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Activity Survey for Bats & Birds

Web Processing Ltd, New Horwich Road, Whaley Bridge, High Peak, SK23 7LG

July 2011

Notice to readers

This report has been prepared by Michael Gavaghan wildlife Consultancy with all reasonable skill, care and diligence, within the terms of the contract with the client. The actions of the surveyor on site and during the production of the report were undertaken in accordance with the Code of Professional Conduct for the Institute of Ecology and Environmental Management (www.ieem.org.uk).

Capability

Surveyor 1

Matthew Haydock – HND, ND, MIEEM, Natural England Bat Licence Number 20101027. Matthew is an ecologist with four years' experience of environmental consultancy work. He holds a HND in Environmental Management with distinction. Matthew is an experienced bat surveyor with competency in activity surveys, dawn and dusk bat roost assessments, daytime surveys for bat field signs, assessments of trees as potential bat roosts and the production of reports providing advice on best practice, mitigation and compensation works relating to bats as may be required. Matthew holds a Natural England and Countryside Council for Wales licence, since 1997, to disturb bats for the purposes of science and education or conservation, and has held Development licences to permit development works affecting bats. Matthew has been an active bat group worker with the Staffordshire Bat Group since 1997, conducting various surveys throughout Staffordshire and Derbyshire. He also works alongside the Bat Conservation Trust with various projects such as the National Bat Monitoring Project and is now a corporate member of the Bat Conservation Trust.

Surveyor 2

Michael Gavaghan has gained his bat experience in a variety of ecological consultancy, in which he has assisted on initial (daytime) surveys, and varied dusk emergence and dawn swarm surveys. These have included residential properties, fields and potential barn conversions, bridges and trees.

Surveyor 3

Lucy Ashley has been an assistant with Michael Gavaghan Wildlife Consultancy for nearly two years. She has assisted as a bat surveyor and has gained competency in activity surveys, dawn and dusk bat roost assessments, daytime surveys for bat field signs, assessments of trees as potential bat roosts and the production of reports providing advice on best practice, mitigation and compensation works relating to bats as may be required.

Non-technical summary

An internal and external inspection and activity survey was conducted on 13th July 2011. A dusk and dawn re-entry within a 24-hour period survey for bats was carried out on 2nd and 3rd August 2011 for the existing building on a site at Web Processing Ltd, New Horwich Road, Whaley Bridge, High Peak, SK23 7LG.

The site comprises large areas of hardstanding, hedgerows and a building.

No previous bat surveys have been conducted on this building. The building was inspected for bird and bat activity; no evidence was found for either species. During the activity surveys, no bats were seen emerging from the building, although bats were recorded commuting and foraging in the adjacent gardens. From this it can be concluded that a European Protected Species licence from Natural England will not be required, as no roosts were evident. No active birds' nests were observed during the surveys.

No Trees were on site.

During the second activity survey, 28 soprano pipistrellus were recorded emerging from the north-east gable end of the building adjacent to the site on the north elevation. Please see APPENDIX 2.

Contents

1.0 Introduction

Background

1.1 Michael Gavaghan was commissioned to undertake internal and external inspection and activity surveys for the identification of bat and bird activity within an existing residential building on a site known as Web Processing Ltd, New Horwich Road, Whaley Bridge, High Peak, SK23 7LG, Grid reference: SK0128 81084.

1.2 The site comprises a 20th-century building with areas of hardstanding and hedgerow.

1.3 As defined in Planning Policy Statement 9 (ODPM, 2005) Biodiversity and Geological Conservation, sites of biodiversity conservation value and protected species are material considerations in the planning process.

1.4 The aim of the survey was to undertake an appraisal of the buildings to establish the following:

- presence/absence of bat roosts
- status of roosts, if present
- whether additional surveys are required
- whether a European Protected Species (EPS) licence is required to ensure legal compliance
- which type of mitigation measures would need to be employed.

Site Characteristics

1.5 The site consists of a stone-structured building and hardstanding.

1.6 The site is bordered by residential buildings, agricultural fields, woodlands, water and hedgerows.

2.0 Legislation and Status

2.1 All species of bat are listed in Schedule 5 of The Wildlife and Countryside Act (1981) and as such receive protection under Section 9 of this Act. This has been amended several times, most recently by the Countryside and Rights of Way Act 2000, which added 'or recklessly' to Section 9(4) (a) and (b). In summary, it is a criminal offence to:

- intentionally kill, injure or take a wild bat
- be in possession of, or control, any live or dead wild bat or part of, or anything derived from a wild bat
- intentionally or recklessly damage, destroy or obstruct access to any place that a wild bat uses for shelter or protection
- intentionally or recklessly disturb any wild bat whilst it is occupying a structure or place that it uses for shelter or protection
- transport for sale or exchange, or offer for sale or exchange a live or dead bat or any part of a bat.

