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6 The Ridgeway, Marchwiel

Bat and Nesting Bird Assessment

6 The Ridgeway
Marchwiel
Wrecsam
LL13 0SB

Produced by P J Ecological Solutions on behalf of Miss C Barker

May 2025

Version 1

Report by Matthew Whitehead
Reviewed by Paul Roberts

Executive Summary

P J Ecological Solutions were commissioned by Miss C Barker to undertake a protected species survey of 6 The Ridgeway, Marchwiel. The survey was commissioned to ascertain whether the proposed works thereto have the potential to affect protected species, particularly bats and nesting birds, and to make recommendations as appropriate.

The proposals are for the construction of a two-storey extension onto the east (side) elevation of the existing two-storey dwelling, and for the construction of a single-storey extension on the south (front) elevation of the existing two-storey dwelling.

A preliminary roost assessment has been undertaken, which determined the building to have only low potential to support roosting bats. Accordingly, a single bat emergence survey of the building was undertaken, during which no bats were observed emerging from any part of the building. Further, no evidence of nesting bird use was found during the internal or external inspection of the building and no nesting bird use was observed during the emergence survey.

The survey results therefore indicate that the building to be modified does not support roosting bats or nesting birds. As such, no adverse impacts upon roosting bats or nesting birds are expected from the proposed development.

Accordingly, no specific mitigation measures for roosting bats or nesting birds are recommended, and no further surveys are recommended. However, if works are delayed into the active season for bats (May to September, inclusive) 2027, then a suitably qualified ecologist must be instructed to provide a revised assessment of the likely impacts of the proposed development. In the unlikely event that a bat or nesting bird is found during the works, the procedure detailed in Appendix 1 should be followed.

N.B: To comply with Section 6 of the Environment (Wales) Act 2016*, local planning authorities are required to look for biodiversity gain within the planning system. Accordingly, as biodiversity enhancement provisions, it has been agreed that 1 No. Vivara Pro Build-In Bat Box will be incorporated into the east elevation of the proposed two-storey extension, that 1 No. Vivara Pro Seville Nest Box will be installed upon the north elevation proposed two-storey extension, and that two native fruiting trees will be planted within the curtilage of the dwelling.*

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1 Introduction

P J Ecological Solutions were commissioned by Miss C Barker to undertake a protected species survey of 6 The Ridgeway, Marchwiel, Wrecsam, LL13 0SB (Grid Reference: SJ36194752; hereafter referred to as 'the site').

The survey was commissioned to ascertain whether the proposed works thereto have the potential to affect protected species, particularly bats and nesting birds, and to make recommendations as appropriate. The proposals are for the construction of a two-storey extension onto the east (side) elevation of the existing two-storey dwelling, and for the construction of a single-storey extension on the south (front) elevation of the existing two-storey dwelling.

The site is set in a semi-rural position, upon the southeast periphery of the village of Marchwiel (see Figure 1.1). The site is bounded by further dwellings to the north and west, by the A525 (Bangor Road) two-lane single carriageway to the south, and by The Ridgeway, a further two-lane single carriageway, to the east. The land beyond the A525 and further surrounding the village is characterised by permanent pasture and features a good network of traditional boundary hedgerows with trees. This network will provide good habitat connectivity between the site and nearby habitats of importance, including the Marchwiel Covert broadleaved woodland and numerous small bodies of standing water, although it is expected that the extensive streetlighting around the site will inhibit some wildlife from accessing it.

A detailed desk study of the surrounding area and a preliminary roost assessment and nesting bird assessment of the building has been undertaken, in addition to a single bat emergence survey. The aim of these efforts/this appraisal is to:

- Identify potential and actual habitat and species constraints pertinent to the development proposals.

- Detail further survey requirements and/or reasonable avoidance measures which should be adhered to during the proposed works, as appropriate.

- Identify opportunities for the proposed development to provide enhancements and add to the biodiversity resource within the site.

