



## Template Method Statement to be used within a Bat Development Licence Application

This template Method Statement is to be used to form part of your Licence Application for a European Protected Species Development Licence. It will be used to determine the impact of the application on the favourable conservation status of the species concerned (Regulation 53(9) (b) of the Conservation of Habitats and Species Regulations 2010). It must be prepared by a consultant ecologist or other suitably qualified person. You are strongly advised to refer to the Bat Mitigation Guidelines<sup>1</sup>, and The Bat Survey Guidelines (2nd Edition). Please submit your Application and supporting Method Statement electronically to the contact details provided below.

### Contact Details

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|                                         |                                     |
|-----------------------------------------|-------------------------------------|
| <b>Method Statement Title:</b>          | Oakfields, Isycoed                  |
| <b>Method Statement Version Number:</b> | Version 1                           |
| <b>Method Statement Issue Date:</b>     | 31/10/2022                          |
| <b>Site Address:</b>                    | Oakfields, Isycoed, Clwyd, LL13 9RY |

<sup>1</sup> Bat Mitigation Guidelines (IN136) available to download from the Natural England website

## **Background and Supporting Information**

### **A Executive Summary.** No more than one side of A4

This report relates to the site proposed for re-development at Oakfields, Isycoed, Clwyd, LL13 9RY (Central OS Grid Reference: SJ 40089 50110). It has been prepared at the request of Ms. Clare Callander (proprietor). Under the current proposals, the surveyed residential dwelling B1 is proposed to be extended. The licence is required, as these works will inadvertently cause the loss of multiple day roosts. These were found to be of a peak count of one brown long-eared (*Plecotus auritus*), six common pipistrelle (*Pipistrellus pipistrellus*) and two whiskered (*Myotis mystacinus*) bats. With this being the case, the following mitigation and compensatory measures have been proposed, to ensure no detriment to the local population of this species:

- Once a Natural Resources Wales Development Licence has been obtained, initially the installation of a translocation bat box (1FS or similar) and 'soft strip' works should take place between the months of December 2022 in favourable conditions for bat activity, due to the possibility that a few bats may be hibernating within their summer day roost. The translocation bat box will face north on the nearby tree (see section E2.5 for a visual representation).
- To compensate for the presence of void dwelling bats within the loft, access into the new loft will be facilitated. This should either be through the retention of the currently used access points, or the incorporation of [Bat Access Tiles](#) and purposely lifted ridge tiles.
- A number of additional measures should be included to ensure that the roost is of the highest value possible to the target species. These measures include incorporating two [Schwegler 2F bat boxes](#) should be placed along the ridge board. Finally, a ply-board lining should be introduced [approximately] half way up the roof (heading towards the apex) in order to provide further roosting opportunities for the bat species present.
- The site will need to incorporate three [Integrated Eco Bat Box](#), One with a crevice roosting chamber and two with a cavity roosting chamber, the location of which are shown in figure 9.

## **B Introduction**

### **B.1 Background to activity/development**

This report relates to the site proposed for re-development at Oakfields, Isycoed, Clwyd, LL13 9RY (Central OS Grid Reference: SJ 40089 50110). It has been prepared at the request of Ms. Clare Callander (proprietor).

Under the current proposals, the surveyed residential dwelling B1 is proposed to be extended. The licence is required, as these works will inadvertently cause the loss of multiple day roosts. These were found to be of a peak count of one brown long-eared (*Plecotus auritus*), six common pipistrelle (*Pipistrellus pipistrellus*) and two whiskered (*Myotis mystacinus*) bats.

### **B.2 Full details of proposed works on site that are to be covered by the licence**

The current proposals involve the demolition of outbuilding and detached garage, with a proposed two storey side extension. Planning permission for the projects has been granted (application number – ISY P/2021/1131).

The project is proposed to span six months from the starting date.

### **B.3 Actions requiring licensing,**

The proposed works will inadvertently cause the loss of day roosts of brown long-eared (*Plecotus auritus*), common pipistrelle (*Pipistrellus pipistrellus*) and whiskered (*Myotis mystacinus*) bats. It is deemed possible that some bats may be resident within their summer roost during the winter months. Therefore, site supervision will be undertaken to capture and translocate any specimens found into a nearby translocation bat box (1FS Schwegler) or similar. These actions are necessary as the proposed re-development works will destroy a resting place used by low numbers of relatively common bats.

## **C Survey and site assessment**

### **C.1 Existing information on the bat species at the survey site.**

Cofnod were commissioned to carry out an ecological data search of all protected bat species within a 2km search radius. Further resources were independently used to analyse the local records within the area and identify the importance of the site within the local landscape. The resources used were; [www.ordanancesurvey.co.uk](http://www.ordanancesurvey.co.uk), Google Maps, Google Earth and Bing Maps.

The ecological data search provided by Cofnod revealed no bat species within the 2km search radius of the structure at Oakfields, Isycoed.

### **C.2 Statutory sites notified for the species (SSSIs or SACs) within 10km**

Due to the current proposals remaining within the site boundary and the nature of the site itself, it was not necessary to obtain any further information regarding both Statutory and Non-Statutory Nature Conservation Designations. This is due to the proposed works not altering any of the wider surrounding landscape.

### **C.3 Objectives of the survey.**

The aims of the surveys were to undertake an appraisal of the building/s and surrounding area to establish whether any bats and birds were present and in what capacity they were using the site. The actions of the surveyors on the site and during the production of this report were conducted in accordance with Bat Conservation Trust (BCT) guidelines (3<sup>rd</sup> edition). The surveys included a preliminary roost assessment of the buildings, followed by subsequent emergence/re-entry surveys to establish the bat presence/absence within the buildings located on the site.

### **C.4 Scaled plan/map of survey area**

Please see the figures below that illustrate the surveyed area at Oakfields, Isycoed, Clwyd, LL13 9RY (Central OS Grid Reference: SJ 40089 50110).

**Figure 1:** An aerial photograph of the surveyed site at Oakfields, Isycoed (as shown by the red outline). The arbitrary building numbers referred to throughout this report are also illustrated.



