

SPECTRUM ECOLOGY

Protected Species Surveys

Bat Roost and Emergence Survey

Pentyla Farm, Kenfig Hill, Bridgend CF33 6RD

Report Prepared for:

Leigh Kembrey

June 2020

SPECTRUM ECOLOGY

Protected Species Surveys

Report on survey for Bat Roost sites

at
**Pentyla Farm,
Kenfig Hill,
Bridgend
CF33 6RD**

Report by
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Licensed Bat Surveyor
Licence Number S085293/1

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1. Executive Summary

1.1 Spectrum Ecology was commissioned by Leigh Kembrey to carry out a full survey for bats on an annex to the property Pentyla Farm, Kenfig Hill, Bridgend, CF33 6RD, Grid Ref SS 85098 85239. The survey was requested in order to determine whether bats were present and likely to be impacted by proposed development works. These works involve the demolition of the existing single-storey annex structure and replacement with a new 2 storey annex to the main farm house building. It is understood from the client that the new development will not involve works to the roof section of the main farm building and the new extension / annex will not break into the existing roof void of the adjacent building.

1.2 The initial preliminary assessment for bats in the annex at Pentyla Farm was carried out during the daytime on the 19th May 2020. A detailed internal and external scoping survey inspection was made of the annex building, looking for evidence including droppings, staining on timbers, scratch marks and/or feeding remains. The surveyors did not access the main farmhouse building due to Coronavirus restrictions, but observations were made of external features with potential to be impacted by the proposed works. During the course of these investigations, **no evidence was found to indicate that the property was being used as a roost for bats**. However the annex building was found to contain a number of features with high potential for bats. These included gaps in the masonry and access to the open interior via gaps in the roof covering and corrugated metal side panels. Potential access points to the main farmhouse building were also noted. Due to the presence of the high potential features and high quality surrounding habitat, it was decided to carry out additional dusk and dawn bat activity surveys in order to gain a better understanding. The high potential features became the focal point for observations during the evening emergence surveys.

1.3 The survey was carried out on a single-storey annex structure attached to a larger 2 storey dwelling known as Pentyla Farm. The extension structure is stone-built with corrugated metal sheeting comprising the gable end and roof covering. Internally the layout is open to the rafters with a mezzanine floor / hay loft occupying approximately half of the structure. The roof is timber-framed with an asbestos cement and corrugated metal roof covering which has no underlay. The extension structure measures approximately 7metres x 7metres and stands around 4.5 meters floor to ridge. A dilapidated garage-type outbuilding is attached to the west elevation and a conservatory structure to the south elevation.

1.4 The daytime internal / external building inspection was followed up with 2 evening / dusk emergence surveys and a dawn survey. The sunrise / sunset bat emergence and activity surveys were carried out on the 19th May, 2nd June and 7th June 2020. The observations were conducted of areas highlighted as potential access points in the scoping survey. During the course of these surveys, no bats were seen to emerge from the building. A number of pipistrelle species bats (less than 5 for each survey) were recording passing through the surrounding grounds of the property during each survey, with the majority of passes flying in from the wider landscape to the west before exiting towards the north / north-east. The conditions for the surveys were excellent on all occasions.

1.5 During the course of these surveys, no bats were seen entering (dawn swarming survey) or exiting the building (dusk emergence survey). Further, no additional evidence was found, either

in the form of droppings, staining or feeding remains, to indicate that bats were using the building.

The surveys indicated therefore, that the property was not currently being used as a roost site.

1.6 Notwithstanding the above findings, a number of bats (<5) were detected passing and foraging in relatively close proximity to the building. These observations were made during each of the evening emergence surveys. This activity involved mostly Soprano Pipistrelle bats with a smaller number of Common Pipistrelle bat passes.

1.7 Bats are highly mobile animals and may set up new roosts at any time. Despite bats not being observed to be using the building, the presence of bats in the vicinity must be taken into account. Therefore care should be taken during any potentially disturbing works on the building, especially in respect to operations such as removal of the existing annex structure. If any bats are found or if there is any reason to believe that a bat roost has been established in the interim, as a legal requirement, all works should cease immediately while further advice is sought from the local office of Natural Resources Wales or the licensed bat ecologist.

