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LIMITED

Barn at Vale Farm, Higham-on-the-Hill
Leicestershire

Survey for the presence of roosting bats

Report prepared by:
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Leicestershire Wildlife Trust report February 2006

1. Background and Purpose of the Report

HSSP Consulting has commissioned a preliminary survey of an existing single story barn at Higham on the Hill (NGR SP384 958) to determine whether the existing structure has been, or is being, used by Bats for roosting. The existing structure is being considered for re-development to provide B&B accommodation.

It is proposed that a planning application to be submitted to the Local Planning Authority for conversion of the existing structure and this survey has been commissioned to identify whether the presence of Bats may present a constraint to any proposed development and, if necessary, identify any mitigation measures that may be appropriate for consideration within any conversion proposals prepared.

2. Site Description and Survey Context

The building is a single story structure with roof tiles and exposed wooden roof beams. Open barn doors are present. Internally the building is divided into two areas by an internal wall that has a significant void at the roof pitch that may allow bat access. The larger internal area (Internal Area 1) is approximately twice the size of the smaller area (Internal Area 2) situated at the far end of the building nearest to the access gate to the road.

There are many potential access points for Bats within the structure being surveyed.

Unrestricted access, both internally and externally, was obtained to all areas of the structure using ladders where necessary. The interior of building had remained undisturbed for some considerable period prior to the survey thus ensuring any physical evidence of Bats would be retained.

3. Limitations of Survey

The client must accept that the author will remain impartial to all parties involved and the results of the survey may not be in the best interests of the client.

The inspector has made a determined effort to access and inspect every part of the building detailed as potential habitat during this ground level and climbing inspections. The inspector cannot be held responsible for parts of the building structure that may have been inaccessible to the inspector due to services or structural restrictions within the building, or other restriction that could compromise the safety of the inspector or prevent unrestricted access.

The **timing** of this building survey completed on 26 November 2008 dictates that evidence bat activity during the pre hibernation period is only commented on.

4. Legal Constraints

Wildlife and Countryside Act 1981 (WCA) transposes into UK law the convention on the conservation of European wildlife and natural habitats (commonly referred to as the Bern convention). The 1981 act has been amended several times, most recently by the **Countryside and Rights of Way (CROW) Act 2000** which added 'recklessly' to S9(4) (a) and (b). All species of bats are listed on schedule 5 of the 1981 Act, and therefore subject to the provisions of section 9, which makes it an offence to:

- Intentionally kill, injure or take a bat [section 9(1)]
- Posses or control any live or dead specimen or anything derived from a bat [s9(2)]
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat [s9(4)(a)]
- Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for that purpose [s9(4)(a)]

The Conservation (Natural Habitats) Regulations 1994 (the habitats regulations) transpose into UK law council directive 92/43/EEC of 21st May 1882 on the **Conservation of Natural Habitats and of Wild Fauna and Flora** (often referred to as the 'Habitats [and Species] Directive)'. All bats are listed in Annex iv of the directive and some are also listed in Annex ii. The latter Annex relates to the designation of Special Areas of Conservation (SACs) and covers Greater and Lesser Horseshoe Bats, Barbastelle and Bechstein's Bats. Inclusion on Annex iv ('European protected species') means that member states are required to put in place a system of strict protection as outlined in Article 12; this is presented through inclusion on Schedule 2 of the Regulations. Regulation 39 makes it an offence to:

- Deliberately capture or kill a bat [Regulation 39(1)(a)]
- Deliberately disturb a bat [Regulation 39(1)(b)]
- Damage or destroy a breeding site or resting place of a bat [R.39(1)(d)]
- Keep, transport, sell or exchange, or offer for sale or exchange a live or dead bat or any part of a bat [R.39(2)]

The above legislation makes it an offence to intentionally or recklessly damage, destroy or obstruct access to a site used by bats whether bats are present at the time or not. This can include work on trees whether it is surgery, felling, the covering or filling of cavities or the installation of road braces and flexible cable braces, where a bat roost is present.

There are some 16 species of bat native to the British Isles (excluding Myotis myotis, the Mouse-Eared Bat, declared extinct in the UK in 1992). All these are insectivorous and depend to some extent on habitat in which suitable buildings and trees are a significant element. Bats are a protected species and are in decline, both globally and nationally. Therefore, they are to be fully considered before any work to redevelop or modernise a building commences, particularly if the structure is readily accessible to bats. If a bat roost is known to be in a building that is to be removed or worked on, a license must be sanctioned by Natural England.

