Protected Species Survey – Central Cottage, Market Place, Owston Ferry, North Lincolnshire

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1 INTRODUCTION

Ecology and Forestry Ltd was commissioned by Mr Paul Chapman to undertake a Protected Species Survey on Central Cottage, Market Place, Owston Ferry, North Lincolnshire, DN9 1RB. The survey is required in connection with planning application PA/2011/0984 for change of use of barn to residential accommodation (resubmission of PA/2011/0925) to North Lincolnshire Council.

This report details the methods used, describes the habitats and species found on the site, discusses the results and makes recommendations for further work. Annotated photographs are given in the text.

2 SITE DESCRIPTION

2.1 Site communities and habitats

The site, located at NGR: SE 811 000 within the village of Owston Ferry, is surrounded by houses and gardens, with extensive areas of permanent pasture, arable farmland, mature trees and hedgerows further to the south. The survey site contains a single former agricultural barn.

Photograph 1: Representative views from the north (left) and south (right).

2.2 Main Building

The former semi detached, two storey agricultural barn is constructed of solid bricks, supporting a timber framed roof covered with concrete tiles. The building physically adjoins a newly developed property to the north. Internal walls are part rendered. The equal pitched roof is in excellent condition, having been replaced in recent years. Any associated mortar pointing along the ridge and gable end is in excellent condition with no cracks or gaps present. There is no roof void, with the roof being open to the apex. It is not insulated but is under drawn with a breathable fabric membrane. All associated timbers appear to be new.

There is no cladding, no hanging tile, no soffits, no barge boards or eaves. uPVC fascia boards are present with a substantial gap of up to 2" present to the rear. Any internal ceiling is constructed from timber boards with lathe and plaster present in areas below. Historic weather ingression has resulted in rotten and collapsed floor boards in places. The ground floor is sub divided into four compartments by solid brick walls. The first floor is essentially open plan. A single dwarf wall is present. A number of windows and doors are absent. Any windows and doors remaining are generally in poor condition with gaps present. Any integral air vents are largely obstructed utilising sacking Ambient light and draught levels are generally high, particularly on the first floor.

A number of settlement cracks, eroded mortar joints, absent bricks and similar structural defects are present.

Attached at the western gable end is a single story, hipped, red brick extension which has experienced total roof collapse with only partial timbers remaining exposed to the elements.

At the time of the survey cobwebs were present along sections of the ridge beam. The ground floor was extensively cobwebbed in areas no prone to draughts.

Photograph 2: Representative images showing the western gable end single storey extension.

Photograph 3: Representative images showing a window (left) and ground floor door (right).

Photograph 4: Representative images showing the internal roof structure of Main Building.

Photograph 5: Representative images showing Upvc fascia board (left) and integral air vent (right).

Photograph 6: Representative images showing age related defects in the brickwork.

2.3 Surrounding habitats

The immediate area is dominated by hard standing. An access track to a neighbouring property immediately borders the northern boundary of the property. Houses and gardens lie beyond. The High Street and further properties border the east and south. The market place lies to the south. To the west of the village are areas of permanent pasture, arable farmland, mature trees and hedgerows.

Photograph 7: Representative views of the building from the south east (left) and north east (right).

2.4 Associated buildings

There is a large solid brick and pantile open fronted two bay former wagon shed immediately south west of the surveyed building. This is currently used as a garage and for domestic storage by the neighbouring property.

2.5 Proposed work

The proposed work entails the conversion of the building into a single domestic dwelling.

3 METHODS

The site was surveyed on 18 April 2016 by Rod Strawson (Natural England bat licence number 2015-11496-CLS-CLS and great crested newt licence number 2015-8360-CLS-CLS). All habitats and plant communities within and adjacent to the site were recorded and mapped. Representative photographs were taken.

During the initial appraisal of the site the protected species considered likely to occur on site were identified. These were:

- Bats
- Common species of birds

The methods used to survey for these species are detailed below.

3.1 Data search

The NBN (National Biodiversity Network) Gateway website and local bat group records were consulted in order to check for records of protected species from the area.

