# PRELIMINARY ECOLOGICAL APPRAISAL

## CANN OFFICE, SY21 0PL

## SJ 0110 4244

**FOR**

**ROGER PARRY AND PARTNERS**

Arbor Vitae Environment Ltd
Lower Betton Farm
Cross Houses
Shrewsbury
Shropshire
SY56JD



ARBOR VITAE
ECOLOGY • FORESTRY • LAND USE

## Contents

# 1 INTRODUCTION

## 1.1 BACKGROUND TO DEVELOPMENT

A planning application has been approved for the development of six wooden holiday chalets to be built on an area of improved grassland. A further application will be made for an additional six lodges on the site. The proposed development site sits south east of the established Riverbend Holiday Park which has over 50 plots for leisure accommodation.

Arbor Vitae were commissioned by Roger Parry and Partners to undertake a Preliminary Ecological Appraisal.

## 1.2 SCOPE OF SURVEY

The survey is primarily designed to:

- Identify and record habitats and important ecological features on site;
- Evaluate the potential of the proposed development site to provide opportunities for protected species;
- Determine any likely impact which the development and landscape proposals may have on these.
- Identify opportunities for the enhancement of habitats and biodiversity features on site.

# 2 SITE DESCRIPTION

## 2.1 LOCATION, LANDSCAPE, AND BACKGROUND

The improved grassland field lies to the west of the River Gam and immediately to the south of Llangadfan village (Figure 1). The site lies in the valley of the River Banwy and the confluence of the Gam and Banwy is 400 metres NE of the site. The surrounding landscape is predominantly grassland, mainly enclosed in small to medium fields with large hedgerows. The site itself sits on a low hill which slopes to the east, terminating beside the River Gam. (Figure 2).

The proposed chalets will occupy an area at the east of the field next to the river (Figure 3). An existing access track is in place to the north of the field and joins a single track lane onto the main highway.

# 3 SURVEY METHODOLOGY

## 3.1 DESK STUDY

An initial desk study was carried out to gain background information regarding the presence of protected species or site designations within the area. The main sources of information were Biodiversity Information Service and MagicMap.

## 3.2 SITE SURVEY

A visit was made to survey the proposed development site on 21/06/2022. All habitat features present were noted and evidence of either protected species, or the potential of the site to support protected species, were noted.

An assessment of the available habitats both on and adjacent to the site led to consideration of the potential of the site for the following protected species:

- Badger
- Bats
- Breeding birds
- Otter

The survey methodology was tailored to evaluate the area for these species:

**Badger**

An area within 50 meters of the site was closely searched for the following signs of badger activity: setts, tracks and footprints, latrines, snuffle holes.

**Bats**

The site was evaluated based on its suitability to support bat populations mainly by investigating the trees on site for any potential roosting sites but also evaluating the usefulness of the hedgerows in terms of commuting corridors.

**Breeding birds**

The site was assessed in terms of its suitability to support breeding bird populations. Hedgerow habitat and nearby potential habitat were assessed and recorded.

**Otters**

The River Gam runs along the southern edge of the proposed development site. Otters are recorded from within 114 metres of the site, presumably either on the River Gam or Banwy, or both. The nearest stretches of river were assessed in terms of suitability for otter holts.

### 3.2 PERSONNEL

The survey was carried out by Phillipa Stirling MSc ACIEEM.

### 3.3 CONSTRAINTS

There were no constraints on the survey being carried out according to accepted guidelines and standards.

## 4 SURVEY RESULTS

### 4.1 DESK STUDY

Results from the desk study revealed that within a 1km radius of the proposed development site there were several historical records of protected and priority species (Figure 4). Within 500m of the site there were records of: Common lizard, Otter, Soprano pipistrelle bat, Common pipistrelle bat, Noctule bat, Natterer's bat, Curlew, House sparrow and Starling (See Table 1. for more details).

There are no statutory site designations within the vicinity of the proposed development site. The search included Ramsar, SSSI, SAC, SPA, and CSAC. [1]

### 4.2 HABITATS ON SITE

***Improved grassland***

The site is dominated by improved grassland with ryegrass being dominant, along with smaller quantities of crested dog's tail. Herbaceous species are very limited. This habitat is of negligible ecological interest.

***Bare earth***

[1] *SSSI: Site of Special Scientific Interest, SAC: Special Area of Conservation, SPA: Special Protection Area, CSAC: Candidate Special Area of Conservation.

Works for the existing consent have already started on site and there are areas of exposed earth present on the field site.

***Unimproved grassland***

One small, steeper section of hill exists in the center of the site where agricultural improvement has not been possible and a small area of more species-rich acid grassland exists here. The sward includes sheep's fescue, velvet bent, sheep sorrel, harebell, yarrow, heath bedstraw.

***River***

The east boundary of the field is marked by the River Gam which is separated from the field by wire fencing and overgrown native hedgerow.

