

Bat Survey: 10 Graig Road, Trebanos, Pontardawe, Swansea, SA8 4BA



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1.0 The Brief: its Background and Purpose

1.1 10 Graig Road is a detached house located in the small village of Trebanos in the Swansea Valley. The building is currently being used as a family home. The owners propose to extend the existing building. 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 164m and 435m from the property which are records for Pipistrelle Bat (*Pipistrellus*) species maternity roosts and 446m from the property which is a record for an unidentified bat species. There are various non roosting records for bats in the area, the nearest being 462m from the property which is a record for foraging Common Pipistrelles (*Pipistrellus pipistrellus*) a Soprano Pipistrelle (*Pipistrellus pygmaeus*) and 569m from the property which is a record for foraging Common Pipistrelles (*Pipistrellus pipistrellus*). The property is not within 10km of a designated SAC or SSSI for bats.

2.0 Site Description

2.1 10 Graig Road is a two storey face stone and pebble dashed building with a slate apex roof. The property is detached. There is likely to be a cavity wall in the newer aspects of the building. There is uPVC soffit and fascia surrounding the building. There is a slate roofed lean-to to the left of the building. The building has undergone a number of newer extensions in the distant past.

2.2 The building dates back to in excess of 100 years and is located in the small village of Trebanos in the Swansea Valley. There was a low amount of ambient lighting to the front and sides of the building and there was a bright street light to the rear.

2.3 The nearest significant watercourses are the Swansea Canal, approximately 164m to the south of the property and the River Tawe, approximately 198m to the south of the property. The Upper Clydach River lies approximately 1.2km to the north east of the property.

2.4 The building is situated in a residential area on Graig Road in the small village of Trebanos and there is considerable countryside and woodland within close proximity of the property. There is a riparian corridor along the River Tawe, approximately 198m to the south of the property. The Pontardawe Leisure Centre grounds lie approximately 164m to the east of the property and are surrounded by tree-lines. There is open land approximately 253ft to the west and 175m to the south of the property. There is excellent ecological connectivity for bats to the wider environment and there are fresh water supplies in the immediate and intermediate area.

2.5 The National Grid Reference of the site is: **SN 7129 0307**.

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.

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 6th June, 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 buildings were 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 opportunities for bats to roost. Those that were available were deemed as moderate potential. There were apertures in the fascia of the lean-to; there was an area of raised lead flashing on the roof and around the chimney which were suitable for bat access and there were multiple raised slates on the rear of the roof. The building was classed as moderate 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 buildings:





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 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 Debbie Parry; Mason Smith; Caitlin Watkins; Richard Watkins and Scott 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 6th June, 2021.

- Sunset: 21:18
- Weather: Dry and calm with 80% cloud cover
- Temperature: 15 degrees celsius
- Surveyors: Debbie Parry; Caitlin Watkins and Scott Watkins

No bats were observed exiting the building being surveyed.

Two Common Pipistrelle bats (*Pipistrellus pipistrellus*), traveled from north to south through the site. The bats arrived from a gap between the house being surveyed and a neighbouring property to the west. A single Soprano Pipistrelle (*Pipistrellus pygmaeus*) was observed feeding in the front garden.

8.4 Emergence Survey on 21st June, 2021.

- Sunset: 21:38
- Weather: Dry with a slight breeze and 95% cloud cover
- Temperature: 15 degrees celsius
- Surveyors: Debbie Parry; Mason Smith; Caitlin Watkins and Richard Watkins

No bats were observed emerging from the building. Again a low number of Common Pipistrelles was observed flying from north to south through the site.

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

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	<i>Pipistrellus pipistrellus</i>
Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>
Noctule	<i>Nyctalus noctula</i>

8.9 During the emergence surveys, a low number of Noctule (*Nyctalus noctula*) , Common Pipistrelle (*Pipistrellus pipistrellus*) and Soprano Pipistrelle (*Pipistrellus pygmaeus*) bat calls were recorded but these did not emerge from the building being surveyed.

9.0 Concluding Remarks and Recommendations

9.1 The building was assessed as having moderate potential for bat use. The building and its condition did offer features for bat occupation and roosting potential. There was a limited amount of ambient lighting to the front and sides of the building and there was a bright street light to the rear. The location of the building, being in a rural environment with excellent ecological connectivity to suitable feeding areas made the location of the building suitable for bat use.

