



Bat Survey: Wesley Methodist Church, South Street, Dowlais, Merthyr Tydfil,
CF48 3DS



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1.0 Background and Purpose

1.1 Wesley Methodist Church is a detached, former church situated within a residential area in the village of Dowlais in Merthyr Tydfil. The property is not currently in use and planning permission is sought to subdivide and extend the property to provide self contained flats across three floors. This report will investigate if there is potential to disturb bats and will be used to assist in the planning process.

1.2 To support the planning application a bat report has been commissioned to investigate if bats use the current property in any capacity during the maternity season, and for any evidence suggesting that bats use the property at other times of the year.

1.2 The report is prepared and undertaken by Mr. Richard Watkins BSc., an experienced bat ecologist with 13 years experience, and Aislinn Harris, a Natural Resources Wales licensed bat ecologist, license number S085699-1.

1.3 A data search did not identify any historic records of bats being present in the property, (LERC Reference: 0223-017). The nearest recorded day roost is 1551m from the property which is a record for a Brown Long Eared Bat (*Plecotus auritus*) and a Common Pipistrelle (*Pipistrellus pipistrellus*) day roost from 2011. There are various non-roosting records for bats, the nearest being 703m from the property which is a record for a foraging unidentified bat species; 800m from the property which is a record for a foraging Common Pipistrelle and 915m from the property which is a record for foraging Common Pipistrelles. There are records 1533m from the property for hibernating Brown Long Eared Bats; a Daubenton's Bat (*Myotis daubentonii*) and a Lesser Horseshoe Bat (*Rhinolophus hipposideros*) from 2020. The property is not within 10km of a designated SAC or SSSI for bats.

2.0 Site Description

2.1 Wesley Methodist Church is a detached, single storey, brick building with a multiple tiled apex roof. There is a dry verge and plastic fascia and soffits present and there is likely to be a cavity wall. There is a single brick built roof dormer present with a tiled lean-to roof and plastic fasciae and soffits.

2.2 The property dates back around 50 years and is located in a semi-urban environment. There is likely to be minimal ambient lighting within the immediate vicinity of the property.

2.3 The nearest significant watercourse is the River Taff, approximately 2.5km to the south west of the property and there is a smaller watercourse, Nant Morlais, approximately 890m to the north west of the property. Additionally, there are two reservoirs approximately 875m and 1km to the north east of the property.

2.4 Wesley Methodist Church is situated in a semi-urban environment immediately within a residential area in the village of Dowlais in Merthyr Tydfil. The building has a large tarmac car park to the north east and semi improved grassland to the east, south and west. Residential properties sit immediately to the north of the building. The site is bounded by a metal mesh fence line with a tree line of approximately 5 trees to the south east, outside of the site footprint. A main road sits approximately 20m to the south of the site. The town of Dowlais and residential properties are present to the north, east and south of the building. A large copse of trees are present approximately 100m to the east and 230m to the north of the property. There is a large open space approximately 360m to the north of the property and Ifor Park lies approximately 685m to the north west of the property. There are open fields and farmland starting approximately 450m to the south east and 1.2km to the north east of the property.

2.5 The National Grid Reference of the site is: **SO 0654 0764.**

2.6 Whilst this report focuses on the building consideration to the wider grounds within the development site has also been given. Photographs of the site are provided within Appendix 11.5. A site visit to assess the wider habitat within the site boundary was undertaken by Aislinn Harris of Ecological Services Ltd on the 4th August 2022. Well maintained semi improved grassland is present around the east, south and west boundary between the weld mesh fence line and tarmac footpaths. Species noted within the maintained semi improved grassland include red clover, ribwort plantain, selfheal, creeping buttercup, cut leaved cranesbill, dandelion, annual meadow grass and a species of the daisy family thought most likely to be autumn hawkbit. Five mature trees are present within the maintained grassland and these are four maple trees, thought to be field maple and one hawthorn tree.

