



**92–94 High Street,
Merthyr Tydfil, CF47 8UP**

Bat Survey Report for Gwent Associates Ltd



***A European Protected Species Licence will not be required
for this development to be undertaken***

Report type	Bat Survey Report
Report reference	IG202692–94HighStreet
Site	92–94 High Street, Merthyr Tydfil, CF47 8UP
Grid reference	SO 04951 06392
Client	Gwent Associates Ltd
Date(s)/time(s)/ type(s) of survey(s)	Scoping survey: 25 th March 2026
Surveyor details	Scoping survey: Mr Glyn Lloyd-Jones, Natural Resources Wales Licence number S094480/1 and Mr Iestyn Evans, Natural Resources Wales Licence number S095328/1
Architect/Agent	Dry Architects Ltd

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	Name	Position	Date
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Executive summary

✦ 92–94 High Street (the property) is a large, terraced, east facing, three-storey building that is subject to proposed plans for its conversion into commercial units on the ground floor with domestic dwellings above. It is under renovation and is generally in good condition, well maintained and tightly sealed. It is constructed of brick walls which have been rendered to the rear and one side. None of the walls have any potentially exploitable gaps, and there are also no wall top gaps under the timber/uPVC soffits, fascia, or barge boards. In addition, the uPVC framed windows and doors are all intact and remain closed when work is not being undertaken, with no potentially exploitable gaps around any of the frames. The roof is predominantly pitched slate with small section of flat bitumastic felt. There are no slipped, damaged, or missing slates; no raised ridge tiles; no damage to the flat roof; and no gaps under any flashing. It's recently undergone roof ware replacement and some internal renovation.

✦ On 25th March 2026, I&G Ecological Consulting Ltd undertook a survey of the property. This report confirms the findings of that survey, completed in accordance with current best practice (Collins, J. (Ed.) 2023). It was conducted by an experienced, licensed ecologist and access was available to all parts of the site.

✦ The property is located within the town of Merthyr Tydfil. **It is within close proximity to favourable bat habitat but is not within 2km of any site designated for its bat interest.**

✦ Using the results obtained from the desk study and scoping survey, it is considered that the property has **negligible** potential to support roosting bats, and a **negligible** risk of bats using the features present. **There are currently no bats using the property.** As no evidence of bats or roosts was found, the building is not currently a bat roost and therefore does not receive roost-specific protection. No bat-related constraints to the proposed works are anticipated, but all bat species remain protected under UK and Welsh legislation.

✦ **No evidence of bats, nesting birds, or signs of owl activity** were discovered. However, wider biodiversity enhancement measures are required to be submitted to ensure the development complies with the Environment (Wales) Act 2016, Future Wales 2040, and Planning Policy Wales (Ed. 12, 2024). Recommendations are as follows and all locations will be provided on the plans to be submitted (**see Appendix 5 for recommended locations and Appendix 7 for examples**):

✦ **Recommendation 1 (Bat Enhancement):** 1 x Beaumaris Woodstone (or similar) bat box is to be affixed to the rear (west) elevation of the property. See [Putting up your box - Bat Boxes - Bat Conservation Trust \(bats.org.uk\)](#)

✦ **Recommendation 2 (Bird Enhancement):** 1 x Sparrow terrace is to be affixed to the rear (west) elevation of the property. This is not normally the preferred elevation for a bird box; however, it is the best location in terms of connectivity. See [Where To Put A Bird Box | Nestboxes - The RSPB.](#)

✦ **Recommendation 3 (Broadscale Site Enhancement):** Wider ecological benefit can be achieved by ensuring native, wildlife-friendly species are planted (including in pots if no other space) to retain connectivity to the surrounding habitat.

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1. Introduction

1.1 Scope and purpose of survey

1.1.1 Any sign of use of a site by bats is enough to confirm that the space has ‘bat interest’ and is enough to confirm the importance of the location to bat species. All species, as well as their resting places, are protected by law, and the site is protected even when bats are not present. See appendix 1 for an introduction to bat surveys, including the aims of the scoping survey, appendix 2 for an overview of the legislation, and appendix 3 for information on roost types and survey timings. Appendix 4 lists all surveyors who undertake work for I&G Ecological Consulting Ltd and includes their experience.

1.1.2 This report confirms the results of, and conclusions and recommendations from, the surveys undertaken. It aims to provide the local planning authority with sufficient information to enable a full assessment of the potential ecological impacts of the proposed development. The CIEEM Guidelines for Ecological Report Writing (2017) state that it is important that the structure and content of a report should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. This report has therefore been written in line with these guidelines.

1.1.3 For the purposes of this survey report, the site boundary is defined as the building(s) and surfaces within the overall site footprint.

1.2 Site characteristics and proposed works

1.2.1 92–94 High Street (the property) is located at an elevation of 190m within the town of Merthyr Tydfil. Despite its location within a town, it sits within close proximity to favourable bat habitat, with managed grasslands and mature trees within the town as well as a number of woodlands – including large areas of ancient woodland within Cwm Glo a Glyndyrys to the west– within 2km. In addition, to the east are the more unimproved grasslands of Merthyr Common. In relation to waterbodies and watercourses, the partially wooded river corridor of Nant Morlais is 80m to the north-west, 300m to the south-west is the Afon Taf, Nant Cwm-pant bach is 1.2km to the west, and within 2km are a number of unnamed streams and waterbodies.

1.2.2 The property is subject to proposed plans to convert the commercial building into commercial units on the ground floor with domestic dwellings above.



commercial units on the ground floor with domestic dwellings above. Figure 1 is an aerial view of the property, Figure 2 on the following page is of the wider environment around the property, and Figure 3 is a location and site plan. Additional plan drawings are included within Appendix 5.

Figure 1: Aerial view of the property which is outlined in red (from Apple® Maps)





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Figure 3: Location and site plan (provided by the architect)