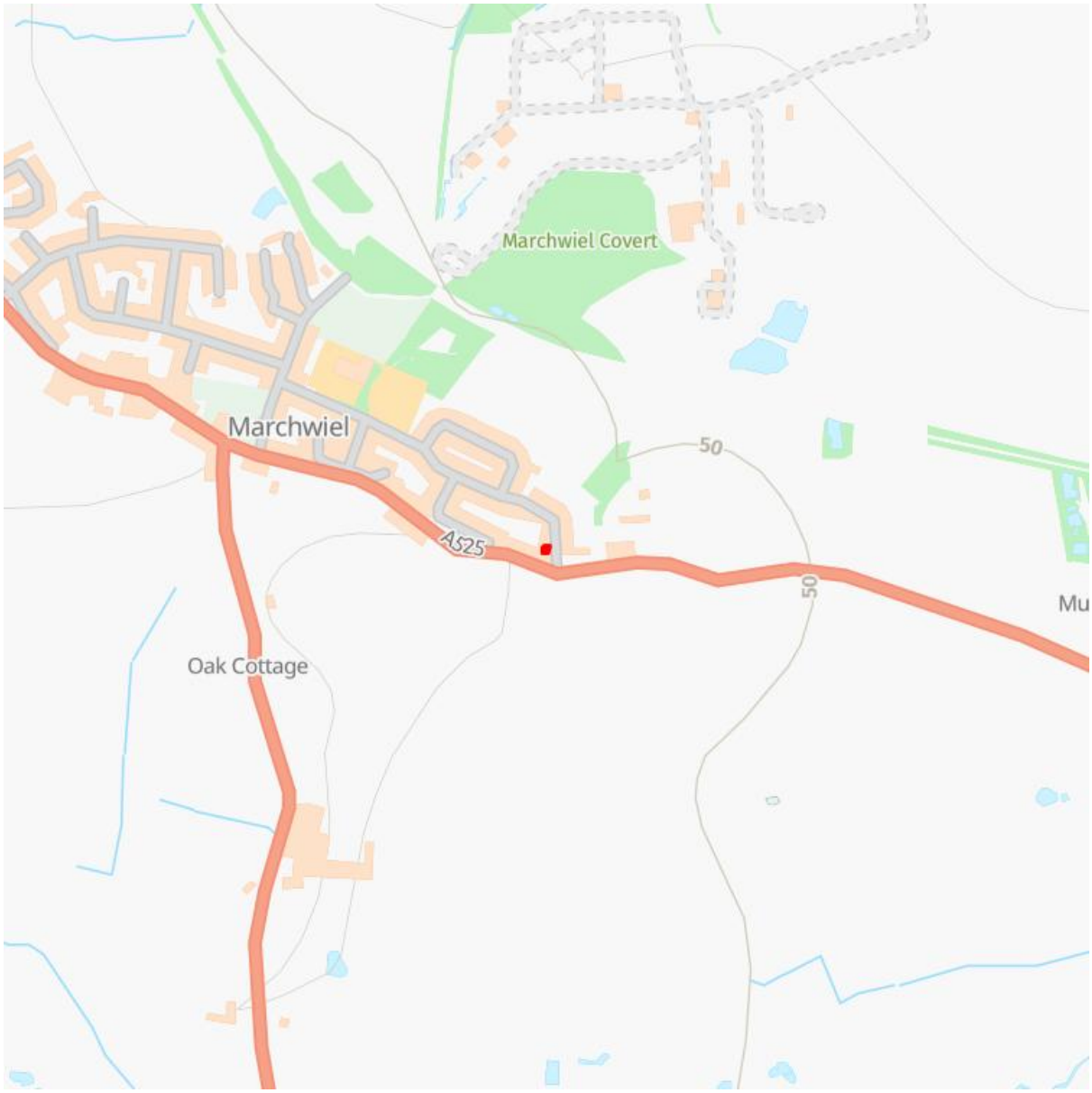


Figure 1.1: A 1:10,000 map view of the site (in red) and its immediate surrounds.

2 Method

2.1 Desk Study

2.1.1 Statutory and Non-Statutory Designated Sites

A desk-based study was undertaken to identify nearby habitats of importance and features providing local habitat connectivity, and to identify the presence of statutory and non-statutory designated sites within the vicinity of the site. These include:

- ***International recognised statutory designations:*** Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar Sites.

- ***National recognised statutory designations:*** Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs).

- ***Local level non-statutory designations:*** County Wildlife Sites (CWSs), Local Nature Reserves (LNRs), Sites of Importance for Nature Conservation (SINCs), North Wales Wildlife Trust Reserves (NWWT reserves), and Royal Society for the Protection of Birds Reserves (RSPB reserves).

The search (1km radius) was carried out using the Multi-Agency Geographic Information for the Countryside (MAGIC) website's interactive mapping application, and the Natural Resources Wales (NRW) website's Designated Site Search function.

