

Bat Survey: 1 Tyn-Y-Graig Road, Llanbradach, Caerphilly, CF83 3LH



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Warning! The building is now a confirmed bat roost.

No works can be undertaken that may impact or disturb the roost without the legal owner being in possession of a European Protected Species License. Please refer to section 4 and section 9 of the report for further details.

If there is any doubt of what is permissible please contact the author on: Tel:07866461726 or Email rich@ecologicalservices.wales prior to any works commencing.

Disturbance or destruction of a bat roost is a criminal offence that may result in any granted planning permission being revoked, the legal owner receiving a fine and or a prison sentence.

1.0 The Brief; its Background and Purpose

1.1 The building being surveyed is located in the rear garden on 1 Tyn-Y-Graig on a residential street where Tyn-Y-Graig Road meets Pencerrig Street in the village of Llanbradach within Glamorgan. The building is not currently in use and planning permission is sought to demolish the existing building and create a residential dwelling. 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.

1.3 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.

1.4 A data search did not identify any historic records of bats being present in the building. The nearest recorded day roosts are 63m from the property which is a record for a single Greater Horseshoe Bat (*Rhinolophus ferrumequinum*) day roost from 2018; 89m from the property which is a record for a Greater Horseshoe Bat (*Rhinolophus ferrumequinum*) day roost from 2016 and 245m from the property which is a record for an unidentified bat species day roost from 2009. There are various non roosting records for bats, the nearest being 73m from the property which is a record for a foraging Common Pipistrelle (*Pipistrellus pipistrellus*) and Soprano Pipistrelle (*Pipistrellus pygmaeus*) and 282m from the property which is a record for a foraging Common Pipistrelle (*Pipistrellus pipistrellus*). There is a record for unidentified deceased bats 168m from the property. The property is within 10km of 1 SSSI for bats; Ruperra Castle and Woodlands but is not within 10km of a designated SAC. Due to the small scale of the proposed works, this site will not be adversely affected.

2.0 Site Description

2.1 The building being surveyed is located in the rear garden of 1 Tyn-Y-Graig and is a two storey, detached stone building with a box metal apex roof. There are timber boards covering the windows and there is a metal shutter door to the front of the building. There are timber barge boards on the gable ends and there is 3/4 timber fascia on the front of the building with one piece missing. There is no soffit on the building and there is no cavity wall.

2.2 The building dates back to in excess of 80 years and is located in a residential area in the village of Llanbradach. There is a street light to the front of the building which will emit a moderate amount of light.

2.3 The nearest significant watercourse is the Rhymney River, approximately 332m to the east of the property, with a smaller watercourse, Nant Owen, approximately 587m to the north of the property.

2.4 The building is located in a semi-urban environment; the property is situated immediately within a residential area but is surrounded by open fields and farmland. There is a tree-line immediately to the west of the property extending along the railway line and there are unlimited open fields starting approximately 148ft to the west and 164m to the east of the property. There are riparian corridors along both watercourses in the area and there is excellent ecological connectivity for bats to the wider environment.

2.5 The National Grid Reference of the site is: **ST 1473 9039**.

3.0 Report Constraints

3.1 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.

3.2 Ecological surveys are limited by factors which affect the presence of plants and animals such as the time of year, migration patterns and behaviours. 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.

3.3 Even though bats are habitual creatures they can still move to new roosts if they are 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 two years from the 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.

3.4 Due to the Covid-19 pandemic no internal inspection was undertaken, however, it is suggested that this did not significantly alter the reports conclusions. During the second emergence survey, access to the rear garden was not possible, however, this was not considered to be a significant constraint as any potential features for bat access could still be visualised.

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 or 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 and 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 UK 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 28th July, 2021 and in conditions of good natural light. All external aspects of the buildings 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 entry of roosting points 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 cills 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 unlimited opportunities for bats to access and use the building. Those that were available were deemed as moderate-high potential. There were apertures in the stone; under the timber fascia and in the timber boards covering the windows. There was a missing piece of timber fascia on the building. The building was classed as moderate-high potential for roosting bats.

