Whitcher Wildlife Ltd.
Ecological Consultants.

WOODHEAD FARM, BIDDULPH MOOR.

OS REF: SJ 914-594.

BAT SURVEY.

Ref No: - **190778.**

Date: **30th August 2019.**

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1. INTRODUCTION.

1.1. Planning permission is being sought for the conversion of two buildings at Woodhead Farm in Biddulph Moor, one into holiday lets and the other into a residential property.

1.2. A bat survey of the buildings has been commissioned to accompany the application for planning permission on the site.

1.3. Whitcher Wildlife Ltd carried out an initial daytime survey of the buildings on 29th July 2019. That survey identified the requirement for additional bat surveys of the buildings, which were carried out on the 8th and 29th August 2019.

1.4. This report outlines the findings from all of the surveys and makes appropriate recommendations.

1.5. Appendix I of this report provides background information with respect to bats and the legal protection afforded to them.

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2. SURVEY METHODOLOGY.

2.1. The structure was checked for potential bat roosting sites in line by looking for the following signs: -

* Holes, cracks or crevices.
* Bat droppings.
* Prey remains.

2.2. A thorough external inspection was carried out from ground level for any gaps or openings of the structure which may provide suitable roost access points and field signs to indicate possible use by bats.

2.3. All 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.

2.4. 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.

2.5. The subsequent dusk emergence and dawn swarming surveys were also conducted in accordance with Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition).*

2.6. The initial daytime survey was carried out by Steven Whitcher MCIEEM. Since 2002 Steven has gained extensive experience in a professional capacity as an ecological consultant carrying out ecology, protected species and Extended 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 Extended Phase 1 Habitat Surveys. Steven holds Natural England Survey Licences in respect of bats, great crested newts, hazel dormice, 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.

2.7. The dusk emergence survey was led by Steven Whitcher with the additional surveyors on site comprising:

- James Campbell – licenced.
- Stevan Roebuck – licenced.
- Mitchel Greenhalgh – agent.

2.8. The dawn swarming survey was also carried out by Steven Whitcher with the additional surveyor on site being James Campbell.

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3. SURVEY RESULTS.

3.1. Data Search Results.

3.1.1. A desktop data search for existing records of bats within 2km of the surveyed area was submitted to Staffordshire Ecological Record (SER).

3.1.2. SER do not hold any records of bats or bat roosts within the surveyed area the immediate surrounding area.

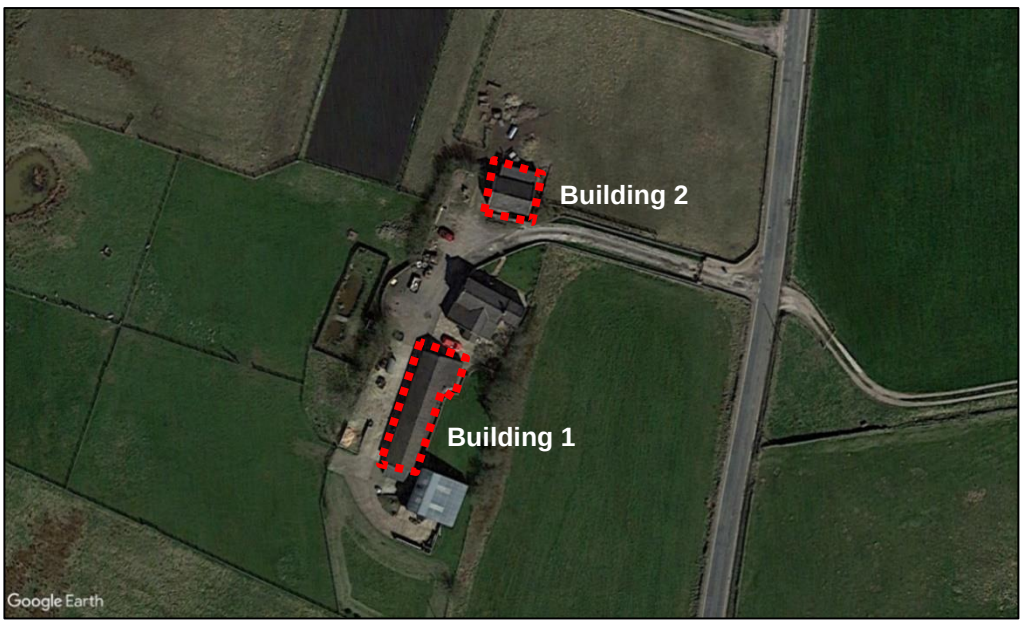
3.1.3. SER hold abundant records of bats within 2km of the surveyed area although the records predominantly refer to Hurst Quarry, located over 1km to the west of the surveyed area. Several species of bat were recorded within the quarry during bat transect surveys carried out during 2016.

