



SARDIS CHAPEL, STATION TERRACE, BEDLINOG

BAT ACTIVITY SURVEY

ISSUE 1, VERSION D

SEPTEMBER 2024

SARDIS CHAPEL, STATION TERRACE, BEDLINOG

Bat Survey Report

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EXECUTIVE SUMMARY

The development proposals involve Change of use of garage to create a one bedroom annex with external balcony.

BE ECOLOGICAL LTD was commissioned by the client to undertake subsequent activity survey of the property following a report produced by Acer Ecology in 2023 who stated the building as being of moderate potential for roosting bats.

Subsequent emergence surveys revealed that the property is not a bat roost. Further surveys are not considered necessary providing that the work is undertaken in line with a method statement and ecological supervision.

A licence from Natural Resources Wales will not be required due to lack of evidence of the property being a bat roost (please see conclusion within)

1 INTRODUCTION

1.1 Background

BE ECOLOGICAL LTD was commissioned by the client to undertake subsequent activity survey of Sardis Chapel following a report produced by Acer Ecology in 2023 who stated the building as being of moderate potential for roosting bats.

This report includes the findings of the aforementioned bat activity surveys undertaken in the appropriate season.

The surveys were undertaken in line with the current guidance on standards for bat surveys (Bat Conservation Trust, 2023¹).

1.2 Site description

Please see Preliminary Assessment (Acer Ecology, 2023)

¹ Bat Surveys for Professional Ecologists - Good Practice Guidelines (Collins, J (Ed). BCT, 2023)

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2 LEGISLATION & POLICIES

2.1 Conservation of Habitats & Species Regulations 2017 (as amended)

The Conservation of Habitats and Species Regulations 2017 (as amended) provides safeguards for European Protected Species (those listed under Annex IV Habitats Directive). With regards to bats, this makes it an offence to:

- Deliberately (or recklessly in Scotland) capture, injure or kill a bat
- Deliberately (or recklessly in Scotland) disturb a bat in a way that would (significantly in Scotland) affect its ability to survive, breed or rear young (or hibernate or migrate in England, Wales and Northern Ireland) or (significantly in England, Wales and Scotland) affect the local distribution or abundance of the species.
- Damage or destroy a roost (this is an 'absolute' offence)
- Possess, control, transport, sell, exchange or offer for sale/exchange any live or dead bat or any part of a bat

2.2 Wildlife & Countryside Act 1981

The Wildlife & Countryside Act 1981 (as amended) is the legislation for England and Wales for nature conservation, making it an offence to:

- Intentionally or recklessly disturb a bat at a roost
- Intentionally or recklessly obstruct access to a roost

2.3 The Environment (Wales) Act 2016

The Environment (Wales) Act 2016 requires that all public authorities, when carrying out their functions in Wales, seek to "maintain and enhance biodiversity" where it is within the proper exercise of their functions. In doing so, public authorities must also seek to "promote the resilience of ecosystems". This ensures that biodiversity is an integral part of the decisions that public authorities take in relation to Wales. It also links biodiversity with the long term health and functioning of our ecosystems, therefore helping to align the biodiversity duty with the framework for sustainable natural resource management provided in the Act. In Wales, this legislation replaces and enhances the Natural Environment and Rural Communities Act (2006) which sought to raise the profile of biodiversity and to make sure that it is considered in all local authority decisions by ensuring that "Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity.". Other elements of NERC 2006 may still apply.

3 METHODOLOGY

3.1 Survey Objectives

- To carry out recommended activity surveys
- To present the above details and if necessary recommendations for mitigation, future research and compensation within this report.

3.2 Survey Summary

The bat survey comprised of two parts:

- Part 1- single activity survey
- Part 2- Single activity survey
- Part 3- Single activity survey

3.3 Surveyor Information

The survey was run by Beth Evans. Beth is the owner of BE ECOLOGICAL LTD and has a postgraduate degree in Environmental Biology: Conservation & Resource Management, specialising in British bats. Beth has nearly 12 years' experience of ecological surveys, both in a small scale and large multi-disciplinary context. Beth also holds Natural Resources Wales and Natural England bat licences to disturb and handle bats.