2.7 Longer grassland which isn't regularly mown is present within the weld mesh fence that is present around the building. Species noted within the longer grassland include birds foot trefoil, cocksfoot, false oat grass, common hogweed, yorkshire fog, Knapweed, a species of bent grass thought to be creeping bent, ragwort and three orchids. The orchids were mostly going to seed making identification difficult but they were thought most likely to be common spotted orchid. The remaining habitat within the site boundary is tarmac car park and the former church building.

2.8 The longer grassland within the site and five mature trees are considered to have the most biodiversity value. The longer grassland does have more floral diversity with the presence of occasional orchid species and Knapweed of value for local biodiversity. Local invertebrate and small mammals could benefit from the longer grassland. However the grassland is dominated by grass species and likely to become very rank without management. The site is also considered fairly isolated from surrounding suitable habitat. The housing estate that surrounds the proposed development site has well mown grassland in all green spaces which are used by local residents.

2.9 The proposed site plans indicate large areas of green space will be created within the site boundary. Given the small size of the site it is unlikely any habitats can be retained within the weld mesh fence. The trees along the east and south boundary will be retained. The development proposals are considered likely to create short term habitat loss for invertebrates and small animals within the local area only. Providing suitable soft landscaping and long term management of the green spaces are secured, there is an opportunity to secure biodiversity gain within the site.

3.0 Report Constraints

3.1 Bats use different roosts throughout the year. Bats hibernate in torpor for weeks at a time throughout the cold months, mainly underground in caves and in deep rot holes at the centre of large mature trees. Bats are habitual and can live upwards of twenty years. During the summer months they will normally return annually to the same roost, usually in attics of buildings to form maternity colonies. Outside the maternity season, a scoping survey can be limited as the majority of any bats using the structure as a summer roost may not be present. External evidence such as droppings and staining which can identify bat use may have been removed by the rain. Therefore this survey will evaluate potential for bat use, in addition to searching for evidence of bats.

3.2 The report is solely concerned with bats in relation to this building. Trees and other buildings not mentioned directly have not been included in this report.

3.3 Ecological surveys are limited by factors which affect the presence of plants and animals such as the time of year; migration patterns and behaviour. The survey methods employed can provide evidence for the potential presence of bats at the times when the site was visited. Although the methods follow best practice guidance and were carried out in such a way as to maximise the chances of detection, failure to detect the target species cannot be considered as definitive proof of their absence.

3.4 Even though bats are habitual creatures they can still move to new roosts if more suitable. Therefore this report cannot predict the status of the structure in regard to bat occupancy in the future. This report should be acted upon as soon as practical and will be valid for 18 months from date of issue. If planning or building works are delayed, it is the responsibility of the client to discuss and gain approval from the *author* before work commences. Natural Resources Wales will only consider reports up to two years old.

3.5 Due to the Covid-19 pandemic no internal inspection was undertaken, however, it is suggested that this did not significantly alter the reports conclusions.

4.0 Legal Constraints

4.1 Bats, and any place a bat uses for breeding or shelter, either currently occupied or unoccupied are protected by European and British law, predominantly by **The Conservation of Habitats and Species Regulations 2017**, which are the principal means by which the Habitats Directive is transposed from European directive into law in England and Wales.

4.2 In summary this law states that it is an offence to:

- **Deliberately capture or kill a bat**
- **Deliberately disturb a bat**
- **Damage or destroy a breeding site or resting place of a bat**
- **Keep; transport; sell; exchange or offer for sale or exchange a living or dead bat or any part of a bat**

4.3 ‘Deliberately’ may also be interpreted, as not intending to injure or kill a bat but having done so due to being insufficiently informed and unaware of the consequences of the action.

