



Bat Survey: The Barns at Chapel Farm, Chapel Lane, Llandeud, Newport



Instructed by: Newport Norse

Reported by: Ecological Services Ltd
10 Mount Pleasant, Llanelly Hill, Abergavenny, Monmouthshire, NP7 0NT

Author	Date	Version
Richard Watkins	August 2024	V4.0

T: 07866461726 E: rich@ecologicalservices.wales W: www.ecologicalservices.wales

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Guidance Note

Warning! The building is now a confirmed bat roost.

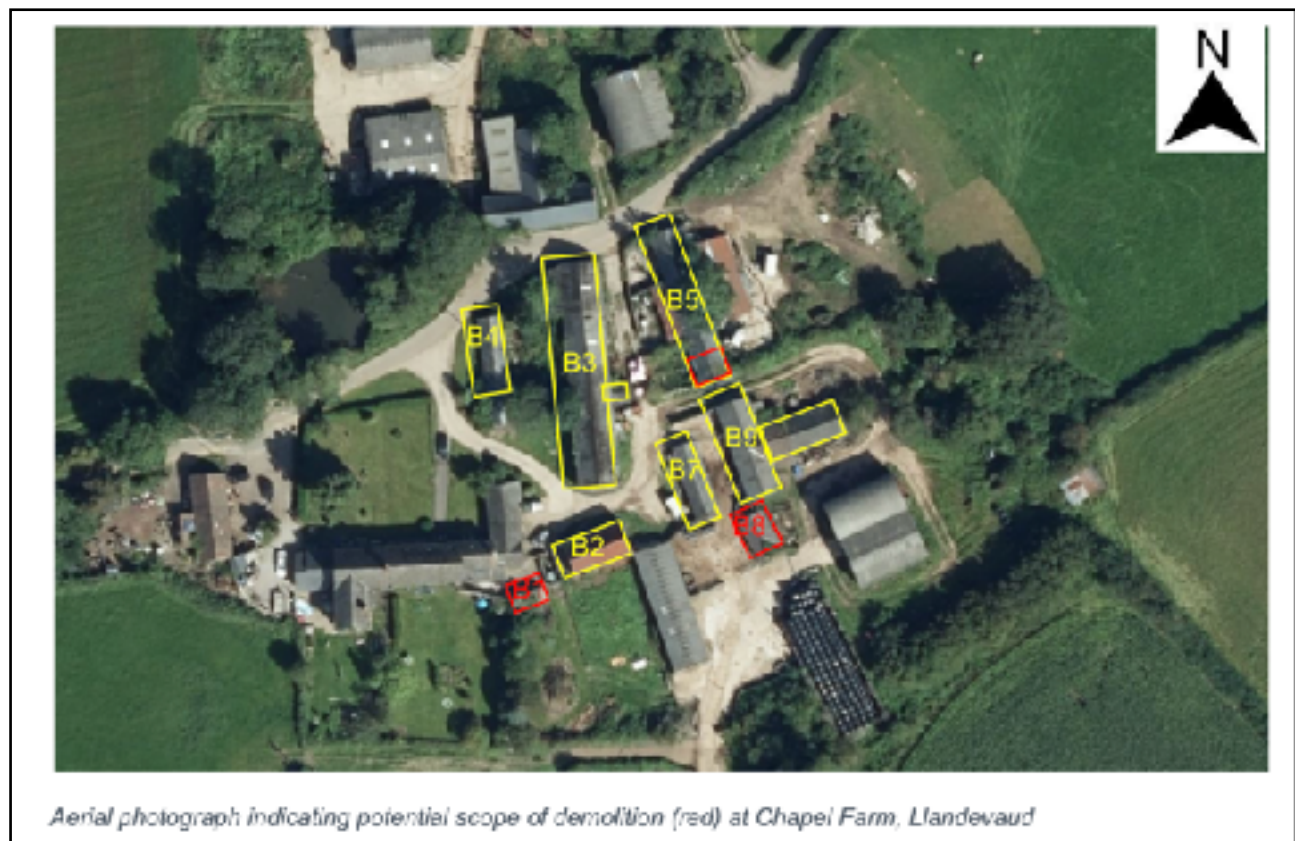
No works can be undertaken that may impact or disturb the roost without the legal owner being in possession of a European Protected Species License. Please refer to section 4 and section 9 of the report for further details.

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 Background and Purpose

1.1 The buildings being surveyed consist of three 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 Llandeudaud. The barns are all currently in use for storage and planning permission is sought to demolish Barns 1 and 8 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.



