# BAT & BARN OWL SURVEY AT WALSOPTHORNE FARM, ASHPERTON, HEREFORDSHIRE

***Report to Nigel Teale***

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NE07/1804/F

## 1. Executive Summary

In May 2006, Worcestershire Wildlife Consultancy were commissioned by Mr Nigel Teale on behalf of his client Mr Edward Davies to undertake a survey of a building at Walsopthorne Farm, Ashperton, Herefordshire prior to a planning application. The survey was for bats and barn owls.

Common pipistrelles were observed flying out of the upper storey of the building and foraging around the yard, buildings and adjacent orchards. Daubenton's bat was recorded over a pond but is thought to have originated from off the site.

No sign of barn owls or any other owls were found within the building. Swallows and some small passerines were observed to be nesting in and around the building.

## 2. Site Description

The site is at the end of a long drive leading from a minor road to the east of the village of Ashperton at NGR SO650423. The surrounding land is agricultural, with pasture, orchards and some arable. There is also some nearby woodland.

The building in question is a two-part structure; one part is a two-storey red brick and timber building with a corrugated metal roof and the other is a single storey cart shed of red brick with a clay pantiled roof. The lower floor of the two storey part is used for the storage of agricultural materials and chemicals and is a closed unit, although there are gaps in the timber cladding. The upper storey could only be viewed from a ladder but there are several missing windows and numerous gaps in the timber cladding.

The single storey section is used for the storage of machinery, fencing materials and general agricultural sundries. It is open on one side in the style of a cart shed but the other three sides have solid walls. Both sections of the building have the original beams, which provide crevices and holes.

The other buildings in the complex include similar barns, modern cattle yards and the large, imposing half-timbered three-storey farmhouse.

## 3. Methodology

A data search of areas of ecological importance was undertaken using the Multi-Agency Geographical Information for the Countryside website (MAGIC). None were found. In addition, a data search for protected species information was requested from the Herefordshire Biological Records Centre (see Appendix 1).

The building was inspected in daylight and both the lower and upper floors (where accessible) were inspected for signs of occupation by bats, such as droppings, staining of wood by urine or the characteristic smell of ammonia. The exterior is usually examined for potential entrance holes but in this case there were several large openings such as the missing windows, meaning that small cracks and crevices were of lesser importance.

As evening descended, ultrasonic bat detectors were employed. These render ultrasonic echolocation calls audible to the human ear and enable the identification of most species by sound. During the evening surveys, positions were taken up outside at suitable points to see if any bats emerged from the building, using bat detectors as well as flight patterns in order to identify the species. The bat detectors used throughout the survey were BATBOX Duets operating in both the frequency division and heterodyne modes. In addition, a heterodyne UltraSoundAdvice Mini-3 detector was used in order to detect any bats that came in from elsewhere onto the site.

In the case of barn owls (*Tyto alba*), signs of breeding (barn owls do not construct nests) or signs of roosting can be found in the form of regurgitated pellets and/or splashes of droppings. Each species of owl produces a distinctive pellet.

Alan Shepherd of Worcestershire Wildlife Consultancy undertook the surveys on 19th, 26th & 30th June 2006, assisted by Steve Roe and Steve Coney.

## 4. Survey Results

The data search from Herefordshire Biological Records Centre yielded many records for several species of bats within a 2km radius of the site but since there are at least two well known and regularly monitored roost sites within the area this is not surprising. None of the records originate from this particular site.

### 4.1 Bat emergence surveys

On **19/6/06** the weather was still with 100% cloud cover and an air temperature of 15.8°C when the survey commenced at 21.15.

At 21.54 a bat was heard flying within the upper storey. From its echolocation frequency of 45 kHz it was identified as a common pipistrelle (*Pipistrellus pipistrellus*). Within two minutes it had emerged to be followed by another common pipistrelle.

This was followed by a burst of activity with pipistrelles flying in and out of the upper storey, in and out of the single storey building and feeding in the yard, the modern building and flying out to the orchard. By 22.13 a pattern of feeding became obvious with four or five common pipistrelles feeding around the site, leaving and returning at regular intervals.

The survey was concluded at 22.55, when the air temperature was 14.2°C by which time it was too dark to observe any further emergence activity. With the confusion caused by bats flying into one end of the building and emerging from the other end, establishing the total was difficult but after some discussion it was deduced that from a total of four or five common pipistrelles, at least three definitely emerged from the building.

In addition, one or possibly two Daubenton's bats (*Myotis daubentonii*) were observed feeding over a pond to the rear of the building. Their origin is unknown but it was not from the barn. It is believed that there is a Daubenton's bat roost in a tunnel on the dis-used Hereford to Lydney Canal, which lies within 500m of the site (Alan Shepherd *Pers comm.*)

On **26/6/06** the weather was dull and overcast with light drizzle and an air temperature of 13.1° C when the survey commenced at 21.15.

At 21.37, a common pipistrelle was seen and heard flying around the modern buildings and another was seen at the rear of the farmhouse, possibly having emerged from there.

At 21.42 two common pipistrelles emerged from the northern end of the building and commenced foraging around the site. By 22.01, the pattern of foraging was again noted until at 22.11 when rain began to fall, meaning that the bats flew into the

modern buildings and continued to forage. A count of five or possibly six bats estimated.

The survey finished at 22.25 when the rain and associated light conditions made it impossible to see any further emergence and at this point the air temperature had dropped to 12.9° C.

On **30/6/06** at 21.15 the weather was initially dull and overcast with an air temperature of 14.7° C.

At 21.46 a single common pipistrelle was heard within the upper storey, emerging almost immediately. At this point, two more were seen and heard around the modern buildings but their origin was not clear, apart from the fact that they had not emerged from the barn.