***Hedgerow***

There is a remnant ancient hedgerow running to the south of the development area in the same field. The trees include some notable specimens, in particular a very large crabapple tree. The hedge consists of alder, wild crab apple, and hawthorn. The site is bounded by mature native hedgerows which are largely managed but, in some places, have remained uncut.

### 4.2 ADJACENT HABITATS

The surrounding landscape is dominated by agricultural grassland, linear features such as mature native hedgerows bounding each field, and the continuation of the River Gam with its confluence with the River Banwy 400 metres north east of the site.

There are several residential and agricultural farm buildings which lie within 1km of the proposed development which could provide opportunities for bat roosts.

## 5 EVALUATION OF RESULTS AND POTENTIAL ECOLOGICAL IMPACT

### 5.1 HABITATS

The only habitat directly affected by the proposals is a small area of improved grassland and bare earth. This has negligible ecological interest. A small area of more species-rich grassland on a steep slope within the same field will remain unaffected.

### 5.2 POTENTIAL FOR BADGERS

No evidence of badgers was found during the preliminary ecological appraisal and the site was not thought to be suitable habitat, other than for occasional foraging.

### 5.3 POTENTIAL FOR BATS

There were no structures or habitats on the proposed development site which were thought to provide habitat for bats and therefore the development will have no impact on local bat populations. Tree and hedge lines may well provide foraging routes or flight lines for bats.

### 5.4 POTENTIAL FOR BREEDING BIRDS

No evidence was found of breeding birds and the proposals will have no impact.

### 5.5 POTENTIAL FOR OTTERS

No evidence of otters was found along the river immediately adjacent to the proposed development site and the proposals are highly unlikely to impact otter populations or their habitat.

### 5.6 POTENTIAL FOR OTHER PRIORITY SPECIES

Of the priority species listed in Table 1 as having been recorded locally, only dunnock and hedgehog may possibly find suitable habitat on the site. The perimeter hedgerows may provide habitat for either or both of these species and should be protected.

## 6 MITIGATION AND ENHANCEMENT

### 6.1 HABITAT MITIGATION

The main habitat to be impacted by the proposed development will be improved grassland. As this has little ecological interest, no specific habitat mitigation measures will be required.

In order to protect the river corridor from inadvertent disturbance from light and noise the hedgerow along the boundary of the field will be allowed to grow up to a height of 3m along the length of the development boundary. The hedge will be maintained at this height and current width. Any areas without hedgerow which lies adjacent to the development will be planted with a mixed native hedge and managed in the same way.

## 6.2 PROTECTED SPECIES MITIGATION

Additional external lighting will be kept to a minimum so as to not to illuminate hedgerows and the river corridor. This will prevent disruption of bat foraging routes and otter activity. The following measures will be incorporated into a lighting plan for the site:

- Hedgerows and key habitat features including mature trees on the site will not be illuminated in order to retain dark movement corridors for nocturnal wildlife.
- Any exterior security or decorative lights to be installed on the development site will be less than 3 m from the ground and fitted with hoods to direct the light below the horizontal plane, at an angle of less than seventy degrees from vertical, and shall not be fixed to, or directed at, bat boxes or gables or eaves.
- Security lighting will be set on motion sensors with short timers (<1 minute) and will be LED with a passive infrared trigger.
- Lighting must be less than 3 lux at ground level and there shall be no light splay exceeding 1 lux along buildings, eaves or roof or adjacent hedgerows or trees.
- External lights will be hooded and directed toward the ground to reduce upward light spill.
- A warm white spectrum will be adopted throughout the scheme to reduce blue light component (<2700Kelvin).
- Internal luminaires will be recessed where installed in proximity to windows to reduce glare and light spill. LED luminaires will be used internally where possible due to their sharp cut-off, lower intensity, and dimming capability.
- Luminaires will always be mounted horizontally with an upward light ratio of 0%.

## 6.3 ECOLOGICAL ENHANCEMENT

A nest box scheme will be adopted in order to provide opportunities for protected and priority species on and adjacent to the site. The following will be installed into nearby mature trees:

- Two Woodcrete multi-chamber bat boxes. The boxes will be installed at least 3m from the ground and face south or south-west.
- Two Woodcrete bird boxes. The boxes will be installed 2.5m from ground level.

## 7 SUMMARY

A Planning Application has been approved for the development of six wooden holiday chalets to be built on an area of improved grassland. A further application will be made for an additional six lodges on the site. Arbor Vitae were commissioned by Roger Parry and Partners to undertake a Preliminary Ecological Appraisal.

The only habitat directly affected by the proposals is a small area of improved grassland. This has negligible ecological interest. A small area of more species-rich grassland on a steep slope within the same field will remain unaffected.

The east boundary of the field is marked by the River Gam which is separated from the field by wire fencing and overgrown native hedgerow.

In order to protect the river corridor from inadvertent disturbance from light and noise the hedgerow along the boundary of the field will be allowed to grow up to a height of 3m along the length of the development boundary.

