

**Survey for Bats, Barn Owls & Breeding Birds,  
Barn at , Haile, Egremont, Cumbria.**



Barn and house viewed from the southwest

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**Report commissioned by:**

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## Introduction

This report has been produced to identify any protected species of animal in particular, bat, barn owl or any nesting bird from being disturbed in their roost, nest or feeding areas during the proposed work to be carried out on the property.

### A1 Bats and their requirements

All British bats and their roosts are afforded protection under the 1981 Wildlife & Countryside Act (as amended) and are listed under Annex IV of the Habitats Directive as in need of protection. NPPF (National Planning Policy Framework) acts as a guide to local authorities in relation to wildlife issues where developments may affect protected species and how conservation and any appropriate mitigation measures should be implemented. Furthermore where the presence of a European protected species (all British bats) may be affected by development then a licence to derogate from the habitats directive 2014 Regulations would be required from the Department of the Environment, Food and Rural Affairs (Defra). Licences are processed by Natural England, the statutory body for nature conservation.

A bat roost may be defined in several ways:

- A) Summer breeding roost
- B) Hibernation roost.
- C) Transitional or temporary roost.

As bats have a variety of roost sites that fulfil different requirements at different times of the year, and these sites are returned to regularly, then the roost is protected even if the bats are not present. Roost selection is often closely correlated to suitable foraging habitat within a reasonable commuting distance from the roost and different sites are used depending upon insect densities and abundance. Climatic conditions can also affect their ability to successfully forage. All British bats are insectivorous.

**The Bat Year**, indicated below, shows work on trees and roofs is best done in spring or autumn (red) while work on roosting sites are best avoided from June-August and hibernation sites from December- February, this avoids periods when they are particularly vulnerable to disturbance.

January, February	Bats Hibernate, Individually or in small groups.
March, April, May	Occasionally wake. Bats hungry and active, torpid in bad weather. Move roost sites
June, July, August	Females in large maternity groups. Young born, suckle for 6 weeks. Mothers leave roost first, young later.
September, October, November	Mating takes place. Bats put on fat. Look for good wintering sites. Gradually become torpid for longer periods.
December	Hibernate

*Table from the Bat Conservation Trust*

### A2 Barn Owls and their requirements

Barn Owls are listed in Schedule 1 of the Wildlife and Countryside Act (1981) (as amended). Should barn owls be present in the barn then a licence would be required from Defra and licenced by Natural England to derogate from the Act, and mitigation for the disturbance would be required. NPPF acts as a guide to local authorities in relation to wildlife issues where developments may affect protected species, the presence of a protected species is a material consideration when a local planning authority is considering a development proposal which if carried out, would be likely to result in harm to the species or its habitat.

### A3 Breeding Birds

All wild birds, their nests, eggs and young are protected under the Wildlife and Countryside Act 1961 (as amended) during the nesting season. Work must not begin if nesting birds are present on site and should occur outside of the bird nesting season (March through to August, although weather dependant). If building works are undertaken during the bird breeding season, a check for any active nest sites should be undertaken by a suitably qualified ecologist. If breeding birds are found during the survey, the nest should not be disturbed and works should be delayed until nesting is complete and any young birds have fledged.

### B1 Background to activity

An application to Planning is being made to convert the barn into a dwelling, a bat and breeding birds survey is being commissioned for the application.

### Survey and site assessment

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

None.

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

Species	Local Status	Habitat
<b>Noctule</b> <i>Nyctalus noctula</i>	Widespread but uncommon, mobile populations, breeding roosts recorded.	Tree dweller; predominantly in lowlands. Occupies woodpecker & rot holes. Seldom in buildings. Will utilise bat boxes. Feeds over deciduous woodland, parkland, pasture, water & forest edges.
<b>Daubenton's bat</b> <i>Myotis daubentonii</i>	Widespread; hibernacula & breeding roosts recorded	Bridges, tunnels, caves, mines, stone buildings & trees. Has been found hibernating underground at high altitude (550m). Feeds over rivers, canals & other water bodies. Will forage in riparian woodland.
<b>Natterer's bat</b> <i>Myotis nattereri</i>	Widespread; hibernacula & breeding roosts recorded. Less common than Daubenton's.	Similar to Daubenton's & can be found together; bridges, old buildings, barns, trees & underground sites. Feeds in woodland & parkland. Has recently been recorded in some upland areas, mainly using riparian habitats.
<b>Whiskered bat</b> <i>Myotis mystacinus</i>	Widespread but uncommon; breeding roosts & hibernacula recorded	Older, mainly stone buildings, old churches, trees & often in bat boxes. Feeds mainly in deciduous woodland.
<b>Brandt's bat</b> <i>Myotis brandtii</i>	Widespread but uncommon; breeding roosts & hibernacula recorded. 'Swarming' sites recorded.	Similar to Whiskered.
<b>Brown Long-eared bat</b> <i>Plecotus auritus</i>	Widespread; hibernacula & breeding roosts recorded	Old buildings, churches, barns (often with trees close by), underground sites & trees. Often found in bat boxes. Feeds in deciduous & coniferous woodland often within the canopy, around parkland trees, gardens, along hedgerows