From 21.46 until 21.57 three or four common pipistrelles continued to feed in and around the yard and buildings but after that activity was sporadic and restricted to brief sorties in and out of the yard. The bats were then located feeding in the adjacent orchard. With very little activity and with the conditions too dark to see any further emergence the survey finished at 22.15 when the air temperature was recorded as 13.7° C. Despite the end of the survey the team remained on site in order to check for the presence of the Daubenton's bat(s) around the pond and for any further echolocation from any species that may have been over-flying the site. None were recorded.

## 4.2. Barn owl survey

No signs of any owl species were found, although a little owl (*Athene noctua*) was heard calling in the distance on 26/6/06 and 30/6/06.

Swallow (*Hirundo rustica*) and blackbird (*Turdus merula*) nests were noted in the barn, along with a fledgling blackbird. There were signs that feral pigeons had roosted in the building.

## 5. Conclusions and recommendations

The survey indicates that at least **two common pipistrelles** were using the building as a roost with a few others roosting elsewhere around the farmyard complex. There were **no barn owls** using the building.

This means that once planning permission is granted and prior to any redevelopment a Department for Environment, Food and Rural Affairs (DEFRA) development licence in respect of a European protected species must be sought.

As all bat species are protected under the Wildlife and Countryside Act 1981 and the Habitat Regulations 1994, **no work can commence on the barn at Walsopthorne Farm until a licence is issued by DEFRA for the proposed development works**.

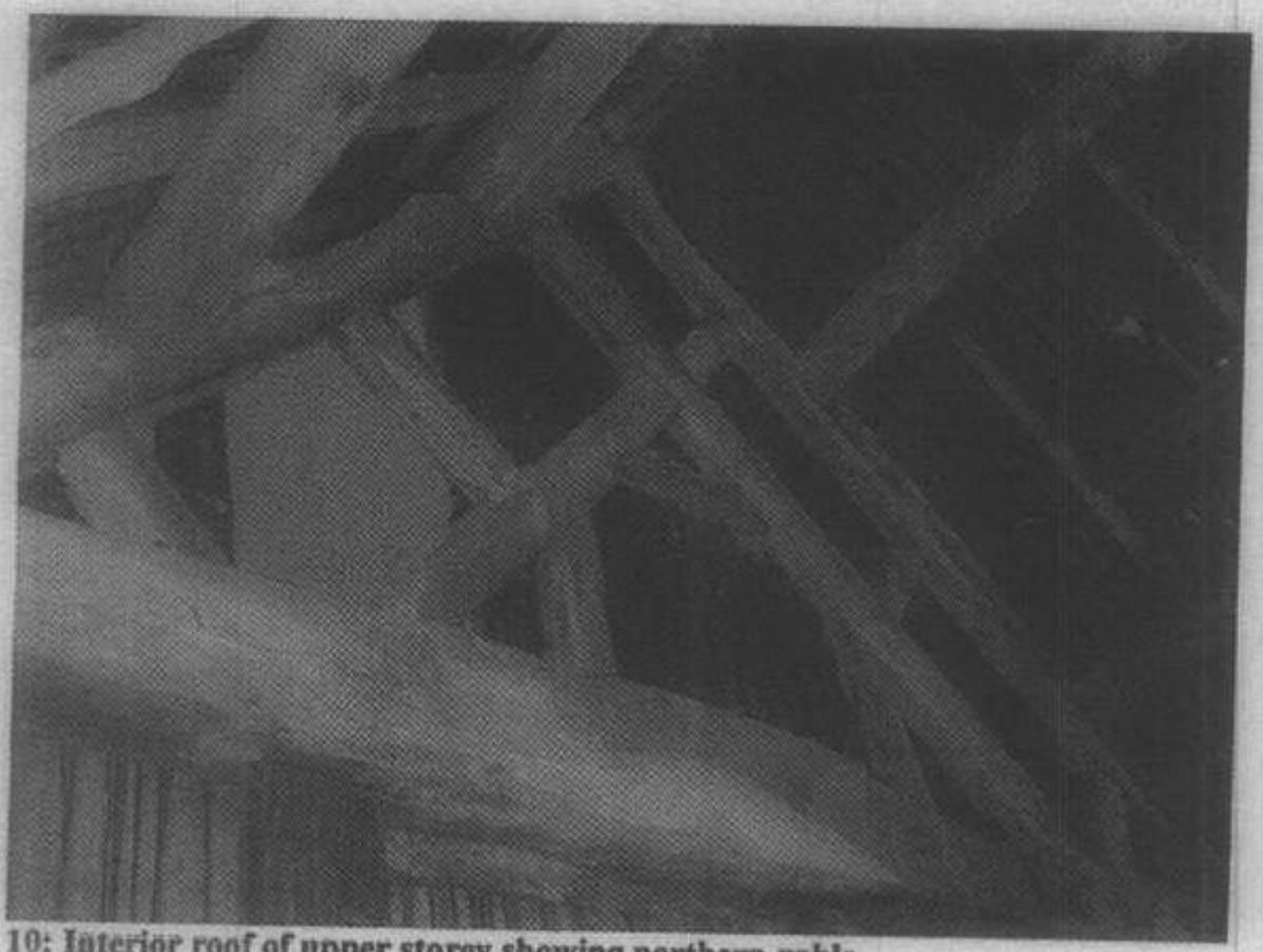
It must be noted that DEFRA are under no obligation to issue such a licence unless they are satisfied certain criteria are met. Should a licence be issued, no work should commence before October (in any year) at the earliest (this will be stipulated within the licence) to ensure that any bats present have left the barns for their winter hibernation site. To proceed with the DEFRA application a method statement must be produced by a suitably qualified and experienced ecologist, which identifies mitigation and habitat enhancement measures which will ensure the favourable status of the species (in this case common pipistrelle) is maintained.

It is strongly recommended that should the development be programmed to start in the autumn of this year at least **one further survey is undertaken in early-mid September 2006**. This is to assist with gaining a development licence from DEFRA. Should the development not proceed during late 2006 at least **3 further surveys in any following years** will be required to ascertain the up to date status of the bat population at the site prior to applying for a DEFRA licence.