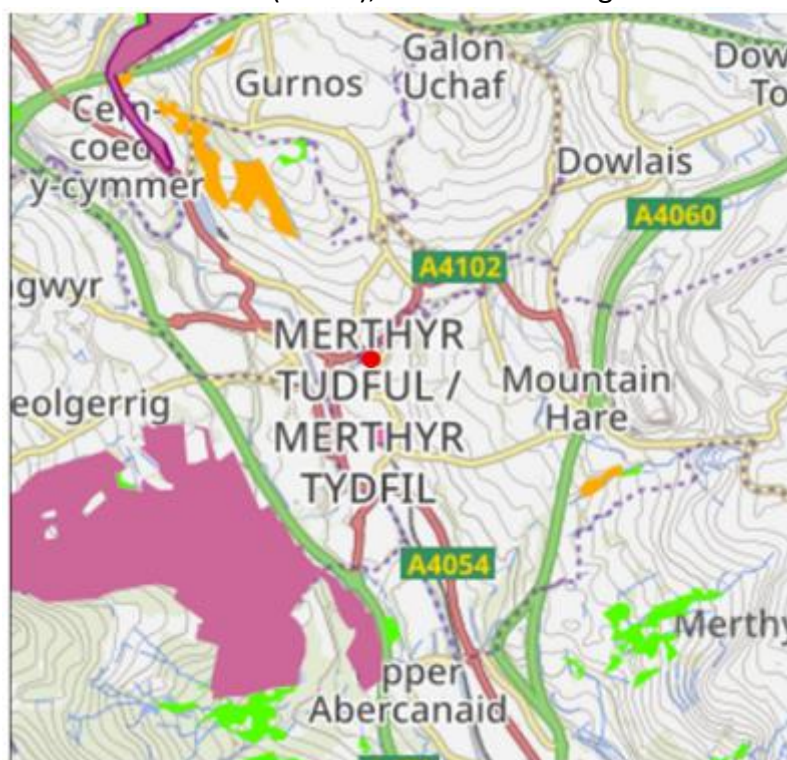
2. Desk study methods and results

2.1 Methods

2.1.1 A 2km search area is used which covers the predicted zone of influence of the proposed development. Multi-Agency Geographic Information for the Countryside (MAGIC), DataMapWales, and Lle are used to establish the proximity of National and International Statutory Designations, particularly in relation to designations for bat interest. Species searches are also conducted through the Local Records Centre (LRC) where appropriate. An online search of planning applications at the property is undertaken to understand its planning history, especially relating to bats.

2.2 Results

2.2.1 No statutory or non-statutory protected features of ecological significance are present within nor adjacent to the property. Within 2km, 960m to the south-west is the Cwm Glo a Glyndyrys Site of Special Scientific Interest (SSSI)/Site of Importance for Nature Conservation (SINC) while 1.7km to the north-west is Cwm Taf Fechan Woodlands SSSI/Local Nature Reserve (LNR)/SINC. None of these sites are designated for their bat interest. Within 2km, there are also six areas of Ancient Semi Natural Woodland (ASNW) and four Restored Ancient Woodlands (RAWS), the closest being a RAWS 890m to the north-west. There are



no Wildlife Trust Sites or National Nature Reserves within 2km of the property. See Figure 4 for sites within 2km, with the location of the property being shown by a red dot.

Figure 4: Designated sites within 2km (taken from DataMapWales)

Key

-  SSSI
-  RAWS
-  ASNW
-  LNR

2.2.2 An LRC data search was not undertaken due to the low predicted impact and nature of the development. The overall impact on biodiversity is likely to be localised and of low significance and current proposals suggest no land will be lost or linear features severed. It is considered very unlikely that the development will have any impact outside the footprint of the works. The data search results would be considered unlikely to impact on the decision-making process as appropriate well-staffed surveys were undertaken at optimum times of year. This approach is consistent with the CIEEM Guidelines for Accessing and Using Biodiversity Data (2020). In addition, the development affects only the building footprint

and does not impact linear features or habitats used by bats for commuting or foraging. **An online search revealed records for the following bat species within 2km of the property: Daubenton's (*Myotis daubentonii*), Lesser horseshoe (*Rhinolophus hipposideros*), Greater horseshoe (*R. ferrumequinum*), Natterer's (*M. nattereri*), Serotine (*Cnephaeus serotinus*), Soprano pipistrelle (*Pipistrellus pygmaeus*), Common pipistrelle (*P. pipistrellus*), and Brown long-eared (*Plecotus auritus*).**

2.2.3 In relation to bird interest, a number of bird species are found at Cwm Glo a Glyndyrys SSSI, including nightjar (*Caprimulgus europaeus*), cuckoo (*Cuculus canorus*), tree pipit (*Anthus trivialis*), whinchat (*Saxicola rubetra*), wood warbler (*Phylloscopus sibilatrix*), and redstart (*Phoenicurus phoenicurus*).

2.2.4 An online search found one current planning application for the property. Application P/26/004 for conversion of the 1st and 2nd floors to 8 x 1-bed flats (4 units on each floor), above the ground floor property known as Barcode was validated on 26th February 2026. This is the application for which this Bat Survey Report is being produced. 2021 Preliminary Roost Assessment (PRA) and subsequent Bat Emergence and Re-entrance Survey Reports found approximately 30 **Pipistrellus species** bat droppings randomly spread on the floor surfaces. It was not possible to state whether these were at the place of deposition or were droppings that had fallen through as the ceilings were stripped (more likely situation it is speculated). The droppings were intact but apparently friable & dry and it was assessed that they were not droppings that had been produced in 2021. No live bats or birds were observed, and **no bats were seen to enter or leave the property during the three surveys conducted** in June 2021 (x 2) and October 2021, but during the two June surveys **P. pipistrellus** and **Noctule (*Nyctalus noctula*)** were observed foraging and commuting within the surroundings. *It was concluded that there was a likely-absence of roosting bats, with the old droppings found on the upper floor likely to be remnants from a minor roost that was historical at the time of survey.*

3. Field survey methods and results

3.1 Methods

3.1.1 A PRA was undertaken by Glyn Lloyd-Jones and Iestyn Evans on 25th March 2026 to identify Potential Roost Features (PRF). Details of the equipment used by I&G Ecological Consulting Ltd can be found in appendix 1. PRA inspections for building suitability are seasonally unrestricted (Collins 2023, Section 5.2.3).

3.1.2 In relation to survey limitations, many of the UK species of bat are crevice dwelling, and bats or signs of bats can be difficult to find within a building. In addition, there may be areas that are inaccessible to the surveyor. Externally, sufficient access was available to enable a thorough survey from ground level – noting that the building is large – while internally, access was available to all areas. As a result, using the equipment available to them, all accessible areas were thoroughly surveyed to maximise effectiveness. In addition, weather conditions were good.

3.1.3 Due to the findings of the PRA, it was not considered that any activity surveys – or deployment of an Anabat – were necessary (Collins (2023), Section 5.2.44). Works to repair roof ware and refurbish the interior have also started suggesting that activity surveys would reveal nothing.