4.4 For a more comprehensive description and exact wording of the legislation please refer to:

<http://www.legislation.gov.uk/ukxi/2010/490/contents/made>

4.5 Where there is a risk that a bat roost may be present, it is incumbent upon the owner to commission a specialist bat survey to identify bat roosts before any work commences. Maximum penalties for offences relating to disturbance to bats or their roosts can amount to imprisonment for a term not exceeding six months or fines of up to Level 5 on the standard scale under the Criminal Justice Act 1982/1991 (i.e. £5000 in April 2001) per roost or bat disturbed or killed, or to both.

4.6 If a bat roost is discovered, no work that could affect the roost can be undertaken until Natural Resources Wales grants a licence endorsing the work. A thorough method statement and adequate mitigation proposal will need to be submitted to support any licence application.

4.7 The Environment (Wales) Act 2016 puts an onus onto responsible bodies such as Local Planning Authorities to not only preserve, but also to enhance biodiversity meaning that planning applications must offer an element of ecological gain as well as preserving any aspects of ecological importance.

5.0 General Information

5.1 Bats are unable to build roosts themselves but instead rely on both man made and naturally occurring features to provide suitable accommodation. Bats generally prefer older buildings built with traditional materials, as traditional building methods provide more opportunities for gaps and entrances to buildings. Traditional cut roofs are preferred to a roof with trusses. Bats also prefer to roost where the external roost area has access to sunlight during the day such as south facing roof elevations.

5.2 Bats can utilise the following features on a building; end tiles, barge boards, soffit, gable ends, porches, lead flashing, hanging tiles, ridge tiles, broken tiles, eaves, sash window frames, wood cladding, fascia boards, window sills and internal roof spaces and timbers. Although this list demonstrates the most popular roosting sites it is by no means definitive. Bats can use apertures as small as 10mm in diameter to gain access.

5.3 The U.K bat population is divided into two distinct families, Rhinolophidae and Vespertilionidae. In general, Rhinolophidae (Horseshoe) bats differ in their roosting requirements to Vespertilionidae (the remainder of UK bat species). Horseshoe bats prefer to roost in large areas such as internal attic spaces and hang in the open from the roof of the roost. They tend to roost in visible clusters to maintain the high temperatures that a maternity colony needs. Horseshoe bats also prefer free flight access and egress into the roosting area. Horseshoe bats tend to be more light averting to other UK bat species, and routinely fly around the internal roosting area to warm up before exiting. It is noted that Plecotus (Long Eared) bats share some of these preferences. Vesper bats are, on the whole, crevice dwelling bats who squeeze into small apertures to access the roost. These, like Horseshoe bats, will cluster in maternity colonies, but are normally hidden from view. Vesper bats, with the exception of Long Eared bats, do not require a large internal roost to fly around before exit. Long Eared bats, although part of the vesper family, are very light averting and will, on occasions share the roosting patterns of both Horseshoe and crevice dwelling species.

6.0 External Scoping Survey

6.1 The external scoping survey was undertaken on the **8th April, 2022** in conditions of good natural light. All external aspects of the building were comprehensively evaluated for roost potential. Evidence was also sought for any staining or droppings which could suggest bat occupation. Binoculars and an endoscope were used when required.

6.2 The building was inspected for overt evidence of bat presence and occupation such as:

- Staining around the entry of roosting point caused by oils secreted by the bat into its fur
- Scratching on surfaces caused by the bat in the acts of take off and landing
- Bat droppings on walls; floors; roof voids; window sills or panes and barge boards
- Urine stains below a possible entrance site, within the entrance to a cavity or on timbers used for roosting
- Bats can produce chatter on warm evenings prior to leaving the roost. A heterodyne bat detector is used to help determine this
- Flies around the entrance or on the floor of possible roosts, which may be attracted to bat guano

6.3 Due to the condition of the building, there were a small number of opportunities for bats to access and use the building and those that were available were deemed as having at least low to moderate potential for bat use. There were areas of slipped tiles and raised ridge tiles; apertures around the roof line and the roof dormer and an aperture along the entire length of fascia on the northern elevation of the building.