Opportunities for mitigation with regards to the pipistrelles include the provision of a number of artificial bat boxes, bat bricks and modified ridge tiles, all of which are commercially available. The first two should be located in and around the site on external walls. In addition, low-level lighting should be used except where health and safety is considered to be of over-riding importance.

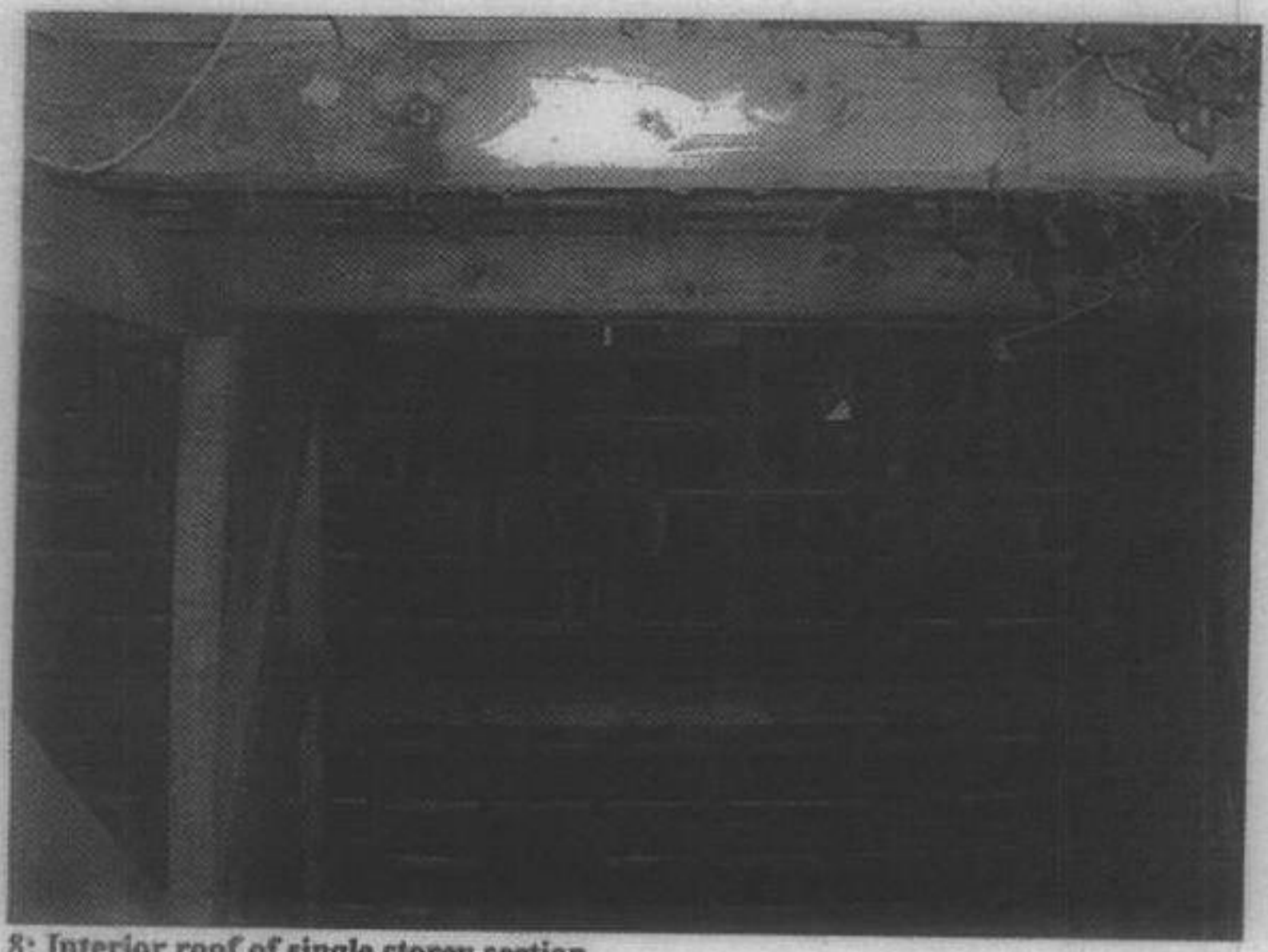
Finally, with regard to the new Planning Policy Statement 9 (PPS9), it is now a requirement for local planning authorities to maintain and enhance, restore or add to biodiversity. As stated within the document, "Development proposals provide many opportunities for building-in beneficial biodiversity or geological features as part of good design. When considering proposals, local planning authorities should maximise such opportunities in and around developments, using planning obligations where appropriate". This is most pertinent to any future re-development of this site and is addressed via the suggested outline mitigation proposals, which would need to be expanded upon and agreed prior to any work commencing at this site.