Where there is a risk that a bat roost may be present, it is incumbent upon the owner to commission a survey to identify the possible presence of a bat roost before instructing any work that may potentially impact upon the roost to commence. Failure to do so and in the event of disturbing a roost site and upon conviction is an offence. The maximum penalty for committing offences relating to bats or their roosts can amount to imprisonment for a term not exceeding six months or to fines of up to Level 5 on the standard scale under the Criminal Justice Act 1982/1991 (i.e. £5000 in April 2001) per roost or bat disturbed or killed, or to both.

Wildlife and Countryside Act 1981 and as amended by Schedule 12 of the Countryside and Rights of Way Act 2000 and by the Conservation Regulations 1994 under Section 39(1). Bats are to receive a special mention here as this mammal is currently at threat from extension in the UK and for this reason are legally protected (see item 10.3-10.8). Bats occur naturally in trees and buildings using them for a variety of purposes. British bats show a preference for habitats and locations associated with broadleaved woodlands and water. In addition, they select linear features in the landscape for foraging and commuting. Buildings and trees may contain bats or may contain a bat roost, even if not occupied during winter months.

5. Survey Methodology

The initial survey involved a visual external inspection of the building to be surveyed and the immediate surroundings to place the building in the context of the local environment. The visual inspection comprised an assessment of the building from all accessible side each tree from the ground using professional high quality Olympus binoculars 10 x 25 to establish if any access points for roosts were present and identify any external indications such as stains, wearing around holes etc that indicate the potential presence of Bats. At this time of year Bats require a thermo stable environment, somewhere that offers a constant temperature, so as to remain in torpor with the bodies homeostasis slowed to such an extent that energy consumption is reduced to a minimum, as their staple diet of insects and moths are not available. Only deep-rooted cavities in buildings that are free of significant drafts

normally offer this thermo-compatible environment during the winter months. In addition to potential access points the weather proofing capabilities of the building were also considered during the initial external inspection.

Where evidence of potential access points are identified, these features are targeted for further detailed investigation at close quarters. This close up inspection is vital as bats at this time of year spend long periods of time inactive.

After identifying external target points for closer inspection the internal structure of the building was similarly assessed to identify areas where Bats might find appropriate areas in which to roost at any time of year such as void behind beams and slats, fissures, knot holes etc.

A potential roost site is to be inspected for overt evidence of bat presence and occupation. This could present as:

- Staining around a cavity, fissure, void or split caused by oils secreted by the bat into its fur
- Scratching on timbers and joists caused by the bat in the act of take off and landing
- Bat droppings and feeding debris in and around the access point or below the feeding roost
- Urine stains below a possible entrance site or within entrance to a cavity. The urine also smells heavily of ammonia which is distinctively identifiable at close quarters
- Possible audible noises during daylight of bats chattering especially in hot weather
- Flies around entrance of possible roost which may be attracted to bat guano
- The lack of cobwebs around a possible entrance site may also suggest occupation, but of course does not directly confirm bat presence.

Any potential roost features with the above evidence and not fully visible to the naked eye will then be subjected to a visual inspection using a torch or Endoscopic Fiberscope with illumination as appropriate.

6. Report Findings

6.1 Courtyard aspect of the barn

On the courtyard aspect, inspection by binoculars of the tiled roof identified a number of quite significant gaps in the roof tiles that may allow small Bats to access the internal roof areas.

At the junction of the adjacent two-storey brick building and the single storey barn the flashing has a number of gaps that could potentially allow access by Bats. The pitched tiled roof is clad with red brick tiles, with half-round ridge tiles along the top. None of these are missing and there are no obvious gaps through this, three 150mm diameter chimney vent structures are present, two of which have vented caps that would allow access by Bats into the roof space.

Access into the barn through two open slatted windows and two doorways would be easy for Bats. There is a substantial gap under the eves on the courtyard side towards the gable end of building. The brick gable end is entirely sealed to Bats, there are no gaps, cracks or fissures in the brickwork and the flashing up to the tiles is in excellent condition.

6.2 Roadside

The roof along the road aspect of the barn has a number of gaps in the tiles that may permit access by small Bats. There is a large gap of 50mm under the eves almost the entire length of the building and the roof timbers inside can be seen through. This will provide easy access for Bats. There is one significant gap close to the top of the pitched roof of about 50mm between tiles which would be a potential access point and there are two, 10cm round pipes set approximately 1.2m high in the wall that straight into the building. These may be old drainage or vent pipes.