2.1.2 Species Records Pertinent to the Assessment

A full records search from the local environmental records centre has not been undertaken at this stage of the project; however, a search (1km radius) for species records pertinent to the assessment was undertaken using the interactive mapping applications available on the MAGIC, DataMapWales and National Biodiversity Network (NBN) websites.

2.2 Preliminary Roost Assessment

A preliminary roost assessment of the building was undertaken on the 28th of March 2025 by Paul Roberts UCert (license number: S091932/1) and Matthew Whitehead BSc (Hons) MRSB (an accredited agent upon the same license), both of whom are experienced ecological consultants familiar with the local area. Potential roosting features were accessed using a suitably tall ladder and inspected using a Clulite CB2-L2 high-powered torch and a Eazyview Tradesman fiberscope. A detailed inspection of the building's exterior and interior was carried out in accordance with the methodology prescribed within the Bat Conservation Trust's (BCT) Good Practice Guidelines (2023). The building was then categorised in accordance with Table 4.1 of that document.

During the inspection, note was made of the number and nature of any potential roosting features, and/or of any points of entry/exit, such as:

- Cracks or crevices within walls; lifted paintwork, render, plaster, felt, or lead flashing; loose or lifted roof tiles or ridge tiles; loose windowsills and window frames, gaps behind fascia's, soffits, bargeboards, weatherboard or hanging tiles; exposed eaves or wall plates; aged or badly fitted wooden roof supports; or thick vegetation cover.

- Holes within the walls or roof; broken/missing doors or windows; gaps between the walls and fascia's, soffits or bargeboards; exposed eaves or wall plates; basement grills; broken ventilation outlets; or points of vegetation penetration.

A search for bats or evidence thereof (such as droppings, claw marks, or oil or urine staining) was undertaken, paying especial attention to:

- Gaps behind furnishings, such as curtains, pictures, and posters; accessible cupboards; peeling paintwork; chimneys accessible from fireplaces; loose wooden panelling; lintels above doors; roof timbers and beams (especially within mortise and tenon joints and where ridge and hip beams meet); at the top of gable end walls, connecting walls, and chimney breasts; and behind roofing felt.

During the inspection of the building, notes were made of any evidence of current or historic use by nesting birds.

The inspection was undertaken in accordance with the advice provided in the document *Guidance on Ecological Survey and Assessment in the UK During the COVID-19 Outbreak (Version 4)*, produced by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2021).

2.1 Bat Emergence Surveys

A single bat emergence survey was carried out in accordance with the methodology prescribed within *Bat Surveys for Professional Ecologists* (Bat Conservation Trust, 2023). The survey was undertaken by Matthew Whitehead using a Pettersson M500-384 bat detector, as well as Canon XA50 and Panasonic HC-VX980EB-K infrared cameras, each of which was connected to a PeerSonic RPA3 bat detector (see Figures 2.1 and 2.2) The survey was undertaken under the conditions detailed in Table 2.1.

Table 2.1: The details of the emergence survey undertaken.

Type of Survey	Date and Time	Weather Conditions at Sunset/Sunrise
Emergence Survey	15th May 2025 20.45 – 22.45	Sunset Time: 21.15; 12°C, Dry, Negligible Wind, 0% Cloud Cover

The emergence survey was undertaken in May, in dry and calm conditions, when the temperature at sunset was above 10°C, all of which is in accordance with the good practive guidelines provided in Section 7 of the BCT's *Bat Surveys for Professional Ecologists* (2023). The survey commenced at least 30 minutes before sunset and continued until at least 90 minutes after sunset. As such there are no limitations associated with the timing and weather conditions of the survey.

N.B: Bat emergence surveys can only give a snapshot of bat behaviour at the time of the survey. As the potential of the site for roosting bats may change over time, it is recommended that bat surveys are updated after two years if development has not yet commenced.