<b>Common Pipistrelle</b> <i>Pipistrellus pipistrellus</i> (45kHz)	Widespread & common; breeding roosts recorded but species recognition only recently recorded.	Wide age range of buildings; favours modern structures, trees occasionally & bat boxes. Feeds over diverse habitat; rural & urban gardens, woodland, farmland or near water. Found hibernating behind wooden cladding on buildings, in soffits, behind fascia boarding & in gaps in wooden window frames, also hibernates in
<b>Soprano Pipistrelle</b> <i>Pipistrellus pygmaeus</i> (55kHz)	Widespread and common; breeding roosts recorded but species recognition only recently recorded	As Common Pipistrelle. Favours riparian habitat & roosts in larger maternity colonies than the Common Pipistrelle. Found hibernating behind wooden cladding on buildings, in soffits, behind fascia boarding & in gaps in wooden window frames, also hibernates in
<b>Nathusius Pipistrelle</b> <i>Pipistrellus nathusii</i>	Rare. Three UK breeding sites known. A single bat detector record of a night roost in Cumbria and several foraging records.	Tree dweller, hollow trees, cracks, bat boxes & buildings. Sometimes shares nursery roost with Pipistrelle or Brandt's bats. Feeds mainly around riparian & woodland edge habitats.
<b>Leisler's bat</b> <i>Nyctalus leisleri</i>	Rare. Unconfirmed bat detector record in Cumbria. Present in adjacent counties (Yorkshire & Dumfries & Galloway)	Woodland bat, similar to Noctule but will roost in buildings. Feeds in open deciduous and coniferous woodland, over water bodies, parkland and around street lamps in suburban areas.
<b>Alcathoe's bat</b> <i>Myotis alcathoe</i>	Rare. Unconfirmed bat detector record for Cumbria. Present in adjacent county (Yorkshire)	Woodland bat, similar to Whiskered. Feeds in mature deciduous woodland with streams. Often uses dead/decaying trees for roosting.

(adapted from the Cumbrian Wildlife Trust BAP report)

The Cumbrian Mammals atlas compiled by Tullie House Museum which records reported sightings of bats (the majority being from populated areas) there are reports of Brown Long Eared, Daubenton, Natterer's bats in this Tetrad NY0208 (4km square) with Noctule & Pipistrelle bats in adjoining tetrads and Whiskered bats within 6km.

Tyto alba (barn owl) is considered widespread but scarce. The Breeding Birds for Cumbria Atlas 2007-2012, indicates the species is breeding in this Tetrad NY0208.

### C3 Objective of Survey

The objective of survey was to ascertain whether there were any signs of use of the site by bats, barn owls and other breeding birds.

Signs of bats include droppings, insect remains, wear marks on beams, egress points smoothed by continuous use, or the presence of bats. Areas that have potential for bats to roost in, but no actual signs of bats or inaccessible areas to survey are also noted.

Signs of owls include :- pellets, faeces remains ('whitewash'), feathers, dead chicks, prey remains or the presence of owls.

Signs of breeding birds :- bird activity, nest material and eggs/chicks, feathers and faeces.

### C4 Survey area

The survey area was the interior and exterior of the barn internally & externally, surrounding buildings were also observed.

