Whitcher Wildlife Ltd.
Ecological Consultants.

PEAR TREE FARM BRIERELY.

OS REF: SE 40880 11246.

DUSK EMERGENCE BAT SURVEY.

Ref No:- **160828.**

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1. INTRODUCTION.

1.1. Weddle Landscape Design carried out a preliminary bat roost assessment of a series of buildings at Pear Tree Farm, Brierley during August 2016. The series of buildings were split into eight sections during the survey and low bat roost potential was identified in six of these buildings.

1.2. A further dusk emergence bat survey of the buildings has been commissioned to identify whether there is a bat roost present in any of the buildings.

1.3. Whitcher Wildlife Ltd carried out that dusk emergence bat survey on the 30th August 2016. This report outlines the findings of the survey 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.

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2. SURVEY METHODOLOGY.

2.1. A dusk emergence bat survey of the site was carried out by licensed surveyors in line with Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn).*

2.2. The surveyors concentrated on the areas of roost potential identified in Weddle Landscape Designs April 2016 preliminary bat roost assessment report.

2.3. Three surveyors were each equipped with Batbox Duet detectors during the survey and used an additional three Anabat units to record the bat movements around the site.

2.5. This survey was carried out by Jenny Whitcher Roebuck MCIEEM, Lewis Wright BSc Grad CIEEM and Derek Whitcher.

2.5.1. Since 2001 Jenny has had experience in a professional capacity as a Wildlife Consultant carrying out Ecology Surveys and Phase 1 Habitat surveys. Jenny holds Natural England Survey Licences in respect of bats, great crested newts, crayfish and barn owls, CCW and SNH Survey Licences in respect of bats and great crested newts. She has also successfully completed a number 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. As a full member of CIEEM she is committed to continuous professional development, a continual process of learning and career development, a condition of CIEEM membership.

2.5.2. 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.

2.5.3. The survey was undertaken 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 survey licences for barn owl, bat, great crested newt and white clawed crayfish.

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3. SURVEY RESULTS.

3.1. The Surveyed Area.

3.1.1. The surveyed area was Building A, sections A1–A8 as shown on the plan below.

3.1.2. Sections A1, A2, A3, A4 and A6 are single storey stone barns with very few suitable roosting features and no direct evidence of bats was identified in the initial survey. The buildings were assessed as having low bat roost potential.

3.1.3. Section A5 has a collapsed roof and was assessed as having negligible potential for roosting bats.

3.1.4. Section A7 is a two storey brick barn with potential access points for bats to enter the building. The buildings were assessed as having low bat roost potential.

3.1.5. Section A8 is a single story brick building with a corrugated cement sheet roof. The building was assessed as having negligible potential for roosting bats.

3.1.6. The buildings lie in the village of Brierley with farmland to the northeast and residential properties on all other sides.

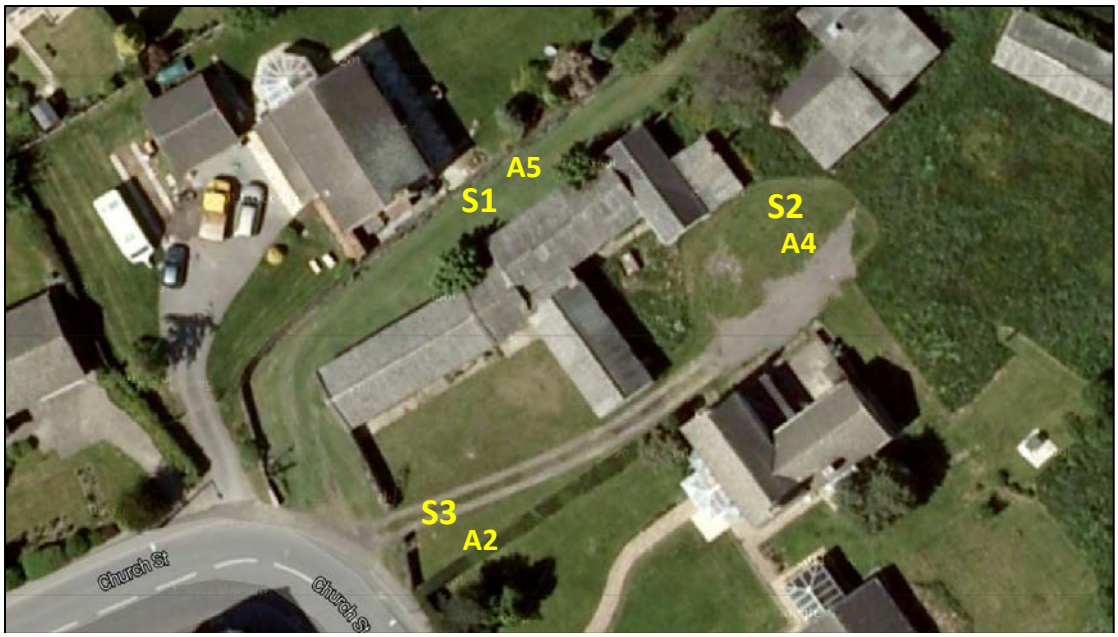
3.1.7. The aerial photograph below shows the building and surrounding area.