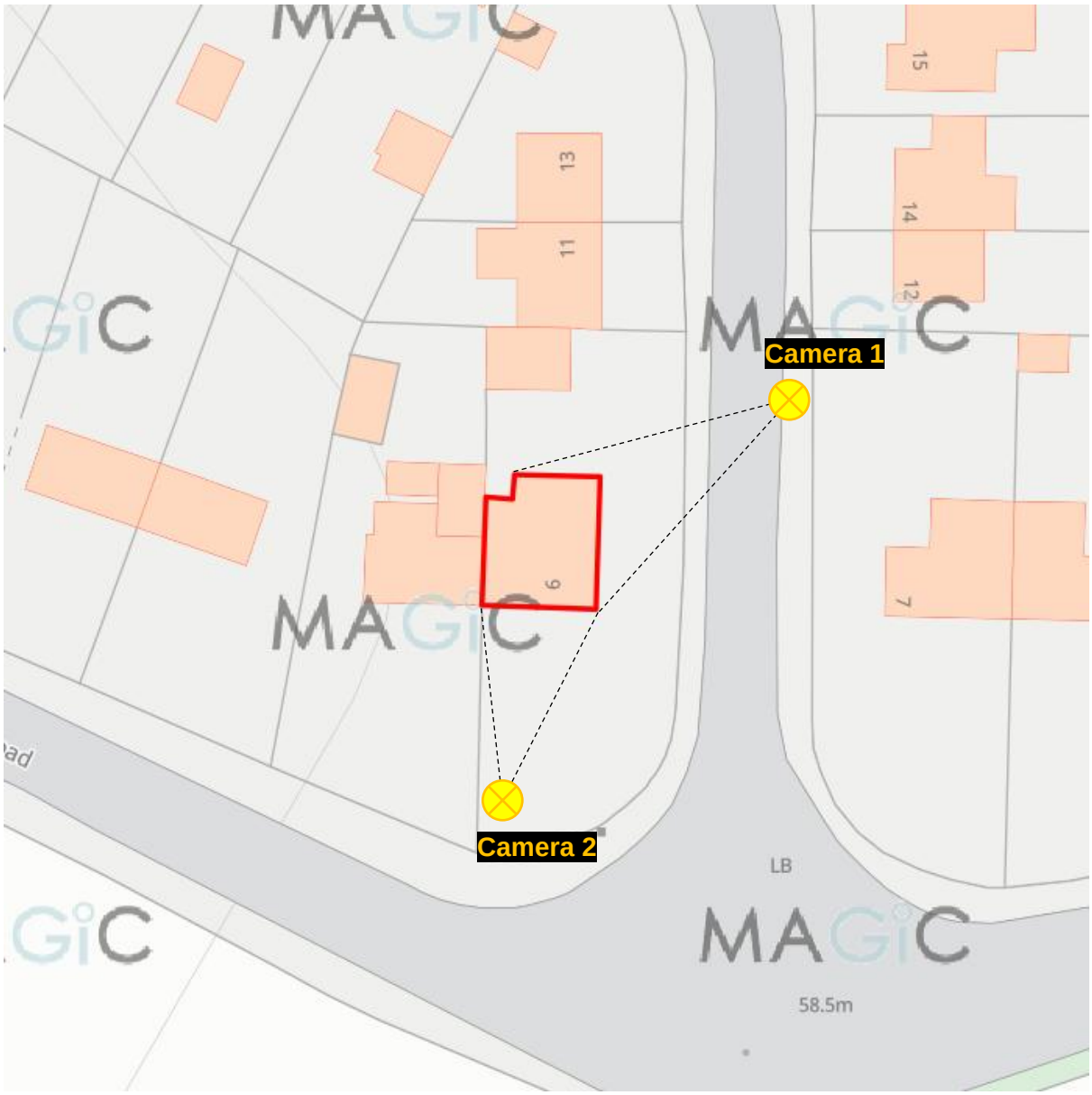


Figure 2.1: A 1:500 map view showing the positions of the surveyors/equipment during the emergence survey. The building to be modified is shown in red.



Figure 2.2: The field of view of each of the cameras used at the darkest part of the survey (Left: Camera 1 – the Canon XA50; Right: Camera 2 – the Panasonic HC-VX980EB-K. All footage was reviewed in real-time using the open-source PotPlayer software. All sonograms were manually reviewed using the SonoBat 30 UK bat call analysis software.

3 Results

3.1 Desk Study

3.1.1 Statutory and Non-Statutory Designated Sites

A review of the information retrieved during the desk study identified no statutory designated sites within 1km of the site (see Figure 3.1). As such and given the nature and modest extent of the proposals, no adverse impacts on any such sites are expected from the proposed development.

