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**ECOLOGICAL ASSESSMENT:**

**WOODLAND AND BUNGALOW AREA DEVELOPMENT  
AT GORSE HILL CARAVAN AND LODGE PARK**

for

**Gorse Hill Caravan and Lodge Park Ltd.**

23rd May 2023

ECO\_951

**Ecoscope Ltd.**

Telford Lodge, Benarth Road, Conwy LL32 8UB

t. [03335 771 402](tel:03335771402) e. [info@eco-scope.co.uk](mailto:info@eco-scope.co.uk) w. [www.eco-scope.co.uk](http://www.eco-scope.co.uk)

Registered address as above | Company Number: 08916412 | VAT Reg. No. 199 5268 44

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**SUMMARY**

*Ecoscope Ltd. were commissioned by Gorse Hill Caravan and Lodge Park Ltd. to undertake an ecological survey to help support a planning application for additional static lodges and associated infrastructure at Gorse Hill Caravan and Lodge park.*

*The survey and report were updated in May 2023 to incorporate changes to the design following a pre-application consultation. Significant reductions to the scale of the development were implemented following this consultation, with measures implemented to reduce impact on the adjacent woodland.*

*Key points:*

- *Invasive non-native Crassula helmsii was present in 2019 but had been controlled and eliminated by the July 2020 survey.*
- *A nesting Goshawk was present in the locality, this will not be directly affected by the proposal. Avoidance measures are proposed. This was not recorded in the 2020 or 2023 update.*
- *Significant planting and erection of wildlife boxes are proposed as part of the scheme.*
- *Following consultation, the development has been moved away from Coed Baclaw with buffer planting to shield the woodland from disturbance and light.*

<b>Document Issue Date:</b>	29 <sup>th</sup> May 2018	Preliminary issue
	18 <sup>th</sup> June 2019	Updated design & survey
	08 <sup>th</sup> October 2019	Updated design & survey
	21 <sup>st</sup> July 2020	Updated design & survey
	23 <sup>rd</sup> May 2023	Updated design & survey

**Field surveyors:** Mr. Stuart Kato M.Sc., MCIEEM & Mr. Mat Saunders B.Sc. (Hons.), Miss F Brailsford B.Sc. (Hons.).

**Updated by** Dr. Richard Birch C.Ecol., Stuart Kato M.Sc. MCIEEM

**Approved by:** Mr. Stuart Kato M.Sc., MCIEEM

## 1. INTRODUCTION

### 1.1 Background

1.1.1 This assessment has been carried out by Ecologists employed by Ecoscope Ltd. to evaluate the effects of a proposed development at Gorse Hill Caravan and Lodge Park. The full address of the property is Gorse Hill Caravan and Lodge Park, Trefriw Road, Conwy, LL32 8HJ. The proposal includes the siting of lodges/static caravans within existing woodland; together with an access track and associated infrastructure. The proposal site is located at NGR SH 78002 74959.

1.1.2 This report describes the ecology and nature conservation assessment that has been carried out as part of a suite of preliminary work to accompany a planning application for these proposals. Further detailed drawings have been submitted as part of the planning application. This report related to Environmental associated Drawing No. EA 5333-104-02.



**Figure 1.** Aerial photograph showing the approximate area of the proposal site at

Gorse Hill Caravan and Lodge Park (outlined in red)



**Figure 2.** OS Map showing the proposal location at Gorse Hill Caravan and Lodge Park (highlighted in red)

- 1.1.3 This report details survey work undertaken to assess the potential effects of the proposed development upon protected habitats and species in the locality. Please refer to the application drawings submitted (reference EA/5333-104-02).

## **2. ASSESSMENT METHODS**

### **2.1 General approach**

2.1.1 To assess the likely effects of the proposed development of the site, a series of desk- top and site investigations were undertaken throughout autumn 2017 to spring 2018 (updated May and June 2019 and June 2020 and again in 2023). The data collection method followed the general guidance provided by the Chartered Institute of Ecology and Environmental Management (CIEEM). Information about the site has been gathered through a graduated series of surveys and searches which have highlighted the key ecological issues concerning the proposals. The search area was not limited to the site boundary, the desk top search considered habitat and species within 1km.

2.1.2 Three levels of survey were used to establish the ecological baseline for the site:

- A desktop search;
- A preliminary ecological assessment;
- Species survey work as required.

2.1.3 The surveyors were all appropriately experienced ecologists licensed to undertake surveys for protected species as required and to undertake habitat surveys.

### **2.2 Ecological survey assessment methods**

#### **Desktop search:**

2.2.1 A 'desk-top' search for protected species and sites within 1km radius of the site centred on NGR SH 77808 75259 was conducted, using Cofnod. Cofnod is one of the four Local Record Centres in Wales and holds the largest number of records for biodiversity and geo-diversity information in North Wales, Cofnod hold data sets for all species groups. The results of this combined with walkover surveys enabled surveys to focus upon specific species and habitats of relevance to the project.

### **Preliminary Ecological assessment**

2.2.2 A preliminary ecological assessment of the site was undertaken to ascertain the ecological value, identify habitat types which have the potential to support protected species, record any evidence of protected species and to establish whether further surveys needed to be undertaken. The survey recorded the general vegetation, making a list of vascular plant species that could be identified. Other features of wildlife interest were recorded, and the potential for protected / important species to be present was noted. In addition to this site assessment the results of previous ecological survey work for past planning applications was reviewed as much of this is applicable to the current proposal.

### **Detailed ecological surveys**

2.2.3 The following specialist surveys, shown by the desk-top and Phase 1 work to be needed, were undertaken at appropriate times of the year for the species concerned. All surveys followed best practice guidance and were undertaken by suitably experienced and where appropriate licensed ecologists.

### **Reptile survey**

2.2.4 In addition, an assessment of the site was made against the local and national Biodiversity Action Plan Species (LBAP and UKBAP species) and the Section 7 list of habitats and species of principal importance for the purpose of maintaining and enhancing biodiversity under the Environment (Wales) Act 2016. Planning guidance publication Technical Advice Note 5 (TAN5) recommends that these species are considered (in addition to those protected by U.K. and European legislation) as a material consideration in the planning process.



### **3 BASELINE**

#### **3.1 Desktop study**

##### **Nature conservation designations**

3.1.1 A COFNOD environmental information search was commissioned. Searches were also made through the NBN Gateway and the MAGIC map application websites, the results of these investigations are detailed below.

##### **Statutory wildlife sites**

3.1.2 A desk study was carried out to identify species or habitats that are considered important in a local context and to identify any species recorded locally that may be associated with the application site. A search of Natural Resources Wales' website and DEFRA's Magic Map application was undertaken to determine the presence of all statutory sites (e.g. Sites of Special Scientific interest [SSSI's]) within 2km of the application site.

3.1.3 Aber Afon Conwy SSSI, of special interest for its marine and terrestrial invertebrate biology, is located approximately 250m to the east/southeast of the application site. The proposal site lies within deciduous woodland sited on the inland side of Baclaw Lane, as such it not anticipated that the proposed development will have an affect upon Aber Afon Conwy SSSI.