3.2 Bats

Aided where necessary by the use of a powerful torch, ladders, endoscope and close focusing binoculars, a visual search was made internally and externally of all cracks and fissures in the walls and the undersides of the roofs (where still present) of all structures on site for bats. Where accessible, all undisturbed surfaces were inspected for evidence of past and present occupation by bats in the form of: droppings, urine or fur staining, feeding remains, scratch marks and the bodily remains of bats.

3.2.1 Bat Activity survey

An evening activity survey was undertaken on the evening of 18 April 2016.

The aim of the survey was:

- To establish whether any enclosed places or niches within the buildings which could not be fully inspected during the daylight inspection were used by bats for roosting or as a place of shelter.
- To assess the value of the site for use by bats for foraging and feeding.

The survey was carried out in accordance with the Bat Surveys – Good Practice Guidelines, 3rd edition (BCT, 2016) with the evening survey commencing approximately 15 minutes before sunset and lasting for 2-3 hours.

An experienced surveyor undertook the dusk and pre-dawn surveys. The surveyor's position was chosen to get a clear view of both the building eves and the ridge tile against a clear skyline.

The surveyor was equipped with an ultrasonic bat detector to electronically detect and identify bats; and a sample of the bat calls from the detector were digitally recorded. These calls were later analysed using specialised sound analysis computer software.

Levels of bat activity are strongly correlated with climatic conditions due to the influence these factors have on the abundance of insect prey. The climatic conditions throughout the survey were also recorded.

3.3 Common species of birds

All habitats were assessed for their potential to support nesting birds. All bird species seen or heard were noted. All disused and active nests were recorded.

3.4 Schedule 1 species of birds (Barn Owls)

An inspection was made of the buildings for the presence of barn owls and the signs indicative of their past or present use. These signs include:

- Regurgitated pellets
- Faecal deposits
- Feathers
- Discarded prey items

The places that could potentially be used as breeding locations, including roof voids and horizontal surfaces at first floor level, were also checked for any signs of current or former nesting attempts. These signs included brooding adult birds, concentrations of accumulated flattened pellet nest debris, faecal encrustation, eggs or eggshell remains, surplus prey items, bodily remains of chicks or infant down feathers.

3.5 Other statutorily protected species

As part of the extended walkover of the site and its environs, a search for signs of use by other statutorily protected species was also undertaken. Particular attention was focused on the habitats and plants and the presence of any ponds.

3.6 Survey Constraints

It should be noted that the absence of protected or rare species within the survey does not rule out them being present on site. There is always a risk of protected or rare species being over-looked, either owing to the timing of the survey or the scarcity of the species at the site.

The survey undertaken was a protected species survey; therefore species lists recorded would not be complete for the site; although sufficient information was gathered to determine the character of the habitat types present and species lists were compiled for each of the habitat types present.

4 RESULTS

4.1 Data search

The National Biodiversity Network (NBN) www.nbn.org.uk was searched for records of protected species within the 10km OS grid square SE 80. Due to a change in Terms & Conditions it is not possible to publish these results for commercial planning applications.

4.2 Habitats and plant species

The habitat types and plant species recorded on the site are common and widespread in North Lincolnshire. There are no habitats or plants of local importance or significance. None of the plant species recorded on site appear on Schedule 8 of the Wildlife and Countryside Act 1981 (as amended). No nationally rare or scarce plants as defined by Wiggington (1999) and Stewart *et al* (1994) respectively were found.

4.3 Bats

No bat droppings were found on the 1st floor of the building. Two old droppings, believed to have been voided in flight by a pipistrelle bat *Pipistrellus sp* were located on stored items on the ground floor of the building. The droppings of rodents were also found within the fabric of the building.

A number of niches suitable for use by a small number of/individual bats were identified on the external fabric of the building, in particular niches created by failed mortar joint between bricks, between wooden lintel and the brickwork, niches where the ceiling timbers tied into the brickwork and settlement cracks.

Some features were considered to offer potential for use by bats and these included gaps created by failed mortar joint between bricks. These features were considered particularly favourable for roosting by pipistrelle bats.

All potential niches were inspected and a number were found to be covered with cobwebs. Any that were found to be cobweb free were carefully inspected with an endoscope. None were found to contain bat droppings.