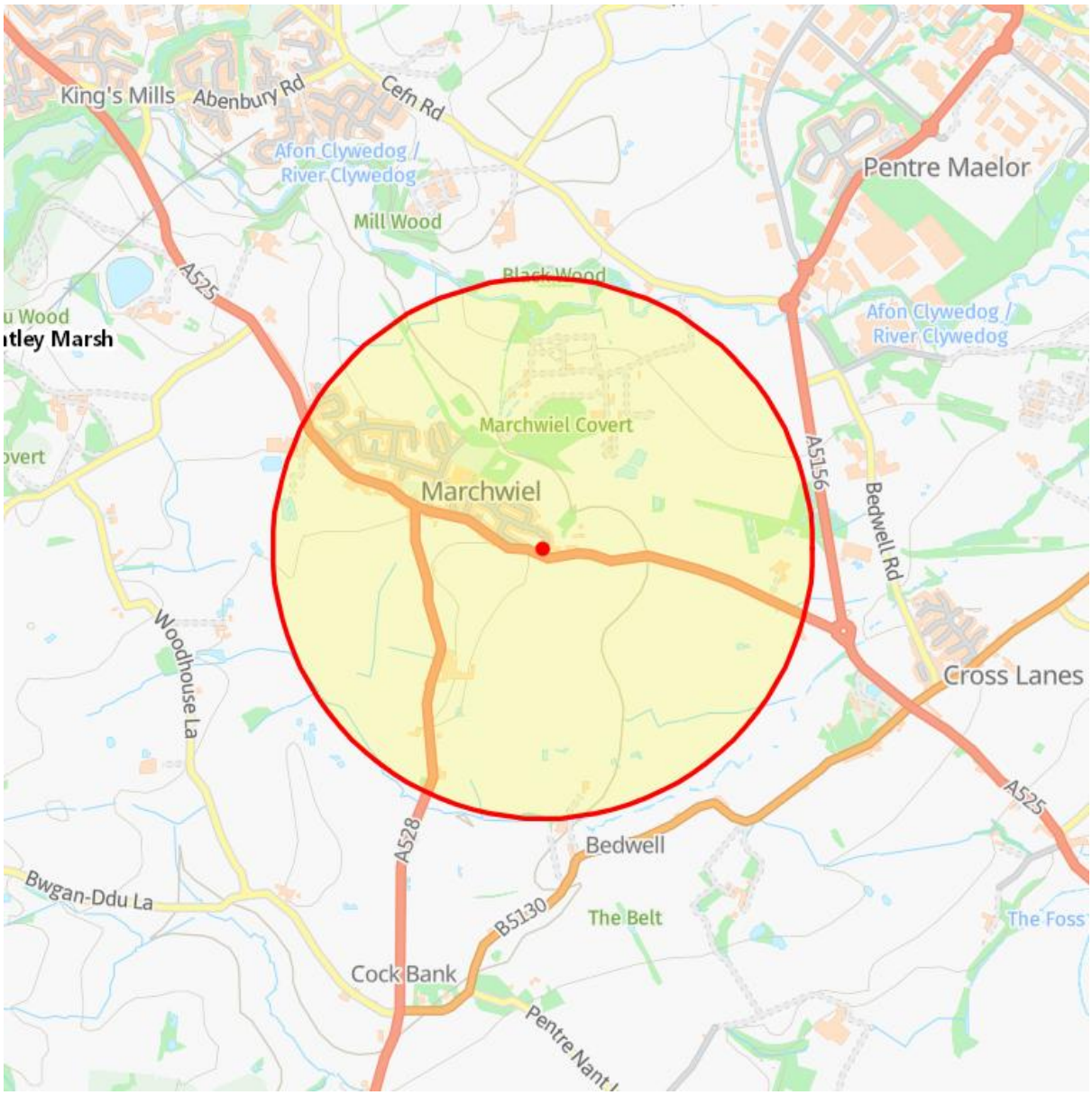


Figure 3.1: A 1:25,000 map view of the site relative to local designated sites.

3.1.2 Species Records Pertinent to the Assessment

A review of the information retrieved during the desk study identified no species records which would warrant additional or alternative survey effort than would normally be expected to inform such a proposal. Several local records of great crested newt (*Triturus cristatus*) were retrieved;

however, given that these were all >250m from site, and given the habitats immediately surrounding the site and the effective urban isolation of the site, it was not considered necessary to expand the scope of the survey to include potential impacts upon this species on this occasion

3.2 Preliminary Roost Assessment

A description of the building to be modified is provided in Table 3.1, below.

Table 3.1: The building to be modified.

