



Bat Activity Survey Report for

**Building 1 on land between Cwmavon and Dan Y Bont, Maes Y
Bettws, Pontrhdyfen, Neath, SA12 9SD**

Mr J. James

**This report is to be read alongside the PEA produced by Elite
Ecology 2021**

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

Protected Species Survey – Bats

Building 1 on land between Cwmavon and Dan Y Bont, Maes Y Bettws, Pontrhdyfen, Neath, SA12 9SD

Report type	Bat Survey Report
Report reference	IG2022Maes y Bettws
Site	Building 1 on land between Cwmavon and Dan Y Bont, Maes Y Bettws, Pontrhdyfen, Neath, SA12 9SD
Grid reference	SS 79299 93867
Client	Mr J James
Date(s)/time(s)/type(s) of survey(s)	Dusk activity survey: 23 rd Sept 2022 between 18:50 and 21:30
Surveyor details	Activity surveys: Mr Iestyn Evans Natural Resources Wales Licence number S090746/1 and Mr Greg Evans
Architect	Hayston Developments & Planning Ltd

Version	Status	Changes	Name	Position	Date
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	Name	Position	Date
Reviewed by	Ceri Daugherty	Ecologist	07/11/2022
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Executive summary

- ✧ The site is situated in a semi-rural setting on the western edge of the village of Pontrhydyfen. It is separated from the main village by the waters of the River Afan and is bound on its western flank by the large wooded hills of Foel Fynyddau. The site itself measures roughly 0.21ha and is dominated by five main habitat types. These habitats are: Bare ground, Tall ruderal, Buildings, Short perennial, and Broadleaved scattered trees, some of which could be utilized by protected species.
- ✧ On 14th September 2021, ecological consultant Mr. Connor Wild (BSc [Hons]MSc, Ecologist) carried out a PEA survey of the site and identified Building 1 (B1) as having Low potential for Bat use. Although no evidence of bat activity was found in the building, due to a few minor gaps a single dusk activity survey was recommended in the original report (see the PEA Report undertaken by Elite Ecology). Elite Ecology were unable to undertake the activity survey therefore I&G Ecological Consulting Ltd undertook a dusk activity survey on behalf of the client. The weather conditions present at the site were conducive to bat activity and access was available to all parts of the building.
- ✧ This report confirms the findings of the survey, completed in accordance with current best practice (Collins, J. (Ed.) 2016) and current government and CIEEM guidelines in relation to the COVID-19 pandemic. They were conducted by experienced, licensed ecologists and assistants.
- ✧ The site is situated in a semi-rural setting on the western edge of the village of Pontrhydyfen. It is separated from the main village by the waters of the River Afan and is bound on its western flank by the large wooded hills of Foel Fynyddau. Within the wider landscape, further habitats are present. These come in the form of some residential dwellings (and their associated gardens), parkland, woodland, heathland, and steep hills. The habitats that surround the site also have the potential to be utilized by a variety of protected species. Under the current proposals, there is to be a change of use of land into one gypsy pitch to include one static residential unit, one touring caravan, conversion of part of the existing stable block (B1) to create a utility/ day room, the creation of improved access, a parking and turning area, and associated works. These works will result in both the permanent and temporary loss and/or alteration of some of the habitats located on the proposed re-development site.
- ✧ As part of the PEA survey undertaken by Elite Ecology, no bats or their signs were found. The building (B1) is considered to have **low** potential to support roosting bats, and a **low** risk of bats using the features present. During the activity survey two species: **Soprano pipistrelle** and **Common pipistrelle** were using the surrounding environment for foraging and commuting, but no bats were seen to leave or enter any part of the building. **There are therefore currently no bats using the building**, it receives no ecological protection under wildlife legislation and there are no ecological constraints to the proposed works.
- ✧ **No evidence of bats, nesting birds, or signs of owl activity** were discovered. However, biodiversity enhancement measures are required to be submitted. 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 (Enhancement):** 1 x Beaumaris Woodstone (or similar) bat box to be affixed to the rear (east) elevation of the building. See [Putting up your box - Bat Boxes - Bat Conservation Trust \(bats.org.uk\)](https://www.bats.org.uk/putting-up-your-box-bat-boxes-bat-conservation-trust/) for siting advice.
 - ✧ **Recommendation 2 (Enhancement):** 1 x Sparrow terrace to be affixed to the rear (east) elevation of the building. See [Where To Put A Bird Box | Nestboxes - The RSPB](https://www.rspb.org.uk/birds-and-wildlife/bird-care/tips-and-advice/where-to-put-a-bird-box/) for siting advice.
 - ✧ **Recommendation 3 (Broadscale Enhancement):** Wider ecological benefit could be maintained by ensuring (where possible) that all boundaries are planted with native species to retain connectivity to the surrounding habitat as well as retaining any mature trees on site. See [17 bats & hedges leaflet.pdf \(hedgelink.org.uk\)](https://www.hedgelink.org.uk/17-bats-hedges-leaflet.pdf).