Beth Evans was assisted during the activity surveys by Michael Rogers, Gavin Vella, Dion Rowles and Stephen Shutt. Michael Rogers and Dion Rowles have been undertaking bat surveys with BE Ecological Ltd for the last three seasons and are working towards their bat licence. Gavin Vella is an experienced bat surveyor and ornithologist. Stephen Shutt is an experienced licensed bat surveyor.

3.4 Internal & External Inspection

An initial inspection survey was carried out in November 2023 by Acer Ecology (Acer Ecology, 2023) Please see the report for further detail.

In summary, the building was identified as being of moderate potential for roosting bats and two emergence surveys were recommended.

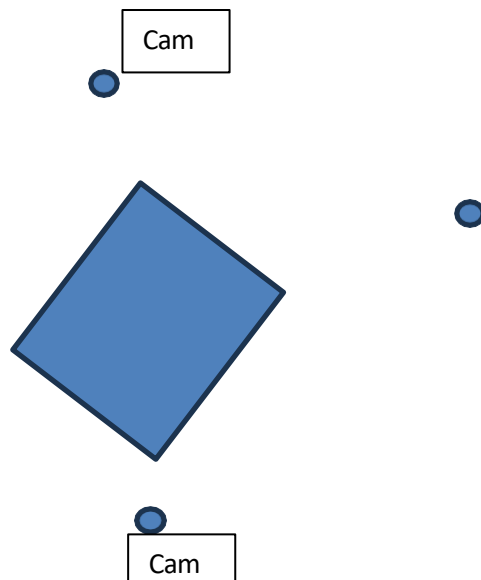
3.5 Activity Surveys (emergence/re-entry surveys)

Building 'emergence' and 're-entry' surveys were carried out on the following dates, times and weather conditions. Climatic conditions including rain, wind, temperature and cloud cover were recorded for each survey using a hand held Kestrel 4500 weather station.

3.5.1 Survey 1- 22nd May 2024

A dusk survey was carried out on 22nd May 2024 using surveyors positioned in such a way that as much of the building was visible to surveyors as possible. Surveyors were equipped with Batlogger M detectors and NVAs.

Figure 1: Approximate surveyor locations



Surveyor location dotted blue

Please note, it was not possible to erect a camera on the north eastern corner during the first survey. An attempt was made, however, due to the road being extremely narrow, there was a lot of traffic present that evening, with a lot of parked camera and surveyors were being harassed for putting a camera in the way. The decision was made to not use the camera and replace the camera with a surveyor. The sides of the property are only accessed via a very narrow pathway again making camera placement difficult. The rear of the building has a sheer drop present which is covered in vegetation, again making camera placement extremely difficult. It can only be accessed from the left hand side of the chapel.