### C.5 Site/habitat description (relevant to bats)

The site itself is situated within a semi-rural setting within the local government community of Isycoed, Clwyd. Hard standing ground, amenity grassland and hedgerows are situated in the immediate vicinity of the building, as well as a small amount of other buildings (residential dwellings and their associated gardens) and arable and pastureland. This report relates to three buildings on a site which measures approximately 190m<sup>2</sup>.

The wider landscape is comprised of arable land, scattered trees and hedgerows. There is a large waterbody located 600m to the west of the site, and the site offers good connectivity to the wider landscape. Therefore, the habitats that are present in and around the site contains all of the elements that are considered to be critical in both bat and bird life cycles.

**Figure 2:** An aerial photograph of the surveyed site (yellow star) and some of the nearby habitats to Oakfields, Isycoed.



#### C.6 Field survey(s).

##### Survey Method

The actions of the surveyors on the site and during the production of this report were conducted in accordance with Bat Conservation Trust (BCT) guidelines (3<sup>rd</sup> edition). An initial walkover survey of the site is undertaken, with the visual inspection of the building/s and any trees. This is done to determine the availability of the required resources for the protected species in the immediate area. The buildings onsite were inspected both externally and internally for signs of bat activity. Notes were made on the following in accordance with the guidelines published by the BCT for the scoping and surveying of building/s and built structures. These buildings were then given a rating (negligible, low, moderate or high) as to their suitability to support bats in some capacity. This was done to devise how many further activity/emergence/re-entry surveys are required to ascertain the bat usage of the structures (more details on the survey methodology can be found within the accompanying survey report).

Surveyors

The surveys were undertaken by licensed bat ecologist/s and members of the Chartered Institute of Ecology & Environmental Management (CIEEM):

**Mr. Richard Millington**, BSc (Hons), ACIEEM, CERPIT, Senior Ecologist, Natural Resources Wales Survey Licence.

**Mr. Matthew Hodgson**, Ecologist.

**Mr. Matthew Cotterill**: BSc [Hons], Ecologist.

**Mr. Alex Fitzroy**, BSc (Hons), Ecologist.

**Mr. Matthew Priddey**, Assistant Ecologist.

**Miss. Ella Moore**, BSc, Assistant Ecologist.

**Miss. Livia Spadetto**, MSc, Assistant Ecologist.

**Mrs. Jacquie Mansey**: Assistant Ecologist.

**Ms. Lucy Talbot**: BSc (Hons), Assistant Ecologist.

**Mr. Peter Royall**: BSc (Hons), Assistant Ecologist.

**Mr Simon Band**: Assistant Ecologist.

**Dr Mark Ashby**: Assistant Ecologist.

Mr. Richard Millington has 14 years' experience in surveying for bats across England and Wales. He has also been involved in multiple mitigation projects in England.

Equipment Used

During the surveys, the types of equipment used included a number of different types of bat detectors to listen for and record bat activity. These were the Bat Box Duet, SSF Bat2, the EcoObs batcorder and the EchoMeter Touch.

### Environmental Variables

The buildings at Oakfields, Isycoed were externally and internally inspected for the presence of bats with the use of various types of equipment (including binoculars, torches, endoscopes and ladders) in full daylight. Subsequent activity surveys use a variety of bat detectors that include Bat Box Duet, SSF Bat2, EchoMeter Touch and the EcoObs Batcorder. The following table outlines the environmental variables from the survey visits:

| Environmental variables | PRA Survey of the Building and Activity Survey 1 – 30 <sup>th</sup> August 2019. Dusk | Activity Survey 2 – 24 <sup>th</sup> September 2020. Dusk | Activity Survey of the Buildings – 1 <sup>st</sup> of June 2021 Dusk | Activity Survey of the Buildings – 21 <sup>st</sup> of June 2021 Dawn |
|-------------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------|----------------------------------------------------------------------|-----------------------------------------------------------------------|
| Temp Start:             | 17.5°C                                                                                | 11°C                                                      | 20°C                                                                 | 10°C                                                                  |
| Temp Finish:            | 16.9°C                                                                                | 10°C                                                      | 18°C                                                                 | 9°C                                                                   |
| Humidity Start:         | 86%                                                                                   | 68%                                                       | 58%                                                                  | 83%                                                                   |
| Humidity Finish:        | 90%                                                                                   | 75%                                                       | 63%                                                                  | 91%                                                                   |
| Cloud Cover Start:      | 100%                                                                                  | 50%                                                       | 30%                                                                  | 5%                                                                    |
| Cloud Cover Finish:     | 100%                                                                                  | 50%                                                       | 70%                                                                  | 10%                                                                   |
| Wind Speed Average:     | Low                                                                                   | Still                                                     | Low                                                                  | Low                                                                   |
| Precipitation:          | None                                                                                  | None                                                      | None                                                                 | None                                                                  |

| Environmental variables | Activity Survey of the Buildings – 5 <sup>th</sup> of May 2022 Dusk | Activity Survey of the Buildings – 19 <sup>th</sup> of May 2022 Dawn | Activity Survey of the Buildings – 17 <sup>th</sup> of June 2022 Dusk |
|-------------------------|---------------------------------------------------------------------|----------------------------------------------------------------------|-----------------------------------------------------------------------|
| Temp Start:             | 14°C                                                                | 9°C                                                                  | 18°C                                                                  |
| Temp Finish:            | 13°C                                                                | 9°C                                                                  | 16°C                                                                  |
| Humidity Start:         | 72%                                                                 | 94%                                                                  | 84%                                                                   |
| Humidity Finish:        | 75%                                                                 | 95%                                                                  | 92%                                                                   |
| Cloud Cover Start:      | 30%                                                                 | 10%                                                                  | 100%                                                                  |
| Cloud Cover Finish:     | 45%                                                                 | 15%                                                                  | 100%                                                                  |
| Wind Speed Average:     | Low                                                                 | Low                                                                  | Moderate                                                              |
| Precipitation:          | None                                                                | None                                                                 | None                                                                  |

### Constraints

No constraints were apparent in obtaining the survey information.