6.3 Conclusion to external survey

The building may be accessed by Bats with minimal difficulty at a number of points. However, the building is not entirely weather proof and whilst having significant roost potential, this is likely to be restricted to warm summer days and for short periods as this is not ideal as a long term roost structure.

6.4 Inspection of Internal Area 1

No evidence of any Bat faeces or marks of any kind were visible on the floor or any of the sills of this building. The inspection found areas where bird droppings are located directly under nests and perching places. Rat droppings were present within this building. The ceiling has a number of large wooden beams with wooden slats supporting clay tiles. Many areas were noted within the roof where daylight is shining through the roof tiles. No evidence of recent Bat activity was found.

Inspection and torching was used to systematically inspect the roof and walls with particular attention being given to areas previously identified as having potential for access by Bats. Any significant gaps within the slates were inspected. The presence of cobwebs throughout suggests the roof area has not been recently used by Bats.

Gaps behind the ridge and purlin beams and cracks and fissures within the brick construction were all visually inspected. The top surfaces of the major purlin and collar tie beams were also inspected for droppings but none were found. No sign of any Bats was identified. The main collar tie beams have a number of cracks and substantial drilled holes. Inspection of these revealed no sign of Bats. The vertical vents in the pitch of the roof were investigated and these are open allowing significant drafts into the barn structure. The entire structure is very drafty and far from ideal for Bat roosting purposes. There was no sign of any insect debris associated with occasional Bats feeding activity.

6.5 Inspection of Internal Area 2

Inspection of ground and sills throughout this smaller internal area within the barn found no evidence of Bats faeces, urine staining or litter from feeding within this building on the floor or any of the flat surfaces. Significant evidence of bird droppings were scattered through out and numerous nests visible in the rafters and gaps in the roof.

This area is similarly very drafty and is probably not very suitable for Bats except as an occasional summer feeding roost. Internal inspection using ladders and torches of the roof and beams, gaps between slates and brickwork revealed some abandoned birds nests. There is no sign or evidence that Bats use of this barn.

6.6 Discussions with building owner

A discussion with the building owner took place and it was discovered that the main farm building located approximately 20-25 metres from the barn and linked to it by a number of other buildings does have a small colony of Bats present. The building between the house and the barn being surveyed has been subject to a Bat survey. A copy of this Bat Survey prepared by the Leicestershire Wildlife Trust dated February 2006 is appended to this report. No evidence of bats was found during the earlier survey.

The structure of the nearby main farmhouse with its pitched roof and tiles, combined with the description of the bats provided by the owner and the location of the suspected entry points suggests Pipistrelle or Long Eared Bats as being the likely occupants.

6.7 Evidence of other protected species

During the survey undertaken no evidence to suggest the presence of other protected species was noted. Species such as Badgers may be present in the area; however the presence of the structure being surveyed is not of relevance to these. There are no nearby ponds that may contain Great Crested Newts and the presence of the structure being surveyed is not of relevance to these. There are a small number

of Swallow nests within the internal roof structure of the building. This confirms that it is used for nesting birds. Consideration of how to avoid works during the nesting season should be given and mitigation considered in the form of alternative nesting sites in adjacent farm buildings or retention of an accessible area within the renovated roof void.

