

**GWAUN IARLL
SEVEN SISTERS****BAT EMERGENCE WATCH/ACTIVITY SURVEY
&
PRELIMINARY ECOLOGY ASSESSMENT****July-August 2019****1 survey at the request of-**

Rhian Bowden, owner.

2 proposed works

Demolition of empty/disused house.

3 site: name/grid refGwaun Iarll, Seven Sisters, Neath SA10 9EW
SN811083**4 nature & date of survey****25th July 2019-** assessment of bat-use *via* external/internal search**25th July 2019-** emergence watch/activity survey**08th August 2019-** emergence watch/activity survey**09th August 2019-** emergence watch/activity survey**5 objectives-**

- to assess the likelihood of any bat (or other protected species) use of the building
- to identify any constraints consequent upon the discovery of bats, or other protected species, in the building
- to assess any other ecology-interest at the site.

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Rob Colley: scientific/conservation bat licence 1999-, SO86091/1

Rob Taylor: scientific/conservation licence, 1995-

Len Moran: named agent, SO86091/1

7 ecology & legal status**7.1** Different bat species have different life-cycle strategies but, in general, each requires the following features:

- hibernation roost sites, where stable winter temperatures allow a period of winter torpor (e.g. underground sites such as caves and mines, or crevices and hollows in mature standing trees)

- nursery roost sites, where females gather in the spring/early summer to give birth and rear their single offspring (e.g. roof spaces, crevices and hollows in mature standing trees)
 - roost sites for individual, or small congregations of, males during spring-autumn (e.g. roof spaces, or crevices and hollows in mature standing trees)
 - an insect-productive (usually ecologically diverse) feeding environment
- additionally, there is a poorly understood need for social-gathering sites at certain times of the year (e.g. the autumn mating season) for some, or all, species.

Most, if not all, British bat species are believed to be in decline; main threats to bat populations can be 2octule22d as:

- the loss of invertebrate-rich foraging areas (eg. woodland, hedgerows, ponds)
- the loss of nursery and hibernation roosts (eg. caves and mines, roof spaces, large standing trees)
- the effects of toxic chemicals (eg. timber preservatives in roof-space roosts, agricultural insecticides which reduce prey species).

- 7.2 All British bats, and their roosts (occupied or not) are protected by i)) **The Conservation of Habitats and Species Regulations 2010** (the “Habitats Regs”): this legislation implements the EC Habitats and Species Directive in the UK, and ii) the **Wildlife and Countryside Act** (as amended by the **Countryside and Rights of Way Act 2000**) Schedule 5.

Developments which compromise the protection afforded to a European Protected Species require **Natural Resources Wales licence** (Habitats Regs). The granting of licence will be conditional on i) an agreed “works methodology”, designed to minimise impact on the bat(s), ii) agreed “mitigation”, to ensure the provision of alternative roost potential at/near the development. Where planning permission is sought, the LPA will need to know, at application stage, what methodology/mitigation is being proposed: this is to i) avoid changes in planning designs, post pp, ii) ensure that LPAs comply with reg 3(4) of the Habitat Regs, and iii) allow the Statutory Nature Conservation Organisation (NRW)) to properly advise the LPA.

These protections can be summarised as prohibiting- taking, killing or injuring a bat; damaging or destroying a roost (occupied or not); obstructing access to a roost; disturbing in-roost bats.

The Natural Environment & Rural Communities Act 2006/**Environment (Wales) Act 2016** requires all public authorities/bodies to have regard for the conservation of biodiversity- eg. when considering planning applications. **Section 6 (EWA)** requires LAs to ensure that development i) causes no significant loss of habitats or populations of species, locally or nationally and ii) provides a net benefit for biodiversity. There is a particular requirement to address those species and habitats listed by the **UK Biodiversity Action Plan**, in pursuance of which the Welsh Gov’t have listed Common and Soprano pipistrelles, Noctule, Brown long eared, Greater and Lesser Horseshoe, Barbastelle and Bechstein bats at Section 42 (NERC)/ **section 7 (EWA)**: Species of Principal Importance for Conservation of Biological Diversity. Implementation of these responsibilities varies across authorities but, typically, some LPAs ask for “bat accommodation” as a routine req’t, and some require survey data to be passed to a Local Records Office.