3.1.4 Benarth Wood SSSI is located approximately 1.4km to the northeast of the application site. The mixed deciduous woodland has a diverse ground flora and a shrub layer which includes the nationally uncommon Wild Service Tree (*Sorbus torminalis*). The scale and nature of proposed works, considered with the relatively long distance from this SSSI suggests that Benarth Wood is highly unlikely to be affected by the proposals.

### Non-statutory wildlife sites

- 3.1.5 Non-statutory wildlife sites in the area include Gorse Hill Meadow; this meadow lies within the boundaries of the caravan park and is managed as enhancement for a previous development project. The meadow does not lie within the application boundary for this development, and it is not anticipated that the proposed works will have any impact.
- 3.1.6 Plas Iolyn Grass Verge is another non-statutory site in the area which lies to the west of the application site, it lies outside of the boundary of this part of works and it is not anticipated that proposed works in this application will affect this area.
- 3.1.7 Coed Baclaw is a relatively small (2.48 ha) non-statutory wildlife site listed as Ancient semi-natural woodland in the Ancient woodland inventory (NRW, 2014); this site lies adjacent to the south of the proposal site. The proposal boundary has direct ecological connectivity with Coed Baclaw.



**Figure 3.** Approximate proposed development site (outlined in red) in relation to Coed Baclaw ancient semi-natural woodland (highlighted in blue).

## 3.2 Consultations

3.2.1 COFNOD, the Local Environmental Records Centre for north Wales were contacted for records of protected, priority and locally important species and habitats, international, national and local biodiversity sites within a 1km radius of the application site. Below is a summary of the results from the last 10 years; the full results from the data search are available by request.

3.2.2 Category 1 (species with UK and/or European Legal Protection, Section 7 [Environment (Wales) Act] Species or UK BAP Priority species) recorded within the 1km search area include;

### **Bluebell (*Hyacinthoides non-scripta*), approx. 35m North (N), (2012)**

3.2.3 Bluebell has been recorded within tree copses in several areas to the north of the proposal site (between 35– 640m away), several of which lie within property owned by Gorse Hill Caravan and Lodge Park, however no records exist within the boundary of the application site.

### **Slow-worm (*Anguis fragilis*), approx. 70m N (2012)**

3.2.4 Records of Slow-worm were made in 2012 approximately 70m to the north of the proposed development site; this record was made within Gorse Hill Caravan and Lodge Park however no records exist within the boundary of the application site. Other records of Slow-worm include an area located 680m to the west in 2016.

- Common Pipistrelle (*Pipistrellus pipistrellus*), approx. 70m N (2012)
- Lesser Horseshoe bat (*Rhinolophus hipposideros*), approx. 70m N (2012)
- Noctule (*Nyctalus noctula*), approx. 70m N (2012)
- Soprano Pipistrelle (*Pipistrellus pygmaeus*), approx. 70m N (2012)
- Lesser Horseshoe bat roost (*Rhinolophus hipposideros*), approx. 150m N (2009)
- Lesser Horseshoe bat roost (*Rhinolophus hipposideros*), approx. 270m W 2009)

3.2.5 A maternity roost of Lesser Horseshoe bats is present at the Manor House approximately 150m to the north-west of the application site boundary. Over 200 Lesser Horseshoe bats were recorded during recent emergence counts. Another Lesser Horseshoe roost is located within farm buildings located approximately 270m to the west of the proposal site where 10 droppings were located in 2009. Other records include foraging and commuting bats.

3.2.6 Many records of Category 1 birds exist, none of which were recorded within the boundary of the proposal site, these species included;

- Song Thrush (*Turdus philomelos*)
- Herring Gull (*Larus argentatus*)
- Red Kite (*Milvus milvus*)
- Bullfinch (*Pyrrhula pyrrhula*)
- Redwing (*Turdus iliacus*)
- Lapwing (*Vanellus vanellus*)
- Cuckoo (*Cuculus canorus*)
- Reed Bunting (*Emberiza schoeniclus*)
- Goldeneye (*Bucephala clangula*)
- Dunnock (*Prunella modularis*)

3.2.7 Other notable Category 1 species included;

- Weasel (*Mustela nivalis*), between 0.3–1.3km NW (2007)
- Polecat (*Mustela putorius*), approx. 620m NW (2015)
- Wall (*Lasiommata megera*), approx. 620m NW (2016)
- Common Frog (*Rana temporaria*), approx. 620m NW (2015)
- Badger (*Meles meles*), approx. 850m NW (2016)

3.2.8 Category 2 species (Global Red List, British Red Data Book, Nationally Rare & Scarce, Welsh Red and Amber Birds & Welsh Vascular Plant Red Data List, where these are not identified in Category 1) and Category 3 species (LBAP Species not identified under Categories 1 & 2, Locally Important species as specified by local experts) identified during the data search include a large number of bird species, the full list is available by request. No records were found within the proposal boundary.

3.2.9 The following invasive/non-native species were also recorded within 1km of the development site:

- Himalayan Balsam (*Impatiens glandulifera*), approx. 35m & 75m N (2012)
- White Stonecrop (*Sedum album*), approx. 690m NW (2014)
- Montbretia (*Crocsmia x crocosmiiflora*), approx. 960m NE (2017)

3.2.10 No records originated from within the boundary of the proposed development site.

### **3.3 Initial walkover survey**

3.3.1 A 'walkover survey' (visual inspection) as part of a Preliminary Ecological Assessment of the site was conducted in daylight to assess the potential for the site to be used by protected species. The initial walkover survey was undertaken by Ecologist Mr. Mathew Saunders and Mr Stuart Kato in early August 2017, July 2020 and finally updated for this issue in May 2023.. Principal Ecologist Stuart Kato has a good knowledge of the habitats and species on site, lives locally and has managed several surveys for other applications on the park. Weather conditions were calm and dry on all occasions and ideal for such surveys.

3.3.2 The study area is situated amongst rolling countryside on the western slopes of the Conwy valley, overlooking the River Conwy to the east. The site is an existing caravan/lodge park surrounded by farmland and small woodlands. Surrounding land to the east is improved agricultural grassland, used predominantly for rearing livestock (sheep and cattle). The pastures are interwoven with a network of hedgerows providing excellent ecological connectivity such as bat flight lines and foraging habitat. The land adjacent to the south and west is broadleaved and mixed woodland, the north links the proposed development area to the rest of the caravan/lodge park property. There are very few wetland areas in the locality with the exception of running ditches and the river Conwy.

3.3.3 The proposed development site itself consists of two primary habitat types; bare ground, mixed and broadleaf woodland, and two residential dwellings set within landscaped lawns (Crud-yr-Awel and Fron Fedw). Ancient semi-natural woodland (Coed Baclaw non-statutory wildlife site) resides beyond the south-western boundary of the application site. The extent of the proposals is shown in Figure 6, APPENDIX 2: Phase one Mapping.

