

Bat assessment
of a
farm outbuilding at
Blaen Cwm Llawernog
Llanarmon Dyffryn Ceiriog
Wrexham
Grid reference SJ 1338 3420
Visited on 20/7/09

Site visit by:

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Bat assessment

Farm outbuilding at Blaen Cwm, Llanarmon Dyffryn Ceiriog, Wrexham

Background

The shed in question is closely adjacent to a farmhouse which we surveyed for bats and birds on 20th July 2009. On that occasion we also examined the shed, although not as thoroughly as the house. The activity survey which we did on the same evening also included observation of the shed.

It is now proposed to develop the shed, and so we have been asked to give an opinion on the likely impact of this development on wildlife. We have not revisited the site for this purpose.

Methods

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

The building was examined for signs of bats, including droppings, urine stains and signs of colouration by rubbing.

Binoculars were used to examine parts which were otherwise inaccessible.

Photographs were taken of the exterior of the building and its surroundings.

The area subject to development was searched for evidence of other protected species.

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

Activity was also monitored 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, and also with a n AnaBat SD1 detector which has the same functions in one unit.

MW also used an AnaBat SD1 detector equipped with a HP iPaq 2795 PDA providing real-time display of bat calls, which were also recorded.

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

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

Findings

Annexes

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Environment

The site is a hill farm at 380m OD at the head of Cwm Llawernog which is on the east flank of the Berwyn hills, running into the nascent River Ceiriog. The valley here is steep-sided, with a narrow strip of grass pasture on the north side of the stream and rough moorland with much bracken immediately above the farmstead. The stream is lined with alder, birch and willow. There are a few connecting hedgerows with occasional small trees, but no woodland nearby and no standing water.

This is marginal habitat for bats, although it would be expected that bats would disperse up the valley to feed from roosts lower down.

Description of the site and building

The building in question is a stone-built implement shed with a loft over, to the south of the farmhouse. Most of the ground floor is open to the north. The floor of the loft was in poor condition, and partially collapsed, and the loft was not entered. There was a large gap in the slate roof, which was in a state of collapse at its west end.

Bats

Visual Survey

The building had evidently not been disturbed for many months. We found no evidence of recent use by bats.

Activity Survey

Sunset was at 9.23 BST. Air temperature at 9.15pm was 16.5°C rising to 20.5°C at 11.15. Relative humidity was 63% falling to 59%. The wind was light, westerly. Cloud cover 2/8. It had been a day of occasional sunshine and a few showers, which cleared up before evening. Cloud cover at 9:45 was 2/8. There was no wind at first, but later there was an intermittent very slight breeze.

Observation began at 9.15, although the AnaBat recorders were switched on earlier. EMB watched from near the southeast corner of the main house, while MW watched from the hillside above the northeast corner, which also allowed a view of the implement shed. EMB was much closer to the shed, so that her bat detector would be expected to detect bats associated with the shed.

An AnaBat recording system was deployed in the first floor room J of the house, and another was set up on the ground floor in room B.

The first bat was detected at 9:42, to the north of the house. It was a common pipistrelle (*Pipistrellus pipistrellus*). Subsequently 2 bats of the same species were seen and detected foraging around the buildings, mostly on the north side between the few trees and shrubs on the hillside above the house. Later (10:23 onwards) they were occasionally joined or replaced by a soprano pipistrelle (*Pipistrellus pygmaeus*). At 10:56 a single pass by a whiskered bat (*Myotis mystacinus*) was identified by the AnaBat/PDA on the north side of the house, and at 11:12 a Daubenton's bat (*Myotis daubentonii*) was detected, this time on the south side of the house.

The AnaBat on the ground floor registered faint calls from a common pipistrelle at 9:43, and further occasional calls, mostly faint, from both species of pipistrelle throughout the evening. Some of the calls were strong enough to have been from bats inside the building, but most were weak.

The AnaBat on the first floor did not register any bay calls during the evening.

No bats were seen to leave the house or enter it during the evening, and no activity was observed near the implement shed.