9: Interior roof of upper storey



10: Interior roof of upper storey showing northern gable

7: Interior roof of single storey section



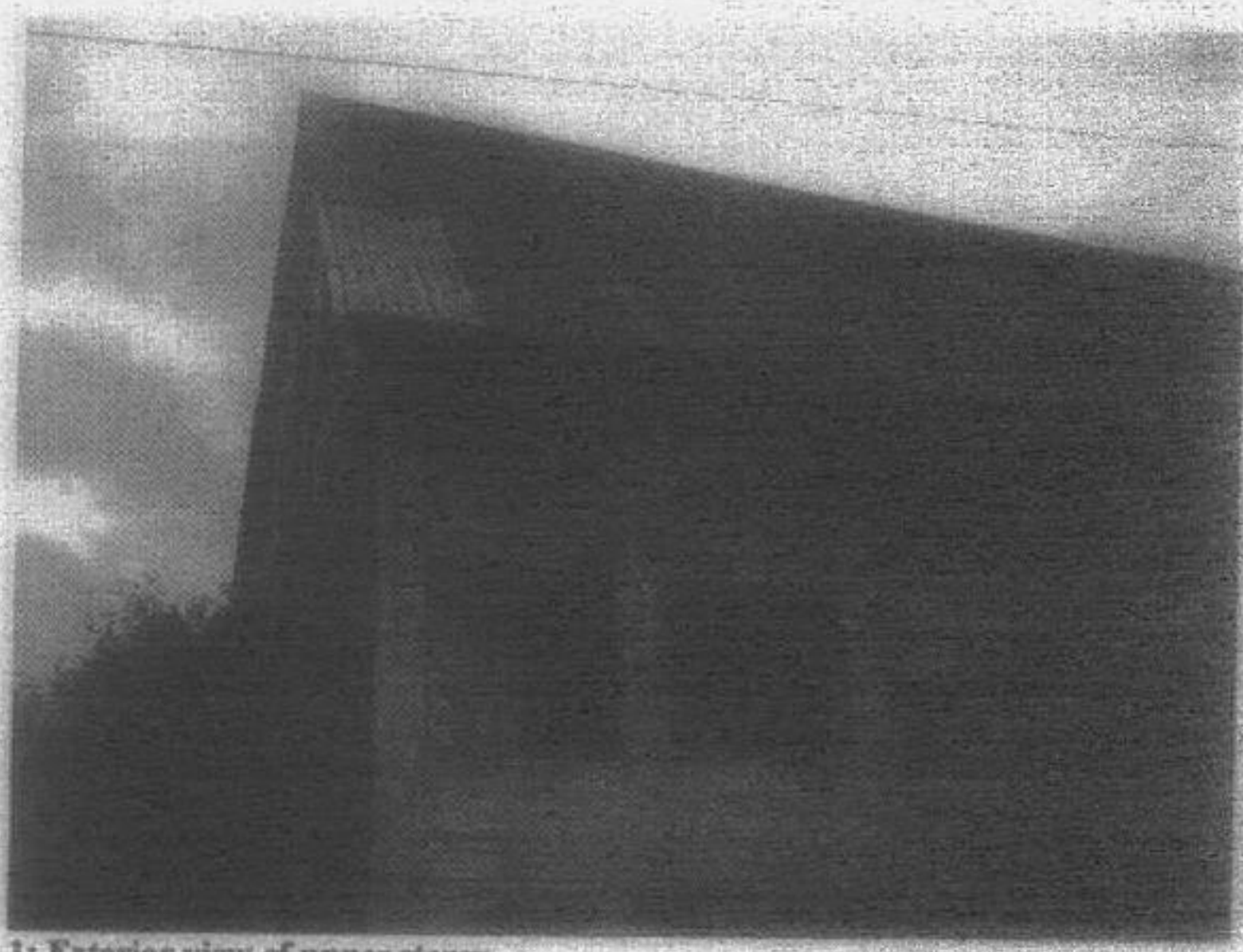
8: Interior roof of single storey section

5: Detail of southern gable showing clay tiles

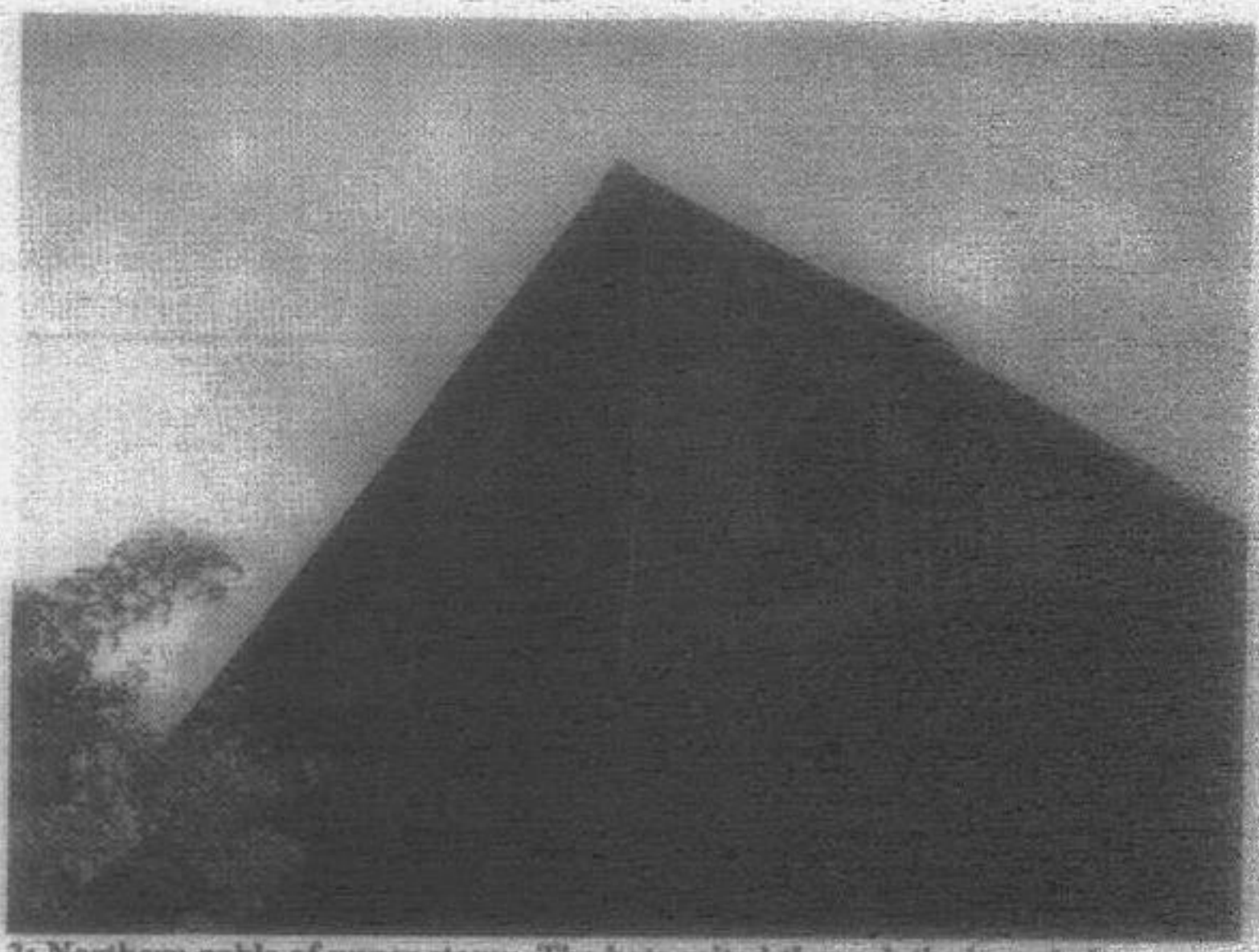
6: Showing single and two storey sections from the south-west