**Habitats on site**

3.3.4 The main habitat types identified on site are listed in Table 1 below, together with species lists and descriptions of their ecological values.

**Table 1. Description of habitats and species recorded on or near site**

Habitat	Description & species list
<b>Hard-standing</b>	<p>A hard-standing gravel track enters the site from the western-most point and continues southwards along the western boundary for approximately 85 metres before the hard-standing surface stops and the track turns into bare ground. The gravel surface had recently been re-laid at the time of survey and as such no vegetation was present on the track.</p> <p><b>The hard-standing provides negligible ecological value to the site.</b></p>
<b>Bare ground</b>	<p>The proposal site comprised of some areas of bare ground at the time of survey; the gravel track entering the site from the west turns into a dirt track after 85m and the bare-ground track continues in a north-easterly direction through the woodland towards the caravan park area to the north of the site.</p> <p>Another area of bare ground included the cleared service easement beneath the overhead powerlines which run in a north-south direction through the woodland.</p> <p>An area of the development site had also been cleared and the ground partially landscaped at the time of survey; we understand this area previously comprised largely of Japanese (or possibly hybridised Japanese/European) Larch (<i>Larix kaempferi</i> or <i>L. x marschlinsii</i>) dominated plantation, leaving bare ground with Foxglove (<i>Digitalis purpurea</i>) being the first and only significant pioneer species to colonise the habitat.</p> <p><b>The bare ground is of low ecological value to the site.</b></p>

Habitat	Description & species list
<b>Buildings</b>	<p>Two detached dwellings are present near the site; “Crud-yr-Awel” &amp; “Fron Fedw”.</p> <p>Considering their construction types, locations and the surrounding habitat, both dwellings provide potential habitat for nesting birds and roosting bats.</p>
<b>Amenity grassland</b>	<p>The residential dwellings of Crud-yr-Awel and Fron Fedw are situated within managed grassland lawns. The sward of these grasslands was maintained as short-mown lawn subject to regular mowing as the only management regime. As such, very little cover is present in these garden lawn areas. <b>The ecological value of the amenity grassland is considered negligible.</b></p>
<b>Hedgerow: Intact, native species-rich</b>	<p>An intact, species-rich hedgerow lies along the western boundary of the site, adjacent to the hard-standing track. The hedgerow gives the non-statutory wildlife site of Coed Baclaw ecological connectivity to a smaller woodland block to the north-west of the proposal site.</p> <p>The hedgerow is relatively species-rich, dominated by Hazel (<i>Corylus avellana</i>), Blackthorn (<i>Prunus spinosa</i>) and Sessile Oak (<i>Quercus petraea</i>) [including two early-mature Oak trees. The hedgerow also contains Wild Cherry (<i>Prunus avium</i>), Hawthorn (<i>Crataegus monogyna</i>), Grey Willow (<i>Salix cinerea</i>), Holly (<i>Ilex aquifolium</i>), Dog Rose (<i>Rosa canina</i>) and Bramble (<i>Rubus fruticosus agg.</i>).</p> <p>The understory was notably diverse even during January, with Herb Robert (<i>Geranium robertianum</i>), Foxglove (<i>Digitalis purpurea</i>), Stinking Iris (<i>Iris foetidissima</i>), Ivy (<i>Hedera helix</i>), Common Nettle (<i>Urtica dioica</i>) and Green Alkanet (<i>Pentaglottis sempervirens</i>) present.</p> <p>Past coppicing management has maintained the hedgerow with consistent cover and an intact structure; parts of the hedgerow are growing on a defunct “clawdd” wall which served as a former boundary with the field adjacent to the west. A dry ditch is also present along the western banks of the hedgerow in the adjacent field.</p> <p>Considering the species diversity, integrity of, and ecological connectivity provided by this feature, <b>the hedgerow is of medium ecological value.</b></p>
<b>Introduced shrub</b>	<p>An unkempt stand of introduced shrub habitat lies on the southern edge of the lawn/garden at the “Fron Fedw” property. This stand is</p>

Habitat	Description & species list
	<p>dominated by non-native shrubs including Buddleia (<i>Buddleja davidii</i>) and Wilson’s Honeysuckle (<i>Lonicera nitida</i>); with occasional European Gorse (<i>Ulex europaeus</i>), Bramble (<i>Rubus fruticosus agg.</i>) and Teasel (<i>Dipsacus fullonum</i>) also present. As the habitat is predominately formed by introduced (non-native) shrubbery with a potential to thrive and out-compete native understorey species, <b>this habitat is overall considered to be of low ecological value.</b></p>
<p><b>Tall ruderal</b></p>	<p>A stand of tall ruderal vegetation is present to the north of the mixed plantation stand, this area forms a clearing within the shade of the mixed plantation area and is dominated by Bracken (<i>Pteridium aquilinum</i>) and Rosebay Willowherb (<i>Chamaenerion angustifolium</i>), and contains scattered small Ash (<i>Fraxinus excelsior</i>) saplings. The stand contains little in the way of diversity and during winter the ground was relatively sparse due to Bracken and Rosebay Willowherb having died-back – <b>this habitat is overall considered to be of low ecological value.</b></p>
<p><b>Woodland: Mixed plantation</b></p>	<p>An area of mixed coniferous/broadleaf plantation woodland exists within the central area of the site, comprising predominately of Larch (<i>Larix x marschlinsii</i>), with Cherry (<i>Prunus avium</i>), Hazel (<i>Corylus avellana</i>), Ash (<i>Fraxinus excelsior</i>) and Sycamore (<i>Acer pseudoplatanus</i>) also present as the plantation heads south-west towards Coed Baclaw (the adjacent ancient woodland site). A Goshawk was noted to be nesting in this location in 2019.</p> <p>This is an early-mature plantation woodland which has had its wind-firm edge removed, exposing many Larch specimens featuring etiolated growth. This habitat contains numerous opportunities for nesting birds as well as potential refugia/hibernacula for small mammals where the understorey contains coppice or thickets where grazing has not occurred previously. The woodland edges provide suitable foraging habitat for bats. It also forms a corridor of connectivity across the site, linking woodland/copses to the north with the non-statutory wildlife site of Coed Baclaw. <b>Overall the mixed plantation is of high ecological value.</b></p>
<p><b>Woodland: Broad-leaved, semi-natural</b></p>	<p>The eastern boundary of the woodland application site forms a band of Semi-natural broadleaved woodland which is classified as W11 Oak woodland as found elsewhere on the park. This habitat comprises predominately of Sessile Oak (<i>Quercus petraea</i>), Ash (<i>Fraxinus excelsior</i>) and Holly (<i>Ilex aquifolium</i>). Many of these specimens are mature and resemble relict ancient woodland habitat. The understorey is however particularly sparse as the</p>



