

Bat Survey: Former Day Nursery, Brewery Road, Dowlais, Merthyr Tydfil
CF48 3BU



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Guidance Note

1.0 Background and Purpose

1.1 The building being surveyed is a detached, former nursery situated in an urban environment just outside the grounds of Blessed Carlo Acutis Catholic School in the town of Merthyr Tydfil. The nursery building is currently derelict and planning permission is sought to convert the building into units with one being offices and the other being a store. It is also proposed to raise the roof level and create a first storey extension. 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 Hannah Evans (accredited agent S092780/2), an experienced bat ecologist with 5 years experience, and Richard Watkins, a Natural Resources Wales licensed bat ecologist, license number S0931358-1.

1.4 A data search was undertaken with SEWBRc (0245-071) 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. The nearest recorded roosts are approximately 1,340m from the property which is a record for a Brown Long Eared Bat (*Plecotus auritus*); Daubenton's Bat (*Myotis daubentonii*) and Lesser Horseshoe Bat (*Rhinolophus hipposideros*) hibernation roost from 2020 and 1,450m from the property which is an historic record for an unidentified bat species maternity roost from 1995.

1.5 There are various non roosting records for bats, the nearest being approximately 270m from the property which is a record for a foraging unidentified bat species; 625m from the property which is a record for a foraging Common Pipistrelle (*Pipistrellus pipistrellus*) and 690m from the property which is a record for a foraging Pipistrelle Species (*Pipistrellus sp.*).

1.6 A small number of records for nesting birds were returned as part of the data search. Species records include Barn Owl; Great Tit; House Martin; Lesser Black Backed Gull and Starling. All species records are within 500m of the proposed development site.

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

2.0 Site Description

2.1 The building being surveyed is a detached, former nursery which is rendered and two storeys in height with a pitched slate roof and a single brick chimney. There were areas of uPVC and timber fasciae and there were timber barge boards present. There was a single storey, flat roofed extension to the rear of the building. There is likely to be a cavity wall in the building.

2.2 The building dates back to in excess of 50 years and is situated in an urban environment. There is unlikely to be any ambient lighting within the vicinity of the property.

2.3 The nearest significant watercourse is the River Taff, approximately 2km to the south west of the property at its nearest point. Additionally, Top Pond lies approximately 1.1km to the north east of the property and Cyfartha Park Lake lies approximately 2.2km to the west of the property.

2.4 The former nursery is situated in an urban environment just outside the grounds of Blessed Carlo Acutis Catholic School in the town of Merthyr Tydfil. Despite being situated within a residential area, the property is immediately surrounded by open green areas and playgrounds and there are a number of residential gardens within the vicinity of the property. Ifor Park lies approximately 335m to the north of the property and Hillcrest Park lies approximately 300m to the north west of the property. There are substantial amounts of open land in the wider areas around the property and there is excellent ecological connectivity for bats to the wider environment.

2.5 The National Grid Reference of the site is: **SO 0611 0781**.

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 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 The external scoping survey was undertaken on the **25th April 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 a number of missing and slipped slates; raised ridge tiles and apertures underneath the fasciae and barge boards.

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 The internal scoping survey was undertaken on the **25th April 2024** by **Hannah Evans (accredited agent S092780/2), an experienced bat ecologist with 5 years experience.**

7.2 The building has sustained high levels of vandalism and therefore the ceilings have been removed. The underside of the roof could be visualised from the stairs and the ground floor. The space was partially lined and of a traditional cut design. There were visible amounts of daylight present from a number of missing slates.

7.3 No droppings or evidence of bats were discovered on any internal features, however, the building has sustained high levels of vandalism which made searching for bat droppings suboptimal.





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 6th May 2024

- Sunset: 20:47
- Weather: Dry and calm with approximately 60% cloud cover
- Temperature: 13 degrees celsius
- Surveyors: Tyrone Evans; Debbie Parry; Caitlin Smith; Keith Watkins and Richard Watkins

No bats were observed emerging from the building.

8.4 Second Emergence Survey on 30th May 2024

- Sunset: 21:21
- Weather: Dry and calm with approximately 5% cloud cover
- Temperature: 13 degrees celsius
- Surveyors: Jonathan Daniels; Tyrone Evans; Adam Hughes; Keith Watkins and Richard Watkins

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 emergence surveys, a very low number of bat calls were recorded. A small number of Common Pipistrelles were observed foraging to the east of the building but did not emerge from inside and a Noctule call was detected on both surveys but the bat was not observed.



