Whitcher Wildlife Ltd.
Ecological Consultants.

JOWETT HOUSE DOVECOTE.

OS REF: SE 26696 07927.

BAT SURVEY REPORT.

Ref No: **200901/2.**

Date: **17th August 2021.**

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1. INTRODUCTION.

1.1. There are plans to convert the existing dovecote at Jowett House Farm into a residential dwelling.

1.2. Whitcher Wildlife Ltd was therefore commissioned to carry out a Preliminary Bat Roost Assessment, dusk emergence survey and dawn survey of the site to establish whether there are any issues that may affect the proposed works. That initial surveys were carried out on 31st August 2020 and the dawn survey on 14th September 2020.

1.3. A further dusk emergence survey was carried out the following year, on the 10th August 2021. This takes the total number of surveys completed up to three.

1.4. This report outlines the findings those surveys and makes appropriate recommendations.

1.5. 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.

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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 fascia's 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 buildings 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 were appropriate.

2.8. These surveys were carried out by a team of Whitcher Wildlife Ltd surveyors lead by Derek Whitcher who has over twenty years' experience of surveying for wildlife and has run his own wildlife consultancy since 1998. He has extensive experience of a wide variety of survey techniques for a variety of species of protected wildlife supplemented by attendance on a wide range of training courses through CIEEM, FSC and BCT. As a member of CIEEM he is committed to continuous professional development, a continual process of learning and career development, a condition of CIEEM membership. He holds current Natural England, CCW and NRW survey licences for, bat, great crested newt and white clawed crayfish.

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3. SURVEY RESULTS.

3.1. Data Search Results.

3.1.1. A desk top data search was requested from South Yorkshire Bat Group for records of bat roosts within 2km of the survey area.

3.1.2. The site is located close to Cannon Hall and Country Park and there are records of a wide variety of bats foraging around the area. There are also records of Brown Long eared and Daubenton's bats roosting in the buildings on that site.

3.1.3. There are no bat records closer to or within the survey area.

3.1.4. The data search results must not be publicised but are available to the client on request.

3.2. Site Description.

3.2.1. The survey area is part of a farm complex located within an area of arable farmland and woodland to the northwest of Cawthorne village and to the southwest of Cannon Hall. The aerial photograph below shows the surveyed site and the surrounding area.



3.2.2. The building lies within the Jowett House Farm complex. The dovecote lies at the entrance to the farmyard, shown by the red marker on the aerial photograph below.



3.3.2. The dovecote building is shown below.



3.3. Day Time Preliminary Bat Roost Appraisal.

3.3.1. The dovecote is a three-storey building with lower walls of stone and with brick above. There are numerous open joints in both the stonework and the brickwork, as shown below.



3.3.2. There are also three open windows on the first and second floors, as shown below although the top two windows have a mesh across most of them.



3.3.3. The roof is covered with natural stone tiles. These are all in place, as are the ridge tiles although there are gaps underneath the tiles where they do not sit flat.



3.3.4. During the first survey there was access into the ground floor of the building only. The photograph below shows inside the ground floor.



3.3.5. During the second survey access was gained to the middle floor where there is an open window, partly obscured by shrubs. The ceiling and walls are in dilapidated condition.



3.3.6. Access was possible through the loft hatch into the top floor although the floor was assessed to be unsafe to walk on. The following photographs were taken from the loft hatch.



3.3.7. The house was assessed to have moderate potential for roosting bats in line with the Bat Conservation Trust Good Practice Guidelines.

3.4. Dusk Emergence Survey Results. – 30th August 2020.

3.4.1. Two surveyors carried out a dusk emergence survey on the evening of 30th August 2020. One of the surveyors holds a current Natural England survey licence and the other is an experienced assistant.

3.4.2. The evening was overcast and cool with a temperature of 12°C at 19:45 and with no breeze, 0 on the BWS. Sunset was at 19:59.

3.4.3. The survey commenced at 19:40 and continued until 21:15.

3.4.4. The surveyors were positioned so that they could see all aspects of the building simultaneously. The position of each surveyor was as shown on the aerial photograph below.