3: View of northern lower wall

4: View of the single storey "cart shed" showing the open front and clay tiled roof



1: Exterior view of upper storey



2: Northern gable of upper storey. The bats exited through the large hole.

| | | | | | | |
|---|---|---|---|---|---|---|
| Brown Long-Eared Bat | *Plecotus auritus* | BC2 BoC2 ECH4 WCA5,6 HSP | SO645435 | 1986 | 10 | roosting |
| Lesser Horseshoe Bat | *Rhinolophus hipposideros* | BC2 BoC2 ECH2,4 WCA5,6 UKB HSP | SO645435 | 1986 | 20 | roosting |
| Bluebell | *Hyacinthoides non-scripta* | WCA8(S13(2)) | SO64R | 1984 | Present | present |
| Bluebell | *Hyacinthoides non-scripta* | WCA8(S13(2)) | SO64S | 1980 | Present | present |
| Freshwater Pearl Musse | *Margaritifera margaritifera* | BC3 ECH2,5 WCA5 UKB | SO644437 | 1980 | 1 recently | present |
| Freshwater Pearl Musse | *Margaritifera margaritifera* | BC3 ECH2,5 WCA5 UKB | SO6343 | 1980 | Present | present |
| Badger | *Meles meles* | BC3 PBA WCA6 | SO637444 | 1977 | Present | present |
| Bluebell | *Hyacinthoides non-scripta* | WCA8(S13(2)) | SO671444 | 1974 | Present | present |
| Pearl-bordered fritillary | *Boloria euphrosyne* | WCA5(S9(5)) UKB HSP | SO6643 | 1965 | Present | present |
| Plymouth Pear | *Pyrus cordata* | WCA8 | SO6542 | 1896 | Present | present |

| | | | | | | |
|---|---|---|---|---|---|---|
| Noctule | *Nyctalus noctula* | BC2 BoC2 ECH4 WCA5,6 HSP | SO668445 | 2004 | 1 | feeding |
| Natterer's Bat | *Myotis nattereri* | BC2 BoC2 ECH4 WCA5,6 HSP | SO668445 | 2004 | 2 | in flight |
| Natterer's Bat | *Myotis nattereri* | BC2 BoC2 ECH4 WCA5,6 HSP | SO668445 | 2004 | 2 | in flight |
| Unidentified Bat | *Myotis* | BC2 BoC2 ECH4 | SO668445 | 2004 | 3 | in flight |
| Unidentified Bat | *Myotis* | BC2 BoC2 ECH4 | SO668445 | 2004 | 8 | in flight |
| Lesser Horseshoe Bat | *Rhinolophus hipposideros* | BC2 BoC2 ECH2,4 WCA5,6 UKB HSP | SO646436 | 2004 | 1 | roosting |
| Barn Owl | *Tyto alba* | BC2 CITES2 WCA1i HSP | SO650405 | 2003 | Present | present |
| Lesser Horseshoe Bat | *Rhinolophus hipposideros* | BC2 BoC2 ECH2,4 WCA5,6 UKB HSP | SO645435 | 2003 | 9 | roosting |
| Wood White | *Leptidea sinapis* | WCA5(S9(5)) HSP | SO664405 | 2002 | Present | present |
| Slow-Worm | *Anguis fragilis* | BC3 WCA5(S9(1) killing/injuring only, S9(5)) | SO641415 | 2002 | 3 | adult |
| Pipistrelle | *Pipistrellus pipistrellus* | BC2 BoC2 ECH4 WCA5,6 UKB | SO645435 | 2002 | 3 | in flight |
| Lesser Horseshoe Bat | *Rhinolophus hipposideros* | BC2 BoC2 ECH2,4 WCA5,6 UKB HSP | SO645435 | 2002 | 11 | roosting |
| Smooth Newt | *Triturus vulgaris* | BC3 WCA5(S9(5)) | SO645414 | 2001 | 6 | adult |
| Chiroptera | *Chiroptera* | BC3 BoC2 ECH4 HSP | SO642414 | 2001 | Present | roosting |
| Great Crested Newt | *Triturus cristatus* | BC2 ECH2,4 WCA5 UKB | SO645414 | 2001 | 2 | adult |
| Great Crested Newt | *Triturus cristatus* | BC2 ECH2,4 WCA5 UKB | SO645414 | 2001 | 87 | egg/ovum |
| Pipistrelle | *Pipistrellus pipistrellus* | BC2 BoC2 ECH4 WCA5,6 UKB | SO639409 | 2000 | 161 | roosting |
| Pipistrelle | *Pipistrellus pipistrellus* | BC2 BoC2 ECH4 WCA5,6 UKB | SO639409 | 1999 | 149 | roosting |
| Pipistrelle | *Pipistrellus pipistrellus* | BC2 BoC2 ECH4 WCA5,6 UKB | SO639409 | 1999 | 177 | roosting |
| Pearl-bordered fritillary | *Boloria euphrosyne* | WCA5(S9(5)) UKB HSP | SO642410 | 1998 | 10 | present |
| Smooth Newt | *Triturus vulgaris* | BC3 WCA5(S9(5)) | SO676436 | 1998 | 1 | larva |
| Great Crested Newt | *Triturus cristatus* | BC2 ECH2,4 WCA5 UKB | SO676436 | 1998 | 1 | adult |
| Smooth Newt | *Triturus vulgaris* | BC3 WCA5(S9(5)) | SO673439 | 1997 | 10 | larva |
| Great Crested Newt | *Triturus cristatus* | BC2 ECH2,4 WCA5 UKB | SO673439 | 1997 | 2 | larva |
| Lesser Horseshoe Bat | *Rhinolophus hipposideros* | BC2 BoC2 ECH2,4 WCA5,6 UKB HSP | SO645435 | 1995 | 2 | roosting |
| Brown Long-Eared Bat | *Plecotus auritus* | BC2 BoC2 ECH4 WCA5,6 HSP | SO649420 | 1993 | 1 | roosting |
| Lesser Horseshoe Bat | *Rhinolophus hipposideros* | BC2 BoC2 ECH2,4 WCA5,6 UKB HSP | SO649420 | 1993 | 2 | roosting |
| Lesser Horseshoe Bat | *Rhinolophus hipposideros* | BC2 BoC2 ECH2,4 WCA5,6 UKB HSP | SO645435 | 1992 | 1 | roosting |
| Bluebell | *Hyacinthoides non-scripta* | WCA8(S13(2)) | SO6341 | 1991 | Present | present |
| Common Dormouse | *Muscardinus avellanarius* | BC3 ECH4 WCA5,6 UKB HSP | SO672440 | 1991 | 1 | present |
| Common Dormouse | *Muscardinus avellanarius* | BC3 ECH4 WCA5,6 UKB HSP | SO660425 | 1991 | 1 | present |
| Common Dormouse | *Muscardinus avellanarius* | BC3 ECH4 WCA5,6 UKB HSP | SO672440 | 1991 | 1 | present |
| Common Dormouse | *Muscardinus avellanarius* | BC3 ECH4 WCA5,6 UKB HSP | SO660425 | 1991 | 1 | present |
| Chiroptera | *Chiroptera* | BC3 BoC2 ECH4 HSP | SO679440 | 1991 | 1 | roosting |
| Chiroptera | *Chiroptera* | BC3 BoC2 ECH4 HSP | SO671423 | 1991 | Present | roosting |
| Bluebell | *Hyacinthoides non-scripta* | WCA8(S13(2)) | SO64L | 1990 | Present | present |
| Common Dormouse | *Muscardinus avellanarius* | BC3 ECH4 WCA5,6 UKB HSP | SO670446 | 1990 | 1 | present |
| Common Toad | *Bufo bufo* | BC3 WCA5(S9(5)) | SO640440 | 1989 | Present | present |
| Common Frog | *Rana temporaria* | BC3 WCA5(S9(5)) | SO640440 | 1989 | Present | present |