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 Natural Resources Wales licensed bat ecologist with 13 years experience, license number S0931358-1.

1.4 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.

1.5 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*).

1.6 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.

1.7 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 three 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 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.

2.4 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.

2.5 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.

2.6 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.

2.7 The buildings being surveyed consist of three 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 Llandevaud. 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.

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

3.0 Report Constraints

3.1 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.

3.2 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. Natural Resources Wales will only accept survey data up to two years old from date of issue for licence applications, although some Local Planning Authorities will only accept survey data up to eighteen months old. 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.

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 **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 three 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











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







8.0 Emergence 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. 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 First Emergence Survey on **all of the barns on **3rd May 2024****

- Sunset: 20:40
- Weather: Dry and calm with full cloud cover
- Temperature: 11 degrees celsius
- Surveyors: Hannah Evans; Tyrone Evans; Allen Harvey; Lloyd James; Debbie Parry; Caitlin Smith; Mason Smith; Kinga Streich; Keith Watkins; Richard Watkins and Scott Watkins

No bats were observed emerging from the buildings.

8.4 Second Emergence Survey on **Barns 1 and 8 on **28th May 2024****

- Sunset: 21:16
- Weather: Dry and calm with full cloud cover
- Temperature: 15 degrees celsius
- Surveyors: Hannah Evans; Tyrone Evans; Allen Harvey; Adam Hughes; Keith Watkins and Richard Watkins

No bats were observed emerging from the buildings.

8.5 Second Emergence Survey on **Barn 5 on **4th July 2024****

- Sunset: 21:31
- Weather: Dry and calm with full cloud cover
- Temperature: 15 degrees celsius
- Surveyors: Hannah Evans; Tyrone Evans; Allen Harvey; Adam Hughes; Keith Watkins and Richard Watkins

1 Common Pipistrelle (*Pipistrellus pipistrellus*) was observed emerging from the open side to the western elevation of Barn 5 at 21:54.



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 during the emergence surveys.

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. Nightfox Night Vision Goggles with record features were also used alongside additional infrared spotlights. These were positioned with the surveyors.

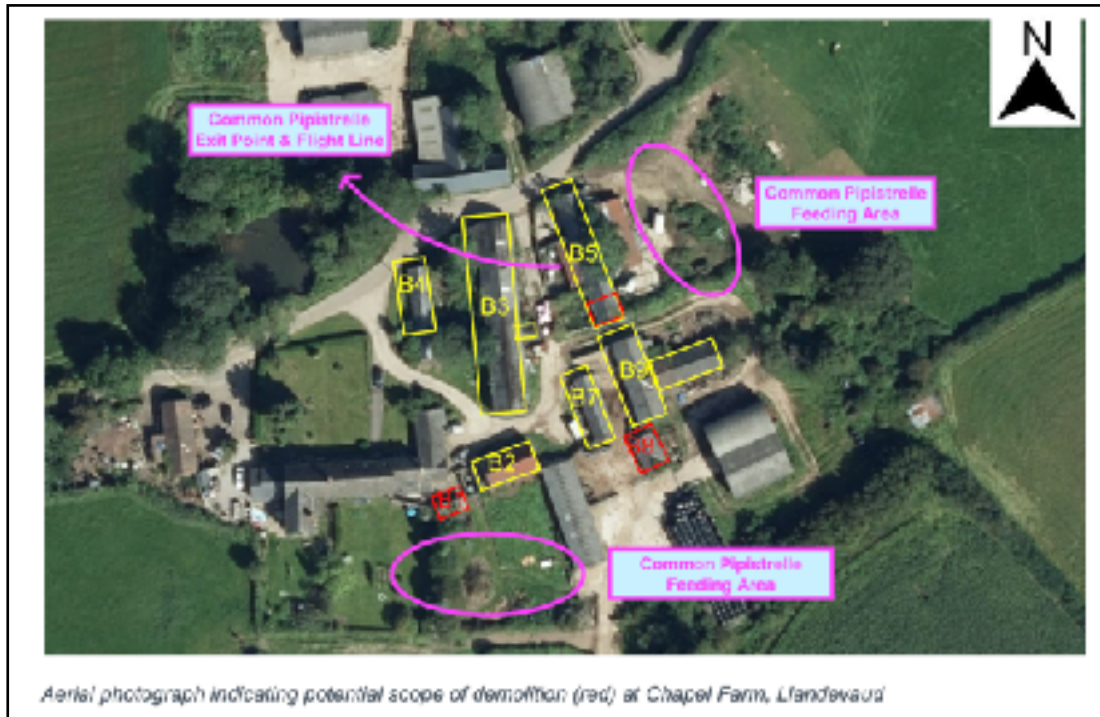
8.9 Analysis of sound recording on bat detectors:

Species of Bats Recorded Emerging from Barn 5:	
Common Pipistrelle	<i>Pipistrellus pipistrellus</i>
Species of Bats Recorded in the Area:	
Common Pipistrelle	<i>Pipistrellus pipistrellus</i>
Noctule	<i>Nyctalus noctula</i>

8.10 During the first emergence survey on all of the barns, a moderate number of bat calls were recorded. During the survey, a maternity colony of Common Pipistrelles were observed using Barn 3. This was an incidental finding outside of the current scope of works and the proposed works will have a negligible impact on the maternity colony.

8.11 During the second emergence survey on Barns 1 and 8, a very low number of bat calls were recorded. A Noctule was detected but was not observed and a small number of Common Pipistrelles were observed foraging around the site.

8.12 During the second emergence survey on Barn 5, a very low number of bat calls were recorded. A Common Pipistrelle was observed emerging from Barn 5 and a small number of Common Pipistrelles were observed foraging around the site.



8.13 Examples of NVA Still Shots:







9.0 Concluding Remarks and Recommendations

9.1 During the emergence surveys, a bat was observed using Barn 5 as a day roost.

9.2 No bats were observed emerging from Barns 1 or 8 during the emergence surveys. Therefore works can proceed in these areas once any relevant statutory permissions have been granted.

9.3 A Common Pipistrelle (*Pipistrellus pipistrellus*) was observed emerging from Barn 5 during the second emergence survey. Common Pipistrelles 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.

9.4 Throughout the surveys, a very low number of bat calls were recorded and a maximum of 1 bat was observed using Barn 5 as a day roost during any emergence survey.

9.5 The emergence surveys did not identify a significant maternity roost. The bat using Barn 5 as a day roost is likely to be male or a non breeding female and is using the building as an occasional day roost.

9.6 During the emergence surveys, there was a maternity colony of Common Pipistrelles using Barn 3. This was an incidental finding outside of the current scope of works and the proposed works will have a negligible impact on the maternity colony. Further bat surveys will be required if any works to Barn 3 are proposed in the future and these findings must be considered alongside any future survey work.

9.7 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 through February inclusive.

9.8 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 were in a poor state of repair, their structural integrity was not as compromised as Barn 8.

9.9 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.

9.10 There was no ambient lighting within the vicinity of the site.

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

9.12 Barn 5 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).

9.13 The current proposed schedule of works would potentially destroy the known bat roost in Barn 5.

9.14 If planning is approved for the scheme of works on Barn 5, the legal owner must apply and be in possession of a European Protected Species Licence to destroy the roost, this is issued by Natural Resources Wales. This will take approximately 40 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.

9.15 A bat box will be erected prior to works in a suitable location by a suitably qualified ecologist. This will be used to relocate any bats found during an ecological soft strip of the building under European Protected Species Licence.

9.16 A detailed external lighting plan will be required to minimise any external light disturbance to the bats using the building and surrounding area. Any new external lighting must not directly illuminate any roosting location. Any external lighting must be downward angled and activated by passive infrared. The lights will be baffled to avoid any unnecessary lateral or vertical light spill. The lux levels of any external lights will be as low as required for health and safety purposes.

10.0 Proposed Mitigation and Enhancements

10.1 To comply with Natural Resources Wales and the Environment (Wales) Act 2016, ecological gain will be included into the scope of works. **All proposed mitigation and enhancements must be shown on architectural drawings.** This will consist of:

4 Schwegler 1FQ Surface Mounted Bat Boxes. These can be painted with a water based paint to match the surrounding colour scheme.

4 Vivara Pro WoodStone Surface Mounted Swift Nest Boxes.

4 WoodStone Swallow Nest Bowls (Plywood board mounted) or Ceramic Swallow Bowls.

If any of the above products are not available, then further advice must be sought from a suitably qualified ecologist regarding a suitable replacement product.