3.4.5. Each surveyor was equipped with a Batbox Duet detector and a two-way radio. A static Anabat recorder was placed near each surveyor to record bat activity for subsequent computer analysis using Analook software.

3.4.6. The following bat activity was observed by the surveyors and the static Anabat recorders by them.

3.4.6.1. Surveyor 1.

20:18. Common Pipistrelle heard not seen.
20:22. Common Pipistrelle from the front of the building and flew north.
20:24. Common Pipistrelle from the front of the building and flew north.
20:25. Common Pipistrelle foraged south side of the building.
20:26. Common Pipistrelle heard foraging, not seen.
20:34. Soprano Pipistrelle heard not seen.
20:40. Bat heard not seen.
20:43. Common Pipistrelle heard not seen.

21:12. Common Pipistrelle heard not seen.

Anabat 20 with Surveyor 1 recorded a Soprano Pipistrelle at 20:34 and a Common Pipistrelle at 20:39.

3.4.6.2. Surveyor 2.

20:19. Common Pipistrelle emerged from lower window, south side of building and flew northeast.
20:23. Soprano Pipistrelle emerged from the lower building window and flew north.
20:26. Soprano Pipistrelle emerged from the building lower window and flew north.
20:27. Common Pipistrelle emerged from building lower window and flew north.
20:36. Two Soprano Pipistrelles emerged from the lower window on south side of building and flew north.
20:38. Quiet bat came from north side of building and flew northeast.
20:39. Quiet bat flew down the drive from the southwest and flew round to north of the building.
20:41. Common Pipistrelle heard not seen.
20:44. Common Pipistrelle heard not seen.
20:45. Soprano Pipistrelle emerged from lower window and flew north.
20:45. Common Pipistrelle flew from the southwest along the drive and flew north.
21:14. Common Pipistrelle heard not seen.

Anabat 15 with Surveyor 2 recorded no bat activity.

3.4.7. No bird nesting activity was seen anywhere in or around the building.

3.4.8. Summary of Dusk Emergence Survey Results.

Seven bats emerged from the lower window on the south side of the building. Three were Common Pipistrelle and four were Soprano Pipistrelles.

3.5. Dawn Swarm Survey Results. – 14th September 2020.

3.5.1. Two surveyors carried out a dawn swarming survey on the morning of 14th September 2020. One of the surveyors holds a current Natural England survey licence and the other is an experienced assistant.

3.5.2. The morning was fine, clear and still with a temperature of 13ºC at 05:00, 0 on the BWS. Sunrise was at 06:38.

3.5.3. The survey commenced at 05:40 and continued until 06:45.

3.5.4. The surveyors were positioned so that they could see all aspects of the building simultaneously. The position of each surveyor was as shown on the aerial photograph below.



3.5.5. Each surveyor was equipped with a Batbox Duet detector and a two-way radio. A static Anabat recorder was placed near each surveyor to record bat activity for subsequent computer analysis using Analook software.

3.5.6. The following bat activity was observed by the surveyors and the static Anabat recorders by them.

3.5.6.1. Surveyor 1.

05:05. Common Pipistrelle heard overhead.
05:06. Quiet bat heard not seen.
05:07. Soprano Pipistrelle foraging overhead.
05:09. Common Pipistrelle foraging round the building.
05:11. Soprano Pipistrelle foraging.
05:12. Myotis flew round the building.
05:13. Soprano Pipistrelle foraging.
05:16. Myotis foraging between the buildings.
05:19. Soprano Pipistrelle flew clockwise round the building.
05:20. Myotis heard not seen.
05:22. Common Pipistrelle flew clockwise round the building.
05:26. Common Pipistrelle heard not seen.
05:27. Common Pipistrelle flew clockwise round the building.
05:30. Common Pipistrelle flew clockwise round the building.
05:42. Common Pipistrelle foraging up and down the lane.
05:45. Common Pipistrelle passed up the lane.
05:47. Common Pipistrelle foraging along lane.
05:56. Common Pipistrelle swarming over the wall.
05:57. Common Pipistrelle from the north and round to the south.
05:58. Common Pipistrelle foraging west to east along the lane.
06:00. Common Pipistrelle flew round to the south.