## **C7 Survey Results.**

### Preliminary Roost Assessment Results:

The buildings on site were given varying bat roosting potential based on the features they contain. The following table summarises the findings.

| Building | Bat Roost Potential | Number of bat activity surveys required |
|----------|---------------------|-----------------------------------------|
| B1       | High                | 3                                       |
| B2       | High                | 3                                       |
| B3       | High                | 3                                       |

### DNA Results:

A small sample of droppings were collected and sent for DNA testing with EcoWarwicker at the University of Warwick. The results from this testing revealed whiskered (*Myotis mystacinus*) bats with a 100% bootstrap level.

**Please be aware** that results from DNA testing reflect the droppings collected. This may not be a true representation of all species using the surveyed site.

### Activity Survey Results:

| Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Dusk/Dawn | Species                                                     | Roost Type | Roost Location                       | Access Points                                          | Dimension of Roost                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------------------------------------------------------------|------------|--------------------------------------|--------------------------------------------------------|------------------------------------------------------------------------------|
| 30/08/2019                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Dusk      | 2 x Common pipistrelle ( <i>Pipistrellus pipistrellus</i> ) | Day        | Two locations under the eaves        | The eaves in the south-eastern corner of the building. | Likely to be a small area due to the presence of a crevice dwelling species. |
| Notes: This survey was undertaken at dusk, with sunset being recorded at 20:07. There was a lot of common pipistrelle ( <i>Pipistrellus pipistrellus</i> ) activity, with most of it being focused in the southern garden. During this survey, two common pipistrelle ( <i>Pipistrellus pipistrellus</i> ) bats were seen emerging from the south-eastern corner of the main house.                                                                                                                                                             |           |                                                             |            |                                      |                                                        |                                                                              |
| 24/09/2020                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Dusk      | 2 x Whiskered ( <i>Myotis mystacinus</i> )                  | Day        | South-eastern corner of the building | South-eastern corner of the building                   | Likely to be a small area due to the presence of a crevice dwelling species. |
| Notes: The activity survey was undertaken at dusk on the 24 <sup>th</sup> of September 2020, with sunset time recorded at 19:04. During the site visit, two whiskered ( <i>Myotis mystacinus</i> ) bats were witnessed emerging from the south-eastern end of the site. In addition to this, some brown-long eared ( <i>Plecotus auritus</i> ) and plenty of whiskered ( <i>Myotis mystacinus</i> ) bats were identified on site. Additionally, a noctule ( <i>Nyctalus noctula</i> ) bat was seen to forage in the vicinity of the buildings.. |           |                                                             |            |                                      |                                                        |                                                                              |
| 01/06/2021                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Dusk      | 1 x Brown Long-eared ( <i>Plecotus auritus</i> )            | Day        | Loft Space of B1                     | Eaves at south of B1.                                  | Approximately 58m <sup>2</sup> .                                             |
| 01/06/2021                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Dusk      | 6 x Common                                                  | Day        | On the                               | 4 – around                                             | Likely to be a                                                               |

The Conservation of Habitats and Species Regulations 2010 as amended

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |                                                                |     |                                                                                                                   |                                                                                             |                                                                             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------------------------------------------------------------|-----|-------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      | pipistrelle<br>( <i>Pipistrellus pipistrellus</i> )            |     | southern and eastern elevations of B3, southern and western elevations of B1                                      | the soffit box of B3 (x2), and one at the western, and one on the southern elevations of B1 | small area due to the presence of a crevice dwelling species.               |
| 01/06/2021                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Dusk | 2 x Whiskered<br>( <i>Myotis mystacinus</i> )                  | Day | Within the loft of B1                                                                                             | Eaves at the western and south-eastern corners of the building                              | Likely to be a small area due to the presence of a crevice dwelling species |
| Notes: This survey was undertaken at dusk, with sunset being recorded at 21:27. During this survey, one brown long-eared ( <i>Plecotus auritus</i> ), six common pipistrelle ( <i>Pipistrellus pipistrellus</i> ) bats were seen to emerge from B1, along with two whiskered ( <i>Myotis mystacinus</i> ) specimens. These species were also foraging and commuting around the site.                                                                                                                                                                                                                                                                                                                                                 |      |                                                                |     |                                                                                                                   |                                                                                             |                                                                             |
| 21/06/2021                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Dawn | 1 x Brown Long-eared<br>( <i>Plecotus auritus</i> )            | Day | Within the loft of B1                                                                                             | Eaves at south of B1.                                                                       | Approximately 58m <sup>2</sup> .                                            |
| 21/06/2021                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Dawn | 3 x Common pipistrelle<br>( <i>Pipistrellus pipistrellus</i> ) | Day | At the south-eastern eaves of B1                                                                                  | At the south-eastern eaves of B1                                                            | Likely to be a small area due to the presence of a crevice dwelling species |
| Notes: The activity survey was undertaken at dawn, with sunrise time recorded at 04:45. During the site visit, one brown long-eared bat was seen to return to roost, along with three common pipistrelle bats. Finally, one whiskered specimen was seen to return to roost within B1.                                                                                                                                                                                                                                                                                                                                                                                                                                                |      |                                                                |     |                                                                                                                   |                                                                                             |                                                                             |
| 05/05/2022                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Dusk | 1 x Common pipistrelle<br>( <i>Pipistrellus pipistrellus</i> ) | Day | Under the eave of the south-eastern corner of B1.                                                                 | Under the eave of the south-eastern corner of B1.                                           | Likely to be a small area due to the presence of a crevice dwelling species |
| Notes: The activity survey was undertaken at dusk, with sunset being recorded at 20:47. During this survey, one common pipistrelle ( <i>Pipistrellus pipistrellus</i> ) bat was identified emerging from under the eave of the south-eastern corner of B1 at 21:22. No bats were observed emerging from B2 and B3.<br><br>In addition to this, common pipistrelle bats were observed foraging and commuting through the site, with a noctule ( <i>Nyctalus noctule</i> ) identified commuting, heading west, and a brown long-eared bat ( <i>Plecotus auritus</i> ) was seen commuting southwards. Soprano pipistrelle ( <i>Pipistrellus pygmaeus</i> ) and whiskered ( <i>Myotis mystacinus</i> ) bats were also heard but not seen |      |                                                                |     |                                                                                                                   |                                                                                             |                                                                             |
| 19/05/2022                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Dawn | 4 x Common pipistrelle<br>( <i>Pipistrellus pipistrellus</i> ) | Day | 1 in South-eastern eave of B1<br><br>1 Air vent on the southern elevation<br><br>2 on the eastern elevation of B3 | South-eastern eave of B1<br><br>Soffit of the eastern elevation of B3                       | Likely to be a small area due to the presence of a crevice dwelling species |
| Notes: The activity survey was undertaken at dawn, with sunrise being recorded at 05:06. During                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |                                                                |     |                                                                                                                   |                                                                                             |                                                                             |