Habitat	Description & species list
	<p>ground flora has been subject to grazing from livestock due to the site being unfenced from the [until recently] agricultural pasture below. Heavy grazing by Rabbit (<i>Oryctolagus cuniculus</i>) was also evident at the time of survey.</p> <p>This habitat forms another corridor of ecological connectivity to Coed Baclaw ancient woodland adjacent to the western boundary of the site. It also features plentiful opportunities for nesting birds and foraging bats, however its value to small mammals etc. is limited due to the ground flora/understorey being sparse and almost resembling parkland. <b>Currently of medium ecological value</b>; with the potential for understorey restoration, <b>the broad-leaved woodland is potentially of high ecological value.</b></p>
Wall	<p>A dry-stone wall forms the south-western boundary of the site where the proposal site runs adjacent to Coed Baclaw non-statutory wildlife site. The old wall is largely intact however some sections have minor collapses although the main structure remains present. Wind-blown trees have collapsed onto some sections of the wall where the wind-firm edge has been removed, resulting in further damaged sections of wall.</p> <p>The wall itself forms a substrate for many well-established mosses and lichen communities along its entire length. The wall also provides a stable climate for animals such as small mammals which require refugia and/or hibernacula for over-wintering. <b>The wall is considered to be of high ecological value.</b></p>
Pond	<p>A small garden pond lies within the garden area of “Fron Fedw”. Located to the south of the house itself, this garden pond features a plastic liner and contained water during the walkover survey but was heavily vegetated and almost dry during a second visit in April.</p> <p>The pond is very small, with a surface area of approximately 10m<sup>2</sup> and was heavily vegetated. Garden shrubs (Wilson’s Honeysuckle (<i>Lonicera nitida</i>) lie adjacent to the south of the pond, with short-mown amenity grassland surrounding the remainder. <u>The pond is heavily infested with <i>Crassula helmsii</i> and attention is drawn to actions that must be taken to prevent the spread of Invasive Non-Native Species (INNS) available at <a href="http://www.nonnativespecies.org/index.cfm?sectionid=51">http://www.nonnativespecies.org/index.cfm?sectionid=51</a></u></p> <p>The probability of amphibians being present. The only recorded amphibian within 1km of the site is Common Frog which was recorded approx. 675m from the pond in 2015. No records of protected amphibians (i.e. Great Crested Newt) exist within 1km of</p>

Habitat	Description & species list
	<p>the site, nor are they known to be present in the wider area. The pond was checked in April 2018 and May 2019 and found to be almost completely dry.</p> <p><b>The pond was filled in in 2020 as a measure to control the <u>Crassula helmsii</u></b></p>
<b>Buildings</b>	<p>Two detached dwellings are present on the site; “Crud-yr-Awel” &amp; “Fron Fedw”.</p> <p>Considering their construction types, locations and the surrounding habitat, both dwellings provide potential habitat for nesting birds and roosting bats. The proposal would involve demolishing these buildings.</p> <p><b>The buildings have the potential to be of ecological value to the site (subject to nesting bird and roosting bat surveys).</b></p>

### 3.4 Protected species in the wider area

3.4.1 The results of the desk top search and initial walkover survey inform the field survey and the suitability for protected species.

#### Birds

3.4.2 A Goshawk nest was confirmed in woodland adjacent land to the proposal during Phase 1 mapping (see, APPENDIX 3). Goshawk are listed on schedule 1 of the Wildlife & Countryside Act (1981 as amended) and are therefore subject to special consideration. The Goshawk was not recorded in 2020 or in 2023.

3.4.3 An assessment of suitable nesting habitat was undertaken as part of the site investigation. No other active nests were identified within the boundaries of the proposed development site. However, habitat within the boundaries of the proposal is highly suitable for many species of nesting birds; including hedgerows and woodland blocks of mature trees (both mixed and broadleaved) – all providing potentially ideal nesting habitat. All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended). To avoid impact clearance works will either be timed to avoid the bird nesting season which runs from March to September inclusive or a bird nesting survey will be conducted immediately before the works. Works must not proceed if nesting birds are present (based on the habitat suitability, nesting birds are highly likely to be present between April and August).

#### **Badgers**

3.4.4 No Badger setts (active or unused) were discovered within the proposed development area. Badger foraging signs are present throughout the wider area and a dead Badger was discovered on Baclaw land close to the site in 2014. It is considered that Badgers are present nearby, however they are not currently using the proposed development area. The habitat is suitable for sett building with well-drained soil and sloping banks.

#### **Bats**

3.4.5 **Bats:** Flight-line surveys of the general park area were undertaken May 2016. The surveys started at sunset and continued for three hours after sunset. Surveys of the two buildings to be demolished were undertaken in 2017 and updated in 2020.

- 3.5.5 Five species of bat were recorded within the Lodge park boundaries including Lesser Horseshoe (*Rhinolophus hipposideros*), Common Pipistrelle (*Pipistrellus Pipistrellus*), Soprano Pipistrelle (*P. pygmaeus*), Noctule (*Nyctalus noctula*) and Daubenton's bat (*Myotis daubentonii*).
- 3.5.6 The buildings as Fron Fedw and Crud-yr-Awel provide potential roosting opportunities for bats; these buildings will be demolished as part of the proposals; emergence surveys of these buildings were therefore necessary. The bat surveys are detailed in section 4.2 below.

#### **Reptiles & Amphibians**

- 3.4.6 Areas around the buildings on the proposal site, such as between the amenity grassland lawns and areas of introduced shrub are potentially suitable for reptiles as they provide open areas for basking adjacent to areas suitable for shelter and refugia. The results of reptile surveys are detailed in section 4.

#### **Assessment of other Section 7 and LBAP species present**

- 3.4.7 An assessment of the site was made on the ability of the habitat present to support species listed as important on Biodiversity Action Plans (Local and National) and those species listed on Section 7 of the Environment (Wales) Act 2016.
- 3.4.8 The habitat is considered suitable for a range of species which were not recorded but likely to be present. This was determined by Phase 1 survey (extended), which considers the potential of the habitat to include the following species included in Section 7 of the Environment Act Wales 2016). They are also known to occur locally:
- European Hedgehog (*Erinaceus europaeus*) – S7, UKBAP, LBAP
  - Barn Owl (*Tyto alba*) – WCA1, LBAP
  - Tawny Owl (*Lasiommata megera*) – LBAP

## 4 DETAILED SURVEY WORK

### 4.1 Reptile surveys

- 4.1.1 The walkover survey highlighted areas of open amenity grassland and introduced shrub on site which combined form habitat potentially suitable for reptile species (areas identified in Figure 4 below); this habitat includes areas of south-facing slopes with an interface of suitable basking and sheltering habitat. These areas are considered suitable for reptiles, particularly Slow Worm (*Anguis fragilis*) and Common Lizard (*Zootoca vivipara*).



