

# Sensible Ecological Survey Solutions

## The Ecology Consultancy that Makes Sense

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### "ERWALLO UCHAF, DOLYWERN, PONTFADOG, WALES"

#### PHASE 2 BAT SURVEYS

#### STATEMENT REPORT

## Introduction

Sensible Ecology Survey Solutions (SESS) was instructed in February 2020 to complete a Phase 1 Buildings Protected Species Survey (SESS 2020a) of a residential structure located at a site (Figure 1) referred to as:-

### "Erwallo Ucha", Dolywern, Pontfadog, N. Wales, LL20 7AG"

The building is currently undergoing extensive internal renovation works and plans are being advanced to undertake additional external extensions and internal conversions which will require works to the current slate roofing.

No evidence of bats was recorded during the above referenced SESS survey of the building. However, an earlier bat survey completed in 2017 (Sam Dyer Ecology, 2017) recorded a single Common Pipistrelle bat (*Pipistrellus pipistrellus*) emerging from under a ridge tile on the building. Although the 2017 survey is now out of date the LPA has requested that a further two Phase 2 bat surveys be completed to confirm beyond doubt that there is currently no risk to bats.

All UK bat species are protected under European and National wildlife legislation. All UK breeding birds are protected under national wildlife legislation.

This report presents the findings of two Phase 2 bat surveys completed in May 2020, with appropriate conclusions and recommendations.

## **General Description of Target Building & Site**

The target building is a detached two storey property of stone construction with pitched slate covered roofing (**Photographs A, B & C**) with an attached former barn structure again of stone construction with pitched corrugated metal sheet roofing (**Photograph D**). The main residential building has been vacant for a number of years and has been stripped out internally in preparation for conversion work.

The building occupies an isolated location on the side of a steep hill (**Figure 1**).

The structure is generally in good repair externally. The slate roofing is in good condition and well sealed. The ridge tiles are in good condition and well bedded down. The metal roofing on the extension barn is again in good condition and well sealed to stonework. Features such as chimney stacks are in good condition.

Fascia and soffit timber work is in good condition and well sealed against stonework with no apparent bat or bird access opportunities. Stone pointing and gable end mortar seal is again generally in good repair.

Internally the main building slate roofing is backed with felt which is in good condition and well sealed (**Photograph E**); whilst the metal roofing is exposed internally within the barn extension (**Photograph F**).

Doors and windows associated with the main residential structure have recently been replaced/repairs and are well sealed. The annexe barn has currently first floor unglazed windows openings.

*[NOTE: For further information on the building, the site and bat potential appraisal please refer to **SESS (2020a)**]*

**Figure 1: Aerial view of Surveyed Building and surrounds.**

*Note: The target building is highlighted with a red ring. The main residential building can be seen to the northern end with the attached metal roofed barn structure to the south.*



**Photograph A: General view of front (east facing) frontage to target building.**



**Photograph B: General view of rear (west facing) frontage to target building.**



**Photograph C:** View of north facing frontage to target building.



**Photograph D:** View of south facing frontage to building with corrugated metal roofing extension to rear.



**Photograph E:** View of exposed felt backing to slate roofing covering main building.

*Note: The absence of an enclosed roof chamber, the exposed internal felt backing to the slates and the extensive hanging mats of accumulated spider's webs.*



**Photograph F:** View of internally exposed corrugated metal roofing covering extension.

*Note: The heavy timber framework supporting the roofing.*



## **RECORDS FOR BAT SPECIES RECORDED IN THE LOCAL AREA**

A desk based review of biological records generated the following list of bat species for the general area around the site

Bat species records as listed in the National Biodiversity Network Gateway web site database, for a 5 km radius around the site:

|                     |                                   |                  |
|---------------------|-----------------------------------|------------------|
| Common Pipistrelle  | <i>Pipisterellus pipistrellus</i> | widespread       |
| Soprano Pipistrelle | <i>Pipsitrelleus pygmaeus</i>     | scattered        |
| Brown Long-eared    | <i>Plecotus auritus</i>           | <i>scattered</i> |
| Daubenton's         | <i>Myotis daubentonii</i>         | scattered        |
| Natterer's          | <i>Myotis nattereri</i>           | scattered        |

Given the current nature of the site and immediate surrounds the bat species which might be expected to be present on the site would be Common Pipistrelle.

## **Survey Details**

### **Survey Procedures**

Two Phase 2 dusk emergence survey was completed for the building on:  
19<sup>th</sup> May 2020 and 26<sup>th</sup> May 2020.

Two experienced bat surveyors, led by Dr David Bell, Director, Sensible Ecological Survey Solutions, supported by Janet Bell, were able to position themselves to obtain good observation points to cover all the frontages and roofing of the building (Figure 2).

Visual observations and hand held 'Batbox Duet Bat Detectors' were used to record bat behaviour and identify species.

Recording general bat activity within or in proximity to the site was not the key objective of the survey however incidental bat flight activity in the immediate area around the surveyors was noted provided it did not distract from the key objective i.e. observation of the target building.

Figure 2: Aerial view of target building showing approximate location of the bat surveyors (red crosses).