3.1.4. Further records of several species of bat were also noted within Biddulph Grange Country Park, located over 1.5km to the southwest of the surveyed area.

3.1.5. A full copy of the records received from SER can be provided on request.

3.2. The Surveyed Area.

3.2.1. The surveyed area was two existing buildings at Woodhead Farm on Biddulph Moor, as shown below.



3.2.2. The buildings comprise a barn (Building 1) located in the centre of the Woodhead Farm complex and a more modern annex (Building 2) located to the north of the buildings that make up the farm complex.



3.2.3. The buildings are located in an elevated location on a west facing hillside with the surrounding land comprising open grazing pasture and occasional farms and small holdings.



3.3. Daytime Survey Results, 29th July 2019.

3.3.1. The two buildings have been dealt with separately below.

3.3.2. Building 1.

3.3.2.1. Brief Description.

3.3.2.1.1. Building 1 comprises a single storey barn that was previously used as stables and is currently used for general storage.



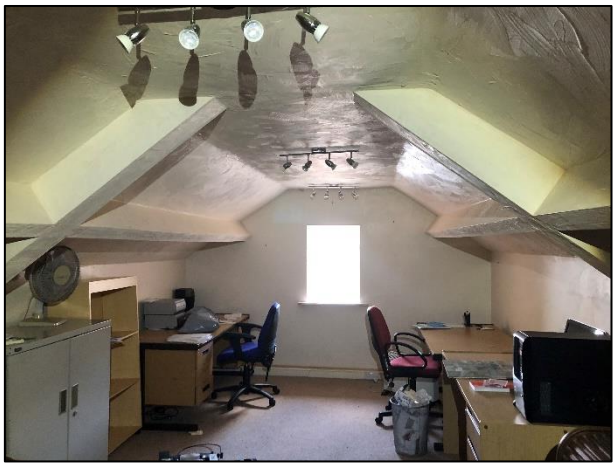
3.3.2.1.2. The walls of the building comprise a mixture of stone, brick and concrete blocks with the windows and doors around the building in place although some of the windows and doors do not completely seal.





3.3.2.1.3. The roof of the building is pitched and covered with rosemary tiles. The building was re-roofed approximately 10 years ago.

3.3.2.1.4. Internally the building comprises two distinctly different areas with the northern third of the building converted into two storeys with storage below and a more formal office space above.





3.3.2.1.5. The southern end of the barn is open to two storeys with exposed metal frame and purlin and rafter timbers and a hay loft above the central section of the building.

3.3.2.1.6. There are small lean too extensions on the southern and eastern elevations of the building. The southern lean too comprises corrugated walls and roof and is open with the eastern lean too comprising stone walls and a sloping rosemary tiled roof.





3.3.2.2. Survey Results.

3.3.2.2.1. The walls of the building were found to display abundant voids in the form of cracks, ventilation holes and pointing voids. In addition voids were identified all around the eaves of the building due to the open construction of the eaves.





3.3.2.2.2. The roof of the building was found to be in a generally good condition although abundant missing, slipped or slightly raised tiles were identified.



3.3.2.2.3. Internally the northern end of the building was found to be completely sealed providing no internal opportunities for bats.

3.3.2.2.4. The southern end of the barn was open to the inside of the roof with abundant opportunities for bats to enter the building around the eaves and through the ventilation holes and doorways. Abundant holes were identified around the interior walls of the building.





