

**Old Rectory  
Brampton Abbotts  
Ross on Wye  
Herefordshire  
HR9 7JE**

**Bat Search & Evening Emergence Survey & Assessment**

**Report to  
Jo Pilkington**

**Sept 2014**

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## **Executive summary**

Evidence of a feeding/resting perch of an individual brown long-eared bat was found in the barn. Common pipistrelle bats were recorded flying through and feeding around the surveyed site.

Bats and their roosts are protected by law.

**Recommendations are given in this report to compensate for the loss of biodiversity.**

This report is an independent assessment of the site's ecology. It is not a statement of support or otherwise to the development of the site.

## **1 Introduction**

### **1.1 Commissioning Brief**

In July 2014, Richard Spyvee, was commissioned to undertake a bat survey and assessment of the property.

The objectives of the survey were:

*To determine whether bats will be affected by the development, in this case conversion of a small timber barn into accommodation and, if so, what implications this will have.*

### **1.2 Site Location**

The Old Rectory is in the middle of the village of Brampton Abbots, just over 1km north of Ross on Wye, at NGRRef: SO6000826679

### **1.3 Scope of the Survey**

The survey and assessment focused on a search and emergence surveys for bats.

### **1.4 Survey Constraints**

Most species of bat in Britain roost in crevices. Bats usually have several roosts and move between them at intervals. Sometimes bats leave few or no signs (especially those that roost on the outside of buildings). Therefore, a lack of signs bats, or bats, does not necessarily show that a building is not used by bats. The surveys were carried out at the end of the optimum survey period season and during fine weather.

These constraints are reduced by the diligence and experienced judgment of the surveyor.

## **2 Methodology**

The bat survey was led out by an experienced ecologist, with the relevant licence.

Richard Spyvee BSc MCIEEM CEnv – 25yrs experience in nature conservation and 10yrs experience in bat ecology.

NE licence no – CLS00715 - levels 1 & 2

### **Search Survey**

The search survey was a visual inspection of the building, inside and outside, for bats or signs of them (bat droppings, feeding remains, scratch marks, staining etc.). The inside of the building was searched for the presence of free-hanging bats. The site was also assessed for other suitable habitats that may support bats, such as trees that have suitable holes or are covered with dense ivy and habitats that may provide good foraging.

Once the search survey of the building had been conducted the potential for bat usage was calculated as follows:

#### **Low/Negligible**

Buildings in this category fall into two main types: Generally well maintained without cracks and crevices, no gaps between bargeboard or soffit and wall or without an attic space; or those which contain

some or all of the above features, but are both draughty and thick in cobwebs or contain strong odours such as solvents, diesel etc.

It must be borne in mind that a building from this latter group can become suitable for bats due to refurbishment. This often happens to houses once the attic space has been cleaned and under-felted prior to timber treatment.

Trees with low bat interest are usually young trees without any deadwood or holes. Most conifers fall into this category as they are usually planted as a crop and are then felled prior to becoming old, although once old age is attained as in a landscape tree, suitable bats roosts may develop.

Following the search survey there is no evidence of bats present in this category of buildings.

A licence will not be required for development to a building classified as Low/Negligible potential for roosting bats.

### **Medium**

The buildings in this category contain sites suitable for roosting bats although no obvious signs were recorded during the survey. In exposed conditions on large buildings the signs of bat usage such as droppings and urine marks can be obliterated by heavy rain.

Occasionally a light scattering of droppings will be recorded in an attic or a semi derelict building, which is considered by the surveyor unsuitable for use as a bat roost. The medium potential of bat usage is based on the surveyor's experience.

Whilst normally no licence is required for development to a building classified as a medium, it is often best practice to conduct sensitive roof stripping or architectural salvaging to minimise any possible disturbance.

Trees in this category will have holes, cracks and crevices and loose bark suitable for roosting bats but there may be no obvious roost signs such as staining and droppings at entrances.