Figure 2: Thermal Guide camera view 20/05/24

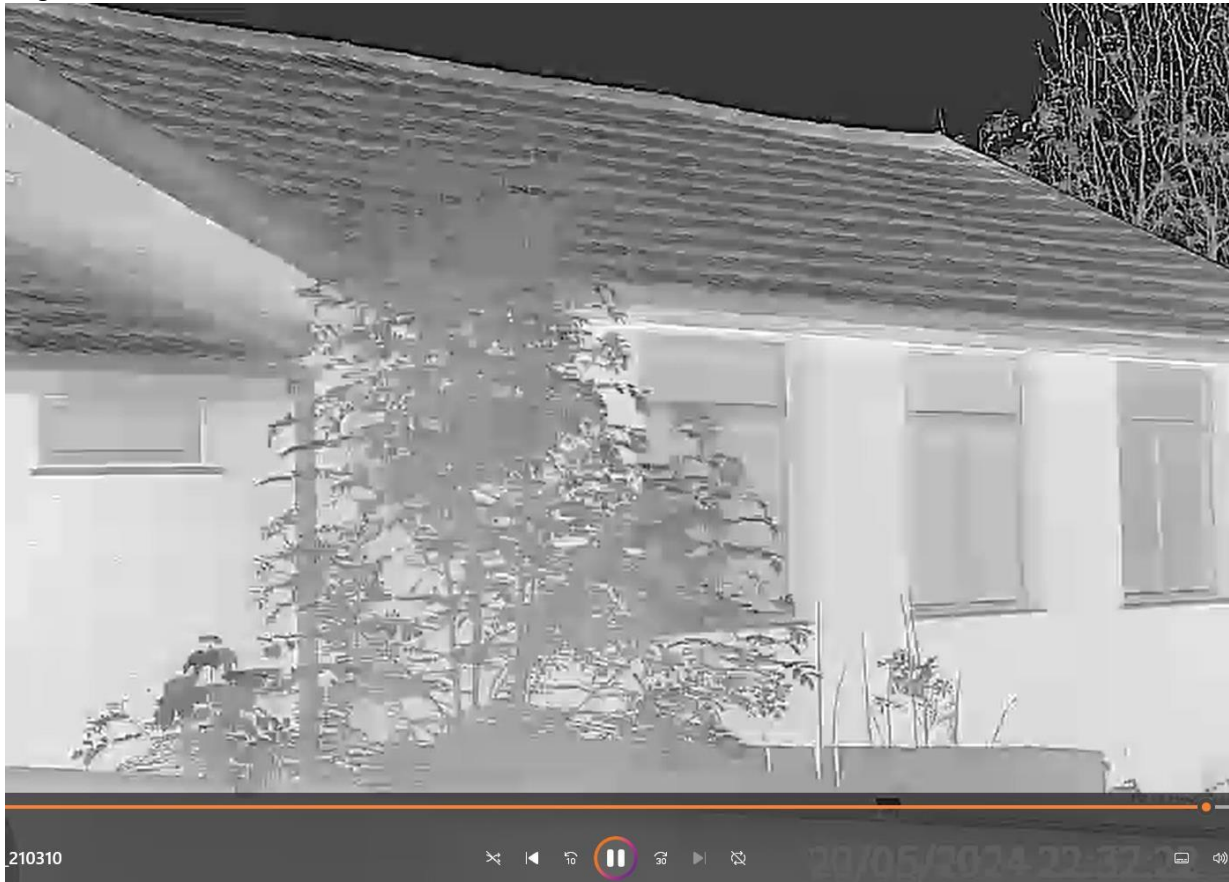


Figure 3 : Night fox Whisker View 20/05/24 (please note, surveyor accidentally entered wrong date into camera at the start of the survey. The survey was undertaken on 20/05/24



3.5.2 Survey 2- 10th June 2024

A survey was undertaken on 10th June 2024 as above, however due to a quieter street and less parking, a camera was able to be placed on the north eastern corner

Figure 4- Thermal Guide camera view 10th June 2024



Figure 5- Sionyx colour night vision 10th June 2024



Figure 5: Sionyx Colour night vision

Brambles had grown up towards the rear of the property following a period of rainfall. The rear of the bank was also extremely slippery, so a decision not to place a camera at this location was made due to not being able to gain the correct angle and due to not being able to walk further afield as a result of health and safety. As much of the rear as possible was covered by a surveyor only.

1.1.1 Survey 3- 27th July 2024

A survey was undertaken as per figure 1 above. This time the banking to the rear had dried up with some of the brambles were able to be pushed out of the way and a camera was again placed at the rear. A camera was again able to be placed on the north east corner.

