
**YGG GWAUN CAE GURWEN
GYM BLOCK**

BAT EMERGENCE WATCH/ACTIVITY SURVEY

June-July 2020

1 survey at the request of

Mr Muhanned Jama, Structural Engineer, Neath Port Talbot CBC.

2 proposed works

Demolition of gym building, YGG Gwaun Cae Gurwen.

3 site: name/grid ref

YGG Gwaun Cae Gurwen, New Rd, Gwaun Cae Gurwen
SN704122

4 nature & date of survey

02nd June 2020- external search/ emergence watch/activity survey
18th June 2020- emergence watch/activity survey
23rd June 2020- emergence watch/activity survey
24th July 2020- assessment of bat-use *via* internal/external search
26th July 2020- 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.

6 surveyors

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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 summarised 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, 2007/2012/14/16) & ***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. Internal search was of limited value (9.3, below), and an additional emergence watch was made.

emergence watch: On four 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.

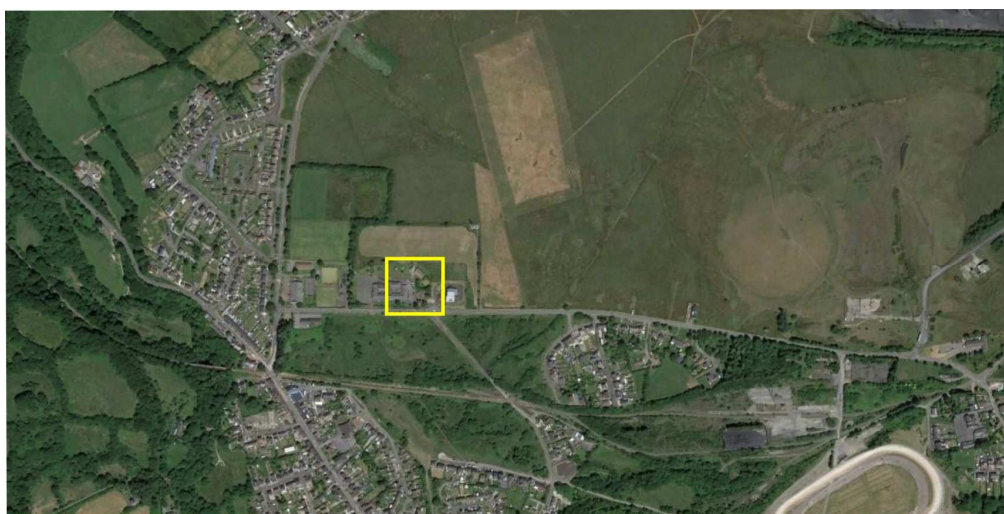
DNA genotyping: **n/a** (When surveyors are unsure of the origin of any bat faeces found, these are submitted to Dr Robin G Allaby, University of Warwick, for species ID *via* genotyping.)

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.)