### **High**

This group includes buildings with known roosts or signs of bat occupancy such as droppings and staining at a roost entrance. The description of high probability buildings will also contain an indication as to the time of year when it will be occupied by bats i.e. summer- nursery roost, winter- hibernation.

Trees here will contain all the obvious roost features such as holes, cracks and crevices and loose bark but will also contain staining and droppings at the roost entrance or have been identified as a roost via a visual sighting of an exiting bat.

If the building or trees fall in to the high probability group then work carried out around the area of bat interest, will need to be done under the auspices of a Natural England licence.

## **Bat Emergence Survey**

The emergence surveys concentrated on bats leaving the building and possible roost sites. Other bat activity was also recorded.

When the surveyor picked up a bat echolocation signal on the bat detector, the surveyor noted the location of the bat and the direction of flight, to deduce whether it has exited the building, or was flying over from an off-site roost. As well as locating bats, the bat detector also helped the surveyor in identifying the species of bat. Other characteristics that help to distinguish the species were flight patterns, shape and behaviour.

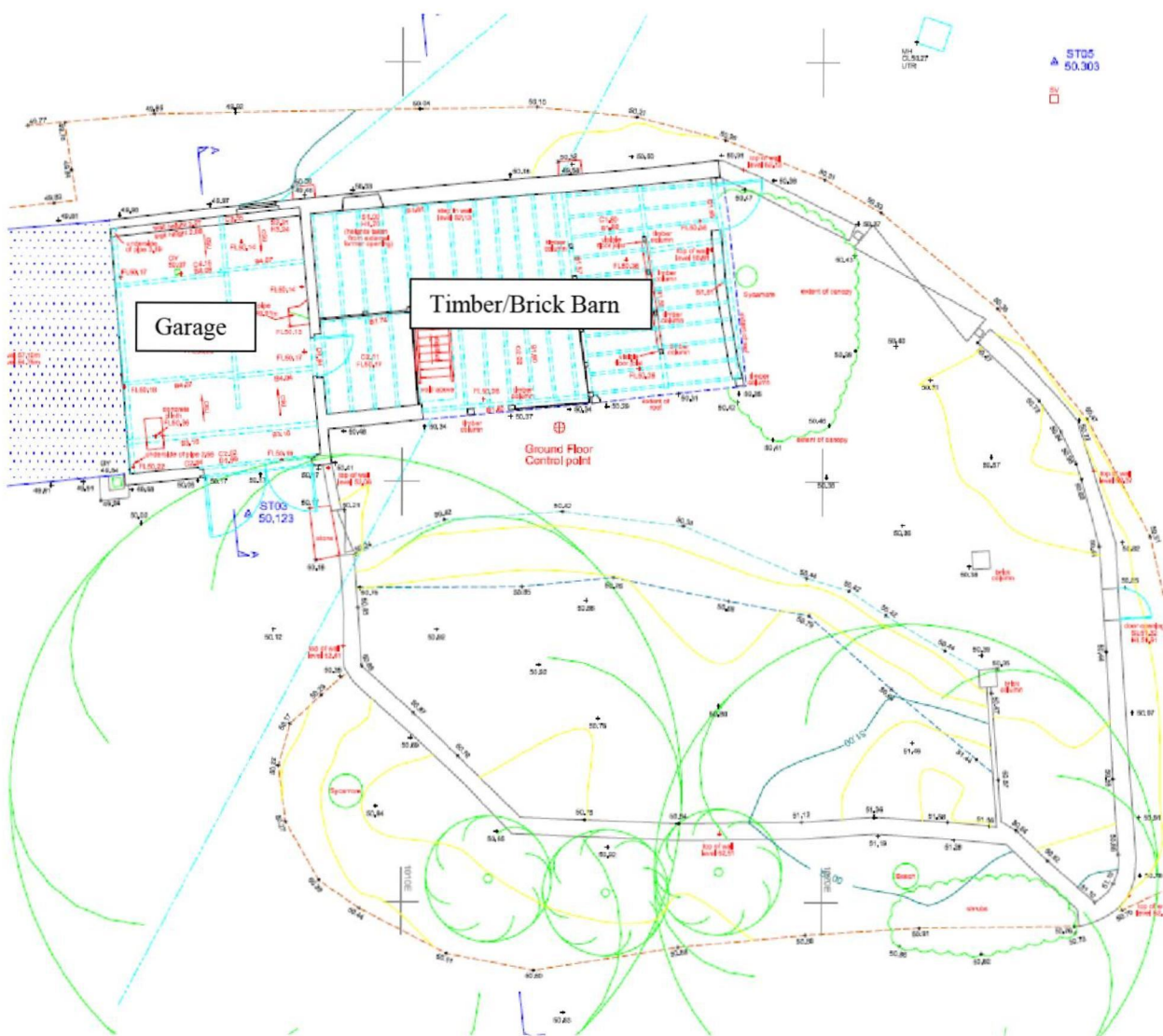