1.8 Due to the fact that there is a known flight path and foraging area within 10 metres of the building, contractors should be alert to the possibility of encountering such bat roosts unexpectedly during development work. In the unlikely event that such a bat roost is found, work on the structure should stop while further advice is sought from the local office of Natural Resources Wales or the authors of this report.

1.9 It is proposed to completely demolish the existing annex building. **As the surveys indicated bats are not using the building, it is considered that the works are not likely to cause a disturbance to bats or their roosts.**

As a consequence of the above it is considered that a European Protected Species Development Licence will NOT be required from the Welsh Government.

However, points 1.7, 1.8 above and 1.10 below should be taken in to account and works should proceed according to recommendations and best practice.

1.10 Given the lack of evidence for bats being present, it is considered that works can be carried out during the coming summer months. However, as bats are active at this time of year and in order to ensure no roosts have become established in the interim, it is considered that a pre-works survey should be undertaken immediately ahead of works and that a licensed bat ecologist be retained for the duration of the works. In addition, this report includes some further recommendations detailing certain mitigation measures that should be put in place ensure a net enhancement of roosting opportunities following the development, in line with Local Authority obligations under section 6 of the Environment Act 2016. The addition of bat boxes such as the Schwegler 1FF model fixed to trees within the vicinity of the building and the creation of specific gaps around fascia boards and barge boards within the new building section would also ensure against any net loss of roosting potential resulting from the works.

2. Background

2.1 The client is seeking planning permission to demolish the existing annex structure and replace with a new extension on to the west gable end of the main farmhouse building. The development will involve the complete removal of the existing annex but the new extension will not break into the existing roof void of the main farmhouse building. The only impact to the main building will be to join the new extension roof to the existing farmhouse roof section.

2.2 Section 6 of the Environment Act 2016 places a duty on public authorities to 'seek to maintain and enhance biodiversity' so far as it is consistent with the proper exercise of those functions. In so doing, public authorities must also seek to 'promote the resilience of ecosystems'. The duty replaces the Section 40 duties in the Natural Environment and Rural Communities Act 2006 (NERC Act 2006), in relation to Wales, and applies to those authorities that fell within the previous duty. As a result the client commissioned protected species surveys for roosting bats as part of the process of applying for planning permission.

2.3 Mr Daniel Lock, Licensed Bat Surveyor, assisted by trainee surveyor Emma Roberts and 1 volunteer surveyor were commissioned to undertake a detailed survey for the presence of bats and their roosts. This report documents the results of surveys undertaken on the dates noted above. In addition it makes recommendations on how the redevelopment will proceed and the conservation measures, if appropriate, that might be taken to ensure that bats are fully considered as part of the redevelopment of this site.

3. Constraints

3.1 No problems were encountered in finding or accessing the site. All areas of the annex building and any crevices were accessible as described in section **1.2**. The interior was fully accessible and able to be investigated at close hand using ladders, high powered spot lamp and digital endoscope.

3.2 The main farm house building was not accessed due to restrictions associated with the coronavirus pandemic. However, as the proposed extension works will cause only negligible impact to the existing roof of the adjacent building this constraint is less significant. All external features of the existing roof section which are likely to be impacted (eg where the new roof section will join the existing roof section) were investigated as thoroughly as possible and formed part of the observations for the dusk / dawn bat activity surveys.

3.3 All potential access features were the focus for the subsequent bat detector surveys.

3.4 As a result of the above, the surveyors are confident that the assessment of the annex at Pentyla Farm, Kenfig Hill has been as thorough as the Bat Conservation Guidelines require.

4. Surveyor Experience

4.1 The principle surveyors and authors of this report, were Daniel Lock (Licence Number **S085293/1**), assisted by trainee bat surveyor Emma Roberts. Daniel is a Natural Resources Wales licensed bat surveyor with over eight years licensed experience. Daniel has over eleven years of wide and extensive experience in countryside management and surveying for protected species and has worked on many projects related to bat conservation. He has experience undertaking surveys as part of the National Bat Monitoring Programme, as well as undertaking numerous building and tree surveys for bats.

4.2 Spectrum Ecology have become recognised figures in the bat surveying arena, especially with local authorities such as Bridgend County Borough Council and the government body, Natural Resources Wales, previously Countryside Council for Wales, as well as a number of production companies for TV and Film.