## **C5 Habitat description**

Orchard Brow Barn is at grid ref. NY033084, to the south Haile village and 3km southeast of Egremont, 50m to the west a small beck runs west joining Kirk beck then the River Ehan before flowing south into the Irish Sea at Sellafield, all are tree lined. Boundaries are dry stone walls or fences and hedges and large trees and shrubs with the woodland of Great Wood to the north and Carletonmoor woods to the west. Longlands Lake and the River Ehan and Clints Quarry a Cumbria Wildlife site are 4km to the north.

### **Site description**

The three storey house (a former barn conversion) has a two storey barn connected to the north, walls are local stone mortar built, roof is slate with stone ridge, ground floors are concrete, upper floors boards on joist & beams.

## **C6 Field survey**

### **C6.1 Methods:**

The building was surveyed on 22<sup>nd</sup> August 2017, with a high-powered torch and ladder. Areas that had potential for bats, owls or other birds but were inaccessible were noted.

### **C6.2 Timing-**

the emergence/activity survey was carried on the sae evening.

### **C6.3 Weather conditions-**

temperature was 20degC conditions were calm & dry with 100% cloud cover, sunset was approx. 20:30.

**C6.4 Personnel-** survey was conducted by Steve Wake & Liz Greenway using a Magenta Bat5 & Ceil detectors.

## **C7 Results:-**

There was no sign of any barn owls, signs of barn swallows were evident in the barn, there were signs of Brown Long Eared bat activity with droppings on the hayloft floor.

20:20 Survey commenced.

20:32 a Common Pipistrelle (CP) foraged in tree area to the N of the barn, also at 20:46,47,54 & 21:11.

20:34 to 21:27 a CP foraged along road from N & back at 2-3m height, with two at 20:37 & four at 20:40.

20:35 a CP emerged from a wall vent on the E wall & flew north at 6m height.

20:36 a CP foraged over E yard & headed N at 3m height, also at 20:53.

20:39 a CP foraged into yard from N then back at 3m height.

20:41 two CP foraged to yard from NE then N at 3-5m height, also a Soprano Pipistrelle (SP) at 43.

20:44 a CP foraged from N to SE at 3-4m height.

20:45 to 21:45 a Brown Long Eared bat (BLE) light sampled in hayloft at 3-4m height, came from above block work wall to house, with two at 21:30.

20:45 two CP foraged over neighbours yard to the NE at 3m height.

20:48 a CP foraged along road from S & back at 2-3m height, also at 20:54.

20:50 a CP foraged NE from yard at 3-4m height.

20:50 a CP foraged E from yard at 3-4m height.

20:52 a CP foraged over yard & back from SW at 6m height.

20:54 two CP foraged over the yard heading S at 5m height.

20:55 a CP foraged E over the barn to the yard at 8m height.

20:56 a Soprano Pipistrelle (SP) foraged from NE to S over yard at 6m height.

21:00 a BLE light sampled in roof scurried behind ridge beam, at 21:04 seen flying past vent slots from outside.

21:13 a BLE emerged from vent slot & flew NE at 6m height.

21:14 a CP foraging over road commuted S at 2-3m height.

21:15 a BLE in hayloft flew light sampling to the N end of roof at 4m height.

21:20 a Noctule was heard foraging to the NE.

21:50 survey ended.

CAPITALS refer to bat type and compass directions.

The interior of the building was monitored through the night with BLE bat activity noted throughout with a maximum of two bats seen at any one time.



## Potential

There is potential for bats to roost in areas difficult to access, such as :-

Under the ridge tiles, slates & flashings.

Behind roof timbers.

In openings in external walls & around door & window frames.

In the roof space of the adjoining house.

There is no opportunity for Owls to roost, swallows were nesting in the main barn roof.

## C8 Interpretation and evaluation

### C8.1 Presence/Absence:

There were no field signs to indicate the presence of barn owls, swallows were seen nesting, there is a small Brown Long Eared bat roost evidence suggests it is in the party wall with the house or in the house roofspace, with the hayloft being used for light sampling flight before full emergence.