this survey, one common pipistrelle (*Pipistrellus pipistrellus*) was seen re-entering B1 at 03:58, below the eave on the eastern aspect. Another common pipistrelle bat was seen re-entering B1 at 04:19, below the eaves by a vent brick at the junction of the smaller south-facing wall, and the small east-facing wall.

Two common pipistrelle (*Pipistrellus pipistrellus*) bats flying down into the space between B2 and B3, before returning to roost in B3 at the eastern aspect.

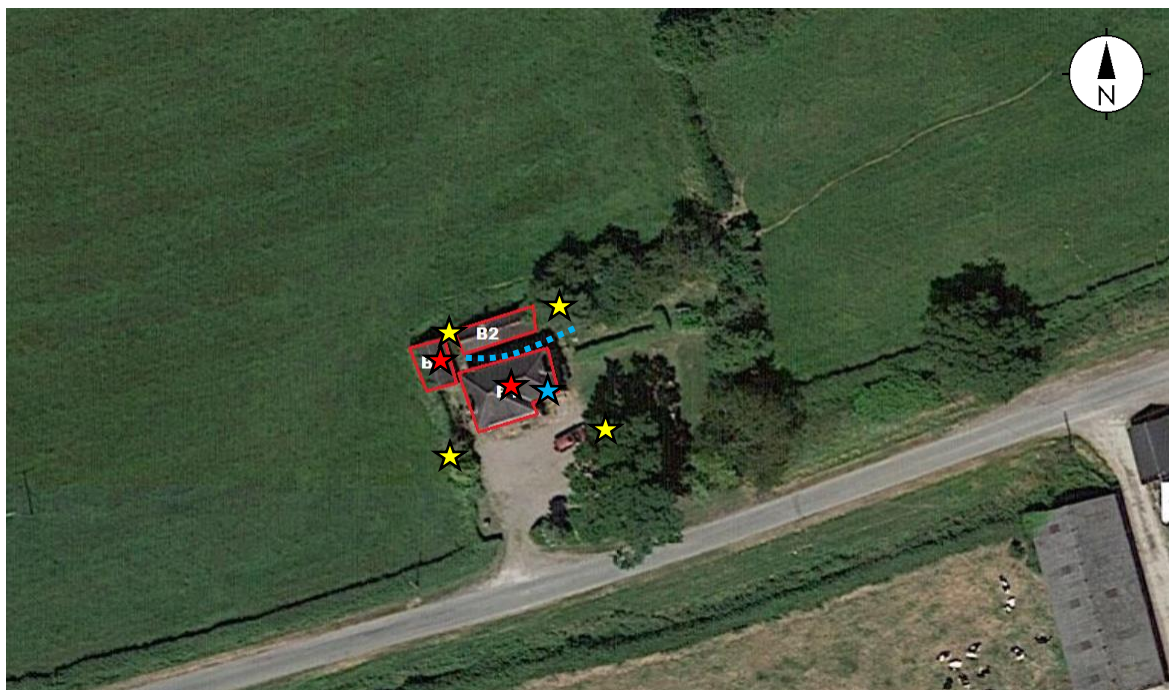
In addition to the re-entries recorded, foraging and commuting common pipistrelle (*Pipistrellus pipistrellus*) bats and a commuting soprano pipistrelle (*Pipistrellus pygmaeus*) were observed using the site. Finally, a whiskered bat (*Myotis mystacinus*) was heard but not seen

|            |      |                                                             |     |                                         |                                         |                                                                             |
|------------|------|-------------------------------------------------------------|-----|-----------------------------------------|-----------------------------------------|-----------------------------------------------------------------------------|
| 17/06/2022 | Dusk | 1 x Common pipistrelle ( <i>Pipistrellus pipistrellus</i> ) | Day | Eaves on the north-western corner of B1 | Eaves on the north-western corner of B1 | Likely to be a small area due to the presence of a crevice dwelling species |
|------------|------|-------------------------------------------------------------|-----|-----------------------------------------|-----------------------------------------|-----------------------------------------------------------------------------|