The level of activity recorded does not suggest that the building is used as an established place of shelter for significant numbers of bats and there are no current indications that bats are breeding on site.

4.3.1 Bat activity survey

During the emergence survey no bats were seen to emerge from any of the structures on site.

Emergence Survey 19.45 – 21.50 hrs

TIME	**OBSERVATION**
20.58hrs	Two brief passes of Common Pipistrelle due south of building. 2 bats.

Climatic Conditions:	
Start of Emergence Survey 19.45hrs Sunset: 20.12 hrs Air Temperature: 12.8 ºC Relative Humidity: 62% Wind: 18 km/h WSW	**End of Emergence Survey** 23:15hrs Air Temperature: 11.1 ºC

During the activity survey no bat activity was recorded around the building. The first bat recorded near the building was recorded 46 minutes after sunset.

4.4 Birds

A small assemblage of common British birds was recorded on the site and in the immediate environs of the site. A total of 5 species were noted; these are listed below:

English Name	**Latin Name**
Woodpigeon	*Columba palumbus*
Barn Swallow	*Hirundo rustica*
Winter Wren	*Troglodytes troglodytes*
Blackbird	*Turdus merula*
Robin	*Erithacus rubecula*
Chaffinch	*Fringilla coelebs*

Some 10 old and disused nests of swallows were recorded throughout the ground floor of the building. 2 of these disused nests have since been adopted by wrens *Troglodytes troglodytes.*

Photograph 8: Representative examples of recorded swallow nests

Housing and mature gardens are found adjacent to the site, providing some suitable nesting and foraging habitat for breeding birds.

No schedule 1 barn owl activity was recorded.

4.5 Other statutorily protected species

No ponds were found in the immediate environs of the survey site or within 500 meters of site. No habitat considered suitable for utilisation by any other protected species was noted on site or within the immediate environs of site.

Given all of these findings, overall the potential for other statutorily protected species likely to be affected by the development is considered to be very low and no further work is recommended.

5 DISCUSSION AND RECOMMENDATIONS

5.1 Bats

5.1.1 Legal protection

In England, Scotland and Wales, all bats are strictly protected under the Wildlife and Countryside Act 1981 (and as amended); in England and Wales this legislation has been amended and strengthened by the Countryside and Rights of Way (CRoW) Act 2000.

Bats are also protected by European legislation; the EC Habitats Directive is transposed into UK law by The Conservation of Habitats and Species Regulations 2010 – often referred to as 'The Habitat Regs'. Taken together, all this legislation makes it an offence to:

- Deliberately capture (or take), injure or kill a bat
- Intentionally or recklessly disturb a group of bats where the disturbance is likely to significantly affect the ability of the animals to survive, breed, or nurture their young or likely to significantly affect the local distribution or abundance of the species whether in a roost or not
- Damage or destroy the breeding or resting place of a bat
- Possess a bat (alive or dead) or any part of a bat
- Intentionally or recklessly obstruct access to a bat roost
- Sell (or offer for sale) or exchange bats (alive or dead) or parts of bats

A roost is defined as being ‘any structure or place that is used for shelter or protection’, and since bats regularly move roost site throughout the year, a roost retains such designation whether or not bats are present at the time.

5.1.2 Recommendations

Given the presence of two old pipistrelle droppings and the recording of foraging bats in proximity to the survey site, it is anticipated that the Local Planning Authority will require some mitigation as part of any future development.

The following best working practice should be followed;

- All contractors working on the buildings will be briefed on the legal protection afforded to bats and their places of shelter and on how to proceed if a bat is discovered during the course of the work. A procedure to follow in the event of discovering bats on site is provided as Appendix 1. A copy of this will be available on site during the

development.

The following conservation measure is suggested for the new building design,

- A single bat roosting unit to be incorporated within the design of the new building. Example images of these can be found in Appendix 2.

Parts of the Barn are exposed and well lit which would reduce the potential for a significant long term bat roost to occur on site. There were some features which were considered to offer some small potential for use by small numbers/individual bats e.g. cracks in the external stonework (some of which recess into the deeper fabric of the building), although there was no evidence of such use.