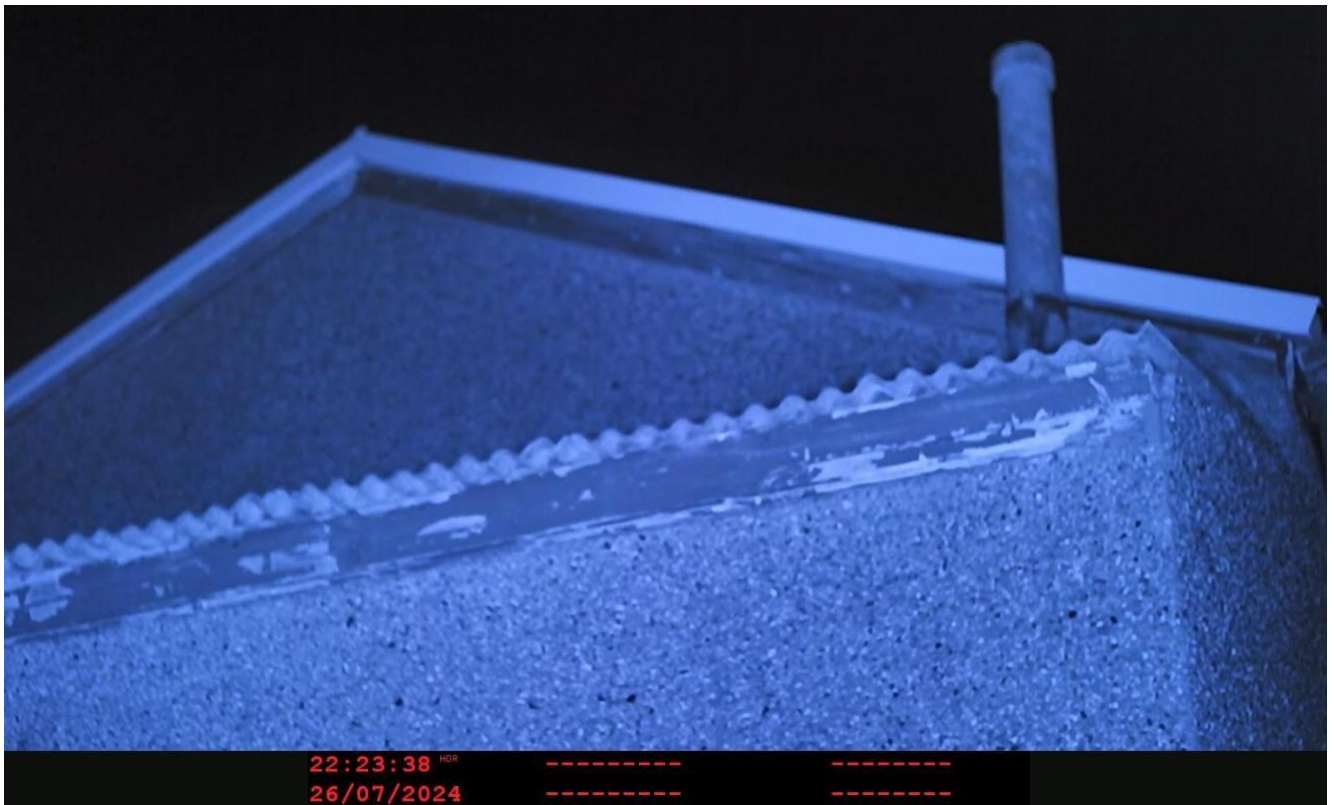


Figure 6: Sionyx night vision colour 26/07/24



Figure 6: Sionyx night vision colour 26/07/24



Figure 7: Thermal Guide 25/07/24. Thermal camera has reverted the time stamp to the day before

Limitations

As described above.

1 RESULTS

1.1 Inspection survey

1.1.1 External survey results

Please see The Acer Ecology report for the results of the initial inspection survey (Acer Ecology, 2023)

1.1.2 Internal survey results

Please see The Acer Ecology report for the results of the initial inspection survey (Acer Ecology, 2023)

1.2 Activity surveys

The surveys were undertaken as per the table below:

1.3 Survey Schedule and Weather Conditions

Table 1: Schedule and weather conditions

Visit	Date (sunrise) (sunset)	Start End	Time	Temp C	Wind	Cloud Cover	Notes
Survey 1 22/05/24	21:10	Start	20:50	17	Low	20%	Dry evening, insects flying
		End	22:40	17	Low	20%	
Survey 2 10/06/24	21:31	Start	21:10	18	Low	30%	Dry evening, insects flying
		End	23:05	20	Low	30%	
Survey 3 27/07/24	21:09		20:50	15	Low	50%	Dry evening, insects flying
		End	22:40	17	Low	50%	

1.4 Activity Survey Results

1.4.1 Survey 1- 22nd May 2024

Species heard on site include common pipistrelle, soprano pipistrelle and noctule. The first bat heard was a common pipistrelle bat, heard at approximately 30 minutes post sunrise. The bat was seen foraging along the vegetation to the rear of the property. Throughout the survey, a number of common and soprano pipistrelles were observed foraging and commuting along the vegetation to the south, occasionally flying through the alley way at the east of the property to the street. A sparrow was seen re-entering the building beneath the barge board of the porch.