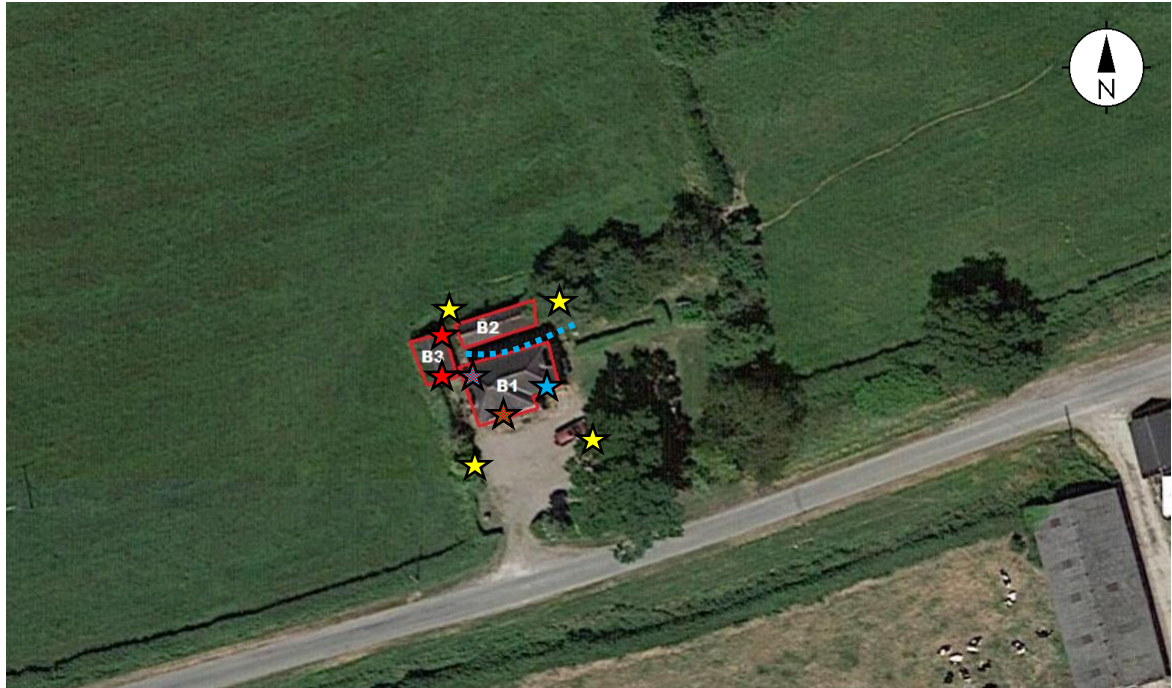
Notes: The activity survey was undertaken at dusk, with sunset time being recorded at 21:40. At 22:04, one common pipistrelle (*Pipistrellus pipistrellus*) was seen emerging below the eaves, from the north-western corner of B1.

In addition to this emergence, commuting and foraging common pipistrelle (*Pipistrellus pipistrellus*) and soprano pipistrelle (*Pipistrellus pygmaeus*) bats were observed using the site. Finally, brown long-eared (*Plecotus auritus*) bats were also identified using the site, although were not visible to the survey team.

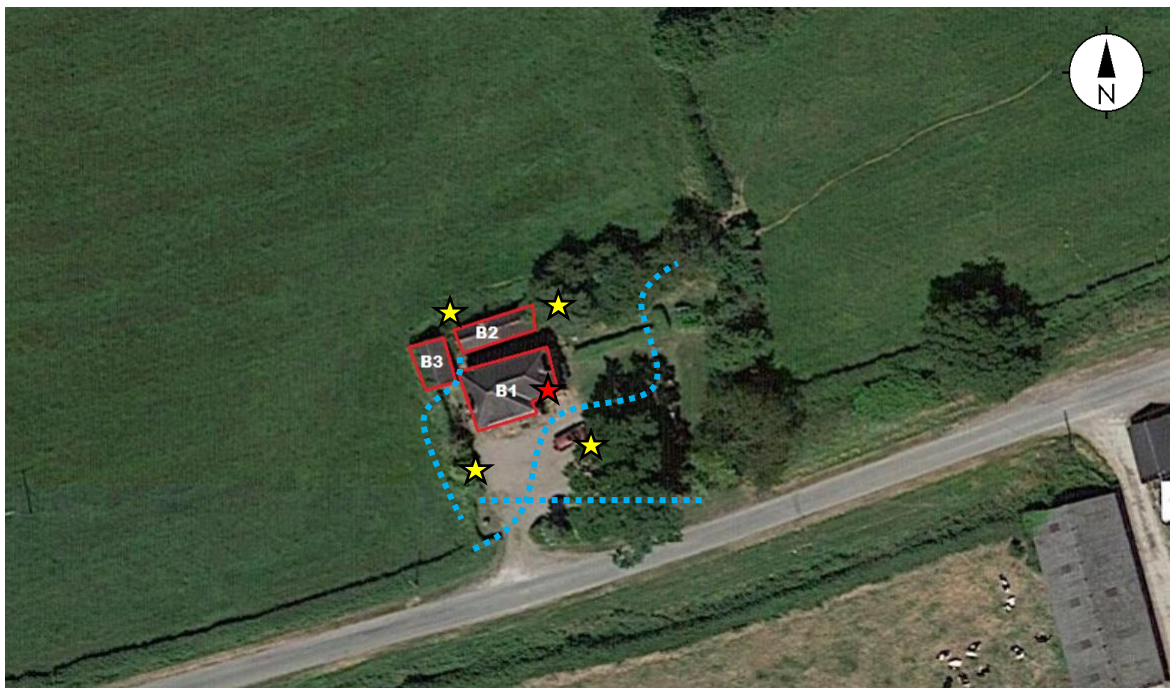
**Figure 3:** An aerial photograph of the surveyed site (red outline), the surveyor locations (yellow stars) and the identified bat flight paths (blue lines). The blue star illustrates the identified egress points identified. The red stars illustrates where the bat droppings were identified.