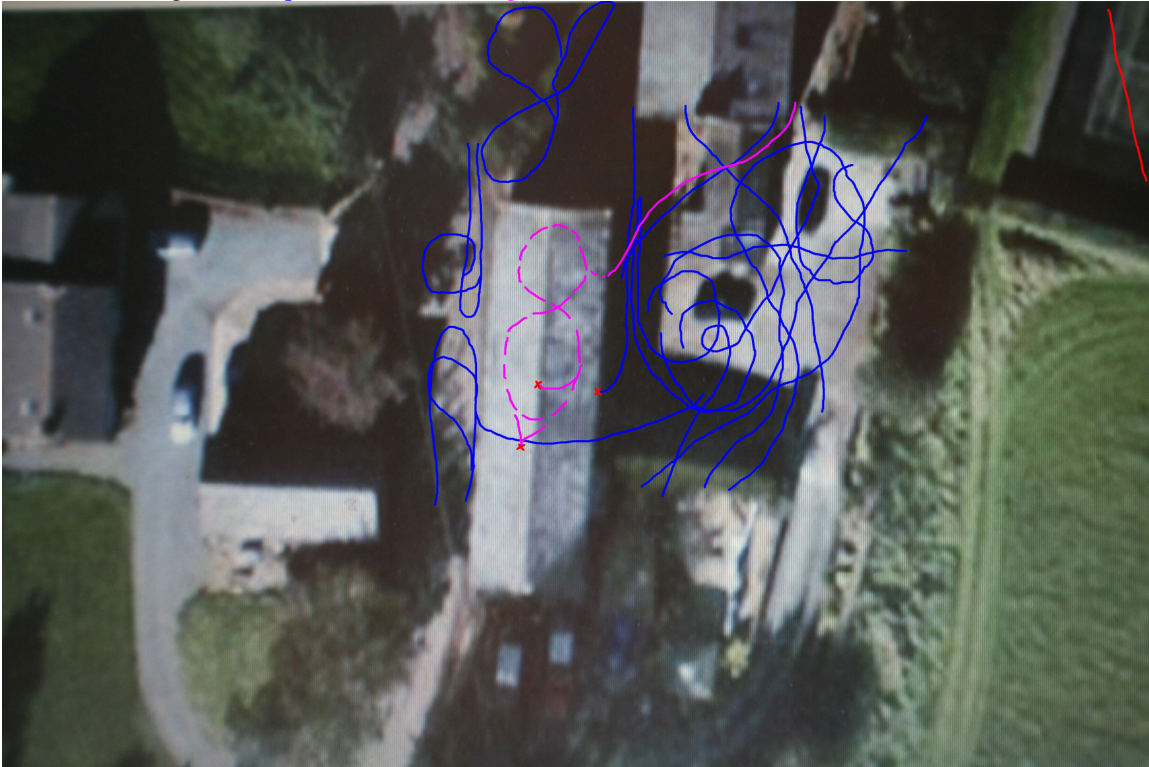
**C8.2 Population size class assessment:** two Brown Long Eared bats were seen and a single Pipistrelle bat using the barn roof area.

### C8.3 Site status assessment:

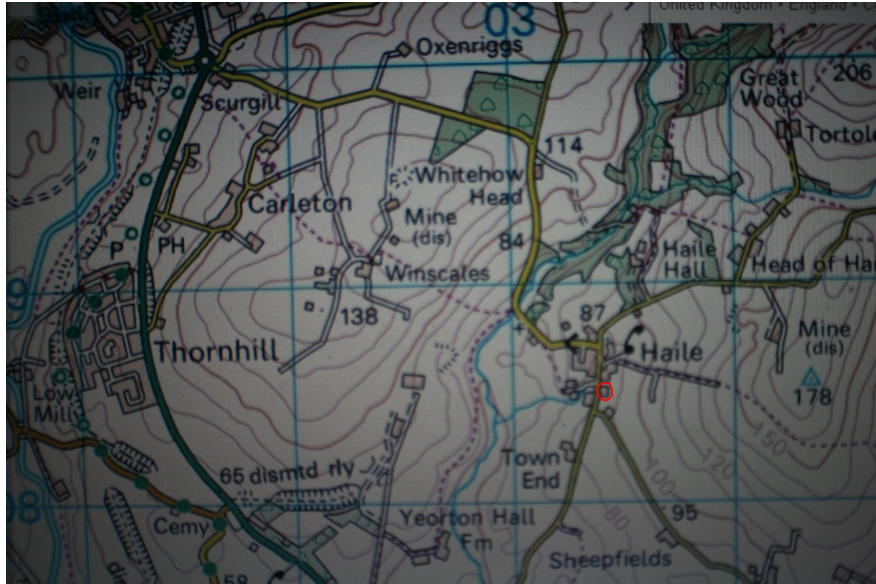
In their present condition, the site has a low status in the ecology of the local owl & other bird population and a medium status for bats.