None of the bats interacted with the building in any way and no bats emerged from the building on this date.

1.4.2 Survey 2- 10th June 2024

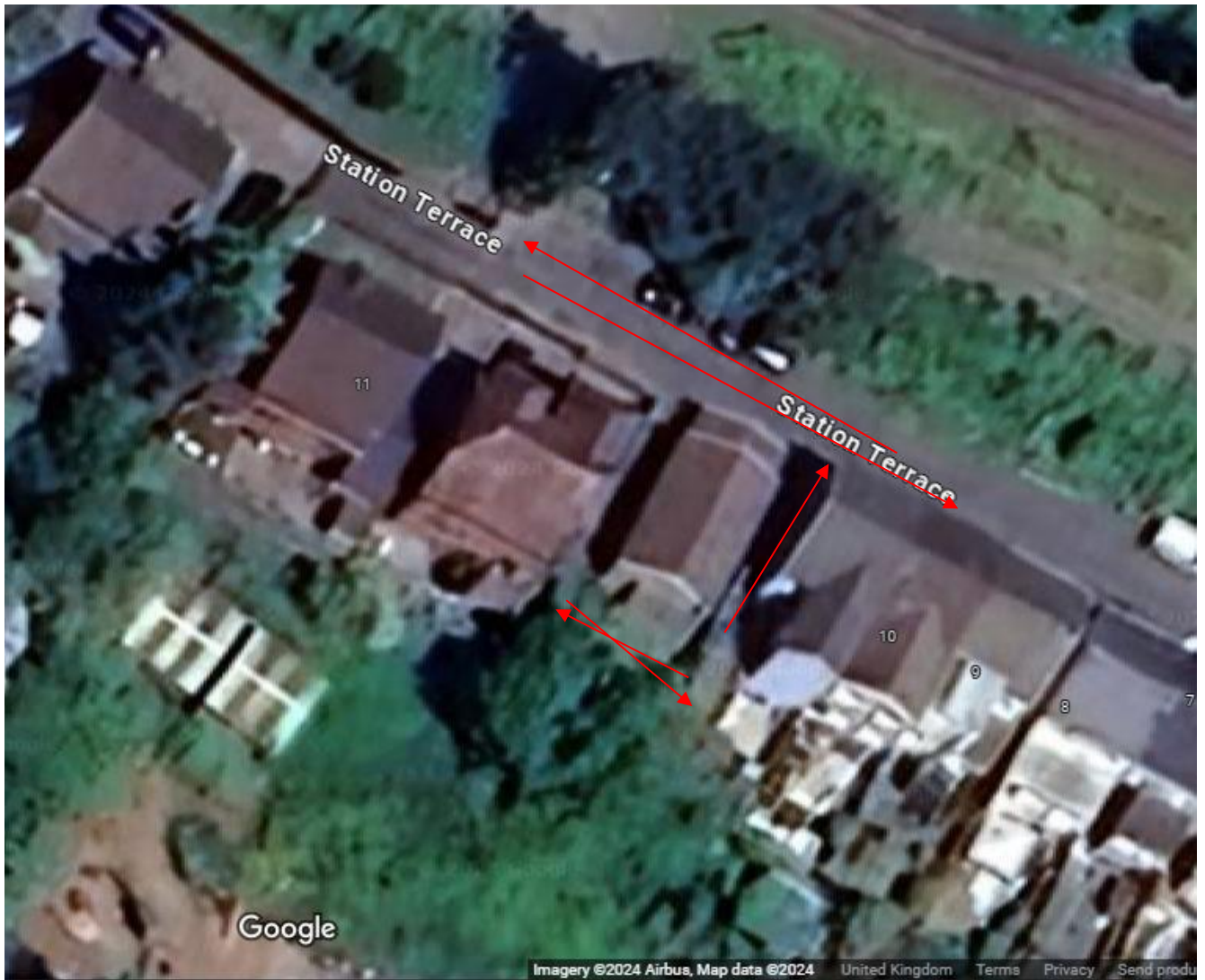
Species heard on site again include common pipistrelle and soprano pipistrelle. The first bat heard was a common pipistrelle bat, heard at 21:45. The bat was seen flying high over head from west to east. A pipistrelle bat was observed emerging from the property to the north east. Bat activity was intermittent throughout the course of the survey and very similar to that of the previous survey. A single common pipistrelle and a single soprano pipistrelle were observed flying through the street from north west to south east.