9.2 Although a very small number of common species of bats were observed feeding and commuting through the site, no bats were observed using the building throughout any of the surveys. Therefore it is suggested that the impact of the proposed building works will have a negligible impact on the local bat population. It is noted that Pipistrelle bats are more tolerant to light disturbance than other species of U.K. bats.

9.3 The building did not offer significant potential for hibernating bats. 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 building.

9.4 Following a successful planning application; in the unlikely event that the contractor encounters any bats during any works, then work must stop and the bat worker summoned. If for any reason they cannot be contacted, advice must be sort from Natural Resources Wales, (Telephone Number 0300 065 3000). The guidance note on finding bats found in the appendices must be followed.

9.5 A suitable external lighting plan must be implemented to reduce any disturbance to the bats feeding and commuting to the front and side of the building.

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:

2 number raised ridge tiles on the new roof.

1 number Schwegler ISP nest box Sparrow Terrace, built integral into the new block work.

1 number Schwegler type 24 Bird Brick, built integral to the new block work. This can be rendered over and painted to match the surrounding finish. Care must be taken no to obstruct the entrance hole.

1 number Vivara Pro Build-in Woodstone Bat Tube, built integral to the new block work on the gable end This can be rendered over and painted to match the surrounding finish. Care must be taken no to obstruct the entrance slot.

1 number Vivara Pro Woodstone, Built in Swift Box ,built integral to the new block work

If the 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 crevice dwelling species of bat will be created underneath the entire row of ridge tiles. This will be accessed by 2 number raised ridge tiles.

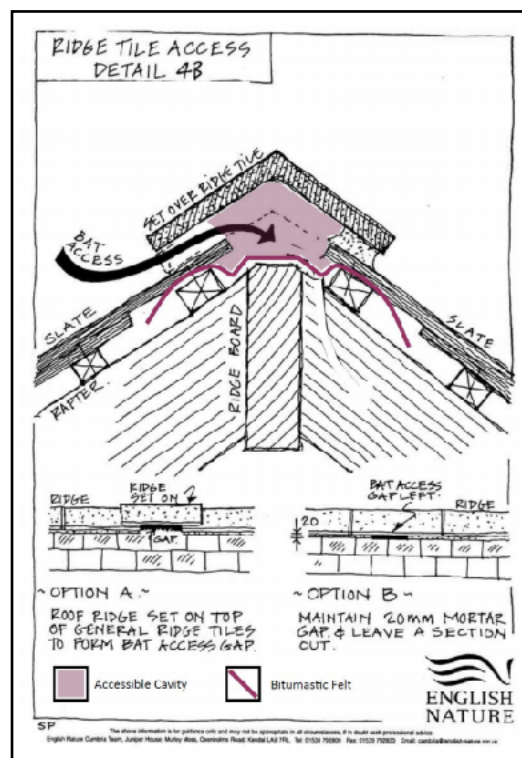
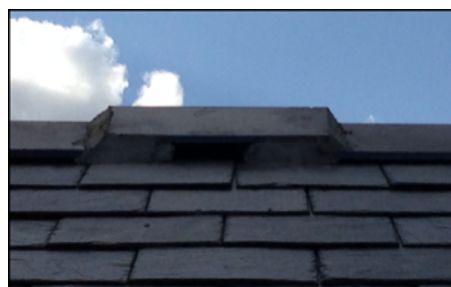
10.3 The raised ridge tiles will have two access apertures measuring 100mm long by 25mm high one the front elevation and one on the rear.

10.4 The roosting area will benefit from uninterrupted access to the sun on its southern aspect. This along with the heat generated from the living space will create a favourable temperature range for bats. The roosting area will be sufficient in size for a maternity colony to establish.

10.5 Bats will be restricted to the void in the underside of the ridge tile by using a continuous piece of 1F bitumen felt as a base liner. This will be fixed in location over the top rafters as per adjacent image.

10.6 There will be no direct illumination of any roost exit points. Any external lighting will be controlled by passive infrared.

10.7 The building will become warmer once occupied. Breathable membrane is dangerous for bats therefore it is essential that the detail contained in the adjacent drawing is followed exactly and is to be fitted under direct ecological supervision by a suitably qualified ecologist.



