

Bat & owl survey
of
farm outbuildings at
Glas-aber
Llanarmon Dyffryn Ceiriog
Wrexham
Grid reference SJ 1398 3388
On 13th July 2009

Site survey by:

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Summary

Scope of the survey

A detailed survey of farm outbuildings and associated structures and their immediate surroundings at Glas-aber, Llanarmon Dyffryn Ceiriog, Wrexham, Grid Reference SJ 1398 3388, was carried out on 13th July 2009 by Michael Worsfold and Eileen Bowen of Springfields, Station Road, Llanymynech, Shropshire SY22 6ED.

The building investigated is outlined in red in Annexes 1-3.

We looked for evidence of bats and owls at the request of Mike Browning of Glas-Aber, Llanarmon Dyffryn Ceiriog, Wrexham, in relation to proposed change of use and conversion to living accommodation.

Details of the methods used and of our findings are included. The findings are supported by photographic and instrumental evidence.

Summary conclusions

In our opinion the proposed development will not disturb bats or affect their conservation status.

It is not possible to be sure that bats are not concealed in crevices in the building during the hibernation season (November to March), or that bats might not use some inaccessible parts for summer roosts; and therefore advice is given on how to avoid disturbing or injuring such bats.

The proposed development would entail the loss of nesting sites for swallows but we identified adequate other provision on the same site.

If any birds, with few exceptions, gain access to the buildings and start nesting before work starts or while it is in progress, then work in that area will have to be delayed until the young birds leave the nest.

E Bowen

M Worsfold PhD

27/07/2009

Protected Species Survey

farm outbuildings at Glas-aber, Llanarmon Dyffryn Ceiriog, Wrexham

Scope of the survey

A detailed survey of the farm outbuildings was carried out on 13 th July 2009 by Eileen Bowen and Michael Worsfold of Springfields, Station Road, Llanymynech, Shropshire SY22 6ED at the request of Mike Browning Glas-aber Llanarmon Dyffryn Ceiriog Wrexham in relation to proposed Change of use and conversion.

The buildings investigated are outlined in red in the following annexed pages:

Location Map (Annex 1)

Aerial Photograph (Annexe 2)

Plan of the buildings (Annex 3)

Background

The owners have lived in the house attached to the buildings in question for several years. They wish to convert the larger shed, currently used for storage and a workshop, into a kitchen and to change the small shed at the western end of the range into a 2-storey studio.

Methods

Michael Worsfold PhD and Eileen Bowen are both experienced wildlife surveyors, licensed bat workers, registered bat roost visitor trainers and licensed great crested newt workers.

All of the buildings, inside and outside, were searched systematically for any signs of bats, including droppings, insect remains, urine stains and signs of colouration by rubbing.

Ladders were used to examine roof spaces, support timbers and wall cavities.

Binoculars were used to examine parts which were otherwise inaccessible.

An endoscope (Medit HF7-1350) was used to examine cavities.

Photographs were taken of the exteriors and interiors of all the buildings and their surroundings, and of any evidence of the presence of protected species on the site.

The land immediately surrounding the building was searched visually for evidence of protected animals and plants, informed by consultation of large scale maps and aerial photographs.

Activity of bats was monitored by both surveyors using heterodyne/ detectors (BatBox Duet and Magenta 5)).

Activity was also monitored and recorded with a stationary AnaBat II frequency division detector coupled to an AnaBat CF ZCAIM zero-crossing analysis and storage unit which stores data from bat sounds on a Compact Flash card for later analysis.

MW also used an AnaBat SD1 detector with the same facilities as the AnaBat II in one housing. This was equipped with a HP iPaq 2795 PDA allowing real-time display of bat calls, which were also recorded.

PMR446 personal radio transceivers were used to maintain inter-observer contact during surveys.

Temperature and humidity during the activity survey were recorded using a EL-USB-2 logger.

A "Night Mariner" 2nd generation image intensifier by ITT with infra-red illuminator and 1:1 magnification was also used to observe in low light conditions.

Findings

Annexes:

Location of the buildings	1 - 2.
Buildings and rooms or defined areas within the buildings labelled	3.
Photographs of exteriors of the buildings	4.1 – 4.2
Photographs of interiors & other details	4.3-4.5

Environment and site description

This completely rural site is in the steep valley of the upper reaches of the river Ceiriog, at an altitude of about 285m OD. It is less than 200m southwest of the river, and was once a farmhouse but is now separate from adjacent sheep farm. The surrounding hill farming landscape is undeveloped except for modern stock sheds. Hedgerows are mainly intact with frequent hedgerow trees. In addition to the river and its tributaries, there is a large pond recently made by the owner-occupier of the site, less than 100m to the northwest. There are numerous small patches of mixed woodland scattered about this part of the Ceiriog valley, several of them within 500m of the site.

This is therefore potentially a good habitat for bats, despite its elevated position.

Description of the buildings

The buildings (A & B, Annex 3) are attached, end-to-end, to a larger, stone-built one-time farmhouse. They form the southern range of the courtyard, which has another old shed (C & D) at its western end and a range of modern homes for domestic cats along the northern side, facing the house.

They consist of a currently single-storey shed (A), conjoint with the house, which originally might have had a loft in the roof void, and a smaller shed, again single storey but which once had a low chicken loft above. The walls were of random stone with no cavity.

The roofs of both were pitched, slated, unlined, on timber battens and supports. The larger shed has a single tie-beam at full wall height with king-post roof support. The chicken shed has joists, which once supported the first floor, set in the walls about 0.5m below the eaves. The south walls of both are set into the hillside rising behind the site.