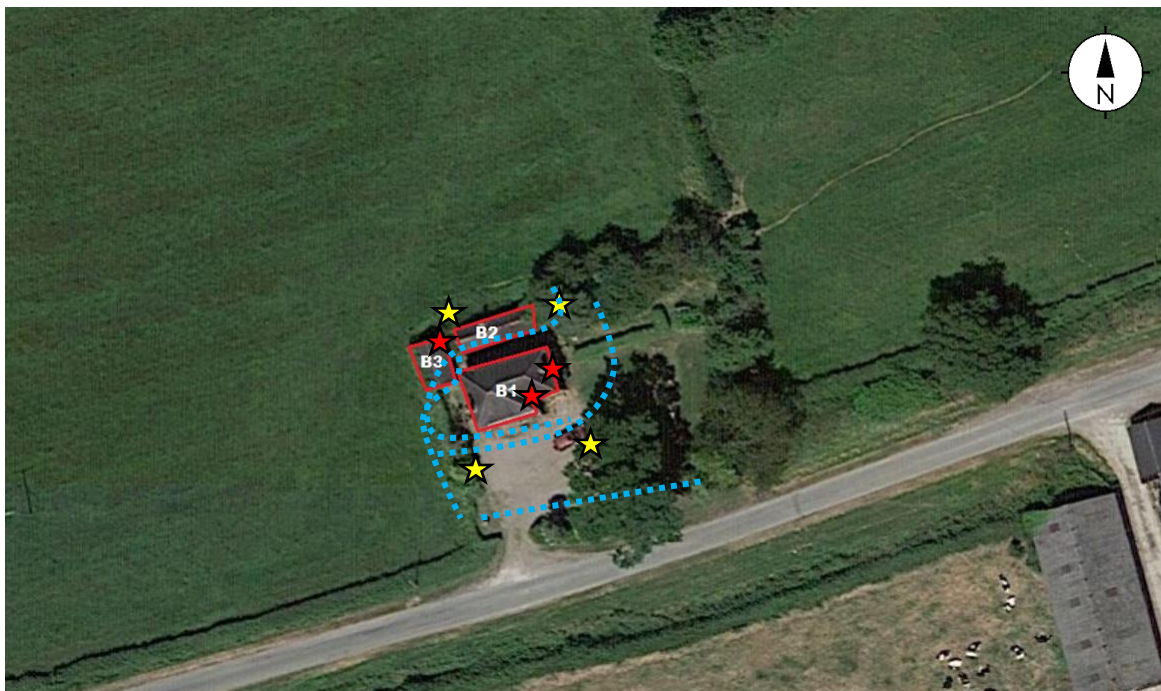
**Figure 4:** An aerial photograph of the surveyed site (red outline), the surveyor locations (yellow stars) and the identified bat flight paths (blue lines). The red star illustrates the identified ingress/egress points of the common pipistrelle bats, with the blue stars being the ingress/egress points of the brown long-eared bats identified. The green stars illustrates where the whiskered bats were accessing the property.



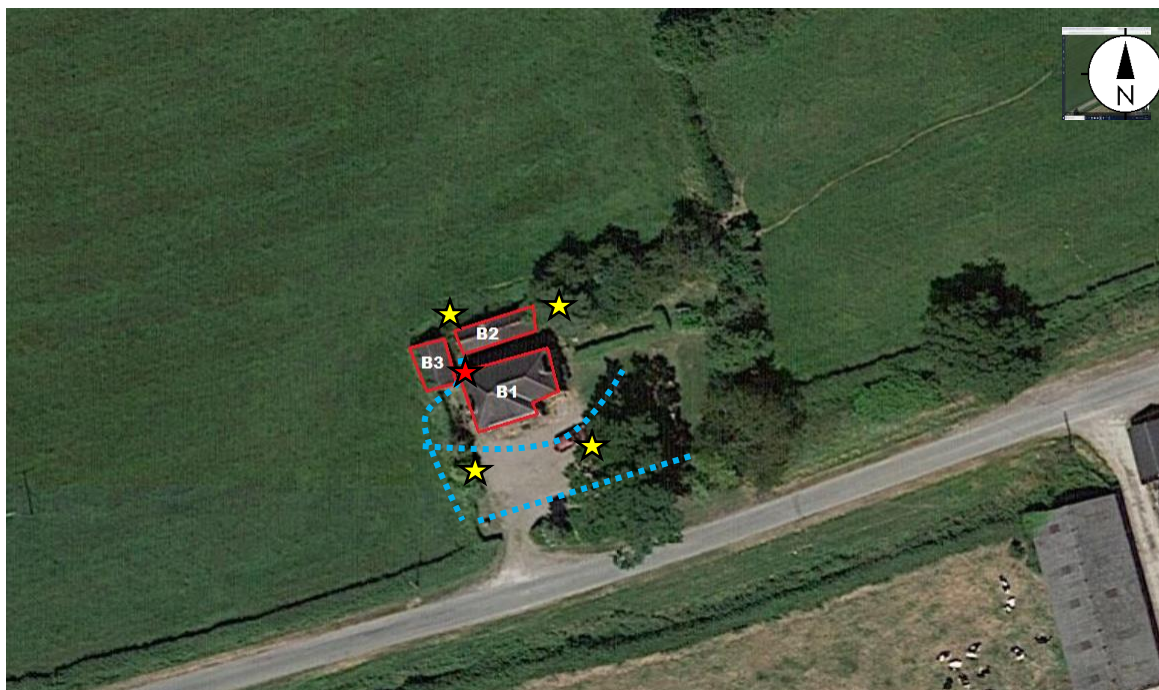
**Figure 5:** An aerial photograph of the surveyed site (red outline), the surveyor locations (yellow stars) and the identified bat flight paths (blue lines). The red star illustrates the identified ingress/egress points of the common pipistrelle bats, with the blue stars being the ingress/egress points of the brown long-eared bats identified. The green stars illustrates where the whiskered bats were accessing the property.



**Figure 6:** An aerial photograph of the surveyed site (red outline), the surveyor locations (yellow stars) and the identified bat flight paths (blue lines). The red star illustrates the identified ingress/egress points of the common pipistrelle bats.



**Figure 7:** An aerial photograph of the surveyed site (red outline), the surveyor locations (yellow stars) and the identified bat flight paths (blue lines). The red star illustrates the identified ingress/egress points of the common pipistrelle bats.



**C.8 Interpretation/evaluation of survey results** (See Bat Mitigation Guidelines section 5.8 and Bat Survey Guidelines Ch11)

| Structure       | Species                                                 | Count | Site Status                                     | Roost Significance                                                                |
|-----------------|---------------------------------------------------------|-------|-------------------------------------------------|-----------------------------------------------------------------------------------|
| B1 at Oakfields | Brown Long-eared ( <i>Plecotus auritus</i> )            | 1     | Day Roost within the loft of the building.      | Low – This is due to the roost being occupied by a common species at low numbers. |
| B1 at Oakfields | Common pipistrelle ( <i>Pipistrellus pipistrellus</i> ) | 5     | Day Roost within the loft of the building.      | Low – This is due to the roost being occupied by a common species at low numbers. |
| B1 at Oakfields | Whiskered ( <i>Myotis mystacinus</i> )                  | 2     | Day Roost within the loft of the building       | Low – This is due to the roost being occupied by a common species at low numbers  |
| B3 at Oakfields | Common pipistrelle ( <i>Pipistrellus pipistrellus</i> ) | 2     | Day Roost within the soffit box of the building | Low – This is due to the roost being occupied by a common species at low numbers  |

Update Walkover Survey:

An update walkover survey was undertaken at the site on the 27<sup>th</sup> of September 2022. During this inspection, the roof had been removed on B2 and B3 at the site. This has been reported to the Wildlife Police at North Wales Police. Photographs can be provided on request.