## **Survey Limitations**

There were no significant limitations to the surveys.

The survey was completed within the optimal summer bat survey season (late April to early September inclusive).

Weather and temperature conditions were within specified limits for such surveys. There was no precipitation during survey periods.

**[Details on weather conditions and survey times can be found in Appendix A to the rear of the report].**

## **Summary of Surveys Results**

### ***Bat Egress/Access:***

**SURVEY 1:** Two Common Pipistrelle bats were recorded egressing the target building via an unglazed high level window at the southern gable end of the barn extension structure (Figure 3; Photograph G).

**SURVEY 2:** Two Common Pipistrelle bats were recorded egressing the target building one via an unglazed high level window at the southern gable end of the barn extension structure (Figure 3; Photograph G), and the second via an unglazed window to the east facing frontage of the same barn structure (Figure 3: Photographs G & H).

**Figure 3:** Aerial view of target building showing the bat egress locations from the barn structure building.



**Photograph G:** View of south facing gable end of barn structure with bat egress location via unglazed windows indicated.



**Photograph H:** View of east facing frontage to barn structure with bat egress location via unglazed windows indicated.



### ***Bat Activity Summary:***

Common Pipistrelle (CP) (*Pipistrellus pipistrellus*) was the only bat species recorded. Initial activity was recorded approximately 20 minutes after sunset and comprised of rapid passes over the site from east to west.

All activity records were for solitary bats. No social behaviour was detected. The majority of activity records comprised of short bouts of foraging along the trees margin or over the top of the woodland to the north of the site. Occasional rapid passes from east to west and west to east over the site and target building were recorded.

For three of the four bat emergence records the bats dispersed immediately from the site on emergence. For one of the records the bat emerged and quickly re-entered the building on several occasions and was recorded flying around inside the barn structure before finally emerging and dispersing from the site.

[See *Appendix B* to rear of report for full bat activity records].

# **Conclusions & Recommendations**

## **ROOSTING**

There were no significant limitations to completion of the two Phase 2 bat surveys, and the surveys were completed within the optimal survey season and under acceptable weather conditions.

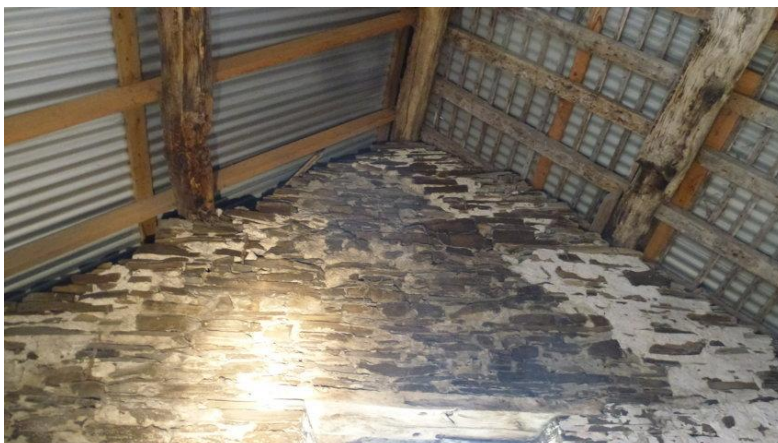
The surveys detected evidence of two Common Pipistrelle bats day time roosting with the target building. The bats are roosting within the metal roofed barn structure (Photographs D & H) which is attached to the main residential building. The barn structure has currently two high level unglazed windows (Photographs G & H) which offer bat access/egress. This feature is in contrast to the main residential structure whose windows are glazed and sealed throughout.

The barn has a metal panel roof which is exposed internally (Photograph I). Metal roofing is generally considered to represent a hostile and commonly avoided environment to roosting bats due to the wide temperature fluctuations associated with the material. Although the exact roosting location within the barn has not been identified there are suitable locations associated with timber frame and gable end stone work (Photographs F & I) to allow individual or small numbers of bats to roost.

The small size of the roost indicates that the individuals present are males or non breeding females, and they are using the structure as a summer only day roost. The barn structure in its current state is considered unsuitable as a winter hibernation site.

**Photograph I:** Internal view of exposed roofing within the barn structure.

*Note: Note the older support beams standing off from the metal work due to secondary timber work and the gapping between the top of the gable end stonework and roofing; these features could provide refuge access to bats.*



## BAT ACTIVITY

The low levels of Common Pipistrelle activity recorded during both survey sessions would indicate the site and immediate surrounds have limited value as a foraging area. The trees and trees margins to the north of the site generated the largest numbers of bat records, which is to be expected given that trees attract flying insects.

The small number of recorded passes over the site would indicate that it as limited value as a flight corridor for bats. The proposed works on the building will not compromise current bat dispersal.

It is concluded that the proposed works will have negligible impact on the local bat population in terms of foraging or flight patterns.

## BAT MITIGATION

The barn structure is isolated from the main residential building by a stone gable end (Photographs F & I). It is therefore concluded that continuing works on the residential building may proceed with negligible risk to bats, provided potential bat access points such as windows and doors remain sealed during nocturnal periods. Protection measures can therefore focus on the barn structure.