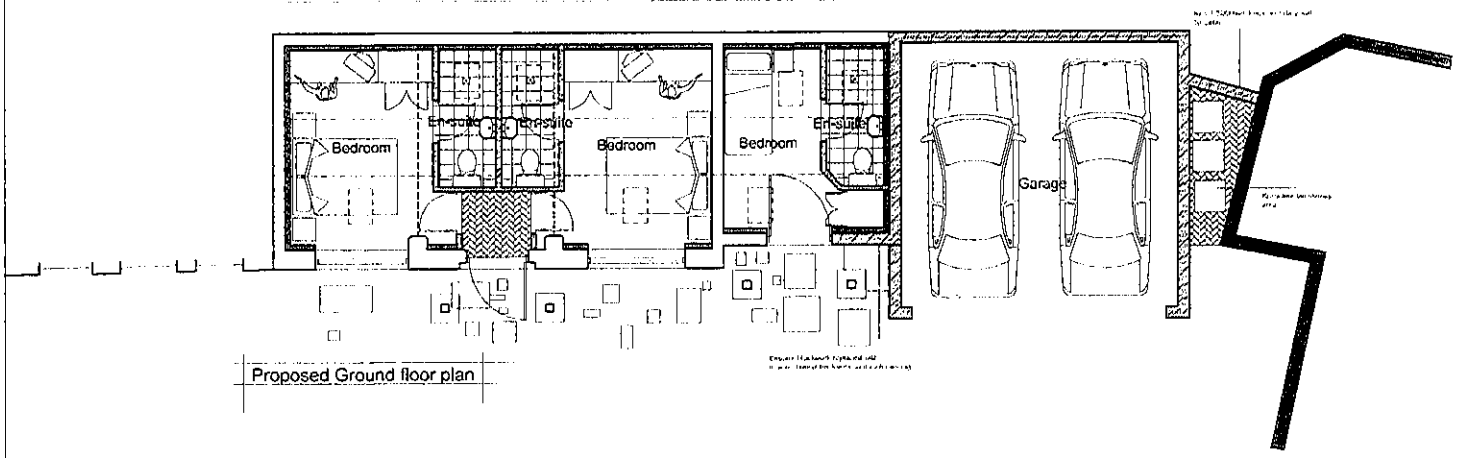
7. Mitigation

Mitigation measures are not required as no evidence of Bats using the structure has been identified.

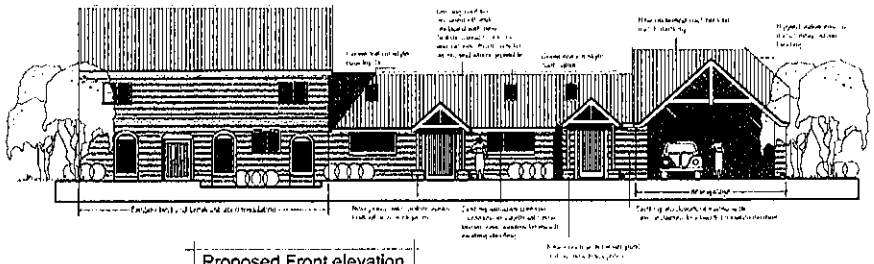
However, as it is recognised that Bats are present in the roof of a nearby farmhouse it would be desirable if the proposed redevelopment design could retain a small loft area with some exposed beams that might be attractive to Bats. Following redevelopment it is likely that the roof will be less drafty and may offer a more attractive roosting habitat for Bats. A Bat access point such as gaps between bricks or similar voids could easily be designed into the scheme.

Christopher Barker
Merriman Ltd

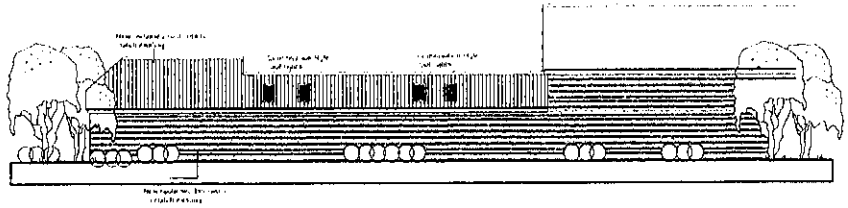
Appendix 1
Site Location Plan



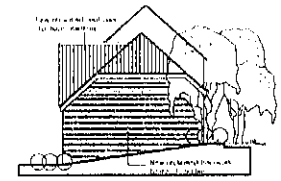
Proposed Ground floor plan



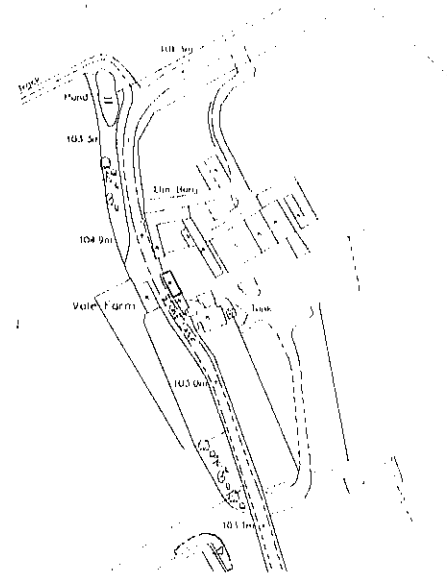
Proposed Front elevation



Proposed Rear elevation



Proposed Side elevation



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project
Bed and Breakfast accommodation
Vale Farm
Higham on the Hill
Mr T Preston