This wealth of experience and resultant expertise allows us to produce good quality reports, mitigation documents and habitat management plans to assist clients with any ecology or biodiversity related plans within their projects. As well as producing numerous bat reports annually for private individuals and organisations, we have also been involved in providing training, guidance and advice in such matters to local authorities across Wales.

We have delivered Protected Species Awareness training over 3 days to Officers and Principle Officers across Bridgend County Borough Council. We were integral in developing BCBC's Tree Safety Policy & advised on the development of the protocol for Bats in bridges (for Highways, when surveying for defects etc.). We have also assisted the Authority on numerous occasions in obtaining derogation licences from CCW / WG (now NRW) by carrying out bat surveys & developing mitigation measures / method statements. Current and previous clients include Bridgend County Borough Council's regeneration department, Fox television, Sky television, BBC Cymru, Carmarthenshire Colleges and numerous private clients.

5. Site Description

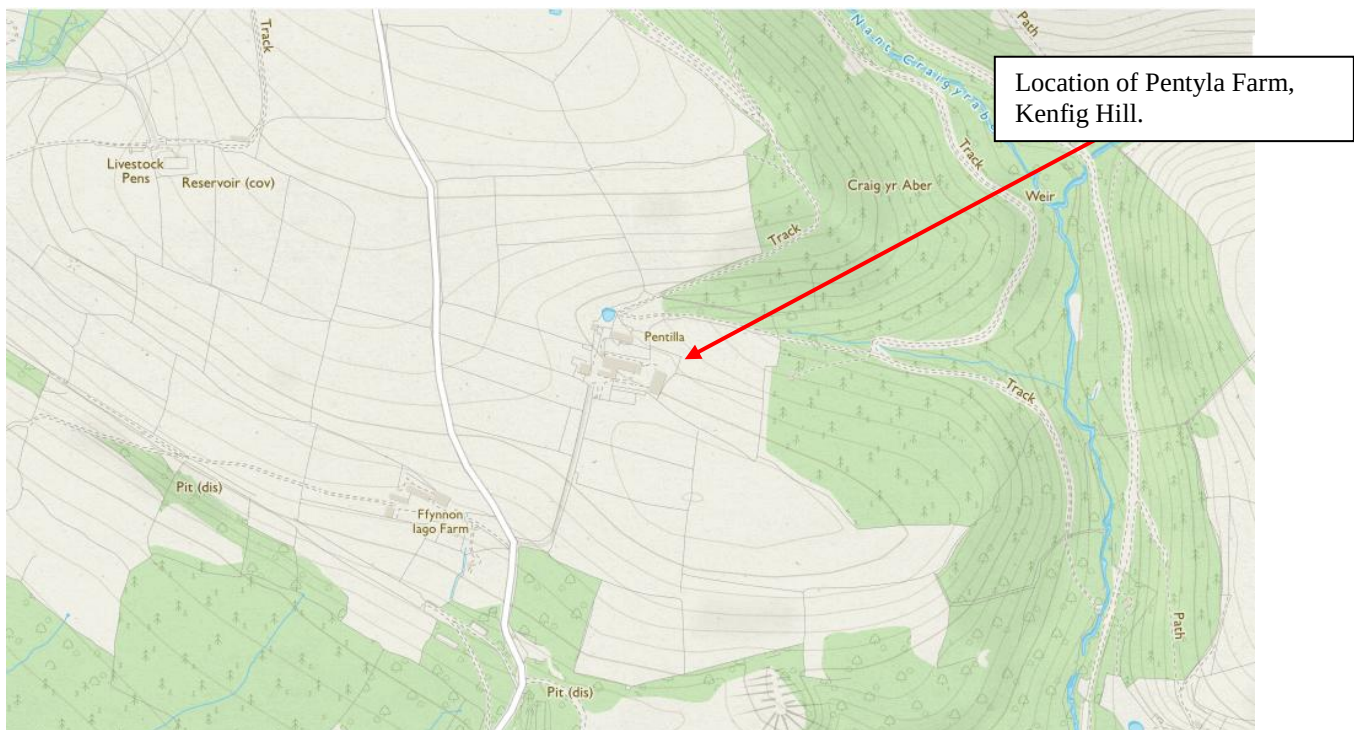
5.1 The survey was carried out on a single-storey structure attached to a larger 2 storey dwelling known as Pentyla Farm. The extension structure is stone-built with corrugated metal sheeting comprising the gable end and partial side panel with a corrugated metal and asbestos cement roof covering. Internally the layout is open to the rafters with a mezzanine floor / hay loft occupying approximately half of the structure. The roof is timber-framed with an asbestos cement and corrugated metal roof covering which has no underlay. A dilapidated garage-type outbuilding is attached to the west elevation and a conservatory structure to the south elevation. The extension structure measures approximately 7metres x 7metres and stands around 4.5 meters floor to ridge.