Anabat 19 with Surveyor seven Common Pipistrelles between 05:26 and 05:43, two Soprano Pipistrelles at 05:16 and 05:19 and one Myotis at 05:46.

Anabat 15 on the steps to the middle floor recorded twenty-seven Common Pipistrelles between 04:54 and 06:01, twenty-five Soprano Pipistrelle calls between 05:09 and 05:26 and one Myotis at 05:45.

3.5.6.2. Surveyor 2.

04:57. Common Pipistrelle heard not seen.
04:58. Common Pipistrelle passed west to east.
05:01. Common Pipistrelle heard not seen.
05:04. Common Pipistrelle passed east to west.
05:09. Soprano Pipistrelle passed east to west.
05:12. Myotis flew round the building.
05:15. Distant Soprano Pipistrelle heard not seen.
05:17. Myotis foraging between the buildings.
05:19. Soprano Pipistrelle flew clockwise round the building.
05:20. Myotis heard not seen.
05:22. Common Pipistrelle flew clockwise round the building.
05:25. Common Pipistrelle foraging west of the building.
05:27. Soprano Pipistrelle flew west to east round the building.
05:30. Soprano Pipistrelle flew clockwise round the building.
05:33. Soprano Pipistrelle foraging up and down the lane.
05:42. Soprano Pipistrelle heard not seen.
05:55. Three Common Pipistrelle swarmed against the south side of the building and then moved away.
05:56. Soprano Pipistrelle passed east to west.
06:00. Common Pipistrelle flew into the lower south facing window.
06:05. Common Pipistrelle entered gap between bricks above the top window south side.
06:08. Common Pipistrelle entered a roost in the stone wall.

Anabat 21 with Surveyor 2 recorded forty Common Pipistrelles between 04:57 and 06:08, twenty-seven Soprano Pipistrelle calls between 05:01 and 05:55 and two Myotis at 05:09 and 05:34.

Anabat 13 on the window sill of the middle floor window recorded twenty-six Common Pipistrelles between 04:54 and 06:08 and twenty-seven Soprano Pipistrelle calls between 05:11 and 06:02.

3.5.7. Summary of Survey Results.

3.5.7.1. A relatively high level of bat activity was recorded during the survey, around the Dovecote.

3.5.7.2. Common Pipistrelles swarmed around the middle floor, south facing window but did not enter, instead they flew away elsewhere.

3.5.7.3. In the event, one Common Pipistrelle flew into the building through the window to roost and two flew into gaps in the outer wall to roost, one high up in the brickwork and one low down in the stone wall. The roost locations are shown below.



3.6. Dusk Emergence Survey Results. – 10th August 2021.

3.6.1. Two surveyors carried out the final dusk emergence survey on the evening of 10th August 2021. The survey was led by Mitchel Greenhalgh, who has ample experience in conducting and leading bat surveys, along with an experienced assistant.

3.6.2. The evening was mild with light clouds and a temperature of 16°C at 20:30. The wind measured 1 on the Beaufort scale and sunset was at 20:46.

3.6.3. The survey commenced at 20:31 and continued until 22:16.

3.6.4. The surveyors were positioned so that they could see all aspects of the building simultaneously. The position of each surveyor was as shown on the aerial photograph below.



3.6.5. Each surveyor was equipped with a Batbox Duet detector and a two-way radio. A static Anabat recorder was placed near each surveyor to record bat activity for subsequent computer analysis using Analook software.

3.6.6. The following bat activity was observed by the surveyors and the static Anabat recorders by them.

3.6.6.1. Surveyor 1.

21:20 Common pipistrelle foraging in gap between the dovecote and neighbouring terraced houses.
21:27 Common pipistrelle foraging around courtyard to north.
21:37 Common pipistrelle foraging around courtyard to north.
21:42 Unidentified bat flew south to north.
21:43 Unidentified bat foraging around the building.

Anabat 7 with surveyor 1 recorded twelve common pipistrelle calls between 21:30 and 22:03, and one myotis call at 21:22.

