

HOUGH LANE, WOMBWELL.

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BAT SURVEY AND BIODIVERSITY ENHANCEMENTS.

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1. INTRODUCTION.

1.1. An Extended Phase 1 Habitat Survey was carried out by Innovation Group Environmental Services during 2017, which highlighted the buildings on sites as having a **Low Potential** for roosting bats.

1.2. Whitcher Wildlife Ltd was therefore commissioned by Hoober Ltd and the Together Housing Group to carry out a bat dusk emergence survey of the site to establish whether there are any issues that may affect the proposed works.

1.3. This survey was carried out on 26th August 2020 and this report outlines the findings of that 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.

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 (3^{rd} 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 (3^{rd} 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. This survey was carried out by James Campbell MCIEEM. Since 2003 James has had experience in a professional capacity as a Wildlife Consultant carrying out Ecology Surveys and Phase 1 Habitat surveys and is a full member of CIEEM. James holds licences with several licensing bodies including: -

- Natural England Survey Licences in respect of bats, great crested newts, white clawed crayfish, water voles and barn owls.
- Scottish Natural Heritage Licences in respect of bats and great crested newts.
- Natural Resources Wales Licences in respect of bats and great crested newts. He has also successfully completed numerous courses run by CIEEM, BCT and FSC

regarding protected species and in carrying out Phase 1 Habitat surveys. He is also confined spaces trained and qualified to NVQ Level 2 in tree climbing and aerial rescue.

2.8.1. The survey was also carried out by licenced surveyors and experienced assistances from Whitcher Wildlife Ltd.

3. SURVEY RESULTS.

3.1. Data Search Results.

3.1.1. A desktop data search was carried out on the internet using publicly available websites for records of bats and bat roosts within 2km of the survey area.

3.1.2. There were no records of bats or bat roost within 2km of the survey area.

3.2. Site Description.

3.2.1. The surveyed buildings were a variety of disused industrial buildings. The buildings were surrounded by residential properties to the east and the west with woodland to the south.

3.2.2. The aerial photograph below shows the location of the surveyed buildings and the immediate surrounding area.



3.3. Dusk Emergence Survey Results.

3.3.1. A dusk emergence survey of all buildings on the site was carried out on the evening of 26th August 2020 by eight surveyors. Three of these surveyors hold a Natural England bat class survey licence. The remaining surveyors are all experienced assistants working under the survey licence of the other surveyors on site.

3.3.2. The eight surveyors were positioned in order to be able to view all aspects of the buildings simultaneously. Each surveyor was equipped with a Batbox Duet detector and a two-way radio for communications. In addition, eight static Anabat recorders were deployed to record bat activity for subsequent computer analysis using Analook software. One Anabat was placed with each surveyor. The positions of the surveyors (S) were as shown below.



3.3.3. The evening was mild with a temperature of 15°C at 20:00. The sky was clear with no breeze, 0 on the BWS. Sunset was at 20:08 and the survey started at 19:53.

3.3.4. The following bat activities were recorded by each surveyor:

3.3.4.1. Surveyor 1.

20:37 to 21:05. A Common Pipistrelle flew onto the site from the north along the treeline and continued to forage constantly.

Anabat 1 with Surveyor 1 recorded two Common Pipistrelle between 20:37 and 21:05.

3.3.4.2. Surveyor 2.

20:49. A Common Pipistrelle flew from the east to the west to the south of the building.

20:51. A second Common Pipistrelle flew from the east to the west to the south of the building.

21:12. Noctule bat heard over the site.

Anabat 2 with Surveyor 2 recorded four Common Pipistrelle between 20:49 and 21:51 and one Noctule at 21:12.

3.3.4.3. Surveyor 3.

20:20. Common Pipistrelle was seen foraging from the north to the south between the buildings on site.

20:37. Common Pipistrelle was heard not seen.

20:45. Common Pipistrelle was heard not seen.

20:45. Common Pipistrelle was seen foraging from the north to the south between the buildings on site.

20:45. Common Pipistrelle was heard not seen.

20:56. Common Pipistrelle was heard not seen.

21:03. Common Pipistrelle was seen foraging from the north to the south between the buildings on site.

21:08. Common Pipistrelle was seen foraging from the north to the south between the buildings on site.

Anabat 3 with Surveyor 3 recorded six Common Pipistrelle between 20:20 and 21:08.

3.3.4.4. Surveyor 4.

20:32. Common Pipistrelle was identified flying over the site from the west to the east.

20:35. Common Pipistrelle foraging over the carpark to the east of the survey area.

20:37. Common Pipistrelle was identified foraging to the north over adjacent houses.

20:41. Common Pipistrelle was identified flying over the site from the west to the east.

20:47. Common Pipistrelle foraging over the carpark to the east of the survey area.

20:48. Common Pipistrelle was identified flying over the site from the west to the east along the long building to the south.

20:51. Common Pipistrelle was identified flying over the site from the west to the east.

20:56. Common Pipistrelle was identified flying over the site from the west to the east.

20:58. Common Pipistrelle was identified flying over the site from the west to the east.