The large shed has a door on the north side as well as on the south (courtyard) side, while the chicken shed has one full-sized door facing the courtyard and a small hatch at first-floor level on the west gable end. All of the doors were open at the time of our visit, and appeared to be permanently so. There was free access for bats and birds by a variety of openings in both buildings.

Bats

Visual inspection

Despite a careful search, no evidence of use by bats was found. There were a few wings of yellow underwing moth on the floor of the chicken shed, but these appeared to be from one individual, and although they might have been the result of feeding by a long-eared bat they could equally well have been the result of death of the moth by other causes.

The absence of a roof lining or closed roof void reduced the potential for bat roosts. The tops of the walls were in general well finished with few crevices. The roof timbers in the large shed appeared to be rather recent, with no crevices. The very old timbers in the chicken shed were rather light, and although much repaired had no significant crevices to host bats. However, there were some crevices in the walls in which bats could hide, especially in the outer walls. We examined many of these with an endoscope and found no evidence of bats in them, but it is not possible to be certain that bats would not use them occasionally.

We were told by the occupants of the house that bats had roosted under the roof, with an access route under the eaves on the southeast corner, in previous years, although they had not been noticed in the current year.

Activity survey

Sunset was at 9.31 BST. Temperature at 8:30 was 20.0°C, falling to 11.0°C by 11:30. Relative humidity was 64% at 8:30 and 88.5% at 11:30 (see Annex 5). There had been occasional showers during the day, and a very brief light one at 9:00, but the cloud began to clear by the start of our observation period at 9:20. By 10:15 cloud cover was 3/8, and at 10:45 was only 1/8, with no wind. It did not rain again.

2 observers were used. EMB observed the north side of the building and the occasionally the east side of the farmhouse from the courtyard, while MW watched from the north and east. Observation began at 9.20pm. The AnaBat recording system was deployed outside on the north at first, so as to detect any early-emerging bats such as pipistrelles leaving or feeding around the building. It was taken inside the large shed at 9.30 and left there until observation ceased at 11:25.

The first bat was detected at 9.24 in the courtyard. It was identified as a common pipistrelle (*Pipistrellus pipistrellus*). Pipistrelles were detected and heard at intervals of a few minutes until observation ceased at 11:25pm. Some were soprano pipistrelles (*Pipistrellus pygmaeus*), the first of which was detected at 9:40. These identifications were confirmed from the AnaBat recordings (see Annex 6). Many of these bats were heard to be foraging, especially around the western end of the buildings.

Bats were occasionally seen to enter the buildings and then re-emerge. The number of bats and the time of their arrival were consistent with their having travelled from roosts elsewhere to feed at this site, although the common pipistrelles arrived quite early and could not have travelled far.

We saw no bats emerge from the house on this occasion.

The AnaBat in the shed recorded only occasional brief passes from common pipistrelles throughout the evening, the first being at 9:51. This is consistent with these bats occasionally entering the shed to forage.

There was no indication that bats were emerging from roosts in the buildings.

Birds

Old nests of birds were found at a number of locations within the buildings (Annex 4.3, 4.4). Some of these were of swallows, some appeared to be house sparrows.

There was no evidence of the use of the barn by any kind of owl. Since owls always leave abundant evidence of their use of a building, then we confidently conclude that the building has not recently been used by owls.

Conclusions and recommendations.

1. In our opinion this development will not disturb bats or affect their conservation status but it could affect nesting swallows and other birds.

Bats

2. It is not possible to be certain that bats might be or might become concealed in crevices in the structure. Therefore the following constraints and procedures should be observed.

No pointing or repairs of any gaps or crevices which cannot be easily seen to be empty should take place between the beginning of October and the first week in April, to minimise the possibility of incarcerating bats.

3. Although no evidence of roosting by bats was found, the location is a good one for bats, and the buildings had some potential for bat use which will be diminished by the proposed development. We therefore recommend the attachment of 3 non-degradable bat boxes to the upper walls of the 2-storey building. Schwegler Type 1FF boxes would be suitable (see Annex 7)

Annexe 8 outlines the legal status of bats in Wales, the fines that may result if an offence against bats and/ or their roost is committed, and the circumstances under which a European Protected Species licence from the Welsh Assembly Government is required in respect of bats.

Nesting birds

4. The proposed development could entail the loss of nesting sites for swallows. However, the shed on the west side of the courtyard (C & D, Annex 3) was also in use by swallows for nesting at the time of our visit, and we understand that this shed is to remain undeveloped and accessible to the birds. We consider that this will be adequate provision for the number of birds which were in evidence.

5. If birds gain access to the buildings and begin building nests before or during the work, then the work will have to stop until the young have left the nests.