**Appendix 1**

**Data search from Herefordshire Biological Records Centre**

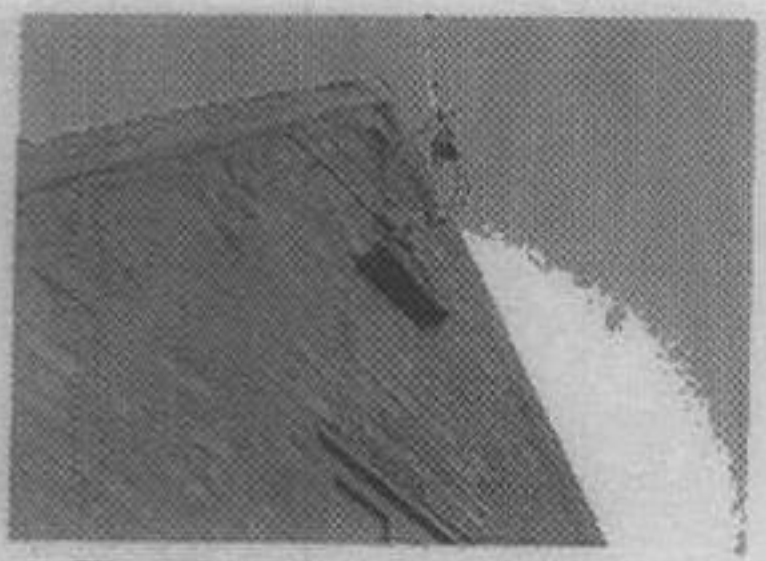
# Walsopthorne Farm

# SO650423

| Species | | Status, If known | Grid Ref. | Year | Count | Sex/Stage |
|---|---|---|---|---|---|---|
| Bluebell | *Hyacinthoides non-scripta* | WCA8(S13(2)) | SO64M | Not known | Present | present |
| Chiroptera | *Chiroptera* | BC3 BoC2 ECH4 HSP | SO6765743 | 2005 | + | Droppings |
| 55 Khz Pipistrelle | *Pipistrellus pipistrellus 55kHz* | BC2 BoC2 ECH4 WCA5,6 UKB | SO646436 | 2005 | 1 | roosting |
| Pipistrelle | *Pipistrellus pipistrellus* | BC2 BoC2 ECH4 WCA5,6 UKB | SO646436 | 2005 | 1 | roosting |
| 55 Khz Pipistrelle | *Pipistrellus pipistrellus 55kHz* | BC2 BoC2 ECH4 WCA5,6 UKB | SO646436 | 2005 | 1 | roosting |
| 55 Khz Pipistrelle | *Pipistrellus pipistrellus 55kHz* | BC2 BoC2 ECH4 WCA5,6 UKB | SO676439 | 2005 | 1 | in flight |
| 45 Khz Pipistrelle | *Pipistrellus pipistrellus 45kHz* | BC2 BoC2 ECH4 WCA5,6 UKB | SO646436 | 2005 | 2 | roosting |
| 45 Khz Pipistrelle | *Pipistrellus pipistrellus 45kHz* | BC2 BoC2 ECH4 WCA5,6 UKB | SO676439 | 2005 | 2 | in flight |
| 45 Khz Pipistrelle | *Pipistrellus pipistrellus 45kHz* | BC2 BoC2 ECH4 WCA5,6 UKB | SO676439 | 2005 | 3 | in flight |
| Pipistrelle | *Pipistrellus pipistrellus* | BC2 BoC2 ECH4 WCA5,6 UKB | SO646436 | 2005 | 49 | roosting |
| 45 Khz Pipistrelle | *Pipistrellus pipistrellus 45kHz* | BC2 BoC2 ECH4 WCA5,6 UKB | SO646436 | 2005 | 49 | roosting |
| 45 Khz Pipistrelle | *Pipistrellus pipistrellus 45kHz* | BC2 BoC2 ECH4 WCA5,6 UKB | SO676439 | 2005 | 7 | roosting |
| Pipistrelle | *Pipistrellus pipistrellus* | BC2 BoC2 ECH4 WCA5,6 UKB | SO646436 | 2005 | 97 | roosting |
| 45 Khz Pipistrelle | *Pipistrellus pipistrellus 45kHz* | BC2 BoC2 ECH4 WCA5,6 UKB | SO646436 | 2005 | 97 | roosting |
| Brown Long-Eared Bat | *Plecotus auritus* | BC2 BoC2 ECH4 WCA5,6 HSP | SO676439 | 2005 | 15 | roosting |
| Brown Long-Eared Bat | *Plecotus auritus* | BC2 BoC2 ECH4 WCA5,6 HSP | SO676439 | 2005 | 2 | roosting |