3.2 Survey results

3.2.1 The PRA found that the large, terraced, east facing, three-storey building is under renovation and is generally in good condition, well maintained, and is tightly sealed. It is constructed of brick walls which have been rendered to the rear and one side. None of the walls have any potentially exploitable gaps, and there are also no wall top gaps under the timber/uPVC soffits, fascia, or barge boards. In addition, the uPVC framed windows and doors are all intact and remain closed when work is not being undertaken, with no potentially exploitable gaps around any of the frames. The roof is predominantly pitched slate with small section of flat bitumastic felt. There are no slipped, damaged, or missing slates; no raised ridge tiles; no damage to the flat roof; and no gaps under any flashing. Internally, the uppermost floor is open to the ceiling with the timber rafters currently exposed, and the bitumastic felt lining is in good condition with no damaged sections. No light enters through the roofs or wall tops; however, there are numerous windows which mean that the floors are light and bright. This would reduce the potential for day roosting, were any present. Careful examination found that the surfaces have only undisturbed cobwebs, debris, and dust on them, and no live or dead bats or their signs (e.g., droppings, stains, scratches, or smells) were found anywhere either externally or internally. A thermal and optical fusion image showed no 'hot spots' that could indicate the presence of cryptic bat species. As a result of the findings, it is considered that the property has **negligible** potential to support roosting bats and a **negligible** risk of bats using the features present, and **no evidence of the presence of bats was found either externally or internally**. Site survey images are in appendix 6.

3.2.2 No evidence of nesting birds was found, and no signs of owl activity were discovered.

4. Conclusions and recommendations

4.1 Conclusions

4.1.1 Using the findings of the desk study and field surveys it is **concluded that the property is located within close proximity to favourable bat habitat but is not within 2km of any site designated for its bat interest. There are no trees or hedgerows with any bat potential on site that are affected by the proposed development, the property currently has negligible potential to support bats. No bats or birds are currently using the building. It is therefore considered that proposed development will not have a negative impact upon the favourable conservation status of the bat species using the area.** In addition, the localised scale of the proposed development suggests that the impact on the local ecology is likely to be low, and it is anticipated that the proposed enhancements detailed in 4.2 will result in a positive impact and net gain for biodiversity.

4.1.2 There are not considered to be any survey limitations which would impact upon the findings and recommendations of this report.

4.2 Enhancement measures

4.2.1 Enhancement measures will be required to help meet obligations within the Environment (Wales) Act 2016, Future Wales 2040, and Planning Policy Wales 12th Edition (2024); as well as to compensate for the loss of roosting opportunity. Excellent long-term enhancement can be delivered by implementing measures outlined within appendix 7. Proposed enhancements are as follows:

✦ **Recommendation 1 (Bat Enhancement):** 1 x Beaumaris Woodstone (or similar) bat box is to be affixed to the rear (west) elevation of the property. See [Putting up your box - Bat Boxes - Bat Conservation Trust \(bats.org.uk\)](https://bats.org.uk/putting-up-your-box-bat-boxes/)

✦ **Recommendation 2 (Bird Enhancement):** 1 x Sparrow terrace is to be affixed to the rear (west) elevation of the property. This is not normally the preferred elevation for a bird box; however, it is the best location in terms of connectivity. See [Where To Put A Bird Box | Nestboxes - The RSPB](https://www.rspb.org.uk/where-to-put-a-bird-box/).

✦ **Recommendation 3 (Broadscale Site Enhancement):** Wider ecological benefit can be achieved by ensuring native, wildlife-friendly species are planted (including in pots if no other space) to retain connectivity to the surrounding habitat.

4.2.2 This ecological **report will remain valid** for a period of 24 months from the last survey date i.e. **25/03/2028** (CIEEM, 2019). A further scoping survey may be required to update the site information if planning is not obtained or works do not commence within a two-year period following the survey, especially if the property has fallen into disrepair.

5. Outline method statement for planning

5.1 Outline method statement for planning

5.1.1 **No bats** were detected utilising the property, and there are no restrictions on the timing of the work in relation to bats. Where plans involve works to the roof(s), extra care will be taken at wall tops and when stripping any part of the roof. All materials are to be lifted and not slid as despite a negative survey, bats can still be found in these areas. **If bats are found at any stage, all works will stop, and a qualified ecologist called for advice and guidance.** As no bats or bat signs were detected at the property, no monitoring is proposed (Mitchell-Jones, 2004 – figure 4, page 39).

5.1.2 Current **lighting** plans are not known. Any future lighting must be kept to a minimum to prevent any adverse impacts on bats. In particular, external lighting around the recommended enhancement must be carefully designed to avoid any impact upon bats (Institution of Lighting Professionals, Guidance Note GN08/23). Any external lighting scheme proposed for this application must comply with the lighting principles outlined within the guidance referenced above. See appendix 2 for additional information.

5.1.3 Where **external lighting** is necessary, it should utilise a number of key design points to limit impact: Low level lighting pointed towards the ground; LED bulbs of 2700 kelvin (*p.29 of the lighting guidance note referenced above*) and below (warm white light only); use of light shields/hoods to direct the light downwards and prevent vertical/horizontal light spill; and use of PIR motion sensors on timers to ensure lights only come on when necessary, especially important for the more light sensitive bat species such as horseshoe bats.

Appendix 1: An introduction to bat surveys

A note on bat surveys

- ▶ All bats and their roosts, irrespective of the number of bats, species, and whether bats are present or not, are fully protected by the Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981 (as amended). Bats are the only mammal capable of true flight. They are notoriously difficult to survey for as they cannot be heard unaided and are difficult to see due to their nocturnal behaviour. They are also small and can live in the smallest of crevices, so may often be overlooked because of their size.
- ▶ Wales has relatively high numbers of most of the species that occur in Britain; the rural landscape with its abundance of wooded areas, river valleys and hedgerows means that buildings are commonly used as roosting sites by bats. This is particularly the case for older buildings (typically with stone walls and slate roofs) that are located close to good feeding areas, on the edge of settlements, or that are rarely disturbed.
- ▶ Bats may also change their resting and feeding places regularly throughout the year, depending on the time of year and weather conditions. Thus, other signs of use are also looked for such as their droppings or signs of feeding.
- ▶ To gain an understanding as to how bats are using a building, a survey may also involve dusk and/or dawn observations which may need to be repeated at different times throughout the year. These surveys are aided by both night vision and thermal devices – each surveyor has access to a personal thermal camera (TC) and one is also deployed on tripod with a wide field of view. The thermal cameras are aimed at potential PRFs and left in situ for the survey or manned – depending on bat activity levels. The footage is then reviewed for bat activity upon our return to office to ascertain bat use if any. The TC is mainly used by staff to make bat detection more likely (if they are present) as they are highly sensitive and can even detect animals in the fog and high above in the sky. Images will be included in the report where they add any detail.
- ▶ The search buffers implemented as part of the survey are considered to more than adequately cover the predicted zone of influence of the proposed development. The reasons for the site designations have also been considered when discussing potential impacts on the biodiversity of these sites. If the sites are designated for their bat or bird interest, this will be mentioned.
- ▶ Survey methodologies are implemented as appropriate, based on the surveyors' assessment of the site features and with particular reference to the advice in Bat Surveys for Professional Ecologists: Good practice guidelines, 4th edition (Collins, J. (Ed.), 2023) & The Bat Workers' Manual, 3rd edition. (Mitchell-Jones, A.J., & McLeish, A.P. (Ed.), 2004). Reports are written with reference to the CIEEM (2017) Guidelines as well as BS42020.
- ▶ A PRA visit (scoping survey) is used to identify all potential access and egress points for bats in the building, and to identify crevices and possible dwelling places to inform any activity surveys, if necessary. Internal and external inspections are aided using powerful binoculars and close-focussing monoculars, as well as ladders, high powered Cree flashlights and head-torches. We also have thermal imaging cameras and night vision devices at our disposal as well as full spectrum photographic cameras which can photograph a bat in complete darkness with an infrared flash. Exploitable crevices are also endoscoped with a hand-held high resolution digital scope. Digital thermometers and hygrometers are also at our disposal.