10.8 Further new roosting for bats will be created by fitting 1 number Vivara Pro Build-in Woodstone Bat Tube. This will be built integral to the new block work and can be rendered over and painted to match the finish of the building. Care must be taken to leave the access/egress slot at the bottom exposed for access. This will be fitted as high as possible on a suitable gable end.



10.9 Bat mitigation will benefit from the south 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.

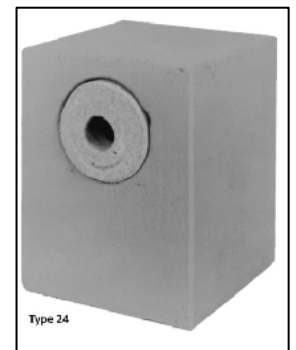
10.10 The Schwegler 1SP sparrow terrace will be built into the render. These will not be situated on a south facing elevation. The sparrow boxes should be recessed or partially recessed into the render or cladding if possible. They also can be surface mounted if this is not possible.



10.11 The Vivara Pro Woodstone Swift Nest Box will be built into the new block work. These will not be situated on a south facing elevation..



10.12 The Schwegler Type 24 Bird brick will be built into the new block work. These will not be situated on a south facing elevation. These can be rendered over and painted to match the exterior finish. Care must be taken not to obstruct the entrance hole during the rendering process.



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

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

10.15 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 meters away.

10.16 On occasions the suggested mitigation can be in short supply. Please order the 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.

10.17 Locations of Bat and Bird Mitigation



Location of Vivara Pro Madrid Swift Nest Box



Location of Schwegler 1 SP Sparrow Terrace



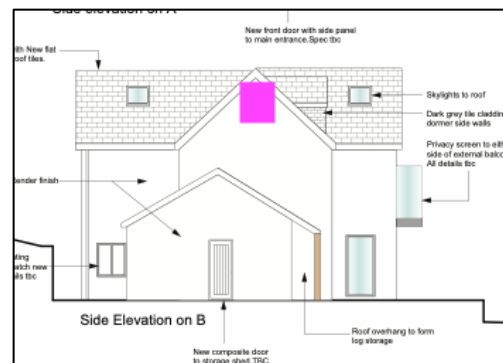
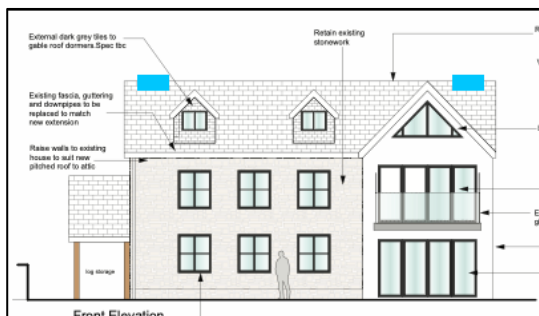
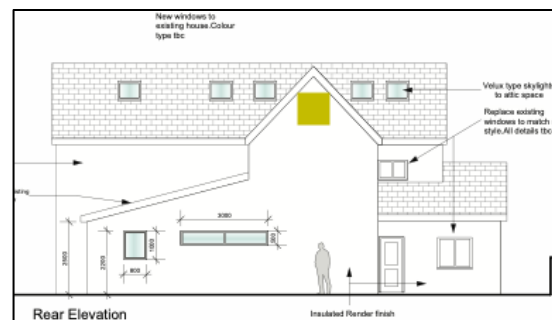
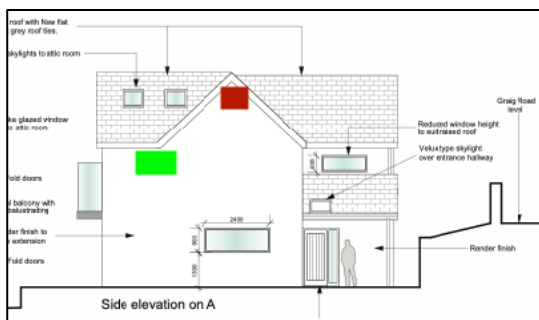
Location of Vivara Pro Build-in Woodstone Bat Tube



Location of Schwegler Type 24 Bird Box



Location of the raised ridge tiles.