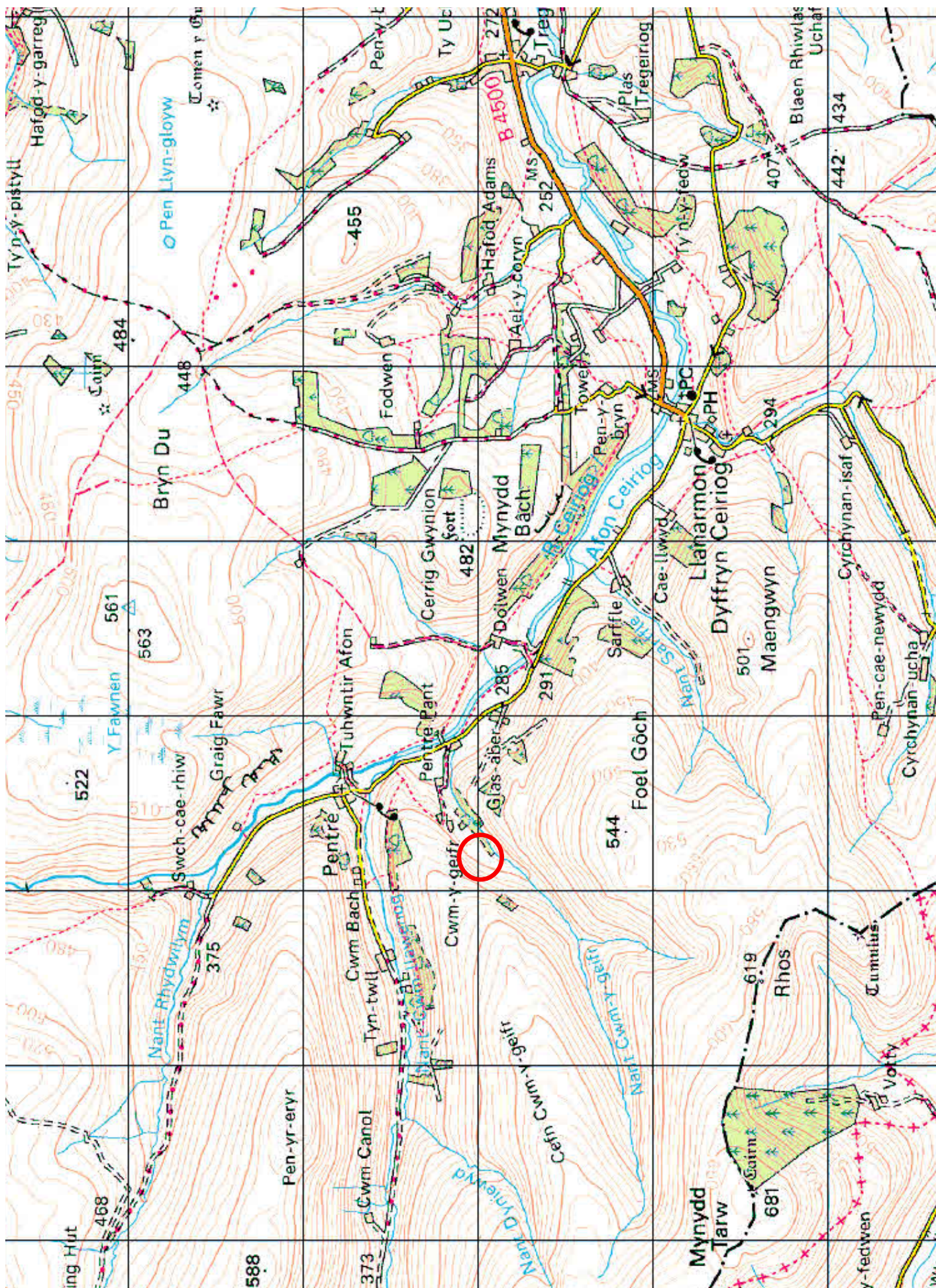
Annex 9 outlines the legal protection afforded to birds and their nests in England and Wales.

M Worsfold PhD.