**Figure 4** Areas of potential reptile habitat surveyed (highlighted in yellow)

### **Reptile survey method**

4.1.2 Following best practice guidance, seven reptile surveys were undertaken searching both artificial and natural refugia, all suitable habitat within the development site was surveyed. Reptile searches were undertaken during ideal weather conditions of intermittent cloud and no heavy precipitation, the dates are shown in Table 2, p.13. All areas of the site which had suitable reptile habitat were surveyed, these areas are marked on Figure 4, p.20.

4.1.3 Surveys were undertaken following the standard reptile survey methodology detailed in Surveying for Reptiles (Froglife, 2016). Refugia sheets (1m<sup>2</sup> Onduline™ sheets and roofing felt) were deployed at a density of over 100 per hectare of suitable habitat. Twice the size of the standard 0.5 m<sup>2</sup> refugia, these are generally accepted to be more attractive to reptiles than the tin or felt alternatives. Refugia were located throughout the site, placed close to cover in areas considered to be good reptile habitat with an open mosaic of vegetated and open land. Surveys were aided by the use of close-focusing binoculars so that sheets could be observed without being disturbed.

### **Reptile survey results**

4.1.4 Table 2 shows the results and details of the visits undertaken.

**Table 2. Reptile Survey Results**

Survey	Date	Temp <sup>1</sup>	Cloud <sup>2</sup>	Result
1	05/04/17	Sheets deployed		
2	20/04/17	12	75	NIL
3	27/04/17	10	40	NIL
4	03/05/17	15	70	NIL
5	17/05/17	12	80	NIL
6	25/05/17	19	60	NIL
7	30/5/2017	15	20	NIL

**Notes:** 1 = Degrees Celsius. 2 = Percentage cover

### **Reptile survey summary**

4.1.5 Results for reptile surveys were all negative; no species of reptile were found.

4.1.6 The update walkover survey undertaken in July 2023 indicated no relevant change to the habitat, no reptiles were observed using natural refugia present.

## **4.2 Bat surveys**

4.2.1 This investigation was conducted by our Principal Ecologist Mr. Stuart Kato who is a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM). He holds NRW bat licence number 45741:OTH:CSAB:2015 and NE bat licence number 2015-17713-CLS-CLS and has over ten years' experience in undertaking bat surveys for development and developing mitigation proposals. He has undertaken research projects into the roosting ecology of the Lesser Horseshoe bat in North Wales the results of which are currently used to help identify potential roosts during the planning process. He is an active member of the Gwynedd Bat Group and regularly attends training events and courses.

4.2.2 Stuart was accompanied by our Ecologist Mr. Mathew Saunders B.Sc. (Hons) who has experience of conducting bat surveys for development proposals in Cornwall, Devon and north Wales including building inspections, activity transects, dawn and dusk emergence surveys as well as hibernation roost visits with Gwynedd Bat Group. He has undertaken courses in bat ecology and bat call sound analysis with private ecological consultancies and has a bachelor's degree in Zoology. Also assisting was Miss. Francesca Brailsford (M.Sc.) who has previous experience in bat survey work, is an active member of the Gwynedd bat group and has higher education in ecological disciplines.

### ***Aim of the survey***

4.2.3 The survey had three aims:

1. Determine the presence of any roosts within the buildings;
2. Determine the use of the habitat by bats including the species using the site;
3. Determine the use of the buildings by nesting birds including Owls.

### ***Building suitability inspection***

4.2.4 The two residential properties of Fron Fedw and Crud-yr-Awel at Gorse Hill were inspected internally and externally for evidence of use by bats. Bat roosting or activity within a building can be indicated by one or more of the following signs:

- Staining beneath or around an entry point, caused by natural oils in the bats' fur.
- Scratch marks around an entry point, caused by bat claws.
- Bat droppings beneath an entry point or resting area.
- Bat droppings and / or insect remains beneath a feeding area.
- Audible squeaking, particularly on hot days or at dusk.
- A characteristic odour of bats / bat droppings.
- Dead bats, usually inside the part of the building used for roosting.

4.2.5 The internal survey was facilitated by the use of the following equipment:

- A flexible endoscope (Vscope VOXX-10WW).
- Bright rechargeable spotlights.
- A ladder to gain access to loft voids etc.
- Close-focusing binoculars.
- Inspection mirror for tight corners.

4.2.6 The buildings were also searched for the presence of nesting birds including evidence of Owls such as feathers, white-washing or pellets.

### ***Dusk emergence surveys***

4.2.7 All surveys undertaken followed the Bat Conservation Trust (BCT) Best Practice Guidelines (Hundt, 2016). The dusk emergence surveys began approximately 30 minutes before sunset and continued for approximately 150 minutes.



- 4.2.8 Anabat Walkabout, Bat box duet and Eco-meter Touch Pro Bat detectors were used, in conjunction with infra-red night vision recording equipment. Anabat detectors record the ultrasonic sound waves emitted when bats echolocate. Different bat species echolocate at different frequencies and in different ways. By analysing the call, making field observations of the bats in flight and the habitat present and having a good knowledge of likely species distribution in the survey area, it is possible to determine which species are using the habitat.
- 4.2.9 Multiple surveyors were used on each survey; surveyors surrounded the buildings ensuring all aspects of the structures were visible, observations were made for species, numbers of individuals and times when/if a bat would emerge from a roost exit point on the building. General bat activity on the site was also considered, flight lines determined and monitored and use of the site by other nocturnal species such as Owls was noted.
- 4.2.10 Weather conditions were monitored before and during each survey. Surveys were only undertaken during ideal survey conditions with temperatures above 10°C, little or no wind and no precipitation. A Skywatch Atmos weather station was used to record temperature, wind speed and humidity at the start and finish of each survey.



**Figure 4. Emergence survey observation points**

(marked with blue dots at Crud-yr-Awel, marked with red dots at Fron Fedw)

### ***Building descriptions and internal surveys***

#### ***Crud-yr-Awel***

4.2.10 The building is a single-storey, L-shaped structure of brick/blockwork construction with a render finish and a pitched slate roof. Photographs of the building are presented in **Appendix II**. Windows and doors appear well-sealed and the render appears intact with no cracks/crevices suitable for bats. The building was considered to be of moderate roost suitability. The building has deteriorated significantly since the initial surveys in 2017.

#### ***Fron Fedw***

4.2.11 The building is a single-storey structure of brick/blockwork construction with a render finish and a pitched slate roof. The building also contains two flat-roof extensions and a lean-to conservatory on the eastern gable. Photographs of the building are

presented in **Appendix II**. Windows and doors appear well-sealed and the render appears intact with no cracks/crevices suitable for bats. The building was considered to be of moderate roost suitability. The building had deteriorated significantly since the initial surveys in 2017.

#### ***Evidence of bats and nesting birds***

4.2.12 Although no evidence was found of bats within the buildings; the buildings and surrounding habitat are suitable for both bats and nesting birds.

#### ***Emergence/Re-entry surveys***

4.2.13 The dates, times and meteorological conditions of the surveys are set out in **Table 2**. A summary of the results of each survey is outlined in **Table 3**. Summary of bat activity survey results'. All surveys were undertaken in conditions suitable for bat work. Based on the Bat Survey Guidelines visits on two occasions are considered sufficient. Three surveys were undertaken for each building on this occasion, so the recommended survey effort was exceeded.