- The survey consists of a visual inspection of the interior and exterior of the building(s) for evidence of bat use, including droppings, smells, feeding remains, staining, and scratching around roost exit and entry points. Potential features conducive (but not necessarily predictive) to bat presence include voids in the stonework, wooden beams, any associated rot holes, gaps behind soffits or within walls and fascia boards, raised tiles, any raised render, and any sufficiently large crevices. The general condition of the building(s) is examined, including the structure of the roof, condition of walls, the potential for disturbance, and the position of the building in relation to connectivity to good bat habitat.
- If positive bat signs are discovered, or the construction style suggests cryptic bats *may* be present, a passive full spectrum bat recorder is deployed within the space of the building surveyed. These commonly record all bats from within and to the exterior of a building as they have extremely sensitive microphones so clusters of calls or high frequency of calls over short periods that are repeated (not just a vocal (Chatty) bat passing the microphone once on a foraging /socialising expedition) may indicate a presence within the building. Supporting evidence is then needed to make a decision, such as bats seen during surveys, droppings and feeding signs as well as building suitability for a given species. For example, we have had clear sonograms for Serotine bats (*Cnephaeus. serotinus*) from a loft space deployed recorder where no gaps existed anywhere and no droppings from serotines were present. These large bats were roosting elsewhere on site or use the site for foraging.
- The outcomes have been used to specify whether further surveys are required, or to establish the need for, and extent of, any mitigation or compensation measures required as part of the proposed works.
- If positive signs of bat activity are found then it will be necessary to assess whether a licence is needed (damage and disturbance to the roost and harm to bats can be avoided through thoughtful and planned working practices), or whether a licence is recommended as damage, disturbance or harm are unlikely to be avoided.

Appendix 2: Overview of the legislation

- All bats and their roosts, irrespective of the number of bats, species, and whether bats are present or not, are fully protected by the Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981 (as amended).
- There is a risk that works could result in the damage or destruction of a bat roost or roosts, the disturbance of bats, and the potential killing or injury of bats, sufficient survey effort (where indicated) helps to minimise this risk.
- All wild birds, their nests, eggs, and dependent young are afforded protection under the Wildlife and Countryside Act 1981 (as amended), with the bird nesting season generally from 1st March until 31st August.

Technical Advice Note (TAN) 5 (Welsh Government, 2009) specifically provides advice about how the land use planning system should contribute to protecting and enhancing biodiversity and geological conservation. The TAN provides advice for local planning authorities on the key principles of positive planning for nature conservation; nature conservation and Local Development Plans; nature conservation in development management procedures; development affecting protected internationally and nationally designated sites and habitats; and development affecting protected and priority habitats and species.

Under Section 2.4 within the TAN 5, 'when deciding planning applications that may affect nature conservation local planning authorities should':

- Pay particular attention to the principles of sustainable development, including respect for environmental limits, applying the precautionary principle, using scientific knowledge to aid decision making and taking account of the full range of costs and benefits in a long- term perspective.
- Contribute to the protection and improvement of the environment, so as to improve the quality of life and protect local and global ecosystems, seeking to avoid irreversible harmful effects on the natural environment.
- Promote the conservation and enhancement of statutorily designated areas and undeveloped coast.
- Ensure that appropriate weight is attached to designated sites of international, national and local importance.
- Protect wildlife and natural features in the wider environment, with appropriate weight attached to priority habitats and species in Biodiversity Action Plans.
- Ensure that all material considerations are taken into account, and decisions are informed by adequate information about the potential effects of development on nature conservation.
- Ensure that the range and population of protected species is sustained.
- Adopt a step-wise approach to avoid harm to nature conservation, minimise unavoidable harm by mitigation measures, offset residual harm by compensation measures and look for new opportunities to enhance nature conservation; where there may be significant harmful effects local planning authorities will need to be satisfied that any reasonable alternative sites that would result in less or no harm have been fully considered.

➤ Bats are listed under Schedule 5 and 6 of the Wildlife and Countryside Act 1981 and protected under sections 9 and 11 (as amended by the Countryside and Rights of Way (CROW) Act 2000).

➤ The Environmental Damage (Prevention & Remediation) Regulations 2009 – A protected species and its habitat are protected under this legislation as well as others.

➤ The Conservation of Habitats and Species Regulations 2017 – (regulation 43) fully protects all bats and their roosts, making it **an offence to deliberately kill, injure or capture** (take) bats; *to deliberately disturb bats; damage or destroy bat roosts* or resting places (this is considered an ‘Absolute Offence’ as damage and destruction may detrimentally affect the Continuous Ecological Functionality of that roost/resting place); possess or transport a bat or any part of a bat; sell (or offer for sale) or exchange bats or parts of bats.

➤ For any offence to occur a derogation or **European Protected Species (EPS) licence** must be gained from Natural Resources Wales. To gain an EPS Licence, they must be satisfied that:

i. granting the licence would not be detrimental to the Favourable Conservation Status (FCS) of the populations of species concerned within its natural range.

ii. the derogation (licence) is in the public interest of Health and Safety or for other reasons of over-riding public interest, including those of a socio-economic nature or will have a benefit of primary importance to the environment; and

iii. there is no satisfactory alternative to the derogation which would allow the described development to proceed but which would avoid or reduce, the need for any adverse impact to the species.

Bats are also protected by:

➤ Appendix III of the Bern Convention.

➤ Appendix II of the Bonn Convention (including the Convention's Agreement on the conservation of Bats in Europe).

➤ Natural Environment and Rural Communities Act 2006 (in England).

➤ The Environment (Wales) Act 2016: specifically, Sections 6 (*places a duty upon Local Authorities to enhance biodiversity and the **resilience of ecosystems***) and 7 (*Creating local biodiversity lists and a duty to take steps to **maintain and enhance biodiversity***).