### 3 Results

#### 3.1 Search Survey

Survey date - 26/08/2014 (main survey) & 15/09/2014  
Surveyor - Richard Spyvee BSc, MIEEM, CEnv.  
Weather conditions - Overcast, light breeze 16°C (26/08). Still, high cloud 17°C (15/09).  
Equipment used - Ladders, 500,000 candle-power torch, binoculars, camera, inspection camera.

The grounds of The Old Rectory provide good feeding areas for bats; large and small trees/scrub, rough grassland. The gardens are well connected with the wider landscape. Again the surrounding countryside supports good habitats for feeding bats with woodland and orchard.

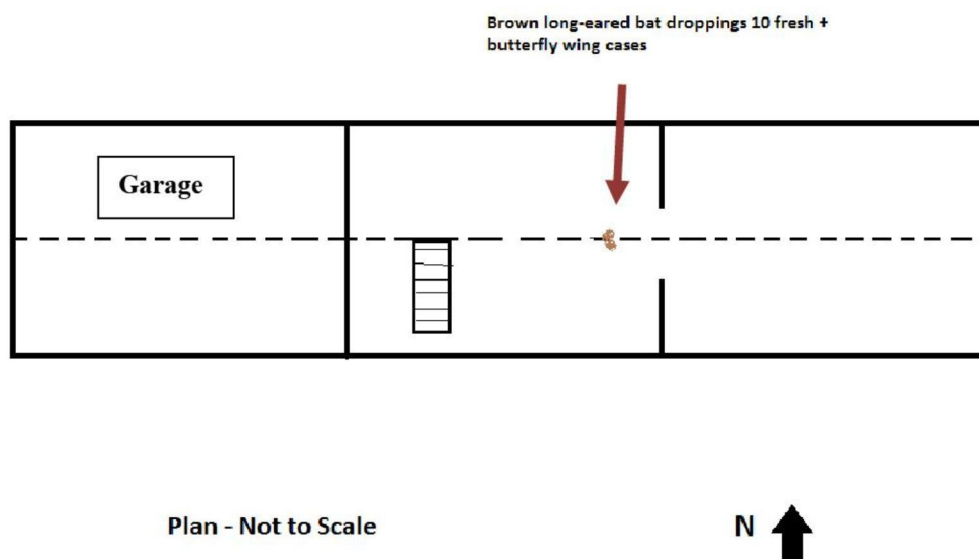
#### Layout of buildings



**Timber/Brick Barn (photo 1 & 2)** - The timber/brick barn lies to the north east of the grade II listed Old Rectory. A brick garage abuts the barn on the western side. The garage is currently used to store garden machinery and bikes, whilst the barn shelters fire-wood. The village lane runs directly north of the buildings. The southern side and eastern end of the barn is contained in a small yard with a stone wall running around it. The yard is used for wood storage and the vegetation is dominated by ground elder and nettles. The formal garden of the Rectory is to the south of the yard. A large sycamore and copper beech grow close to the yard wall. The barn has a low ground floor (6ft) with a wooden stair case leading to the loft area. The loft is split into two distinct rooms.