4.2.14 Surveys were updated in 2020 following the same protocol and the buildings were visited in May 2023 by Stuart Kato. The buildings had degraded further and showed no indication of use by bats, there was no reason to expect the previous results did not remain valid.

**Table 2. Weather conditions during bat emergence surveys**

Survey no	Date	Wind speed km/h	Temp .°C	Precipitation
1	11 <sup>th</sup> August 2017	0-4	16	None
2	17 <sup>th</sup> August 2017	0-3	14	None
3	30 <sup>th</sup> August 2017	0-4	14	None
4	4 <sup>th</sup> Sept. 2017	0-4	17	None
5	12 <sup>th</sup> Sept 2017	0	11	None
6	19 <sup>th</sup> Sept 2017	0	10	None

**Table 3. Summary of bat activity survey results**

Survey number	Survey observations
1	<u>Crud-yr-Awel</u> : No bats observed emerging from the building. Foraging common pipistrelle, Soprano pipistrelle and Brown Long eared bats were observed in the garden area.
2	<u>Fron Fedw</u> : No bats observed emerging from the building. Foraging Common Pipistrelle, Soprano pipistrelle and Brown Long eared bats observed in the garden area. Lesser horseshoe bat recorded briefly.
3	<u>Crud-yr-Awel</u> : No bats observed emerging from the building. results as per survey one with the addition of several Lesser Horseshoe passes.
4	<u>Fron Fedw</u> : A single Common pipistrelle bat was seen emerging from under a lifted tile by the chimney. Foraging as previous but with a single pass by an unidentified myotis bat. and three Noctule bat passes.

Survey number	Survey observations
5	<i><u>Crud-yr-Awel:</u> No bats observed emerging from the building. results as per survey one with the addition of several Lesser Horseshoe passes.</i>
6	<i><u>Fron Fedw:</u> Again, a single Common pipistrelle bat was seen emerging from under a lifted tile by the chimney. Foraging Common Pipistrelle, Soprano pipistrelle and Brown Long eared bats observed in the garden area. Lesser horseshoe bat recorded briefly, Noctule passes recorded suspected Whiskered bat recorded.</i>

**Table 2. Weather conditions during bat emergence surveys (2020 update)**

Survey no	Date	Wind speed Beaufort	Temp .°C	Precipitation
1	4 <sup>th</sup> May 2020	4	14	None
2	6 <sup>th</sup> May 2020	4	12	None
3	19 <sup>th</sup> May 2020	4	11	None
4	22 <sup>nd</sup> May 2020	4	13	None
5	24 <sup>th</sup> June 2020	3	17	None
6	25 <sup>th</sup> June 2020	3	20	None

**Table 3. Summary of bat activity survey results (2020 update)**

Survey number	Survey observations
1	<u>Crud-yr-Awel</u> : No bats observed emerging from the building. Foraging common pipistrelle, Soprano pipistrelle and Brown Long eared bats and lesser horseshoe were observed in the garden area.
2	<u>Fron Fedw</u> : Two common pipistrelle emerging from the building. (lifted tile by chimney). Foraging Common Pipistrelle, Soprano pipistrelle and Brown Long eared bats observed in the garden area. Lesser horseshoe bat recorded briefly, Noctule pass.
3	<u>Crud-yr-Awel</u> : No bats observed emerging from the building. results as per survey one with the addition of several Lesser

Survey number	Survey observations
	Horseshoe and Noctule passes.
4	<u>Fron Fedw:</u> Unidentified Myotis passes and Noctule, Three Common Pipistrelle bats emerges from the same location as survey 2.
5	<u>Crud-yr-Awel:</u> No bats observed emerging from the building Foraging common pipistrelle, Soprano pipistrelle and Brown Long eared bats and a single lesser horseshoe were observed in the garden area. Two Noctule passes recorded.
6	<u>Fron Fedw:</u> No Emergence recorded but passes and foraging by Common and soprano pipistrelle, several Noctule passes.

### Summary

- 4.2.13 No bats were observed emerging from/entering Crud-yr-Awel, the raised tile close to the chimney of Fron Fedw is being used by a single Common Pipistrelle bat as an occasional, transitional day roost. The feature used is considered unlikely to support more than a few bats. The update surveys confirmed that that had been no change in the use of the buildings by bats.
- 4.2.14 Foraging behaviour was observed around the proposed development area; activity was mainly recorded in the open areas around the gardens. The majority of activity involved Common and Soprano Pipistrelle bats although Lesser horseshoe bats were recorded using the dark corridor to the west of Crud-yr-Awel. Similar foraging behaviour was recorded in 2020.

### **4.3 Revised Phase 1**

- 4.3.1 A revision of the Phase 1 map was drawn up in July 2020 and checked for currency in 2023 . this drawing is provided in Figure 6, APPENDIX 2: Phase one Mapping, p. iv. In the revision, the pond containing *Crassula helmsii* had been filled in, eradicating the INNS.
  
- 4.3.2 Some additional site clearance had been undertaken to accommodate a new site layout. This is shown, together with the associated track infrastructure, in APPENDIX 2: Phase one Mapping.



## **5 IMPACT ASSESSMENT**

### **5.1 Construction and operational effects**

5.1.1 The anticipated development impacts, without mitigation are outlined below.

#### **Birds**

5.1.2 In 2019, a Goshawk nest was confirmed in woodland adjacent land to be cleared during the Phase 1 mapping (see APPENDIX 3). Goshawk are listed on schedule 1 of the Wildlife & Countryside Act (1981 as amended) and are therefore subject to special consideration. This species has not been recorded in subsequent visits.

5.1.3 Schedule I birds are protected from disturbance when they are nesting. If such a species is nesting in close proximity to construction works the birds should either be acclimatised to the works (i.e. works started in stages before the nesting period) or the work is completed outside the nesting period. We would recommend that if consent is gained the construction work starts outside the nesting period unless a survey is conducted beforehand to show that no schedule one species are present. If Goshawk is nesting works should be delayed until the chicks have fledged. Goshawks only have a single brood, Fledging is generally complete by the early summer.

5.1.4 Habitat within the boundaries of the proposal site is suitable for passerine nesting birds. Hedgerows and woodland blocks of mature trees (both mixed and broadleaved) – all providing potentially ideal nesting habitat. All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended). To avoid impact, clearance works will either be timed to avoid the bird nesting season which runs from March to September inclusive or a bird nesting survey will be conducted immediately before the works; works must not proceed if nesting birds are present (based on the habitat suitability, nesting birds are highly likely to be present between April and August).

5.1.5 Overall it is anticipated that the impact on local avifauna without mitigation and enhancement is considered to be **MEDIUM** and of a **LOCAL** scale.