E M Bowen

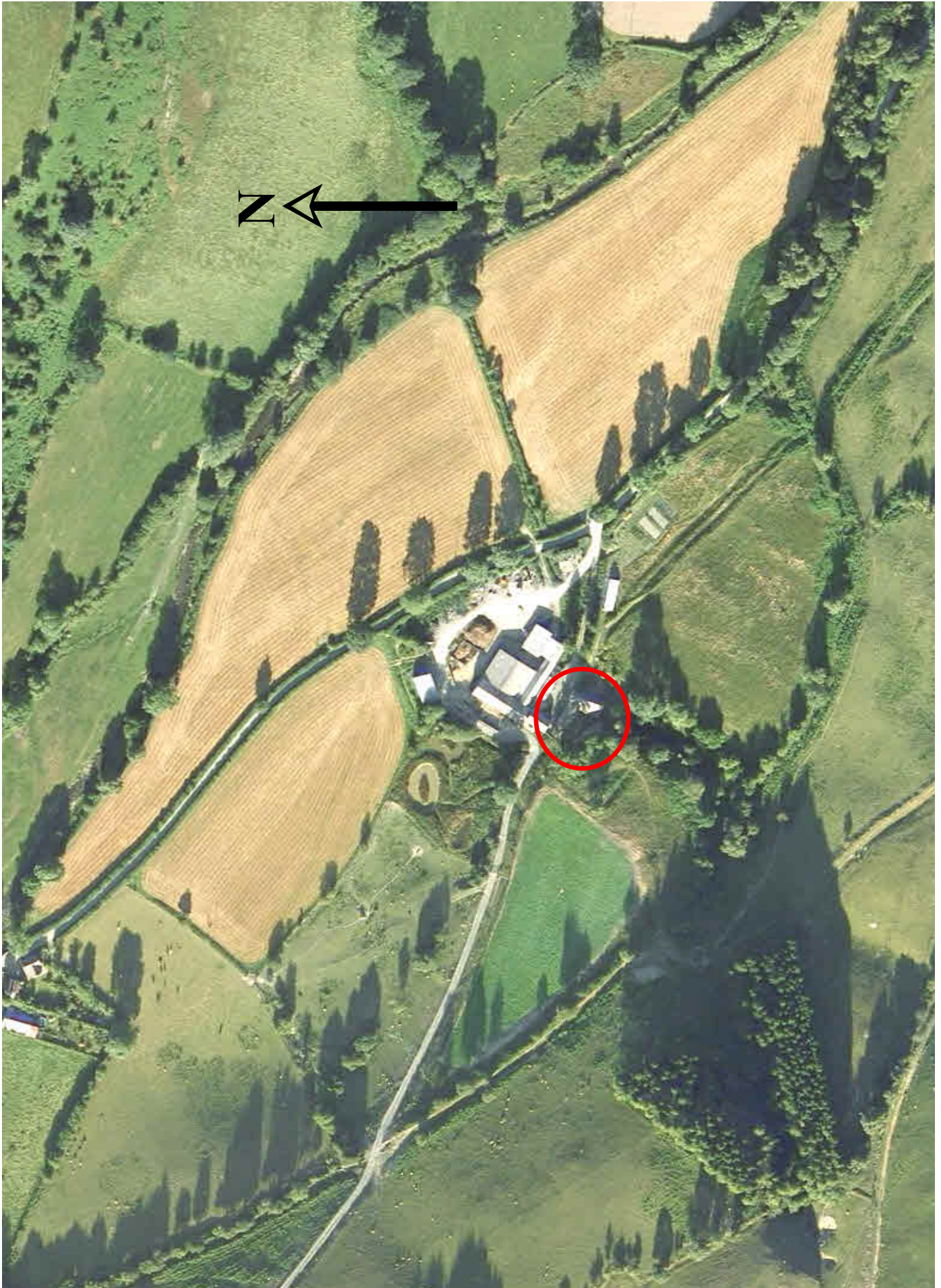
27/07/2009

Annex 1: Location map

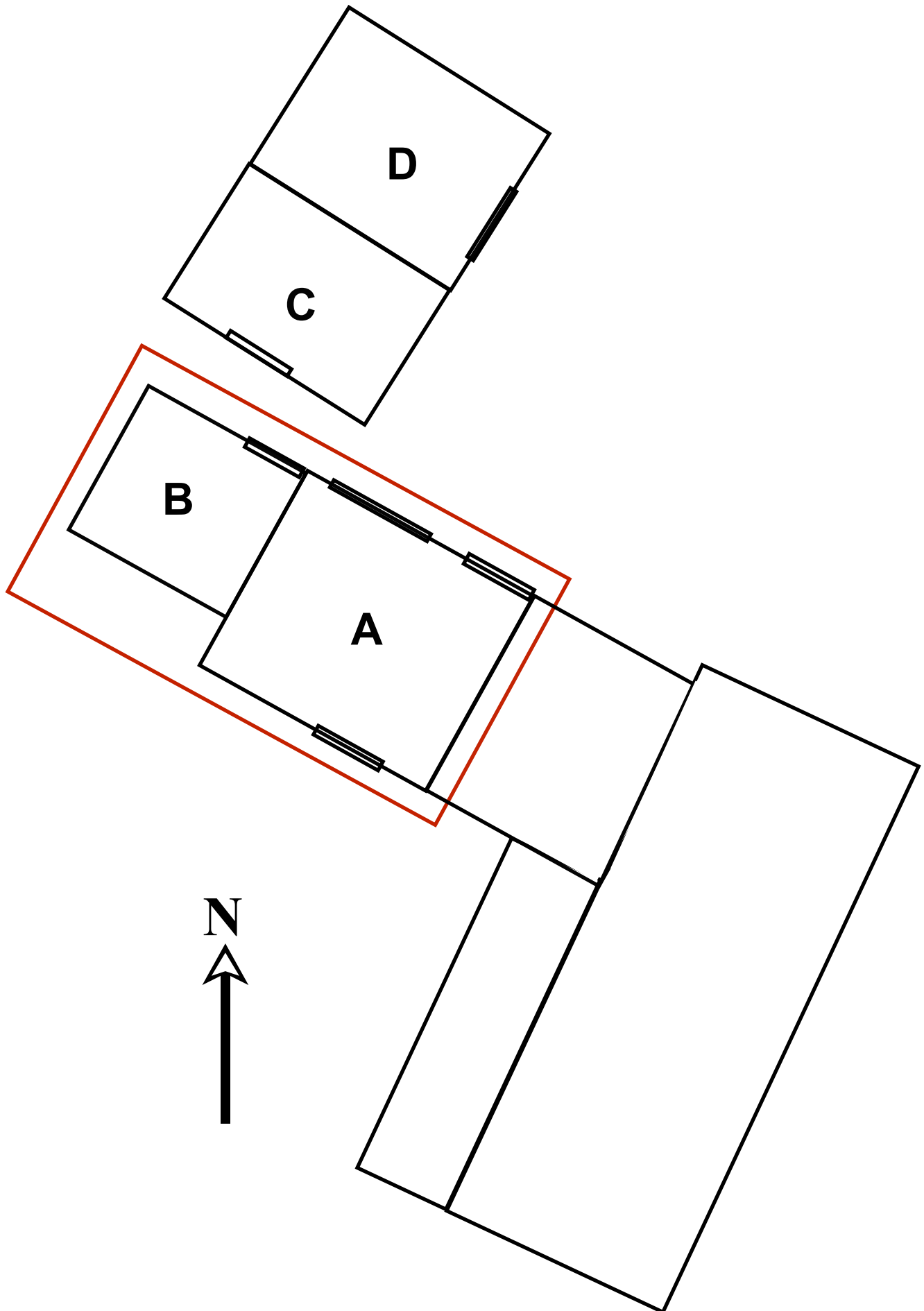


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Annex 2: Aerial photograph



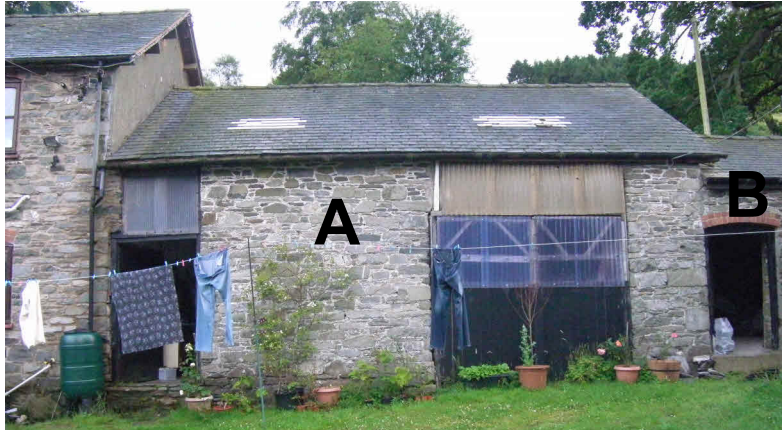