Exterior Fabric and Features	
Structure	• The building to be modified is a two-storey semi-detached dwelling which features a complex roof structure, comprising a symmetrically pitched section which runs north-to-south, which is hipped to the north and open-gable to the south, and an intersecting symmetrically pitched roof which extends to the west, where it adjoins the neighbouring dwelling.
Walls	• The walls of the building are constructed of exposed modern brick and are in a good state of repair, with no obvious gaps or crevices present anywhere within the brickwork.
Roof	• The roof of the building is constructed of slate tiles and features angled ridge tiles and is generally in a good state of repair; however, there are some notable gaps in the mortar beneath some of the ridge and hip tiles.
Soffits, fascias and bargeboards	• The building features uPVC fascias, soffits and bargeboards, all of which appear to be in a good state of repair and appear tightly fitted to their surrounding components and wall surfaces.
Windows, doors, and other points of access	• The building's windows and doors are all present and intact and provide no potential for bats or wild birds to access the building's interior spaces. No other points of possible ingress were identified.
External lighting	• The building is set in a residential area which features significant streetlighting. There are several streetlights which spill directly onto both the building's south and east elevations.
Vegetation upon or immediate to the building	• There is no vegetation growth anywhere upon or immediate to any part of the building.
Interior Fabric and Features	
Structure	• The building is a currently occupied and well-maintained family dwelling. There are therefore no opportunities for any bats or wild birds to access any part of the building's interior main. • The building features a single roof void, separate to the interior main
Roof Structure, Roof Lining and Roof Void	• The building features a single roof void, separate to the interior main; however, due to the sloped ceilings above the dwelling's first-floor area, this is a cramped space with limited room for wildlife to maintain flight. • The building's roof is supported by a traditional cut timber frame and is lined with a non-bitumen coated roofing membrane. The roof void is a generally cramped space into which there is no observable natural light or draught ingress.

Evidence of Roosting Bats or Nesting Birds	
Evidence of bats or bat roosts	• No evidence of roosting bats was found during the internal or external inspection of the building.
Evidence of nesting birds	• No evidence of nesting bird use was found during the internal or external inspection of the building.

Summary: No evidence of roosting bats was found within the building's roof void, which appears both cramped and well-sealed. Further, the building's walls and roofline are all in a good state of repair, and the building is set in an area saturated with artificial lighting. However, some potential roosting features are present within the building's roof, beneath the ridge and hip tiles, suitable for more 'light-tolerant' crevice-roosting bat species. Accordingly, the building was categorised as having low potential to support roosting bats.

No evidence of nesting bird use was found during the internal or external inspection of the building.

Photographs showing the above features and findings are included below (see Figures 3.2 to 3.7).