3.3.2.2.5. No bat field signs were identified around the interior or exterior of the building during this survey.

3.3.2.2.6. Overall the building was assessed as providing a **moderate** potential to support roosting bats due to the voids around the walls and gaps at the eaves and the abundant voids between the roof tiles.



3.3.2.2.7. In addition several old nests, including swallow nests, were identified throughout the interior of the building. None of the nests displayed current use at the time of this survey.

3.3.3. Building 2.

3.3.3.1. Brief Description.

3.3.3.1.1. Building 2 is a modern annex building constructed in 2011. The building is currently disused and empty.



3.3.3.1.2. The walls of the building comprise cavity walls with a stone exterior and breeze block interior.



3.3.3.1.3. The windows and doors around the building are predominantly intact and sealed although there is a single storey section of the building to the north that is open with no door fitted.

3.3.3.1.4. The roof of the building comprises a pitched rosemary tiled roof over the main building with a sloping roof over the lean too. Stone coping stones extend along either end of the roofs.

3.3.3.1.5. Internally the main building comprises two floors with a very small loft space above with the lean too comprising an open room currently used as a sheep pen.

3.3.3.2. Survey Results.

3.3.3.2.1. The walls of the building were found to be in a very good condition with the only voids comprising two openings into the cavity around the entrance to the lean too building.




3.3.3.2.2. The void was identified to display a large amount of cobweb at the time of this survey with no bats or bat field signs visible although the void within the wall was extensive.

3.3.3.2.3. The roof of the building was found to be in a good condition with only very occasional broken tiles present. However, the non-uniform shape of the tiles created voids between the tiles in some areas.




3.3.3.2.4. Internally the loft space of the building was found to be very small, no more than 0.25m in height, and could not be accessed during this survey because the loft contains a ventilation system that blocked the access hatch.



3.3.3.2.5. The single storey section of the building displayed a breathable lining felt with open rafters providing some voids on the top of the walls although no bats or bat field signs were identified around the voids during this survey of the site.



3.3.3.2.6. No bat field signs were identified around the interior or exterior of the building during this survey.

3.3.3.2.7. Overall the building was assessed as providing a **low** potential to support roosting bats due to the voids around the opening to the single storey section of the building and the occasional voids between the roof tiles.



3.3.3.2.8. Several old nests, including swallow nests, were identified throughout the interior of the building. None of the nests displayed current use at the time of this survey.

3.3.4. Woodhead Farm is located on an exposed hillside surrounded by open grazing pasture with little connectivity to the surrounding area. The foraging and commuting potential of the site was assessed as low.

3.4. Dusk Emergence Bat Survey, 8th August 2019.

3.4.1. A dusk emergence bat survey of both buildings was carried out on the 8th August 2019. Sunset on the night of the survey was at 20:51 with the survey extending from 20:35 to 22:21. The weather at the start of the survey was fine with 40% cloud and a breeze of approximately 4mph with gusts above (BWS-2/3). A temperature of 18°C was recorded at 20:45.

3.4.2. During the survey the cloud cover increased to approximately 70% and the temperature dropped to 17°C by the end of the survey.

3.4.3. The survey was carried out by four surveyors who were equipped with an Anabat Walkabout or Batbox Duet bat detector, an Anabat SD1 or SD2 unit and a two-way radio for communication. A further Anabat SD1 was placed inside Building 1 during the survey.

3.4.4. The plan below shows the locations of the surveyors during the survey.



3.4.5. Below is an outline of the findings from each of the surveyors during the survey.

3.4.5.1. Surveyor 1.

21:24 – A Common Pipistrelle flew along the east of Building 1 from north to south.
21:44 – A Common Pipistrelle was identified to the east of Building 1 over the garden area.
21:45 – A Common Pipistrelle was identified foraging to the north.
21:47 – For the rest of the survey the surveyor identified occasional Common and Soprano Pipistrelle activity although the bats were not visible, assumed to be along the adjacent vegetation.

The Anabat located with Surveyor 1 recorded twenty five calls throughout the survey from 21:44 to 22:14. The calls comprised:

- Twenty Common Pipistrelle calls throughout the survey.
- Five Soprano Pipistrelle calls between 21:49 and 22:09.