➤ All bats are listed in Annex IV of The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and are therefore designated as *European Protected Species*. These *protected* species are afforded enhanced protection and more stringent licensing provisions than those protected by the Wildlife and Countryside Act (WACA) alone. There are also biodiversity obligations to be met within the Well-being of Future Generations (Wales) Act 2015 [WFG] and the seven well-being goals which include an emphasis on socio-economic resilience as well as protecting culture, heritage and the Welsh language. One Act does not take precedence over the other.

➤ Planning Policy Wales (12th Ed.) also emphasises the importance of ensuring – wherever possible – a net gain to biodiversity from any development. Future Wales (The National Plan 2040) highlights in the 10th of 11 outcomes that the aim is for a “Wales where people live...in places with biodiverse, resilient and connected ecosystems”. Highlighting the importance for creating and enhancing resilient and diverse eco-systems.

► Future Wales – the National Plan 2040 states the following:

- Outcome 10 focuses on places with biodiverse, resilient and connected ecosystems. As such, the variety of flora and fauna found across Wales makes it a special place. Biodiversity underpins the functioning of healthy, resilient ecosystems and the multiple benefits they provide. While biodiversity has declined in recent decades, we will reverse these losses and enhance the resilience of ecosystems. The planning system will ensure wildlife is able to thrive in healthy, diverse habitats, both in urban and rural areas, recognising and valuing the multiple benefits to people and nature.
- Policy 9 concerns Resilient Ecological Networks and Green Infrastructure. To ensure the enhancement of biodiversity, the resilience of ecosystems and the provision of green infrastructure, the Welsh Government will work with key partners to:
 - identify areas which should be safeguarded and created as ecological networks for their importance for adaptation to climate change, for habitat protection, restoration or creation, to protect species, or which provide key ecosystems services, to ensure they are not unduly compromised by future development; and
 - identify opportunities where existing and potential green infrastructure could be maximised as part of placemaking, requiring the use of nature-based solutions as a key mechanism for securing sustainable growth, ecological connectivity, social equality and well-being. Planning authorities should include these areas and/or opportunities in their development plan strategies and policies in order to promote and safeguard the functions and opportunities they provide. In all cases, action towards securing the maintenance and enhancement of biodiversity (to provide a net benefit), the resilience of ecosystems and green infrastructure assets must be demonstrated as part of development proposals through innovative, nature-based approaches to site planning and the design of the built environment.

■ Institution of Lighting Professionals, Guidance Note GN08/23 (pages 29 and 30), **Appropriate luminaire specifications:** 4.29 Light sources, lamps, LEDs and their fittings come in a myriad of different specifications which a lighting professional can help to select. However, the following should be considered when choosing luminaires and their potential impact on Key Habitats and features: All luminaires should lack UV elements when manufactured. Metal halide, compact fluorescent sources should not be used; LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability; A warm white light source (2700 Kelvin or lower) should be adopted to reduce blue light component Guidance Note 08/23: Bats and Artificial Lighting At Night 30 Institution of Lighting Professionals; Light sources should feature peak wavelengths higher than 550 nm to avoid the component of light most disturbing to bats (Stone, 2012); Internal luminaires can be recessed (as opposed to using a pendant fitting) where installed in proximity to windows to reduce glare and light spill; Waymarking inground markers (low output with cowls or similar to minimise upward light spill) to delineate path edges (see Case Study 1); Column heights should be carefully considered to minimise light spill and glare visibility. This should be balanced with the potential for increased numbers of columns and upward light reflectance as with bollards; Only luminaires with a negligible or zero Upward Light Ratio, and with good optical control, should be considered - See ILP GN01.

✦ Luminaires should always be mounted horizontally, with no light output above 90° and/or no upward tilt; Where appropriate, external security lighting should be set on motion sensors and set to as short a possible a timer as the risk assessment will allow. For most general residential purposes, a 1- or 2-minute timer is likely to be appropriate; Use of a Central Management System (CMS) with additional web-enabled devices to light on demand; Use of motion sensors for local authority street lighting may not be feasible unless the authority has the potential for smart metering through a CMS; The use of bollard or low-level downward-directional luminaires is strongly discouraged. This is due to a considerable range of issues, such as unacceptable glare, poor illumination efficiency, unacceptable upward light output, increased upward light scatter from surfaces and poor facial recognition which makes them unsuitable for most sites. Therefore, they should only be considered in specific cases where the lighting professional and project manager are able to resolve these issues. See Case Study 6; and only if all other options have been explored, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed. However, due to the lensing and fine cut-off control of the beam inherent in modern LED luminaires, the effect of cowls and baffles is often far less than anticipated and so should not be relied upon solely.

Appendix 3: Types of bat roost and survey timings

The tables below show the recommended survey timings and are reproduced from the Good Practice Guidelines (tables 7.1 and 7.2) (4th Edition, 2023). This is for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees but unlikely to give confidence in a negative result).

Table 7.1. Recommended timings for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees where other methods such as PRF inspection are not possible, but unlikely to give confidence in a negative result). To be used in tandem with Table 7.2.		
Low roost suitability or PRF-I	Moderate roost suitability	High roost suitability or PRF-M
May to August (structures)	May to September ^a , with at least one of surveys between May and August ^b	May to September ^a , with at least two of surveys between May and August ^b
No further surveys required (trees)		
a September surveys are both weather- and location-dependent. Conditions may become more unsuitable in these months, particularly in more northerly latitudes, which may reduce the length of the survey season. September surveys are likely to miss maternity roosts due to dispersal before this time, but may pick up mating roosts. b Multiple survey visits should be spread out to sample as much of the recommended survey period as possible; it is recommended that surveys are spaced at least three weeks apart, preferably more. Survey timings should consider the prevailing conditions in the year of survey, which will vary geographically. In years with a cold spring, the surveys should not be started in early May or all completed in May. The surveys should maximise the possibility of detecting maternity roosts, which can switch roosts between pregnancy and lactation, and the optimum coverage includes the pre-parturition, post-parturition and mating periods.		

Table 7.2. Recommended minimum number of survey visits for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees but unlikely to give confidence in a negative result).		
Low roost suitability or PRF-I	Moderate roost suitability	High roost suitability or PRF-M
One survey visit. One dusk emergence survey ^a (structures).	Two separate dusk emergence survey visits ^b .	Three separate dusk emergence survey visits ^b .
No further surveys required (trees).		
a Structures that have been categorised as low potential can be problematic and the number of surveys required should be judged on a case-by-case basis (see para 5.2.44). In some cases, more than one survey may be needed, particularly where there are several buildings in this category. b Multiple survey visits should be spread out to sample as much of the recommended survey period (see Table 7.1) as possible; it is recommended that surveys are spaced at least three weeks apart, preferably more.		