3.2. Dusk Emergence Survey Results.

3.2.1. A dusk emergence bat survey was carried out by three surveyors on the 30th August 2016. The surveyors were equipped with Batbox Duet detectors and two way radios during the survey and three additional Anabat units were used to record bat activity around the site for subsequent computer analysis using Analook software.

3.2.2. The weather at the time of the survey was fine and still. A temperature of 22ºC was recorded at 20:00 reducing to 19ºC at the end of the survey with sunset at 19:59.

3.2.3. The locations of the surveyors and Anabat bat detectors are shown on the plan below. S=Surveyor and A=Anabat.



3.2.4. Below is a brief outline of the findings from the surveyors during the survey.

3.2.4.1. Surveyor 1.

- 20:10 – A Noctule passed from north to southeast over the site.
- 20:30 – A Common Pipistrelle passed from southwest to northeast along the track at the northern side of the buildings
- 20:31 – A Common Pipistrelle flew from the north, foraged along the track at the northern side of the buildings then flew northeast off site.
- 20:34 – A Common Pipistrelle passed from south to north over the site and foraged briefly over the garden to the north of the site.
- 20:36 – A Common Pipistrelle passed from northeast to southwest along the track at the northern side of the buildings.
- 20:38– A Common Pipistrelle flew from the southwest, foraged along the track at the northern side of the buildings then flew off site to the northeast.
- 20:40 – A Common Pipistrelle flew from southwest to northeast along the track at the northern side of the buildings. A second Common Pipistrelle flew from the north and flew off site to the northeast.
- 20:47 – A Common Pipistrelle flew from southwest to northeast along the track at the northern side of the buildings.
- 20:57 – A Common Pipistrelle flew from the northeast then flew north.
- 21:02 – A Common Pipistrelle was heard pass but was not seen.

3.2.4.2. Surveyor 2.

- 20:32 – A Common Pipistrelle bat was heard to the east but was not seen.
- 20:38 – A Common Pipistrelle bat was heard to the east but was not seen.
- 20:42 – A Common Pipistrelle bat was heard to the east but was not seen.
- 20:48 – A Common Pipistrelle bat was heard to the east but was not seen.
- 20:49 – A Common Pipistrelle bat was heard to the east but was not seen.
- 20:56 – A Common Pipistrelle bat was heard to the east but was not seen.
- 21:02 – A Common Pipistrelle bat was heard to the east but was not seen.

3.2.4.3. Surveyor 3.

- 20:24 – A Common Pipistrelle flew from south to north over the site.
- 20:27 – A Common Pipistrelle flew from north to south foraging briefly as it passed.
- 20:30 – A Common Pipistrelle flew from north to south foraging briefly as it passed.
- 20:33 – A Common Pipistrelle flew from south to north over the site.
- 20:36 – A Common Pipistrelle flew from the south, foraged briefly then flew north.
- 20:38 – A Common Pipistrelle flew from the south, foraged briefly then flew north.
- 20:41 – A Common Pipistrelle flew from the south and foraged along the southern edge of the buildings.
- 20:49 – A Common Pipistrelle flew from the south and foraged along the southern edge of the buildings.

3.2.5. Below is a summary of the recordings from each of the Anabat units during the surveys.

3.2.5.1. Anabat 2.

Anabat 2 recorded one Noctule call and twelve Common Pipistrelle calls throughout the survey. No other bat species were recorded on this Anabat. The recordings confirm the findings of Surveyor 3 and the Noctule recorded by Surveyor 1.

Time	Noctule	Common Pipistrelle	Total
20:06	1		1
20:21		1	1
20:24		1	1
20:26		1	1
20:27		1	1
20:32		1	1
20:33		1	1
20:35		1	1
20:39		3	3
20:43		1	1
20:46		1	1
Total	**1**	**12**	**13**

3.2.5.2. Anabat 6.

Anabat 6 recorded only one Noctule calls throughout the survey. No other bat species were recorded on this Anabat. No Common Pipistrelle bats were recorded on this Anabat as all bats recorded by Surveyor 2 were distant and to the east behind the surveyor.