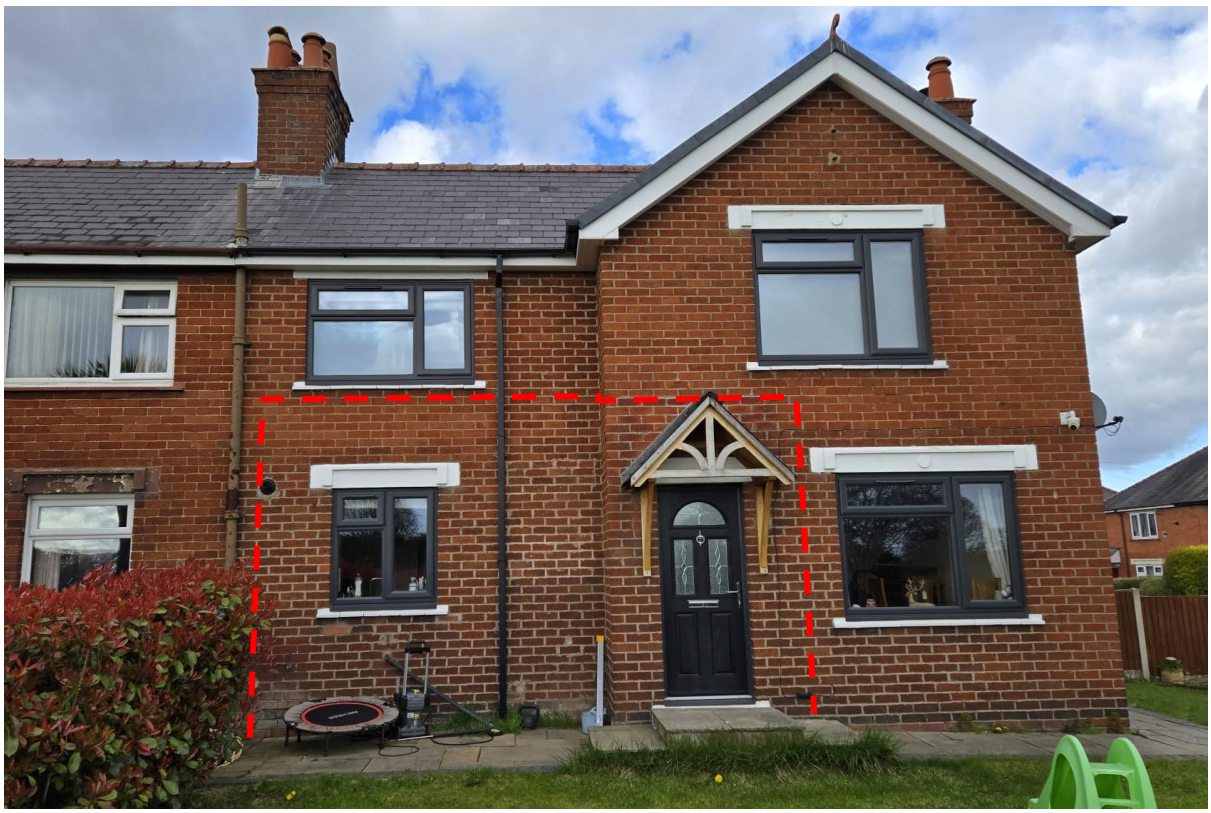


Figure 3.2: The south (front) elevation of the dwelling to be modified. The proposed single-storey extension will adjoin the building as indicated in red.



Figure 3.3: The east (side) elevation of the dwelling to be modified. The proposed two-storey extension will adjoin the building as indicated in red.



Figure 3.4: The north (rear) elevation of the dwelling to be modified.



Figure 3.5: The construction and condition of the building's roof.



Figure 3.6: The construction and condition of the building's roofline.



Figure 3.7: The building's single roof void.

3.1 Bat Emergence Surveys

22nd May 2025: No bats were observed emerging from any part of the building during the emergence survey.

During the survey, common pipistrelle bats (*Pipistrellus pipistrellus*) were recorded in the vicinity of the site at 21.38, at 21.46, at 21.49, at 21.51, at 21.55, at 22.04 and at 22.19; soprano pipistrelle bats (*Pipistrellus pygmaeus*) were recorded in the vicinity of the site at 21.48, 21.54 and at 22.14; and a common noctule bat (*Nyctalus noctula*) was recorded in the vicinity of the site at 21.52.

No other bats were recorded or observed during the survey.

4 Evaluation

No evidence of roosting bats was identified during the inspection of the building; however, based upon its fabric and features, the dwelling was categorised as having low potential to support roosting bats. As such, a single bat emergence survey was considered both necessary and sufficient to determine whether any roosts are present.

Accordingly, a single bat emergence survey was undertaken, during which no bats were observed emerging from any part of the building. Further, bat activity around the site appeared limited. The survey results therefore indicate that the building to be modified does not support roosting bats and that the site has only very limited utility for foraging and/or commuting bats.

No evidence of nesting bird use was found during the internal or external inspection of the building and no nesting bird use of the building was observed during the emergence survey.

5 Impact Assessment

The building to be modified does not appear to support roosting bats or nesting birds. Further, bat activity around the site appears to be limited. As such, no adverse impacts upon roosting bats or nesting birds are expected from the proposed development.

6 Required Actions

No specific mitigation measures for roosting bats or nesting birds are recommended, and no further surveys are recommended. However, if works are delayed into the active season for bats (May to September, inclusive) 2027, then a suitably qualified ecologist must be instructed to provide a revised assessment of the likely impacts of the proposed development. In the unlikely event that a bat or nesting bird is found during the works, the procedure detailed in Appendix 1 should be followed.

Appendix 1: PWMS (Bats and Nesting Birds)

Procedure to follow if bats or nesting birds are discovered during works

- In the highly unlikely event that a bat is discovered during the works, then contractors must stop work immediately and telephone Paul Roberts on 07545 681586.

- P J Ecological Solutions will either provide an appropriately licensed bat worker to the site or provide a member of staff who will liaise directly with Natural Resources Wales. Actions will then be taken following advice given. This may include removal of bats, but only where direct written or verbal permission is gained from Natural Resources Wales. Bats are a protected species and under no circumstances should contractors attempt to handle a bat.