^a September surveys are both weather and location dependent. Conditions may become more unsuitable in these months, particularly in more northerly latitudes, which may reduce the length of the survey season. *September surveys may miss maternity roosts due to dispersal (but the amount of guano, smell, and other signs will suggest whether it's a likely maternity roost or not).* A September survey may pick up a mating roost.

Roosts required by bats

Hibernation sites (hibernacula). Sheltered areas with relatively stable winter temperatures.

Underground cavities, caves, mines, cellars, hollow trees and cavities and crevices in buildings or similar structures are examples.

Nursery roosts (maternity roosts). Places usually warm, where adult females of a colony gather to give birth and rear their young. These are often traditional sites with a history of such use and include roof voids, walls, soffit boxes, hollows and cracks/splits in trees and cavities in bridges and similar structures.

Night roosts/feeding perches. Places where bats may gather at night away from the day roost after initial feeding. These places are often quite exposed and may not be suitable for day roosting. They are often recognisable by deposits of droppings and insect remains.

Intermediate/dispersal roosts. Sites where small numbers of bats may gather after hibernation before taking up residence in the nursery roost. Bats may return to these sites after dispersal from the nursery roost and before entering hibernation.

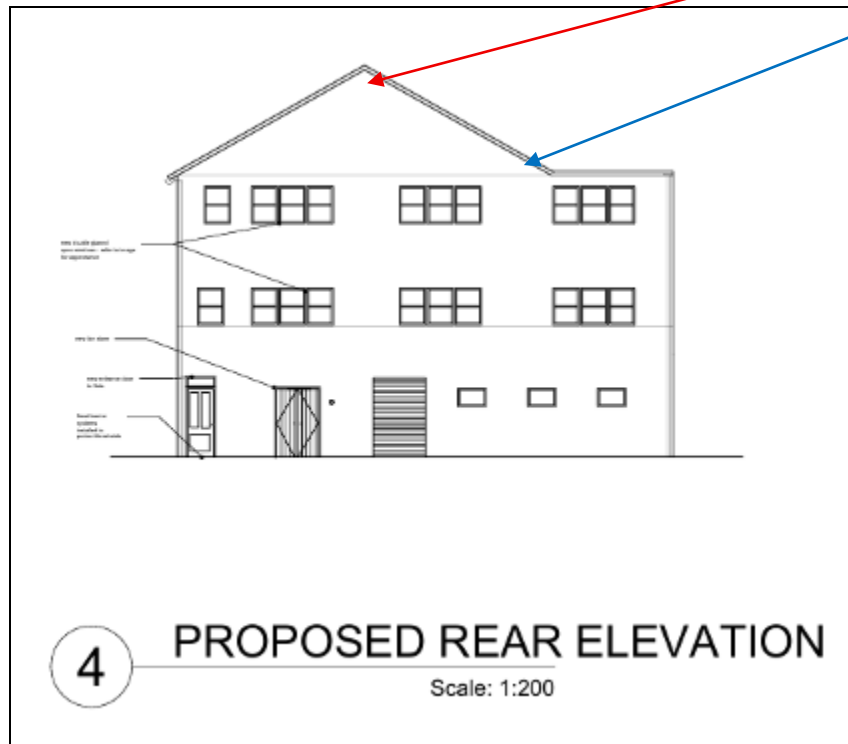
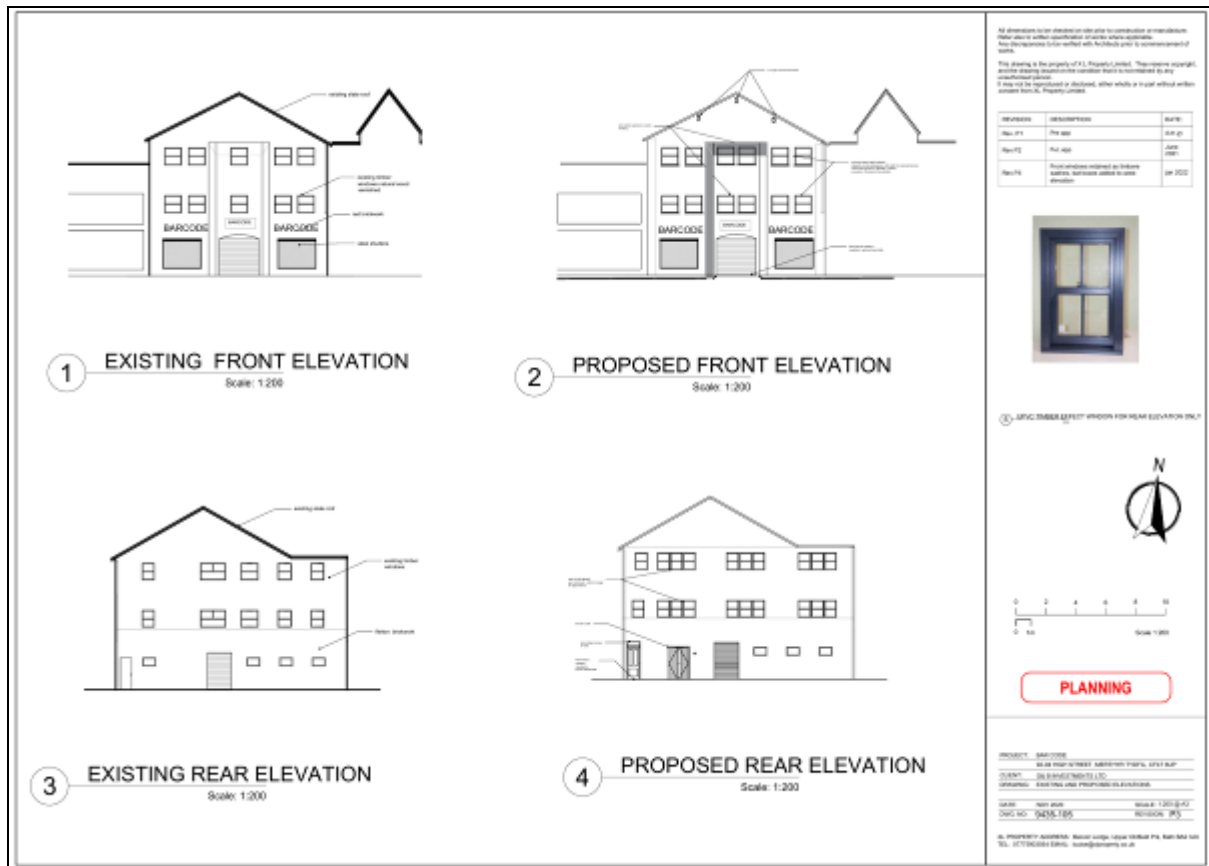
Mating/male roosts. Places that an individual male may defend from other males and to which he will attempt to lure females. These will include small holes/cavities in trees, stonework, caves, mines, and buildings.