‘Reasonable Avoidance Measures’ (RAMs) and ‘Mitigation Measures’ proposed by Sam Dyer Ecology (2017) remain applicable and should be consulted for further details. The relevant key instructions are as stated below:-

*All works which may affect the barn structure to be completed between 1st September and 15<sup>th</sup> April.*

*Prior to 15<sup>th</sup> April following commencement of works, the barn structure to be made secure with glazed windows fitted and windows and doors to be sealed during nocturnal hours*

*Prior to works commencing on the barn structure two ‘Schwegler 2FN’ bat boxes to be erected on suitable mature trees within the site, these boxes will act as alternative roosting refuges for bats, and to remain in situ for the boxes lifespan. The location and fixing of the boxes to be completed under the supervision of s suitably qualified bat worker.*

*All destructive works on the barn building structure, including removal of roofing to be under the supervision of a suitably qualified bat worker.*

*In the unlikely event that a bat or bats are located during the works at any stage then all work should terminate immediately and the supervising bat worker consulted on how to proceed. A low impact*

*Natural England licence will then be required to disturb roosting bats, including translocation out of harm's way.*

It is concluded that in the absence of mitigation the proposed works could directly harm or disturb a small number of non breeding Common Pipistrelle bats, and result in low impact on the local bat population.

Through the adoption of appropriate RAMs as summarised above it is concluded that the risk to bats will be negligible.

## **References:**

**Bat Conservation Trust (2016) Bat Surveys for Professional Ecologists. Good Practice Guidelines. Bat Conservation Trust, London.**

**Sam Dyer Ecology (2017) Erwallo Uchaf, Pontfadog. Building Conversion. Protected Species Survey. Sam Dyer Ecology, Bangor, Wales**

**SESS (2020a) Erwallo Uchaf, Dolywern, Pontfadog, Wales. Buildings Protected Species Survey Report. Sensible Ecological Survey Solutions, Warrington.**

## **Appendix A: Survey Weather Records & Sunset Times**

### **Weather Conditions & Sunset Time**

#### **SURVEY 1**

**Survey Date: 19<sup>TH</sup> May 2020**

**Start Temp: 19C, finish temp 12C, very light SW breeze at start of survey which dropped to still by completion of survey period. Broken light cloud with no precipitation during survey period, dry ground. The day had been sunny and warm prior to survey.**

**Sunset Time at site on survey day: 21:09.**

#### **SURVEY 2**

**Survey Date: 26th May 2020**

**Start Temp: 17C, finish temp 13C, still no breeze. Cloud cover during survey period: 20% light broken. No precipitation during survey period, and dry ground. The day had been warm, sunny and dry prior to survey.**

**Sunset Time at site on survey day: 21:20.**

## **Appendix B: Bat Emergence & Activity Records**

Abbreviations used: CP - Common Pipistrelle

### **SURVEY 1**

Survey start time: 20:22; survey finish time 22:39

#### ***Bat Emergence:***

Two CP bats recorded emerging from the target building, via south facing gable end high level window (glass missing) (Photograph G)

#### ***Bat Activity:***

21:22 1xCP flew rapidly over to top of target building from E to W.

21:31 1xCP flew along tree lint to north of site from E to W.

21:34 1 x CP emerged from southern gable end of target building via high level window before departing immediately to the W.

21:41 1 x CP flew across S of site coming from W.

21:45 1 x CP foraging along tree line to N of site.

21:51 1 x CP high level pass over trees to N. of site.

21:52 1 x CP emerged from southern gable end of target building via high level window before departing immediately to the E.

21:57 1 x CP rapid pass along track to N of site.

21:59 1 x CP rapid pass over top of target building travelling E to W.

22:01 1 x CP pass over top of target building travelling W to E.

22:15 1 x CP distant pass to over top of trees to N of site.

22:17 1 x CP foraging briefly along tree line to N of site.

22:23 1 x CP short (<15 secs) foraging session around target building.

22:32 1 x CP foraging briefly at distance to north of site.

No further bat activity records during survey period.

## **SURVEY 2**

## **SURVEY 1**

Survey start time: 20:46; survey finish time 22:57

### ***Bat Emergence:***

Two CP bats recorded emerging from the target building, one via south facing gable end high level unglazed window, and one via east facing unglazed window (Photographs G & H).

### ***Bat Activity:***

21:40 1 x CP rapid pass to south of target building E to W.

21:40 1 x CP foraging along tree line to north of site.

21:51 1 x CP foraging along tree line to north of site.

21:58 – 22:05 1 x CP emerged and re-entered building via unglazed east facing window.

22:08 1 x CP rapid pass to south of building E to W.

22:09 1 x CP emerged via south facing gable end window before departing to west immediately.

22:12 1 x CP distance pass to north of site over top of trees.

22:20 1 x CP short foraging bout to N of site.

22:27 1 x CP pass to south of site W to E.

22:33 1 x CP foraging to N of site over trees.

22:34 1 x CP rapid pass to N of site W to E.

No further bat activity records during survey period.

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