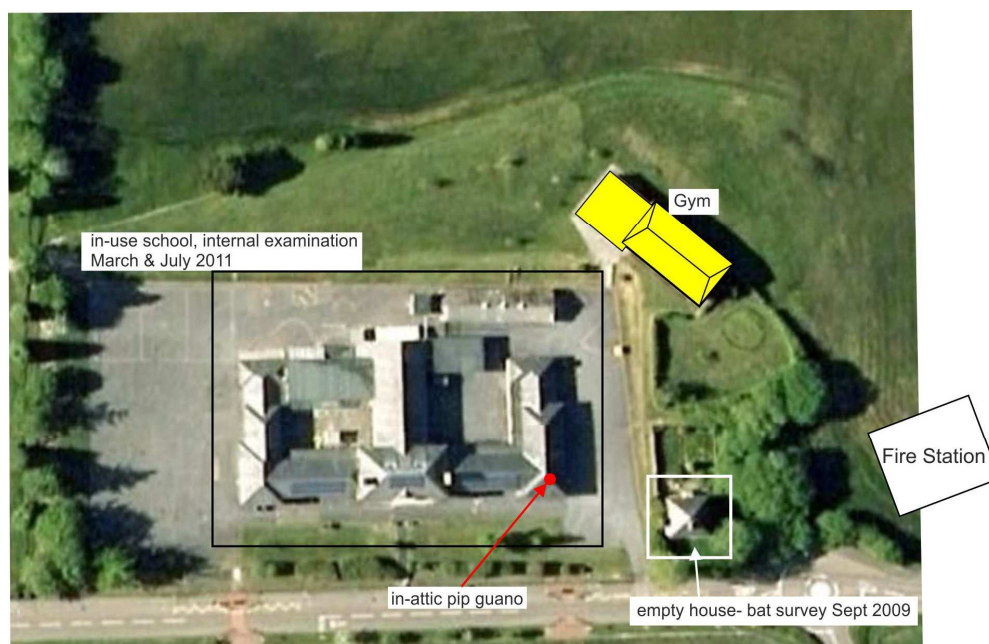
methodology/mitigation: Methodology/mitigation measures, where appropriate, are based on the surveyor’s experience of similar situations, with reference to ***Bat Mitigation Guidelines*** (English Nature, 2004) & ***Bat Workers’ Manual 3rd ed.*** (JNCC 2004).

9 results

9.1 site location, adjacent habitat:



The wider site is at an open and exposed area at the edge of Gwaun Cae Gurwen village; there are (reclaimed/marshy) grasslands to-north and east, lightly scrubbed unmanaged grassland over-road to-south, and light (village) urbanisation to-west.

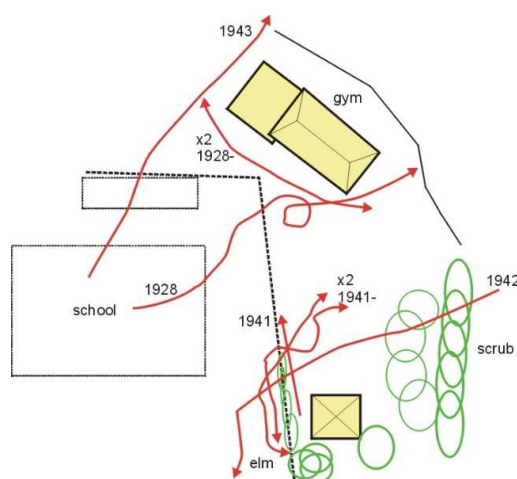


The survey building stands at a slightly elevated position at the east edge of an in-use school campus; heavily managed amenity grass is immediately to north/east (sports field) and to-west (bank, downsloping to metalled school yards). There is ribbon scrub beyond school amenity-grassland to the north and beyond the school's western perimeter; the garden of an (unoccupied, detached) house, immediately to-south, has developing *Salix*/hawthorn/hazel scrub over a one-time (ryegrass) lawn; a recently (<10yrs) built fire-station is c.50m to south east.

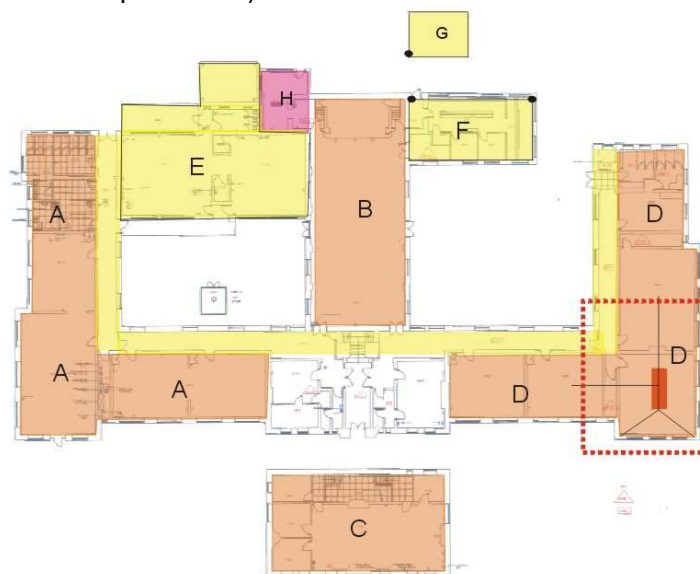
This habitat offers foraging opportunity for generalist/opportunist bat species- eg. pipistrelles- but is thought to be sub-optimal for most bat species.