3.4.5.2. Surveyor 2.

21:24 – A Pipistrelle flew from the north and foraged over the garden to the east of Building 1.
21:43 – A Pipistrelle was heard but not seen.
21:44 – A Pipistrelle was heard but not seen.
21:47 – A Pipistrelle flew from the west, foraged over the garden and returned to the west.
21:50 - For the rest of the survey the surveyor identified occasional Pipistrelle activity although the bats were not visible, assumed to be along the adjacent vegetation.

The Anabat located with Surveyor 2 recorded fifty two calls throughout the survey from 21:24 to 22:20. The calls comprised:

- Forty one Common Pipistrelle calls throughout the survey.
- Nine Soprano Pipistrelle calls between 21:49 and 22:19.

3.4.5.3. Surveyor 3.

21:35 – A Pipistrelle was heard but not seen.
21:38 – A Pipistrelle was heard but not seen.
21:44 – A Pipistrelle was heard but not seen.
21:45 – A Pipistrelle flew past from north to south.
21:45 – A Pipistrelle flew from the south and west into the tree line.
21:46 – For the rest of the survey the surveyor identified occasional Pipistrelle activity although the bats were not visible, assumed to be along the vegetation to the west.

The Anabat located with Surveyor 3 recorded ten calls throughout the survey from 21:42 to 22:18. The calls comprised:

- Eight Common Pipistrelle calls throughout the survey.
- Two Soprano Pipistrelle calls at 21:42 and 22:03.

3.4.5.4. Surveyor 4.

21:36 – A Pipistrelle flew from the south around Building 2 and continued off site to the east.
21:36 – A Pipistrelle flew past the north of Building 2 from west to east.
21:43 – A Pipistrelle was heard but not seen.
21:45 – A Pipistrelle was heard but not seen.
21:46 – Two Pipistrelle flew across the site from south to north.
21:48 – For the rest of the survey the surveyor identified occasional Common and Soprano Pipistrelle activity although the bats were not visible, assumed to be along the adjacent vegetation.

The Anabat located with Surveyor 4 recorded twenty calls throughout the survey from 21:33 to 22:16. The calls comprised:

- Seventeen Common Pipistrelle calls throughout the survey.
- One Soprano Pipistrelle call at 22:00.
- One Noctule bat call at 21:39.
- One brief Myotis species call at 22:16.

3.4.6. Anabat 5 located within Building 1 did not record any bat activity throughout the survey.

3.4.7. Overall the bat activity during the survey was relatively low with no bats identified emerging from roosts in either building. Pipistrelle bats were identified foraging around the site, predominantly along the vegetation, throughout the survey and individual Noctule and Myotis species bats were identified briefly passing the north of the site.

3.5. Dawn Swarming Bat Survey, 29th August 2019.

3.5.1. A dawn swarming bat survey of Building 1 was carried out on the 29th August 2019. Sunrise on the morning of the survey was at 06:12 with the survey extending from 04:40 to 06:20. The weather at the start of the survey was fine with 25% cloud and a 4-5mph breeze (BWS-2). A temperature of 10°C was recorded at 04:30.

3.5.2. During the survey the breeze dropped to 1-2mph (BWS-1) and the temperature remained consistent.

3.5.3. The survey was carried out by two surveyors who were equipped with an Anabat Walkabout or Batbox Duet bat detector, an Anabat SD1 or SD2 unit and a two-way radio for communication. A further Anabat SD1 was placed inside Building 1 during the survey.

3.5.4. The plan below shows the locations of the surveyors during the survey.



3.5.5. Below is an outline of the findings from each of the surveyors during the survey.

3.5.5.1. Surveyor 1.

04:54 – A Common Pipistrelle was briefly heard but not seen.
05:10 – A Common Pipistrelle was identified passing the eastern side of Building 1.
05:27 – A Common Pipistrelle was briefly heard but not seen.

The Anabat located with Surveyor 1 recorded three calls throughout the survey. The calls comprised Common Pipistrelle calls at 04:54, 05:10 and 05:27.

3.5.5.2. Surveyor 2.

05:11 – A Pipistrelle flew past the east side of Building 1 from north to south.

The Anabat located with Surveyor 2 recorded two calls throughout the survey. The calls comprised Common Pipistrelle calls at 05:10 and 05:27.