Interpretation

In view of the late arrival of the bats, and the nature of the calls, we consider that all of the bats which we detected had travelled up the valley to feed near the site or were passing through to feed further up the valley. The pipistrelle calls recorded in the lower storey were typical of bats entering buildings through open windows and doors to forage or explore. The calls would have been detected earlier if they had roosted inside the building.

Although observation of the implement shed was not our primary purpose, it was even at that time considered to be pertinent to the status of bats associated with the house, and so it was observed and considered.

There was no evidence of bats roosting in any of the buildings, including the implement shed, although it is not possible to rule this out.

Conclusions and recommendations.

In our opinion, the proposed development would not disturb or affect the conservation status of bats.

However, it is not possible to be certain that bats will not hibernate or roost in crevices in the structures. Therefore, no crevices or gaps which cannot easily be seen to be empty should be filled between October and March, inclusive.

Birds

It is likely that birds will nest in the implement shed, since nests were found in the main house.

The nests which we found in the house were of birds which nest in a variety of sites which are available in the remaining buildings and field boundaries, and availability of these sites is unlikely to limit their success.

However, all birds' nests are protected by law while in use or under construction, so that 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.

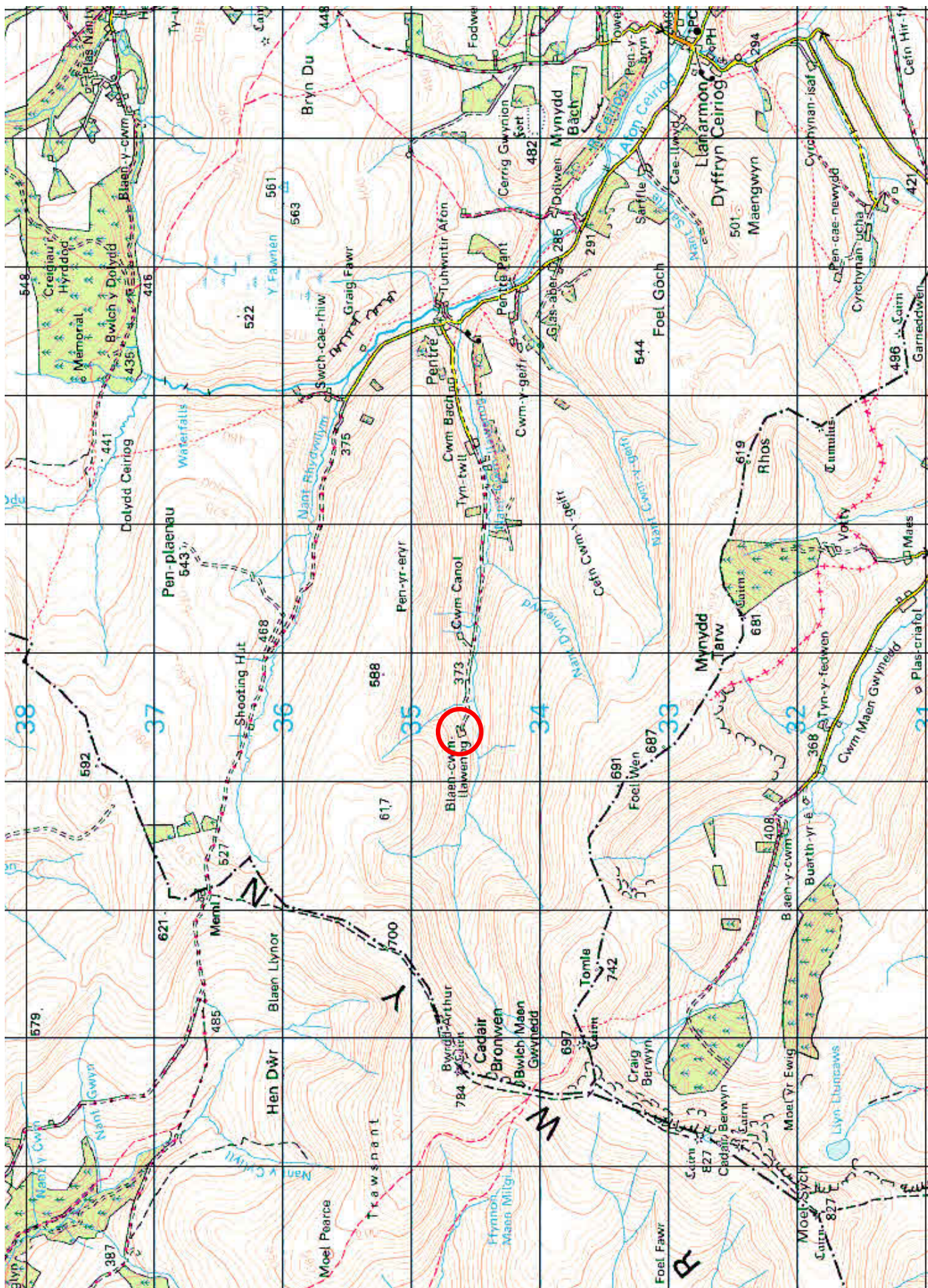
We recommend that if the work is done between March and August the building be inspected by an ecologist a few days beforehand, to ascertain that nesting birds will not be disturbed.