None of the bats interacted with the building in any way and no bats emerged from the building on this date.

1.4.3 Survey 2- 27th June 2024

Again the only bat species heard on site were common pipistrelle, soprano pipistrelle and noctule. The first bat heard was a noctule approximately 20 minutes post sunrise. The bat was not seen. Again activity was very similar to that of the previous survey. No bats emerged from or interacted with the building on this date.

Figure 7: Locations of flight lines (arrowed red)



(Google Maps 2024)

1.4.4 Survey 1

The property was not identified as a bat roost on this date.

1.4.5 Survey 2

The property was not identified as a bat roost on this date.

1.4.6 Survey 3

The property was not identified as a bat roost on this date

Conclusion

Generally bat activity at the site is low with only one species heard throughout the surveys, common pipistrelle, soprano pipistrelle and noctule.

The property was not identified as a bat roost during activity surveys.

The Acer Ecology report for the site stated that bat droppings were found to be present, one on the exterior of the building and an aggregation above the porch door (directly behind where a sparrow was observed entering the building).

BE Ecological Ltd has since been to site to check the aggregation of droppings following a nil result from the surveys. It is unclear from what was present on the interior whether this aggregation was actually bat droppings. The “droppings” are too degraded should they be droppings to be able to send off for DNA analysis (not intact, swollen and very old debris). Please see below photographs and please cross reference photographs from Acer Ecology Report. The large clump present in the acer ecology report appeared to have fallen to the floor and broken up.



A lot of the debris that is there currently did not appear to be biological. When crumbled, those pieces that may have been (not intact or shaped like bat droppings) did break apart but they did not crumble into a fine dust as bat droppings usually would. A few of the pieces that were crumbled, crumbled to smaller fragments, some of which appeared to have occasional bits of vegetation present (please see yellow line in photograph below)



Having re-assessed the Acer ecology report, there is no convincing evidence from inside the building currently (close up of droppings etc) that this debris was in fact droppings. Please note, this was an easy misidentification and without further evidence (lack of bats during surveys, close up of droppings etc), BE Ecological Ltd would have possibly considered some of these to be droppings also in the first instance. It is noted that a licence cannot be granted due to insufficient evidence of a roost or species or numbers present. Static bat detectors cannot be placed above ceiling level due to lack of access and it would not be considered to be proportional to ask the client to undertake further surveys given the survey effort already undertaken at the site.

The client is happy to carry out the works at the least sensitive timing for bats (spring and autumn) and the client is happy to provide mitigation within the on site building. Mitigation would be no less than what the bats have access to currently. As a result it is proposed that the works are undertaken in line with a non-licensed method statement and ecological supervision. If at any point bats or evidence of bats are found, all works will cease, with NRW consulted. Further surveys and/or a licence may be required prior to works re-commencing.

2 INTERPRETATION & IMPACT ASSESSMENT

2.1 Active Season Usage

It is considered that the property is not a bat roost

2.2 Hibernation Season Usage

It is possible that bats will use the property over winter, in both the roof and the crawl space beneath the chapel.

2.3 Ecological Impacts of development

The impacts of the development have been assessed using the current information of the proposed works. Should any changes be made to the proposed works, the assessment will need to be reviewed and amended as necessary.

The property has not been identified as a bat roost and it is considered unlikely that there will be any impacts on roosting bats. To safeguard the unlikely presence of roosting bats and due to the unclear results, all works will be undertaken in line with a method statement and ecological supervision.

3 ENHANCEMENT

3.1 Bats

If barge boards or flush fascias are to be fitted, they will be offset from the wall by 20mm on all elevations. If box soffits are present, access points will be cut flush to the wall measuring 20mm x 100mm. Two of these will be created either side of the apex of the gable and three on each elevation.

