

**WOOD HOUSE, COANWOOD – PROPOSED DEVELOPMENT  
BAT AND BARN OWL REPORT – SUMMER 2015**

**SECTION 1 BACKGROUND AND SUPPORTING INFORMATION**

**A. Executive Summary**

- Wood House is situated 600m northeast of Coanwood in Northumberland. The buildings are a two storey stone built, pitched slate roofed residence with adjoined barn and single storey outbuildings which are stone built with dilapidated pitched slate roofs.
- There is sparse feeding habitat within 100 metres, however 800m to the west the wooded riverbanks of the River South Tyne are present providing bat-feeding corridors to the north and south.
- Survey results revealed occasional Pipistrelle 45kHz and a small number of Brown long-eared bats emerging from the buildings during the surveys. Foraging Whiskered/Brandt's and Pipistrelle 55kHz bats were also seen on site.
- Roosting sites such as crevices at the ridge have been highlighted and mitigation has been put in place, as bats may be present at any time of the year in small numbers. There is low bat roost potential in the roofs that are due for renovation and the occasional bat is present. Mitigation will be put in place, however as the disturbance of a roosting place and access point for bats will take place the site requires a Natural England Licence. The occasional bat may also be present in any suitable crevice on the wall tops at any time of the year in small numbers. Timing of the renovations and roost provision in the buildings will ensure that the development has as little negative affect on bat conservation status as possible.
- A watching brief will be conducted during the removal of the roofing materials in the region of potential bat roost crevices such as at the ridge and wall tops.
- Bat roost mitigation will be put in place with the provision of bat access into a ridge crevice of the renovated buildings and a bat box will be positioned on a nearby tree to the north. The existing loft in the farmhouse will be retained as at present with additional bat access.
- The mitigation proposed will ensure that the development has as little negative affect on bat conservation status as possible and aims to meet Regulation 53(9)(a) and 53(2)(e)\*
- **All contractors involved in the development will read the method statement, prior to commencing the work.**
- No traces of barn owls were present in the building. Any nesting birds will be allowed access to the nest until the young have fledged.

\* The Conservation of Habitats & Species Regulations 2010. Regulation 53(9)(a) "*there is no satisfactory/alternative*" and 53(2)(e) "*preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment*".

## **B. Introduction.**

### **B1 Background.**

Wood House is situated 600m northeast of Coanwood in Northumberland. The buildings are a two storey stone built, pitched slate roofed residence with adjoined barn and single storey outbuildings which are stone built with dilapidated pitched slate roofs.

### **B2 Proposed Works.**

The outbuildings are due to be converted to two cottages. This will involve re-laying the single storey roofs with a felt sarking. Doors and windows will be replaced as necessary and full internal renovations will take place. The exteriors will be re-pointed where necessary.

## **C Survey and site assessment**

### **C1 Pre-existing information on the species at the site.**

There are no known pre-existing records of bats on site.

### **C2 Status of species in the local/regional area.**

Known bat activity in the area within 2km of the site includes maternity roosts of Pipistrelle sp. 2km to the northeast and northwest (1985 and 1997) and Brown Long-eared to the northwest (1987). Occasional foraging bats of Whiskered/Brandt's and Pipistrelle 45kHz are also known within 2km to the southwest and northwest (2006 and 2007). Occasional foraging bats of Pipistrelle 45kHz and Pipistrelle 55kHz are known 1.5km to the northwest (2016). (Own records 1985 - 2016).

Locally and regionally, the Common Pipistrelle is the most common bat. Both Pipistrelle 45KHz and 55KHz bats are frequent in northern England, although Pipistrelle bats are the most abundant species they are thought to have declined by 70% between 1978 and 1993 (National Bat Colony Survey). Since 1997 monitoring by the National Bat Monitoring Programme (NBMP) has shown that bat numbers seem to be steady with small fluctuations up or down depending on the species and survey type carried out. The Brown long-eared bat is occasional with colonies much smaller in numbers than the Pipistrelle. Daubenton's, Natterer's and Whiskered/Brandt's bats are also occasional but widespread in Northern England with an average colony size being about 35 adult bats.

### **C3 Objectives of survey**

The survey was to determine as far as possible, the presence of bats and barn owls and their roost sites at Wood House in the buildings due for development. The aim is to prevent any animal being physically harmed, to protect all roost sites where possible and to provide mitigation for the proposed development to maintain conservation status.