<b>Walls:</b>	Brick accounts for the majority of the walls. On the southern side wooden cladding is above a six foot high brick wall.
<b>Roof:</b>	Slates tiles with no underlay
<b>Access points</b>	The southern side is open in a number of places. The northern side has an open window aperture. Therefore, the building could be easily accessed by bats.
<b>Signs of bats:</b>	A small concentration (10 fresh, 30 old) of brown long-eared bat droppings (photo 4.) were present below the ridge beam. Tortoiseshell butterfly wing cases were also present. For the exact location of bat evidence please refer to the plan below.
<b>Bat roosting opportunities:</b>	The loft area of the timber/brick barn was very open making it draughty. However, there were dark areas. There were gaps above the wall plate leading into the loft above the garage (photo 7); although this loft area was dark and secluded it was covered in cobwebs (photo 6). The timber joints were tight and there was no underlay. The ridge beam above the bat droppings was clear of cobwebs (photo 8).
<b>Potential for bats:</b>	Low/medium – There were potential roosting opportunities for individual bats (behind ridge beam). However, the long-eared bat droppings pointed towards the building being used by an individual bat using it as a feeding/resting perch.
<b>Comments:</b>	Swallow nests were present in the barn

#### Showing location of evidence of bats





## 3.2 Emergence Surveys

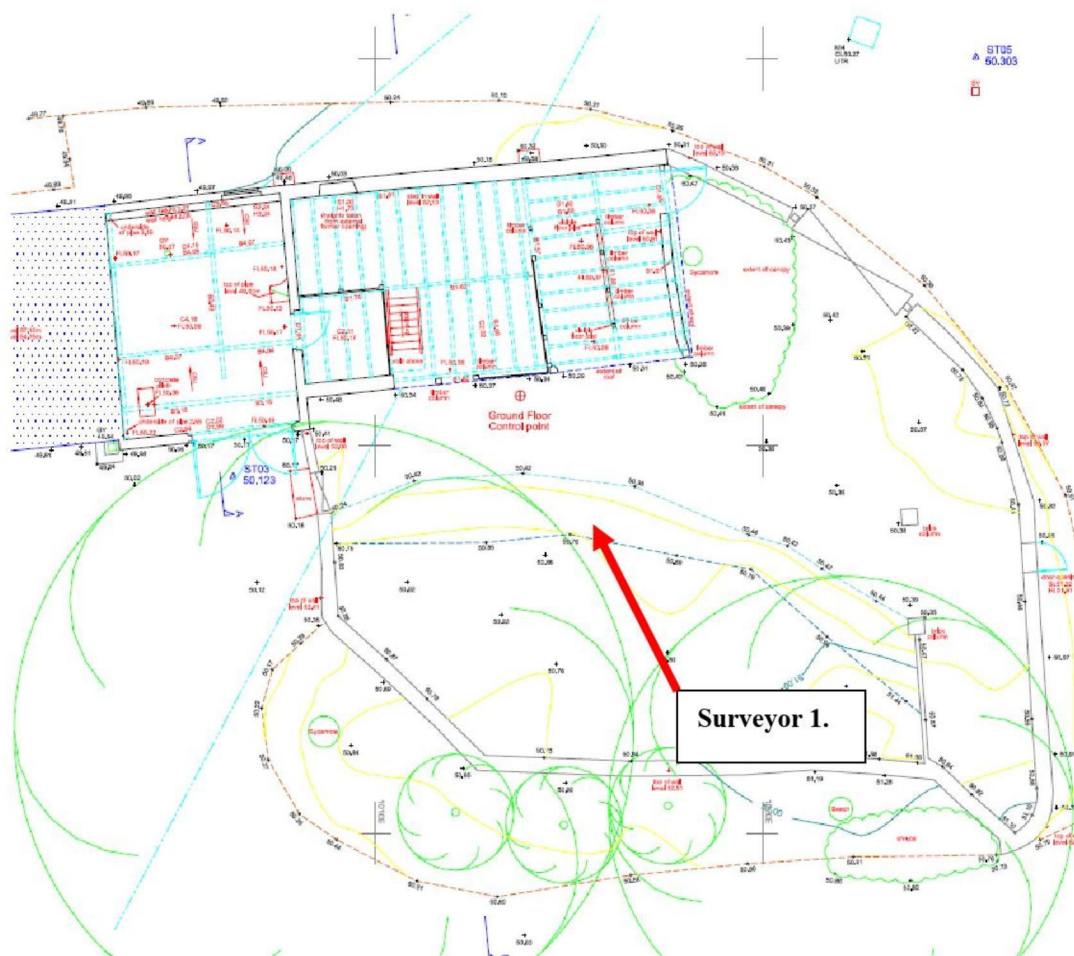
### Emergence survey 1

Survey date - 26/08/2014  
Surveyor 1 - Richard Spyvee BSc, MIEEM, CEnv.  
Weather conditions - Overcast, light breeze 16°C,

Equipment used and at hand included: Clusion 1m candle power lamp, ladders, binoculars, Batbox Duet x 2.

The surveyor had a clear view of the features most likely to harbour and/or provide access for bats, in this case the larger openings on the southern side of the barn. A bat detector was placed in the loft.

### Position of Surveyors



The survey commenced at 20:00, thirty minutes before dusk, ending at 22:30.

**No bats were seen emerging from the building.** Common pipistrelle 45khz bats were recorded, feeding around the large trees and the garden south of the barn. This activity commenced at 20:20 and carried on until 21:30. The bat detector in the loft picked up no activity. A tawny owl was also heard. Once the emergence survey was completed an inspection of the lofts was made and no bats were seen.