| Brown Long-Eared Bat | *Plecotus auritus* | BC2 BoC2 ECH4 WCA5,6 HSP | SO676439 | 2005 | 9 | roosting |
| Unidentified Bat | *Myotis* | BC2 BoC2 ECH4 | SO676439 | 2005 | 1 | in flight |
| Unidentified Bat | *Myotis* | BC2 BoC2 ECH4 | SO646436 | 2005 | 1 | roosting |
| Lesser Horseshoe Bat | *Rhinolophus hipposideros* | BC2 BoC2 ECH2,4 WCA5,6 UKB HSP | SO676439 | 2005 | 1 | in flight |
| Lesser Horseshoe Bat | *Rhinolophus hipposideros* | BC2 BoC2 ECH2,4 WCA5,6 UKB HSP | SO676439 | 2005 | 1 | in flight |
| Lesser Horseshoe Bat | *Rhinolophus hipposideros* | BC2 BoC2 ECH2,4 WCA5,6 UKB HSP | SO646436 | 2005 | 38 | roosting |
| Lesser Horseshoe Bat | *Rhinolophus hipposideros* | BC2 BoC2 ECH2,4 WCA5,6 UKB HSP | SO646436 | 2005 | 42 | roosting |
| Palmate Newt | *Triturus helveticus* | BC3 WCA5(S9(6)) | SO644435 | 2004 | 1 | adult |
| Common Frog | *Rana temporaria* | BC3 WCA5(S9(5)) | SO644435 | 2004 | 2 | adult |
| Chiroptera | *Chiroptera* | BC3 BoC2 ECH4 HSP | SO668445 | 2004 | + | Droppings |
| Great Crested Newt | *Triturus cristatus* | BC2 ECH2,4 WCA5 UKB | SO645444 | 2004 | 1 | larva |
| Great Crested Newt | *Triturus cristatus* | BC2 ECH2,4 WCA5 UKB | SO644443 | 2004 | 5 | egg/ovum |
| Barn Owl | *Tyto alba* | BC2 CITES2 WCA1i HSP | SO652427 | 2004 | 1 | present |
| 45 Khz Pipistrelle | *Pipistrellus pipistrellus 45kHz* | BC2 BoC2 ECH4 WCA5,6 UKB | SO668445 | 2004 | + | in flight |
| 55 Khz Pipistrelle | *Pipistrellus pipistrellus 55kHz* | BC2 BoC2 ECH4 WCA5,6 UKB | SO668445 | 2004 | + | feeding |
| 45 Khz Pipistrelle | *Pipistrellus pipistrellus 45kHz* | BC2 BoC2 ECH4 WCA5,6 UKB | SO668445 | 2004 | 1 | in flight |
| Pipistrelle | *Pipistrellus pipistrellus* | BC2 BoC2 ECH4 WCA5,6 UKB | SO646436 | 2004 | 16 | roosting |
| Pipistrelle | *Pipistrellus pipistrellus* | BC2 BoC2 ECH4 WCA5,6 UKB | SO646436 | 2004 | 32 | roosting |
| Noctule | *Nyctalus noctula* | BC2 BoC2 ECH4 WCA5,6 HSP | SO646436 | 2004 | 1 | roosting |
| Noctule | *Nyctalus noctula* | BC2 BoC2 ECH4 WCA5,6 HSP | SO668445 | 2004 | 1 | feeding |
| Noctule | *Nyctalus noctula* | BC2 BoC2 ECH4 WCA5,6 HSP | SO646436 | 2004 | 1 | roosting |