See document - 12 - AVH711 - A3 - Site Enhancements for further details on site enhancement.

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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 See PEA Report produced by Elite Ecology for full details.

2. Desk study methods and results

2.1 Methods

2.1.1 See PEA Report produced by Elite Ecology for full details.

2.2 Results

2.2.1 See PEA Report produced by Elite Ecology for full details.

Field survey methods and results

3.1 Methods

3.1.1 See PEA Report produced by Elite Ecology for full details.

3.2 Survey results

3.2.1 Figure 1 (below) shows the position of surveyors during the activity surveys. Each surveyor had a Magenta 5 or an Elekon Batscanner bat detector to assist in identification and detection of bats and their behaviour.

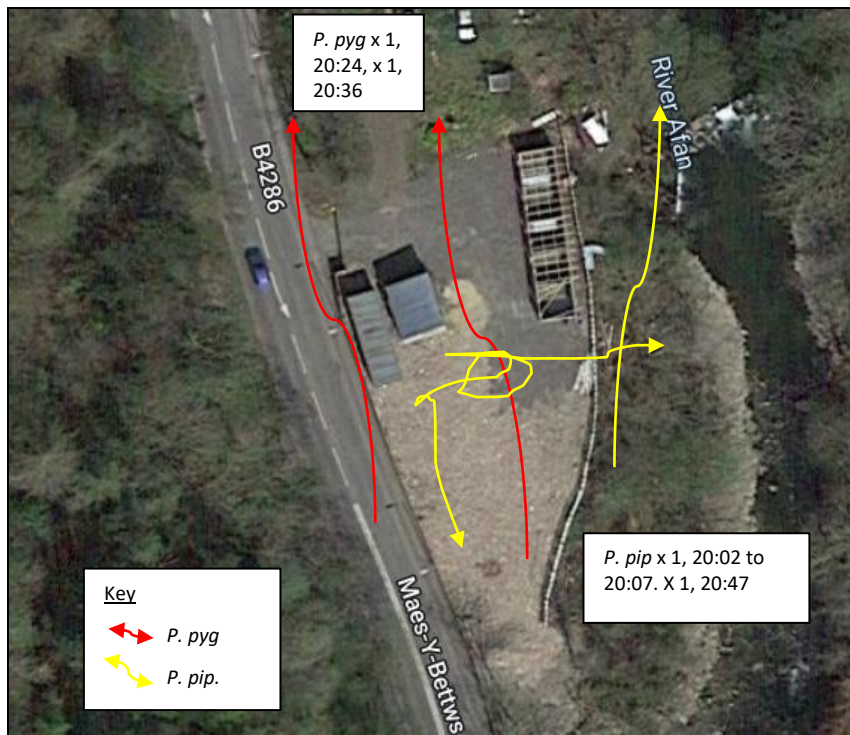
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Figure 1: Surveyor positions during the activity surveys (from Apple® Maps)

Figure 2: Aerial map showing the flight lines of bats detected (from Apple® Maps)



23/09/2022: Sunset was at 19:05, the survey started at 18:50 and ended at 21:30

3.2.2 The dusk activity survey was undertaken on 23rd Sept 2022, and the surveyors were Iestyn Evans, Greg Evans. Sunset was at 19:05, the survey started at 18:50 and ended at 21:30. The weather remained dry throughout the survey with 40% cloud at the start, humidity was 80%, there was a light wind of 2mph, and the temperature started at 16.1°C and ended at 15.3°C.

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- ***P. pipistrellus***: Bats were detected foraging and commuting to the rear of the building and in the yard just to the south of the building.
- ***P. pygmaeus***: Bats were detected commuting in a south to north direction to the front of the building and along the road.

3.2.3 **Activity summary**: No bats were seen to leave or enter the building, nor fly across any part of it but two species (*P. pipistrellus* and *P. pygmaeus*) were using the surroundings for foraging and commuting, with activity generally being low.

3.2.4 **No evidence of nesting birds** was found and **no signs of owl activity** were discovered.