9.2 previous data

9.2.2 September 2009 bat survey (two dates, same personnel) at the empty house (50m to south) and gymnasium building recorded Common pipistrelle activity-



- 9.2.3 March/July 2011 examination (internal search, two dates, same personnel) of the adjacent school buildings found c.200 all-age pipistrelle droppings directly below the roof ridge, at the south-east corner of the south-east corner building at the adjacent school (D at sketch plan below)-



- 9.2.3 Laura Palmer, Biodiversity Officer, NPTCBC (*pers. comm.* May 2020) reports i) the recovery of a bat pup from the gym building, c.2014, and ii) recent Barn owl use of the site, which ended on the death of the resident birds.

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

annotation refers to sketch plans/photos below

The building is modern, in good repair. The principal building (A, sketch plan/photo's) is a tall, single space, gymnasium under a ridged roof; a low/single-storey flat-roofed building (B), with changing room/wc/gym-access corridor/a small (locked) plant room, internally interconnects at the north west end.

The north-east (rear) longwall of A is ground-to-eaves panelling, glazed above the lowest c1m. high panels; the south-west (front) longwall has full-length glazed windows at its top 2m; all windows/panels are intact and closed/sealed; all window panels are tight-sealed to soffit boxes.

All other walls, at both A and B, are good condition brickwork, with no potential bat-access intra-masonry.

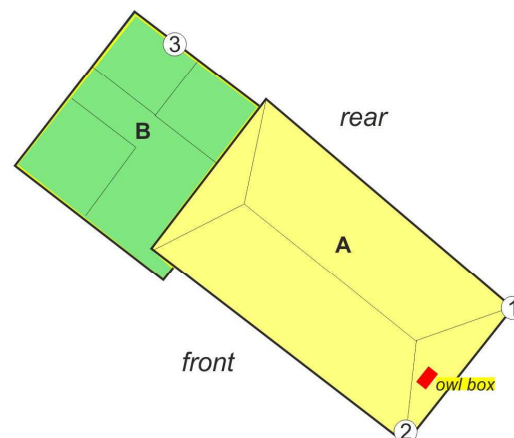
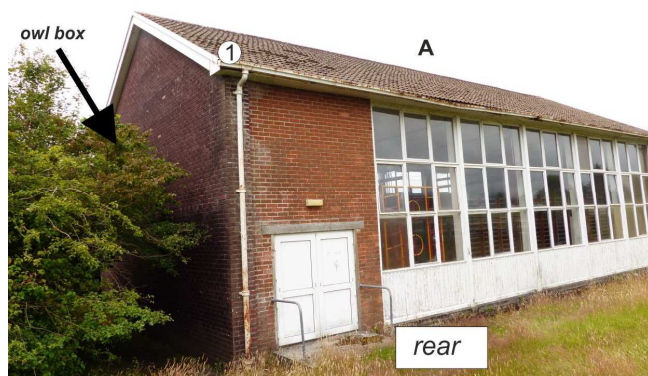
A wooden door (3, sketch plan/photo), to a locked plant room, at the north-east (rear) wall of B has a louvred top section which might be bat-passable- no evidence of use.

Longwall soffits are tight-sealed to walltops, with (visible) potential bat-access opportunity limited to a broken/springing soffit-box corner at the (south) east corner of the building (1, sketch plan/photo) and to a wall-soffit gap at the southernmost corner (2, sketch plan/photo): no on/below-wall evidence of bat use was seen here. (A 2011 reported missing-fascia gap, at the east corner, is presumed to be repaired.)