### **C4 Survey area**

The buildings surveyed are located at NY685596 and are central below.



### C5 Habitat description

Wood House is located immediately in agricultural land consisting of mainly improved grassland with boundaries of walls, hedges and fences. The closest foraging corridor is 100m to the northwest however this links with the River South Tyne that flows 850m to the west with the wooded riverbanks providing bat-feeding corridors to the north and south.

The site and area has good potential for feeding bats, due to the proximity and links along hedgerows to the river and associated woodlands giving shelter and acting as a feeding corridor for bats to further afield. Bat roost potential will be restricted to the scattered dwellings in the area or any suitable tree.

### Photographs of site



**Building 4 from the southeast**

**Building 4 from the northeast**





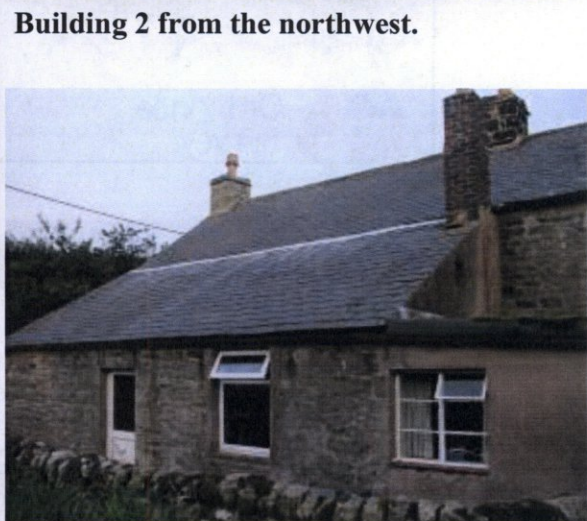
**Building 1, the farmhouse from the southeast**



**Building 2 from the southeast**



**Building 1 from the west.**



**Building 2 from the northwest.**



**Buildings 3 and 5 from the northwest**

## **C6 Field Survey**

### **C6.1 Visual Inspection**

A close inspection of the buildings was made in good light, by torch and endoscope where required. The lofts of the house were examined, interiors and exterior of the buildings were examined as far as was feasible for signs of bats: droppings, urine streaks, clean cobweb-free areas on the ridge boards or crevices and potential roost exit holes. All external and internal crevices were checked using a torch and possible roosting sites were noted. Crevice loving bats can be difficult to find especially when bats are present between the roofing felt and

slate/tiles. Emergence surveys were therefore used to check for the presence of bats missed during the visual inspections.

Beneath ledges the ground was examined for feathers, pellets and birdlime that could indicate occupation by barn owls.

### C6.2 Emergence Survey

As dusk fell 5 surveyors, each using visual observations and bat detectors (Bat Box IIID and Echo Meter EM3's) and two-way radios, carried out the evening emergence surveys, covering all aspects of the buildings. Bat detectors convert bat echo-location signals into audible sounds, enabling the identification of some species, and aid the monitoring of the number of bats present. Two way radios help to determine the emergence and flight paths of a bat seen by surveyors around the site and allow the bat activity of the whole site to be understood, whilst at the site.

Surveyors are on site for at least quarter of an hour before sunset and up to 1½ hours after sunset or until darkness falls as reduced visibility does not allow bats to be seen emerging from the building being surveyed. After this time any bats picked up by detector, cannot be guaranteed to have emerged from the building in question, but confirms if additional species are present in the area or not. If bats or a maternity colony is present the bats are counted until no bats have left the roost for 10 minutes for as long as it takes.

### C6.4 Personnel

Ruth Hadden - Bat Consultant since 1996, Class Survey Licence CL20 2015-13665-CLS-CLS (Bat Survey Level 4). Licensed to handle bats and enter known roosts since 1986. Class Survey Licence CL15 2015-10388-CLS-CLS, (Volunteer Bat Roost Visitor Level 1). Qualifications BSc Joint Honours Zoology & Plant Biology, Newcastle upon Tyne. MCIEEM  
Ben Hadden - Class Survey Licence CL20 2015-14223-CLS-CLS (Bat Survey Level 2).  
Ben Whittle, Jess Hindhaugh and Beth Patience.