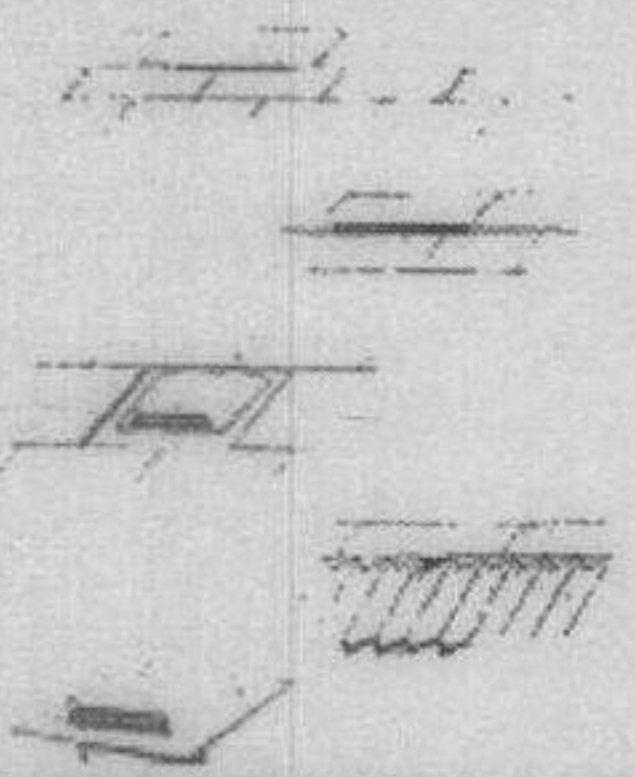
NE07/1847

**Appendix 2**
**Examples of bat mitigation features**

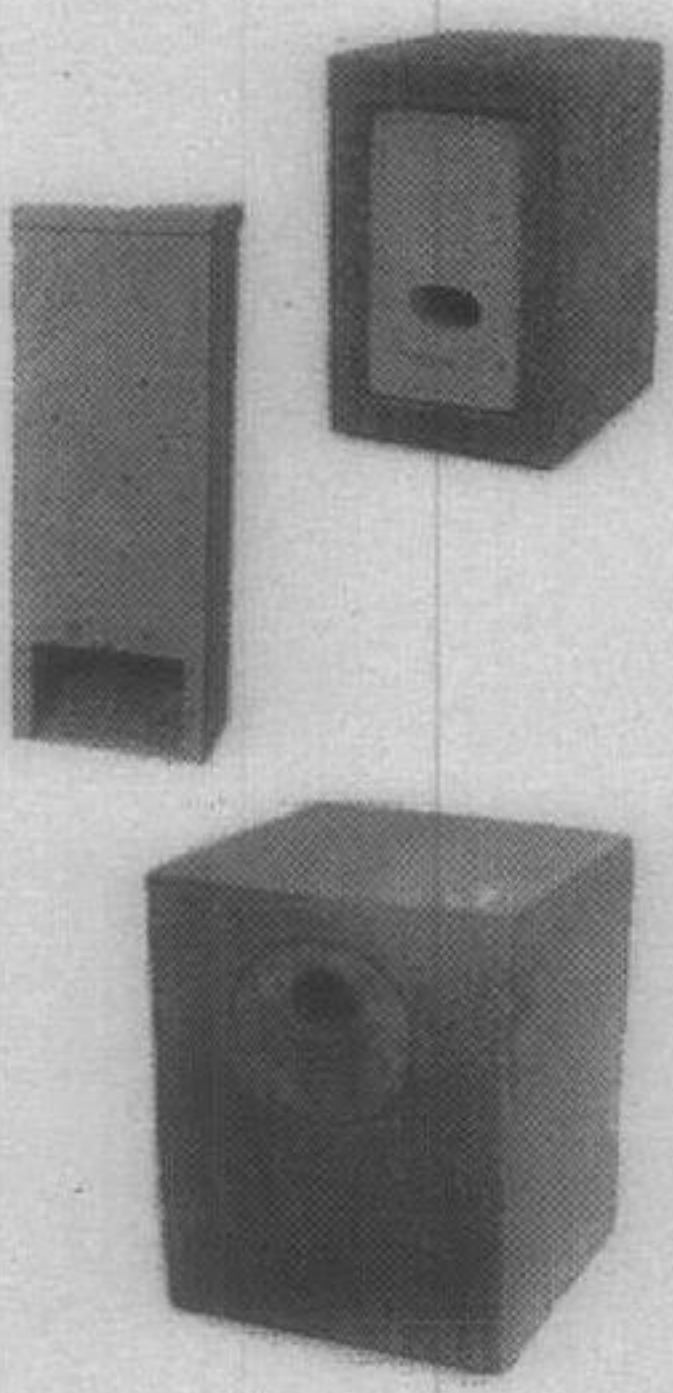


1. Slit-style entrance to bat loft

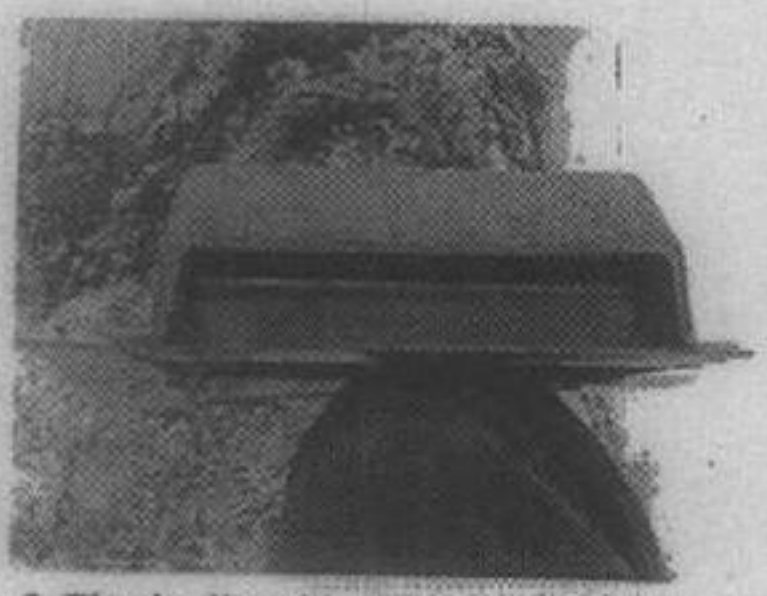
2. Schwegler-style bat box



3. Examples of raised ridge tiles and entrance tiles



4. Examples of bat bricks (to be installed within a cavity wall)



5. Plastic tile with entrance slot for bats.

# NE07/1854/F