



Bat Survey: The School House, Charles Williams Church in Wales School, High Street,
Caerleon, NP18 1AZ



Instructed by: Charles Williams Charity

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1.0 Background and Purpose

1.1 The School House is a Grade II* listed building and is part of Charles Williams School. The building is situated in a semi-rural environment along the residential and commercial street of High Street in the town of Caerleon. The building is currently in use as a school and planning permission and listed building consent are sought to undertake building works to the building which will involve roofing works. The proposed works include the following;

- External painting of windows; fasciae; soffits and rainwater goods and internal painting of windows.
- Possible replacement of rainwater goods and timber windows.
- Review timber fasciae / soffits and repair any damaged sections.
- To the 'newer' aspect of the building (off the yard) - strip back the roof covering and re-salvage where possible; provide a new roof membrane where there is not currently one or it's aged; improve insulation provisions and re-slate using as much of the existing slates as possible. Most of the work for now involves securing slipped and damaged slates due to a health and safety risk.
- Strip back and remove existing rosemary tile roof covering to the 'pyramid roof'; provide a new membrane; add to existing insulation levels (likely replace it all, possibly with sheep's wool) and re-cover with slate.
- To this roof area there is a large rendered chimney which is leaking. In the first instance it is proposed to remove the render and repair the existing brickwork. However, it may have to be taken down and rebuilt.
- Flat roof over the main entrance / WCs completely strip back to the concrete deck as it's completely failed and replace to include insulation board (already some in place but it's saturated).
- Possible repairs to the dormer windows / lead etc in the main older roof areas.

This report will investigate if there is potential to disturb bats and will be used to assist in the planning process. The building has been identified in the below site plan.



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 (0245-312) to provide information on local bat and bird species in the area. The data search did identify a Soprano Pipistrelle (*Pipistrellus pygmaeus*) maternity roost record from 2013 within the junior school building. A record of an unidentified bat flying within the junior school building in 2008 was also submitted to SEWBRc.

1.5 There are various non-roosting records for bats, the nearest being approximately 110m from the site which is a record for a foraging unidentified bat species; 240m from the site which is a record for a Common Pipistrelle live sighting and 395m from the site which is a record for an unidentified bat species live sighting. There are numerous other records for Pipistrelle bats within the wider area.

1.6 There is a record for the presence of Barn Owl, a schedule 1 bird, within approximately 360m of the development site from 2016. Other bird records given to the same grid reference include House Sparrow; Peregrine Falcon; Starling and Swallow.

1.7 The site is not within 10km of a designated SAC or SSSI for bats.

2.0 Site Description

2.1 The School House is a substantial, detached, Grade II* listed building which is predominantly two storeys in height, with some areas being three storeys in height. The building consists of a multiple hipped and pitched slate roof. There are a number of hipped roofed dormer windows around the building and there are timber fasciae and soffits present. There is no cavity wall in the building.

2.2 The oldest parts of the building date back to 1724 and the site is situated in a semi-rural environment. There are likely to be minimal amounts of security lighting within the site boundary.

2.3 The nearest significant watercourses are the River Usk, approximately 400m to the south east of the site and the Afon Lwyd, approximately 605m to the north east of the site at their nearest points.

2.4 The site is situated in a semi-rural environment along the residential and commercial street of High Street in the town of Caerleon. The school is located to the south of the town of Caerleon with residential housing and shops to the north and east of site. Playing fields are located to the west of the primary school buildings. Caerleon Secondary School is present approximately 250m to the west of site. The River Usk is located approximately 400m to the south of site. There are riparian corridors along both of the 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 approximately: **ST 3388 9058**

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 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.

3.2 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 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 An external scoping survey was undertaken on the **17th June 2024** 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.

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 age and condition of the building, there were a number of opportunities present for bats to access and use the building and those that were available were deemed as having moderate potential for roosting bats. There were areas raised lead around all of the dormer windows; areas of raised fasciae; apertures around the chimneys; areas of missing mortar along the ridge lines; a number of raised and slipped slates and apertures between the soffits and the walls.

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

6.5 Evidence of nesting bird use of the building was observed during the scoping survey.

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





7.0 Internal Scoping Survey

7.1 The internal scoping survey was undertaken on the **17th June 2024** by **Hannah Evans (accredited agent S092780/2)**, an experienced bat ecologist with 5 years experience.

7.2 There were four accessible roof voids within the building. The approximate locations of the roof voids have been identified in the below plan. None of the voids were boarded out and there was insulation covering the floor of each space. Each of the voids were lined and there were no areas of significant light ingress present within the voids.