### C6.5 Survey Summary

Survey	Date	Timings	Weather
Inspection	24 August 2015	Externally on both visits (20min) and internally 2 <sup>nd</sup> visit (30 min)	Fine, clear and slight breeze.
Emergence	24 August 2015	8.00-9.50pm (sunset 8.17pm)	Fine, clear and slight breeze. 16 - 14°C
Emergence	26 September 2015	6.40-8.25pm (sunset 6.54pm)	Fine, cloudy and slight breeze. 13 - 12°C

### C7 Results

The buildings are stone built and have slate roofs, the house roof and adjoined barn have a felt sarking. Table 1 gives a description of the buildings and the findings of the survey. No evidence of a large maternity colony was identified in the buildings surveyed, however a low number of Brown Long-eared bats were present using the farmhouse and adjoined barn where a scatter of bat droppings was present. The bats accessed through the doorway of Building 2 during the surveys, which was badly fitting. The tenant mentioned that a large tree in the yard to the north of the house had been felled recently, this would have given additional sheltered feeding for bats.

**Table 1 Observations.**

Building Sections	Description	Comments
1	Two storey house, stone built with rendered walls and a pitched slate roof with a felt sarking. No insulation in the loft space	Occasional missing slate. A light scatter of large bat droppings indicative of Brown Long-eared bats are present in the house loft.
2	Adjoined two storey stone built barn with pitched slate roof with a felt sarking.	Occasional large bat dropping present. Brown Long-eared bats seen after dusk within in the upper section near the internal wall.
3	Single storey stone/brick built out buildings with no roofs where present.	No bat roost potential, well pointed walls.
4	Single storey barn with a very gappy slate and stone slate roof. Built-up walls and whitewashed. Cluttered interior.	No bat traces located. Pipistrelle 55 flew from the north gable apex.
5	Corrugated metal shed with wooden beams.	No bat roost potential

On the August evening survey a Pipistrelle 55kHz emerged from the north gable of Building 4 and Brown long-eared bats were seen emerging from the doorway of Building 2. Pipistrelle 45kHz bats were also seen foraging on site and emerging from a nearby cottage. On the September survey no emergence was noted on site while Pipistrelle 45 kHz bats and Brown long-eared bats were foraging on site in the shelter of an open corrugated metal barn.

Possible hibernation sites include any deep cavities, where present, in the walls of the buildings.



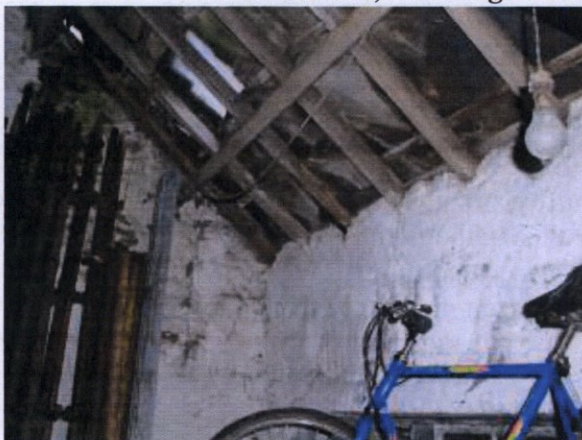
**Farmhouse, Building 1 loft**

No signs of barn owls were noted within the buildings.