3.5.6. Anabat 5 located within Building 1 did not record any bat activity throughout the survey.

3.5.7. Overall the bat activity during the survey was low with no bats identified entering roosts in Building 1 during the survey. Occasional Common Pipistrelle bats were identified crossing the site to the east of Building 1.

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4. EVALUATION OF FINDINGS.

4.1. There are no existing records of bats within the Woodhead Farm complex. Therefore, there will be no impact on known bat roosts during the proposed conversion works.

4.2. Two buildings within the Woodhead Farm complex were covered during these surveys, a barn (Building 1) and an annex (Building 2).

4.3. During the daytime assessment of the site no bat field signs were identified within either building. Building 1 was assessed as displaying a moderate potential to support roosting bats due to voids around the walls and roof of the building and Building 2 was assessed as displaying a low potential to support roosting bats due to occasional voids around a single storey extension and within the roof.

4.4. Bat activity surveys were carried out, in line with the Bat Conservation Trust Good Practice Guidelines, which comprised a single dusk emergence survey carried out covering both buildings and a further dawn swarming survey of Building 1 only, both surveys were carried out during August 2019.

4.5. During the activity surveys no bats were identified emerging from or entering roosts in the buildings and therefore there will be no impact on roosting bats during the proposed conversion works.

4.6. The bat activity during the surveys was also generally low with occasional Pipistrelle foraging activity in the more sheltered areas of the site and occasional Noctule and Myotis species bats crossing the site. Due to the current use of the site as a residential property the proposed conversion is unlikely to cause a significant increase in impact on foraging or commuting bats.

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5. RECOMMENDATIONS.

5.1. No bat roosts were identified within the buildings at Woodhead Farm and therefore there is no requirement for further surveys of a Natural England licence to cover the proposed conversion works.

5.2. However, individual bats may seek temporary refuge almost anywhere and therefore it is recommended that the works are completed with care. In the unlikely event that individual bats are encountered the bats should remain in a sheltered location, works in that area should cease and further advice should be sought.

5.3. It is recommended that a sensitive lighting scheme is used on the site to ensure that the works do not cause an increase in disturbance to any bats foraging or commuting across the site.

5.4. It is recommended that consideration is given to including at least one bat brick in the converted buildings as a biodiversity enhancement, in line with NPPF.

5.5. The bat brick should ideally use a suitable incorporated design, such as the one shown adjacent, faced to match the stonework of the building.



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Prepared by:	
Steven Whitcher, MCIEEM.	Date: 29th August 2019.

Checked by:	
Jenny Whitcher Roebuck MCIEEM.	Date: 29th August 2019.

6. REFERENCES.

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Appendix I. BAT INFORMATION.

Ecology

There are currently 18 species of bat residing in Britain, 17 of which 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 habitat change and shortage of food, caused by pesticides, as insects are their sole diet.

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 man-made structures and will readily use these to roost and to rear their young.

Surveys

During walkover surveys, bat roosts can be identified by looking for:

- Suitable holes, cracks and crevices within any building, tree or other structure.
- Bat droppings along walls, window cills, or on the ground.
- Prey remains, such as insect wings.

Further investigations can be made using endoscopes, by carrying out aerial inspections of trees or by conducting bat activity surveys during dusk and dawn over summer months.

Legislation

Bats are protected under Appendix II and III of the Bern Convention (1982), Schedule 5 and 6 of the Wildlife and Countryside Act (1981), Annex IV of the Habitats Directive (some species under Annex II), Annex II of the Conservation of Habitats and Species Regulations (2010) and EUROBATS agreement. Numerous species are

also listed under section 41 of the Natural Environment and Rural Communities Act (2006) making them species of principal importance.

All bats and their roosts are therefore protected in the UK. This makes it an offence to kill, injure or take any bat, to interfere with any place used for shelter or protection, or to intentionally disturb any animal occupying such a place.

The UK has designated maternity and hibernacula areas as Special Areas of Conservation (SAC's) under the Habitats Directive. Implementation of the UK Biodiversity Action Plan also includes action for a number bat species and the habitats which support them.

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