8.10 Examples of NVA Still Shots:





9.0 Static Bat Monitoring

9.1 A five night period of static bat monitoring has been undertaken within the building during the bat active season to ensure that no resident bats were missed. A static bat detector (Anabat Express) was deployed within the upper storey of the building for a period of five consecutive nights on the **25th May 2024** by Richard Watkins, a Natural Resources Wales licensed bat ecologist, license number S0931358-1 and was collected on the **30th May 2024** by Richard Watkins, a Natural Resources Wales licensed bat ecologist, license number S0931358-1.

9.2 Any data was downloaded and assessed using Analook software. No bat calls were recorded during the five night survey period, however, background noise was recorded which indicates that the detector was working. This supports the findings of the emergence surveys.

10.0 Concluding Remarks and Recommendations

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

10.2 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.

10.3 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.

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

10.5 The building was assessed as having moderate potential for roosting bats and there were a number of opportunities present for bats to access and use the building.

10.6 The building is located in an area with excellent optimal connectivity for bats to the wider environment.

10.7 There was no ambient lighting within the vicinity of the building.

10.8 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.

10.9 A suitable external lighting plan must be implemented to reduce any disturbance to the bats feeding to the east of the property. 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.

11.0 Proposed Enhancements

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

6 Raised Ridge Tiles on the new roofs of the building and a self contained ridge roosting area for bats.

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

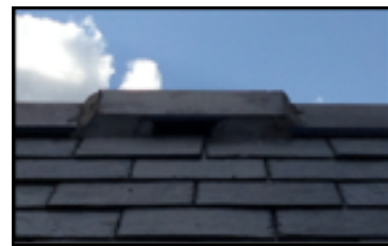
1 Vivara Pro WoodStone Surface Mounted Swift Nest Box. Care must be taken not to obstruct the entrance hole.

1 Vivara Pro WoodStone House Sparrow Nest Box, built integral into the block work of the new extension. 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.

11.2 Permanent enhancements will comprise 6 raised ridge tiles and a self-contained roost area under the entire ridge lines of the building.

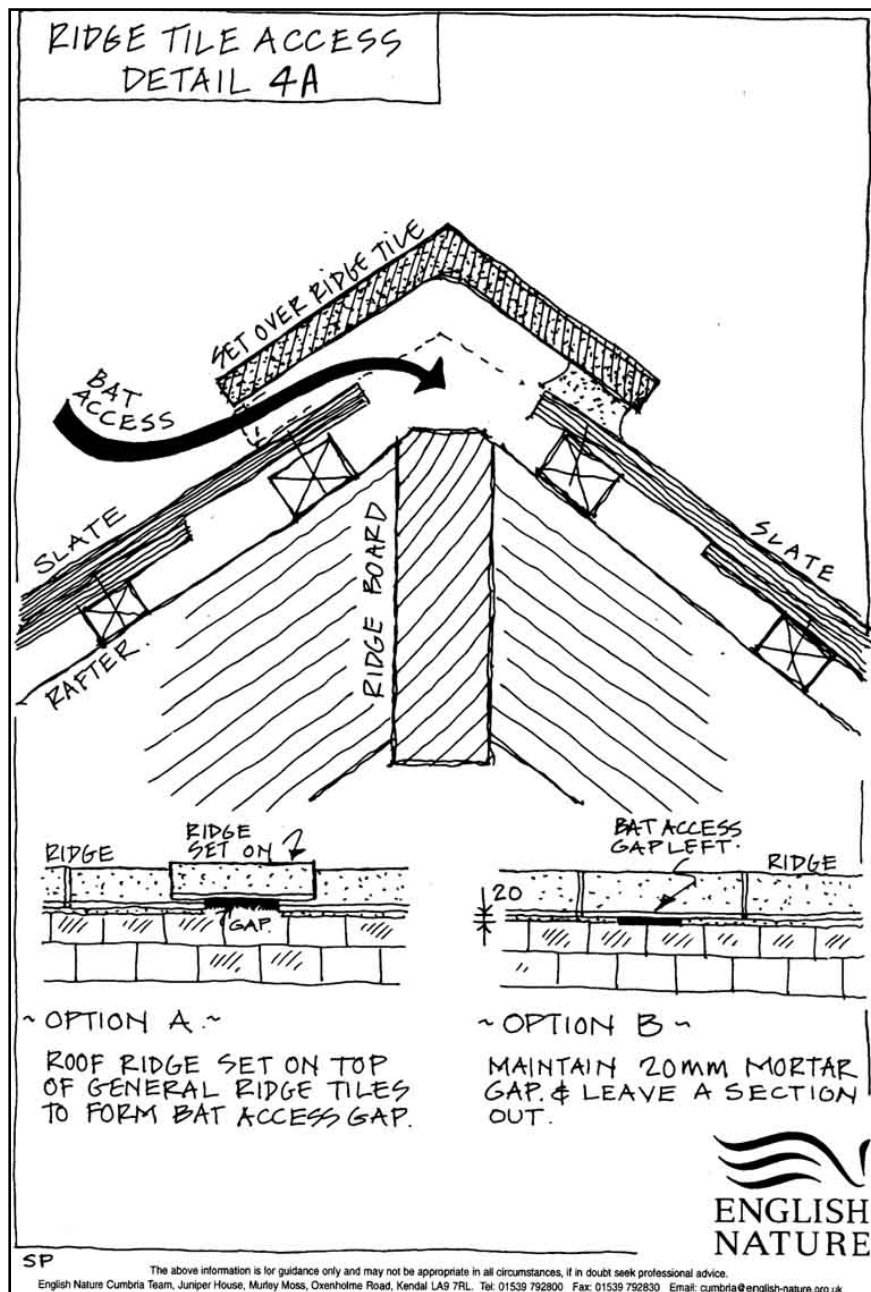
11.3 The raised ridge tiles will have two access apertures measuring 100mm long by 25mm high; one on the front elevation and one on the rear.