4. Interpretation, conclusions and recommendations

4.1 Interpretation and conclusions

4.1.1 The results for each at species were interpreted as follows:

- ***P. pipistrellus***: No bats or their signs were found either externally or internally, and no bats were seen to either enter or leave the building. However, bats were detected foraging and commuting around the building. The evidence as a whole therefore suggests that this species is using the area as part of its foraging and commuting habitat.
- ***P. pygmaeus***: No bats or their signs were found either externally or internally, and no bats were seen to either enter or leave the building. However, bats were detected commuting around the building. The evidence as a whole therefore suggests that this species is using the area as part of its foraging and commuting habitat, with the focus being on commuting between more favourable foraging habitats.

4.1.2 Using the findings of the desk study and field surveys, it is **concluded that the building is located within close proximity to favourable bat habitat** but presently has **low** potential to support bats. Two bat species (*P. pipistrellus* and *P. pygmaeus*) were using the surroundings for foraging and commuting, **but bats are not 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.** The localised scale of the proposed development also suggests that the impact on the local ecology and it is anticipated that the proposed enhancements will result in a positive impact and net gain for biodiversity.

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

4.2 Recommendations

4.2.1 Enhancement measures will be required 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 (Enhancement)**: 1 x Beaumaris Woodstone (or similar) bat box to be affixed to the rear (east) elevation of the property. To be affixed in an elevated (2–7m and ideally 4m) position away from artificial light and potential predation, and ideally not above any windows or doors. See [Putting up your box - Bat Boxes - Bat Conservation Trust \(bats.org.uk\)](https://www.bats.org.uk/putting-up-your-box-bat-boxes-bat-conservation-trust/) for siting advice.

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- ✦ **Recommendation 2 (Enhancement):** 1 x Sparrow terrace to be affixed to the rear (east) elevation of the building. See [Where To Put A Bird Box | Nestboxes - The RSPB](#) for siting advice.
- ✦ **Recommendation 3 (Broadscale Enhancement):** Wider ecological benefit could be maintained by ensuring (where possible) that all boundaries are planted with native species to retain connectivity to the surrounding habitat as well as retaining any mature trees on site. See [17 bats & hedges leaflet.pdf \(hedgelink.org.uk\)](#).
- ✦ See document - 12 - AVH711 - A3 - Site Enhancements, for further details on site enhancement

4.2.2 This ecological report will remain valid for a period of 18–24 months from the date of the last survey i.e. **until the period 22/03/2024 to 22/09/2024 (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 activity survey, especially if the building 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 building and there are no restrictions on the timing of the work in relation to bats. Where proposed plans involve works to the roof(s) extra care will be taken at wall tops and when stripping any part of the roof(s). 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 for the site are not known but should any be proposed they must ensure that exterior lighting is 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, 2018). If an external lighting scheme is proposed for this application a plan will be produced that demonstrates compliance with the lighting principles outlined within the guidance referenced above.

5.1.3 Where **external lighting** is necessary, this should utilise a number of key design points to limit any impact, as follows: Low level lighting pointed towards the ground; LED bulbs to be used of 2700 Kelvin (*p.18 of the lighting guidelines referenced above*) and below (warm white light and not daylight); use of light shields and hoods to direct the light downwards and prevent vertical and horizontal light spill; and use of passive infrared (PIR) motion sensors on timers to ensure lights only come on when necessary.

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.
- ✧ 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, 3rd edition (Collins, J. (Ed.), 2016) & The Bat Workers' Manual, 3rd edition. (Mitchell-Jones, A.J., & McLeish, A.P. (Ed.), 2004). Reports are written with reference to the CIEEM (2015) 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. 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 either a hand-held digital scope or a smart phone compatible 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 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 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 static detector 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 (*Eptesicus serotinus*) from a loft space deployed recorder where no gaps existed anywhere and no droppings from serotines were present. These large bats must have been present 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 at all (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; and
 - 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.

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- ✧ 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 effect 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.
- ✧ 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); and 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***).
- ✧ 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.
- ✧ 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 (11th 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 make Wales 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 is about 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 place making, 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.

Appendix 3: Types of bat roost and survey timings

As the mitigation guidelines state: The presence of a significant (important) bat roost... can normally be determined on a single visit at any time of year; providing that the entire structure is accessible and that any signs of bat activity have not been removed by others. The table below shows the applicability of survey methods. The table has been reproduced from Bat Mitigation Guidelines (table 5.2) (2004).

