Bat Survey: Garden Cottage, Pentre-Poeth Road, Rhiwderin, Newport, NP10 8RT

Instructed by: David Williams Homes Ltd

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Warning! The building is now a confirmed bat roost.

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

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

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

1.0 Background and Purpose

1.1 Garden Cottage is a detached building which is situated in a rural environment along Pentre-Poeth Road to the south west of the small village of Rhiwderin. The property is currently in use as a residential dwelling and planning permission is sought to demolish the existing building and create a new residential dwelling in its place. 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 and Aislinn Harris, a Natural Resources Wales licensed bat ecologist, license number S092780-1.

1.4 A data search was undertaken with SEWBReC (0234-189) 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 in the property and there are no recorded roosts within 1km of the property.

1.5 There are various non roosting records for bats, the nearest being approximately 45m from the property which is a record for a Common Pipistrelle *(Pipistrellus pipistrellus)* bat care call from 2011; 210m and 545m from the property which are records for Common Pipistrelle live sightings and 560m from the property which is a record for a foraging/ commuting Noctule *(Nyctalus noctula)*.

1.6 A small number of records for nesting birds were returned as part of the data search within 500m of the proposed development site. Species records include Linnet; Starling and Yellowhammer.

1.67 The property is not within 10km of a designated SAC or SSSI for bats.

2.0 Site Description

2.1 Garden Cottage is a detached, stone rendered building which is two storeys in height with a pitched slate roof. There are timber barge boards; fasciae and soffits present and there are two pitched roofed dormer windows to the southern elevation of the roof. There is a single storey, uPVC lean-to conservatory to the western gable end of the building with a felt roof and there is a slate roofed, stone rendered, lean-to extension to the eastern gable end of the building which is single storey with timber fasciae and soffits. There is unlikely to be a cavity wall in the building.

2.2 The property dates back to in excess of 80 years and is situated in a rural environment. There is unlikely to be ambient lighting within the vicinity of the property.

2.3 The nearest significant watercourse is Rhymney River, approximately 660m to the west of the property.

2.4 The property is situated in a rural environment along Pentre-Poeth Road to the south west of the small village of Rhiwderin. The property is immediately surrounded by substantial amounts of open agricultural fields and there is an

area of woodland approximately 180m to the north west of the property. There is a riparian corridor along Rhymney River and and there is optimal ecological connectivity for bats to the wider environment.

2.5 The National Grid Reference of the site is: **ST 2512 8590**

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/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 **22nd August 2023** 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 small 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 small apertures in areas of the timber fasciae; apertures around the corners of both of the dormer windows; slightly raised slates and ridge tiles on the lean-to extension to the eastern gable end; an aperture at the apex on the eastern gable end and a slightly raised end ridge tile.

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

6.5 No 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 An internal scoping survey was not undertaken as there was no attic space within the property. All of the upstairs rooms are open to the eaves.

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 **23rd August 2023**

- Sunset: 20:19
- Weather: Dry and calm with approximately 80% cloud cover
- Temperature: 17 degrees celsius
- Surveyors: Tyrone Evans; Debbie Parry; Kinga Streich and Keith Watkins

4 Common Pipistrelles *(Pipistrellus pipistrellus)* were observed emerging from the corner of one of the dormer windows to the southern elevation of the building.

8.4 Second Emergence Survey on **18th June 2024**

- Sunset: 21:33
- Weather: Dry and calm with approximately 40% cloud cover
- Temperature: 14 degrees celsius
- Surveyors: Tyrone Evans; Adam Hughes; Caitlin Smith and Mason Smith

1 Common Pipistrelle was observed emerging from one of the dormer windows to the southern elevation of 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 Emerging from the Building:	
Common Pipistrelle	*Pipistrellus pipistrellus*

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

8.9 During the first emergence survey, a low number of bat calls were recorded. 4 Common Pipistrelles were observed emerging from the building; a small number of Common Pipistrelles were observed foraging around the property and a Noctule was detected but was not observed.

8.10 During the second emergence survey, a very low number of bat calls were recorded. 1 Common Pipistrelle was observed emerging from the building and a small number of Common Pipistrelles were observed foraging around the property.

8.11 Examples of NVA Still Shots:

9.0 Concluding Remarks and Recommendations

9.1 During the emergence surveys, bats were observed using the building as a day roost.

9.2 Common Pipistrelles (*Pipistrellus pipistrellus)* were observed emerging from the building during the emergence surveys. Common Pipistrelles are a common species of bat and are often found roosting in buildings. These type of bats can tolerate more light disturbance than other species of bats.