6.4 No droppings or evidence of bats were discovered on any external features although this would not be definitive of bats not using the building at other times of the year.

6.5 No evidence of nesting bird use of the building was observed during the scoping survey, however, nesting use during the summer season cannot be ruled out.

6.6 Examples of apertures potentially allowing access to cavities in the building:



7.0 Internal Scoping Survey

7.1 An internal inspection was undertaken on the 3rd May 2022

7.2 The building has two separate attic spaces that was accessible via loft ladders.

7.3 The attic spaces were greater than 2.8m in internal height.

7.4 No bats or evidence of bats was seen.

7.5 No external light was visible from the attic spaces.

7.6 Two anabat express' were deployed from the 3rd of May for 5 consecutive days. No bat calls were recorded.

8.0 Emergence and Dawn Surveys

8.1 The emergence surveys were carried out during the maternity season and adhered to current best practice guidelines. These surveys were conducted from half an hour before sunset until two hours post sunset. The surveyors used are all experienced bat counters who have undergone sufficient training in basic bat ecology and bat activity. The surveyors used were Allen Harvey; Debbie Parry; Mason Smith; Kieran Turner; Caitlin Watkins and Keith Watkins. All sound analysis was undertaken by Richard Watkins.

8.2 The emergence surveys gave extra consideration to the features identified during the external scoping survey which could be utilised by bats.

8.3 Emergence Survey on 3rd May, 2022.

- Sunset: 20:41
- Weather: Dry and calm with full cloud cover
- Temperature: 12 degrees celsius
- Surveyors: Debbie Parry; Mason Smith; Kieran Turner and Caitlin Watkins

No bats were observed emerging from the building.

8.4 Emergence Survey on 19th May, 2022.

- Sunset: 21:06
- Weather: Dry and calm with approximately 95% cloud cover
- Temperature: 11 degrees celsius
- Surveyors: Allen Harvey; Mason Smith; Caitlin Watkins and Keith Watkins

No bats were observed emerging from the building.

8.5 The weather conditions were dry and calm with little wind and no rain and therefore conducive for bat activity. The temperature was above 10 degrees celsius during the emergence surveys.

8.6 The best viewing conditions were obtained.

8.7 Echo-meter Touch 2 Pro bat detectors were present to acoustically record any bat calls.

8.8 Analysis of sound recording on bat detectors:

Species of Bats Recorded in the Area:

Common Pipistrelle

Pipistrellus pipistrellus

8.9 During the emergence survey, only a couple of Common Pipistrelle (*Pipistrellus pipistrellus*) bat calls were recorded. The overall level of bat activity within the local area was considered to be low. The bats were observed foraging in the area but did not emerge from the building.

9.0 Concluding Remarks and Recommendations

9.1 During the emergence surveys, no bats were observed using the building as a roost location. Therefore it is suggested that the impact of the proposed building works will have a negligible impact on the local bat population.

9.2 The building was classed as having at least low to moderate potential for bat use for crevice dwelling species of bat. There were a small number of features around the building that bats could access, behind a fascia board on the north elevation and diffusely placed around the roof. It is unlikely bats could access the internal attic space. There was no visible light and the roof line and felt was in good condition.

9.3 There is some ecological connectivity to suitable feeding areas from the building to the wider landscape. The location of the building within the wider landscape was considered during the assessment for bat roosting use.

9.4 There were minimal amounts of street lighting within the vicinity of the property.

9.5 The building did not offer significant hibernation potential for bats.

9.6 No evidence of nesting bird use of the building was observed during the emergence surveys. No nest sites were noted and no bird activity associated with the building was observed during the bat scoping survey and activity surveys.

9.7 Static monitoring was undertaken in the attic spaces, no bat calls were recorded. The survey was carried out in weather conditions conducive to bat activity.