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 Examples of apertures allowing access to cavities in the building:



7.0 Internal Inspection

7.1 Due to the Covid-19 pandemic no internal inspections were undertaken, however, it is suggested that this did not significantly alter the reports conclusion.

8.0 Exit and Return 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 Hannah Evans; Tyrone Evans and Alan Harvey. 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 28th July, 2021.

- Sunset: 21:09
- Weather: Dry and calm with 35% cloud cover
- Temperature: 15 degrees celsius

No bats were observed emerging from the building.

8.4 Return Survey on 29th July, 2021.

- Sunrise: 05:34
- Weather: Dry and calm with 30% cloud cover
- Temperature: 14 degrees celsius

No bats were observed returning to the building.

8.5 Emergence Survey on 6th September, 2021.

- Sunset: 19:48
- Weather: Dry and calm with 10% cloud cover
- Temperature: 21 degrees celsius

4 Common Pipistrelles (*Pipistrellus pipistrellus*) were observed emerging from the building. 3 emerged from gaps in the stonework on the eastern gable of the building at 19:55 and 19:57 and 1 emerged from underneath the timber barge boards on the western gable of the building at 20:12.

8.6 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 for all of the surveys; 15 degrees celsius on the first emergence survey and 21 degrees celsius on the second emergence survey.

8.7 The best viewing conditions were obtained.



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

8.9 Analysis of sound recording on bat detectors:

Species of Bats Recorded Emerging from the Building:	
Common Pipistrelle	Pipistrellus pipistrellus

Species of Bats Recorded in the Area:	
Common Pipistrelle	Pipistrellus pipistrellus
Noctule	Nyctalus noctula
Soprano Pipistrelle	Pipistrellus pygmaeus

8.10 During the emergence surveys, a low number of Common Pipistrelle (*Pipistrellus pipistrellus*); Noctule (*Nyctalus noctula*) and Soprano Pipistrelle (*Pipistrellus pygmaeus*) bat calls were recorded. A single Noctule (*Nyctalus noctula*) was recorded but was not observed and a single Common Pipistrelle (*Pipistrellus pipistrellus*) and Soprano Pipistrelle (*Pipistrellus pygmaeus*) were observed foraging around the building.

9.0 Concluding Remarks and Recommendations

9.1 Direct evidence of bat use was identified; 4 Common Pipistrelles (*Pipistrellus pipistrellus*) were observed emerging from the building. A maximum of 4 bats were observed using the building as a day roost during any activity survey. Common Pipistrelles (*Pipistrellus pipistrellus*) are a common species of bat and are often found roosting in buildings. These types of bats are more tolerant to light disturbance than other species of bats. The building was assessed as having moderate-high potential for bat use. The building and its condition offered opportunities for bat occupation and roosting potential. The age of the building and the excellent ecological connectivity to suitable feeding areas made the location of the building suitable for bat use. There was a street light to the front of the building which emitted a moderate amount of light.

9.2 Throughout the surveys, a low number of bat calls were recorded and bats were observed using the building. The bats using the building as a day roost are probably males or non breeding females. The emergence surveys did not identify a maternity roost.

9.3 If careful consideration is made to incorporate improved roosting conditions into the new build scheme, then this project could offer ecological gain for the resident bats.

9.4 New roost creation in the new building scheme is required to accommodate crevice dwelling species of bats.

9.5 There is potential to offer ecological gain for bats and nesting birds if the project proceeds. This would help satisfy the local planning authorities legal responsibility to preserve and enhance biodiversity under the Environment (Wales) Act 2016. The creation of new roosting features will be incorporated into the schedule of works. This can be achieved at very little expense and with no impact to the owners of the property.

9.3 The building is now a confirmed bat roost. No work that could affect the bat roost is permitted by law, without the permission from Natural Resources Wales, including any works to the roof. Direct illumination of the building is also not permitted, as this could constitute disturbance. (Please see Section 5 of this report for further information).