5.2 Pentyla Farm in a larger landscape context:



5.3 Pentyla Farm is situated on the outskirts of Pen-Y-Bryn in Kenfig Hill, Bridgend, a very rural area surrounded by open countryside comprising field and hedgerow systems and woodland blocks to the north and west. See aerial image above.

5.4 Location Map of Pentyla Farm.



6. Survey Methodology

6.1 The principal aim was to survey the structure of the building for the presence of bat roost sites and to carry out evening/dawn emergence/bat detector surveys. First an external examination was made of the structure of the building to assess the suitability for use by bats and for potential access points. Evidence such as bat droppings (faeces) or urine staining on window frames, doors, and walls or scratching on other surfaces was looked for.

6.2 The building was also inspected internally and a search was carried out for the presence of bats or the remains of dead bats. Signs of bats such as droppings, urine staining, staining on timbers and discarded fragments of insects such as moth wings were also searched for. The survey was carried out with the aid of a close focusing monocular, spot lamp and a digital endoscope.

6.3 Following the building inspection, two evening and one sunrise bat activity surveys were carried out on the building to record any bats emerging from / entering the structure. These were carried out with the aid of Batbox Duet heterodyne / frequency division bat detectors and Wildlife Acoustics Echo Meter Touch 2 Pro. The observation was conducted primarily of areas highlighted as potential access points in the building survey.

7. Site Survey

7.1 The initial, preliminary building assessment for the potential of bats within the annex at Pentyla Farm was carried out on the 19th May 2020. A thorough investigation of the structure was carried out as part of the scoping survey. The search was carried out with the aid of a digital see-snake endoscope, close focussing monocular, camera and high-powered 'Cluson' spot lamp. There were no constraints in accessing the annex building and all high potential features. Although the main farm house building is not likely to be impacted significantly by the proposed works, a thorough investigation of the outside of the building was made and any high potential features noted with particular focus around the west gable end roof section which will be joined to the new roof section of the proposed extension. The roof slant of the main farm house building presented certain health and safety constraints and could not be examined at close hand. However, these and any other areas which could not be assessed at close hand were investigated with the use of the high-powered spot lamp and close-focussing monocular, meaning as thorough an examination as possible was made.

7.2 The annex building structure appeared to be in relatively dilapidated condition, with significant gaps in the masonry on the north side and gaps around the asbestos cement and corrugated metal roof covering and side panel. The fascia boards had a number of gaps along the lower edge which could potentially provide roosting opportunities. The open-fronted garage to the west elevation presented limited opportunities but also formed part of the survey.

7.3 During the internal inspection of the annex building, no droppings or other evidence of bat presence was found despite a thorough search. The internal inspection was carried out with the aid of a spot lamp, close-focusing monocular and endoscope.

7.4 The first evening emergence survey was carried out on the 19th May 2020. The survey began at 21:00hrs and finished at 23:15hrs.

Date	19/5/2020
Survey type	Evening emergence survey
Temperature	17°C, dropping to 16°C by 23:15hrs
Weather conditions	Calm, no breeze, dry, 2-3 oktas cloud cover
Sunset time	21:07hrs

Time	Species	Observation
21:31	Soprano pipistrelle	Pass – entering grounds from west, foraging briefly, exiting grounds to north-east.
21:34	Soprano pipistrelle	Pass – as above
22:10	Soprano pipistrelle	2 individuals foraging briefly to north of property before flying off to the west
22:16	Soprano pipistrelle	Pass – flying west to east to the north of the property

7.5 The second evening survey was undertaken on the 2nd June 2020. The survey began at 21:15hrs and ended at 23:15hrs.

Date	2/6/2020
Survey type	Evening emergence survey
Temperature	24°C, dropping to 21°C by 23:15hrs
Weather conditions	Calm, no breeze, dry, 4 oktas cloud cover
Sunset time	21:24hrs