Both gable walltops at A are tight (mastic-fill) sealed to soffits/barges. An owl nest box (wooden) is affixed to the south end of the right gable wall.

The cement tile roof of the main building (A) is in good repair, with no visible bat-entry points; all ridge tiles appear to be securely seated/sealed.

The smaller extension (B) has a solid concrete slab roof (with bit. felt over), tight-sealed to brick walltops.



Internally there is no bat-interest at the single-space gym (A) or at the internally-interconnected changing room/wc at B.

The gym (A) has a suspended (on-wires) polystyrene tile ceiling throughout. With the exception of a small planked section, above the ceiling tiles at the north end, the over-ceiling void extends to the bituminised felt sarked under-roof, where simple rafters + r'board are visible.

There was no practical access above the ceiling tiles, particularly with the workplace-personnel constraints current at the time of survey, and additional emergence-watch effort was undertaken to address this internal-examination limitation.

There are no roof voids at B, with the underside of the roof slab forming the internal ceilings.

summary:

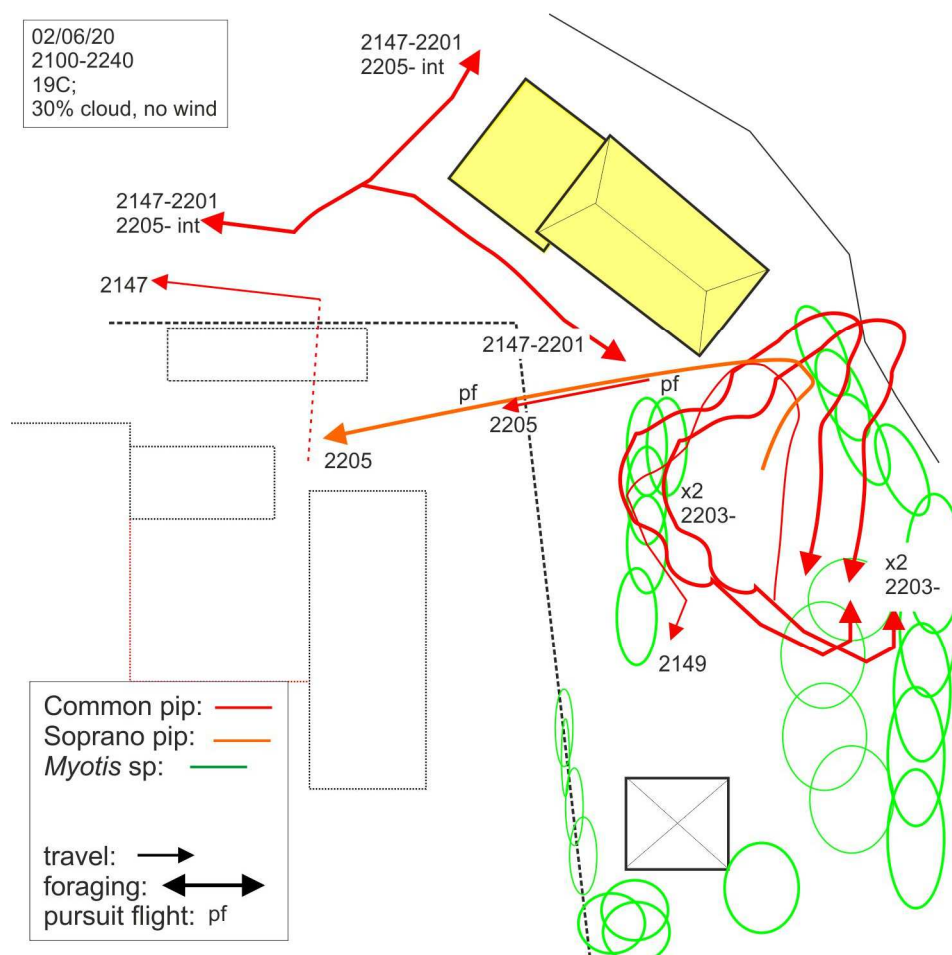
No evidence of bat use was found, internally or externally, but examination of the roof void of A was not possible.

9.4 emergence watches:

At each of four dates, observers were positioned to allow detection of any bat movement from, or to, all of the building.

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

9.4.1 02nd June 2020
 2100-2230
 start temp: 19°C;
 30% cloud; no wind



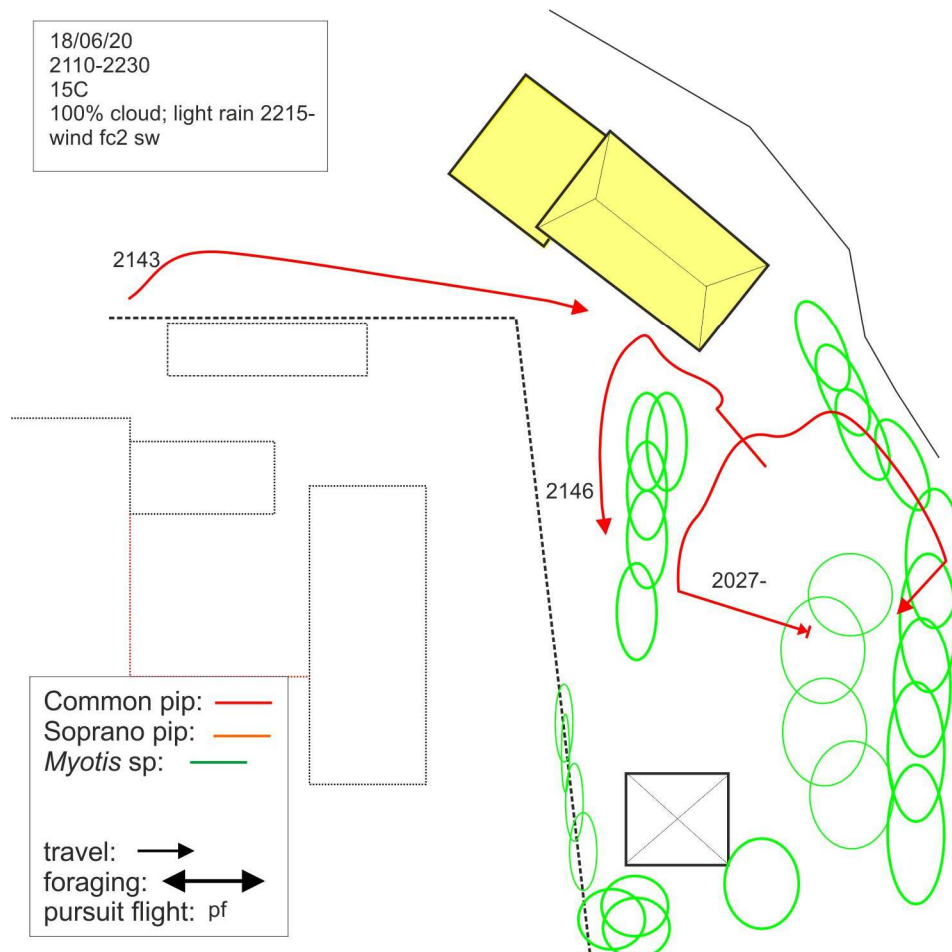
Common pip: x1 to the west of site, 2147- from school?- feeding/flying along grassy bank to-west and survey building grassed frontage, 2201-, with widening beat to include north end of building/playing field from 2205-end (increasingly intermittent/infrequent); x1 "appeared" at/over garden scrub to-south, 2149, joined by second animal 2203, both foraging -end

Soprano pip: x1 over garden to-south, 205, <1min, pursued off site to-west by Ppip,

No bats emerged from (or entered) the survey building, and no other bats were seen/heard.