- If a bat is found under roofing material or within any other niche to the building fabric, and does not voluntarily fly out, then the aperture should be carefully covered over by the last object removed (so long as there is no risk of crushing) to protect the bat from the elements, leaving a small gap for the bat to escape voluntarily. If it should be necessary to improvise a replacement covering, this should be free from grease or other contaminants and should not be a fibreglass-based material. If a bat is found outside of the buildings, it should be covered with a light material (cloth) and the appropriately licensed bat worker awaited to carry out the rescue.

- Only when Natural Resources Wales is satisfied that the risk to bats is ceased will works recommence. Should it emerge that the works being undertaken are of more risk to bats than was originally thought, then works will be stopped until they can be supervised by an appropriately licensed bat worker.

- If a nesting bird/active nest is discovered during the works, all works within 5m of the nest must cease and a 5m exclusion zone should be established. This exclusion zone must be respected until it has been determined that all of the chicks have fledged.

Appendix 2: Biodiversity Enhancement Provisions

To comply with Section 6 of the *Environment (Wales) Act 2016*, local planning authorities are required to look for biodiversity gain within the planning system. Accordingly, as biodiversity enhancement provisions, it has been agreed that 1 No. Vivara Pro Build-In Bat Box will be incorporated into the east elevation of the proposed two-storey extension, that 1 No. Vivara Pro Seville Nest Box will be installed upon the north elevation proposed two-storey extension, and that two native fruiting trees – either crab apple (*Malus sylvestris*), wild pear (*Pyrus pyraster*), wild plum (*Prunus domesticus*), wild cherry (*Prunus padus*) or bird cherry (*Prunus avium*) – will be planted within the curtilage of the dwelling.

The bat box will be installed at least 4m from ground level and will be kept free of any immediate clutter or artificial light spill. The nest box will be installed between 1.5m and 3m from ground level and will also be kept free of any immediate clutter or artificial light spill. The trees will be planted within the first planting season post-completion of the development works (December to March, inclusive) and will be provided with appropriate care (i.e., watering, pruning, use of tree guards, etc.) in accordance with the advice provided by the supplier. Whips or feathered trees may be used; however, any specimens which fail will be replaced at the next appropriate season. Once established, the trees will be managed with minimal interference, so that they are allowed to develop to be of most use for wildlife. The trees may be pruned for aesthetic or safety reasons but will at least be allowed to develop and remain at a height/spread as to be able to blossom and fruit.

Appendix 3: Green Infrastructure Statement

The existing habitats within or immediate to the site are restricted to the building to be modified and the surrounding garden area. The proposed works will result in the modification of the building only. The survey results indicated that the building does not support roosting bats or nesting birds. As such, no green infrastructure is expected to be lost because of the proposed development.

However, new/additional green infrastructure is to be provided via the installation of 1 No. Vivara Pro Build-In Bat Box and 1 No. Vivara Pro Seville Nest Box within/upon the modified building, and via the planting of two native fruiting trees. Vivara Pro Build-In Bat Boxes are high-quality and durable integrated boxes (tubes), which have been specifically designed to meet the needs of native crevice-roosting bat species, such as common pipistrelle bats and soprano pipistrelle bats (both of which have been recorded in the vicinity of the site). Vivara Pro Seville Nest Boxes are high-quality and durable integrated nest boxes, which have been specifically designed to meet the needs of crevice-nesting small bird species, such as blue tits, tree sparrows, house sparrows, great tits, crested tits, nuthatches, coal tits and pied flycatchers. Native fruiting trees, once established, provide a source of direct and indirect forage for a variety of invertebrate, wild bird and small mammal species, as well as nesting opportunities for wild birds.

As no green infrastructure is expected to be lost because of the proposed development, and subject to the delivery of the above provisions, the development is expected to result in a clear net benefit for biodiversity/a clear net gain in local green infrastructure.

The 'stepwise approach' should be adopted throughout the design stage of all new developments in Wales. This means that the loss of existing green infrastructure should be avoided whenever possible, and when it is not possible to avoid the loss of or damage to the existing green infrastructure entirely, the extent of the loss or damage should be minimised to the greatest extent possible. When a proposed development poses a risk of harm to green infrastructure, protected habitats or habitats of principal importance, or protected species or species of principle importance, suitable mitigation should be incorporated into the proposed scheme of works to safeguard that green infrastructure/those habitats and species to the greatest extent possible. Finally, if the loss of green infrastructure cannot be avoided, minimised or mitigated for, suitable on-site compensation should be incorporated into the design of the development.