

SPECTRUM ECOLOGY

Protected Species Surveys



Bat Roost and Emergence Survey

**Salem Chapel, Brynhyfryd Terrace, Seven Sisters, Neath Port
Talbot, Wales, SA10 9BB**

Report Prepared for:

Paul Treloar

June 2020

SPECTRUM ECOLOGY

Protected Species Surveys

Report on survey for Bat Roost sites

at
**Brynhyfryd Terrace,
Seven Sisters,
Neath Port Talbot,
Wales,
SA10 9BB**

**Report by
Daniel Lock
Licence Number S085293/1**

**Licensed Bat worker
For
MR. Paul Treloar**

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1. Executive Summary

1.1 Spectrum Ecology was commissioned by Mr Paul Treloar to carry out a preliminary assessment for bats on the property Salem Chapel, a decommissioned chapel situated on Brynhyfryd Terrace, Seven Sisters, Neath Port Talbot, Wales, SA10 9BB, Grid Ref SN 82109 09006. The survey was requested to inform proposals to redevelop the building into a private residential dwelling. The preliminary roost assessment found no direct evidence of bats but the building was found to contain numerous features known to have potential for the species. It was therefore decided to upgrade the survey effort to a full bat survey, in line with accepted guidelines.

1.2 The basic, preliminary assessment for bats at Salem Chapel was carried out during the daytime on the 14th May 2020. An internal and external scoping survey inspection was made of the building, looking for evidence including droppings, staining on timbers, scratch marks and/or feeding remains. All areas within the building were fully accessible, including the roof void. There were some minor constraints on accessing external aspects of the roof section due to over-riding health and safety concerns. Despite these minor constraints, as thorough a search as possible was made. No droppings, staining or other evidence of bats was found during the scoping survey. However due to the presence of the high potential features 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 and dawn activity surveys.

1.3 The building under survey is a typical Welsh Chapel design, stone built in 1905 with a timber-framed, slate covered roof with no underlay. The building measures 15 metres long by 13 metres wide. The main interior is typical of this type of Welsh chapel, with an open design and gallery seating and walkways comprising the 2nd storey. Other rooms exist to the rear, including storerooms and the workings of the chapel organ. Externally the structure appeared to be in good condition. However there were a number of slipped, damaged and missing roof tiles and gaps around all soffits and barge boards.

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 14th May, 3rd June and 22nd 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 small number of pipistrelle species bats (less than 3 passes for each survey) were recording in the wider vicinity, with the majority of passes recorded commuting along the line of trees bordering the sports area to the north-west and west of the chapel. Myotis species was also detected beyond this tree-line. The conditions for the surveys were good or excellent on all occasions.

1.5 During the course of these surveys, no bats were seen entering (dawn 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 small number of bats (<3) were detected passing and foraging in relatively close proximity to the building. These observations were made during all surveys. This activity involved Common Pipistrelle bat passes, with myotis species also detected in the wider vicinity.

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 involving works to the roof void. 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 within 15 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 replace the roof structure. **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 a bat box with year-round roosting potential such as the Schwegler 1WQ model fixed near the apex of the gable-end of the building and the creation of specific gaps around fascia boards and barge boards within the redeveloped building 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 redevelop the decommissioned chapel and convert to a residential dwelling. The redevelopment will involve extensive internal remodelling and works to the 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 itself.

3.2 All areas within the building were fully accessible, including the roof void. There were some minor constraints on accessing external aspects of the roof section due to over-riding health and safety concerns. Despite these minor constraints, as thorough a search as possible was made.