#### **Bats**

5.1.6 The demolition of Fron Fedw will result in the loss of an occasional transitional roost for a single bat of a common species. Ecological connectivity of the site will not be significantly affected by the proposals.

5.1.7 External lighting has a potential to illuminate the surrounding hedgerows and woodland edges across the proposal site. Artificial illumination will require careful consideration to avoid 'over-lighting' features of potential value to bats at night. No external lighting is proposed. The impact on bats in the locality (without mitigation and enhancement) is considered to be **LOW** and on a **LOCAL** scale.

#### **Reptiles**

5.1.7 Reptiles were not found to be present on the immediate development site. The anticipated impact is therefore considered to be **NEGLIGIBLE**. Reptiles have been recorded in the locality historically; therefore, precautionary measures during site clearance works are advised.

#### **Habitat**

5.1.8 Habitats to be lost include, built and bare ground, a stand of introduced non-native shrubs (predominately Buddleia and Wilson's Honeysuckle) and a small area of tall ruderal vegetation dominated by Bracken. A Phase 1 map and target notes are provided in the appendices.

5.1.9 Overall these habitats potentially provide shelter for common small mammals and nesting birds, however more valuable, native habitat is plentiful in the locality making these habitats of low value to the site; the loss of these habitats is therefore considered negligible as removal of non-native and/or invasive species provides a balance of the potential impacts.

#### **Statutory wildlife sites**

5.1.11 No statutory sites will be affected by the proposed development.

5.1.12 Coed Baclaw is a non-statutory candidate wildlife site which lies adjacent to the south of the proposal site. Over-illumination has the potential to affect this non-statutory site's use by bats. Disturbance to this adjacent woodland by human activity during the construction and use of the lodges is also a consideration. Overall, the potential effects of the proposals upon local non-statutory sites without mitigation or enhancement are considered **MEDIUM** on a **LOCAL** scale.

## 6 IMPACT AVOIDANCE, MITIGATION AND ENHANCEMENT MEASURES

### 6.1 Mitigation proposals

6.1.1 Having set out the impacts without mitigation, this section considers the expected impacts with mitigation. Mitigation is used as a generic term and is considered to include measures to avoid or to compensate for direct or indirect impacts, or to mitigate (to make an unavoidable impact less severe). The anticipated impacts and proposed mitigation measures are summarised in **Table 3** below:

**Table 3. Impacts and proposed mitigation**

Impact	Description of impact	Mitigation proposal	Impact following mitigation
Birds	Potential disturbance during bird nesting season	A reasonable avoidance measures statement (RAMS) will be followed, either avoiding the bird nesting season or completing a nesting bird survey before works	Negligible
Birds	Loss of potential nesting habitat (introduced shrub)	Mitigation planting will be undertaken to improve/restore the understory of the existing woodlands to re-establish suitable nesting habitat in more suitable locations	Negligible

Impact	Description of impact	Mitigation proposal	Impact following mitigation
Bats	Possible night-time illumination of woodlands by lodges and associated infrastructure.	<p>Lighting control measures to be implemented. The proposed lodges will not spill light onto the surrounding woodland. Any lighting required elsewhere within the site layout will be of low intensity and directional with minimal light spillage</p> <p>The replacement lodges cannot be modified to provide bat mitigation. A large-scale bat box scheme will be set up across the park <b>100 bat boxes</b> will be erected (50 within this development area, the remainder throughout the lodge park). The boxes will be checked and maintained on an annual basis. This will also form part of the site enhancement.</p>	<p>Negligible</p> <p>Enhancement</p>
Reptiles	Site clearance works in potentially suitable habitat; risk of injury	Surveys revealed no reptiles. Precautionary measures to include ecological watching brief and hand removal of suitable habitat (e.g. rubble/log piles)	Negligible

Impact	Description of impact	Mitigation proposal	Impact following mitigation
Wildlife sites; Coed Baclaw	Artificial illumination of woodland edges at night	No external lighting proposed. Construction works timed to avoid night-time disturbance. No access from the lodge park to Coed Baclaw.	Negligible
	Disturbance during construction and operation	The proposal has been redesigned to reduce light spill to Coed Baclaw by reducing the number of lodges in this area and by providing a buffer plantation.	LOW

#### **Further detail of Mitigation Measures**

6.1.2 The mitigation measures summarised in Table 3 are explained in detail below:

#### **Nesting birds:**

6.1.3 Removal or pruning of any hedgerow, shrubs or other suitable nesting habitat should be undertaken during October – February in order to prevent any offence regarding the damage or destruction of any active nests of any bird species under the Wildlife and Countryside Act 1981 (as amended). If this is not possible then clearance works should only be undertaken following a detailed search for active nests by a suitably experienced ecologist and then only once any active nests have been protected. Works should avoid starting immediately before or during the Goshawk nesting period. Surveys will be undertaken on the lead up to works to determine if the pair are actively nesting.

**Lighting:**

6.1.4 Currently no external lighting is proposed. Any future outdoor lighting involved in must use light baffles to direct light downwards onto the surrounding ground area and away from woodland edges. The lighting must comply with the following; Any floodlighting will be controlled by a PIR sensor, be below 2250 lumens and will avoid illuminating the habitat on the boundaries of the site; Specifically, the woodland edges or hedgerows will not be illuminated by over spilling light. The lighting will adhere to the lighting guidelines issued by the Bat Conservation Trust's 'Statement on the impact and design of artificial light on bats' (2011);

**Design recommendations for wildlife-friendly lighting include:**

1. Do not "over" light. This is a major cause of obtrusive light and is a waste of energy. Use only the minimum amount of light needed for safety. There are published standards for most lighting tasks, adherence to which will help minimise upward reflected light. Current advice suggests that warm white LED lighting has the least effect on bats and nocturnal animals.
2. Eliminate any bare bulbs and any light pointing upwards. The spread of light should be kept near to or below the horizontal.
3. Use narrow spectrum bulbs to lower the range of species affected by lighting.
4. Use light sources that emit minimal ultra-violet light. Insects are attracted to light sources that emit ultra-violet radiation.
5. Reduce light-spill so that light reaches only areas needing illumination. Shielding or cutting light can be achieved through the design of the luminaire or with accessories, such as hoods, cowls, louvers and shields to direct the light.

6. Reduce the height of lighting columns. Light at a low level reduces ecological impact. However, higher mounting heights allow lower main beam angles, which can assist in reducing glare.
7. For pedestrian lighting, use low level lighting that is directional as possible and below 3 lux at ground level.
8. Limit the times that lights are on to provide some dark periods for wildlife.
9. Use lighting design computer programs and professional lighting designers to predict where light spill will occur.

**Reptiles:**

- 6.1.5 Surveys revealed no reptiles, no significant change was observed in 2023. Precautionary measures to include ecological watching brief and hand removal of suitable habitat (e.g. rubble/log piles)
- 6.1.6 An ecologist employed by Ecoscope Ltd. will be available on an on-call basis to undertake a watching brief during construction works which may affect features previously identified as potentially suitable for reptiles (such as rubble or log piles). If any reptiles are identified they works will cease and translocation of reptiles will occur to suitable habitat within the ownership of Gorse Hill Caravan and Lodge Park, outside of the development area. If >4 individuals are found works will cease and further survey/trapping programmes will be necessary, in consultation with NRA and the LPA as required.