Time	Species	Observation
21:47	Soprano pipistrelle	Pass – entering grounds from west, foraging briefly, exiting grounds to north-east.
21:51	Soprano pipistrelle	Pass – entering grounds from north-east, foraging briefly, exiting grounds to south.
21:58	Common pipistrelle	Pass – flying east to west across grounds to north of property
22:16	Soprano pipistrelle	Pass – entering grounds from west, foraging briefly, exiting grounds to north-east.
22:34	Soprano pipistrelle	2 individuals foraging briefly to north of property before flying off to the east

7.6 The dawn / re-entry survey was carried out on the 7th June 2020. The survey began at 03:45hrs and concluded at 05:15hrs. No bats were seen entering the building.

Date	7/6/2020
Survey type	Dawn re-entry survey
Temperature	14°C
Weather conditions	Calm, no breeze, 2 Oktas cloud cover
Sunrise time	04:58hrs

Time	Species	Observation
04:29	Soprano pipistrelle	Pass to north of property flying north-west
04:33	Common pipistrelle	Foraging briefly over field to west of property

7.8 Despite some bat activity in the vicinity of the building, no bats were seen to be using the building itself, although the observed flight lines did occur within the boundary of the property.

8. Historical and Other Relevant Information

8.1 No further information on bats at the property or in the immediate vicinity was obtained.

9. Ecology of Bats

9.1 There are 18 species of bats of which 17 are known to be breeding in the United Kingdom. Most of them are regarded as threatened due to a variety of factors including habitat loss and disturbance/damage to roosts. Of these species a number regularly use buildings or trees at certain times of year in order to find safe secure roost sites.

9.2 Bats are highly mobile flying mammals, which in the United Kingdom, feed entirely on insects. Having evolved over seventy million years they have developed sophisticated mechanisms to allow them to effectively 'see' in the dark by using sound. Called echolocation this system allows them to track and hunt down small moving insects whilst in flight, rather like radar does in a modern military fighter aircraft

9.3 In winter, when their prey is scarce, British bats hibernate in the cool parts of caves, buildings and tree cavities. They may wake occasionally and will feed if evening temperatures are greater than 7°C, when flying insects will be active. Generally however, activity in winter is very limited and bats only become fully active in spring.

9.4 In late spring female bats will gather together in maternity roosts in order to give birth and rear their single baby in June. Such maternity roosts are often near to foraging areas in order to minimise energy usage, as flight requires vast energy resources.

9.5 Whilst females form maternity colonies, usually in warmer roofs or trees, male bats tend to seek out cooler sites, which may not be so close to the foraging areas. Males are often solitary and do not exhibit the social behaviour that marks out females during the birthing period.

9.6 Several British bat species are known to rely heavily on buildings to roost. Pipistrelle species bats such as the Soprano pipistrelle, *Pipistrellus pygmaeus* and the Common Pipistrelle, *Pipistrellus pipistrellus* appear to be well represented in the county and can often be encountered in built structures located in habitat such as the building under survey. The Whiskered *Myotis mystacinus* and very similar Brandt's bats, *M. brandtii* are other species which commonly roost in buildings.

10. Relevant Legislation

10.1 The marked decline of all British bats has resulted in their being given protection under the Wildlife and Countryside Act 1981. Section 9 of the Act (through provisions in Schedule 5) made it illegal to intentionally kill, injure or take any British bat. It also made it an offence to intentionally damage or destroy their place of rest (the roost).

10.2 Further all bat species are protected under Annex IV of the European Communities Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, which requires the United Kingdom government to provide bats with strict protection. This is currently done through the Conservation of Habitats and Species Regulations 2010.

10.3 Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007 regulation 7 (4) makes a number of important changes to the Wildlife and Countryside Act 1981. One of the most significant is the addition of the word 'recklessly' within offences under Section 9 (4) of the Wildlife and Countryside Act. This covers all bat species.

10.4 The Environment Act (Wales) 2016 section 6 'Biodiversity and resilience of ecosystems; places a duty on public authorities under subsection (1) to 'seek to maintain and enhance biodiversity' so far as it is consistent with the proper exercise of those functions. In so doing, public authorities must also seek to 'promote the resilience of ecosystems'. The duty replaces the section 40 duties in the Natural Environment and Rural Communities Act 2006 (NERC Act 2006), in relation to Wales, and applies to those authorities that fell within the previous duty.