Due to the ground conditions, the crawl space will still be present following completion of the works. Ventilation slots of a similar size will be added to the new build to allow access for bats to the crawl space should they wish.

A https://www.nhbs.com/ib-vl-05-vivara-pro-build-in-woodstone-batbox?bkfno=252213&ca_id=1495&adlocale=uk&gad_source=1&gclid=CjwKCAjwreW2BhBhEiwAavLwfPr8xgsxY0rLHzmPv03daSxqXTz4ce28pDzznLHjMhQIzVE1ji6_rhoCWuUQAvD_BwE (or equivalent) will be integrated into the south eastern elevation of the property. The box will be installed at least 3m from the ground and away from windows. No external lighting will be placed on this elevation.

3.2 Birds

A Schwegler 2GR, 1B Schwegler Nest Box or a suitable equivalent will be integrated into the north western elevation of the property. The box will be installed at least 3m from ground level.

4 RECOMMENDATIONS

7.1.1 Timing

As there is some hibernation potential within the building, the works will not be undertaken in the winter months.

7.1.2 Timber/roofing materials

As bats will be given access to the roof, felt must be type 1 bitumen. Any timbers will be treated with bat friendly treatment.

7.1.3 Lighting

Newly created access points and bat boxes will not be directly illuminated. All external lighting will face downwards and be set on timers to ensure that bats can use the area should they wish. – In addition to this, any onsite lighting will conform to the following guidelines:

<https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/>

Flight paths to the bat boxes and the newly created bat mitigation will be kept dark at all times.

7.1.4 Bat Licensing

A European Protected Species Licence obtained from Natural Resources Wales will not be required before any works commence.

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5 REFERENCES

Bat Conservation Trust. (2016) *Bat Surveys - Good Practice Guidelines*. Bat Conservation Trust, London.

Mitchell-Jones, A.J. & McLeish, A.P. (2004) *The bat workers' manual (3rd Edition)*. Joint Nature Conservation Committee.

Mitchell-Jones, A.J. (2004). *Bat Mitigation Guidelines*. Natural England

The Conservation of Habitats and Species Regulations 2017 (as amended) (HMSO).

The Natural Environment and Rural Communities Act (2006) (as amended) (HMSO).

The Wildlife and Countryside Act 1981 (as amended) (HMSO).

6 METHOD STATEMENT

1. Any works in sensitive areas of the building for bats will be closely supervised by a suitably qualified and licenced bat ecologist and must be undertaken outside of the bat maternity and hibernation seasons. Works (roof removal) must be undertaken in the spring (15th February- 30th April) and autumn (15th September- 15th November).
2. A suitably licenced and experienced ecologist will be on site/call for the duration of the works.
3. Before any work begins on site, a briefing for contractors and other site-staff 'toolbox talk' will be given by an ecologist. The briefing will cover the issues in respect of protected species they may encounter on site, where they might find them, methods of working, and what they need to know to avoid committing an offence. Every briefing attendee will be provided with a copy of a Method Statement and the contact details of an ecologist and Natural Resources Wales.
4. All suitable bat roosting features will need to be removed by hand and inspected by the onsite bat ecologist.
5. The features will also need to be removed manually, one at a time, with the bed and underside inspected for bats/sign of bats by the onsite ecologist before moving onto the next.
6. Only when the onsite bat ecologist is happy that there is no further potential for bats, may he/she leave and the works continue with no supervision. A licensed bat ecologist will be on call for the remainder of the works. In the unlikely event that bats are found during a period that the licensed bat ecologist is not present on site, all works must cease and the licenced bat ecologist engaged.
7. If bats or their signs are found, a EPS licence may be required before works can legally resume.

APPENDIX B- ASESMENT AGAINST POLICY -PLANNING POLICY WALES: STEPWISE APPROACH AND GREEN INFRASTRUCTURE STATEMENT

On the 11th October 2023, ahead of PPW12 being published, the new Chapter 6 came into force with immediate effect.

Net benefit must be secured via planning applications using the step-wise approach, including the acknowledgement of off-site compensation measures and the need to consider enhancement and long-term management. Green Infrastructure Statements will be used to demonstrate the step wise approach. The following information will be used in order to show compliance with policy.

Proposed Development: Sardis Chapel, Station Terrace, Merthyr Tydfil

Site description: A Chapel beneath a pitched slate roof.

Surrounding Area description: The site is located within the urban area of Bedlinog. There are houses and associate infrastructure to the east and west. There is good quality foraging habitat immediately to the rear of the property and along the lane that fronts the street. There is good connectivity to the wider landscape that comprises of lines of trees, fields and patches of broad-leaved woodland.

Development Impacts: Potential loss of bat roosts should they be present. Increased site lighting should lighting be implemented.

Step wise approach

Step 1- Avoidance- Impacts cannot be avoided on existing habitats due to the requirement to upgrade the building.

Step 2- Minimise- Impacts cannot be avoided on existing habitats due to the requirement to upgrade the building.

Step 3- Mitigate/Restore- Mitigation will be via appropriate safeguarding method statements and ecological supervision to ensure no harm to protected species and the retention of vegetation to the rear Lighting (if required) will be in accordance with that specified for bats

Step 4- Compensation on site- Compensation for the loss of potential roost sites has been provided by allowing bats back into the roof on completion of the works.

Biodiversity Enhancements Proposed

Bats

A https://www.nhbs.com/ib-vl-05-vivara-pro-build-in-woodstone-batbox?bkfno=252213&ca_id=1495&adlocale=uk&gad_source=1&gclid=CjwKCAjwreW2BhBhEiwAavLwfPr8xgsxY0rLHzmPv03daSxqXTz4ce28pDzznLHjMhQIzVE1ji6_rhoCWuUQAvD_BwE will be integrated in to the south eastern elevation of the property. The box will be installed at least 3m from the ground and away from windows. No external lighting will be placed on this elevation.

Birds

A Schwegler 2GR, 1B Schwegler Nest Box or a suitable equivalent will be installed on the north western of the property. The box will be installed at least 3m from ground level.

The proposed scheme acknowledges the requirement to achieve a Net Benefit for Biodiversity and from the beginning this has been built into the planning of the project. It is recognized that the footprint of the scheme removes a no vegetation. The applicant aims to deliver biodiversity enhancements at the local scale by offering the enhancements stated above on the site.

As result of the ecological measures within this report, it is expected that there will be a demonstrable net benefit for biodiversity.

Lawn

Lawn areas of the development will be seeded with EL1 flowering lawn mix <https://wildseed.co.uk/product/mixtures/complete-mixtures/special-habitat-mixtures/flowering-lawn-mixture/>

The installation and management of the lawn will be funded by the owner and any successors in title

Ground Preparation

To prepare a seed bed first remove weeds using repeated cultivation. Then plough or dig to bury the surface vegetation, harrow or rake to produce a medium tilth, and roll or tread to produce a level firm surface.

Sowing

Seed is best sown in the autumn or spring but can be sown at other times of the year if there is sufficient warmth and moisture. The seed must be surface sown and can be applied by machine or broadcast by hand. To get an even distribution and avoid running out, divide the seed into two or more parts and sow in overlapping sections. Do not incorporate or cover the seed, but firm in with a roll, or by treading, to give good soil/seed contact.

First Year Management

The wild flower and grass species in this mix are perennial; they will be slow to germinate and grow and will not usually flower in their first growing season. There will often be a flush of annual weeds from the soil in the first growing season. This annual weed growth is easily controlled by repeated mowing.

Mow newly sown flowering lawns regularly (every 7 -10 days during growing season) throughout the first year of establishment. Cut to a height of 40-60mm, removing cuttings if dense. This will gradually develop a good sward structure, help maintain balance between faster growing grasses and slower developing wild flowers, and control annual weeds. Dig out any residual perennial weeds such as docks.

Management Once Established

Mow regularly as a lawn but not too short (25-40mm). To permit flowering, mowing can be relaxed from late June. Cut again when the sward gets untidy (after 4-8 weeks). Mowing may be suspended earlier in the year to allow cowslips to flower. Heavy quantities of cuttings should be collected and removed from site.