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





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 the 24th June 2024

- Sunset: 21:34
- Weather: Dry and calm with approximately 50% cloud cover
- Temperature: 18 degrees celsius
- Surveyors: Jonathan Daniels; Tyrone Evans; Allen Harvey; Adam Hughes; Ryan Offers; Debbie Parry; Caitlin Smith and Keith Watkins

No bats were observed emerging from the building.

8.4 Second Emergence Survey on the 17th July 2024

- Sunset: 21:21
- Weather: Dry and calm with approximately 95% cloud cover
- Temperature: 17 degrees celsius
- Surveyors: Jonathan Daniels; Adam Hughes; Matthew Kedward; Ryan Offers; Caitlin Smith; Mason Smith; Matthew Thomas and Kieran Turner

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.

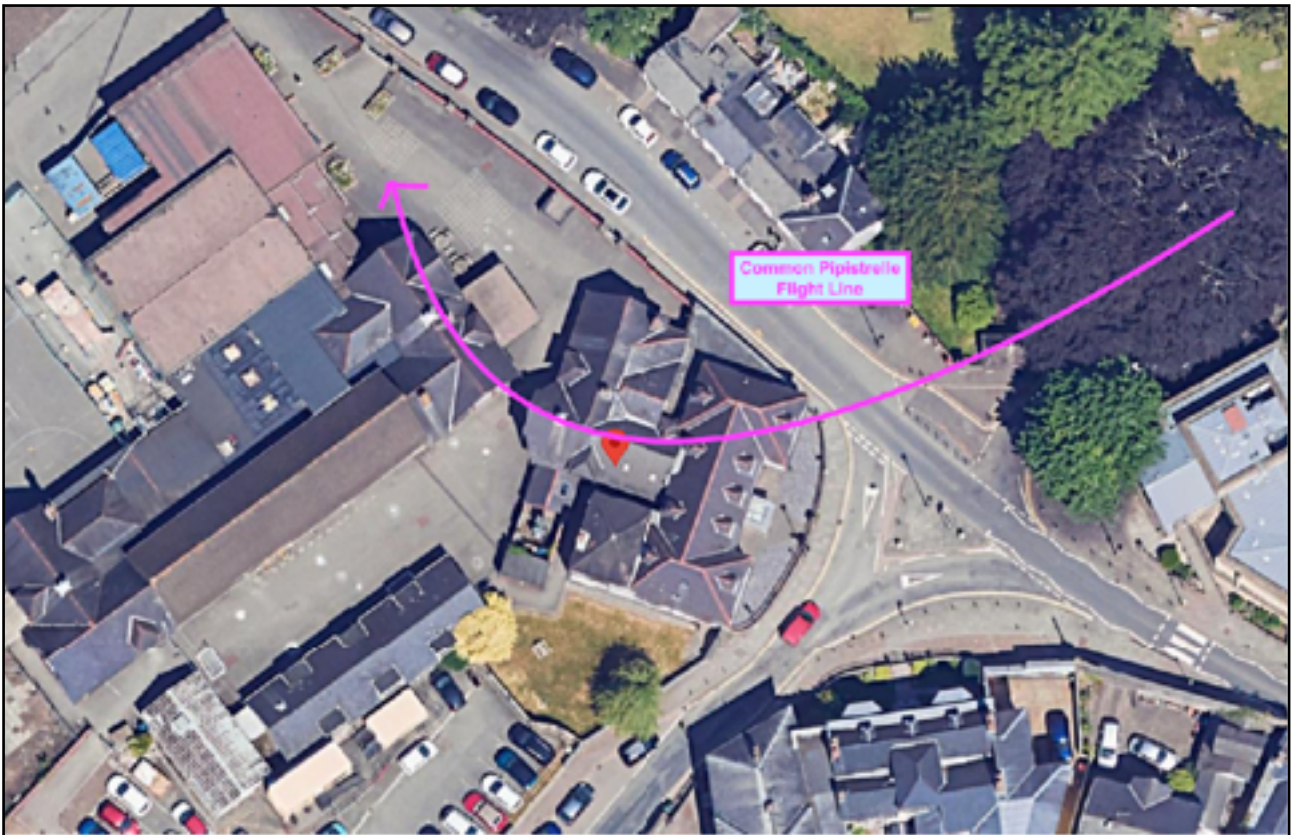
8.6 The best viewing conditions were obtained.