## C9 Map of survey area

Site Plan Bat flight area **Pipistrelle, Brown Long Eared & Noctule, Roost area X**



## Site Location



### Impact assessment

#### **D1 Pre- and mid- activity impacts:**

None for Barn Owls, slight for bats & swallows.

#### **D2 Long-term impacts:** none.

#### **D3 Post activity interference impacts:** none

**D4 Other impacts:** The use of external lighting should be restricted to low level & output to maintain feeding areas.

#### **D5 Summary of impacts at the site level:**

None, if there are no bats or nesting birds present at the time of works.

#### **D6 Summary of impacts in a wider context:** none.

### Mitigation

**E1 Mitigation strategy:** None required for Barn Owls, a light sampling roof space (bat loft) to be retained in the centre of the house for Brown Long Eared bats, created at the start of the work.

**E2 Replacement roost site selection:** None required for owls, swallow nesting and bat loft area in the central roof area to be retained & inspected by bat ecologist.

**E2.1 Existing species status:** Common & Soprano Pipistrelle & Brown Long Eared bats are common and widespread, Barn Owls & Noctule bats are less common but widespread.

**E2.2 Location, ownership and status:** Orchard Brow Barn is at grid ref. NY033084, to the south Haile village and 3km southeast of Egremont, 50m to the west a small beck runs west joining Kirk beck then the River Ehan before flowing south into the Irish Sea at Sellafield The property is owned by Mr & Mrs Douglas.

#### **E3 Habitat creation, restoration and/or enhancement:**

Bat roosts can be created by:-

- Erecting a bat boxes.

- Retaining light sampling bat loft area with ridge & slate access.

Habitat can be enhanced by encouraging insect life and:

- Planting and maintaining broad-leafed native tree species.

- Planting night-flowering species such as honeysuckle.

- Planting native flowering species such as dog rose.

- External lighting to be ideally low level and output so as not to disturb bat feeding areas.



**E3.1 Terrestrial habitats:** Rural village.

**E4.1 Timing , effort, methods, capture/exclusion methods:** See Bat Year.

**E5 Post development safeguard.** Bat/swallow loft to be approved by bat ecologist.

**E5.1 Habitat management and safeguard:** the site is located in a rural agricultural landscape with no immediate threat to the surrounding habitat.

**E5.2 Population monitoring:** N/A.

**E5.3 Mechanism for ensuring delivery:** work to be carried out in 2017/18, any sign of bat activity in the building during works should be notified immediately!

## **F1 Summary of development and mitigation:**

The building had no field signs of barn owls. Swallow, Brown Long Eared & Pipistrelle bat activity was observed with nesting in the roof & bat roosting in the house roof/wall junction & light sampling in barn, a light sampling bat/swallow loft will be retained with new access points created.

There is potential for bats to be present in the areas that were inaccessible to the survey. These were, under any gaps ridge tiles and roof junctions and under slates, behind roof timbers in wall gaps and within main house roof.

Extreme care must be taken when working on these areas and on the roof. Crevices should be checked with a torch prior to pointing to ensure no bats are entombed, downward facing exit tubes will allow any bats to escape.

Bats can be encouraged on site by allowing them access to the building post-works, retaining a light sampling bat loft and by erecting bat boxes.

Provided works are carried out in accordance with this report then a European Protected Species licence should not be required.

**If at any point during the works bats are seen or suspected within the building, work must stop and further advice sought!**

## **References**

Bat Conservation Trust. Bats and the Law BCT & RSPB joint publication.

Bat Conservation Trust 2007 Bat Surveys - Good Practice Guide.

Virtual Fauna of Lakeland. Tullie House Museum.

Natural England. Nature on the Map.

The Breeding Birds of Cumbria. A tetrad atlas 2007-2012.

Birds and Wildlife of Cumbria. Annual Reports.

Wildlife Trust for Cumbria. Biodiversity Action Plan.

Woodland Management for Bats. Forestry Commission England

Mitchell-Jones, A J & McLeish. 2004 Bat Workers Manual

**Photographs**

Barn & house from the west



Interior of barn hayloft looking north



Barn & yard from the east