**Original Site Survey (Outbuilding Roofs Intact):**



**June 2022 Video Screenshot (Outbuilding Roofs Intact)**



**September 2022 Photos (Outbuilding Roofs Removed)**





**D Impact assessment** – potential impacts in absence of mitigation/compensation. See Bat Mitigation Guidelines (section 6.2) and Wray et al (2010) <sup>2</sup>

**D.1 Short-term impacts: disturbance**

Due to the presence of multiple day roosts of brown long-eared (*Plecotus auritus*), common pipistrelle (*Pipistrellus pipistrellus*) and whiskered (*Myotis mystacinus*) bats, there is likely to be a 'high' short-term impact of disturbance to bats, with species specific mitigation and compensation measures required. Without mitigation and compensation, the proposed works could disturb, kill or injure bat specimens during construction work. This will come in the form of vibration, noise and closing access to the roost.

**D.2 Long-term impacts: roost modification**

Due to the presence of the day roosts of brown long-eared (*Plecotus auritus*), common pipistrelle (*Pipistrellus pipistrellus*) and whiskered (*Myotis mystacinus*) bats, there is likely to be a 'high' long-term impact of roost modification, with species specific mitigation and compensation measures required. This is due to the roost being lost by the proposed works. Without mitigation and compensation, the proposed works will destroy the known bat roosts.

The roosts to be retained and modified are one brown long-eared and two common pipistrelle bat roosting points within B1.

**D.3 Long-term impacts: roost loss.**

Due to the presence of two day/male summer roosts of common pipistrelle (*P. pipistrellus*) and soprano pipistrelle (*P. pygmaeus*), there is likely to be a 'high' long-term impact of roost loss, with species specific mitigation and compensation measures required. Without mitigation and compensation, the proposed works will destroy the known bat roosts. This is due to the roost being lost by the proposed works. However, impacts of roost loss is likely to be at a site/local level only due to the roosts being occupied by a low number of common species.

The total roosting and access points lost are three common pipistrelle (*Pipistrellus pipistrellus*) and one whiskered (*Myotis mystacinus*) bats within B1, with one day roost of common pipistrelle in B2 and one day roost of common pipistrelle in B3 also being lost.

**D.4 Long-term impacts: fragmentation and isolation.**

It is considered that the re-development of the site would have a 'negligible' effect on potential foraging and commuting habitat. The site itself offers little foraging habitat, as it consists primarily of buildings and hard standing ground. The surrounding habitats provide all of the necessary foraging value that bats require. These will not be affected during the re-development works and therefore no fragmentation and isolation will occur. Therefore, the proposed works will not fragment or isolate the known bat populations located on the site.

**D.5 Post-development interference impacts.**

The Conservation Plan provides an artificial lighting plan that is sensitive to bats. Please refer to this document for more details.

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<sup>2</sup> Wray, S., Welss, D., Long, E. & Mitchell-Jones, T. (2010) Valuing bats in ecological impact assessment. In Practice, No 70, Institute of Ecology and Environmental Management

## **D.6 Predicted scale of impact**

The predicted scale of impact without any mitigation and compensation on the brown long-eared, common pipistrelle and whiskered day roosts will be high. This is due to the roosts of 1 brown long-eared, 6 common pipistrelle and 2 whiskered specimens using the loft spaces and tiles. Six access points will become inaccessible post-development and would therefore negatively impact the known populations of bats on the site.

The overall predicted scale of impact is thought to be at a site level only due to the roosts being occupied by low numbers of a common species. No further impacts are anticipated as all vegetation in and around the site is proposed to remain in-situ. Therefore, all known flight paths will remain in situ post-development.

## **Delivery Information – Mitigation, compensation and monitoring**

Description of how the impacts will be addressed in order to ensure no detriment to the maintenance of the population at a favourable conservation status.

### **E Works to be undertaken**

Please identify which works will be undertaken or supervised by a licensed ecologist

#### **E.1 Capture and exclusion (if applicable).**

The destructive search by soft demolition/searching (by hand) of the buildings at the site will take place in December 2022 in favourable conditions for bats. These searches will be conducted by hand by Mr. Richard Millington (Licenced Ecologist). The areas to be inspected will be within the loft void of the properties and underneath the tilework. The equipment to be used to search and relocate any bats found include; extendable mirror, endoscope, torch, ladders, temperature logger, animal handling gloves and drawstring holding bag (not to be laid on the ground).

Prior to the soft demolition/searching, the translocation bat box (Schwegler 1FS or similar) will be installed (5m from the ground and facing north) on a nearby mature tree, which is situated just to the north of the building proposed for re-development (please see section E2.5). This translocation bat box is to be installed on the morning prior to the commencement of any soft demolition/searching works (as a preventative measure against small birds roosting inside the box). If bats are found, they will be translocated to the nearby hibernation bat box. The destructive search of the buildings will take place on dry days where the daytime temperature is above 8°C, to reduce the impacts upon any potential bats. Monmouthshire Bat Group will also be contacted if any injured bats are found.

#### **E.2 Bat roosts and habitat**

##### **E.2.1 In-situ retention of roost(s)**

N/A – Due to the known roosts being located within the internal dividing wall, it is not possible to retain the bat roost within the current re-development proposals.

##### **E.2.2 Modification of existing roost(s)**

To compensate for the presence of void dwelling bats within the loft, access into the new loft will be facilitated. This should either be through the retention of the currently used access points, or the incorporation of [Bat Access Tiles](#) and purposely lifted ridge tiles, the location of which are shown in Figure 8. Type 1F Bitumen felt will need to be used as underlay.