Annex 6 outlines the legal protection of birds in England and Wales.

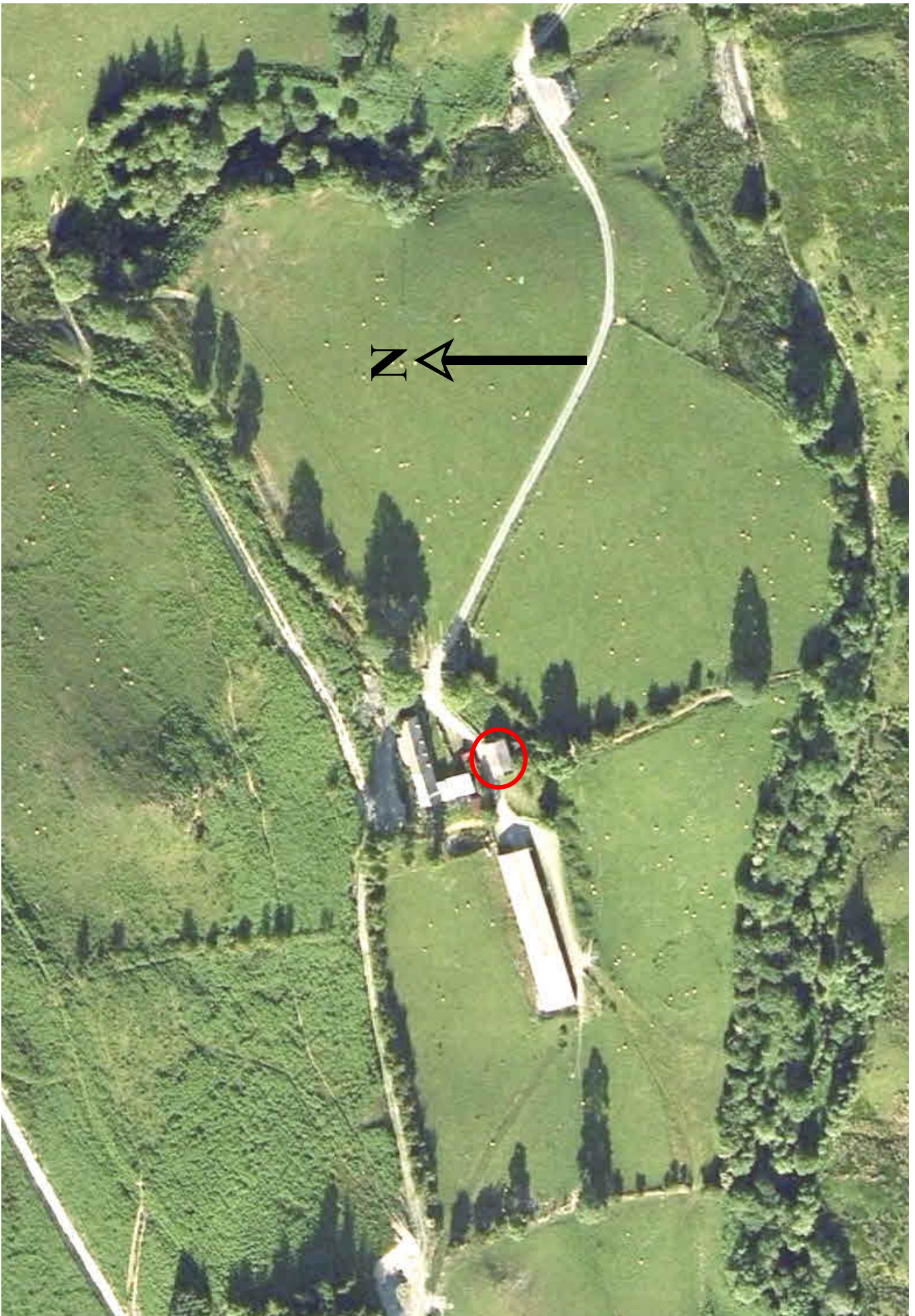
M Worsfold PhD.

E M Bowen

15/02/2010



Annex 2: Aerial photograph



Annex 3: Photographs



Looking west
towards the
implement shed

Inspection of
the implement
shed

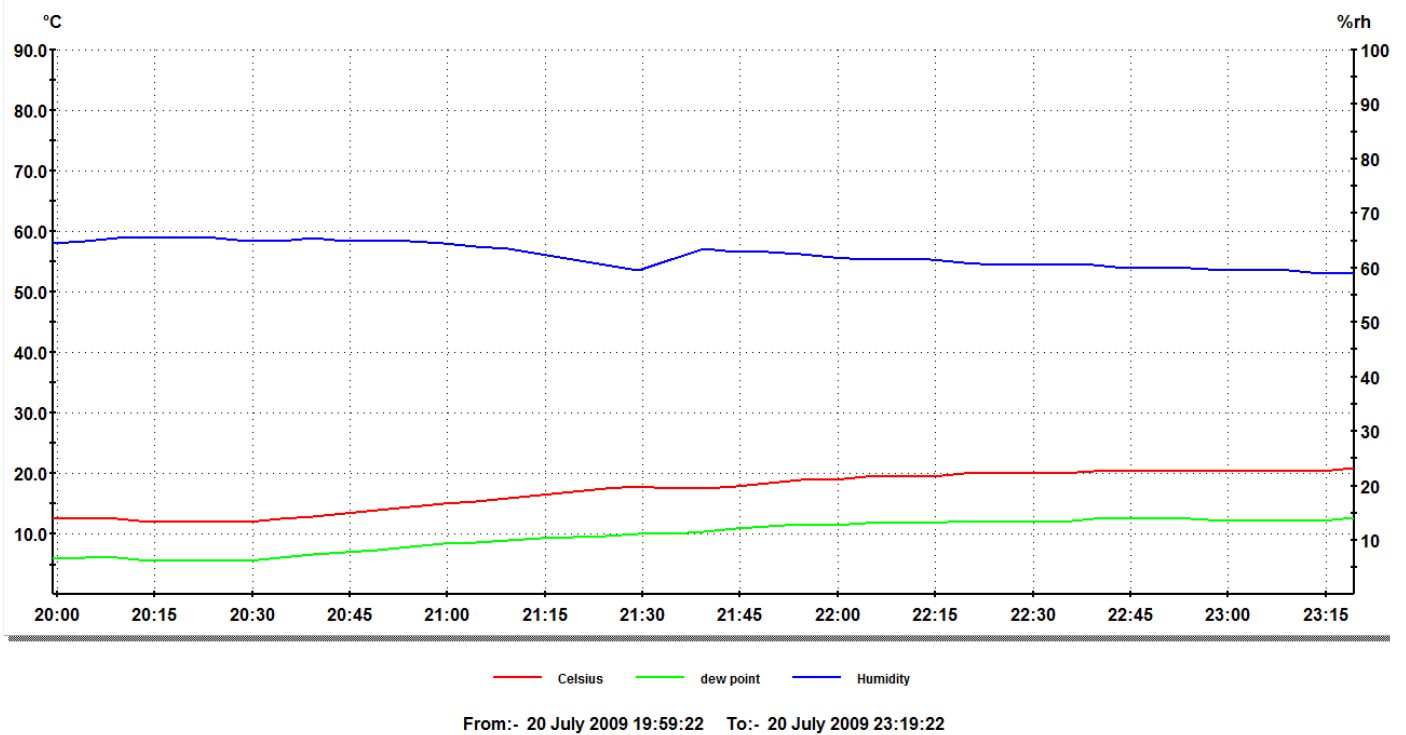


The roof is
badly holed

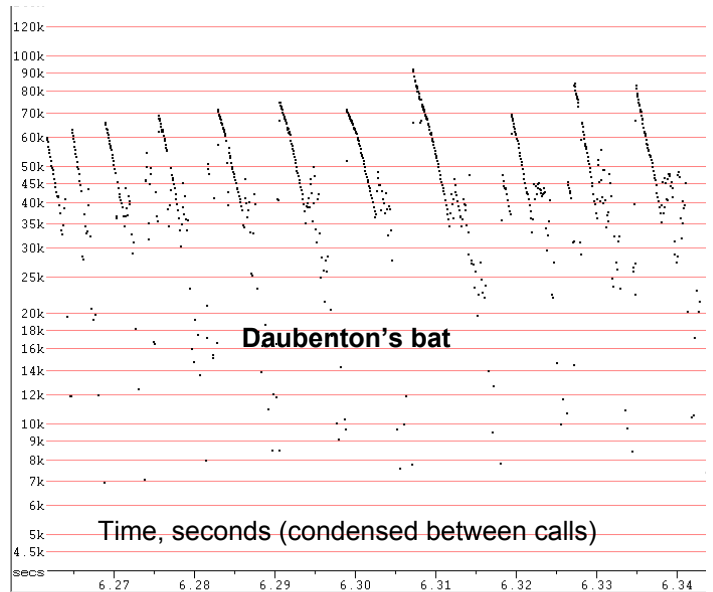
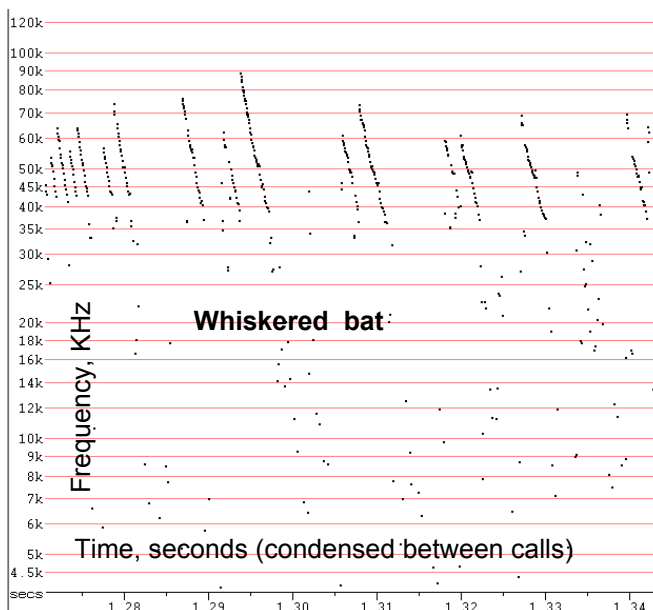
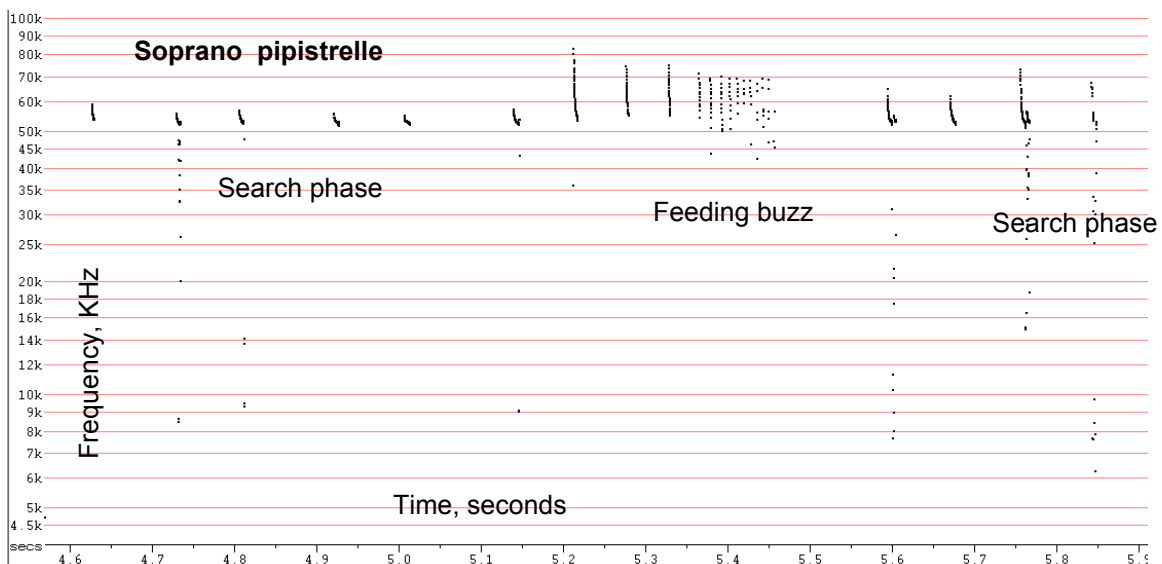
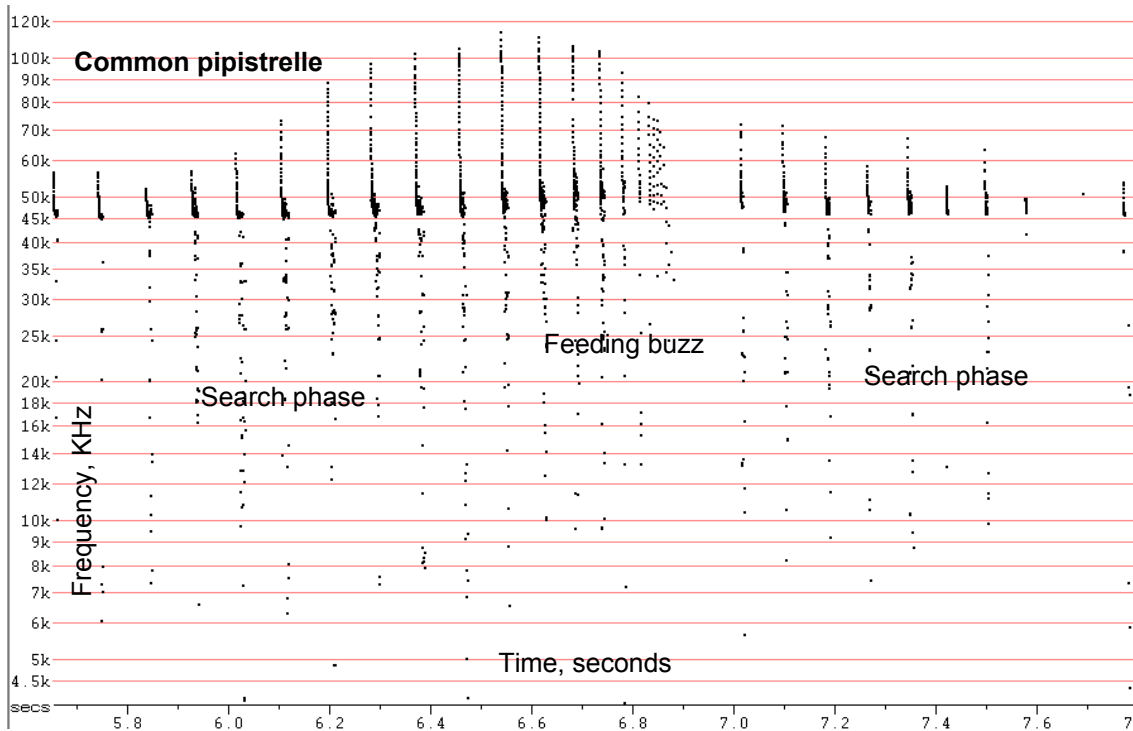
West end from the northwest.
Main house with implement shed
behind (arrowed)



Annex 4: Temperature & humidity log



Annex 5: Examples of sonograms recorded at Blaen Cwm on 20th July 2009



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.