2.2 All species of bat are also listed in Schedule 2 of the Conservation (Natural Habitats, &c.) Regulations (known as the Habitats Regulations) and as such receive protection under Regulation 39 of these Regulations, making it an offence to:

- deliberately capture or kill a bat
- deliberately disturb a bat
- damage or destroy a breeding site or resting place of a bat
- keep, transport, sell or exchange, or offer for sale or exchange a live or dead bat or any part of a bat.

2.3 The Conservation of Habitats and Species Regulations 2010 consolidate all the various amendments made to the Conservation (Natural Habitats, &c.) Regulations 1994, in respect of England and Wales. It is an offence to possess, sell or offer, or transport for sale any European species of bat or any part derived from such a species. These Regulations also remove the 'incidental result defence'. In other words, it is no longer a defence to show that the killing, capture or disturbance of a species covered by the Regulations or the destruction or damage of their breeding sites or resting places was the incidental and unavoidable result of a lawful activity. Natural England can grant European Protected Species (EPS) licenses in respect of development to permit activities that would otherwise be unlawful.

2.4 Under Section 40 of the Natural Environment and Rural Communities Act (2006), public bodies, including Local and Regional Planning Authorities, have a duty to 'have regard' to the conservation of biodiversity in England when carrying out their normal functions, which includes consideration of planning applications. In compliance with Section 41 of the Act, the Secretary of State has published a list of species considered to be of principal importance for conserving biodiversity in England. This is known as The England Biodiversity List, all of which make up the UK BAP Priority Species. Regional Planning Bodies and Local Planning Authorities will use it to identify the species that should be afforded priority when applying the requirements of PPS9 to maintain, restore and enhance species and habitats.

2.5 Seven bat species are UK BAP (2007) Priority Species. These are:

- Brown long-eared bat
- Barbastelle bat
- Bechstein's bat
- Noctule
- Greater horseshoe bat
- Lesser horseshoe bat
- Soprano pipistrelle

2.6 Five bat species are recorded within 2 km of the site. These are:

- Noctule
- Natterer's bat
- Soprano pipistrelle
- Daubenton's bat
- Brown long-eared bat

3.0 Methodology

Inspection & Activity Survey

3.1 All bat species resident in the UK have been recorded using trees, buildings and built structures, e.g. bridges, at some time during the year (Bat Conservation Trust, 2007). The building was inspected externally and internally, where access was available, for signs of bat activity. These typically include bat presence, droppings, feeding remains, urine stains and grease marks. Equipment used to aid the survey included low and high-powered torches, ladders, binoculars and an endoscope.

3.2 Notes were made on the following in accordance with the guidelines published by the BCT (2007) for the surveying of trees and trees structures:

- Type and age of tree
- Presence of potential roost features e.g. woodpecker holes, cracks, raised bark, vegetation.
- Information or evidence of work having been undertaken that could affect use of the structure by bats
- Amount and location of evidence of bats such as presence of live or dead bats, droppings, grease marks, urine stains, characteristic smell of bats.

3.3 Notes were made on the following in accordance with the guidelines published by the BCT (2007) for the surveying of buildings and built structures:

- Type and age of building
- Type of construction
- Presence of potential roost features, e.g. hanging tiles, raised tiles, roof voids
- Information or evidence of work having been undertaken that could affect use of the structure by bats
- Amount and location of evidence of bats such as presence of live or dead bats, droppings, grease marks, urine stains, characteristic smell of bats.

3.4 The activity survey was conducted in accordance with the guidelines published by the BCT (2007) for carrying out dusk and dawn activity surveys.

- Determine presence/absence of species, i.e. the species present in a given area
- Determine the intensity of bat activity both spatially and temporally
- Determine the type of activity, most usually foraging (by feeding buzzes); commuting (by high directional pass rates); mating (by mating social calls)
- Find roosts by tracking back bat flight paths or observing dawn flight activity at roosts.