11.4 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.

11.5 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.

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



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

11.8 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.



11.9 One Vivara Pro WoodStone House Sparrow Nest Box will be built into the block work on the northern elevation of the new extension. **This will not be situated on a south facing elevation. Care must be taken not to obstruct the entrance holes.**



11.10 One Vivara Pro WoodStone Swift Nest Box will be surface mounted on the northern elevation of the building. **This will not be situated on a south facing elevation. Care must be taken not to obstruct the entrance hole.**



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

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

11.13 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.

11.14 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.

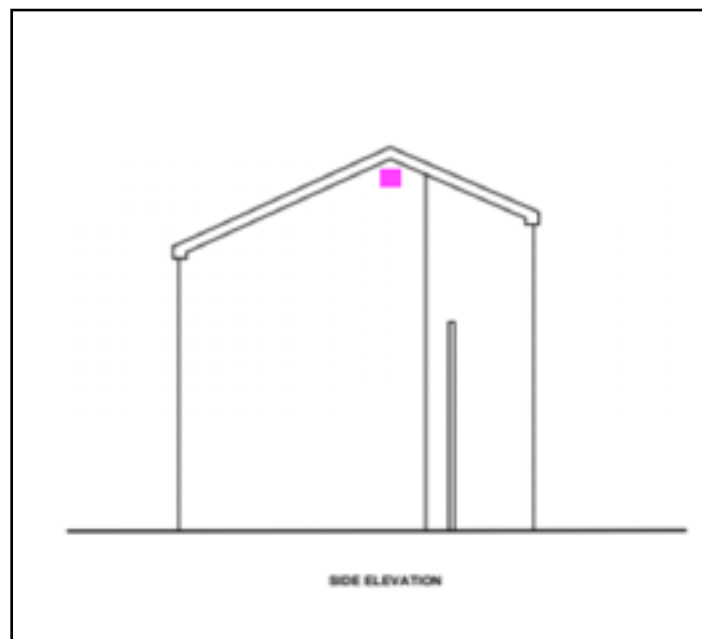
11.15 Recommended Locations of Bat and Bird Enhancements:



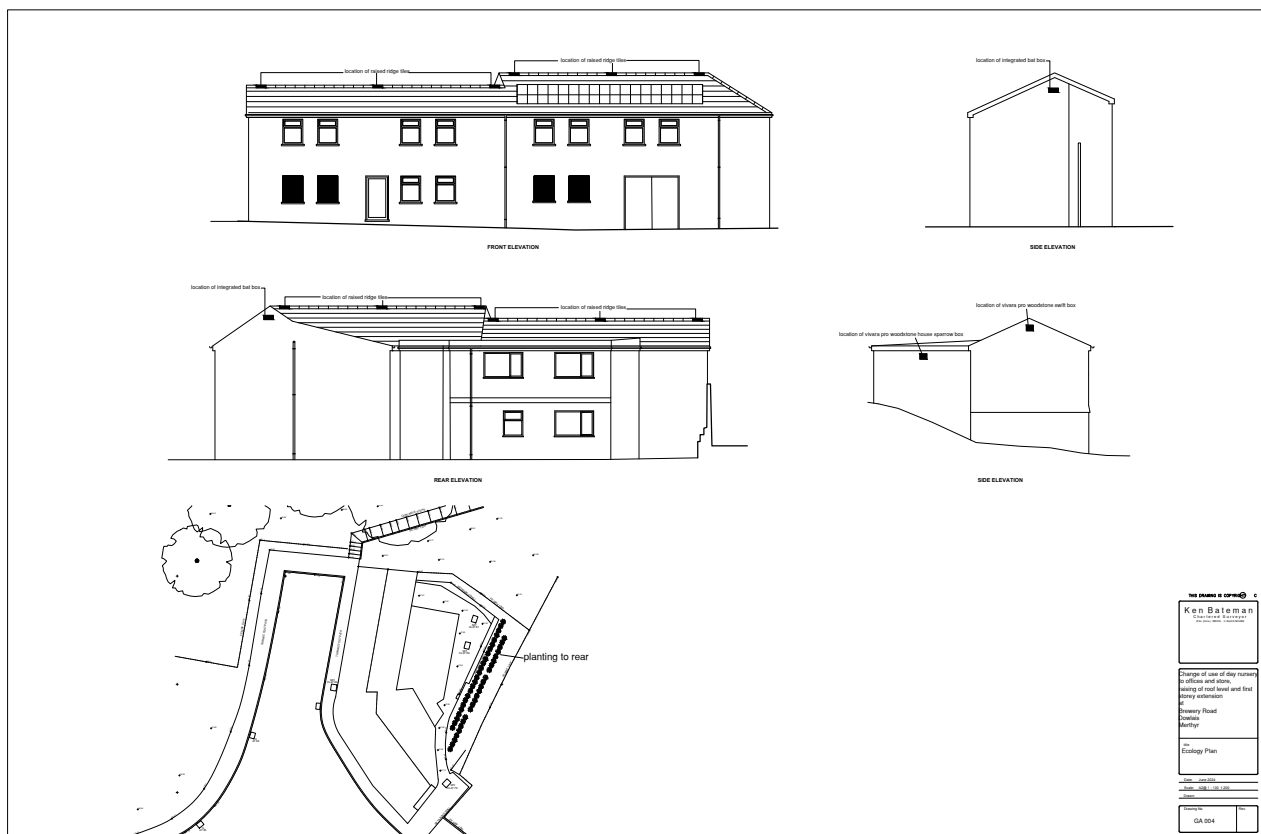
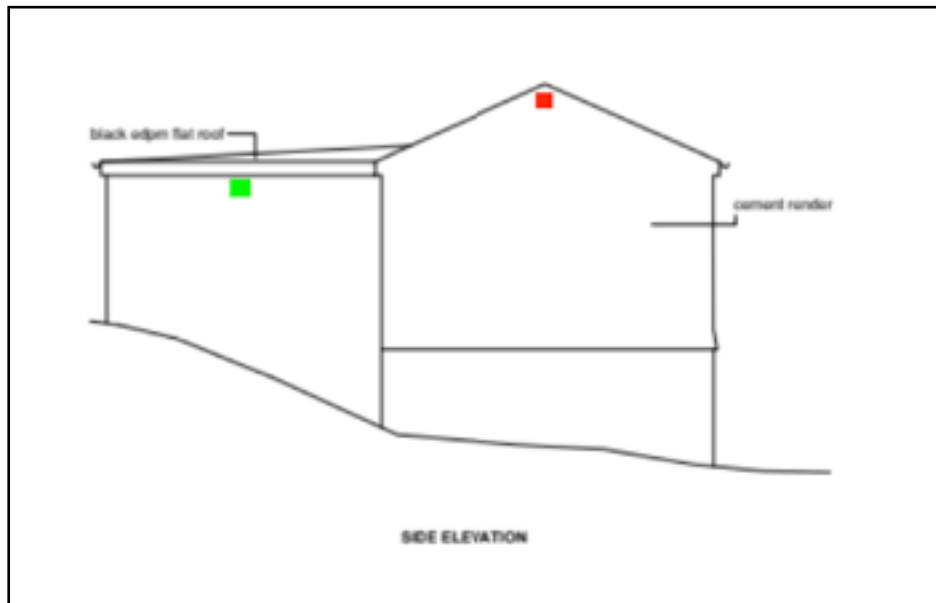
Eastern Elevation



Southern Elevation



Northern Elevation



Signed: Richard Watkins Date: June 2024

12.0 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 excellent ecological connectivity to the surrounding habitat.

Appendix 2 OS Map National Grid Reference SO 0611 0781



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.