8 methods

Survey methodologies are implemented as appropriate, based on experienced surveyors' assessment of the features at each site and with reference to the advice in ***Bat Surveys: Good practice guidelines*** (Bat Conservation Trust, 2007/2012/14) & ***Bat Workers' Manual 3rd ed.*** (JNCC 2004).

building assessment:

Internal/external daytime survey of the building was made, searching for possible bat (or other protected species) entry/exit and roosting points, incidental evidence (principally faeces) of bat use of the building and direct evidence of roosting bats.

emergence watch: On three dates, over the period during which bats can be expected to leave their roosts, direct observation was made of the building exteriors to monitor any bat movement in or out; heterodyne and frequency-division bat detectors were used to assist species detection/identification.

DNA genotyping: **n/a** (When surveyors are unsure of the origin of any bat faeces found, these are submitted to Dr Robin G Allaby, University of Warwick, for species ID *via* genotyping.)

overnight (dusk-dawn) remote data recording: **n/a** (At sites where initial investigation suggests that it is appropriate, Anabat (or Songmeter) detector-recorder equipment is left *in-situ* to indicate species identification and patterns-of-use at the site.)

methodology/mitigation: Methodology/mitigation measures, where appropriate, are based on the surveyor's experience of similar situations, with reference to ***Bat Mitigation Guidelines*** (English Nature, 2004) & ***Bat Workers' Manual 3rd ed.*** (JNCC 2004).

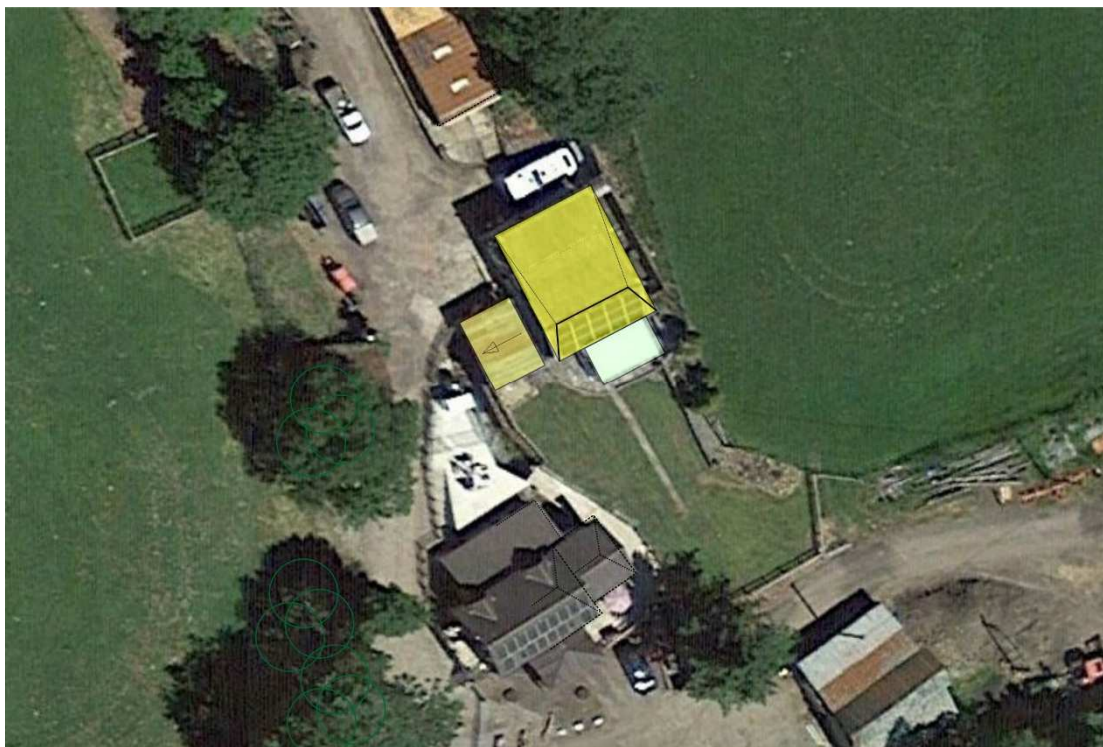
9 results

9.1 site location, adjacent habitat:



The site is c.100m north of the river Dulais riparian tree line; a well grown hedge/tree line runs down to the river at the immediate east perimeter of the site; a (cattle grazed) field is immediately to-east, over perimeter wall/bank. At the wider area, field boundary hedgelines extend to the north/west of the site; there are valley bottom fields, with housing beyond, over-river to the south/east.

This river corridor and field boundaries give foraging opportunity for a wide range of bat species, and any "Welsh species" might be expected here: pipistrelle (two spp) day roosting is known at two in-village sites <1km of the site; Noctule *Nyctalus noctula* overflight and *Myotis* activity is recorded at the wider area.