Time	Noctule	Total
20:07	1	1
Total	**1**	**1**

3.2.5.3. Anabat 11.

Anabat 11 recorded one Noctule call and seventeen Common Pipistrelle calls throughout the survey. No other bat species were recorded on this Anabat. The recordings confirm the findings of Surveyor 1.

Time	Noctule	Common Pipistrelle	Total
20:07	1		1
20:28		1	1
20:29		4	4
20:30		1	1
20:31		3	3
20:33		1	1
20:36		2	2
20:38		2	2

20:44		1	1
20:54		1	1
21:00		1	1
Total	**1**	**17**	**18**

3.2.6. No bats were identified emerging from the buildings during the survey. The main activity recorded were Common Pipistrelle passing the northern side of the site and flying over the site from south to north with occasional foraging on the southern side of the buildings. Bats were also recorded passing by the eastern end of the site behind Surveyor 2.

3.2.7. The activity during the survey was fairly low with the activity level dropping off towards the end of the survey.

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4. EVALUATION OF FINDINGS.

4.1. An initial preliminary bat roost assessment carried out by Weddle Landscape Design during August 2016 identified low bat roost potential in six sections of Building A.

4.2. A dusk emergence bat survey of the buildings carried out on a suitable evening with good weather conditions on 30th August 2016, did not identify any bats emerging from any part of the building.

4.3. Two species of bat were identified on the site during the survey, Common Pipistrelle and Noctule.

4.4. Common Pipistrelle bats were identified passing the northern side of the site and flying over the site from south to north with occasional foraging on the southern side of the buildings. Bats were also recorded passing by the eastern end of the site behind Surveyor 2. Towards the end of the survey the activity reduced to a level where no activity was recorded by any of the surveyors or Anabats.

4.5. The first Common Pipistrelle call was recorded by Surveyor 3 at 20:24, twenty-five minutes after sunset indicating that there is no roost near the site.

4.6. One Noctule was identified passing over the site high up from north to southeast. This was seen by Surveyor 1 and recorded on all Anabat detectors.

4.7. Therefore it is assessed that works on the site will not impact on any bat roosts within Building A.

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5. RECOMMENDATIONS.

5.1. No bats were identified emerging from any part of Building A during the survey. Therefore a Natural England licence is not required to cover works to this building.

5.2. Although an established roost was not identified within either building, individual bats may seek refuge almost anywhere. Therefore it is recommended that care is taken during any work on the buildings and that all personnel working on the site are briefed on the presence of bats and what to look for, using the toolbox talk included in Appendix II of this report.

5.3. If any bats are identified at any stage of the works it is recommended that the bat remains in a sheltered location, work in that area ceases and further advice is sought immediately.

5.4. To enhance the area for roosting bats it is recommended that a bat brick is incorporated into new buildings constructed on the site to provide roosting potential for Common Pipistrelle bats.

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Prepared by:	
Jenny Whitcher Roebuck, MCIEEM.	Date: 30th August 2016.

Checked by:	
Derek Whitcher. BSc, MCIEEM, MCMI.	Date: 30th August 2016.

6. REFERENCES.

Chartered Institute of Ecology and Environmental Management. 2013. ***Guidelines for Preliminary Ecological Appraisal.*** CIEEM, Hampshire.

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2010. ***The Conservation of Habitats and Species Regulations.*** *http://www.legislation.gov.uk/uksi/2010/490/contents/made* (accessed 18/02/16)

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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.

Toolbox Talk : Bats

Whitcher Wildlife Ltd

Ecological Consultants

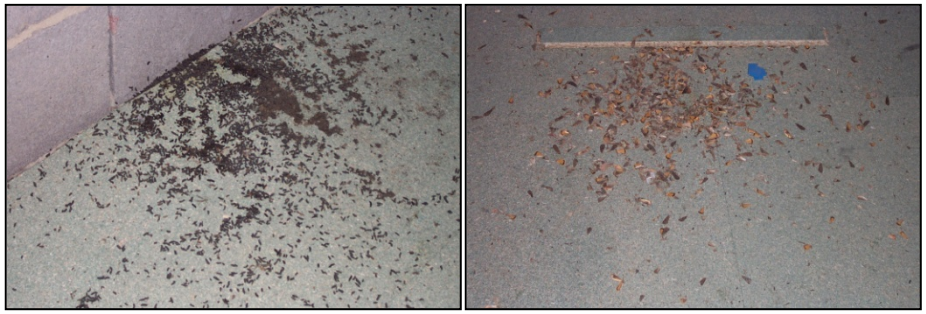
Over 15 species of bat have been recorded in Britain.

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 tree 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