



Bat Scoping Survey: The Barns at Chapel Farm, Chapel Lane, Llandeuvaud,
Newport



Instructed by: Newport Norse

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1.0 Background and Purpose

1.1 The buildings being surveyed consist of four stone barns which form part of the wider complex of Chapel Farm. Chapel Farm is situated in a rural environment to the north east of the small hamlet of Llandeud. The barns are all currently in use for storage and planning permission is sought to demolish Barns 1 and 8; to carry out repair works to Barn 2 and to partially demolish Barn 5. For the purpose of this report, the barns have been numbered on the below site plan by Newport Norse. This report will investigate if there is potential to disturb bats and will be used to assist in the planning process.



Figure 1 – Aerial photograph indicating potential scope of demolition (red) and repair (blue) at Chapel Farm, Llandeud

1.2 A data search was undertaken with SEWBRc (0234-505) to provide information on local bat and bird species in the area. The data search did not identify any historic records of bats being present within the buildings. The nearest recorded roosts are approximately 875m from the site which is a record for an unidentified bat species day roost from 2017; 960m from the site which is an historic record for a Pipistrelle Species (*Pipistrellus sp.*) day roost from 1985 and 995m from the site which is a record for a Lesser Horseshoe Bat (*Rhinolophus hipposideros*) night roost and a Soprano Pipistrelle (*Pipistrellus pygmaeus*) day roost from 2022.

1.3 There are various non roosting records for bats, the nearest being approximately 440m from the site which is a record for a foraging Common Pipistrelle (*Pipistrellus pipistrellus*); Noctule (*Nyctalus noctula*) and Serotine (*Eptesicus serotinus*).

1.4 A number of records for nesting birds was returned as part of the data search within 500m of the proposed development site. Species records include Great Tit; Herring Gull; House Martin; House Sparrow; Kestrel; Little Owl; Pied Wagtail; Spotted Flycatcher; Starling; Swallow and Swift.

1.5 The site is within 10km of 1 designated SAC and 2 SSSI for bats, however, due to the localised nature of the proposed works, these protected sites will not be adversely affected.

<u>SAC Within 10km</u>	<u>SSSI Within 10km</u>
Wye Valley & Forest of Dean Bat Sites	Mwyngloddfa Mynydd-Bach Wye Valley Lesser Horseshoe Bat Site

2.0 Site Description

2.1 The buildings being surveyed consist of four stone barns which form part of the wider complex of Chapel Farm.

2.2 Barn 1 (B1) is a detached, single storey, stone building with a pitched corrugated metal sheet roof. There are no fasciae or soffits present and there is no cavity wall in the building. There is no internal attic space within the building and the building is open to the roof.

The corrugated sheet roof is likely to suffer from temperature fluctuations during the summer months, making the building less suitable for bat roosting use. There are open doorways; apertures in the stonework; areas of vegetation; apertures at the apexes; apertures underneath the roofing sheets and several missing and slipped ridge tiles. The building is also missing a large section of the wall to the eastern elevation. The building is classed as having **moderate** potential for roosting bats.

2.3 Barn 2 (B2) is a large, detached, stone building which is two storeys in height with a pitched corrugated metal sheet roof. The main roof of the building is lined with corrugated metal sheeting and timber rafters are present along the roof line. There are no fasciae or soffits present and there is no cavity wall in the building. The building has a wooden floor which creates a ground and first floor internally. There is no internal attic space within the building and the building is open to the roof. There is a stone built, tiled roofed lean-to to the western elevation of the building with an area of timber fascia but no soffits.

The corrugated sheet roof is likely to suffer from temperature fluctuations during the summer months, making the building less suitable for bat roosting use. There are apertures underneath the roofing sheets; apertures and cracks in the stonework and a partially open ground floor section to the eastern elevation of the building. There are also several missing and slipped tiles on the lean-to and an open doorway. The building is classed as having **moderate** potential for roosting bats. There is a large crack in the south facing wall from ground level to the eaves which is starting to pull away from the building. This will require immediate repair works to stitch the wall back together.

2.4 Barn 5 (B5) is a detached, single storey, stone building with a pitched slate roof and no fasciae or soffits. There is no cavity wall in the building. There is no internal attic space in the areas of the building which are accessible. Dense ruderal vegetation and scrub directly in front of the building prevent internal access to the southern half of the structure. The southern section of the building is approximately 8m in length and is currently leaning away from the remaining section of the building.

There are raised slates and ridge tiles; apertures in the stonework; areas of vegetation and missing slates. The building is classed as having **moderate** potential for roosting bats.

2.5 Barn 8 (B8) is a detached, single storey, stone building with a pitched slate roof. There are no fasciae or soffits present and there is no cavity wall in the building. There is no internal attic space within the building and the building is open to the roof.

There are several missing and slipped slates; raised ridge tiles; apertures and cracks in the stonework; a vertical slit in the stonework at the gable end; areas of vegetation and all windows and doors are missing. The building is classed as having **moderate** potential for roosting bats. There is a large crack in the north east facing wall from ground level to the eaves which is starting to pull away from the building causing slates to collapse from the roof. The unsafe roofing slates are at risk of blowing off and injuring cattle and farm workers.

2.6 The barns at Chapel Farm date back to in excess of 100 years and are situated in a rural environment. There is unlikely to be any ambient lighting within the vicinity of the site.

