BAT AND BARN OWL SURVEY
AT A
BUILDING OFF MARSH LANE, NEW MILLS, DERBYSHIRE

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1.0 INTRODUCTION

1.1 Rachel Hacking Ecology Limited was commissioned in 2011 by JR Consulting to undertake a Bat and Barn Owl survey at a building off Marsh Lane, New Mills, Derbyshire (SK006854). This report will be submitted as part of a planning application for the building. The aim of the survey was to determine the presence or absence of both protected species.

1.2 The building off Marsh Lane is a two-storey stone built barn, with a single storey, more modern extension on the eastern gable end. The barn is currently used for storing construction materials and tools.

1.3 All bat species are European Protected Species under the Conservation (Natural Habitats etc.) Regulations 1994 and are also protected under the Wildlife and Countryside Act 1981 (as amended), the Countryside and Rights of Way Act 2000, the Natural Environment and Rural Communities Act (NERC, 2006); and by the Conservation of Habitats and Species Regulations (2010). It is illegal to disturb or damage a bat roost. Bats hibernate between the months of October to March, preferring roost sites with a constant temperature and humidity level at this time. Bat activity is therefore limited during March but hibernation roosts can be searched for and evidence of previous bat activity within a building can be found.

1.4 All bird species are protected at their nest under the Wildlife and Countryside Act 1981 but Barn Owls are afforded extra protected through inclusion on Schedule 1 of the Act which makes it an offence to ‘recklessly disturb a barn owl whilst it is building a nest.…or recklessly disturb a barn owl whilst near a nest.…or recklessly disturb dependent young of a barn owl’. Barn Owl is also listed in the EC Birds Directive and under Appendix II of the Bern Convention. They are on the 'amber' list of 'Birds of Conservation Concern' and they are also listed in the UK Biodiversity Steering Group Report (1995). Barn Owls breed between March and April and favour old barns or tree hollows as nesting sites.

2.0 METHODOLOGY

2.1 A daytime survey was undertaken to search for evidence of bat and Barn Owl.

Bat

2.2 Each building was surveyed internally and externally for evidence of bat roosts or bat activity. High-power torches were used within the building and a heterodyne bat detector was carried at all times to pick up echo-location. Binoculars were also used to search along roofs. For the internal survey the following signs were searched for:

- live or dead bats
- bat droppings
- bat entry/exit points
- bat urine staining
- feeding remains such as insect wings
- areas clear of cobwebs.

2.3 The external survey included assessing the roof slates for any entry/exit points, staining on walls, gaps between soffit boards and wall, gaps between window frames and bat droppings on the walls and window ledges.

Barn Owl

2.4 All of the buildings were inspected for evidence or presence of Barn Owl. This included searching for Barn Owl pellets, feathers, nests and droppings. Barn Owls can utilise fence posts for foraging from and to, so all potential perches were also inspected for staining.

Timing and Personnel

2.5 Rachel Hacking (Principal Ecologist) conducted the survey on the 8th March 2011. Rachel has been a professional ecologist for over ten years and has conducted many bat and Barn Owl surveys.

3.0 RESULTS

3.1 No bat roost or evidence of bat activity was located during the survey. No evidence of Barn Owl was located.

General

3.2 The main part of the barn is stone built with a slate tile roof (see Photograph 1). The ground floor is currently used for storing building materials and is divided into compartments. The first floor is unused. Wooden shutters cover the windows and there are large wooden doors to each compartment. On the western gable end is a ventilation panel (see front cover of report). The whole building is unheated.



Photograph 1 showing front of barn

3.3 A single storey brick built extension is attached to the eastern gable end (see Photograph 2). This has a sloping roof composed of corrugated metal plates. The extension also has large wooden doors leading to various internal compartments and is also currently used for storage.



Photograph 2 showing brick built extension

Internal Survey

3.4 The building was easy to inspect internally for evidence of bat and Barn Owl. The ground floor was divided by brick walls into compartments (see Photograph 3). Light entered the compartments through gaps in the large doors. The compartments were well maintained. The ceilings of the compartments were comprised of wooden beams and panels. These were covered in cobwebs. No bat activity evidence could be located within these compartments.



Photograph 3 showing one of the ground floor compartments

3.5 The first floor was accessed by a ladder and had not been used for some time. This part of the building was open to the roof and therefore the roof could be easily inspected. The slate tiles were flush to each other with no roof lining and the timber joists were in a good state of repair (see Photographs 4 & 5). No bat urine staining was located.



Photograph 4 showing roof tiles from the first floor

3.6 The roof apex was covered in cobwebs. A number of small gaps were evident where tiles had slipped or broken. These could have provided entry and exit points for bats but were covered in cobwebs. Light penetrated through the window shutters and gaps within the roof. The roof space was unheated and draughty.



Photograph 5 looking towards southern gable end

3.7 The floor of the first floor was inspected for bat droppings and feeding remains but none could be found. No bats were seen and no evidence of a bat roost was located.

External Survey

3.8 The majority of the slate roof is in a good state of repair. There are small gaps where tiles have slipped (see Photograph 6). During the internal survey, gaps were noted to be covered in cobwebs. The mortar and stonework are in a good state of repair. There is the odd gap in the mortar towards the edge of the walls. These gaps were inspected and found to be covered in cobwebs, indicating no recent usage. No bat droppings were located on the walls.



Photograph 6 showing a gap between the slate tiles

3.9 In summary, no bat roost or evidence of a bat roost could be located within the building. Internally, the roof joists and the roof tiles exhibited cobwebs. Any gaps were also covered in cobwebs. No bat urine staining was located or areas clear of cobwebs which bats could be using.

3.10 No evidence of Barn Owl activity could be located within the building. No nests, pellets or staining were could be located.

Surrounding habitat

3.11 Marsh Lane is situated in a semi-rural environment and the barn sits next to open countryside. Modern dwellings are situated next to the barn to the north and to the east.

4.0 CONCLUSIONS

4.1 Despite conducting a thorough internal and external survey, no evidence of a bat roost or any evidence of bat activity could be located. No echo-location was picked up on the bat detector, no bats, bat droppings, discarded wings (feeding remains) or bat urine staining could be found. The barn is not considered to be optimum roosting habitat for bats. The first floor, which is open to the roof, allows daylight in, is unheated and draughty. It is also dusty and covered in cobwebs. The ground floor is frequently used for storage and therefore subject to disturbance.

4.2 Externally the building is in a good state of repair. Exit and entry points for bats included small gaps between the slate tiles, gaps within the window shutters and the ventilation panel in the western gable end. However, no evidence of use by bats could be found at these locations. The single-storey extension had no roof space. The corrugated tin roof does not retain heat at a constant temperature and therefore it is extremely unlikely that bats will roost beneath it.

4.3 No evidence of Barn Owl activity could be located. There were no opportunities for Barn Owls to enter and exit the barn.

4.4 It should be noted that bat absence is very difficult to prove definitively due to their mobility and size, for example, bats can rest up in tiny spaces such as between roofing tiles or beneath soffit boards. However, it is the opinion of the author of this report that development can proceed without the need for bat mitigation. It is advised that conversion/demolition is carried out with care, particularly where the roof is concerned and that if bats are found during the development, then work should stop immediately and an ecologist be contacted.

4.5 It is recommended that the development takes into account the possibility of bats foraging in the vicinity, given the semi-rural location, and that where possible, bat boxes or bat bricks are incorporated into the design.

Rachel Hacking 14th March 2011.