21:07. A Noctule was heard flying over the site.

21:08. Common Pipistrelle was identified flying over the site from the east to the west.

Anabat 4 with Surveyor 4 recorded twenty-four Common Pipistrelles between 20:32 and 21:08.

3.3.4.5. Surveyor 5.

20:32. Common Pipistrelle was identified flying over the site from the west onto the site.

20:35. Common Pipistrelle was identified flying over the site from the west onto the site and to the east.

20:41. Common Pipistrelle was identified flying over the site from the west to the east.

20:48. Common Pipistrelle was identified flying over the site from the west to the east along the long building to the south.

20:51. Common Pipistrelle was identified flying over the site from the west to the east.

20:56. Common Pipistrelle was identified flying over the site from the west to the east.

20:58. Common Pipistrelle was identified flying over the site from the west to the east.

21:07. A Noctule was heard flying over the site.

21:08. Common Pipistrelle was identified flying over the site from the east to the west.

Anabat 5 with Surveyor 5 recorded forty-four Common Pipistrelles between 20:32 and 21:09 and nine Noctules between 19:52 and 20:40.

3.3.4.6. Surveyor 6.

20:32. Common Pipistrelle heard not seen.

20:41. Common Pipistrelle heard not seen.

20:42. Common Pipistrelle foraging from the north to the south to the north between the buildings.

21:03. Common Pipistrelle foraging from the north to the south to the north between the buildings.

21:09. Common Pipistrelle foraging from the north to the south to the north between the buildings.

Anabat 6 with Surveyor 6 recorded twenty-four Common Pipistrelles between 20:32 and 21:09 and six Noctules between 19:46 and 20:15.

3.3.4.7. Surveyor 7.

20:13. Common Pipistrelle from the west to the east along the road.

20:42. Common Pipistrelle heard not seen.

21:01. Common Pipistrelle heard not seen.

Anabat 7 with Surveyor 7 recorded three Common Pipistrelles between 20:13 and 21:01 and three Noctules between 20:36 and 21:03.

3.3.4.8. Surveyor 8.

20:37. Common Pipistrelle seen passing over the site from the south to the north along the western edge of the site.

20:42. Common Pipistrelle heard not seen.

20:43. Common Pipistrelle seen passing over the site from the south to the north along the western edge of the site.

20:45. Common Pipistrelle seen passing over the site from the south to the north along the western edge of the site.

20:48. Common Pipistrelle seen passing over the site from the south to the north along the western edge of the site.

20:55. Common Pipistrelle seen passing over the site from the south to the north and then back to the south along the western edge of the site.

Anabat 8 with Surveyor 8 recorded sixteen Common Pipistrelles between 20:43 and 21:13 and one Noctule at 19:43.

3.3.5. Summary of the Dusk Emergence Survey Results.

3.3.5.1. A low level of Common Pipistrelle and Noctule foraging activity was recorded around the site and particularly around the eastern and western site boundaries.

3.3.5.2. No bats emerged from any of the buildings on site.

3.3.6. Repeat Badger Survey.

While on site for the bat survey the site was re-checked for signs of a badger sett or badger presence. No badger setts or field signs were found anywhere within the site boundaries or the immediate surrounding area.

4. EVALUATION OF FINDINGS.

4.1. During the daytime bat survey, the buildings were assessed to generally be in a good condition, with no bat roosts or bat field signs identified during this survey. However, some small features were identified, which had the potential to support small numbers of bats. The buildings were assessed to provide a **low potential** for opportunist roosting bats. Therefore, there could be a **high impact** on bats if they were to be present.

4.2. During the dusk emergence survey, a low level of Common Pipistrelle foraging activity along the eastern and western site boundaries was identified along with a number of Noctules passing overhead. No bats emerged from any of the buildings on the site. The proposed demolition of the buildings and the redevelopment of the site will have **no impact** on roosting bats.

4.3. The repeat badger survey confirmed that the proposed development will have **no impact** on badger or their setts.

5. RECOMMENDATIONS.

5.1. No bats emerged from any of the buildings during the dusk emergence survey. Therefore, no further surveys are recommended and there is no requirement for a mitigation strategy or for a Natural England bat licence in connection with the proposed development.

5.2. In line with the requirements of the NPPF, it is recommended that integrated bat bricks and swift nest boxes be installed in the new buildings on the site.

6. BIODIVERSITY ENHANCEMENTS.

6.1. Three bat bricks will be built into the new dwellings to be built on the site high in the gable ends in the locations shown by the red circles on the site plan below. Each will be as shown below or equivalent to match the outer skin of the buildings.



6.2. Three swift boxes will be built into the new dwellings on the site, located high in gable end walls in the locations shown by the blue circles on the site plan below.



6.3. The bat bricks will be located as shown by the red circles below and the swift boxes as shown by the blue circles.



Prepared by:		
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Checked by:	
Jenny Whitcher Roebuck MCIEEM.	Date: 8 th September 2020.

7. 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.

Toolbox Talk: Bats

Whitcher Wildlife Ltd

Ecological Consultants

18 species of bat have been recorded in Britain, 17 of which are known to breed here.

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