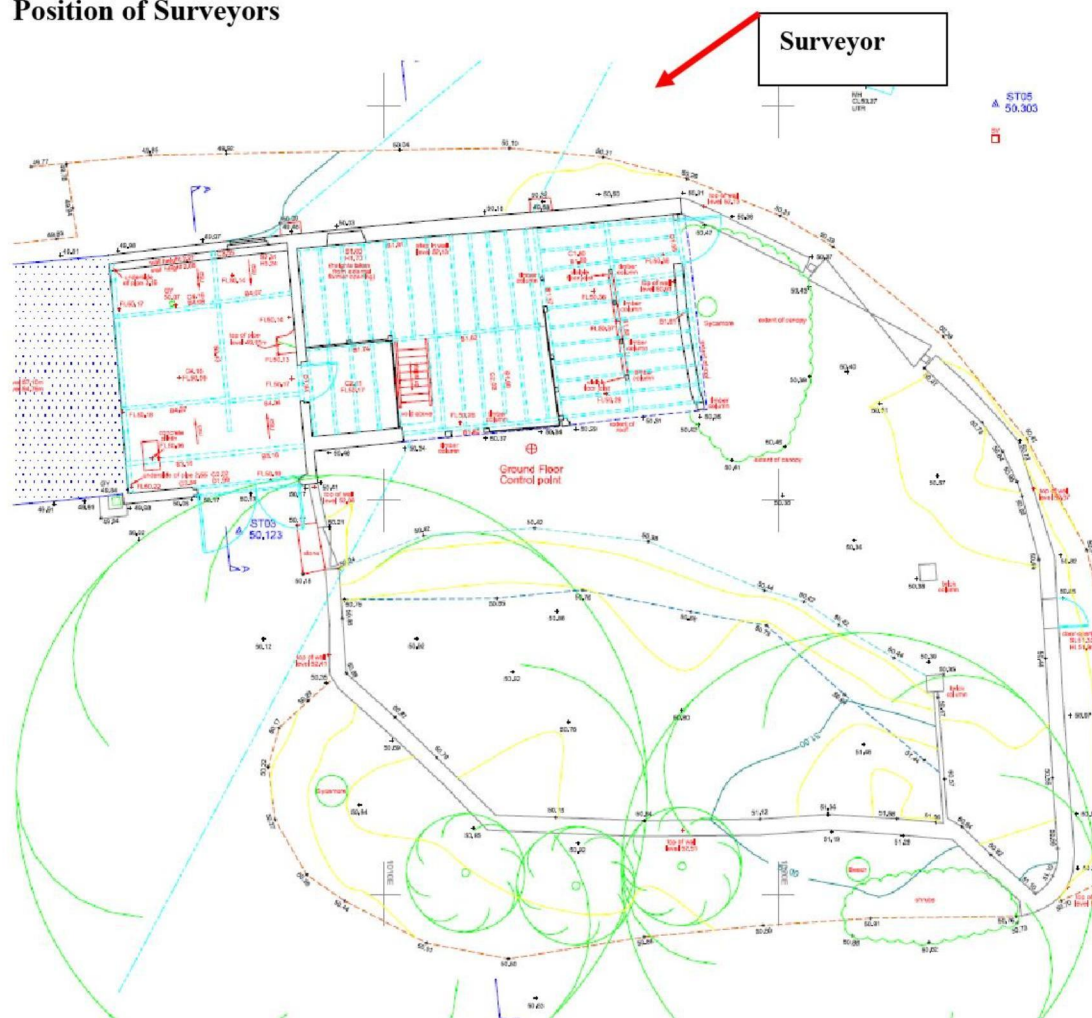
## Emergence survey 2

Survey date - 15/09/2014  
Surveyor 1 - Richard Spyvee BSc, MIEEM, CEnv.  
Weather conditions - Still, high cloud 17°C

Equipment used and at hand included: Clusion 1m candle power lamp, ladders, binoculars, Anabat II and analysis software, Batbox Duet,

The surveyor had a clear view of the features most likely to harbour and/or provide access for bats, on this occasion the large opening on the northern side of the barn. The anabat detector was placed in the loft.

## Position of Surveyors



The survey commenced at 18:45, thirty minutes before dusk, ending at 21:10.

**No bats were seen emerging from the building.** The first bat a common pipistrelle 45khz was recorded at 19:48, feeding around the trees behind the surveyor. At 20:10 a long-eared bat was seen and heard feeding around the garden trees behind west of the surveyor. Common pipistrelle 45khz bat feeding activity was recorded until 20:30.

Analysis of the anabat recording showed no evidence of bats using the barn.

## **4 Recommendations and Implications**

### **4.1 Bats**

#### **Use of the site by bats**

The only evidence of bats using the timber/brick barn was recorded as fresh and old long-eared bat droppings in the loft area. The bat had most likely accessed the loft via the numerous large gaps on the southern side of the building. There is a possibility that access was gained on the northern side of the building through the open window aperture, however, the southern side provided more cover with the presence of trees. The droppings were accompanied by tortoiseshell butterfly wing cases. The number of droppings and the presence of wing cases indicate that the loft being used as a feeding/resting perch. This is where bats will hang up and eat insects between bouts of catching their prey. The bats will dismantle and discard the parts of their prey that are not edible, wing cases for example.

No bats were seen emerging from the building during an emergence survey.

Brown long-eared bats have a common status and a widespread distribution.

There was plenty of common pipistrelle bat activity during the emergence surveys with these bats flying through and feeding around the surveyed site. The owners of the property felt that bats were roosting to the south of the Vicarage,

There is, to the best of our knowledge based on current survey evidence signs, no current bat roost in the building. The quantity and age of droppings found on the search survey indicate that this is likely to be one bat (common species) and occasional use. Under Natural England guidelines this would be a roost of low conservation value.