Signed: R Watkins Date: July, 2021

11.0 Appendices

Aerial Site Photo

Surveyor Positions

OS Map

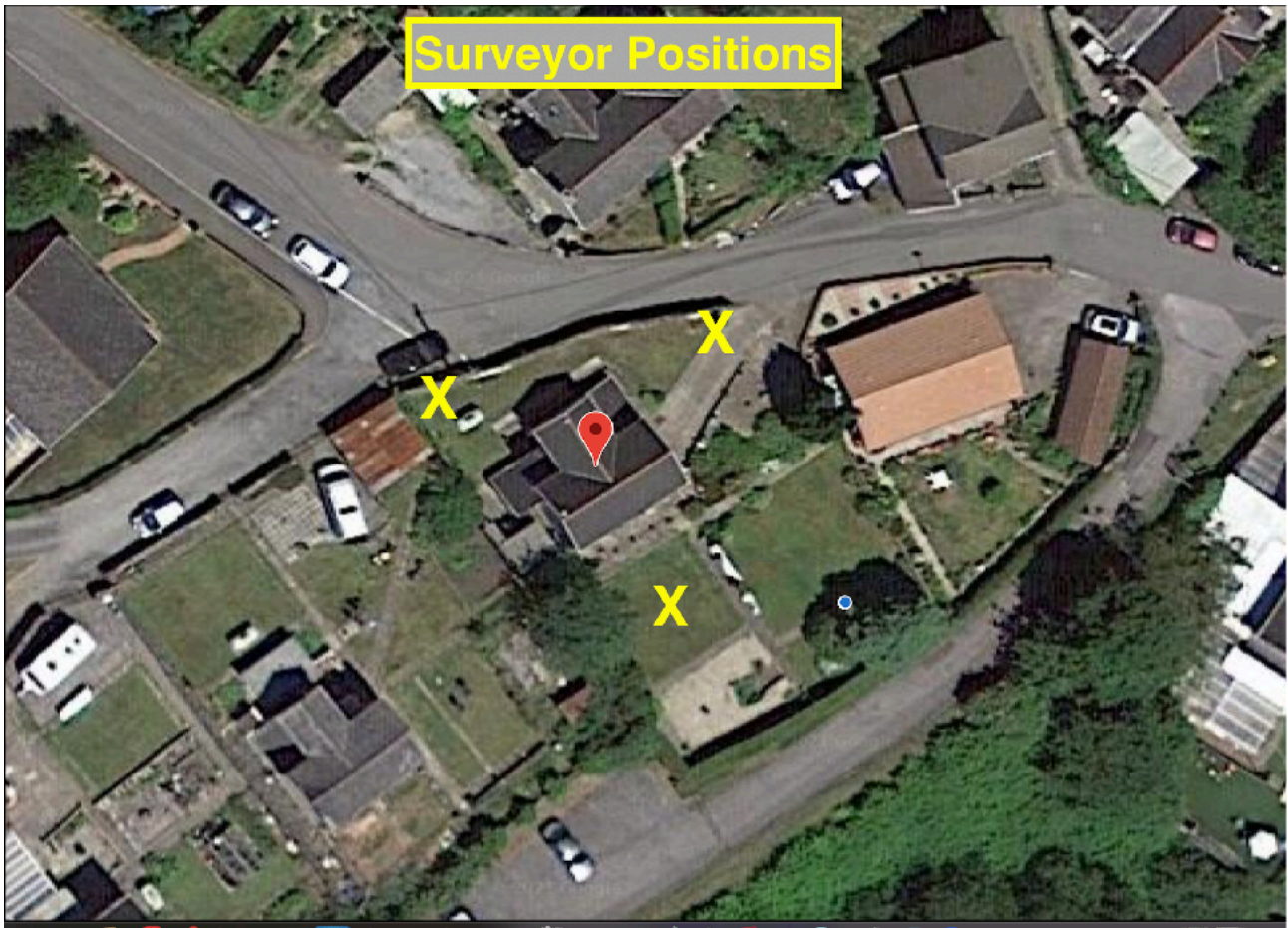
Guidance Note

Aerial Site Photo



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

Surveyor Positions



OS Map National Grid Reference SN 7129 0307



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.