A number of additional measures should be included to ensure that the roost is of the highest value possible to the target species. These measures include incorporating two [Schwegler 2F bat boxes](#) should be placed along the ridge board. Finally, a ply-board lining should be introduced [approximately] half way up the roof (heading towards the apex) in order to provide further roosting opportunities for the bat species present.

**Figure 8:** Annotated site plans for the location of the access points. The Bat Access Tiles are shown by the red markings, with the blue markings showing the location of the purposefully lifted ridge tiles. **Please note** – the annotations on this image are not to scale.





### E.2.3 New roost creation (including bat houses and bat boxes)

The site will need to incorporate three [Integrated Eco Bat Box](#), One with a crevice roosting chamber and two with a cavity roosting chamber, the location of which are shown in figure 9 below. Including these boxes will providing further roosting opportunities. These should avoid any artificial lighting, whilst being sighted facing east, south-east, south, south-west and/or west.

**Figure 9:** Annotated site plans for the location of integrated bat boxes (red shapes). **Please note** – the annotations on this image are not to scale.



#### E.2.4 Maintenance &/or modification of new and existing habitat

N/A – The proposed re-development works does not require any habitat maintenance measures, as the scheme will not extend outside of the site boundary.

### E.2.5 Scaled maps/plans

To show proposals/mitigation outlined above in relation to existing and proposed habitat features. A GIS data layer may be included with your application to illustrate locations of roosts and features in E.2.1 to E.2.3.

**Figure 10:** An aerial photograph of the surveyed buildings (red outline). This photograph illustrates the location of the translocation bat box (orange circles).



### E.3 Mechanisms for ensuring delivery of mitigation and compensation measures

A contract between Elite Ecology and the proprietor will be drawn up to enable both parties to work together to maintain the current status of the common pipistrelle and soprano pipistrelle day roosts. This contract will outline the times of year for works to be undertaken and the installation of the compensatory features outlined within this method statement.

### E.4 Mitigation contingencies

N/A

### E.5 Biosecurity risk assessment

N/A

## **F Post-development site safeguard**

### **F.1 Habitat/site management and maintenance**

No ongoing habitat/site management and maintenance is required for this project.

### **F.2 Population monitoring, roost usage etc.**

Post-development surveys will be undertaken for two years following the installation of the compensatory roost features. These will be undertaken by Mr Richard Millington (Licenced Ecologist) and Mr Adam Harper in June 2025 and June 2027. The types of equipment used will include a number of different types of bat detectors to listen for and record bat activity. These will be the Bat Box Duet, SSF Bat2 and the EcoObs Batcorder.

### **F.3 Post-development mitigation contingencies**

Should the post-monitoring results be unfavourable, certain aspects on the site may be altered. This could include the re-location of bat boxes, or the incorporation of bat friendly planting schemes nearby to the site. This will be decided by Mr Richard Millington (Licenced Ecologist).

### **F.4 Mechanism for ensuring delivery of post-development works**

As previously mentioned, a contract between Elite Ecology and the proprietor will be drawn up to enable both parties to work together to maintain the current status of the common pipistrelle and soprano pipistrelle day roosts. This contract will outline the times of year for works to be undertaken and the installation of the compensatory features outlined within this method statement.

## **G Timetable of works.**

For this project, the timetable of works is as follows:

Soft strip/demolition search (by hand) – December 2022 (in favourable conditions for bats)

Installation of bat boxes – March 2023

Re-development of the buildings – December 2022 to June 2023

Post- development activity survey 1 – June 2025

Post-development activity survey 2 – June 2027

## **H Land Ownership – Mitigation Site**

### **H.1 Mitigation Site/Compensation Site Ownership**

The proposed mitigation/compensation site is currently owned by Ms. Clare Callender of Oakfields, Isycoed, Clwyd, LL13 9RY (Central OS Grid Reference: SJ 40089 50110).

A contract between Elite Ecology and the proprietor will be drawn up to enable both parties to work together to maintain the current status of the common pipistrelle and soprano pipistrelle day roosts. This contract will outline the times of year for works to be undertaken and the installation of the compensatory features outlined within this method statement.

### **H.2 Mitigation Site/Compensation Ownership post construction**

It is not anticipated that the site will come under new ownership for the foreseeable future as the re-development works are for family members. However, should the re-development site come under new ownership in the future, any new site owner must adhere to the aforementioned contract. This will make them aware of their legal responsibilities regarding the compensation features installed around the site.

## I References

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Hutson, A.M., Spitzenberger, F., Aulagnier, S., Coroiu, I., Karataş, A., Juste, J., Paunovic, M., Palmeirim, J. & Benda, P. (2008) *Pipistrellus pipistrellus*. In: IUCN 2012. IUCN Red List of Threatened Species. Version 2012.1

Mitchell-Jones, A J (2004). *Bat mitigation guidelines*. English Nature.

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Rydell J & Racey, P A (1993). Street lamps and the feeding ecology of insectivorous bats. Recent Advances in Bat Biology, *Zool Soc Lond Symposium abstracts*.

UK Biodiversity Action Plan (2007). *UK List of Priority Species*. Joint Nature Conservation Committee. [Online]. Available at: <http://www.ukbap.org.uk/NewPriorityList.aspx> [accessed on 20<sup>th</sup> October 2010].

*Wildlife and Countryside Act 1981 (and amendments)* (c.69). London: HMSO.

## **J Annexes**

### **J.1** Pre-existing survey reports

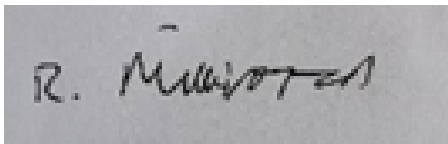
The survey report produced for this project is attached separately.

### **J.2** Raw survey data.

The raw survey data is included within the report write-up. The survey report for this project is attached separately.

### **Signed:**

This method statement has been produced and approved by Mr. Richard Millington, Director and Principal Ecologist at Elite Ecology.

A photograph of a handwritten signature in black ink on a light-colored surface. The signature appears to read 'R. Millington'.

28/11/2022