Season	Roost type	Inspection	Bat detectors and emergence counts
Spring (Mar – May)	Building	Suitable (signs, perhaps bats)	Limited, weather dependent
	Trees	Difficult (best for signs before leaves appear)	Very limited, weather dependent
	Underground	Suitable (signs only)	Static detectors may be useful
Summer (June – August)	Building	Suitable (signs and bats)	Suitable
	Trees	Difficult	Limited: use sunrise survey
	Underground	Suitable (signs only)	Rarely useful
Autumn (September – November)	Building	Suitable (signs and bats)	Limited, weather dependent
	Trees	Difficult	Rather limited, weather dependent; use sunrise survey?
	Underground	Suitable (signs, perhaps bats)	Static detectors may be useful
Winter (December – February)	Building	Suitable (signs, perhaps bats)	Rarely useful
	Trees	Difficult (best for signs after leaves have gone)	Rarely useful
	Underground	Suitable (signs and bats)	Static detectors may be useful

The table below shows the recommended survey timings and is reproduced from the Good Practice Guidelines (table 7.1) (3rd Edition, 2016). 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).

Low roost suitability	Moderate roost suitability	High roost suitability
May to August (structures) No further surveys required (trees)	May to September ^a with at least one of the surveys between May and August ^b	May to September ^a with at least two of the surveys between May and August ^b

^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.

^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 two weeks apart, preferably more, unless there are specific ecological reasons for the surveys to be closer together (for example, a more accurate count of a maternity colony is required but it is likely that the colony will soon disperse). If there is potential for a maternity colony then consideration should be given to detectability. A survey on 31 August followed by a mid-September survey is unlikely to pick up a maternity colony. An ecologist should use their professional judgement to design the most appropriate survey regime.

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The table below shows the recommended minimum number of surveys to be carried out according to roost potential. It is reproduced from the Good Practice Guidelines (table 7.3) (3rd Edition, 2016).

Low roost suitability	Moderate roost suitability	High roost suitability
One survey visit. One dusk emergence or dawn re-entry ^a (structures). No further surveys required (trees)	Two separate survey visits. One dusk emergence and a separate dawn re-entry survey ^b	Three separate survey visits. At least one dusk emergence and a separate dawn re-entry survey. The third visit could be either dusk or dawn ^b

^aStructures 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 (as noted in section 5.2.9 of the guidelines). If there is a possibility that quiet calling, late-emerging species are present then a dawn survey may be more appropriate, providing weather conditions are suitable. 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 above) as possible; it is recommended that surveys are spaced at least two weeks apart, preferably more. A dawn survey immediately after a dusk one is considered only one visit.

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

- *Crevice-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	Glyn has significant experience in survey skills and has assisted/worked with many other licensed bat surveyors as well as local bat groups over the past years. 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 S091520/1. I&G were shortlisted for a BCT roost award in 2021.
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 (if needed) members of the newly incarnated Carmarthenshire Bat Group. Natural Resources Wales Licence number S090746/1.
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 S089483/1.
Mr Pete Watts	Trainee	Peter provides survey support with his keen eye for detail and vigilance. He has accompanied I&G Ecological Consulting Ltd on many surveys and is becoming a valuable and experienced surveyor.
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.
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.
Mr Lewis Jones	Assistant	A Graduate with a background in the biological sciences with an aptitude and passion for ecology. Lewis has undertaken courses in herpetology and phase 1 surveys and has a hunger to learn. With a fondness for bats and owls he's also keen to develop his survey skills in this area.
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 Wendy Larcombe	Assistant	Wendy has an Honours degree in Environmental Biology and over 17 years' experience working in conservation, including as a Planning Ecologist and a freelance Ecologist. She has a wide range of experience, which includes extended Phase 1 habitat surveys, building assessment for bats, bat/barn owl surveys, summer roost counts (Gower), and winter roost counts (Black Mountains). She has undertaken a range of training including bat ecology and surveying and is a valued member of the team.

Appendix 5: Site survey images

See PEA Report undertaken by Elite Ecology for full details.

Appendix 6: 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.