**Loft floor of farmhouse (Building 1) with scattering of bat droppings**



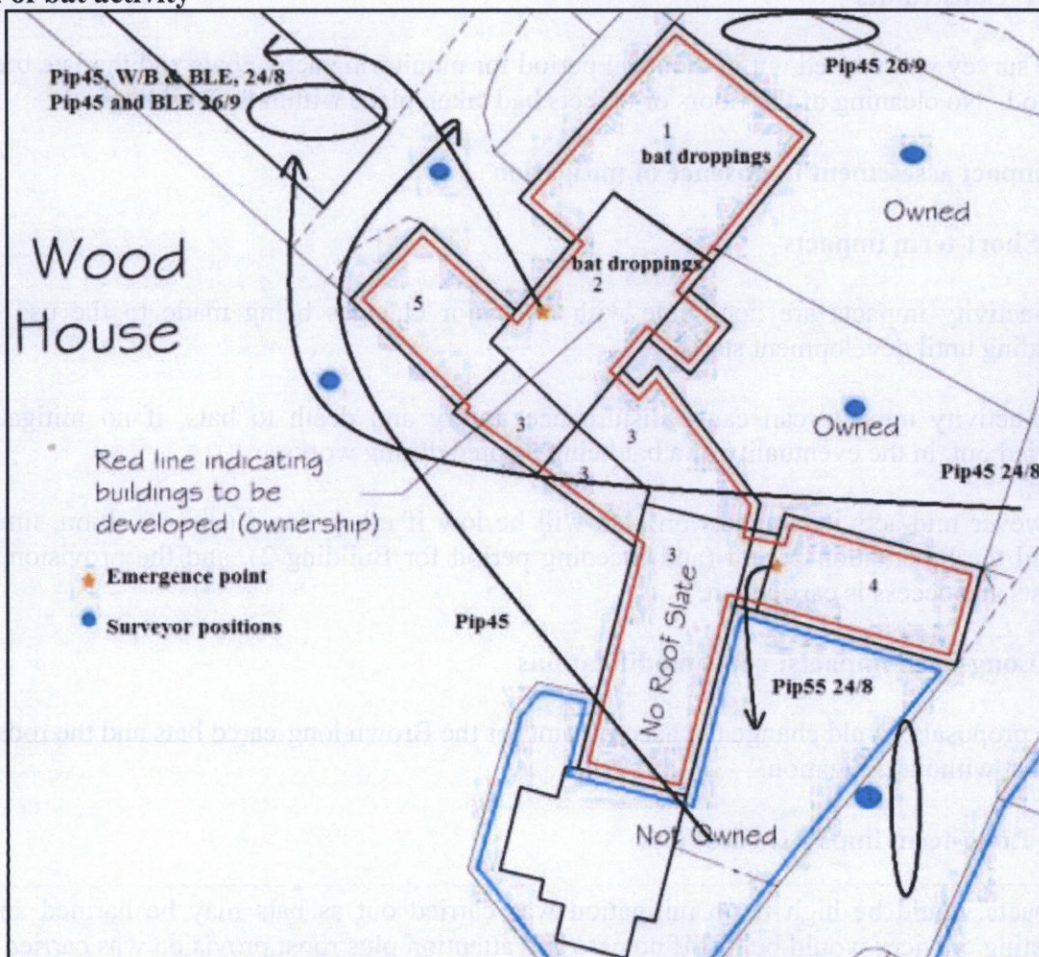
**Interior of Building 4**



**Table 2 Emergence survey results**

Date	Bat Activity
24 August 2015 8.17pm Sunset 8.38pm Pipistrelle 45kHz bat heard but not seen. 8.41pm – 9.00pm 2 Pipistrelle 45kHz bats foraging in the metal barn to the north, before flying to the south 8.43pm 2 Pipistrelle 45kHz bats emerged from the south gable of the cottage south of the site. 8.50pm Pipistrelle 55kHz emerged from the ridge of Building 2. 9.00pm Brown long-eared bat visible inside Building 2. 9.03pm Brown long-eared bat foraging west of the site. 9.04pm Barn Owl seen to the southwest of the site. 9.04pm - 9.25pm Whiskered/Brandt's heard but not seen near the metal barn. 9.12pm – 9.16pm 2 Brown long-eared bats emerged from the doorway of Building 2 and flew to metal barn. 9.16pm 2 Brown long-eared still present within Building 2 9.40pm Survey concluded. No bats within Building 2.	
26 September 2015 6.54pm Sunset. 7.10pm Pipistrelle 45kHz emerged from the cottage to the south of the site. 7.17pm -7.40pm 2 Pipistrelle 45kHz bats foraging inside Building 2. 7.20pm -7.30pm 3 Pipistrelle 45kHz bats foraging east of the site. 7.41pm Brown long-eared bat inside Building 2. 8.10pm No Brown long-eared inside Building 2 or seen emerging. 8.20pm Survey concluded.	

**Plan of bat activity**



## **C8 Interpretation and evaluation**

### **C8.1 Presence**

An occasional Pipistrelle 55kHz bat roost is present in Building 4 and a small number of Brown long-eared bats are present in Building 1 and Building 2.