2.7 The nearest significant watercourse is the River Usk, approximately 3.8km to the north west of the site at its nearest point. Additionally, Wentwood Reservoir lies approximately 3.2km to the north east of the site.

2.8 The buildings being surveyed consist of four stone barns which form part of the wider complex of Chapel Farm which is situated in a rural environment to the north east of the small hamlet of Llandeudov. The property is immediately surrounded by substantial amounts of open agricultural fields and tree-lines and there is optimal ecological connectivity for bats to the wider environment.

2.9 The National Grid Reference of the site is: **ST 4076 9057**

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 these buildings. Trees and other buildings not mentioned directly have not been included in this report.

3.3 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 eighteen months 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 eighteen months old.

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/uksi/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 **29th September 2023** 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. The external scoping survey was 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 S092780-1.

6.2 The buildings were 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 age and condition of the buildings, the four stone barns were all assessed as having moderate potential for use by roosting bats. Each individual building and its bat roosting potential has been broken down in Section 2 of this report.

6.4 No droppings or evidence of bats were discovered on any external features.

6.5 No evidence of nesting bird use of any of the buildings was observed during the scoping survey.

6.6 Examples of apertures allowing access to cavities in the buildings:

Barn 1







Barn 5







Barn 8







7.0 Internal Scoping Survey

7.1 The internal scoping survey of all of the buildings was undertaken on the **29th September 2023**. The internal survey of all buildings was undertaken by Aislinn Harris, a Natural Resources Wales licensed bat ecologist, license number S092780-1.

7.2 There were no internal attic spaces within any of the buildings. All of the buildings were unlined and open to the roofs. The underside of the roofing materials could be seen in all accessible areas of the buildings. An internal inspection of the southern half of Barn 5 could not be undertaken due to the dense scrub in front of the doors, however, there was no internal attic space within the building. Internal access in the northern half of B5 was possible.

7.3 No droppings or evidence of bats were discovered on any internal features.

Barn 1



Barn 2



Barn 8





8.0 Concluding Remarks and Recommendations

8.1 No direct evidence of bat use was identified during the scoping survey. All areas of Barns 1;2 and 8 were accessible during the site visit. An internal inspection of Barn 5 where demolition works are proposed could not be undertaken due to the dense scrub in front of the doors, however, there was no internal attic space within the building.

8.2 The farm complex is located in an area with optimal ecological connectivity for bats to the wider environment and the surrounding environment does offer significant potential for bat use.

8.3 There is unlikely to be any ambient lighting within the vicinity of the site.

8.4 Due to the imminent health and safety risk to livestock and farm workers, it is recommended that the repair works to Barn 2 be carried out immediately and that Barn 8 be demolished immediately. The repair works to Barn 2 are localised and will only affect the stone walls to the southern elevation of the building. An endoscopic inspection of any cracks in the stonework will be undertaken on both barns immediately prior to the repair works and demolition works being carried out. Prior to Barn 8 being demolished, the roofing slates and timbers will be hand removed under direct supervision of a suitably qualified ecologist. If bats or any evidence of bats are discovered, then all works will cease and activity surveys may be recommended or a development license from Natural Resources Wales will be required.

8.5 Barns 1 and 5 were assessed as having moderate potential for roosting bats. Both buildings offered numerous opportunities for bats to access and use the buildings. Whilst these buildings are in a poor state of repair, their structural integrity is not as compromised as Barns 2 and 8. It is recommended that at least two bat activity surveys are completed on the buildings.

8.6 All of the barns do offer low hibernation potential for bats. Apertures were noted in the external and internal stone walls. The barns are all used for storage but are not lived in so they do provide thermally stable environments for hibernating bats. The timing of demolition and repair works must avoid the hibernation season of November - February inclusive.

8.7 No evidence of nesting bird use of any of the buildings was observed during the scoping survey.

8.8 Barns 1 and 5 do offer a number of opportunities for bats to access and use the buildings. Following the survey guidelines, at least two bat activity surveys are recommended to establish the presence or absence of bats within the buildings. The general shelf life of activity surveys is eighteen months. Top up surveys may be required after this time.

8.9 A minimum of five experienced bat surveyors (located to cover Barns 1 and 5) will be used to adequately cover the buildings during the emergence surveys. The surveys will conform to the “*Bat Surveys for Professional Ecologists, Good Practice Guidelines 2016*” and will be undertaken in the core maternity season for bats of May to August inclusive. The surveys will be undertaken in weather conditions conducive for bat activity. Suitable bat monitoring equipment will be used to acoustically analyse any bat calls which are present to allow for accurate species identification. **Once the further surveys are completed, detailed mitigation and enhancement measures can be designed into the development.**

8.10 If bats are found to be resident within the buildings, a development licence from Natural Resources Wales may be required for any works which affect the structures. This process is separate to planning consent and can only be applied for once planning consent has been granted.

8.11 This report must be used in conjunction with the “Bat Friendly Working Methodology” authored by Ecological Services Ltd and dated October 2023.

Signed: Hannah Evans Date: October 2023

9.0 Appendix

Aerial Site Photographs

OS Map

Guidance Note

Appendix 1 Aerial Site Photographs



The site in its immediate environment.



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

Appendix 2 OS Map National Grid Reference ST 4076 9057



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.

Appendix 3 Guidance Note