No owl activity was seen.

9.4.2 18^h June 2020
2115-2240
start temp: 15°C
100% cloud, light rain 2200-15; no wind

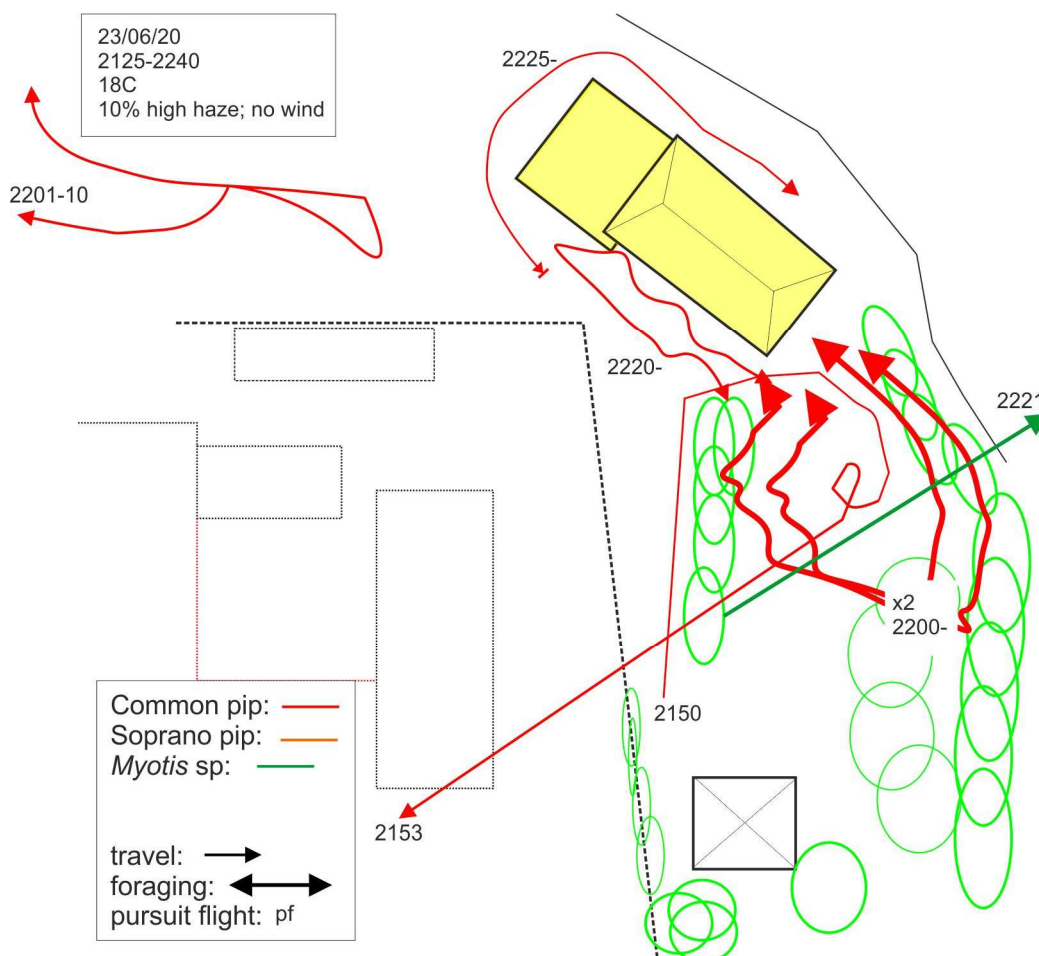


Common pip: x1 from west, 2143, to south of site garden; x1 over south of site garden – same animal?- 2146; x1 at/above south of site garden, 2027-end

No bats emerged from (or entered) the survey building, and no other bats were seen/heard.

No owl activity was seen.

9.4.3 23rd June 2020
2130-2240
start temp: 18°C
10% high haze; light wind



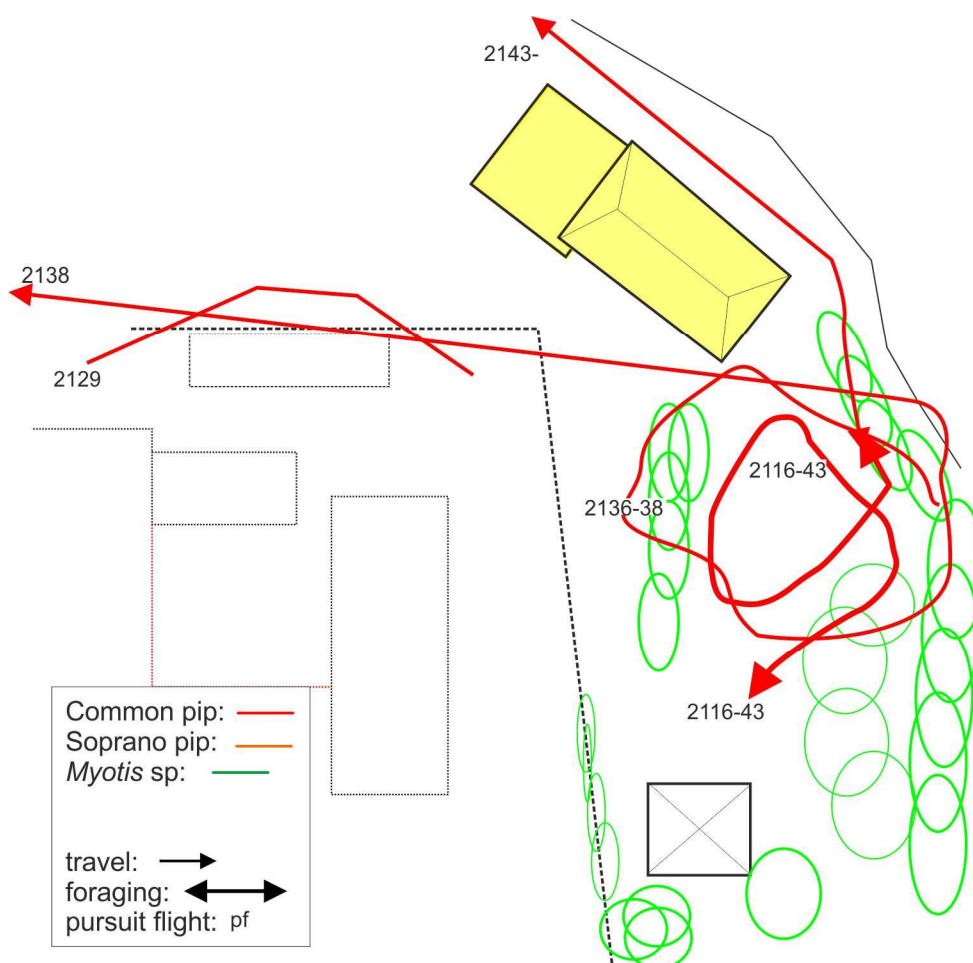
Common pip: x1 "appeared" at/over to-south garden, 2150, flew off-site to-west, 2153; x1 foraging at to-west grassy bank, 2201-10; x2 "appeared" at/over to-south garden, 2200, with continuous foraging here- end (with increasing forays around survey building after 2225)

Myotis sp: x1 passed east-west through to-south garden scrub, 2221.

No bats emerged from (or entered) the survey building, and no other bats were seen/heard.

No owl activity was seen.

9.4.4 26th July 2020
 2050-2210
 start temp: 14°C
 100% cloud; wind fc3sw



Common pip: x1 “appeared” over to-south garden scrub, 2116, with continuous foraging here to 2143; a second animal also flew here, 2136-38, before x1 flew off-site to-west; the remaining bat widened its beat to the rear of the survey building, 2143-

No bats emerged from (or entered) the survey building, and no other bats were seen/heard.

No owl activity was seen.