The survey building stands at the uphill/north of a yard with a modern (occupied) house to-south and various small barns/kennels to north; to-south of the yard, agri barns in light industrial use stand between the site and the river corridor.

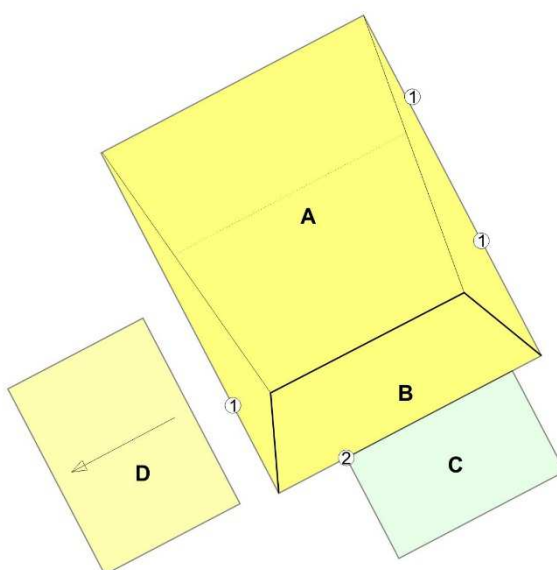
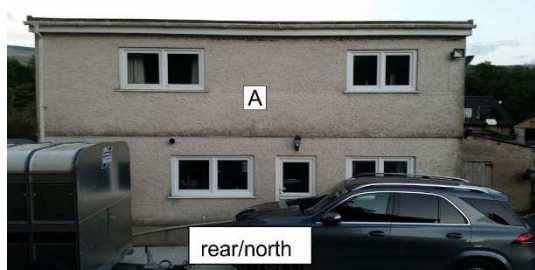
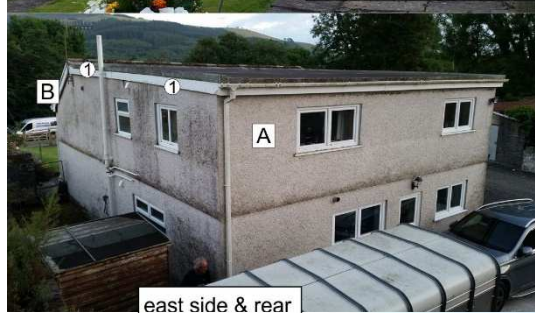
9.2 general description; potential bat access points; evidence of bat presence:

annotation refers to sketch plan/photo below

The survey building is a detached, unoccupied, two storey, house in good repair, in recent use but unoccupied at the time of survey; a detached single-storey outbuilding stands c.2m to-west.

The (original?) front section of the house (B) has a pitched, south facing roof, behind this, to north, a flat roof (A) covers the greater part of the house, including any (original?) rear pitch to B; a single storey conservatory (C) is built to 75% of the width of the front (south) wall. A detached single storey outhouse (D) stands c.2m to-west of the west longwall. Externally, the stone front wall is limewashed and all others walls are dashed/ rendered, in good repair and with no potential bat-access intra-masonry; all (uPVC) doors/windows are intact/tight fitted, with no potential fly-in bat access.

Walltops are render sealed to uPVC fascias above, but with potentially bat accessible gaps at several points on the two longwalls of section A (1, sketch plan/photo); the rear/north longwall top is sealed. A wooden fascia at the front wall top at B has potentially bat accessible gaps at its western end (2, sketch plan/photo); no evidence of use could be seen on the walls below A or at the conservatory roof below the walltop of B.



The slated front roof pitch above B is largely covered/obscured by solar panels: no potential bat access was seen at the visible parts of the roof (including the ridge). The flat roof above A is felt (or f-g?) covered; roof edges are in good repair, with foldover-edges securely sealed to fascias, giving no bat-access opportunity.

Internally, there is no potential bat interest at the (furnished) rooms. Upper level ceilings at the front section B are part vaulted below the pitched section of front roof; all other ceilings follow the flat roof at the larger section of the building (A), giving "roofskins" that are beyond direct examination.

The single storey outhouse (D) has brick walls, with some high course of end wall blockwork to give the high-low slope of the monopitch roof). The walls are in good repair and have no potential bat-access intra-masonry; a north end door and a south end window are intact/sealed. The monopitch roof has wriggly tin sheeting, with an internal panel lining. Internally the outhouse is clean store/workshop, with a clean

concrete floor. Potential bat access at the outhouse is limited to under-corrugations at the edges of the metal roof sheets.