**6.2 Enhancement proposals**

- 6.2.1 The recommendations also include enhancements aimed at compensating species listed in Section 7 of the Environment Act Wales 2016, specifically Section 7 part 3, where:

(3 )Without prejudice the Welsh Ministers must—



- (a) take all reasonable steps to maintain and enhance the living organisms and types of habitat included in any list published under this section;

These enhancements are detailed in Table 4 below:

**Table 4. Enhancement proposals**

Enhancement	Description	Proposal	Result
Birds	Provision of additional nesting opportunities	Installation of 50 bird nesting boxes (Schwegler Type 1B) to be installed in suitable locations on site.	Enhancement
Bats	Provision of additional roosting opportunities	Installation of 100 bat boxes (Schwegler Type 2F) to be installed in suitable locations on site.	Enhancement
Planting	Significant planting and associated management as shown on the drawing presented in Appendix	2189 tree shrubs and whips would be planted as shown on the landscaping drawings submitted with the planning application.	Enhancement

**Enhancement measures**

6.2.2 The enhancement measures summarised in Table 4 are explained in detail below:

6.2.3 Bird boxes will be the Schwegler 1B design, six with the 26mm entrance hole and four with a 32mm hole. The Schwegler wood-crete design is known to be very robust, requires no maintenance and has a design life in excess of 25 years. Boxes will be positioned in locations sheltered from wind, rain and strong sunlight (i.e. facing away from the south-west). The orientation of the boxes will provide a clear flight route to the entrance hole, and they shall be mounted between 2 and 3 metres above ground in the surrounding woodland at the direction of the project ecologist.

6.2.4 Bat boxes will be of the Schwegler 2F design, made of wood-crete these boxes have a long-life expectancy and are known to be robust. They will be positioned on trees in locations which provide connectivity to the surrounding landscape and areas of foraging potential. Bat boxes will be sited in open sunny locations which receive at least 6 hours of sunlight daily. They will be and hung at between 3 and 6 metres above ground and shall not receive direct artificial lighting at night. They will be positioned in surrounding woodland at the direction of the project ecologist.

6.2.5 Wildlife boxes will be checked for use and cleaned on an annual basis in September by the appropriately licenced and experienced project ecologist.

6.2.6 Provided that the mitigation and recommendations suggested are implemented it is anticipated that all the impacts discussed will be reduced to negligible levels. Overall it is considered that there will be a net biodiversity gain taking into account the enhancements highlighted in Table 4.

### **6.3 Significant changes to the proposals implemented following consultation**

6.3.1 The consultation carried out in 2018 indicated that protection of the Coed Y Baclaw woodland was a priority. In response the lodge unit closest to the woodland was removed and replaced with woodland buffer planting. Significant planting in this area has been implemented already as part of the Gorse Hill Woodland Management program.

## **7. CONCLUSION**

### **7.1 Further ecological work**

7.1.1 As the bungalow at Fron-Fedw was found to contain a single Common Pipistrelle bat, the building is confirmed as a bat roost and as such it will be necessary to apply for a derogation licence from Natural Resources Wales (NRW) in order for demolition works to proceed (subject to NRW approval of the proposed mitigation works).

### **7.2 Concluding statement**

7.1.1 No further survey work is considered necessary. Watching brief during construction as detailed above is required alongside the recommended mitigation and enhancement.

7.1.2 Overall the proposals are expected to have a minimal impact on the surrounding habitats and species when the proposed mitigation is implemented. The enhancement proposals allow the project to provide a net biodiversity gain, in compliance with local and national planning policy

**APPENDIX 1: SITE PHOTOGRAPHS**

**Figure 5 Site views**



**A. Bungalow at Crud-yr-Awel (surveyed for bats).(2020)**



**B. Existing access track showing tree and hedgerow to be retained.**



C. Non native planting at Crud Yr Awel



D. Fron Fedw (2020) (surveyed for bats).



**E.** Both the houses in their surroundings



**F** Lower clearing where four lodges are proposed.

APPENDIX 2: PHASE ONE MAPPING

Figure 6 Revised (2020) Phase 1 map & key (with approximate indicative positions of proposed lodges)



## APPENDIX 3: TARGET NOTES

**Table 5 Target Notes**

TN	NOTES	PHOTO
TN 01	Rock outcrop (acid). Scattered cover of small shrubs including: Burnet rose <i>Rosa pimpinellifolia</i> (O), Wood sage <i>Teucrium sylvatica</i> (O) and Gorse <i>Ulex europea</i> (F), and herbs typical of shallow soil on acid substrate, including Sheep's sorrel <i>Rumex acetosella</i> (A) and Navelwort <i>Umbilicus rupestris</i> (F). Non-native planting at base, including specimens of <i>Cryptomeria japonica</i> , <i>Pinus mugo</i> and Rhododendron species. Well-developed moss flora on rock.	
TN 02	Non-native boundary hedge with Laurel <i>Prunus laurocerasus</i> (A), Sycamore <i>Acer pseudoplatanus</i> and non-natives including <i>Escallonia macrantha</i> and <i>Griselinia littoralis</i> .	
TN 03	Neutral grassland, formerly part of lawn. False oat grass <i>Arrhenatherum elatius</i> (A), Cock's-foot <i>Dactylis glomerata</i> (A), Red fescue <i>Festuca rubra</i> (A). Relics of former garden escapes include Pampas grass <i>Cortaderia selloana</i> , Buddleia <i>Buddleia davidii</i> and Pencilled crane's-bill <i>Geranium endressi</i> . Since 2019, many of these non-native ornamentals have been cleared.	
TN 04	Former pond overgrown with <i>Crassula helmsii</i> . This pond was filled in in 2020.	
TN 05	Species-rich hedge with Field rose <i>Rosa arvensis</i> (F), Hawthorn <i>Crataegus monogyna</i> (F), Grey willow <i>Salix cinerea</i> (F), Blackthorn <i>Prunus spinosa</i> (A), Hazel <i>Corylus avellana</i> (F) and Sessile oak <i>Quercus petraea</i> (R).	
TN 06	Recently planted mixed woodland.	
TN 07	Recently planted mixed woodland. Nest of Goshawk noted in summer 2019. Not observed in 2020 or 2023.	

**Figure 7. Target Note images**







c) TN 03 Neutral grassland



d) TN 04 Pond with infestation of *Crassula helmsii* (now successfully eradicated).



e) TN 06 Planted mixed woodland



f) TN 07 Planted mixed woodland



g) TN 07



h) Goshawk nest in adjacent woodland



I) Buildings in 2023



J) Buildings in 2023



K) Buildings in 2023



L) Buildings in 2023