#### **Legislation**

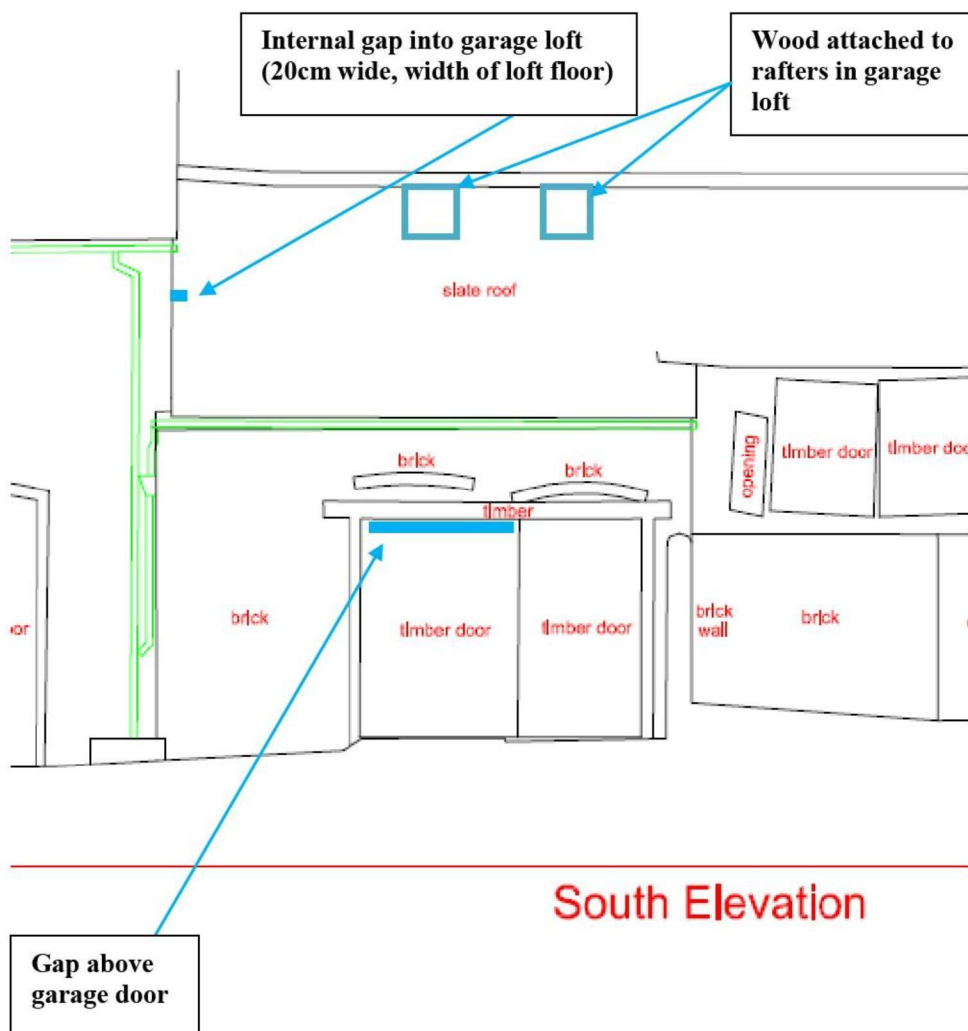
All bat roosts are protected under both British and European Union legislation (see Appendix 2.). Bat flight lines are not specifically protected by the legislation, but local planning authorities can take them in to account and good practice is to protect them.

## Proportionate mitigation/compensation

The proposals to convert the barn to residential use will lead to the destruction of an occasionally used feeding/resting perch, therefore an alternative roost site will need to be provided.

The Bat Mitigation Guidelines (2004) recommendations for mitigation and/ or compensation (depending on impact) for impacts on a bat roost of 'Low' significance are '*Flexibility over provision of bat boxes, access to new buildings etc. No conditions about timing or monitoring*'.

- It is recommended in this circumstance, that access is made into the adjacent garage. This shall be achieved by creating a gap at the top of the double garage doors (photo 3). The gap would need to be at least 10cm deep and run the length of at least one door. Within the garage, enhancements should be made to create better roosting conditions. This should be done by allowing access for bats into the small loft area. Access via a gap in the loft floor at the western end would suffice. The gap will be 20cm wide and run the width of the loft floor. Cobwebs will be removed from the loft area and at least two pieces of timber will be attached abutting the ridge beam and bridging two rafters. These pieces of wood will run down 40cm from the ridge beam.