10.2 It is proposed that new roosting for bats be created by fitting four Schwegler 1FQ surface mounted bat boxes. **The locations of these will be decided by a suitably qualified ecologist and these will be fitted on site under direct supervision of a suitably qualified ecologist.**



10.3 Bat enhancements / mitigation will benefit from the southern elevation or an elevation where there is direct access to sunlight as the bats can tolerate and prefer high levels of temperature in their roost.

10.4 Four Vivara Pro WoodStone Swift Nest Boxes will be surface mounted on suitable buildings. **These will not be situated on south facing elevations. The locations of these will be decided by a suitably qualified ecologist and these will be fitted on site under direct supervision of a suitably qualified ecologist.**



10.5 Four Swallow cups will be placed at eaves level on a suitable building. **These will not be situated on south facing elevations. The locations of these will be decided by a suitably qualified ecologist and these will be fitted on site under direct supervision of a suitably qualified ecologist.**



10.6 Any nesting bird enhancements / mitigation will not be suited on the south elevation as this may experience excess heat from the sun.

10.7 Direct and prolonged illumination of the buildings, especially near any roost entry points or bird boxes must be avoided as this will cause disturbance.

10.8 Where practical, all bat features should be located far enough from any windows to avoid any direct light spill, at least a minimum of 2 metres away.

10.9 On occasions the suggested enhancements / mitigation can be in short supply. Please order the enhancements / mitigation as soon as practical to avoid supply issues during the building phase. If supply is depleted, please seek advice from a suitably qualified ecologist on a suitable replacement prior to the purchase.

10.10 All enhancement / mitigation features must be installed prior to any demolition works commencing.

Signed: Richard Watkins Date: August 2024

11.0 Appendix

Aerial Site Photographs

OS Map

Surveyor & NVA Positions

Guidance Note

Appendix 1 Aerial Site Photographs

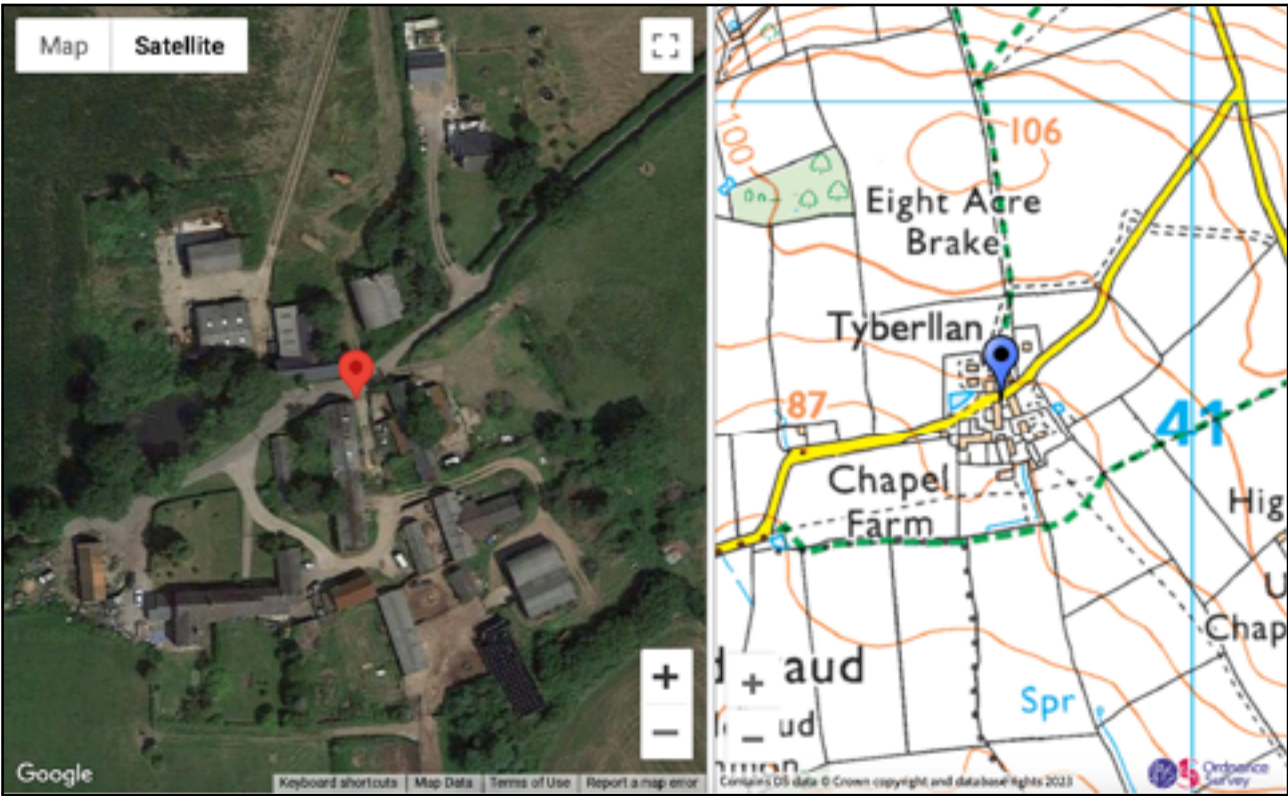


The site in its immediate environment.