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 Salem Chapel, Seven Sisters, Neath 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

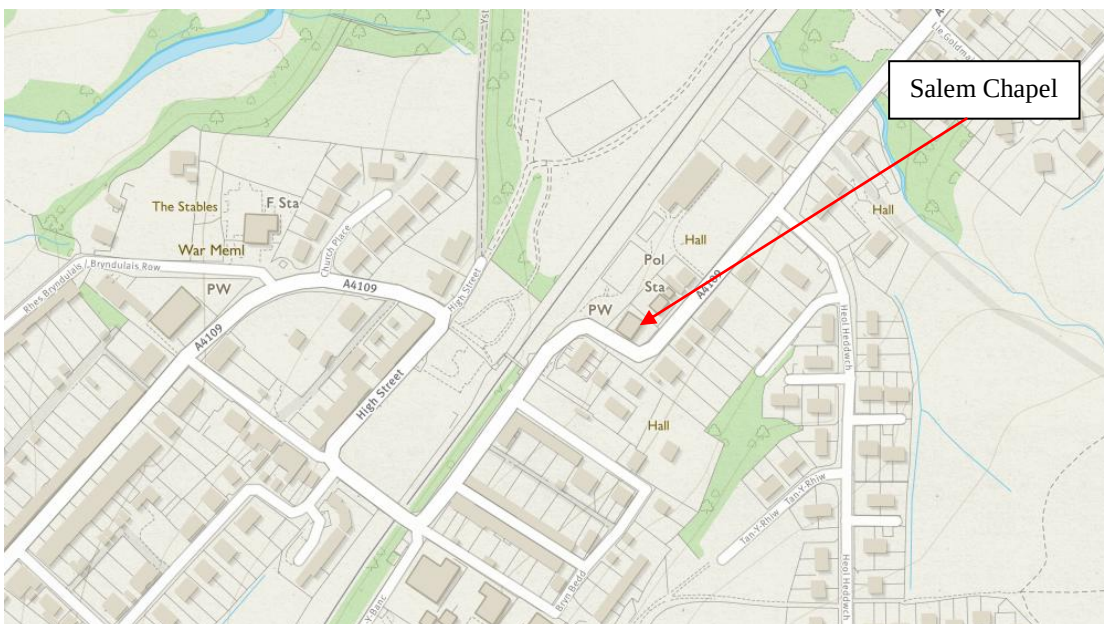
5.1 The building under survey is a typical Welsh Chapel design, stone built in 1905 with a timber-framed, slate covered roof with no underlay. The building measures 15 metres long by 13 metres wide. The main interior is typical of this type of Welsh chapel, with an open design and gallery seating and walkways comprising the 2nd storey. Other rooms exist to the rear, including storerooms and the workings of the chapel organ. Externally the structure appeared to be in good condition. However there were a number of slipped, damaged and missing roof tiles and gaps around all soffits and barge boards.

5.2 Salem Chapel in a larger landscape context:



5.3 The building is situated in the upper Dylais Valley, Neath. The surrounding environment is typical of the South Wales Valleys, comprised of pastureland, wooded valley sides, hedgerows, brooks and woodland blocks. This surrounding environment represents relatively high quality habitat for bats and you would expect to encounter the species in such a location. See aerial image above.

5.4 Location Map of Salem Chapel.



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 bats at Salem Chapel, Seven Sisters was carried out on the 14th May 2020. As thorough an investigation of the building as possible 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 building itself and all internal features were fully accessible, including the roof void. External aspects of the roof covering could not be examined at close hand due to overriding health and safety considerations. 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 building structure appeared to be in good condition. The soffit boxes and fascia boards were in generally good condition but with certain gaps along the lower edge which could be used by bats. There were a number of slipped and damaged roof tiles on the western roof slant which could potentially provide access to the roof void. The ridge tiles had a small number of gaps which could potentially be used by bats to access the building. One of the upper windows to the front of the property was damaged, allowing potential access to the interior of the building.

7.3 The first evening emergence survey was carried out on the 14th May 2020. The survey began at 20:45hrs and finished at 23:15hrs.