3.6.6.2. Surveyor 2.

21:14 – 21:16 Six bats emerged from the roof of the neighbouring property.
21:19 Quiet bat entered the dovecote through the lower southern window.
21:19 Silent bats foraging up and down road to the south.
21:21 Common pipistrelle heard but not seen.
21:22 Common pipistrelle emerged from the lower southern window.
21:26 Two common pipistrelles foraging around the building.
21:28 Common pipistrelle foraging up and down road to the south.
21:32 Myotis heard but not seen.
21:33 Quiet bat flew east to west.
21:37 Common pipistrelle foraging around south of building.
21:38 Common pipistrelle continuously foraging up and down road to south.
21:44 Foraging still frequent but calmed slightly.
21:53 Foraging stopped.

Anabat 19 with surveyor 2 recorded thirty-five common pipistrelle calls between 21:23 and 21:58.

3.6.7. Summary of Survey Results.

3.6.7.1. A moderate level of bat activity was recorded during the survey, around the dovecote.

3.6.7.2. Common pipistrelles were the commonly observed species throughout the survey, foraging around the dovecote and up and down the road to the south.

3.6.7.3. One common pipistrelle entered the building and one common pipistrelle emerged three minutes later; it is very likely that this was the same bat. No other emergences were seen from either inside the building or within its walls.

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4. EVALUATION OF FINDINGS.

4.1. During the Preliminary Bat Roost Appraisal, the dovecote was assessed to have Moderate potential for roosting bats.

4.2. During the first dusk emergence survey seven bats emerged from the lower window on the south side of the building. Three were Common Pipistrelle and four were Soprano Pipistrelles.

4.3. During the dawn survey, one Common Pipistrelle flew into the building through the window to roost and two flew into gaps in the outer wall to roost, one high up in the brickwork and one low down in the stone wall.

4.4. During the second dusk emergence survey, one common pipistrelle was seen to enter the building and re-emerge three minutes later.

4.5. The dovecote was assessed to contain a Common Pipistrelle day roost and a Soprano Pipistrelle day roost inside the building plus two Common Pipistrelle day roosts in the outer walls of the building.

4.6. Works to the building will potentially have a major impact on any bats roosting in the building.

4.7. No nesting bird activity was identified in the dovecote building and therefore the development will have no negative impact on nesting birds.

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5. RECOMMENDATIONS.

5.1. As there are bat roosts in the walls and inside the dovecote, it will be necessary to prepare a mitigation strategy in support of the planning application outlining how the bats will be dealt with in order to maintain their existing conservation status during and after the development.

5.2. On receipt of the planning consent, that mitigation strategy will form the basis of a licence application to Natural England and the development must be delayed until that licence is in place.

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Prepared by:	
Derek Whitcher. BSc, MCIEEM, MCMI	Date: 28th September 2020.
Revised by:	
Mitchel Greenhalgh BSc	Date: 17th August 2021.

Checked by:	
Derek Whitcher. BSc, MCIEEM, MCMI	Date: 20th August 2021.

6. MITIGATION STRATEGY.

6.1. On receipt of planning consent a Natural England licence application will be applied for using this mitigation strategy as the basis for that application.

6.2. A bat box will be erected on the gable end wall of the garage across the yard from the dovecote. This will be retained for at least five years.

6.3. The design of bat box will be a Beaumaris Woodstone box as shown below or equivalent.



Beaumaris Woodstone Bat Boxes

This crevice bat box has a rough interior to provide grip, whilst the WoodStone material makes a very durable and thermally insulated bat roost.

6.4. On receipt of the licence, works can commence on the proposed development between October and March when bats will have moved away to their hibernation roosts.

6.5. A final check will be caried out by an ecologist prior to works commencing and at that time, a selection of gaps in the pointing of the outer walls will be allocated to remain without additional pointing, to provide continued bat roosting opportunities.

6.6. In the unlikely event a bat is found, this will be released into the bat box on the end of the garage.

6.7. In addition, four bat access tiles will be installed in the replaced roof of the building to provide additional future opportunities for roosting bats. Two bat access tiles will be installed either side of the pitched roof to allow bats to access the space between the tiles and the felt beneath.

6.8. Bat access tiles will be as shown below or equivalent.



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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.