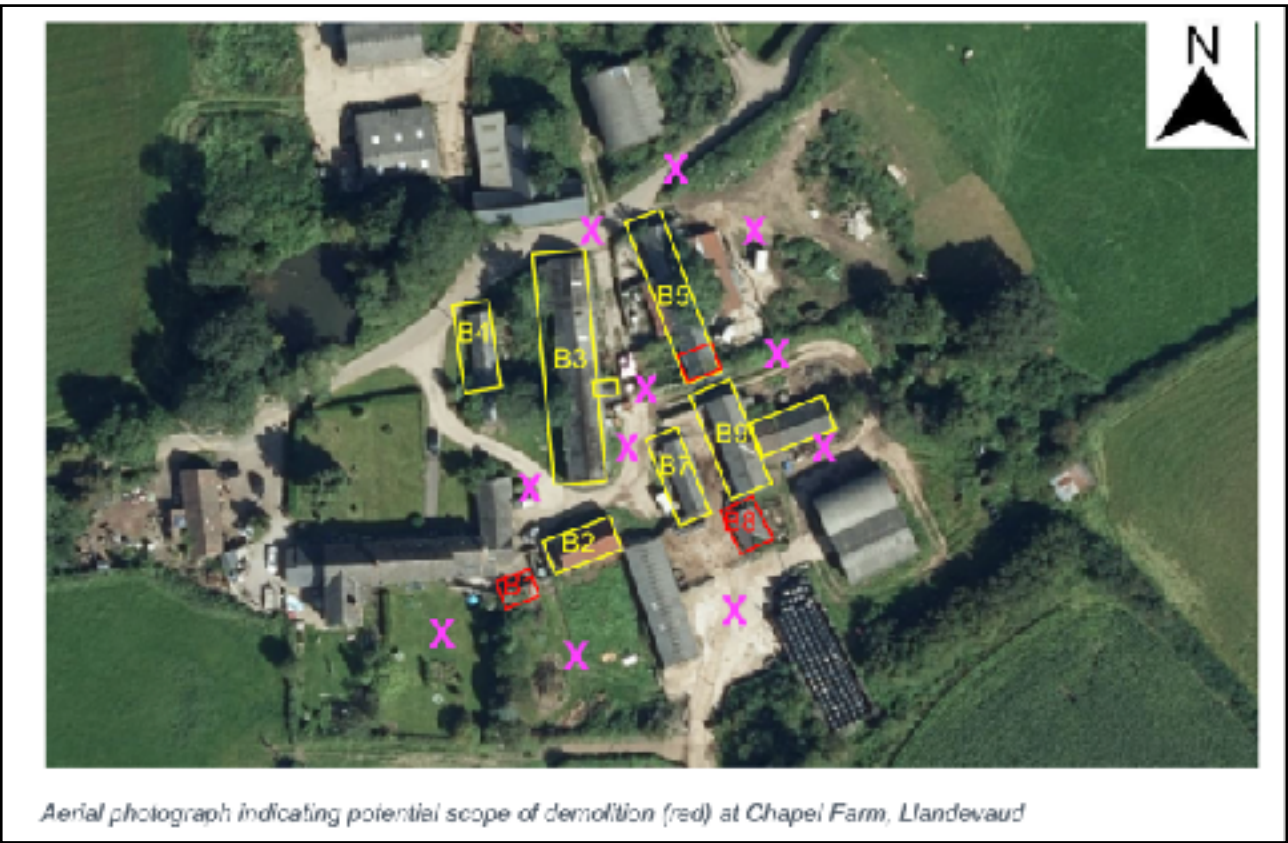


The site in its wider environment offering optimal ecological connectivity to the surrounding habitat.

Appendix 2 OS Map National Grid Reference ST 4076 9057



Appendix 3 Surveyor & NVA Positions



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.