Date	14/5/2020
Survey type	Evening emergence survey
Temperature	16°C, dropping to 14.5°C by 23:10hrs
Weather conditions	Calm, no breeze, dry, 0 okta cloud cover
Sunset time	21:00hrs

Time	Species	Observation
21:21	Common pipistrelle	Pass – flying to west of chapel
21:34	Common pipistrelle	Detected to the west
21:52	Myotis species (possibly Whiskered)	Detected to the west

7.4 The second evening survey was undertaken on the 3rd June 2020. The survey began at 21:15hrs and ended at 23:30hrs.

Date	3/6/2020
Survey type	Evening emergence survey
Temperature	12°C
Weather conditions	Dry, 3 oktas cloud cover, light westerly breeze
Sunset time	21:26hrs

Time	Species	Observation
21:46	Common pipistrelle	Detected foraging over sports area to north-west of chapel. Before flying off to the west.
21:51	Common pipistrelle	Pass – flying north to south along line of trees bordering sports park to north-west of chapel
22:00	Common pipistrelle	Pass – as above

7.5 The dawn / re-entry survey was carried out on the 22nd June 2020. The survey began at 03:45hrs and concluded at 05:15hrs. No bats were seen entering the building.

Date	22/6/2020
Survey type	Dawn re-entry survey
Temperature	13°C
Weather conditions	Calm, light westerly breeze, 3 Oktas cloud cover
Sunrise time	04:57hrs

Time	Species	Observation
04:40	Common pipistrelle	Pass - flying north-east to south-west across open ground / sports park area to west of chapel
04:43	Myotis species (possibly Whiskered bat)	Foraging briefly around trees to north-west of chapel before flying off to west

7.6 Despite some bat activity in the vicinity of the building, no bats were seen to be using the building itself.

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 <3 pipistrelle species bats observed passing and foraging within the vicinity of the building during all of the surveys. Myotis species were also detected.

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 works to the roof void 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 15m 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 the vicinity of 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 a year-round bat roost box such as the Schwegler 1WQ installed near the apex of the rear gable end.

12.7 Further enhancement measures could include that specific gaps are created around the eaves and soffit sections of the new development 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

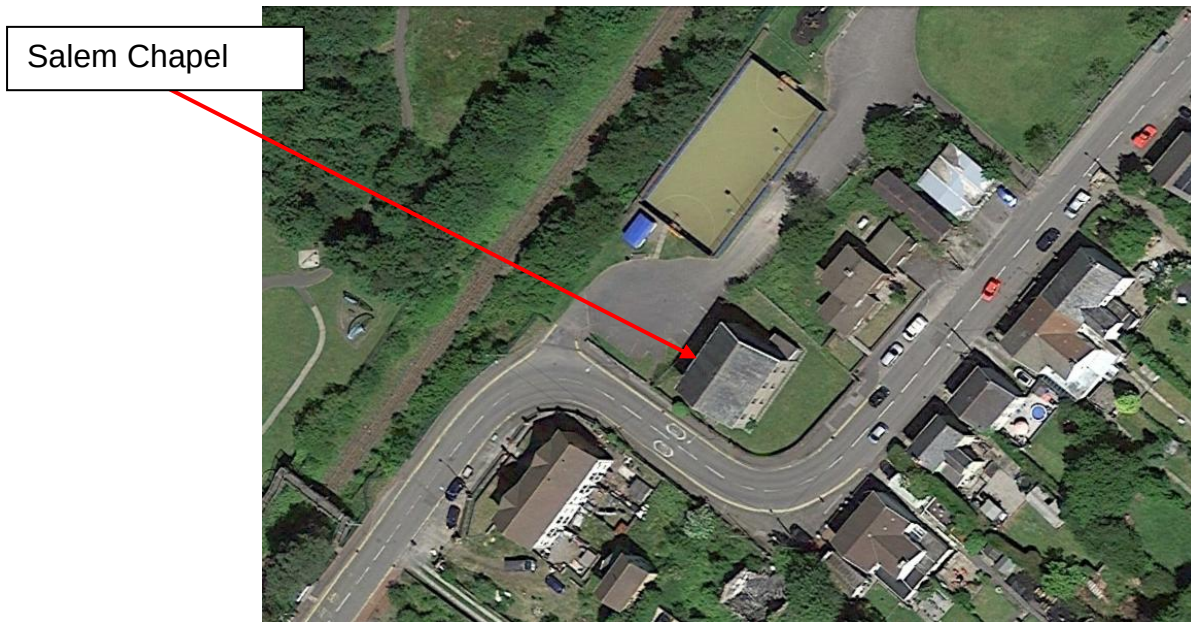
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Disclaimer

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.