There is always the possibility of the occasional bat being present in any crevice throughout the year including the hibernation period.

### **C8.2 Population size**

Pipistrelle 55kHz - < 2 bats

Brown long-eared < 6 bats

### **C8.3 Site status**

The buildings surveyed have moderate/high conservation significance for bats as a roost site. This assessment takes into account the good feeding habitat within 100 metres and the immediate shelter present close to the building, the findings of the survey and the condition of the buildings and features which do not provide bat roost potential.

The occasional male or non-breeding female bat may also be present on the wall tops or in a small crevice such as between the slates and felt at the eaves where they may be present at any time throughout the year.

### **C8.4 Constraints**

The survey was carried out in the ideal period for monitoring active bats and the late breeding period. No cleaning of the floors or objects had taken place within the buildings.

## **D Impact assessment in absence of mitigation**

### **D1 Short-term impacts**

Pre-activity impacts are negligible with no major changes being made to the use of the building until development starts.

Mid-activity impacts can cause disturbance, injury and death to bats, if no mitigation is carried out, in the eventuality of a bat being located during works.

However mid-activity impacts on bats will be low if mitigation such as caution, timing to avoid the hibernation period (and breeding period for Building 2), and the provision of bat roosts and access is carried out.

### **D2 Long-term impacts: roost modifications**

The proposals would change the access point for the Brown long-eared bats and the roost may be lost without mitigation.

### **D3 Long-term impacts: roost loss**

Impacts would be high if no mitigation was carried out as bats may be harmed and two roosting crevices would be lost if no care and attention plus roost provision was carried out as



the majority of the roosting sites would be affected by the proposals. Opportunities for crevice-dwelling bats at the eaves will be retained. The proposed mitigation is therefore expected to result in only minimal impact on the bats species recorded on site at a local level, and negligible impact at county level.

Long-term the impact on bats will be minimal if a range of crevices and further bat provision is provided.

#### **D4 Long-term impacts: fragmentation and isolation**

There are no proposals that will affect bat flight lines.

#### **D5 Post-activity interference impacts**

Any additional floodlights that would increase light levels and shine on the bat access points would be a high impact.

#### **D6 Predicted scale of impact**

The impact on bats would be moderate on site, low in the county and at regional level. A crevice will be recreated when re-roofing, plus access created for the brown long-eared into the house loft. This mitigation would reduce any impact on bats to minimal on site.

### **E Land ownership – Mitigation sites**

#### **E1 Mitigation site ownership**

Mitigation will be carried out on this site.

### **F References**

- Altringham J.D. (2003) British Bats. Collins.
- Barn Owl Trust (2002) Barn Owls on Site. English Nature
- Bat Conservation Trust (2012) Bat Surveys – Good Practice Guidelines. BCT
- Corbet and Harris (1991). The Handbook of British Mammals. Blackwell.
- English Nature (2004) Bat Mitigation Guidelines. EN
- Joint Nature Conservancy Council (2004) The Bat Workers Manual. JNCC.

Bat boxes : <http://www.nhbs.com/title/158629/2f-schwegler-bat-box-general-purpose>

Barn Owl Box : <http://www.barnowltrust.org.uk/infopage.html?Id=41>

## SECTION 2 DELIVERY INFORMATION

### A Mitigation and compensation

**This statement should be copied to the site owner, architect, clerk of works and to those contractors whose work may affect bat roosts including those involved in demolition, timber treatment, roofing and building works.**

Bats are fully protected by law. To avoid breaking the law by damaging or disturbing bat roosts, resulting in possible imprisonment, fines or confiscation of equipment, certain procedures have to be followed.

#### **Legislation**

All bats are protected under the Wildlife and Countryside Act (Schedule 5). They are also included in Schedule 2 of the Conservation Regulations 1994. The Act and Regulations make it illegal to:

Intentionally or deliberately kill, injure or capture (take) bats

Deliberately disturb bats (whether in a roost or not)

Damage, destroy or obstruct access to bat roosts

The Countryside and Rights of Way Act 2000 extended the protection given to bats to cover *reckless* damage or disturbance.

A bat roost is interpreted as 'any structure or place which is used for shelter or protection', whether or not bats are present at the time.