Access, size of roost space and structure

- *Crevise-dwelling bats* (such as Soprano pipistrelles) can crawl into roosts via small gaps in the range of 15–20mm high by 20–50mm wide. The roost area should maintain a crevice of this approximate size gap that the bats can roost between. The area this roost provision covers can be small but about 1m² would be useful for summer nursery roosts. The height of entry can be from 2–7m.
- *Roof-void dwelling bats* require similar dimensions to access the roost but typically need timber joists or beams on which to roost. The height of entry can be from 2–7m.
- *Bats needing a flying area* require the same access dimension as mentioned above, 15–20mm (h) x 20–50mm (w) situated over 2m in height. The roosting area should not be trussed, to allow flight, and should ideally (wherever possible) be of similar dimensions to the roost being replaced.
- *Horseshoe bats* need a larger access so that they can fly (instead of crawl) directly into the roost. Lesser horseshoe bats need an access of 300mm (w) x 200mm (h), while greater horseshoe bats need 400mm (w) x 300mm (h). As above, the roosting area should not be trussed, to allow flight, and should again (where possible) be of similar dimensions to the roost being replaced.

Appendix 4: List of surveyors

Surveyor	Licence	Experience/background
Mr Glyn Lloyd-Jones	Bats	<i>I&G have held bat licences and been operating for more than a decade</i> and in that time, Glyn has gained significant experience in many survey skills and has assisted/worked with many other licensed bat surveyors as well as local bat groups. He possesses both a Bachelor's (with honours) and Master's degree in the biological sciences and is a Chartered Biologist & member of the Royal Society of Biology. He has worked for EAW, NRW and CCW for over a decade and has gained significant experience of working for regulators and conservation bodies. He also holds a Class 2 bat licence in England and has undertaken many badger, tree and herpetofaunal surveys. Natural Resources Wales Licence number S094480/1 . I&G were proud to be shortlisted for a BCT roost award in 2021 and contributed to both the 2023 survey and mitigation guidelines and also sponsor the former.
Mr Iestyn Evans	Bats	Iestyn has extensive experience in conservation, habitat improvement and management and has also worked with and assisted other licensed bat workers for many years. He has also helped with local bat group surveys and assisted in data gathering for the Beacon for Bats project undertaken by the Vincent Wildlife Trust. Iestyn has also assisted the Glamorgan Bat Group and will also help supervise and mentor new members of staff. He is also certified to work in confined spaces. Natural Resources Wales Licence number S095328/1 .
Miss Ceri Daugherty	Bats	Ceri worked at Team Leader level within the SNCO for Wales for many years, dealing with customers and negotiating with landowners. She also has practical conservation management experience as both a Countryside Ranger and a conservation volunteer. She possesses a Master's degree in Environmental Impact Assessment and a Bachelor's degree (with honours) in the natural sciences. She is a member of the Carmarthenshire Bat Group. Natural Resources Wales Licence number S095321/1 .
Ms Cathy Browne	Ecologist	Cathy has a keen interest in wildlife conservation and in undertaking bat and avian surveys in particular, to this end she achieved a first-class honours degree in wildlife and practical conservation with professional studies. She has a passion for ornithology and is working to further improve her skills in this area and others in the ecology sector. Cathy is an accredited agent for bats under Iestyn Evans' licence.
Mr Greg Evans	Trainee	Greg attends dusk and dawn surveys to provide extra monitoring for possible entry and exit points for bats. He is currently building his experience in this area and is a keen amateur natural historian with an enthusiasm and affinity for bats.
Miss Ellie Davies	Ecologist	Ellie has always been passionate about wildlife and nature, to this end she achieved her Bachelor's degree in Zoology. She has a keen interest in undertaking bat surveys and is currently building on her experience to further improve her skill set and hopes to gain a personal bat licence. Ellie is an accredited agent for bats under Iestyn Evans' licence.
Mr Mike Jones	Assistant	Whenever we need extra assistance in observing and recording bat activity on buildings, Mike provides an excellent and reliable service.
Ms Sharon Doherty	Assistant	Whenever we need extra assistance in observing and recording bat activity on buildings, Sharon provides an excellent and reliable service.
Ms Bonnie Illingworth	Assistant	Bonnie has been a member of the Kent Bat Group for a number of years and has undergone formal training in leading Bat Walks by Shirley Thompson, who set up The Young Batworkers group/magazine etc. She has led several educational sessions for the Scouts and local community groups. She has undertaken many bat activity surveys and has enjoyed conservation work with BCT.
Ms Greta Vaiciunaite	Assistant	Greta has a keen eye for detail and a passion for the natural sciences. She regularly helps on surveys for bats, reptiles and amphibians and seeks to gain a rounded knowledge in ecology.
Mr Tom Bellingham	Ecologist	Tom has an aptitude for ecology and enjoys bat, bird, botanical and woodland surveys. He is presently training to gain tree survey accreditation as well as working from ropes and is qualified to work in confined spaces. Tom is an accredited agent for bats under both Iestyn Evans' and Glyn Lloyd-Jones' licences.