9.4.5 summary:

A small number (2-3) of foraging Common pipistrelles was seen at each visit: no day-roosting was found at the survey building. The surveys were conducted through the “breeding season” when multi-animal pipistrelle colonies are extant: there was no evidence of multi-animal (maternity colony) day roosting in the immediate area.

At each date, close to “expected” emergence times, foraging singletons “appeared” at scrub-colonising lawn behind the adjacent to-south detached house. Observer repositioning at the various dates failed to see bat movement from the to-south house, and movement from-school buildings was not confirmed. *Post-survey wider-*

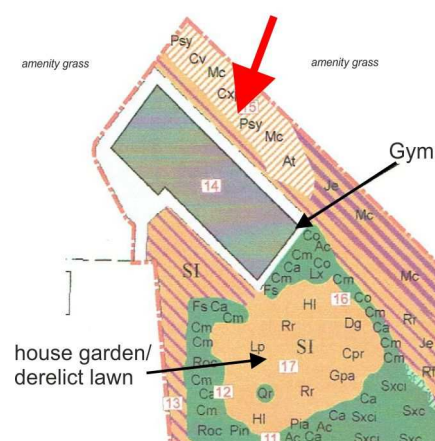
site examination of the external frontage of the adjacent Fire Station noted intra-masonry Schwegler (sparrow?) boxes and bat-accessible gaps behind all-lengths of the gable barges: it's speculated that the timing of bat arrival to-site and the unseen to-site flight are each consistent with single/no-breeding animal roost-use of the Fire Station.

No owl activity was seen at the four dates, and there is no (eg. faecal splashing) evidence which might suggest recent (Barn) owl use.

10 site ecology assessment

No other protected species (eg. breeding bird) use of the building was seen.

The gym building is directly surrounded by hard standing. Mown banks and heavily-managed sports field extend beyond the building surrounds, with a narrow strip of less aggressively mown grass behind/to north, described by Richard Pryce, 2010) as "unimproved acid grassland"-



There are no statutory protected sites within or in close proximity to the survey site. The closest protected sites are:

- Tairgwaith Grasslands SSSI is located about 1km to the south-east.
- Hafod-wennol Grasslands SSSI is located about 3.5km to the south-west.
- Caeau Nant Garenig SSSI is located about 3km to the west.
- Mynydd Du SSSI is a large site: the Drysgol area is the closest point to the survey site which is located about 3.25km to the north-west.

11 summary

- 11.1 No internal or external evidence of bat use of the gym was found, and no activity which might suggest bat roosting at the building was seen.

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

It is speculated that bat-roost use of the wider-area might have been disrupted by works to the school roofs or works to the roof of the adjacent unoccupied house, and

that the reported finding (date unknown: est. 5-6 yrs ago) of a bat pup in the gym reflects such disruption.

- 11.2 No owl activity was seen, and there was no owl use of the building or the gable mounted nest box at the survey dates. No potential owl-entry to the building was identified, and it is speculated that an open-window might have been implicated in the reported finding (date unknown) of two dead birds inside the gym.
- 11.3 No other ecology/protected species constraint to the proposed works is identified.
- 11.4 With no replacement building scheduled for the site, to address the LA's responsibility for maintaining/enhancing biodiversity (7.2, above) it is recommended that nesting and roosting opportunity for Barn owls (*Tyto alba*) is provided at the site, in compensation for the loss of the externally mounted nest box.

To give nesting opportunity, and nearby roosting opportunity for the male bird, it is suggested that the provision of two A-framed pole-mounted boxes would be appropriate: it is suggested that these should be placed at the edge of wider site fringing vegetation, eg-.



The ff site is recommended as a source of advice about the practical issues of such provision-

<https://www.barnowltrust.org.uk/barn-owl-nestbox/barn-owl-pole-nest-box/>

; the LA's own biodiversity/countryside ecologists will advise on this issue, in the light of the County's LBAP.

Rob Colley
July 2020