8.7 Echo-meter Touch 2 Pro bat detectors were present to acoustically record any bat calls. Nightfox Night Vision Goggles with record features were also used alongside additional infrared spotlights. These were positioned with the surveyors.

8.8 Analysis of sound recording on bat detectors:

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

8.9 During the first emergence survey, 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 commuting through the site from the church to the north east of the school house.



8.10 During the second emergence survey, only a single Noctule bat call was recorded and the bat was observed commuting high over the site.

8.11 Examples of NVA Still Shots:



9.0 Concluding Remarks and Recommendations

9.1 During the emergence surveys, no bats were observed emerging from the building.

9.2 Throughout the surveys, a very low number of bat calls were recorded and no bats were observed using the building. Therefore it is suggested that the proposed building works will have a negligible impact on the local bat population.

9.3 The building does not offer significant hibernation potential for bats. The external walls were sound with no visible apertures for bats preventing access into the wall structure. When considering the absence of bat access points into the wall structure, the hibernation use of the building is considered to be limited.

9.4 Evidence of nesting bird use of the building was observed during the surveys. Any building works must if possible be completed outside of the bird nesting season of March through August inclusive. If works are to proceed in the nesting bird season then a suitably qualified ecologist must first inspect the building for active birds nests. No works can commence until any active birds nests become vacant.

9.5 The building was assessed as having moderate potential for roosting bats and offered a number of opportunities for bats to access and use the building.

9.6 The site is located in an area with excellent ecological connectivity for bats to the wider environment and the surrounding environment does offer potential for bat use.

9.7 There were minimal amounts of ambient lighting along High Street to the north of the building.

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 A suitable external lighting plan must be implemented to reduce any disturbance to the bats feeding and commuting in the vicinity of the property.

10.0 Proposed Enhancements

10.1 To comply with the Environment (Wales) Act 2016, ecological gain will be included into the scope of works. This will consist of:

1 Schwegler IFQ Surface Mounted Bat Box. This can be painted with a water based paint to match the surrounding colour scheme.

1 Surface Mounted ISP Schwegler Sparrow Terrace.

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 one Schwegler 1FQ surface mounted bat box on the southern side of an existing chimney. The bat box will be surface mounted on the chimney so that it will be out of visual sight of any children which will discourage disturbance and it will also be located in an area where, in the very unlikely event that the fixings fail, it will not fall to the ground.



10.3 Bat enhancements 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 One ISP Schwegler Sparrow Terrace will be surface mounts on the northern elevation of the existing building. **This will not be situated on a south facing elevation.**



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

10.6 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.

10.7 On occasions the suggested enhancements can be in short supply. Please order the enhancements 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.

10.8 Recommended Locations of Bat and Bird Enhancements:



1SP Schwegler Sparrow Terrac



Schwegler IFQ Surface Mounted Bat Box



Signed: *R Watkins* Date: August 2024

11.0 Appendix

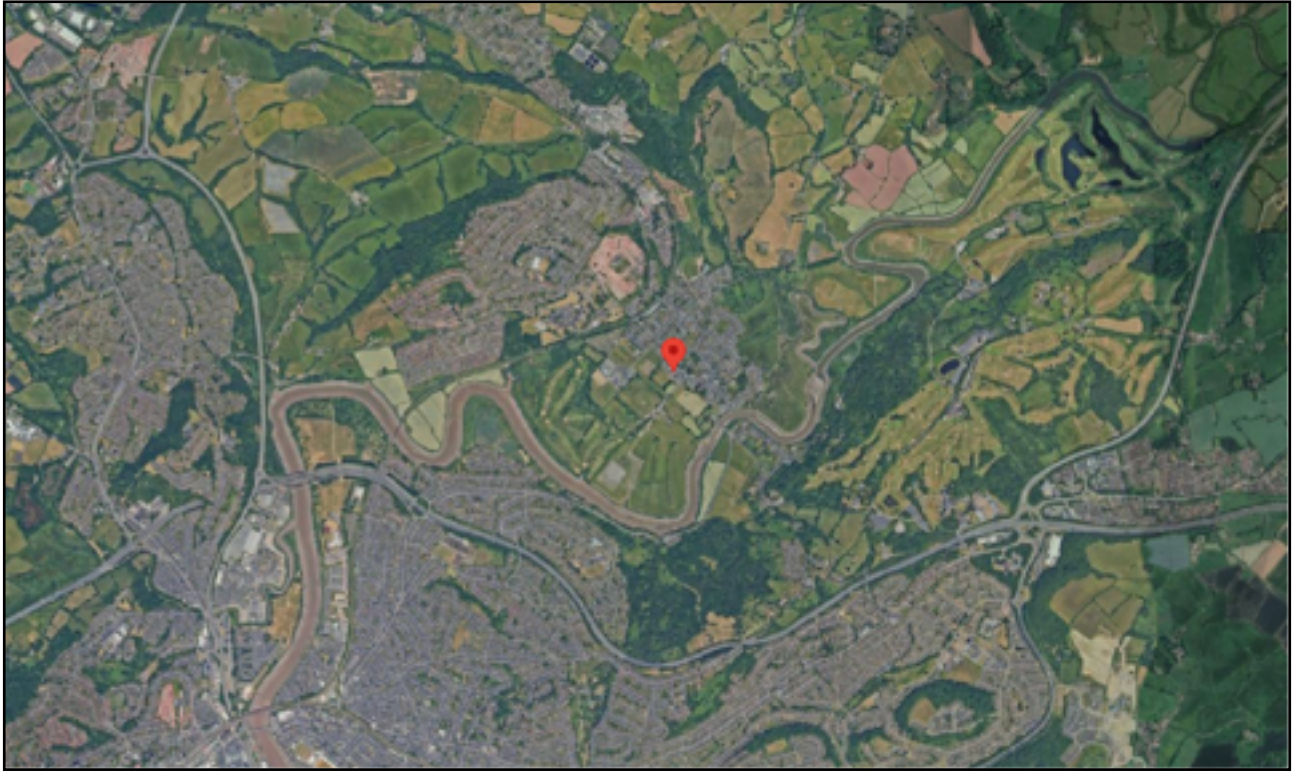
Aerial Site Photograph

OS Map

Surveyor & NVA Positions

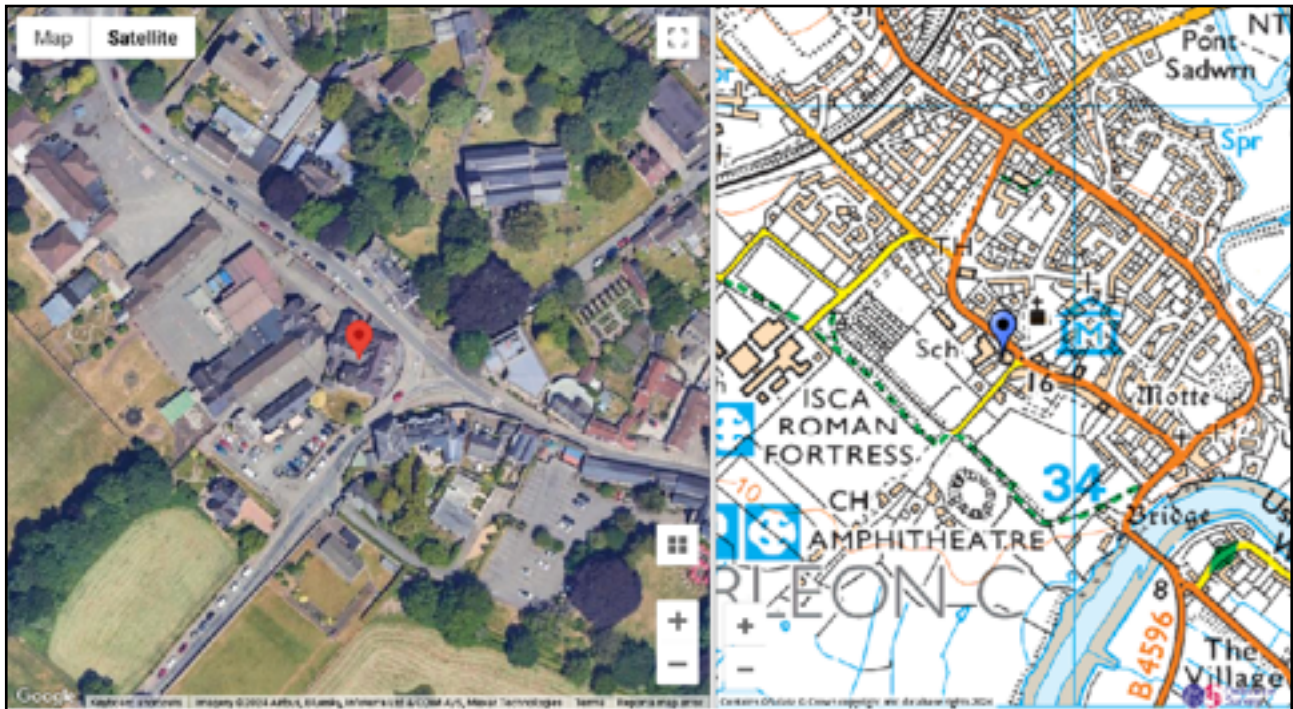
Guidance Note

Appendix 1 Aerial Site Photograph

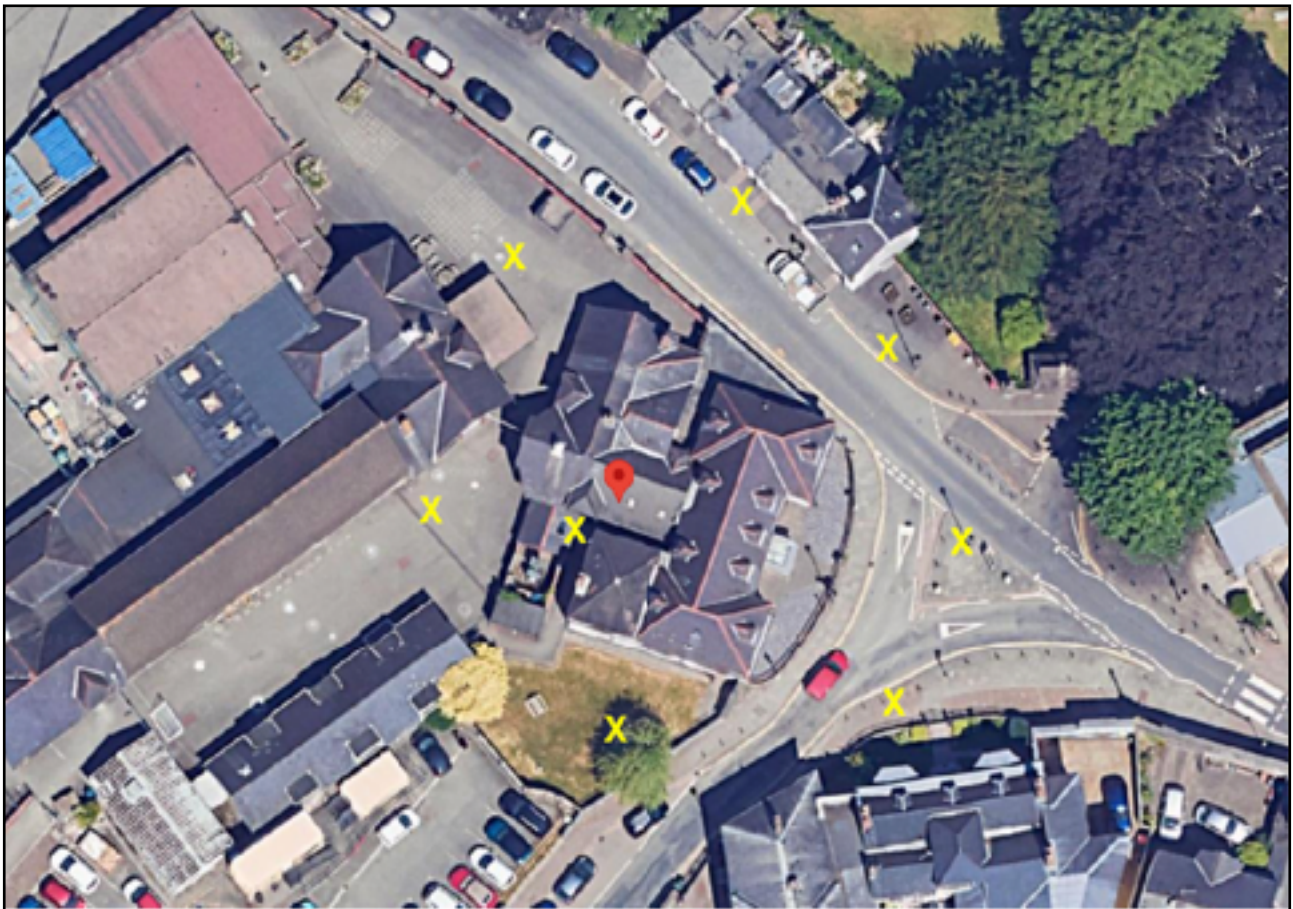


The site in its wider environment offering excellent ecological connectivity to the surrounding habitat.

Appendix 2 OS Map National Grid Reference ST 3388 9058



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.