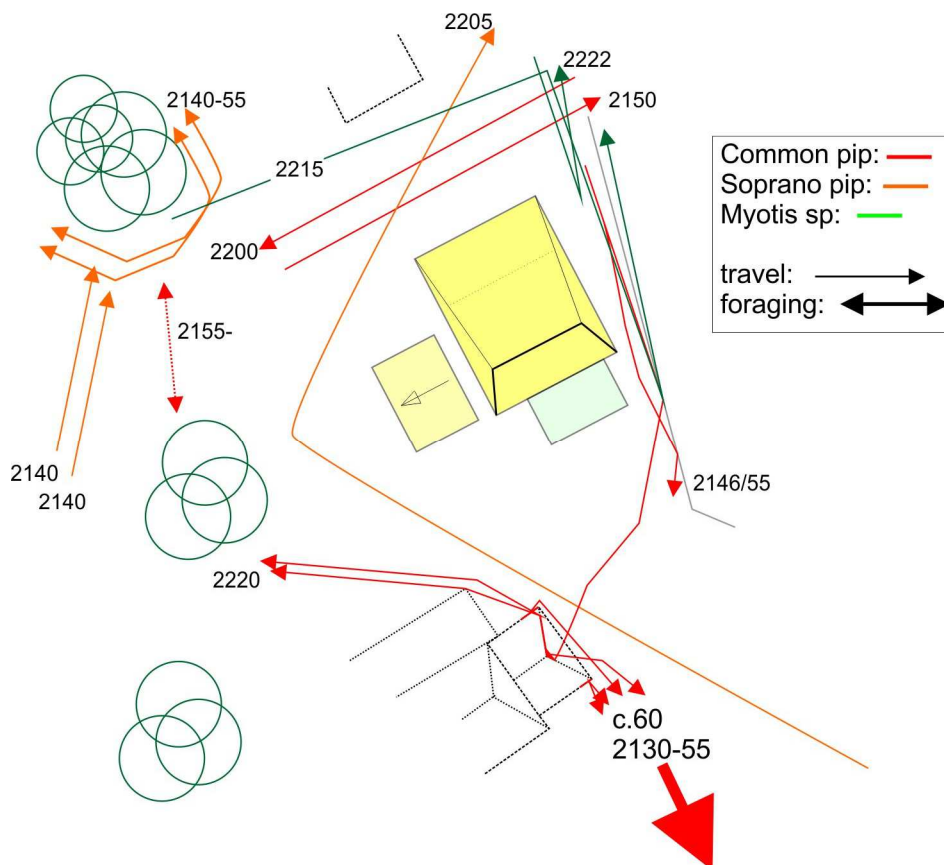
No evidence of bat (or owl) use was found, internally or externally, at the house or outhouse.

9.3 emergence watches:

At each of three dates (deteriorating weather conditions at the second session gave no-confidence in the observations, and this second session was repeated), three observers were positioned to allow detection of any bat movement from, or to, the building.

Common pipistrelle *P. pipistrellus*, Soprano pipistrelle *Pipistrellus pygmaeus* and an unidentified *Myotis* sp. were seen/heard at/near to the site.

9.3.1 24th July 2019 2110-2230 start temp: 21°C 10% cloud; no wind



Common pip: 60+ (not in observers' direct sight: this minimum count is not an accurate emergence-number) emerged from a roof apex at the east end of the at-site occupied house, 2130-2220; most of these passed off site to-south, but 4-5 animals passed the survey building, with foraging individuals to-west/east/north near-continuously recorded 2145-2220, and with x1 young of the year flying c.5mins at the to-east field edge

Soprano pip: x3 crossed site, south-north, 2140/2205, with x2 foraging at off-site trees to-north west

Myotis: a brief pass at the to-east field edge, 2222, could not be identified to species.

No bats emerged from (or entered) the survey building; no owl activity was seen.

9.3.2 08th August 2019

2030-2105

start temp: 13°C

100% cloud; increasing wind with squally rain, 2045 onwards- abandoned.