The following recommendations are based on good practice.

- **If any development is delayed beyond 12 months then a day-time search within the summer months (May-Oct) should be carried out by a qualified bat ecologist.**
- **Tool box talk by ecologist to those carrying out the works (prior to any clearance/demolition) to give guidance on checks and procedures for bats during works, including sensitive roof stripping or architectural salvaging.**
- **Any external lights to be limited to only essential safety lights. Lights to be low-powered, low to the ground, shielded to avoid upwards and sideways glare and by movement sensitive (i.e. not always on).**

## **BIBLIOGRAPHY**

Bat Conservation Trust '**Bat Surveys – Good Practice Guidelines**' 2007

Mitchell-Jones, A.J. '**Bat Mitigation Guidelines**' English Nature (now Natural England) 2004

Richard Spyvee, BSc, MIEEM, CEnv.



## Appendix 1 Site Photographs

Photo 1 – Northern side of barn and garage



Photo 2 – Southern side of barn and yard



Photo 3 – Garage doors



Photo 4 – Bat droppings in barn



Photo 5 – Barn loft



Photo 6 – Garage loft



Photo 7 –. Dividing wall between barn loft and garage loft





## **Appendix 2   Legislation**

### **Bats**

All species of British bat are listed in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the European Conservation (Natural Habitats etc.) Regulations 1994. As well as giving full protection from intentional and deliberate killing, injuring, disturbing and taking of bats, the cited legislation protects bat breeding and resting places (roosts) from damage, destruction and preventing access to such places. The legislation regarding roosts applies irrespective of whether bats are present or not at the time of the offence.

The Countryside and Rights of Way Act 2000 added the word “reckless” to existing protection against “intentional and deliberate” actions.

The law requires that reasonable effort be made to ensure that any actions, plans or projects do not detrimentally affect bats or their roosts without prior consultation with the statutory authorities, which, in the case of England, is Natural England. Therefore, if a bat roost of any kind is found or suspected Natural England must be consulted and advice sought before bats or their roosts are affected.

Proposed developments that affect bats or bat roosts may require a licence from Natural England.

### **Appendix 3 Examples of simple provision for bats in buildings**

#### Provision within roof structures for crevice-seeking species (e.g. pipistrelles):

- Gaps behind barge boards with access to spaces between tiles and underfelt (e.g. via gaps in insect mesh, if fitted)
- any gaps in horizontal surfaces (soffits etc) must be flush with the wall so that bats can land on the wall and crawl straight up through the hole
- Gaps around tiles, including ridge tiles
- Ventilation tiles, including ridge ventilation tiles
- Gaps around flashing
- Gaps behind hanging tiles
- All above gaps to be 15mm x 20 - 40mm
- Gaps between roof timbers, cavities in joints - c.15mm x 40mm x 100+mm
- Bat roost bricks and bat access bricks are available (e.g. Norfolk Bat Group)
- Southerly aspect is preferable but not essential

#### Provision within loft spaces for free-hanging species (e.g. long-eared, horseshoes):

- Gaps (as above) giving access to roof space (e.g. via holes in underfelt) for long-eared bats
- Holes in gable walls near apex
- Avoid through-drafts
- Loft space volume and height to ridge beam should be maximum practical (ideally >2m)
- Rough ridge beams, rafters, etc for bats to cling to
- Rough underfelt for bats to cling to
- Inspection hatch to allow human access/cleaning
- Horseshoe bats fly directly into roosts, so require larger, letterbox style access holes –  
Greater horseshoe = at least 400 x 300mm  
Lesser horseshoe = at least 300 x 200mm

#### Timber treatment

- Should only be carried out using products which are accepted as safe for use in bat roosts (English Nature holds lists of recommended products)

#### Bat box suppliers

- Jacobi Jayne 0800 072 0130
- Bat Conservation Trust 0845 1300 228 [www.bats.org.uk](http://www.bats.org.uk) for further information