9.3 Throughout the surveys, a low number of bat calls were recorded. A maximum of 4 bats were observed using the building as a day roost during any emergence survey.

9.4 The emergence surveys did not identify a significant maternity roost. The Common Pipistrelles using the building as a day roost are probably males or non-breeding females.

9.5 The property 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. The building has recently been tenanted and therefore central heating would have been on which does not provide a thermally stable environment for hibernating bats.

9.6 No evidence of nesting bird use of the building was observed during the surveys.

9.7 The property was classed as having moderate potential for roosting bats and there were a small number of opportunities present for bats to access and use the building.

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

9.9 There was no ambient lighting within the vicinity of the property.

9.10 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.

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

9.12 If planning is approved, 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.

9.13 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.

9.14 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

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 features will need to be shown on architectural drawings.** This will consist of:

5 raised ridge tiles and a self contained ridge roosting area for bats along the entire ridge lines of the new roofs.

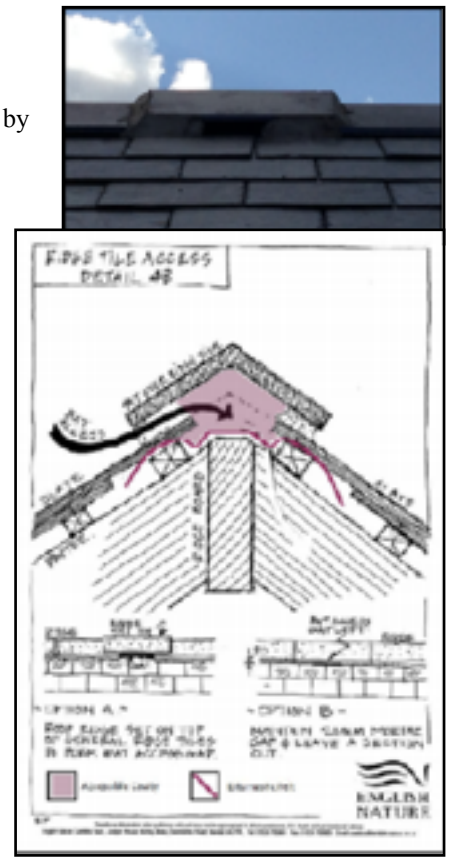
1 Vivara Pro WoodStone Bat Box, built integral into the new block work. Care must be taken not to obstruct the access slot.

2 Vivara Pro WoodStone Sparrow Nest Boxes, built integral into the new block work. Care must be taken not to obstruct the entrance holes.

1 PRO UK Rendered Build-In Swift Box, built integral into the new block work. Care must be taken not to obstruct the entrance hole.

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 Permanent mitigation will comprise 5 raised ridge tiles and a self-contained roost area under the entire ridge lines of the new roofs.



10.3 The raised ridge tiles will have two access apertures measuring 100mm long by 25mm high; one on 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.

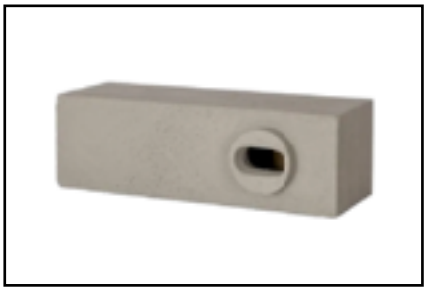
10.6 Breathable membrane is dangerous for bats, therefore it is essential that the detail contained in the adjacent drawing is followed exactly and is to be fitted under direct ecological supervision by a suitably qualified ecologist.

10.7 It is further proposed that new roosting for bats be created by building one Vivara Pro WoodStone Bat Box into the block work on the western elevation of the new build.

10.8 Bat 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.

10.9 Two Vivara Pro WoodStone House Sparrow Nest Boxes will be built into the block work of the new build (one on the eastern elevation and one on the western elevation). **These will not be situated on a south facing elevation. Care must be taken not to obstruct the entrance holes.**

10.10 One PRO UK Rendered Build-In Swift Box will be built into the block work on the eastern elevation of the new build. **This will not be situated on a south facing elevation. Care must be taken not to obstruct the entrance hole.**



10.11 Any nesting bird enhancements will not be suited on the southern elevation as this may experience excess heat from the sun.

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

10.13 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.

10.14 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.