title
Planning

date September 08

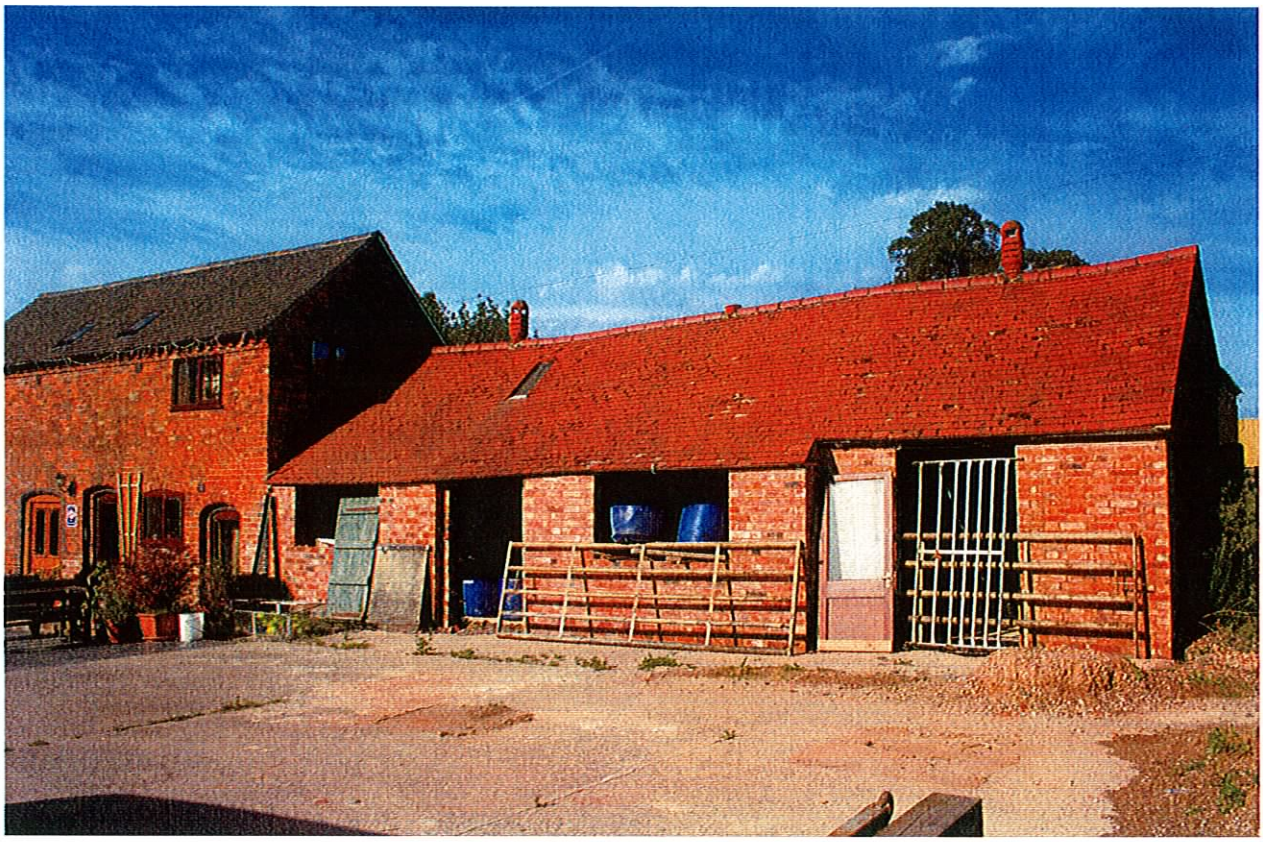
scale 1:1000

drawn checked

dwg no 6189P-01

HSSP A1

Appendix 2
Photographs of External Structure







Appendix 3
Leicestershire Wildlife Trust report February 2006

Barn at Vale Farm, Higham-on-the-Hill, Leicsestershire

Survey for roosting bats

Prepared
February 2006

LEICESTERSHIRE WILDLIFE CONSULTANCY

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RECEIVED
1 JAN 2006
HSSP ARCHITECTS

8 February 2006

Dear Mr Preston,

Protected Species Survey (Bats) – Barn at Vale Farm

I have pleasure in enclosing two copies of my report, following the survey carried out last week.

Thank you for instructing the Wildlife Trust in this matter, and our invoice is enclosed.

While I was visiting the farm, we discussed the possibility of putting up a nest box for Barn Owls, perhaps using the old tea chest which is in the loft of the barn, but placing it in a suitable farm building or tree. I enclose some information about Barn Owls in case you are interested.

Best wishes.

Yours sincerely

Jenny Harris

Jenny Harris
Senior Conservation Officer

Direct line 0116 272 8855
Email jharris@lrwt.org.uk

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