3.5 Where feasible, given the amount of evidence collected, any structures with evidence of bats have been evaluated to assess which of the following categories they fall into, if any (BCT, 2007):

- Maternity or Nursery Roost – used by breeding bats, where babies are born and raised to independence
- Hibernation Site – where bats may be found during the winter
- Daytime Summer Roost – used by males and/or non-breeding females
- Night Roost – where bats rest between feeding bouts during the night but are rarely present during the day
- Feeding Roost – where bats temporarily hang up to eat an item of prey
- Transitional (or Swarming) Site – where bats may be present during the spring or autumn.

3.6 In the absence of any evidence, structures have been assigned a rating of suitability from negligible to high potential for supporting bats. The rating is based on the location of the structure in the surrounding landscape, the number and type of features suitable for use by bats and the surveyor's experience. For example, a structure with a high level of regular disturbance and few opportunities for access by bats that is in a highly urbanised area with few or no mature trees, parkland, woodland or wetland would have negligible potential. Conversely, a pre-20th-century or early 20th-century building with many features suitable for use by bats close to good foraging habitat would have high potential.

3.7 The equipment used to gather data on bats included: Batbox Duet, Petterson Tranquillity Detector, Tascam DR-07 recorder, GPS eTrex Venture HC, hand net, CB2 Clubman Deluxe High-Power Lamp, Pettersson's BatSound v4.03 and SeeSnake 2 Video Endoscope.

Nomenclature

3.8 The English name only of flora and fauna species is given in the main text of this report; however, scientific names are used for invertebrates where no English name is available. A list of all species recorded on site and those mentioned in the text but not necessarily occurring on site together with scientific names is given in APPENDIX 1.

4.0 Results

Inspection Survey

Surrounding Landscape

4.1 The site and surroundings provide potential foraging habitat for a number of bat species. The adjacent hedgerows, gardens and woodlands could be used by foraging bats. The surrounding landscape comprises residential buildings and gardens and is unlikely to support a large number of bats, although hedgerows and residential gardens are all potential feeding and commuting areas for bats.

4.2 No constraints were encountered during the site survey.

Building 1

The residential building on site is a 20th-century building of stone structure with a hipped roof. The exterior of the building was inspected for any cracks or crevices which bats or birds could utilize. The main part of the building, which is of hipped-roof design, shows noticeable raised tiles and some areas of dislodged tiles, roofing ridges and flashing, which provide potential access to the interior of the building. Some of the beams that protrude externally show some crevices that bats and birds could utilize for habitation. Crevices between the stonework and the roofing, caused by structural movement, are apparent under the barge boarding and provide a sufficient gap for bats to gain access to the interior of the building. All windows and doors were checked but show little or no egress points for bats or birds to utilize. Overall, a variety of egress points were found that both bats and birds could use as opportunities for roosting, nesting and access. An active swifts' nest was observed on the corner of the building's north elevation next to a protruding roofing beam.

No bat droppings, scratch marks or oil marks from fur were evident during the external inspection (note that the external environment can remove evidence of bat activity).

The internal inspection of the building revealed that there are three roof voids within the building. The first roof void is a large open-plan space which consists of rafters and purling, which is very dusty with a large number of cobwebs. The roof void does show light penetrating through the tiles, indicating that there is potential access for bats. However, no bat droppings, scratch marks or oil marks from fur were evident during the internal inspection. The second roof void is also open-planned with plaster boarding, thus an inspection between the stonework and the boarding could not be competently investigated. Where crevices were accessible they were investigated; no bat droppings, scratch marks or oil marks from fur were evident. The third roof void is open-planned and consists of rafters and purling with visible roofing slates. The roof void shows a number of crevices which bats could potentially utilize for roosting. These were investigated with the SeeSnake 2 Video Endoscope with care and vigilance. No bat droppings, scratch marks or oil marks from fur were evident.

Activity Survey

Environmental variables

Environmental Variable	13th July 2011	2nd August 2011	3rd August 2011
Temp Start	12.5	18.4	11.4
Temp Finish	11.7	16.6	11.9
Cloud Cover Start	70%	90%	90%
Cloud Cover Finish	70%	90%	90%
Wind Speed Average	2.4 mph	2.6 mph	2.3
Precipitation	Dry	2.6 mph	2.3

All surveys were conducted 1.5 hours before dusk and 1.5+ hours after.