5.2 Birds

5.2.1 Legal protection

All common wild birds are protected under The Wildlife and Countryside Act 1981 (and as amended). Under this legislation it is an offence to:

- Kill, injure or take any wild bird
- Take, damage or destroy the nest of any wild bird while it is in use or being built
- Take or destroy the egg of any wild bird

Certain rare breeding birds are listed on Schedule 1 of The Wildlife and Countryside Act 1981 (and as amended). Under this legislation they are afforded the same protection as common wild birds and are also protected against disturbance whilst building a nest or on or near a nest containing eggs/unfledged young.

5.2.2 Recommendations

Since the building is clearly used for nesting by species of common birds, any future redevelopment building work should ideally avoid the active nesting season. If work commences during the bird breeding season, a search for nests should be carried out before they begin, and active nests should be protected until the young fledge.

5.2.3 Conservation measures – Swallows

The survey indicates that swallows have bred within the building, and have done so for a number of years, with this species typically showing high site fidelity. There has been a marked decrease in the swallow population in recent years, this is thought mainly to be due to losses in the wintering grounds but habitat loss in the breeding areas is also considered to contribute. Although not on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) it has been placed on the amber list of Birds of Conservation Concern: 2002-2007.

It would be advantageous therefore to make provision for nesting swallows within the new development. This can be achieved using specially designed nest 'ledges' or artificial nests, though care should be taken in the location of these so as to prevent the droppings creating problems in the future. As swallows prefer to nest inside built structures it can be difficult to incorporate such provision but possibilities could include having areas above garages, inside porches, or wheelie bin enclosures which can be designed to accommodate the birds without the resultant mess becoming a problem.

Recommendations

In order to mitigate for the loss of swallow nesting areas, it is suggested that two swallow nest cups (Schwegler –No 10 Swallow Nest – shown below) be incorporated into the new design so that swallows can continue to nest on the site.

Photograph 9: Schwegler No 10 Swallow Nest – constructed from WoodcretePLUS™ is a natural material made from a mixture of 75% wood sawdust, concrete and clay.

Details of nest boxes for house sparrows can be obtained from a variety of online specialist suppliers.

6 REFERENCES

Bat Conservation Trust 2016 'Good Practice Guidelines' 3rd edition

Bat Conservation Trust 2012 - The Bat Roost Replacement and Enhancement Resource - http://roost.bats.org.uk/

Mitchell-Jones, A.J. & McLeish, A.P. (2004). The Bat Workers' Manual. JNCC.

Natural England. 2004. Bat Mitigation Guidelines. English Nature, Peterborough

APPENDIX 1

Procedure to follow if bats are discovered during works

- If at any point during the works, bats are discovered then contractors must immediately stop work in the relevant area concerned and telephone Rod Strawson 07881 666215.

- An appropriately licensed bat worker will liaise directly with Natural England. Actions will then be taken following advice given. This may include removal of bats, but only where direct written or verbal permission is gained from Natural England.

- Only when Natural England is satisfied that there is no further risk to bats will works recommence.

- Should it transpire that the operation being carried out is of more risk to bats than was originally thought, then works will be stopped until they can be supervised by an appropriately licensed bat worker.

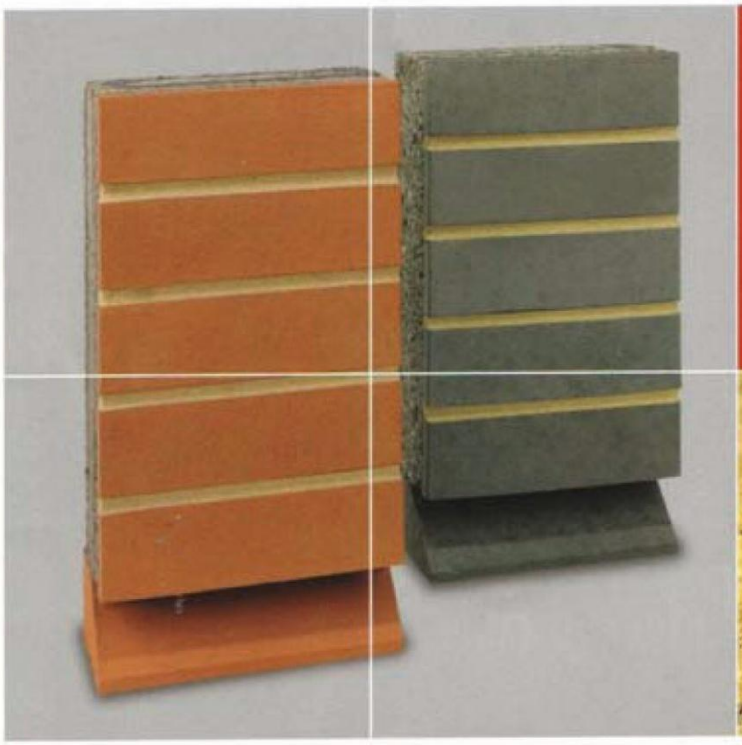
- If a bat is found under a tile or in any other aperture, works will stop immediately (as above). If the bat does not voluntarily fly out, then the aperture will be carefully covered over to protect the bat(s) from the elements, leaving a small gap for the bat to escape voluntarily. Any covering should be free from grease or other contaminants, and should not be a fibreglass-based material.

- Any injured bats should be gently placed in a secure ventilated box in a cool, quiet dark place (e.g. cardboard box with a sealed lid) by the contractor while wearing gloves for the bat's protection whilst awaiting the arrival of the licensed person.

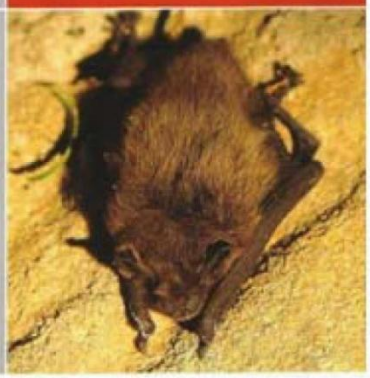
APPENDIX 2
Examples of bat roost units and bat access bricks

IBSTOCK
innovators in clay
ideas into action
eco habitats for bats
Eco Habitats for Bats - Technical Data: A
Sizes
215mm x 215mm or 215mm x 296mm
Durability
F2 S2 - Fully Frost Resistant
Eco Habitats for Bats - Technical Data: B
Sizes
215mm x 215mm or 215mm x 296mm
Durability
F2 S2 - Fully Frost Resistant
Eco Habitats for Bats - Technical Data: C
Size
215mm x 65mm
Durability
F2 S2 - Fully Frost Resistant
A
B
C
Features & Benefits
Enclosed bat box (A & B)
• Designed with the Pipistrelle Bat in mind
• Available in all brick types
• Attractive motif
• Discrete home for bats
• Various sizes
• Several roosting zones are created inside the box
• Bats are contained within the Bat Box itself
• Maintenance free as the entrance is at the bottom
• Ideal for new build & conservation work
Free Access Option (C)
• Discrete Single Bat brick
• Easy to install
• Allows bats to create a natural home habitat within the cavity of the building
www.ibstock.com
contact numbers
sales office 0870 903 4010
design advice 0870 903 4018
technical services 0870 903 4017
literature and samples 0870 903 4030

Wienerberger
Building Value



Bat Boxes. To protect and conserve.



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Wienerberger has worked closely with EcoSurv Ltd to create a brand new range of eco-friendly bat boxes. Compared to existing bat boxes on the market, the Wienerberger bat box is larger and features an innovative arrowhead structure which helps maintain the bats body temperature in order for them to flourish.

The bat box is designed to encourage the most popular bats found in the UK, such as Pipistrelles, Natterer's, Whiskered and Brandt's bats. Other bat box options are available for other breeds via special order.

Bats are an important part of our natural landscape. The latest legislation to protect bat species and their habitats has now brought the UK in line with the rest of Europe and made bat conservation mandatory on any new building project where bats may exist.

Our bat boxes also help towards gaining additional ecological points to meet the requirements of the Code for Sustainable Homes.

Our bat boxes are currently available in Staffordshire Smooth Red and Smooth Blue but can also be manufactured to any colour in our range.

Further detailed information on Wienerberger bat boxes and bat conservation is available at **www.brick.co.uk/batbox** or contact Design Services on **0161 491 8200**