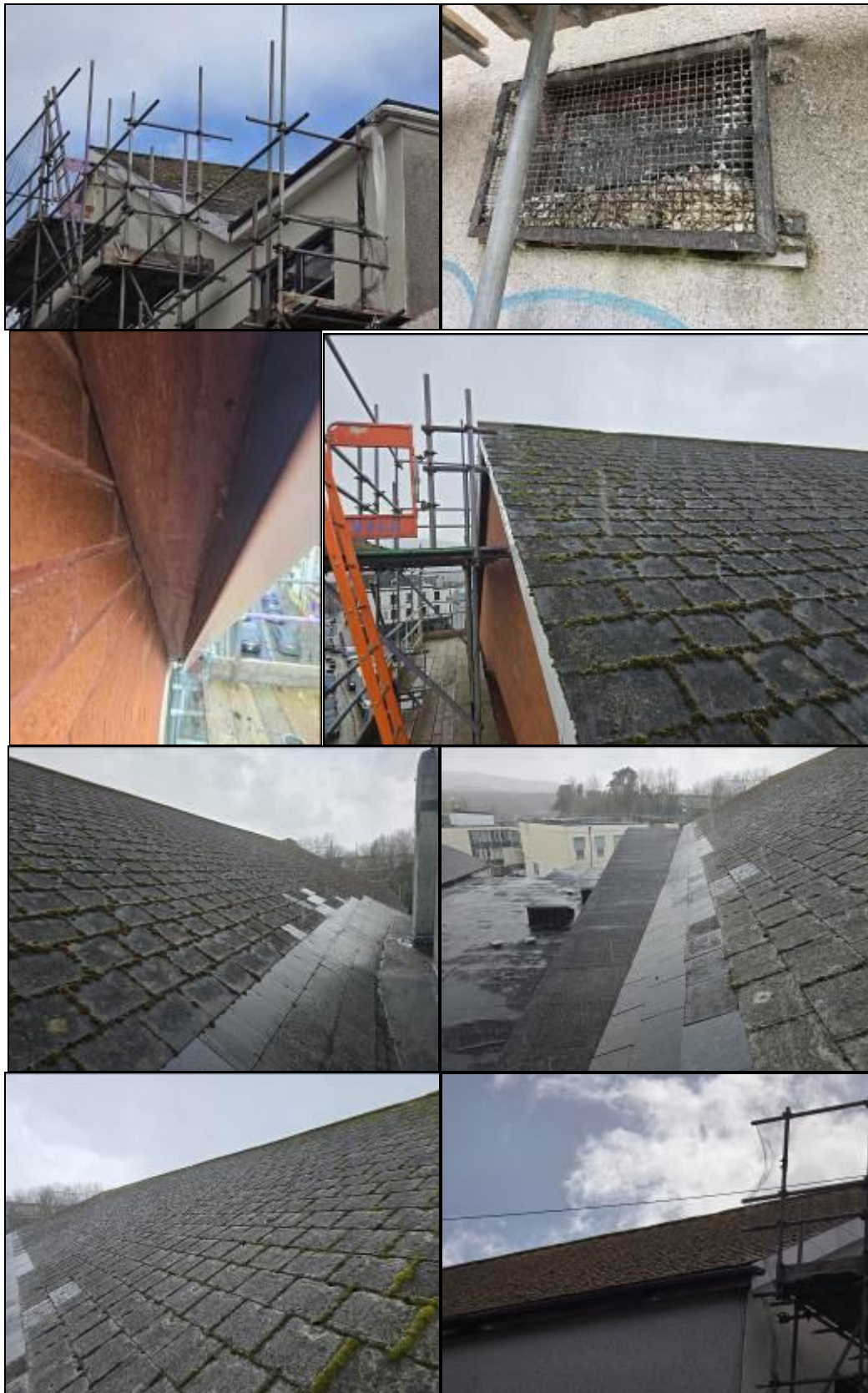


Appendix 6: Site survey images



The large, terraced, east facing, three-storey building is subject to proposed plans to convert the commercial building into commercial units on the ground floor with domestic dwellings above. It is under renovation and is generally in good condition, well maintained, and is tightly sealed. It is constructed of brick walls which have been rendered to the rear and one side. None of the walls have any potentially exploitable gaps, and there are also no wall top gaps under the timber/uPVC soffits, fascia, or barge boards.





In addition, the uPVC framed windows and doors are all intact and remain closed when work is not being undertaken, with no potentially exploitable gaps around any of the frames. The roof is predominantly pitched slate with small section of flat bitumastic felt. There are no slipped, damaged, or missing slates; no raised ridge tiles; no damage to the flat roof; and no gaps under any flashing.

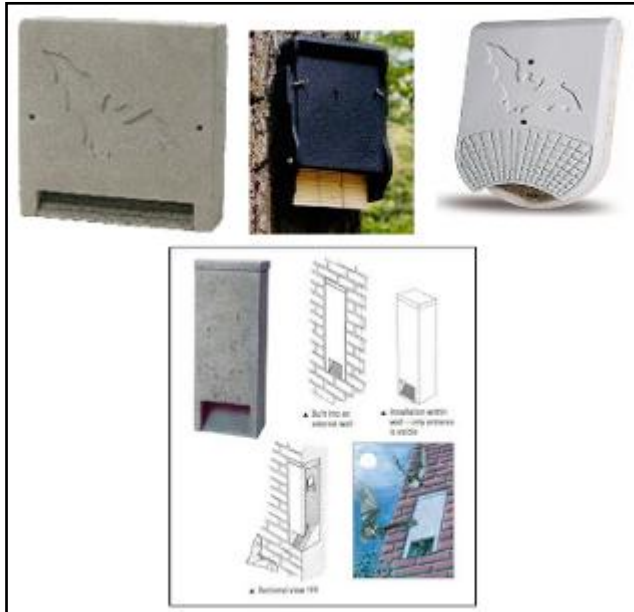


Internally, the uppermost floor is open to the ceiling with the timber rafters currently exposed, and the bitumastic felt lining is in good condition with no damaged sections. No light enters through the roofs or wall tops; however, there are numerous windows which mean that the floors are light and bright. This would reduce the potential for day roosting, were any present. Careful examination found that the surfaces have only undisturbed cobwebs, debris, and dust on them, and no live or dead bats or their signs (e.g., droppings, stains, scratches, or smells) were found anywhere either externally or internally.



A thermal and optical fusion image showed no 'hot spots' that could indicate the presence of cryptic bat or bird species.

Appendix 7: Roost compensation & enhancement measures



Top: From left to right, the in-wall Schwegler 1FE, the tree mounted 1FF and the multi season 1WQ. The bottom image shows the 1FR in situ.



Left: The Beaumaris Bat Box is made from 100% WoodStone which is very durable, so this product has a lifetime warranty. The attractive design is suitable for crevice roosting bats and has a rough interior to provide lots of grip. Bats need to increase their body temperature before flight so prefer warm roosting spots, which is why many of our bat boxes have a black exterior to absorb heat from the sun. WoodStone™ isn't just strong, it also has good thermal insulation, reducing temperature fluctuations inside the box and helping to make this an ideal roost site.

Right: The Vivara Pro Woodstone Build-in bat box. See [Putting up your box - Bat Boxes - Bat Conservation Trust \(bats.org.uk\)](http://Putting up your box - Bat Boxes - Bat Conservation Trust (bats.org.uk))

See [Putting up your box - Bat Boxes - Bat Conservation Trust \(bats.org.uk\)](http://Putting up your box - Bat Boxes - Bat Conservation Trust (bats.org.uk))



Examples of Sparrow terraces (top), House martin nest cups (second line), Swift nest cups (third line), Small-holed nest boxes (bottom left), and Open-fronted nest boxes (bottom right). Siting advice can be found at [Where To Put A Bird Box | Nestboxes - The RSPB](#)



Appendix 8: I&G Ecological Consulting Ltd legal disclaimer

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We confirm that in preparing this report, we have exercised reasonable skill and care, taking into account the project objectives, the agreed scope of the work, and prevailing site conditions.

Advice in this report is based on the judgement of I&G Ecological Consulting and the interpretation of data gathered during the course of their survey on the property named in this document. ***Until payment has been received, this report remains the intellectual property of I&G Ecological Consulting and can be withdrawn from the planning process at our request. You are also not covered by any of our indemnity or liability insurance until the report has been paid for in full.***

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All work undertaken in this report is the sole responsibility of I&G Ecological Consulting.

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