9.8 Following commencement of works; outside any ecologically supervised period and in the **unlikely** event that the contractor encounters any bats during any works, then work must immediately stop and the bat worker summoned. If for any reason they cannot be contacted, advice must be sought from Natural Resources Wales, (Telephone Number 0300 065 3000). No works would recommence until a licence is issued by NRW sanctioning works going forward. The guidance note on finding bats found in the appendices must be followed.

9.9 There is potential to offer ecological gain for bats if the project proceeds. This would help satisfy the local planning authorities legal responsibility to preserve and enhance biodiversity under the Wales Environment (Wales) Act 2016. The creation of a bat roost for crevice dwelling bats can be incorporated into the new build element at very little expense and with no impact to the owners of the property. It is recommended that new roosts be created for crevice dwelling species of bats in the new build scheme and this should be added to the plans prior to submission for planning approval. Further ecological gain can be made by incorporating bird bricks into the new build design. Any new

mitigation must not be directly illuminated and a dark corridor must be established allowing undisturbed access for any bat away from the site.

9.10 A suitable external lighting plan must be implemented to reduce any disturbance to bats feeding in the immediate area.

9.11 Any works to the roof or roofline will be firstly assessed by a suitably qualified ecologist prior to any works starting, to ensure no bats are present before works start. An ecological clerk of works will be appointed for the project and will liaise with the project manager, regarding schedule of works and key times for site visits prior to works starting in that area. There will be no external flood lighting during the schedule of works. If at any time bats or evidence of bats are found then works will immediately stop and no works would further commence until a bat licence is issued by natural resources Wales is issued sanctioning any works ongoing.

9.12 A soft landscaping plan for the site will be devised and implemented as part of any future development plans. Any future soft landscaping proposals must use native species as far as practicably possible. Suitable on going management of any green spaces to encourage longer more diverse grassland habitat must also be secured. For example mowing some areas of the grounds twice per year would encourage longer more diverse habitats to establish.

9.13 The current weld mesh fencing is likely to be a barrier to movement of small mammals such as hedgehog across the site. Any fencing or gates should have a continuous gap of at least 13cm from the base to the floor to allow animal movement across the site.

10.0 Proposed Mitigation

10.1 To comply with the Wales Environment Act 2016, ecological gain will be included into the scope of works. This will consist of bird and bat boxes externally mounted on the exterior of the building. Details and locations of these have been added to the architectural drawings.