Similarly the Barn Owl is protected under Part 1 of the Countryside Act 1981 and is listed on Schedule 1, which gives them special protection. It is an offence, with certain exceptions to:

- Intentionally or deliberately kill, injure or capture (take) any wild barn owl.
- Intentionally take, damage or destroy any wild barn owl nest whilst in use or being 'built'.
- Intentionally take or destroy a wild barn owl egg.
- Intentionally or recklessly disturb any wild barn owl whilst 'building' a nest or whilst in, on, or near a nest containing young.
- Intentionally or recklessly disturb any dependant young or wild barn owls.

#### **Identifying roosts**

Pipistrelle the most common bat, favours small crevices and spaces between stonework, timber and roofing felt. Bats are small mammals and when at rest the bodies are only 4-6 cm long, their fur colour can range from brown to pale and dark grey. When disturbed the bat is likely to be torpid and unable to fly effectively for some minutes, because of this they are vulnerable to injury as they are not fast moving and may fall to the ground breaking bones or be accidentally crushed. Basically, when material from the roof and tops of the walls is removed any crevices underneath should be checked to ensure that no bat has been disturbed.

Other traces that can indicate a past presence of bats are their droppings. These resemble mouse droppings but unlike mouse droppings can be crumbled to dust between finger and thumb. Droppings may be found on wall tops and beneath slates and tiles on top of any sarking.



Photo showing disintegrated bat droppings beneath coping stones. If examined carefully, in the black dust exoskeletons of insects can be seen shining.

## **A1 Mitigation strategy**

To maintain bat populations in the area the following will be carried out:-

- Sensitive timing of any dismantling of walls and roof work in spring or autumn to avoid hibernating bats and breeding bats (Building 2).
- Provide Method Statement to contractors; a copy of which must be supplied to and held by the site foreman.
- Bat licensee (licensed bat ecologist) will give a short toolbox talk to the contractors and supervise the hand-removal of roof materials wherever bats are likely to be present.
- Advice given for the safe removal of any bats found from harm during the development under different weather conditions.
- Provision of a bat crevice on the ridge of Building 4 and a weather proof bat lead saddle to give access to the farmhouse roof (Building 1) will be created prior to work commencing.
- Provision of bat box prior to the development commencing.
- External lighting will be on a relatively short timer, directed away from bat roost access points and flight paths and motion-sensitive only to large objects.

### **Architect**

The bat provision specified below will be incorporated into the plans submitted to planning. This will show the location of the bat access and bat crevices ideally with a brief description as in this report to guarantee delivery.

### **Timing**

As bats are present within two sections being reroofed/converted a Natural England Licence will be required before the development can proceed. This is applied for after planning consent is granted and can take up to 6 weeks. Surveys need to be current.

Any development work involving dismantling any stonework and the removal of the existing roof materials during the works will be carried out avoiding the hibernation period (November to March inclusive) and breeding period (May to September inclusive) on Building 2. Periods of cold weather (below 5°C including night temperatures) will be avoided as any bats present will be in hibernation torpor and be extremely vulnerable. If torpid bats are encountered and disturbance is unavoidable the bat will be taken into care and fed until suitable conditions for release at the site is possible.

## Contractors

All contractors will be aware of the following:

- Bats are present in the buildings and area and could be present when removing roof coverings, ridge tiles, slates etc and may be found torpid on wall tops and in wall cavities if any.
- **Any work on Building 2 or the Farmhouse will take into account the known bat access points, see plan at C1.4.**
- Table 1 below highlights where bats may be found during the works and the recommendations regarding methodology.
- Any bats found during operations will have the cavity re-covered for its safety and any work in the vicinity will cease. Ruth Hadden to be informed for advice immediately (01661 886562). As only licensed bat handlers can move bats and the contractors are not permitted to handle bats, the bat will be allowed to disperse of its own accord or the licensed bat handler will move the bat to the previously erected bat boxes.

**Table 1 General Methodology for Renovation works**

STRUCTURE	METHOD	INSPECT
Roofs	Remove any ridge tiles, slates, or roof coverings by hand.  Removal of any timbers/beams/floor joists.	Check any crevices underneath the roofing materials, as it is removed.  Check any crevices around the beams as work proceeds.
Walls/Eaves	Expose the wall tops. Remove any gutters. Dismantle any walls required, by hand.	Examine for bat droppings and any wall cavities for bats.
Walls - Pointing	<b>Only point crevices where the full depth can be seen. Create one vertical crevice per wall on the south and north sides beneath the eaves that is 10cm deep and 1 – 2cm wide, narrowing at the top.</b>	<b>Check deep crevices for the presence of bats using a torch.</b>
Windows/doors	Remove windows, doors and frames by hand.	Examine any wall cavities exposed. Avoid blocking any external pre-existing gaps.

Any bat found unexpectedly during operations will have the cavity recovered or protected and work will cease in that area. Ruth Hadden to be informed (01661 886562) immediately for assistance. The bat will be released in the previously erected bat box.

If a barn owl is found unexpectedly during operations the cavity will be re-covered or protected and work will cease in that area. Ruth Hadden to be informed (01661 886562) immediately for assistance.

## **B Works to be undertaken by the ecologist or suitably experienced person.**

### **B1 Capture and exclusion**

Only an ecologist licensed to handle bats will handle any bats found on site.

Ruth Hadden or a suitable ecologist will brief the contractors and carry out a watching brief when the slates are removed and any demolition occurs in the region of bat roost potential, this being the ridge and eaves crevices on the south aspect.

If bats are located during the supervised works, the licensed bat handler will capture the bat with thinly gloved hands and place in a drawn-string cloth bag/small terrarium lined with paper kitchen towel enabling the bat to be conveyed to a bat box (locations as shown on plan

at C1.4). Injured bats will be immediately taken into care. If torpid bats are encountered and disturbance is unavoidable the bat will be taken into care and fed until suitable conditions for release at the site is possible.

If any bat is found unexpectedly during operations the cavity will be recovered or protected and work will cease in that area. Ruth Hadden to be informed (01661 886562) immediately for assistance. Ruth Hadden or a suitably licensed ecologist will release any active bats handled in the previously erected bat box.

## **C Works to be undertaken by the Developer/Landowner**

### **C.1 Bat roosts**

#### **C1.1 In-situ retention of roost(s)**

A ridge crevice will be retained on the north gable wall suitable for crevice loving bats. This is created by leaving an access point measuring 15 x 20mm in the mortar below the ridge tiles leading to the gap below the ridge tiles which will not be totally filled by mortar allowing bats access to below the ridge tiles on the top of the ridge board.

#### **C1.2 Modification of existing roost(s)**

The bat loft in the farmhouse (Building 1) will be retained as at present, measuring c.8x5x2m however to ensure bat access is present a lead saddle will be inserted into the north aspect of the roof, also ensuring that access measuring 20 x 20mm through the felt is present. Please see plan at C.1.4 for the locations of mitigation.

Bats will roost in wall cavities, on the wall tops; hang from the ridge board or between the roofing felt and slates, depending on the species. Pipistrelle bats, the commonest species, and Whiskered/Brandt's bats prefer to roost in small cavities often staying on top of the wall and do not enter the open roof spaces. Natterer's, and Brown long-eared bats will use loft spaces.

Timbers will be treated only with 'bat friendly' products, permethrin or cypermethrin as insecticides for example. Further information is available if the contractor requires it.

A traditional felt or wood sarking that would give bats some grip will be used throughout the new build are and not a more modern smooth or breathable membrane that may fray and entrap bats.

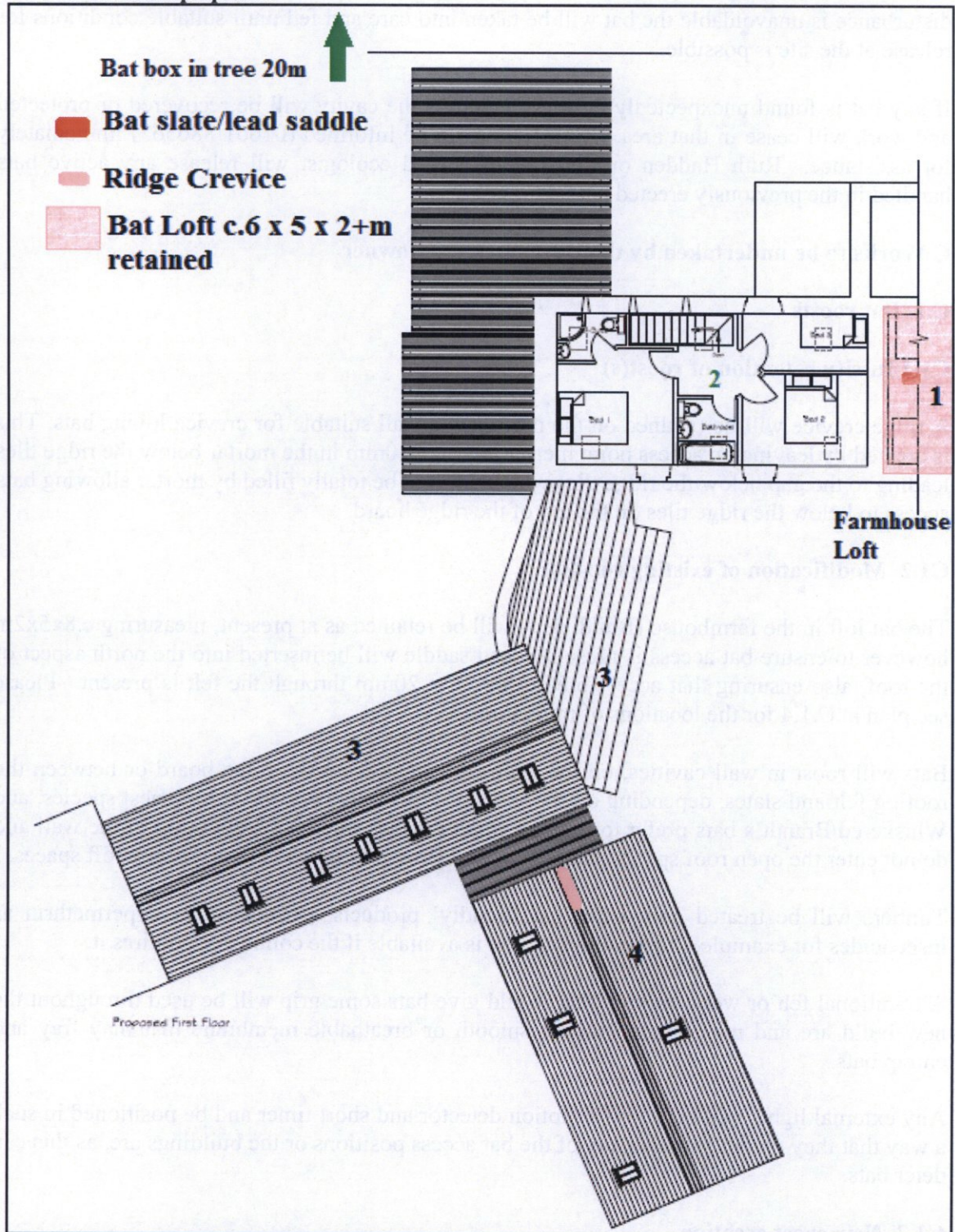
Any external lights will be set on a motion detector and short timer and be positioned in such a way that they do not shine on any of the bat access positions or the buildings are, as this can deter bats.

#### **C1.3 New roost creation**

Not applicable.

To ensure that bats have an alternative site available during the development a Schwegler 2F bat box will be erected on a tree in a sunny position to the north of the site. (see reference at Section 1 F) to be erected permanently with an access gap of 15-20 mm wide to provide roosting places for bats prior *to the development commencing*. The boxes will be placed at a height of 3-4 metres from the ground, with no obstructions to the flight path. Please see plan at C.1.4 for location.

### C.1.4 Scaled maps/plans.



## D Post-development site safeguard

### D.1 Habitat/site management and maintenance

Any water tanks present in any roof space, will be covered to prevent debris and bats from falling in.

## **D.2 Population Monitoring**

Due to low/moderate bat activity on site, monitoring for one year will be required to assess the success of mitigation. (Bat Mitigation Guidelines 2004, Section 7.2) Ruth Hadden available to liaise with the owners as required regarding the mitigation.

## **D.3 Mechanism for ensuring delivery**

Bat mitigation as shown on the plans will be subject to the conditions of the planning consent and Natural England licence when granted.

## **E Timetable of works**

Not known at present.

The Government has hereby authorized the one year will be provided for the purpose of the Act. The Government has hereby authorized the one year will be provided for the purpose of the Act.

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