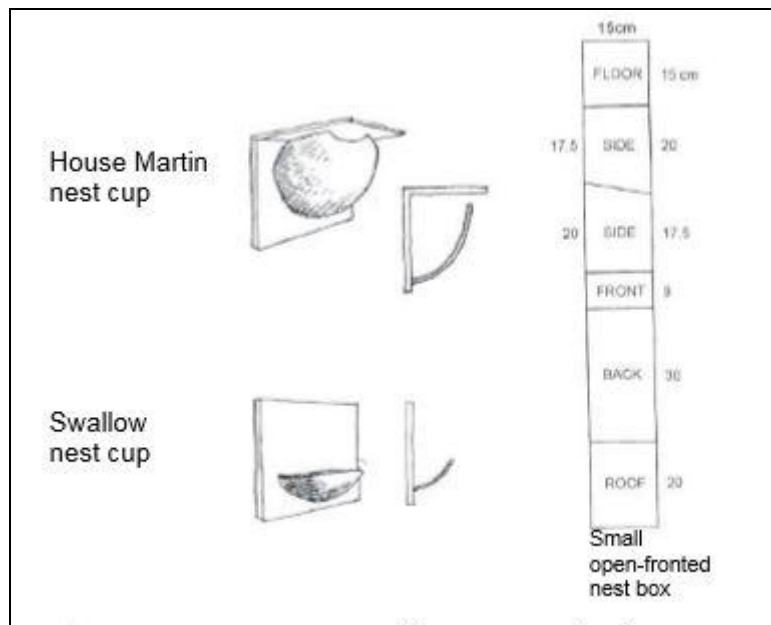
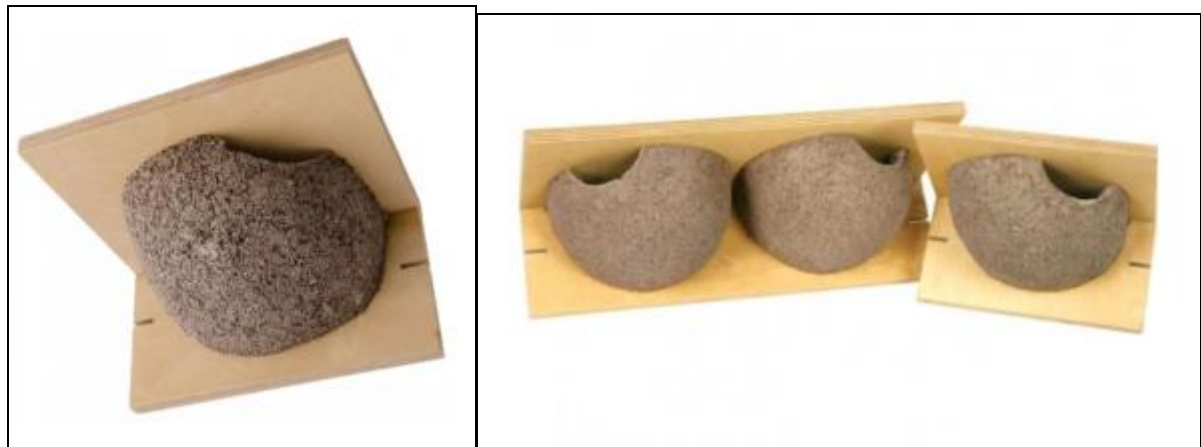


Left: The Harlech WoodStone bat box offers excellent insulation with a minimum of condensation for roosting bats. WoodStone® is a mixture of sawdust from FSC wood sources and concrete, and it is designed to last for years. It is breathable so there will be no problems with condensation and Woodstone maintains a consistent temperature inside, providing excellent insulation for roosting bats. Height 24cm x width 19cm x depth 18cm; Weight 4.4kg; Colour: Black with White front panel; Hook for hanging; Removable front panel for inspection/cleaning; and 10 Year Manufacturers Guarantee. 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))

Protected Species Survey – Bats

Building 1 on land between Cwmavon and Dan Y Bont, Maes Y Bettws, Pontrhyfen, Neath, SA12 9SD

Examples of sparrow terraces and House martin nest cups. Siting advice can be found at [Where To Put A Bird Box | Nestboxes - The RSPB](#)



Appendix 7: I&G Ecological Consulting Ltd legal disclaimer

This report was prepared by I&G Ecological Consulting at the instruction of, and for use by, our client(s) named on the front of the report. It does not in any way constitute advice to any third party who is able to access it by any means. I&G Ecological Consulting excludes to the fullest extent lawfully permitted, all liability whatsoever for any loss or damage howsoever arising from reliance on the contents of this report. We do not however, exclude our liability (if any) for personal injury or death resulting from our negligence, for fraud or any other matter in relation to which we cannot legally exclude liability.

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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The employees of I&G may hold other paid employment but none of their advice, nor work undertaken in respect of producing this report, refers to any roles or responsibilities held in any other employment other than that held at I&G Ecological Consulting.

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

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