In complying with subsection (1), a public authority must take account of the resilience of ecosystems, in particular the following aspects—

- (a) diversity between and within ecosystems;
- (b) the connections between and within ecosystems;
- (c) the scale of ecosystems;
- (d) the condition of ecosystems (including their structure and functioning);
- (e) the adaptability of ecosystems.

11. Discussion

11.1 During the scoping survey / building inspection, as well as the evening and dawn emergence / bat activity surveys, no bats were detected emerging from or entering the building. However, some bat activity was observed with <5 pipistrelle species bats observed passing and foraging within the vicinity of the building during all of the surveys.

11.2 As the above bat activity surveys found no evidence of bats using the building, it is considered that the proposed works will not disturb or pose a threat to bats or their roosts. It is therefore considered that a European Protected Species Development Licence will NOT be required to proceed.

11.3 However, the building does contain a number of features appropriate for use by roosting bats and bat activity was also observed within the vicinity. Therefore, as a precautionary measure, during any works on the building, especially in respect to operations such as demolition of the annex structure and removal of roofing materials, if any bats are found or if there is any reason to believe that a bat roost has been established in the interim, as a legal requirement, all works should cease immediately while further advice is sought from the local office of Natural Resources Wales or the authors of this report (see section 10.3 above).

11.4 Also due to the noted bat activity within the immediate vicinity, the fact that a flight path and foraging areas exist within 10m of the building and the presence of these potential bat access features, contractors should be alert to the possibility of encountering such bat roosts unexpectedly during demolition work. In the event that such a bat roost is found, work on the structure should stop while further advice is sought from the local office of Natural Resources Wales.

11.5 Although the surveys indicated that bats were not using the building at this time, it does nevertheless present some features with potential opportunities for roosting bats, therefore the possibility exists of encountering bats unexpectedly during works. A number of measures should be implemented in order to ensure the safety of both bats and contractors working on the site, as well as to ensure those undertaking works abide by the relevant legislation. These measures will be outlined in the Recommendations section below.

12.0 Requirements

12.1 No bats were seen to be using the building during the course of the surveys. It is therefore recommended that works may proceed without any derogation from the Welsh Government / Natural Resources Wales. However, small numbers of bats were observed flying in close proximity to the building. Therefore as a precautionary approach, the works should be carried out with caution following best practice. This should include a soft-strip demolition approach, as detailed in the measures below. Ideally, in order to ensure no net loss of roosting opportunities, certain steps and measures should be taken to improve the local roosting habitat for bats. These measures are detailed below. As no bats were observed to be roosting on site and

those observed in the vicinity were small in number, then it is considered that the favourable conservation status of the species will not be impacted.

12.2 Due to the observed bat activity in the immediate vicinity, a pre-works survey should be carried out immediately ahead of demolition works, during the bat activity season, to further help ensure that bats are not present.

12.3 The services of an on-call licensed bat ecologist should be enlisted to provide assistance in the unlikely event that any bats are encountered during works.

12.4 As bats are highly mobile flying animals, known to be present in the vicinity and may set up new roosts at any time, all contractors carrying out works should be given a tool-box talk (presented or prepared by a licensed bat worker) warning of the possible presence of roosting bats, and of their protected status. The tool-box talk should make it clearly understood that in the event of any bats being found during the works, all works should cease in the affected area until appropriate expert advice has been sought from Natural Resources Wales or the authors of this report.

12.5 Contractors should be instructed to implement a 'soft-stripping' approach, which will involve checking for the possible presence of bats on the undersides of roofing materials and fascia boards and any other features that bats may use to roost or to access a roost. Such features should be removed by hand, checking for the presence of bats as they are lifted off, before smashing or dumping them. This is especially important at the outset of the works, since once works have started the disturbance is likely to drive any bats, which are present away voluntarily.

12.6 Despite the fact that bats were not observed using the potential features within the building, such features nevertheless present opportunities for roosting bats. Ideally, a mitigation strategy will aim for the replacement of all lost roosting opportunities as a minimum to ensure no net loss. Consideration could therefore be given to the erection of 9 bat boxes such as the Schwegler 1FF model on suitable trees within the immediate vicinity. These boxes should be erected 3 per tree, by – or under the guidance of – a suitable qualified and licensed bat ecologist.

12.7 Further enhancement measures could include that specific gaps are created around the eaves and soffit sections of the new extension to allow access for crevice roosting species such as pipistrelle bats. This would comprise a gap of 15mm – 20mm between wall of building and soffit board, allowing access to any eaves cavity. New barge boards, gutter plates and fascias could be left with a gap of 15mm- 20mm along the lower edge (between wall and board), allowing access to bats behind the board.

12.8 As previously stated bats are highly mobile flying animals which may set up new roosts at any time, therefore this report can only be considered valid for 24 months. If no development of the site has been undertaken within twenty four months of this survey, it is recommended that a further survey for use by bats should be carried out before proceeding with any potentially disturbing works.

13. References

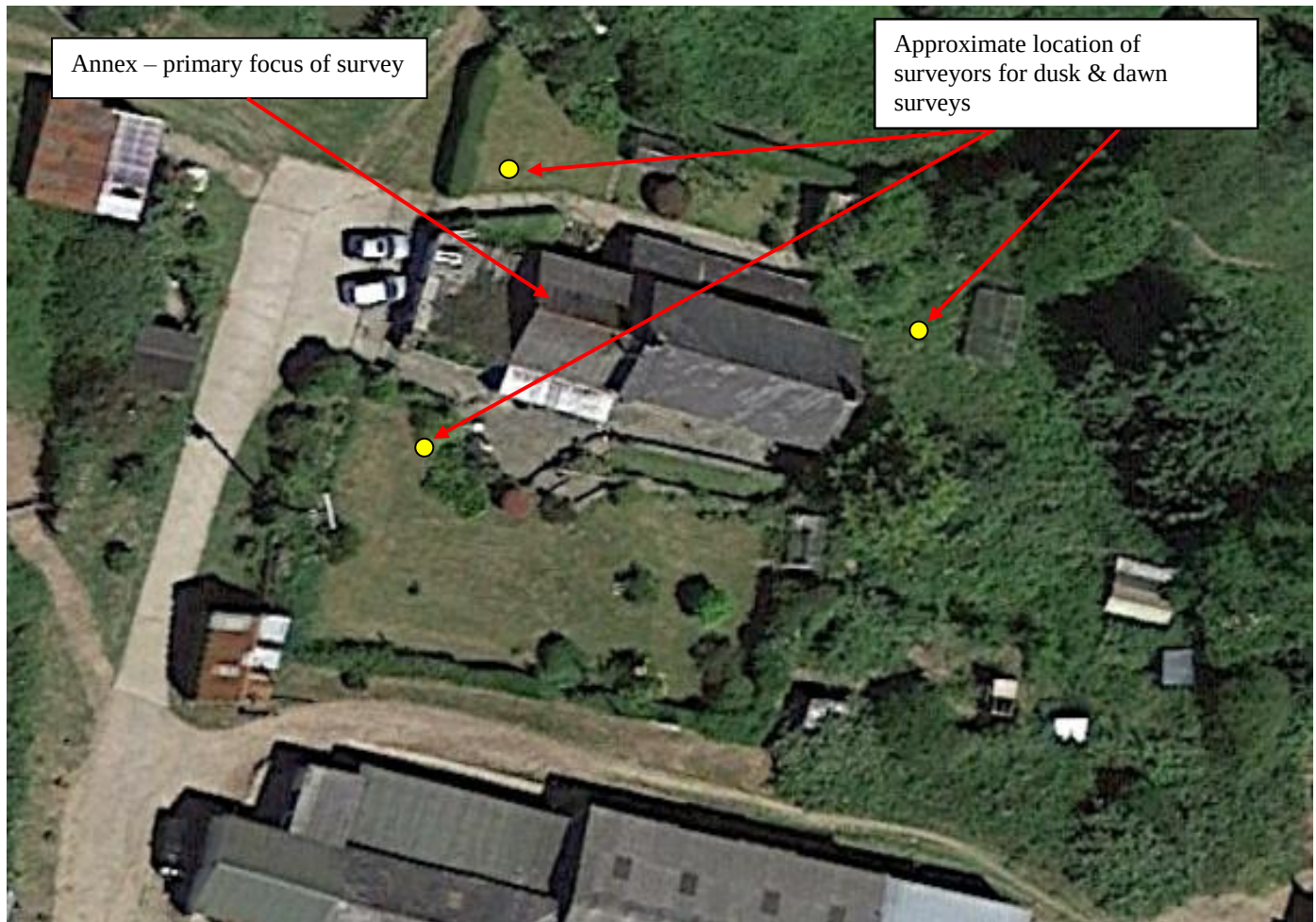
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Disclaimer

This survey was carried out and an assessment was made of the site described at a particular time. The evidence that this report contains can be used to draw conclusions as to the likely presence or absence of bats and the likely impacts of any proposed works. Every effort has been taken to provide an accurate assessment of the situation pertaining to this site at the specific time of the survey. No liability can be assumed for omissions or changes after the survey has taken place.

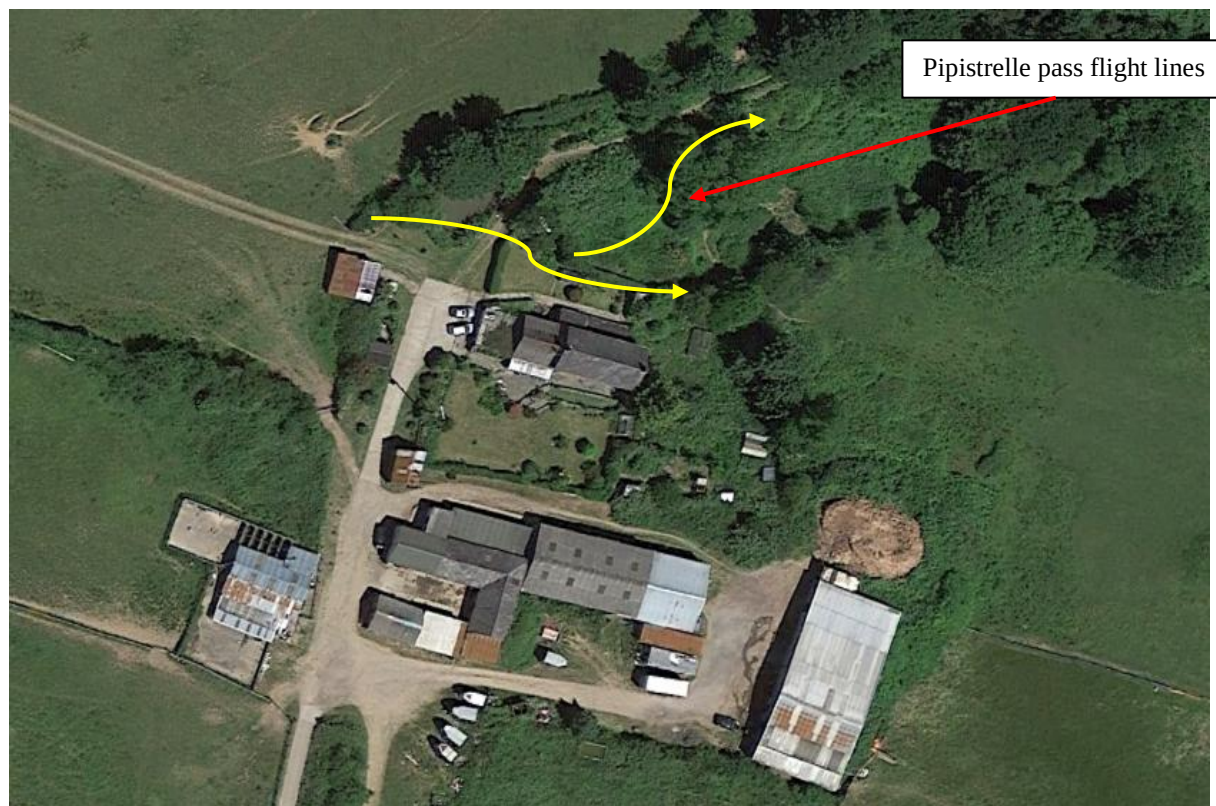
Appendix 1:

Aerial view of building and surrounding grounds



Appendix 2:

Observed flight lines:



Appendix 3: Photographs of Building Elevations

North Elevation:



Annex / extension structure

South Elevation:



West Elevation:



Interior of annex:

