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PRO3755

SURVEYS, INSPECTIONS, REPORTS

**PLOT 4 (BARN #2)
HOME FARM BUILDINGS
RUTHIN ROAD
COEDPOETH
WREXHAM
LL11 3BP**

BUILDING DEVELOPMENT

Protected Species Survey



Plot 4 (Barn #2), Plas Power, Coedpoeth.

Client	Kevin Varley
Planning Authority	Wrexham County Borough Council
Grid Reference	SJ30365064
Dates of Surveys	3 and 18 August 2021
Reference	092021/PSS/KV



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1.0 SUMMARY

The proposed work is for change of use and to convert the barn into a residential dwelling, erect an extension (with an attached garage) to the existing building. The planning process requires that ecological surveys be carried out to highlight any potential conflict regarding the protected species (bats and birds), and the proposed development work. The results of the surveys will guide what mitigation/compensation measures are required.

An initial scoping survey was carried out on 3 August 2021 by licensed bat worker, Stephen Cutmore. No bats were encountered in the building. Evidence of recent bat activity was observed in the form of a few scattered droppings and feeding remains on the floor of the 1st and 2nd sections of the barn. The roof had a couple of holes, where a vent cowling had fallen off and where some slates had slipped or were missing. Gaps were observed beneath ridge tiles and beneath the eaves. The building was assessed as having a moderate potential for roosting bats (one or more potential roost sites that could be used by an individual or a small number of bats but unlikely to support a roost of high conservation status). The surrounding habitat was assessed as having a moderate potential for foraging bats.

Further emergence surveys were carried out on 3 and 18 August 2021, by Stephen Cutmore and two assistant surveyors. During the emergence surveys, 2 x Soprano Pipistrelle bat and 1 x Brandt's bat were observed emerging from out of the roof of the building. Brown Long-eared bats were recorded inside the barn late at night/early morning. Common Pipistrelle and Noctule bats were observed foraging in the vicinity.

The barn on Plot 4 (aka Barn #2) at Home Farm Buildings, Plas Power, Coedpoeth, Wrexham, LL11 3BP, is therefore a confirmed roost, being used by 2 x Soprano Pipistrelle and 1 x Brandt's bats as small day roosts. The evidence suggests a single (or small number of) Brown Long-eared bat(s) are using the barn as a night-time feeding perch/resting place.

A derogation licence will therefore be required from Natural Resources Wales, to avoid an offence being committed.

Compensation in the form of alternative roosts must be provided for the bats, prior to development works commencing. If mitigation is provided, Reasonable Avoidance Measures in the form of timing of operations are followed and bat-friendly features are incorporated into the development as enhancements, the proposed scheme is likely to have a low impact on the favourable conservation status of the locally recorded bats and likely have a positive impact on locally recorded bats.



2.0 INTRODUCTION

2.1 Brief

Stephen Cutmore, a licensed bat worker (NRW[S087991/1], NE[2015-16936-CLS-CLS]), was commissioned by Kevin Varley, to carry out protected species surveys of Plot 4 (aka Barn #2), Home Farm Buildings, Plas Power, Coedpoeth, Wrexham, LL11 3BP.

The definition of the assignment was to:

1. Carry out an initial day-time visual scoping survey of the building to examine if there is any evidence of recent bat use or nesting birds.
2. Carry out further emergence surveys to determine if any roosting bats are present.
3. Provide a report with mitigation measures.

2.2 Purpose of this report

The purpose of this report is to advise you of the results of the parts 1 & 2 of the assignment. These results are set forth in the *Conclusions* section, following. This report describes the field conditions as found and interpreted.

2.3 Scope of report

Date of consultation.

The field surveys were made on 3 and 18 August 2021, and observations and conclusions are as of those dates.

Limit of scope.

This is solely a protected species survey results report and cannot comment on topics outside this discipline. If additional advice is required, it is strongly recommended that other professionals are consulted.

Unless stated otherwise:

- 1) information contained in this report covers only those buildings that were examined:
- 2) the inspection is limited to visual examination of the buildings, utilising a high powered torch and endoscope. Electronic bat detectors are utilised on emergence surveys.
- 3) there is no warranty or guarantee, expressed or implied, that bats may not utilise the buildings after the survey has been completed, that are not discovered utilising the buildings during the inspection. Bats are highly mobile and some species frequently move roosts. It may be possible that bats could move into a building after a survey has taken place. An assessment of the suitability of the building to support roosting bats has therefore been carried out, to establish the likelihood of this occurring.
- 4) this report has been prepared for the sole use and benefit of the client. Any liability of Stephen Cutmore Arboricultural & Ecological Services shall not be extended to any third party.



2.4 Relevant background information

The proposed work is for change of use and to convert the barn into a residential dwelling, erect an extension (with an attached garage) to the existing building. The planning process requires that ecological surveys be carried out to highlight any potential conflict regarding the protected species (bats and birds), and the proposed development work. The results of the surveys will guide what mitigation/compensation measures are required.

2.5 Qualifications

Stephen Cutmore has over twenty years' experience as an arboricultural and ecological consultant. Stephen holds a BSc (Hons) in Arboriculture & Urban Forestry and is a Chartered Arboriculturist. Stephen is a member of the Bat Conservation Trust (102994) and a member of Clwyd Bat Group. Stephen has been a Licenced Bat Worker since May 2007 and a Licenced Amphibian Worker since March 2011 and currently holds bat licences with NRW and NE (NRW[S087991/1], NE[2015-16936-CLS-CLS]) and GCN licences with NRW and NE (NRW[S088921/1], NE[2016-19908-CLS-CLS]).

2.6 Copyright

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3.0 DATA COLLECTION

3.1 Site Description

Plot 4 (aka Barn #2), Home Farm Buildings, Plas Power, Coedpoeth, Wrexham, LL11 3BP, is located at Grid Reference SJ30365064. The site is located approximately 1km to the East of the village of Coedpoeth and some 3km to the Southwest of Wrexham town centre. The site is located on the Plas Power Estate, adjacent to the South of the A525. The A483(T) is some 0.75km to the East of the site

Plot 4 (Barn #2) is located towards the West of the development site, to the Northwest of Plot 7 (aka Barn #1) and to the Southwest of Plot 5 (aka Barn #3). The River Clywedog lies some 1.2km to the South of the site and the River Gwenfro is some 0.7km to the North. Other small watercourses are in the locality. The surrounding landscape has improved pasture fields with native hedgerows and trees. Big Wood is some 1.1km to the Southwest of the site, with other small areas of woodland in the locality. All these landscape features provide good habitat for foraging bats.

The Cofnod (Local Ecological Records Centre) website was accessed (www.cofnod.org.uk) and a Cofnod Data Request (E092541) was made for a data search for bats and roof-nesting birds within a 500m radius of the site. Due to the sensitivity of the data, specific records for protected species cannot be disclosed, but there are records of Brown Long-eared, Common Pipistrelle, Myotis species, Natterer's, Noctule, Pipistrelle species, Soprano Pipistrelle bat species within 500m radius of the site. Records of bird species include Blue Tit, Great Tit, House Martin, House Sparrow and Swallow. Designated sites within 500m include the Higher Berse Marsh (Wildlife Site), and several Ancient Woodland Sites.



Figure 1: Aerial photograph of Plot 4 (Barn #2), Home Farm Buildings, showing good connectivity in the surrounding landscape.



3.0 DATA COLLECTION (continued)

3.2 Methodology

3.2.1 Bats

A day-time building survey was carried out on 3 August 2021, by licensed bat worker, Stephen Cutmore. The structure of the building was visually examined, utilising a high powered torch and an endoscope. The walls (both internal and external), floor, and all accessible roof spaces, crevices and other potential roosting areas were methodically closely visually examined for signs of bat occupation, in the form of droppings, feeding remains, staining around crevices, as well for the animals themselves. The building was also assessed for potential habitat for roosting bats. A static detector (Anabat Express) was placed inside the barn to monitor bat activity inside the barn building over a 3 week period (3-25 August 2021).

3.2.2 Emergence surveys

Further emergence surveys were carried out on 3 and 18 August 2021, by Stephen Cutmore and two assistant surveyors. The surveyors took up strategic positions around the building, which was visually monitored to check for any emerging bats. Electronic bat detectors (Anabat Walkabout and Scout), were used to record and analyse the frequencies of bat echolocation calls. The observed flight pattern of the observed bats and the frequency of the echolocation calls enabled the species of bat to be identified.

3.2.3 Other protected species

The building was visually examined for the presence of and evidence of recent use by birds.

3.3 Results

3.3.1 Bat scoping survey

Description

Barn #2 on Plot 4 is a detached two-storey building constructed of brick walls, with a pitched roof covered with natural slates. The barn is open to the ridge, with no loft void present. The building has not been used or maintained for a number of years

Inside barn

The barn has a moderately high level of natural light penetrating through the windows and holes in the roof. There is no underfelt present beneath the slates, just a remnant of lime plaster. The roof timbers were smothered in old cobwebs. No bats were encountered. Evidence of recent bat activity was observed in the form of a few scattered droppings and feeding remains (butterfly wings) on the floor of the 1st and 2nd sections of the barn.

Roof and external walls

The roof had a couple of holes, where a vent cowl had fallen off and where some slates had slipped or were missing. Gaps were observed beneath ridge tiles and beneath the eaves. The building was assessed as having a moderate potential for roosting bats (one or more potential roost sites that could be used by an individual or a small number of bats but unlikely to support a roost of high conservation status). The surrounding habitat was assessed as having a moderate potential for foraging bats.



3.0 DATA COLLECTION (continued)

3.3 Results

3.3.2 Emergence surveys

1st survey evening emergence 3 August 2021

The emergence survey started at 20.50hrs, with sunset time of 21.04hrs. The starting air temperature was recorded as 15°C. The weather was dry, with 10% broken high clouds. There was a moderate breeze. The survey was stopped at 22.35hrs, with a finishing temperature of 15°C.

The first bat detected at 21.21hrs was observed emerging from a gap beneath the eaves on the bottom right-hand side of the West gable-end wall. Echolocation calls recorded [55kHz] identified this as a Soprano Pipistrelle (*Pipistrellus pygmaeus*). At 21.42hrs a second Soprano Pipistrelle emerged from the same location.

At 21.22hrs a bat was observed flying high over the site. Echolocation calls recorded [18kHz] identified this as a Noctule (*Nyctalus noctula*). This Noctule bat was observed making several foraging/commuting passes over the site during the survey.

At 21.33hrs a bat was observed emerging from beneath the a ridge tile near the West gable-end. Echolocation calls recorded [47kHz] identified this as a Myotis species bat. The call was analysed using Anabat Insight software which identified it as a Brandt's bat (*Myotis brandtii*).

At 21.52hrs a bat was observed foraging on the adjacent plot and a very faint call was detected. The echolocation call recorded [45kHz] identified it as a Common Pipistrelle (*Pipistrellus pipistrellus*).

The Pipistrelle species bats were observed making frequent foraging/commuting passes around the barn throughout the survey.

2nd survey evening emergence 18 August 2021

The emergence survey started at 20.20hrs, with sunset time of 20.34hrs. The starting air temperature was recorded as 14°C. The weather was dry and overcast with 80% cloud cover. There was a moderate breeze. The survey was stopped at 22.05hrs, with a finishing temperature of 13°C.

The first bats detected at 20.43hrs were two Soprano Pipistrelle [55kHz] observed emerging one after another, from a gap beneath the eaves on the bottom right-hand side of the West gable-end wall.

At 21.02hrs a Brandt's [47kHz] was observed from beneath the a ridge tile near the West gable-end.

At 21.34hrs a Noctule [18kHz] was observed flying high over the site.

The Common Pipistrelle and Brandt's bats were observed making frequent foraging/commuting passes around the building throughout the remainder of the survey.



3.0 DATA COLLECTION (continued)

3.3 Results

3.3.3 Static Anabat Express recordings

An Anabat Express static bat detector was placed inside the barn and used to monitor for bat activity within the barn over a 3 week period. Calls of Common Pipistrelle, Soprano Pipistrelle and Brandt's bats were recorded during the evenings following sunset. Recordings of Brown Long-eared (*Plecotus auritus*) bats were made on 12 of the nights during the late night/early morning period (23.37hrs – 04.21hrs).

3.3.4 Nesting birds

An active Barn Swallow nest (*Hirundo rustica*) was observed inside the toilet room on the South elevation.

4.0 SITE EVALUATION

During the scoping survey no bats were encountered. Evidence of recent bat activity was observed in the form of a few scattered droppings and feeding remains (butterfly wings) on the floor of the 1st and 2nd sections of the barn.

The River Clywedog lies some 1.2km to the South of the site and the River Gwenfro is some 0.7km to the North. Other small watercourses are in the locality. The surrounding landscape has improved pasture fields with native hedgerows and trees. Big Wood is some 1.1km to the Southwest of the site, with other small areas of woodland in the locality. All these landscape features provide good habitat for foraging bats.

The building was assessed as having a moderate potential for roosting bats (one or more potential roost sites that could be used by an individual or a small number of bats but unlikely to support a roost of high conservation status). The surrounding habitat was assessed as having a moderate potential for foraging bats.

During the emergence surveys, 2 x Soprano Pipistrelle and 1 x Brandt's bats were observed emerging from the roof structure of the barn. Common Pipistrelle and Noctule bats were observed foraging in the vicinity.

The static Anabat Express recordings indicated Brandt's, Brown Long-eared, Common Pipistrelle and Soprano Pipistrelle bats were active inside the barn.

The barn #2 at Home Farm Buildings, Plas Power, Coedpoeth, Wrexham, LL11 3BP, is therefore a confirmed roost, being used by 2 x Soprano Pipistrelle and 1 x Brandt's bats as small day roosts. The evidence suggests a single (or small number of) Brown Long-eared bat(s) are using the barn as a night-time feeding perch/resting place.

An active Barn Swallow nest (*Hirundo rustica*) was observed inside the toilet room on the South elevation.



5.0 IMPACT ASSESSMENT

5.1 Short-term impact

Disturbance through increased human presence, noise and changes in site layout may have a detrimental effect on bats. Bats could be disturbed if works start when present between spring and summer. Timing of operation and provision of mitigation will minimise disturbance.

5.2 Long-term impact – roost losses

The proposed work will destroy small day-roosts used by 2 x Soprano Pipistrelle bats and 1 x Brandt's bat and destroy a night-time feeding perch/resting place used by a single (or small number of) Brown Long-eared bats. The predicted impact on the individual bats is high, but the predicted impact on the favourable conservation status of the locally recorded bats is low. If compensation in the form of alternative roosts is provided prior to work commencing, Reasonable Avoidance Measures are followed and bat-friendly features are incorporated into the proposed development as enhancement, the predicted long-term impact is low.

5.3 Long-term impact – fragmentation and isolation

No vegetation requires removing to facilitate the proposed development, so there is no predicted long term impact from fragmentation or isolation. New tree/shrub/hedge planting in a post-construction landscape scheme will enhance the site for foraging bats and nesting birds.

5.4 Post-development interference impacts

Any bright, artificial lighting on roost entrances and flightlines would be negative. Any lighting should be low level, with illumination directed downwards to minimise impact (see 7.6 Lighting below).

5.5 Predicted scale of impact

The predicted impact on bats is low, provided that appropriate mitigation measures are implemented and that Reasonable Avoidance Measures are followed, in order to minimise the impact on locally recorded bats.



6.0 CONCLUSIONS

6.1 Bats

During the scoping survey no bats were encountered. Evidence of recent bat activity was observed in the form of a few scattered droppings and feeding remains (discarded butterfly wings) on the floor of the 1st and 2nd sections of the barn.

The building was assessed as having a moderate potential for roosting bats (one or more potential roost sites that could be used by an individual or a small number of bats but unlikely to support a roost of high conservation status). The surrounding habitat was assessed as having a moderate potential for foraging bats.

During the emergence surveys, 2 x Soprano Pipistrelle and 1 x Brandt's bats were observed emerging from the roof structure of the barn. Common Pipistrelle and Noctule bats were observed foraging in the vicinity.

Calls of Common Pipistrelle, Soprano Pipistrelle and Brandt's bats were recorded inside the barn on the static bat detector, during the evenings following sunset. After emerging from their roost, Pipistrelle species bats often enter a building to forage inside.

The scattered butterfly wings and knobbly droppings observed on the floor of the barn sections suggested Brown Long-eared bats were using the barn. This was confirmed by the Brown Long-eared bat calls recorded on 12 of the nights during the late night/early morning period (23.37hrs – 04.21hrs). The bat(s) are likely accessing the barn via the holes in the roof, or via the open 'fly-in' dormer porches installed in the roof. The limited number of droppings and feeding remains leads to the conclusion that a single (or small number of) Brown Long-eared bat(s) are using the barn as a night-time feeding perch/resting place. Previous survey reports concluded that the adjoining Plot 7 (aka Barn #1) had a confirmed small day-roost being used by 4 x Brown Long-eared bats.

The barn on Plot 4 (aka Barn #2) at Home Farm Buildings, Plas Power, Coedpoeth, Wrexham, LL11 3BP, is therefore a confirmed roost, being used by 2 x Soprano Pipistrelle and 1 x Brandt's bats as small day roosts. The evidence suggests a single (or small number of) Brown Long-eared bat(s) are using the barn as a night-time feeding perch/resting place.

An active Barn Swallow nest (*Hirundo rustica*) was observed inside the toilet room on the South elevation.

A derogation licence will therefore be required from Natural Resources Wales, to avoid an offence being committed.

Compensation in the form of alternative roosts must be provided for the bats, prior to the proposed development works commencing. If mitigation is provided, Reasonable Avoidance Measures in the form of timing of operations are followed and bat-friendly features are incorporated into the development as enhancements, the proposed scheme is likely to have a low impact on the favourable conservation status of the locally recorded bats and likely have a positive impact on locally recorded bats.



6.0 CONCLUSIONS (continued)

6.2 Nesting birds

An active Barn Swallow nest (*Hirundo rustica*) was observed inside the toilet room on the South elevation. Any proposed development works which may affect nesting birds should be carried out between October – March to avoid the nesting season.

7.0 MITIGATION AND RECOMMENDATIONS

7.1 COMPENSATION

The proposed development work will result in the destruction of confirmed small day-roosts being used by 2 x Soprano Pipistrelle bats and 1 x Brandt's bat and the destruction of a night-time feeding perch/resting place being used by a single (or small numbers of) Brown Long-eared bats. Mitigation in the form of compensation is required, to provide an alternative 'like-for-like' bat roost(s) on the site. The replacement roost(s) should 1) match the existing roost in terms of size, height and aspect; 2) have a thermal regime suitable for the target species; 3) be situated as close as possible to the roost being lost and; 4) have an entrance close to the existing flight lines and appropriate habitat, to maximise chances of the bats finding and adopting it.

Compensation in the form of an alternative bat roost(s) must be provided for crevice-dwelling bats before any proposed work commences. This could be in the form of bat boxes [suggest Schwegler 1FQ wall-mounted bat box (75) available from www.wildcareshop.com], which should be fixed to the North or South-facing external wall of the building, high enough (2 - 3m) to avoid predation by cats. As there are often problems with obtaining supplies of Schwegler products, an equivalent design woodcrete bat box by a different manufacturer will be a suitable alternative. Alternatively a bat box [Schwegler 1FD triple front panel (55), or an equivalent woodcrete bat box] could be installed in a suitable mature tree or mounted on a pole high enough (>2m) to avoid predation by cats. It is recommended that a minimum of two bat boxes are provided and orientated to face between South – West, so the boxes benefit from solar radiation.

A dedicated night roost for Brown Long-eared bats must also be provided on site. This could be in the form of a small single-storey brick outbuilding with a loft void, or in a loft void above a garage.

7.2 REASONABLE AVOIDANCE MEASURES

General recommendations

Timing of the development works is crucial. The optimum time for work involving a summer roost (where bats are present but without dependable young) is 1st September – 1st May. It is recommended that any works that could disturb bats is carried out under supervision by a Licenced Bat Worker.



7.0 MITIGATION AND RECOMMENDATIONS (continued)

7.2 REASONABLE AVOIDANCE MEASURES

Development works

As confirmed bat roosts will be impacted by the proposed work, a derogation licence must be obtained from NRW and any work that has potential to harm bats should be directly supervised by a licenced ecologist. During the development work, great care should be taken when removing any materials, to ensure no harm is caused to bats. Extreme caution must be exercised when removing roofing materials especially where two materials meet as there is potential for finding bats. The individual slates/tiles should be gently lifted by hand before removal and checked underneath for bats. Check for bats also in timber joints, behind mortar fillets etc. A similar precautionary approach should be taken by checking around window frames, lintels, lintel bearers, doorframes, structural members, wall plates, gaps in blockwork/stonework, lead flashing etc., before proceeding with any work, to ensure no bats are injured during the development work.

The amendments to the European Habitat Regulations came into force in August 2007, which means that the ‘incidental result defence’, which previously covered acts that were the incidental result of an otherwise lawful operation, such as a planning permission, has now been removed. Therefore if any bats, or signs of bats (droppings etc.), are encountered, work should stop immediately and not resume until advised by an ecologist. If any bats are discovered, Natural Resources Wales must be notified as to what bat species and numbers were encountered and what action has been taken.

Any proposed development works which may affect nesting birds should be carried out between October – March to avoid the nesting season.

7.3 BAT ROOSTING OPPORTUNITIES

It is recommended that bat friendly features be incorporated into the proposed development, as wildlife enhancements, in order to keep in line with the Local Biodiversity Action Plans.

If suitable roosting opportunities for bats are to be incorporated into the roof structure of the proposed development, traditional hessian backed 1F bitumastic underfelt **must** be used. Results of recent research commissioned by The Bat Conservation Trust (http://www.bats.org.uk/pages/breathable_roof_membranes.html) has concluded that Breathable Roofing Membrane (BRM) poses a serious threat to bats, due to loose spun-bond filaments becoming entangled around bats feet and wings, resulting in bats becoming immobilised and eventually dying. The functionality and longevity of BRM can also be affected in those parts altered by the presence of bats.

One method that could be designed into the roof construction is the use of ‘Slate-line’ bat tiles installed in the pitches of the roof, to allow bats access to the space between the slates and roofing felt (available from Summit Slate Supplies, Welshpool <http://www.summitslate.co.uk/>). For bat species that use the inside of the loft void (e.g. Brown Long-eared bats), a small 3-sided hole (top and 2 sides) [75mm x 30mm] shall be cut into the underfelt near the top of one of the bat slates, immediately adjacent to a rafter, so that the bats can climb back out.



7.0 MITIGATION AND RECOMMENDATIONS (continued)

7.3 BAT ROOSTING OPPORTUNITIES

Another option is that two or three ridge tiles could have 20mm high x 100mm long gaps/slots cut in one of the lower edges, to allow access for bats, or alternatively leave gaps in the mortar (see *Appendix 5 – Mitigation Details*).

Another alternative is to install a Schwegler 1FQ wall-mounted bat box (75) [available from www.wildcareshop.com], which should be fixed to the South or West-facing external wall of the building, high enough (2 - 3m) to avoid predation by cats. As there are often problems with obtaining supplies of Schwegler products, an equivalent design woodcrete bat box by a different manufacturer will be a suitable alternative.

If bat access is to be provided into a loft void, two simple crevice boxes could be constructed from untreated rough sawn boards (1.5m long x 15cm deep, with a gap of 22mm between the boards as the roosting space) and hung from the underside of the roof, as near to the apex/ridge board of the bat loft as possible. The 22mm battens should be fixed between the boards at either end and along the top edge, to leave the underside open for bat access.

Any bat-friendly features to be incorporated in the new development should be detailed on the development plans/drawings.

7.4 ROOF INSULATION

If bat-friendly features are to be incorporated in the roof sections, any new insulation (e.g. Kingspan sheets), should be fixed to a counter batten, attached to the underside of the rafters. Care must be taken to ensure that a 50mm airspace between the insulation and the slates/tiles is maintained for bat access.

7.5 TIMBER TREATMENT

Any timber treatment to protect against insects, fungal growth or weathering in areas with potential to be accessed by bats, should only be carried out utilising chemicals from the Natural Resources Wales approved list. A list of Approved Products is available at <https://www.gov.uk/guidance/bat-roosts-use-of-chemical-pest-control-products-and-timber-treatments-in-or-near-them>, which provides links to Timber Treatment Table 1. If the product is not listed, check the active ingredients listed in Timber Treatment Tables 2-7.

You can't use chemical products in or near a known bat roost if there are bats present. The best time to apply treatments is usually between autumn and spring.

Pre-treated timber products

Pre-treated timber products are not included in the tables mentioned above. You can use timber that's been pre-treated off-site, because the chemicals are injected deep into the timber leaving lower concentrations on the surface which isn't harmful to bats. However you shouldn't apply products used to pre-treat timber on-site, because the active ingredients will be more concentrated on the timber surface and may be harmful to bats.

Stains and preservatives

Decorative wood finishes, like stains or wood preservative, can be used around bat roosts as long as you only use them on external timber.



7.0 MITIGATION AND RECOMMENDATIONS (continued)

7.6 LIGHTING

Bats can be disturbed by bright, artificial lighting. Where lighting is essential in the vicinity of any proposed new development, subdued lighting should be used and the illumination should be directed downwards (upward light ratio 0%). LED luminaires should be used where possible, with a warm white spectrum (<2700Kelvin) to minimise blue light component. Luminaires should have peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats. The use of motion sensor-triggered security lighting with short (1 min) timers, is preferable to permanent lighting. If roosting opportunities are to be incorporated into the new development, it is essential that roost access points and flightlines used for foraging/commuting (e.g. hedgerows, lines of trees) are not illuminated, to provide a dark corridor. The use of soft landscaping and fencing [supported by concrete posts to ensure long-term contribution] can be used to screen light spill. The latest Guide Note 08/18 can be downloaded at www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/

7.7 BIRD NESTING OPPORTUNITIES

Provision for Barn Swallows must be made in a suitable outbuilding on site by installing starter platforms in the form of 90mm x 90mm wooden battens fixed 450mm down from the roof apex. Consideration should be given to providing some other simple measures that would have a positive conservation benefit on local bird populations. These may be in the form of eaves built to be suitable for house martins. Suitable crevices left unsealed in exterior stonework or brickwork provides potential for nesting house sparrows. Bird boxes could be installed in trees to benefit local bird populations. Planting native species hedgerows and areas of shrubs and trees would provide suitable habitat and food sources for birds.

8.0 WILDLIFE AND THE LAW

8.1 EUROPEAN PROTECTED SPECIES

The Bern Convention (The convention on the conservation of European Wildlife and Natural Habitats) was adopted in 1979 and came into force in 1982. To implement this agreement, the European Community adopted the EC Habitats Directive. The EC Habitats Directive has been transposed into UK legislation by the Wildlife and Countryside Act, 1981 (as amended) and the Conservation of Habitats and Species Regulations, 2010. The Countryside and Rights of Way Act (CroW), 2000 strengthened the existing wildlife legislation in the UK. The UK has also signed the Bonn Convention (The Convention on the Conservation of Migratory Species of Wild Animals) and is therefore party to various agreements.

As from 30th November 2017 the legislation relating to European Protected Species has been consolidated into a new Regulation "The Conservation of Habitats and Species Regulations 2017".



8.0 WILDLIFE AND THE LAW (continued)

8.1 EUROPEAN PROTECTED SPECIES

8.1.1 Bats

All 17 bat species found in the UK and their roosts are protected in the UK under Schedules 5 and 6 of the Wildlife & Countryside Act 1981 (as amended) and are therefore afforded protection under Section 9 of this Act. The Countryside Rights of Way Act (CroW) 2000 strengthened the existing wildlife legislation in the UK.

In addition, five British bat species are also listed on Annex II [and all bats are listed on Annex IV] of the EC Habitats Directive, which is transposed into national law by means of The Conservation of Habitats and Species Regulations (2017).

These are:

- Greater horseshoe bat (*Rhinolophus ferrumequinum*);
- Lesser horseshoe bat (*Rhinolophus hipposideros*);
- Bechstein's bat (*Myotis bechsteinii*);
- Barbastelle (*Barbastella barbastellus*) and
- Greater mouse-eared bat (*Myotis myotis*).

Bats are listed under Appendix III of the Bern Convention. Bats and their habitats are also listed under Appendix II of the Bonn Convention and therefore the UK has an obligation to protect their habitat, including links to important feeding areas. The UK had designated maternity and hibernacula areas as Special Areas of Conservation (SACs) under the Habitats Directive. Implementation of the UK Biodiversity Action Plan also includes action for a number bat species and the habitats which support them.

8.1.2 Legislation relating to European Protected Species

In relation to a development a person commits an offence if they –

- Deliberately captures, injures or kills a European Protected Species
- Deliberately or recklessly disturbs wild animals of any such species in such a way as to be likely significant to affect:
 - (i) the ability of any significant group of animals to survive, breed, or rear or nurture their young; or
 - (ii) the local distribution or abundance of that species;
- Damages or destroys a breeding site or resting place (even if unintentional or when the animal is not present)
- Intentionally or recklessly obstructs access to a structure or place used for protection or shelter
- This legislation applies, regardless of the life stage (including eggs).

A European Protected Species Licence is required to carry out any activity that would otherwise involve committing an offence.

To avoid disturbance during habitat management, a written strategy is required following guidance provided by Natural Resources Wales. If the guidance is followed and major disturbance can be avoided, then a licence is not required.



8.0 WILDLIFE AND THE LAW (continued)

8.1.3 European Protected Species Licences

At the present time, Natural Resources Wales requires the following three ‘tests’ to be met, in order that a licence may be granted.

Test 1. Regulation 53 (2) (e) states that licences granted to ‘preserve public health, or public safety or other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment’.

Test 2. Regulation 53 (9) (a) states that a licence may not be granted unless the licensing authority is satisfied ‘that there is no reasonable alternative’.

Test 3. Regulation 53 (9) (b) states that a licence cannot be issued unless the licensing authority is satisfied that the action proposed ‘will not be detrimental to the maintenance of the species concerned at a favourable conservation status in its natural range’.

8.1.4 Recent changes in Licences

Following a recent intervention from the European Court, there have been significant changes in the interpretation of the way licences are issued. In considering a licence request, Natural Resources Wales will seek information relating to the size and importance of the population/colony and will require evidence to demonstrate that the species will be maintained ‘at a favourable conservation status in their natural range’. In effect, this means that to obtain a licence, Natural Resources Wales must be satisfied that the applicant will implement mitigation to safeguard (and ideally enhance) the population concerned. Natural Resources Wales will need to see evidence that the development work which will disturb/destroy a roost site will be undertaken using current best practice, also that the bats can be provided with an alternative roost site on or in the immediate area.

8.1.5 Important EPSL Information

Please note that a European Protected Species Licence can only be obtained once planning permission has been granted. When assessing planning applications where a European Protected Species could be affected by proposed works, the local Planning Authority must take into account the potential impacts on the species concerned. In practice this could make further survey work (such as emergence surveys in the case of bats) essential prior to planning permission being granted. Alternatively the LPA may grant planning permission whilst imposing planning conditions to undertake further survey work. The local Planning Authority must also have regard for the three ‘tests’ as outlined above – Regulations 53 (2) (e), 53 (9) (a) and 53 (9) (b). Once planning permission has been granted a European Protected Species Licence application can be submitted to Natural Resources Wales. The application requires detailed Method Statements to be produced by a qualified bat ecologist to demonstrate how Regulation 53 (9) (b) can be satisfied. The applicant will also need to complete a Reasoned Statement form demonstrating (with evidence) that Regulations 53 (2) (e) and 53 (9) (a) are satisfied. This involves producing evidence to show that no reasonable alternative to the proposed action is available and that the action must take place to either ‘preserve public health, or public safety or other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment.



8.0 WILDLIFE AND THE LAW (continued)

8.2 OTHER PROTECTED SPECIES - NESTING BIRDS

All wild birds are protected under Part 1 of the Wildlife and Countryside Act, 1981 (as amended). Therefore in the UK it is an offence to:

- Take, damage or destroy the nest of any wild bird whilst it is being built or in use.
- Kill, injure or take any wild bird.
- Take or destroy the eggs of any wild bird.

To avoid committing an offence no works should be carried out on a structure/feature that is being used by nesting birds. Nesting is deemed to be over when the young have fully fledged. Certain species which are listed in Schedule 1 of the Wildlife and Countryside Act receive special protection. In these cases any form of intentional or reckless disturbance when they are nesting or rearing dependent young, constitutes an offence. Any disturbance of nesting birds between 1st March-30th September could constitute a criminal offence.

8.3 ENVIRONMENT (WALES) ACT 2016

This Act sets out Wales' approach to planning and managing natural resources at a national and local level with a general purpose linked to statutory 'principles of sustainable management of natural resources' defined within the Act.

The Environment (Wales) Act introduces a new, enhanced Biodiversity and Resilience of Ecosystem Duty on public bodies to ensure that biodiversity is an integral part of decision making. The Duty will replace the existing Natural Environment and Rural Communities (NERC) Act 2006 Duty. Public authorities will be required to report on the actions they are taking to improve biodiversity and promote ecosystem resilience. Section 6 of the Act places a duty on public authorities to seek to maintain and enhance biological diversity (referred to as biodiversity). All public bodies, statutory undertakers, Ministers of the Crown and other public office holders are required to apply the duty when they are carrying on any functions in Wales, or in relation to Wales. Section 7 of the Act is similar to the duty in *section 42 of the NERC Act 2006* which it replaces. It places a duty on the Welsh Ministers to publish, review and revise lists of living organisms and types of habitat in Wales, which they consider are of key significance to sustain and improve biodiversity in relation to Wales.

8.4 PLANNING POLICY WALES FRAMEWORK

Planning Policy Wales (Edition 11, Feb 2021) sets out the Welsh Government's planning policies and how these are expected to be applied. The planning system manages the development and use of land in the public interest, contributing to improving the economic, social, environmental and cultural well-being of Wales, as required by the Well-being of Future Generations (Wales) Act 2015. It should reconcile the needs of development and conservation, securing economy, efficiency and amenity in the use of land, and protecting natural resources and the historic environment. A well-functioning planning system is fundamental for sustainable development.



8.0 WILDLIFE AND THE LAW (continued)

8.5 KEY PRINCIPLES OF PPW (2021)

Chapter 6 'Distinct and Natural Places' provides policies for protection of biodiversity and geological conservation.

Para.6.4.3 Development proposals must consider the needs to:

- support the conservation of biodiversity, in particular the conservation of wildlife and habitats;
- ensure action in Wales contributes to meeting international responsibilities and obligations for biodiversity and habitats;
- ensure statutorily and non-statutorily designated sites are properly protected and managed;
- safeguard protected and priority species and existing biodiversity assets from impacts which directly affect their nature conservation interests and compromise the resilience of ecological networks and the components which underpin them, such as water and soil, including peat; and
- secure enhancement of and improvements to ecosystem resilience by improving diversity, condition, extent and connectivity of ecological networks.

Para 6.4.22 states:

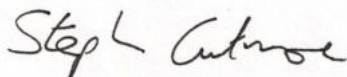
- The presence of a species protected under European or UK legislation is a material consideration when a local planning authority is considering a development proposal which, if carried out, would be likely to result in disturbance or harm to the species or its habitat.
- Local planning authorities should advise anyone submitting a planning application that they must conform with any statutory species protection provisions affecting the site concerned, and should consult Natural Resources Wales before granting permission.
- An ecological survey to confirm whether a protected species is present and an assessment of the likely impact of the development on a protected species may be required in order to inform the planning decision.

Para 6.4.23 states:

- Developments are always subject to the legislation covering European protected species regardless of whether or not they are within a designated site.
- New developments for which development works would contravene the protection afforded to European protected species require derogations from the provisions of the Habitats Directive.
- A derogation may only be authorised if there is no satisfactory alternative and if the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in its natural range.
- The development works to be authorised must be for the purposes of preserving 'public health or safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment'.
- Derogations are granted by a licence issued by Natural Resources Wales. Local planning authorities are under a duty to have regard to the requirements of the Habitats Directive in exercising their functions.

To avoid developments with planning permission subsequently not being granted derogations in relation to European protected species, planning authorities should take the above three requirements for derogation into account when considering development proposals where a European protected species is present.

Report written and compiled by



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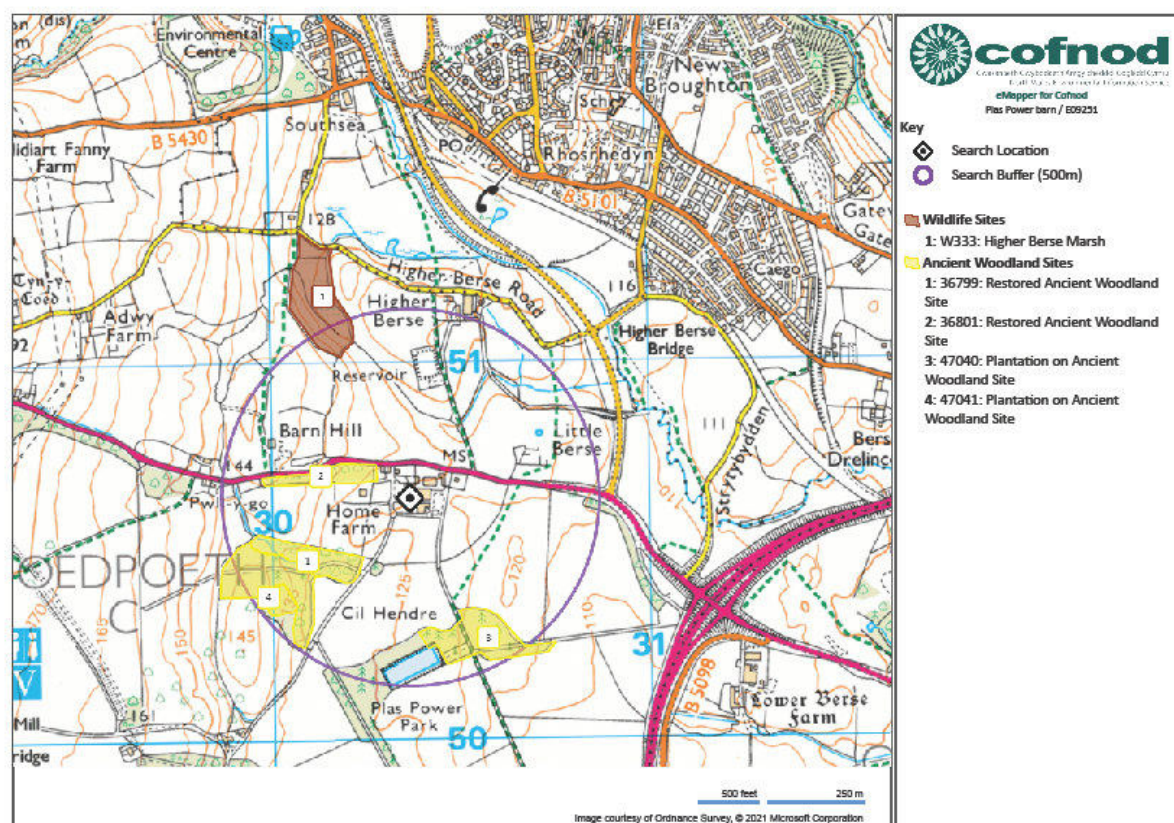
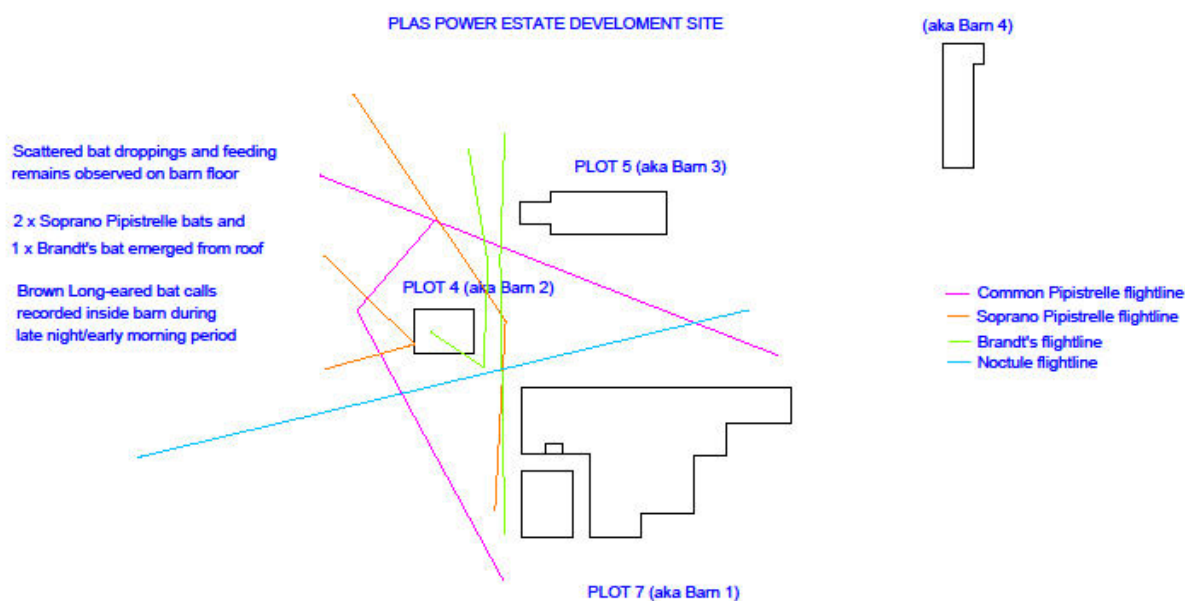
Client: Kevin Varley
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To see details more clearly please see accompanying pdf file 'Plot 4 Home Farm Buildings Coedpoeth Bat Drawing'.



Designated sites within 500m of site.

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APPENDIX 2 – Photographs



Photo 1: Moderately high level of light penetrating barn via windows and holes in roof.



Photo 2: Scattered bat droppings and discarded butterfly wings on the barn floor.



Photo 3: Barn Swallow nest in toilet on South elevation.

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APPENDIX 2 – Photographs



Photo 4: Brandt's bat emerged from beneath ridge tile near West gable-end (green arrow).



Photo 5: 2 x Soprano Pipistrelles emerged from eaves on West gable-end (red arrow).



Photo 6: North elevation and East gable-end.

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APPENDIX 3 – Grading system for bat habitats

It should be noted that low suitability roosting habitats may be present in commuting/foraging habitats that are of high suitability and vice versa. Roosting habitats and commuting/foraging habitats should be assessed separately and independently.

Table 1: Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement.

Suitability	Description Roosting habitats	Commuting and foraging habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain PFRs but with none seen from the ground or features seen with only very limited roosting potential.	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated i.e not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (but not in a parkland situation) or a patch of scrub.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost types only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees or scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.



APPENDIX 4 – Bat Sonographs

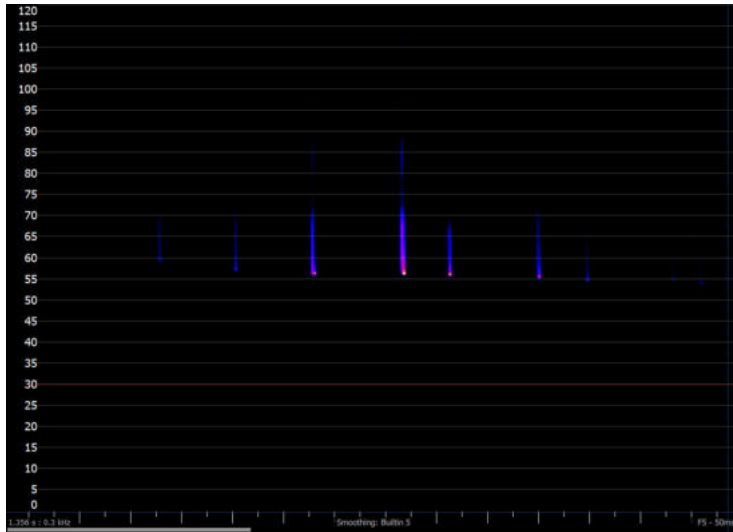


Figure 2: Soprano Pipistrelle [55kHz] emerging from beneath eaves on West gable-end.

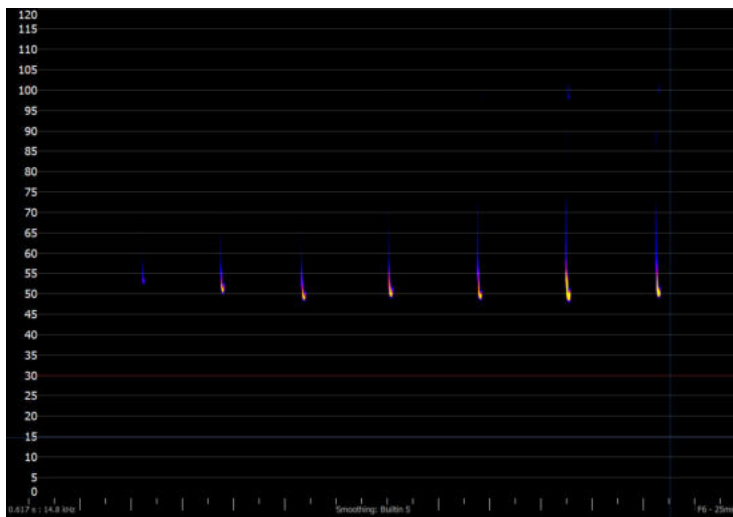


Figure 3: Common Pipistrelle [45kHz] foraging around the barn.

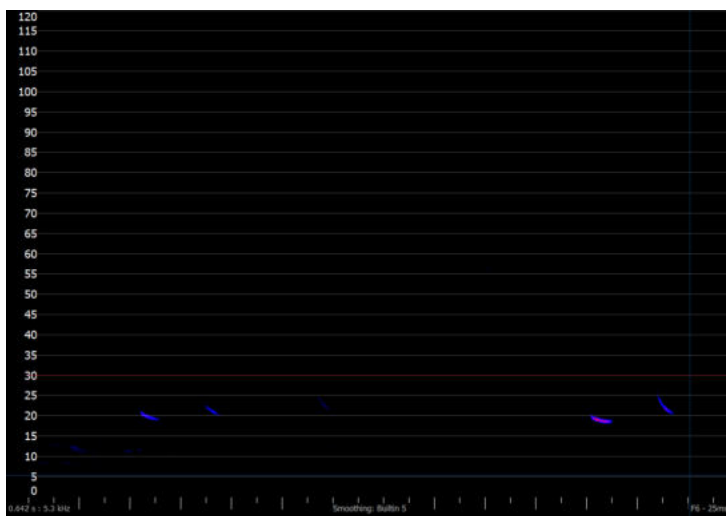


Figure 4: Noctule [18kHz] foraging over the site.

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APPENDIX 4 – Bat Sonographs

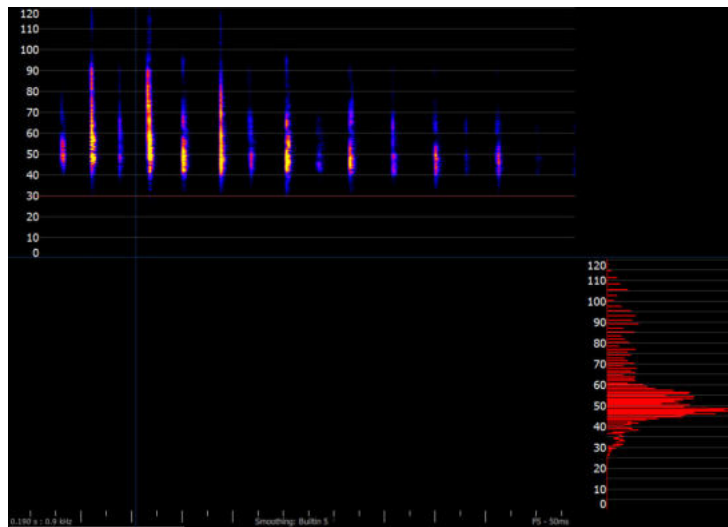


Figure 5: Brandt's [47kHz] (with Cycles) emerging from beneath ridge tile near West gable-end.

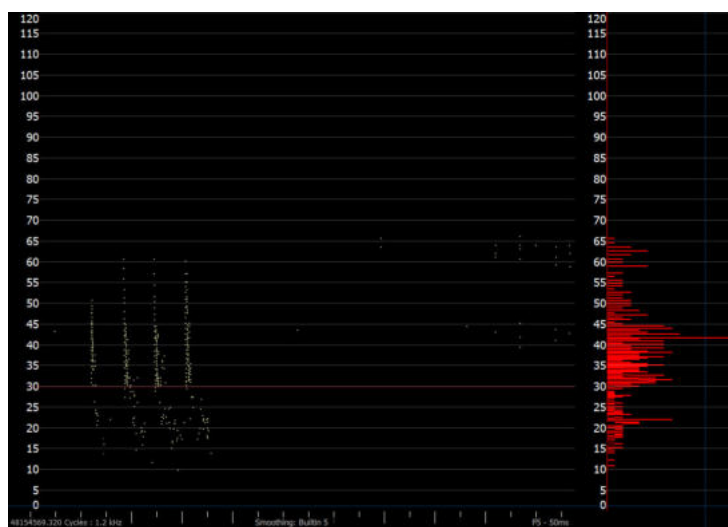


Figure 6: Brown Long-eared [33kHz] (Frequency Division with Cycles) recorded on static detector inside barn.



APPENDIX 5 – Mitigation details

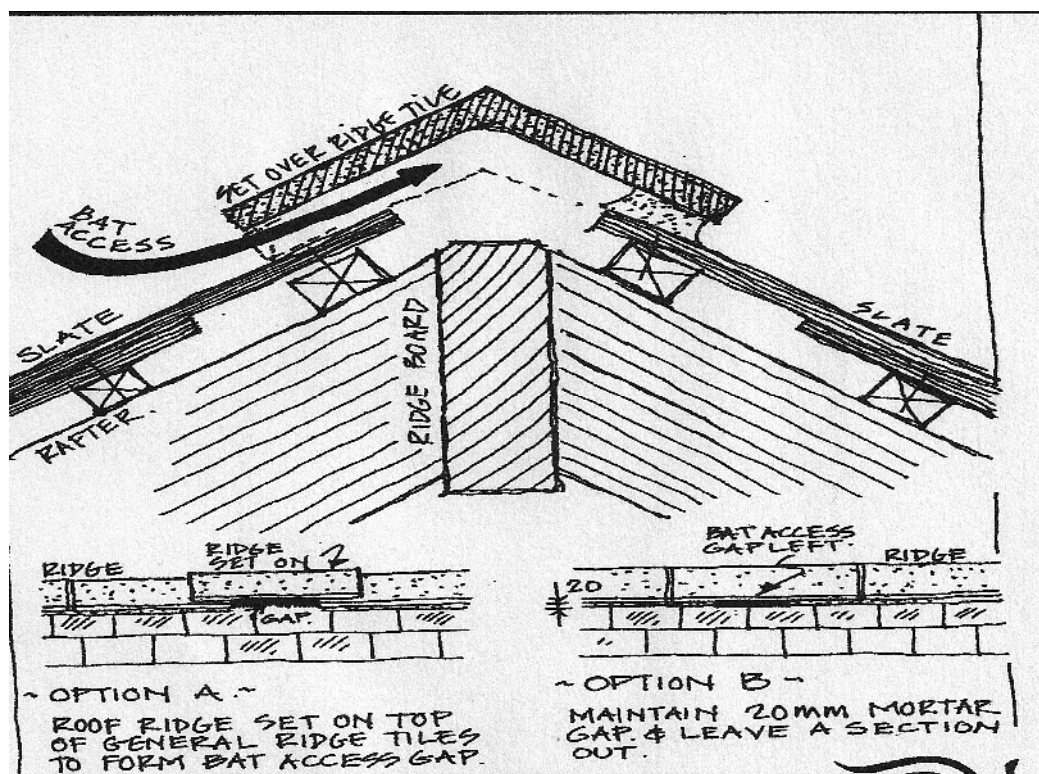


Figure 7: Ridge tile details

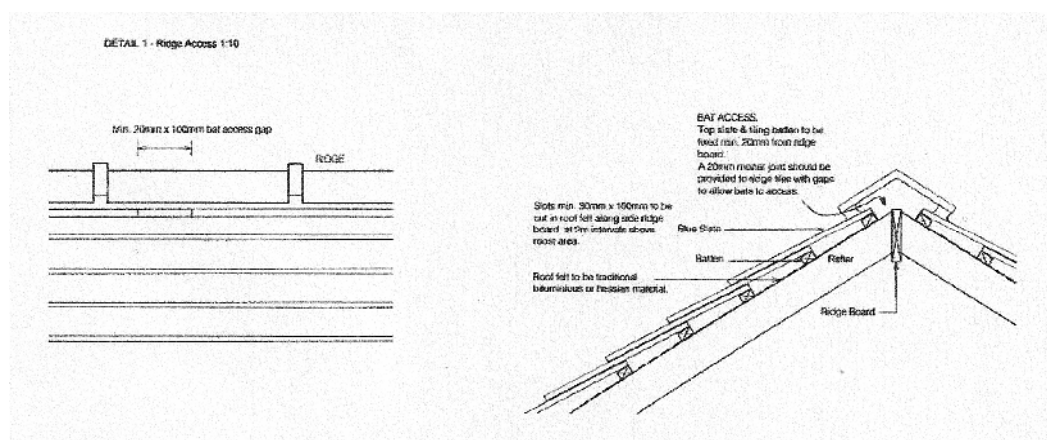


Figure 8: Ridge tile details



APPENDIX 5 – Mitigation details

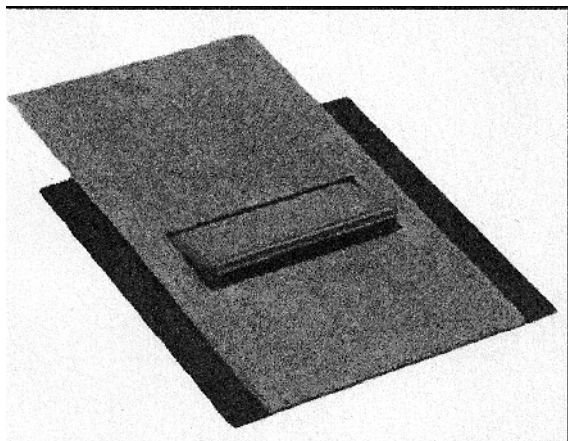


Figure 9: 'Slate-line' bat tile

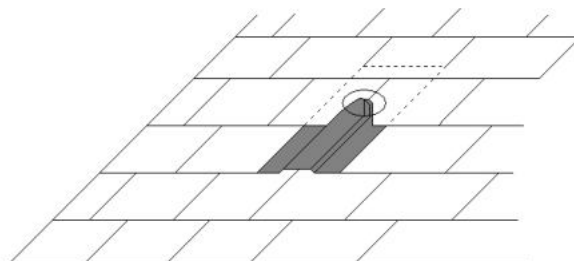


Figure 10: To allow access into the loft void, a hole (75mm x 30mm) needs to be cut in the underfelt, adjacent to a rafter or wall

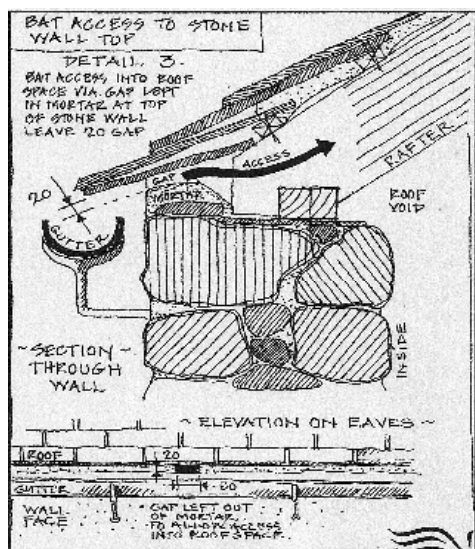


Figure 11: Bat access via eaves



Figure 12: Schwegler IFS bat box (95).

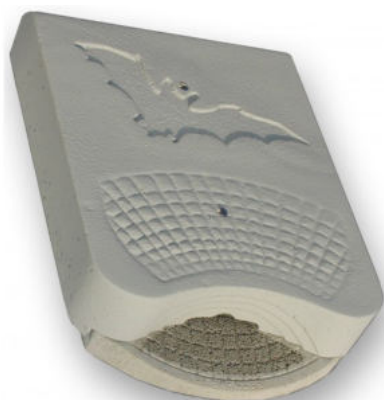


Figure 13: Schwegler (1WQ) Summer & winter roost box



Figure 14: Schwegler (1WQ) bat box fitted to wall.



APPENDIX 5 – Mitigation details

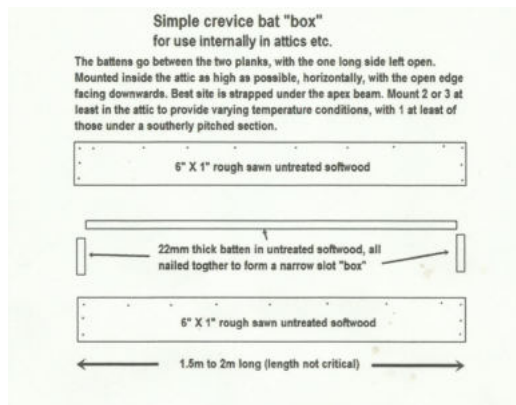


Figure 15: Simple crevice boxes design.



Figure 16: Example of crevice box in a loft void.



APPENDIX 6: Bibliography

The following publications were referred to in preparing this report.

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