1st Survey: Dusk and Activity Survey – 13th July 2011

- The survey team was positioned to cover all sides of the site during the emergence time.
- No bats were seen emerging from any part of the building during this time.
- Bats were recorded in these areas, but given the flight behaviour and height of the bats it is considered unlikely that they emerged from the building.
- Both common and soprano pipistrelle bats were recorded close to the site entrance on the southern section of the site.
- During the first survey, noctule bats were seen and heard commuting and Myotis Sp. were heard, but which species of Myotis it was could not be confirmed.
- During the transect, bats were regularly recorded along the whole length of the treeline on the south boundary of the site.

2nd Survey: Dusk and Dawn Activity Survey – 2nd and 3rd August 2011

- The survey team was positioned to cover all sides of the site during the emergence time and for the dawn re-entry.
- No bats were seen emerging from any of part of the building during this time.

- Bats were recorded in these areas, but given the flight behaviour and height of the bats it is considered unlikely that they emerged from the northern side of the site.

- Early during the second survey at dusk, noctule bats made passes; these were noted to be high flying with accompanying echolocation calls. During the survey, 28 soprano pipistrellus were identified emerging from the adjacent house on the north-east elevation.

- Common and pipistrelle bats were recorded and noted throughout various intervals during the dusk and dawn activity survey.

- Brown long-eared bats were heard commuting and foraging, but although potential sightings of brown long-eared bats were made, this could not be confirmed due to low or no echolocation.

- Myotis Sp. of Daubenton's bats were also noted to be commuting during the dusk activity survey.

5.0 Evaluation

5.1 A summary of the results and an evaluation of the building's potential to support bat roosts is presented in Table 1.

Table 1: Classification of roost potential in building

Building Number	Roost Potential	Rationale
Building	**Medium-High**	The building shows access and roosting opportunities for bats due to the number of cracks and crevices that bats could use.

6.0 Impacts and Recommendations

Impacts

6.1 The building is to be redeveloped with a new extension. The following potential impacts have therefore been identified:

- The building will be redeveloped; during the updated internal and external inspection accompanied by the activity surveys, no bats were seen emerging from any part of the building, therefore the impact on bats will be low.
- One active swifts' nest was located on the northern elevation on the external aspect of the building; if redevelopment occurs during the time that the nest is active this will have a negative impact on the breeding swifts within this nest, which will in turn have a negative impact locally on the swift population.

Legal Compliance

6.2 It will not be required to apply for a EPS licence, as no roosts were identified during the surveys.

6.3 As nesting birds are protected under the Wildlife and Countryside Act (1981), redevelopment is to avoid the bird nesting season.

Further Surveys

6.4 During the activity surveys, which conform to the BCT guidelines (2007), all effort was made to establish if a roost is present or not. Therefore, as no roost is present, no further surveys will be necessary.

6.5 It is required that any redevelopment of the building avoids the bird nesting season, which is generally between April to September. If work is to commence within this time, an experienced ornithologist is to be contacted and the site is to be further investigated for nesting birds and further advice given.

Care and Vigilance During Works

6.6 Where surveys have demonstrated a likely absence of bats in the building it should be noted that it is possible that bats could begin using the building at any time. The contractor(s) should therefore be advised to carry out all work with care and vigilance for bats, and if bats are discovered, an experienced bat worker should be consulted for further guidance.

7.0 References

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BSBI (2008) *BSBI 2007 List* [Online]. Available at: http://www.bsbi.org.uk/html/database.html [accessed on 20th October 2010].

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8.0 Plans

Building Location Plan

9.0 Photographic Plates

Plate 1: showing potential bat and bird access and roosting potential

Plate 2: showing potential bat and bird access and roosting potential

Plate 3: showing potential bat and bird access and roosting potential

Plate 4: showing potential bat and bird access and roosting potential

Roof Space 1

Roof Space 1: example of roosting opportunity.

Roof Space 2

Roof Space 3

Roof Space 3: potential roosting example

Appendix 1

Flora and Fauna mentioned in text

(Not necessarily occurring on site)

Mammals	
Barbastelle bat	*Barbastella barbastellus*
Bechstein's bat	*Myotis bechsteinii*
Brown long-eared bat	*Plecotus auritus*
Soprano pipistrelle	*Pipistrellus pygmaeus*
Greater horseshoe bat	*Rhinolophus ferrumequinum*
Lesser horseshoe bat	*Rhinolophus hipposideros*
Leisler's bat	*Nyctalus leisleri*
Daubenton's bat	*Myotis daubentonii*
Whiskered bat	*Myotis mystacinus*
Brandt's bat	*Myotis brandtii*
Natterer's bat	*Myotis Nattereri*
Noctule	*Nyctalus noctula*

Appendix 2

Site Location