Annex 3: Sketch plan of buildings



Annex 4.1: Photographs of exteriors

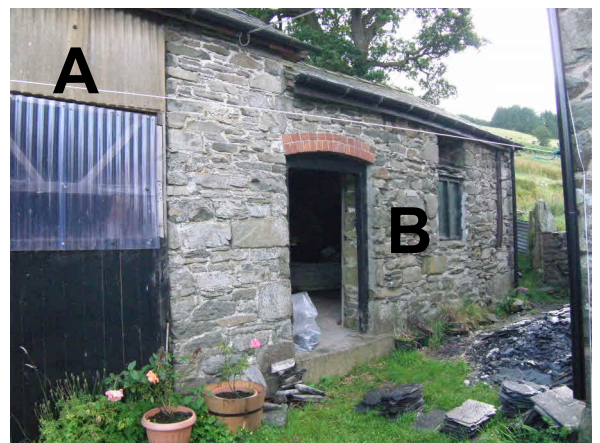


View from the north



Sheds from the northeast

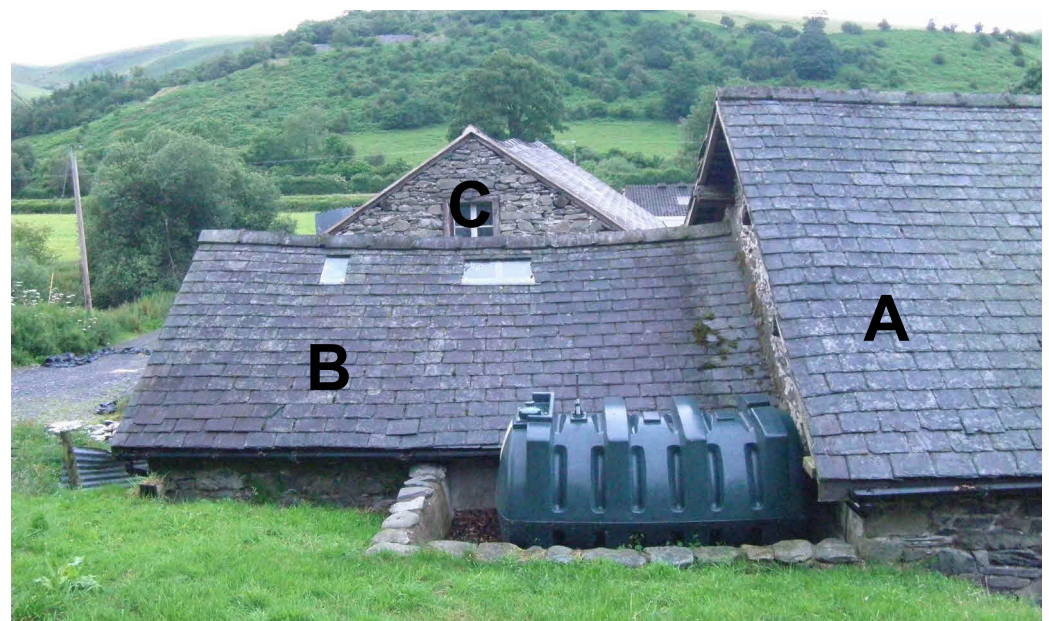
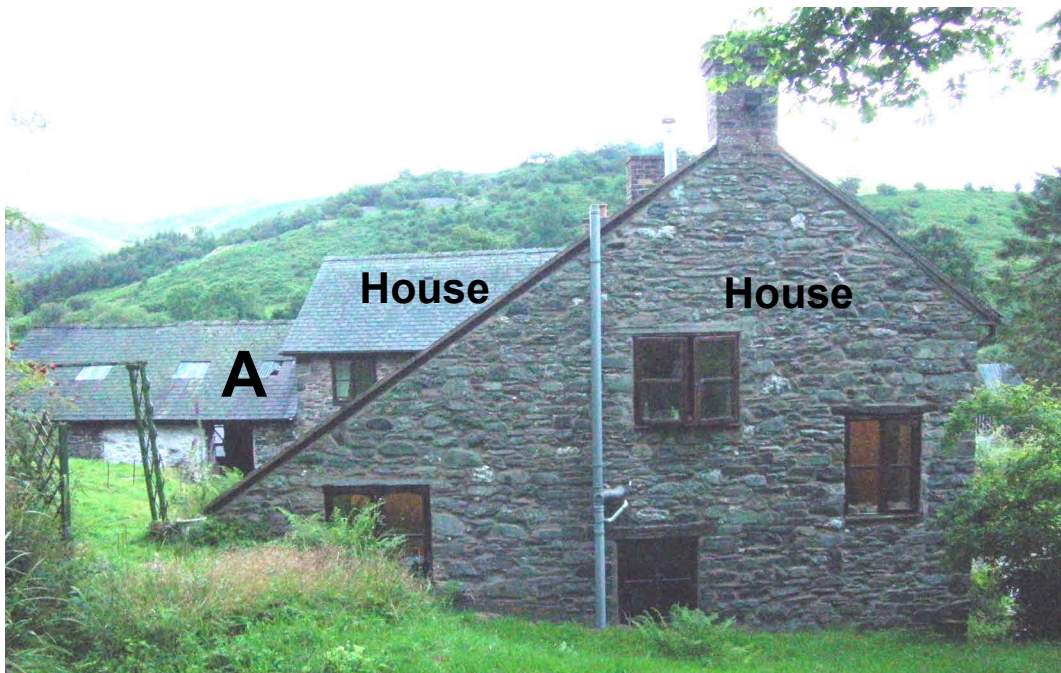
House from the southeast



Sheds from the east

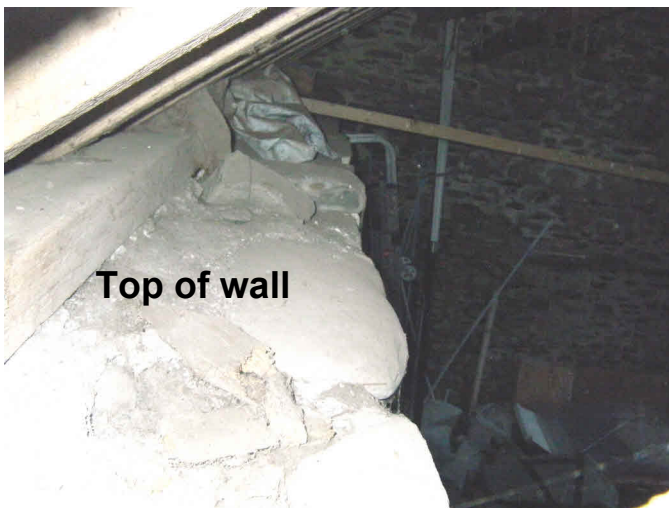


Annex 4.2: Photographs of exteriors



Sheds from the southwest

Annex 4.3: Photographs of interior of shed A



Annex 4.4: Photographs of interior of shed B

Looking west



Looking east



Lintel over door, with crevices



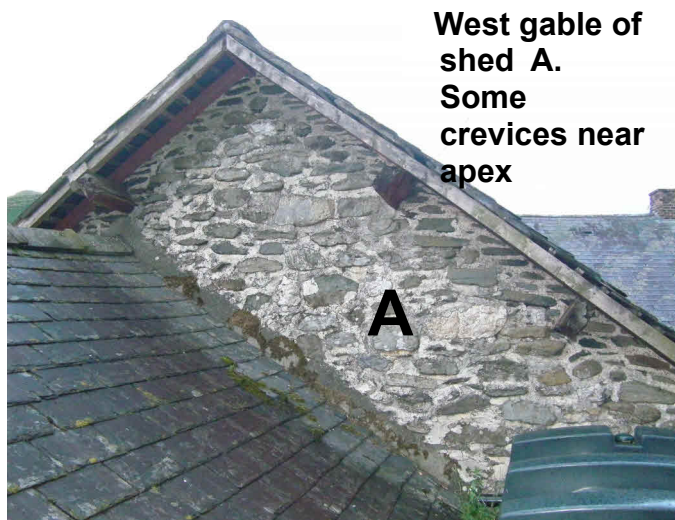
Swallows nests
(arrowed)



Endoscope
examination of
crevices in
exterior walls

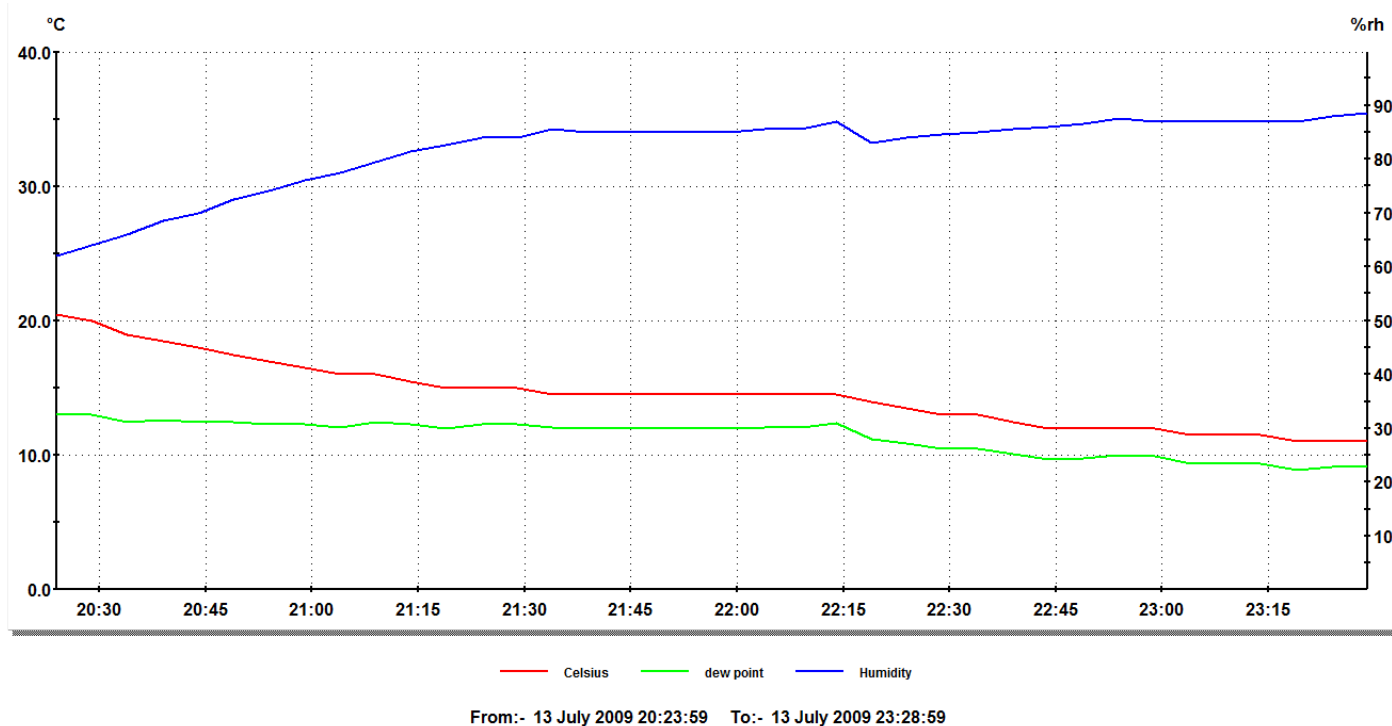


Annex 4.5: Photographs of other details



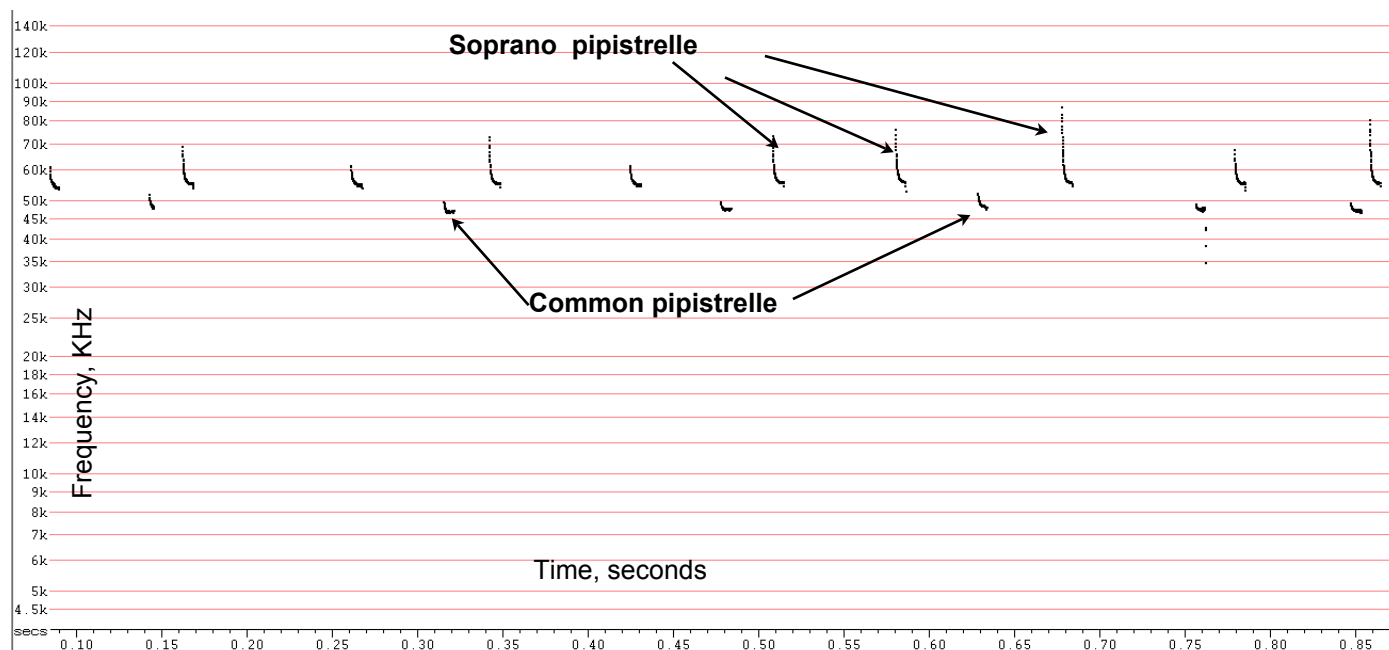
Sheds at west end where swallows nest (arrowed)

Annex 5: Temperature & humidity log

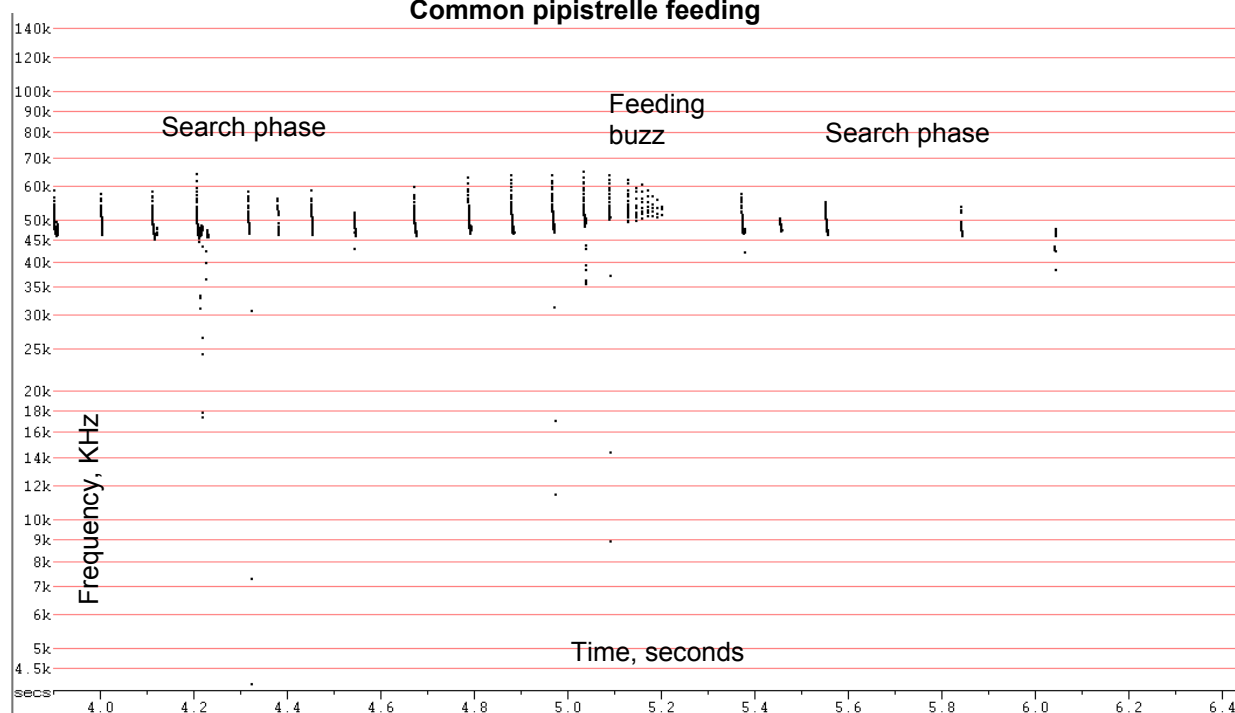


Annex 6: Sonograms of foraging bats

Common and soprano pipistrelles together



Common pipistrelle feeding



Annex 7: Example of suitable bat box

Schwegler Type 1FF

Up to 3: £33.15 net
£38.95 inc VAT



**These prices are an indication only .
Available from several suppliers**

Bats and the Law (Wales)

Taken together, the Wildlife and Countryside Act 1981 (WCA) (as amended), the Countryside and Rights of Way Act 2000 (CRoW), and the Conservation (Natural Habitats, &c.) Regulations 1994 (amended 2007), make it illegal to:

- intentionally or deliberately kill, injure or capture (or take) bats;
- deliberately disturb bats (whether in a roost or not);
- recklessly disturb roosting bats or obstruct access to their roosts (England & Wales only; proposed for Scotland in 2004);
- damage or destroy bat roosts;
- possess or transport a bat or any part of a bat, unless acquired legally;
- sell (or offer for sale) or exchange bats, or parts of bats.

The word 'roost' is not used in the legislation, but is used here for simplicity.

The actual wording in the legislation is 'any structure or place which any wild animal...uses for shelter or protection' (WCA) or 'breeding site or resting place' (Habitats Regulations).

Because bats tend to re-use the same roosts after periods of vacancy, legal opinion is that the roost is protected whether or not the bats are present at the time.

Enforcement

The police are the main enforcement body for wildlife offences, and in some cases local authorities may also take action.

Section 24(4) of the 1981 Act gives English Nature (or, in Wales, the Countryside Council for Wales) the function of providing advice or assistance to the police in respect of alleged offences.

The maximum fine on conviction of offences under Section 9 of the 1981 and Regulation 39 currently stands at £5000.

The CRoW Act 2000 amended the 1981 Act to allow for a custodial sentence of up to six months instead of, or in addition to, a fine.

Note: Fines may be imposed in relation to each offence committed, so operations involving many animals or repeated offences can potentially accrue large fines.

In addition, items which may constitute evidence of the commission of an offence may be seized and detained.

The CRoW Act 2000 also amends the Police and Criminal Evidence Act 1984 to render Section 9 offences 'arrestable', giving the police significant additional powers.

The use of a Welsh Assembly Government licence in respect of bat species

A Welsh National Assembly licence is a licence which permits an action that is otherwise unlawful,

To ensure that no illegal activities are undertaken during the course of a development, it is recommended that a licence is applied for if, on the basis of survey information and specialist knowledge, it is considered that

- the site in question is demonstrably a breeding site or resting place for bats
- the proposed activity is reasonably likely to result in an offence

No licence is required if the proposed activity is unlikely to result in an offence.

Birds and the law

All birds, their nests and eggs are protected by law and it is an offence, with certain exceptions, to:

- a) intentionally kill, injure or take any wild bird
- b) intentionally take, damage or destroy the nest of any wild bird while it is in use or being built
- c) intentionally take or destroy the egg of any wild bird
- d) have in one's possession or control any wild bird (dead or alive) or part of a wild bird which has been taken in contravention of the Wildlife and Countryside Act 1981 or the Protection of Birds Act 1954
- e) have in one's possession or control an egg or part of an egg which has been taken in contravention of the Act
- f) have in one's possession or control any birds of a species occurring on Schedule 4 of the Act unless registered and ringed in accordance with the Secretary of State's regulations.
- g) intentionally (or recklessly, in England and Wales only) disturb any wild bird listed on Schedule 1 while it is nest building or is at (or near) a nest with eggs or young; or disturb the dependent young of such a bird.