9.4 If planning is approved, the legal owner must apply and be in possession of a licence to destroy the roost. This will take approximately 30 working days to be issued. This licence would have to offer a methodology to ensure that any loss of roosting sites be replaced and preferably enhanced in the new build and the project be undertaken in a way which minimises any risk to bats. An ecological clerk of works will be appointed and retained for the duration of the project.

9.5 A bat box will be erected prior to demolition works in a suitable location by a suitably qualified ecologist.

9.6 A detailed external lighting plan will be required to minimise any external light disturbance to the bats using the building and surrounding area.

9.7 There are no current proposed plans available. Prior to submission for full planning permission the proposed plans will be required to be assessed by a suitably qualified ecologist who will advise on suitable mitigation/compensation for any roost lost.

Signed



Date: September, 2021

10.0 Appendix

Aerial Site Photo

Surveyor Positions

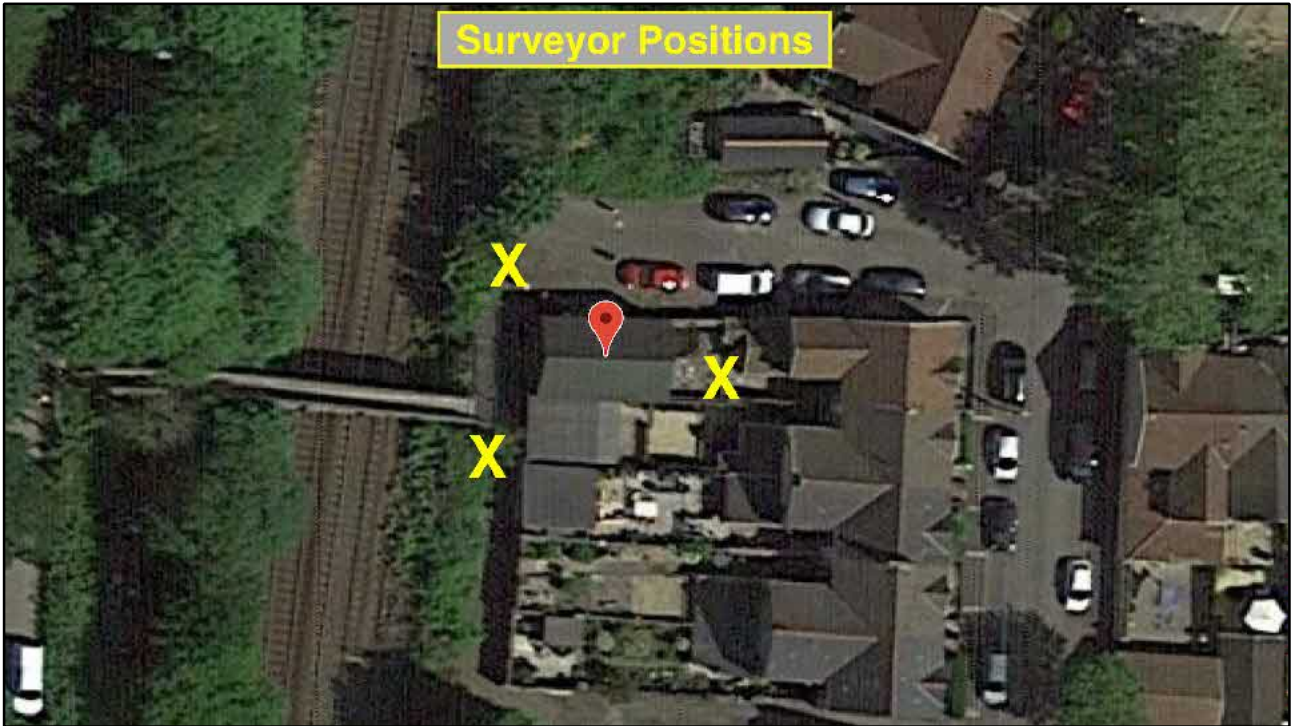
OS Map

Aerial Site Photo



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

Surveyor Positions



OS Map National Grid Reference ST 1473 9039