Signed: *R Watkins* Date: September 2022

11.0 Appendix

Aerial Site Photo

Surveyor Positions

OS Map

Guidance Note

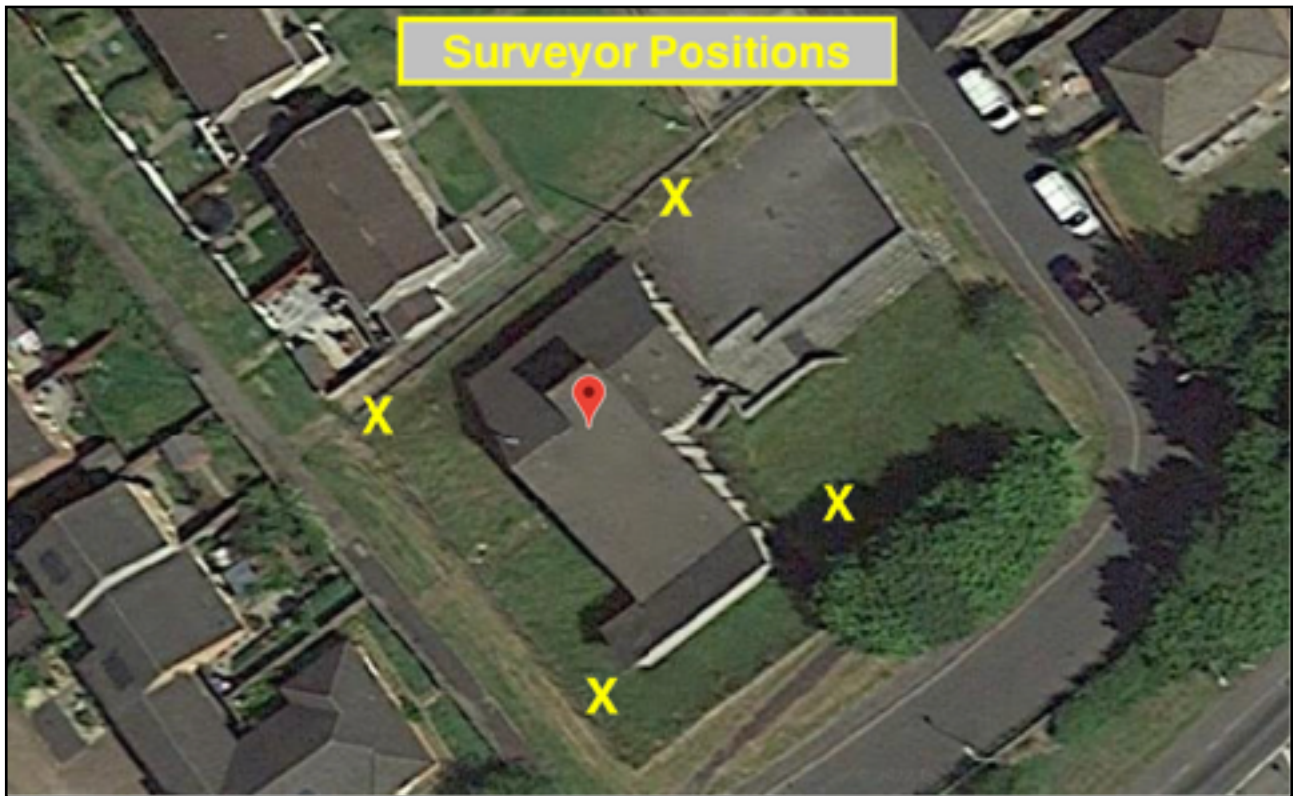
Site Photographs

11.1 Aerial Site Photo



The site in its wider environment offering excellent ecological connectivity to the surrounding habitat.

11.2 Surveyor Positions



11.3 OS Map National Grid Reference SO 0654 0764



11.4 Guidance Note

Guidance Note (Important information in the unlikely event that bats are discovered)

Where any building or demolition work is to commence, all contractors should remain vigilant at all times during the course of the works, looking for signs that bats are present or that bats have formerly occupied the building. Whilst this survey has been undertaken and no visible evidence of bats found within the building, the possibility of a bat or bats being present cannot be absolutely ruled out. In the extremely unlikely event that bats are discovered during the works, then work must **stop** as soon as it is safe to do so, The bat worker must be contacted immediately and Natural Resources Wales informed in order for a licence to be granted to complete the works. No works will be permitted until such time a license is approved.

If in the unlikely event a roost is accidentally opened up, any loose bats should be returned to the roost and apertures closed to prevent their escape until they can be examined for injury by a bat worker. Dead bats should be retained. Bats are very fragile and should be handled by a professional, and unless absolutely necessary should not to be approached and disturbed. However, where a bat is clearly injured and distressed, the contractor should carefully collect them and place in a light proof box. Gloves must be worn when handling bats*

In the Event of a Bats being discovered the bat worker must be contacted immediately that it is safe to do so on 07866461726

If the bat worker is not available, Natural Resources Wales must be contacted on 0300 065 3000

*Bats can potentially carry European Bat Lyssa Virus (EBLV) which is a strain of rabies virus that is found in some bat species although extremely uncommon, a potential risk occurs; therefore, all bats must be handled with thick gloves.

11.5 Site Photographs



East boundary looking south



Southern portion of site within fence line



West portion of site within fence line



Northern boundary of site looking east



Church building



North boundary of site looking west