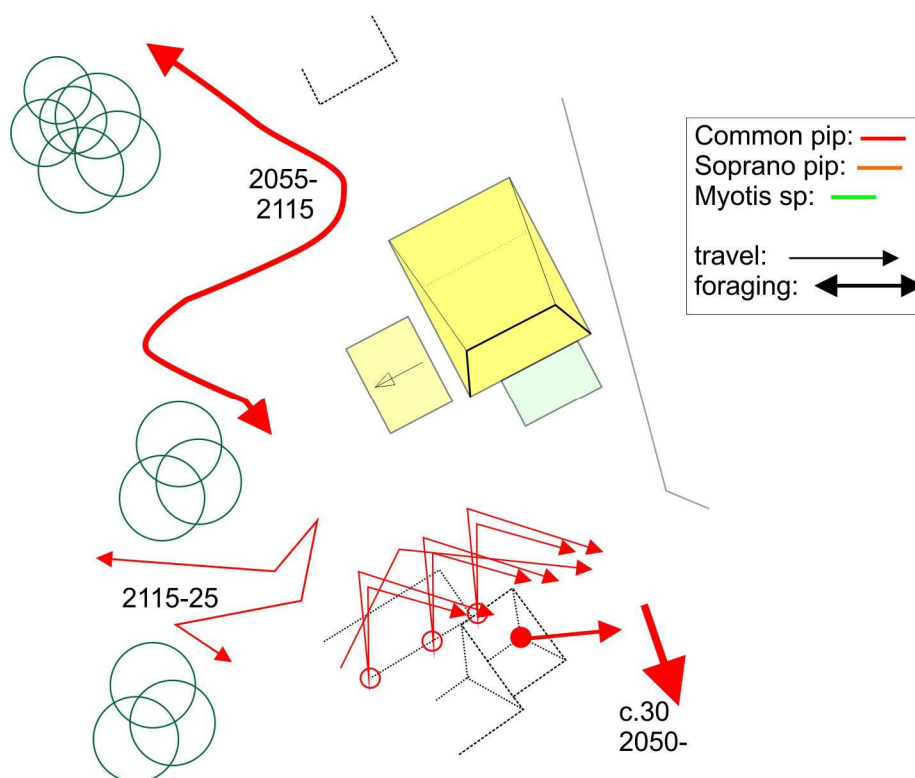
Common pipistrelle: c.10m were seen to emerge from the to-south house east gable, one of which flew briefly at the yard to-west of the survey building, 2101.

9.3.3 09th August 2019

2030-2145

start temp: 15°C

100% cloud, rain squall, 2105-15; wind fc2-4 sw



Common pip: an estimated 30+ bats emerged from the to-south house, flying off-site to south – there was some emergence from the east gable where 60+ were seen two weeks previously but many appeared to be emerging from various (unseen) points on to-west roofs/walltops; x1 foraged at trees at west of site yard, 2055-2115, including throughout the squally shower; x1 foraged to-west, 2115-25.

No owl activity was seen.

10 site ecology assessment

- 10.1 House sparrows *Passer domesticus* (n:4) were seen to in-out of gaps behind the west longwall fascia and behind the front wall fascia: these were presumed to be nesting birds.

No other bird nesting was seen.

- 10.2 The to-be demolished house has hard-standing yards to north and east, with a large lawn to front/south; there is i-g grazing at the field immediately to-east, beyond a post & wire fence.

No ecology/protected species interest is identified at the site footprint/surrounds.

11 summary

- 11.1 No internal or external evidence of bat use of the house (or the adjacent outbuilding) was found, and no activity which might suggest bat roosting at the house was seen.

There is, clearly, a maternity colony of pipistrelle bats at the east gable of the modern house at the south side of the site, and dispersal roosting at (several/many?) other parts of its roof: this building is unaffected, directly or indirectly, by the proposed works.

No bat-related constraint to the proposed works is identified by this survey.

- 11.2 House sparrow nesting was seen at walltops.

To avoid the offence of disturbing nesting birds, *either* demolition should be timed to avoid the March-July inc. nesting season *or* behind-fascia bird access should be blocked, in-winter/ahead of the nesting season.

There is no owl use of the building; no evidence of other bird spp nesting-use was seen.

- 11.3 No other ecology/protected species constraint to the proposed works is identified.

- 11.4 To answer the LA's need to ensure that development causes no biodiversity-loss and to provide "net benefit" for biodiversity (7.2, above), it is recommended that

- to provide single animal, dispersal roost, opportunity for crevice roosting bats: *either* in-masonry crevice roost opportunity (eg. Schwegler FR bat tube box) should be incorporated into a walltop at any new-build, or 150mm deep fascias/barges at any new build should have 12-15mm bat-accessible gaps behind.

- House sparrow nesting opportunity (eg. Schwegler 1SP Terrace) should *either* be incorporated at any new build *or* should be placed at one or more of the other outbuildings at/around the yard.

Detail of these mitigation-provisions will need to be incorporated into any new-build proposal; an ecologist can advise further, when a new-build design is available.

Rob Colley
October 2019