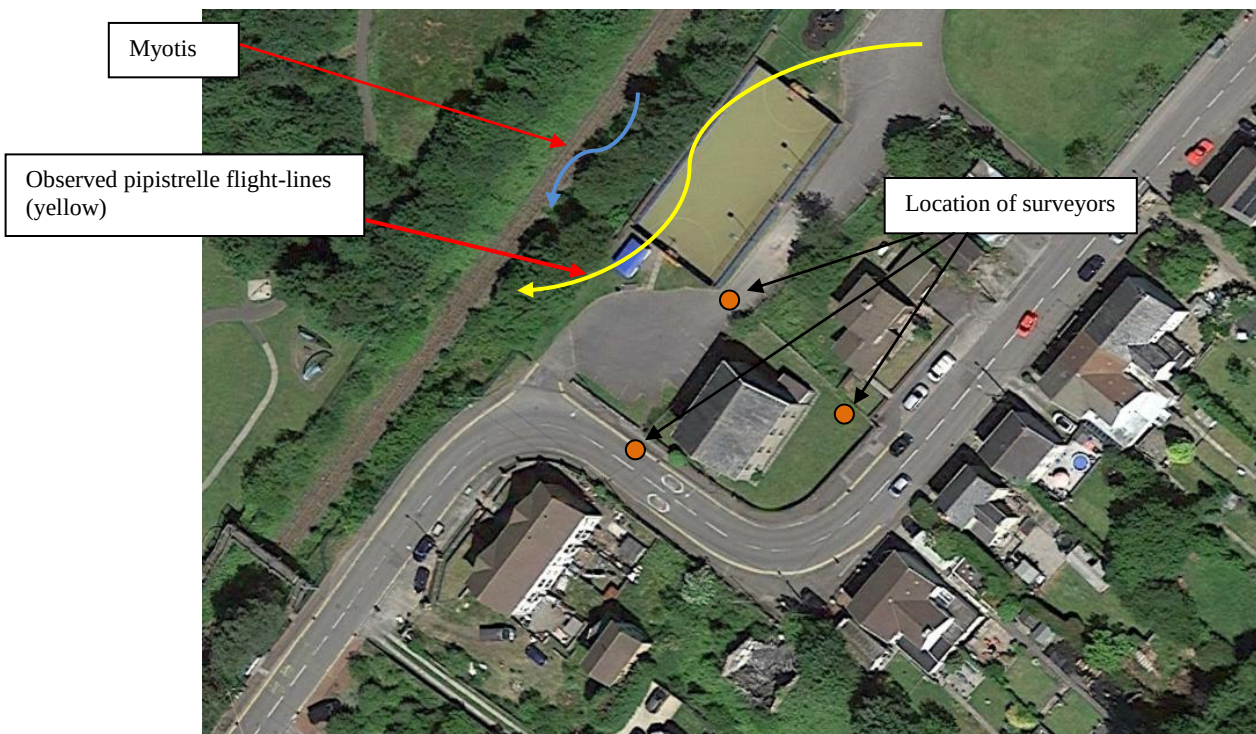
Appendix 1:

Aerial view of building and surrounding environment



Appendix 2:

Observed flight lines:



Appendix 3: Photographs of Building Elevations

South Elevation (Front):



North & East Elevation (rear):



West Elevation:



Slipped and damaged tiles:

