrelle bats, Soprano Pipistrelle bats and Brandts bats within the surrounding area. None of these records were specific to the survey area. BBRC held records of Noctules, Daubentons and Common Pipistrelle bats. None of these records refer to roosts or were specific to the survey area. A copy of the data searches can be provided on request.

3.1.3. Carr House is a Grade II listed building (*Reference 1314712*) although the surveyed building is not included within this listing and has no designations. Carr House will not be affected by the proposed works.

3.2. Site Description.

3.2.1. The surveyed building includes three sections all of which are directly adjacent to each other. A description of each section is provided below;

3.2.1.1. The plan below shows different sections of the surveyed building.



3.2.2. Section One is located on the eastern side of the surveyed area. Section One includes solid stone walls approximately 1m in height. This section of the building has no roof and the existing walls are in poor condition and covered in dense bramble and grasses.

3.2.3. Section Two is attached to Section One and Three by solid stone walls. Section Two is constructed from solid stone walls and a pitched stone slate roof.

3.2.4. A number of gaps which allow access into the interior of the building are located within the northern and southern walls of Section Two. Two doors allowing access into the building are located on the southern side of the building. One of the doors includes a wooden door and the other door does not include a door structure or a door frame.

3.2.4.1. The yellow arrows on the plan below show the gaps allowing access into the interior of Section Two of the building.



3.2.5. A number of large cracks and voids are located within both the exterior and interior side of the stone walls of Section Two of the building.

3.2.5.1. The photograph below shows some of the identified gaps and voids.



3.2.6. The exterior side of Section Two's roof includes stone slates and stone ridge tiles. The gable ends include bare stone slates and there are no fascias or guttering. The roof is in good condition with the only visible gap allowing access inside the building located underneath the ridge tile on the western side of the roof.

3.2.6.1. The photograph below shows the gap within western side of the ridge tiles.



3.2.7. The roof of Section Two is supported by timber rafters, timber tie beam and two large timber joists. The roof also includes bare stone slates which are unlined.

3.2.7.1. The photograph below shows the underside of the roof.



3.2.8. Section Three is located on the western side of the surveyed area. Section Three includes solid stone walls approximately 1.5m in height. This section of the building has no roof and the existing walls are in poor condition and very exposed due to the location of the building within the surrounding landscape.

3.2.8.1. The photograph below shows Section 3 of the Building.



3.2.9. Mature beech trees are located approximately 6m north of building causing a number of large branches to overhang the surveyed building.

3.2.9.1. The adjacent photograph shows the mature beech trees.



3.2.10. The surveyed building is located within an exposed area of farmland on top of a south facing hillside. The surrounding landscape includes a small area of beech woodland, open pasture farmland and scattered stone farm buildings.

3.2.10.1. The aerial plans below show the surveyed area.



3.3. Daytime Survey Results.

3.3.1. Sections One and Three of the surveyed building have partly collapsed walls and no roof; therefore, these sections of the building have been assessed as unsuitable for roosting bats.

3.3.2. Section Two of the surveyed building contains a number of voids and cracks within the exterior and interior sides of the stone walls. The voids and cracks provide

suitable habitat for individual or low numbers of crevice dwelling bats although no bats or bat field signs were identified during this survey; therefore, the building has been assessed as providing low potential for roosting bats in line the Bat Conservation Trust guidelines.

3.3.3. The gaps between the stone slates also provide suitable habitat for individual roosting bats. No bat field signs were identified along the outside or underside of the roof during this survey and the roof is unlined; therefore, the roof is only potentially suitable for low or individual numbers of bats.

3.3.4. A number of large mature beech trees are located approximately 6m north of the surveyed building. A thorough inspection of the beech trees could not be achieved from ground level although they are likely to contain cracks and voids suitable for roosting bats due the trees size and age. No cracks or voids suitable for roosting bats were identified within branches overhanging the surveyed building.

3.3.5. The surveyed building provides suitable habitat for nesting birds during the nesting bird season which extends between March and September each year. A number of old swallow nests and other bird nests likely to be pigeon are located within the interior of the building along the timber rafters and ledges on top of the stone walls.

3.3.5.1. The adjacent photograph shows one of the identified bird nests located within the building.



3.3.6. The vegetation including the dense bramble covering Section One of the building provides suitable habitat for nesting birds although no old bird nests were identified within the vegetation during this survey. The stone walls within Section

One and Three also provide suitable habitat for nesting birds such as wrens which often nest inside small gaps within stone walls.

3.3.7. No active bird nests were identified during this survey although this survey was undertaken outside nesting bird season. No birds were identified within the surveyed area during this survey.

3.4. Dusk Emergence Survey Results.

3.4.1. A dusk emergence survey was conducted on 3rd May 2017 by two surveyors who hold CL18 bat licenses with Natural England.

3.4.2. The survey extended from 20:20 to 22:10, with sunset recorded at 20:39. The temperature at 20:30 was 13°C and dropped to 10°C at 22:10. The weather was clear with approximately 60% cloud cover, with an average wind speed of 2mph with occasional gusts.

3.4.3. Surveyor 1 was equipped with an Anabat Walkabout bat detector, and Surveyor 2 with a BatBox Duet. Three static Anabat SD1/2 bat detectors were also used around the site. The location of the surveyors and static anabats can be seen on the map below where S = Surveyor, A = Anabat.



3.4.4. Surveyor 1 recorded the following activity during the survey:

20:56 – A common pipistrelle was heard but not seen.

21:02 – A common pipistrelle was seen to fly over the site from south and forage over Surveyor 2 until 21:10.

21:11 – A common pipistrelle was identified foraging over Surveyor 2 until 21:15.

21:17 – A common pipistrelle was identified foraging over Surveyor 2 until 21:19.

21:28 – A common pipistrelle was briefly heard but not seen.

21:30 – A common pipistrelle was heard but not seen.

21:36 – A common pipistrelle was heard but not seen.

21:42 – A common pipistrelle was briefly heard but not seen.

21:54 – A common pipistrelle was identified foraging along the lane until 22:03.

Those bats heard but not seen were thought to be foraging along the lane.

3.4.5. Surveyor 2 recorded the following activity during the survey:

20:56 – A common pipistrelle was identified to fly from the south east over the adjacent houses, to the west and along the lane.

20:59 – A common pipistrelle was heard but not seen.

21:03 – Two common pipistrelles flew from the south and from the west to forage on the lane until 21:09.

21:11 – A common pipistrelle flew from the west to forage and flew back down the lane to the west at 21:19.

21:30 – A common pipistrelle was heard but not seen.

21:36 – A common pipistrelle was identified to fly from the west to forage.

21:54 – A common pipistrelle was identified foraging along the lane until 22:03.

Those bats heard but not seen were thought to be foraging over the adjacent housing complex.

3.4.6. Anabat 1 recorded a total of fifty-nine bat calls during the survey of the site.

These comprised:

- *Four myotis calls between 21:59 and 22:01.*
- *Fifty-five common pipistrelle calls between 20:57 and 22:01.*

3.4.7. Anabat 2 recorded a total of seventy-two bat calls during this survey of the site. These comprised:

- *Ten myotis calls between 21:58 and 22:00.*
- *Sixty-two common pipistrelle calls between 20:56 and 22:03.*

3.4.8. Anabat 3 recorded a total of fifty-five bat calls during this survey of the site. These comprised:

- *Four myotis calls between 21:58 and 21:59.*
- *Fifty-one common pipistrelle calls between 20:56 and 22:02.*

3.4.9. Further detail of the Anabat recordings can be found within Appendix III of this report.

3.4.10. No bats were seen to emerge from the building during this survey. No bats were seen to forage within the building during this survey. Anabat 3 (within the building) has picked up bat calls from outside, evident from the level of noise which was recorded during these calls. The timings of these calls also tie with those recorded by the external anabats.

3.4.11. All activity on site was dominated by common pipistrelle bats which were identified to forage up and down the lane adjacent to the surveyed building, around the adjacent woodland and houses. Later on, in the evening towards the end of the survey a myotis bat was identified on all anabats; this is thought to be a daubentons bat foraging along the woodland edge in the same areas as the pipistrelles; although accurate identification from the recorded calls could not be made.

3.4.12. During this survey, a wren's nest was also identified within the southern end of the buildings ridge.

4. EVALUATION OF FINDINGS.

4.1. There are a number of records of bat species within 2km of the surveyed building although there are no records of bats within or directly adjacent to the surveyed area; therefore, the proposed works will have no impact on previously recorded bat roosts.

4.2. No bats or bat field signs were identified within any sections of the building during the initial daytime survey.

4.3. Sections One and Three of the building have been assessed as unsuitable for roosting bats as there is no roof and the existing sections of wall are either close to ground level or too exposed. Works on Sections One and Three will have no impact on roosting bats.

4.4. Section Two of the building has been assessed as providing low suitability for individual or low numbers of crevice dwelling bats although no bats or bat field signs were identified during the initial daytime inspection survey. The building does not provide suitable habitat for hibernating bats due to the exposed location of the site and limited opportunities for hibernating bats.

4.5. The dusk emergence survey of Section Two of the building identified no bats to be roosting within the building, or using the building to forage or as a feeding perch. Any works to this building will therefore have no impact upon roosting bats.

4.6. However, individual bats can seek refuge almost anywhere, therefore there is always potential for individual opportunistic bats to be present. Any works undertaken on any area of the building will therefore have potential to impact on opportunistic bats during the Spring and Summer months.

4.7. The mature trees adjacent to the surveyed building provide potentially suitable habitat for roosting bats although a thorough inspection could not be achieved from ground level. No suitable bat roosting habitat was identified within the branches overhanging the surveyed building.

4.8. If any mature beech trees are to be felled during the works there will be potential impact on roosting bats. If the works do not involve felling but include removing the branches overhanging the surveyed building, there will be no potential impact on roosting bats.

4.9. The dusk emergence survey identified foraging activity by common pipistrelles and myotis species (potential daubentons) along the adjacent lane to the building and surrounding woodland areas. There may be an impact upon these bats during and post development works, should there be a significant increase in light or noise.

4.10. A number of old bird nests including swallow, wren and pigeon nests were identified within the interior of the building. The vegetation and stone walls also provide suitable habitat for nesting birds; therefore, any works undertaken on the building and vegetation during the nesting bird season which extends between March and September each year will have a potential impact on nesting birds.

5. RECOMMENDATIONS.

5.1. It is recommended that soft strip and demolition techniques are used on the building to ensure there are no individual opportunistic bats present at that time. In the unlikely event 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 any lighting to be incorporated into/around the building is done so sensitively, with minimal lighting erected and that being downward facing no higher than eaves level.

5.3. It is recommended any works undertaken on the building and vegetation are carried outside the nesting bird season which extends between March and September each year.

5.4. If works are to be undertaken during the nesting bird season it is recommended a nesting bird survey is undertaken prior to works by an experienced ecologist. Any active bird nests must remain undisturbed until the young have fully fledged the nest.

5.5. It is further recommended the proposed building incorporates nesting bird habitat to compensate for the loss of nesting bird habitat within the existing building. Suitable nesting bird opportunities could include sheltered areas by incorporating overhanging eaves into the building or attaching swallow nest cups along the top of the walls.

5.5.1. An example of a swallow nest cup is shown below;



Prepared by:	
Lewis Wright BSc Grad CIEEM. Laura Hobbs. BSc, MRes, MCIEEM.	Date: 8 th May 2017.

Checked by:	
Steven Whitcher, MCIEEM.	Date: 8 th May 2017.

6. REFERENCES.

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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. NESTING BIRD INFORMATION.

It is necessary to understand a little about the legal protection offered to nesting birds in order to evaluate the findings of this report.

Part 1.-(1) Of the Wildlife and Countryside Act 1981 states that:-

If any person intentionally:-

- (a) kills, injures or takes any wild bird;
 - (b) takes, damages or destroys the nest of any wild bird while that nest is in use or being built; or
 - (c) takes or destroys an egg of any wild bird,
- he shall be guilty of an offence.

Part 1.-(5) of the Act states that:-

If any person intentionally:-

- (a) disturbs any wild bird included in Schedule 1 while it is building a nest or is in, on, or near a nest containing eggs or young; or
- (b) disturbs young of such a bird,

he shall be guilty of an offence and liable to a special penalty.

The Countryside and Rights of Way Act 2000 amends the above by inserting after “intentionally” the words “or recklessly”.

The nesting season will vary according to the weather each year but generally commences in early April, peaks during May and June and continues until mid August.

It is also worth remembering that some birds nest in trees and scrub but others are ground nesting.

The best way to avoid this issue is to plan for vegetation clearance to be carried out outside the bird-nesting season.

Appendix III. ANABAT INFORMATION FOR DUSK EMERGENCE SURVEY 03/05/17.

Table 1. Anabat 1 recordings.

Time	Myotis species calls	Common Pipistrelle calls	Total
20		1	1
:57		1	1
21	1	51	52
:02		1	1
:03		1	1
:04		2	2
:05		2	2
:06		2	2
:07		2	2
:08		1	1
:09		3	3
:11		2	2
:12		2	2
:13		4	4
:14		4	4
:15		1	1
:18		4	4
:19		3	3
:36		1	1
:54		1	1
:55		3	3
:56		4	4
:57		3	3
:58		4	4
:59	1	1	2
22	3	3	6
:00	2		2
:01	1	3	4
Total	4	55	59

Table 2. Anabat 2 recordings.

Time	Myotis species calls	Common Pipistrelle calls	Total
20		1	1
:56		1	1
21	6	54	60
:02		2	2
:03		3	3
:04		1	1
:05		2	2
:06		4	4
:08		3	3
:09		1	1
:11		2	2
:12		4	4
:13		4	4
:14		3	3
:17		2	2
:18		3	3
:19		1	1
:30		1	1
:36		2	2
:54		1	1
:55		4	4
:56		5	5
:57		3	3
:58	3	3	6
:59	3		3
22	4	7	11
:00	4	2	6
:01		3	3
:02		1	1
:03		1	1
Total	10	62	72

Table 3. Anabat 3 recordings.

Time	Myotis species calls	Common Pipistrelle calls	Total
20		1	1
:56		1	1
21	4	45	49
:01		1	1
:02		3	3
:03		1	1
:04		2	2
:05		2	2
:06		2	2
:07		2	2
:08		2	2
:10		2	2
:11		3	3
:12		3	3
:13		3	3
:14		1	1
:17		2	2
:18		2	2
:35		2	2
:53		1	1
:54		2	2
:55		2	2
:56		2	2
:57		4	4
:58	1	1	2
:59	3		3
22		5	5
:00		3	3
:01		1	1
:02		1	1
Total	4	51	55