10.15 Recommended Locations of Bat and Bird Mitigation:

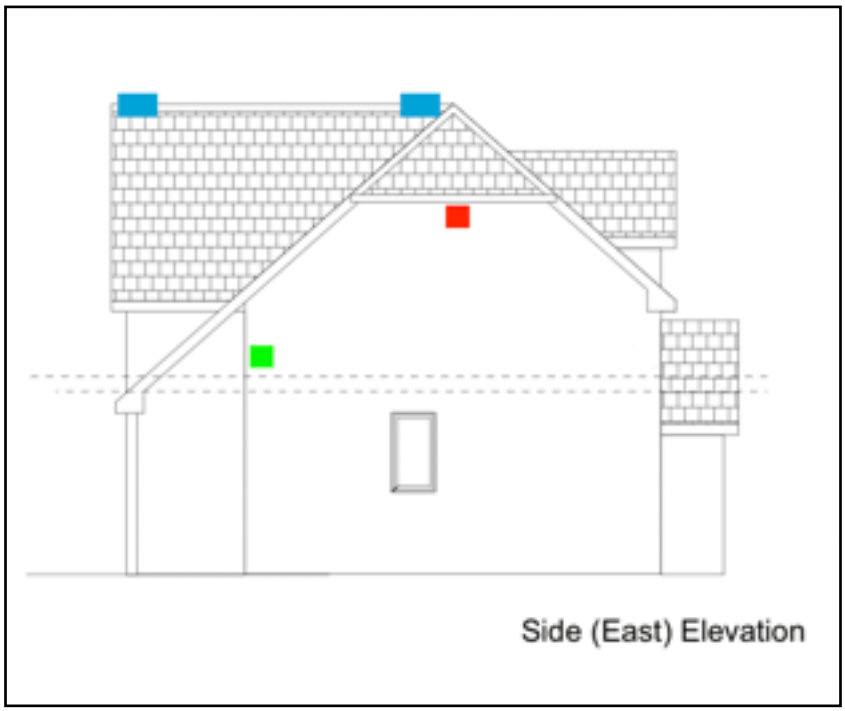
Location of Vivara Pro WoodStone House Sparrow Nest Box

Location of PRO UK Rendered Build-In Swift Box

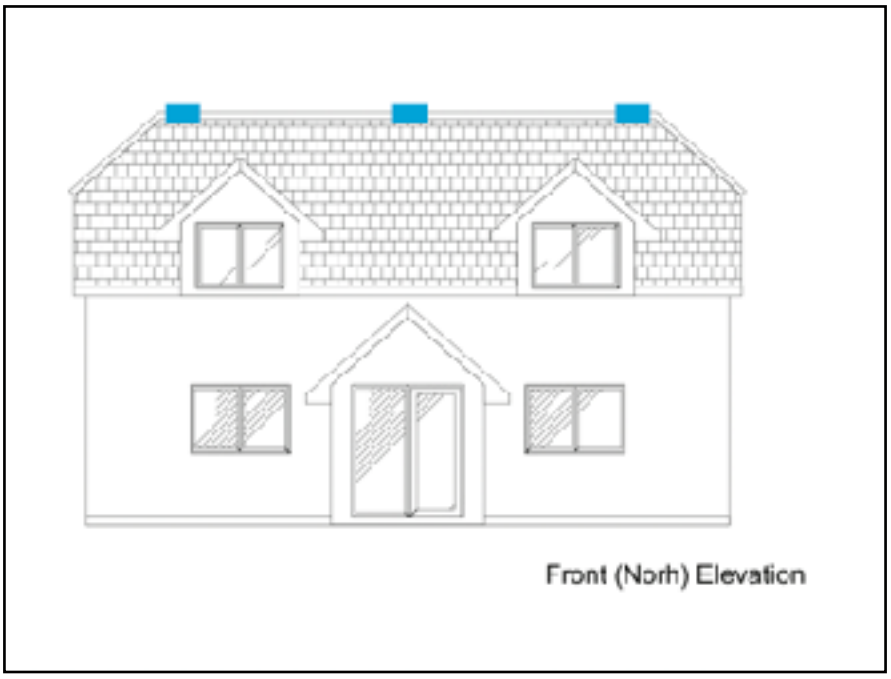
Location of the Raised Ridge Tiles

Location of Vivara Pro WoodStone Bat Box

Eastern Elevation



Northern Elevation



Western Elevation

Signed: *Richard Watkins* ***Date: June 2024***

11.0 Appendix

Aerial Site Photographs

Surveyor & NVA Positions

OS Map

Site Photographs

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 Surveyor & NVA Positions

Appendix 3 OS Map National Grid Reference ST 2512 8590

Appendix 4 Site Photographs

Western Elevation

Southern Elevation

Lean-to Extension

North Western Elevation