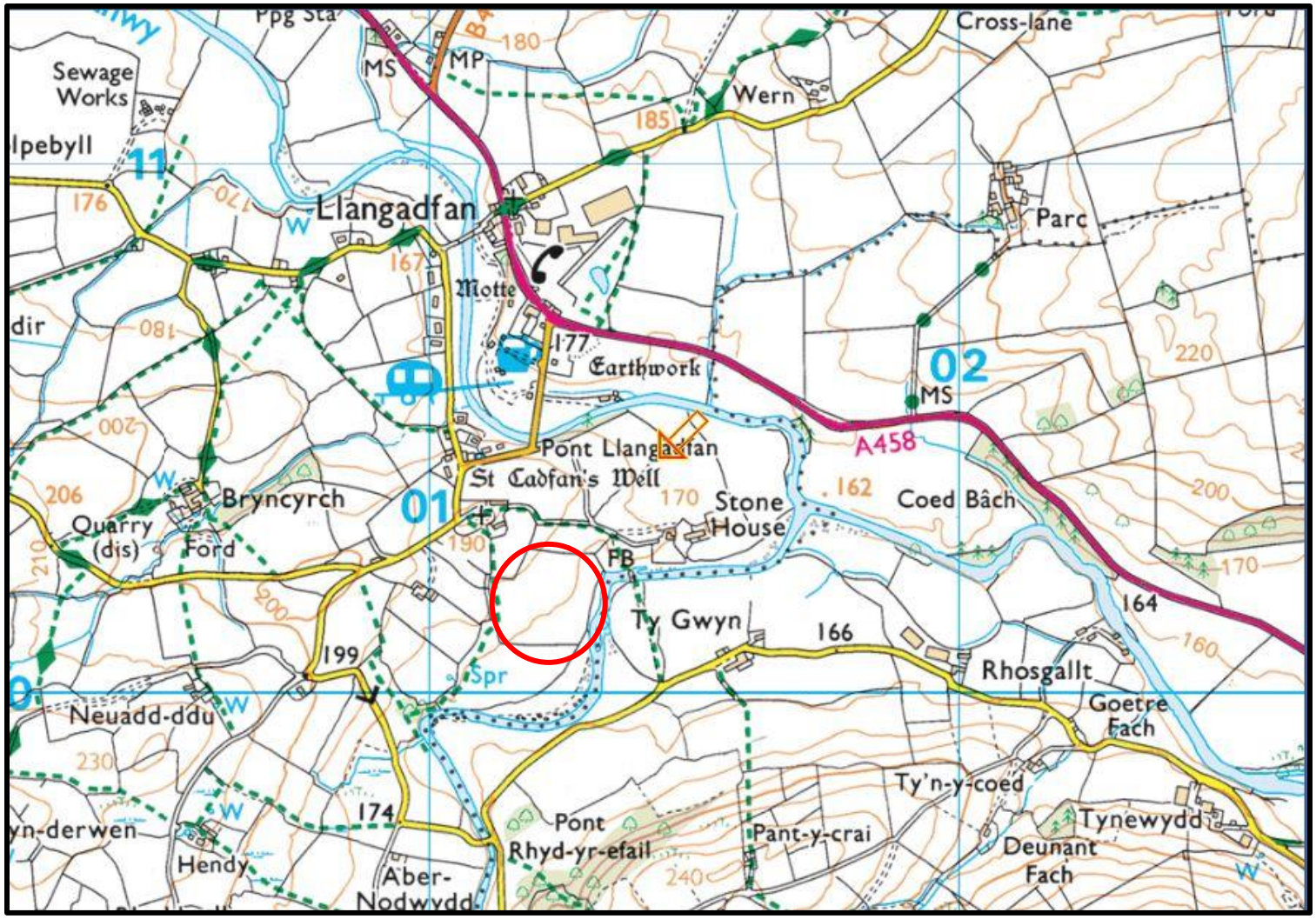
Any areas without hedgerow which lies adjacent to the development will be planted with a mixed native hedge and managed in the same way.

Additional external lighting will be kept to a minimum so as to not to illuminate hedgerows and the river corridor. This will prevent disruption of bat foraging routes and otter activity.

A nest box scheme will be adopted in order to provide opportunities for protected and priority species on and adjacent to the site. The following will be installed into nearby mature trees:

- Two Woodcrete multi-chamber bat boxes. The boxes will be installed at least 3m from the ground and face south or south-west.
- Two Woodcrete bird boxes. The boxes will be installed 2.5m from ground level.

**FIGURE 1 LOCATION**






ARBOR VITAE

ECOLOGY • FORESTRY • LAND USE

**FIGURE 2 AERIAL PHOTOGRAPH**




ARBOR VITAE

ECOLOGY • FORESTRY • LAND USE

**FIGURE 3 PROPOSED DEVELOPMENT PLAN**




ARBOR VITAE

ECOLOGY • FORESTRY • LAND USE

**FIGURE 4 PRIORITY SPECIES WITHIN 1 KM OF THE PROPOSED DEVELOPMENT (CIRCLED RED)- BIS MAP**

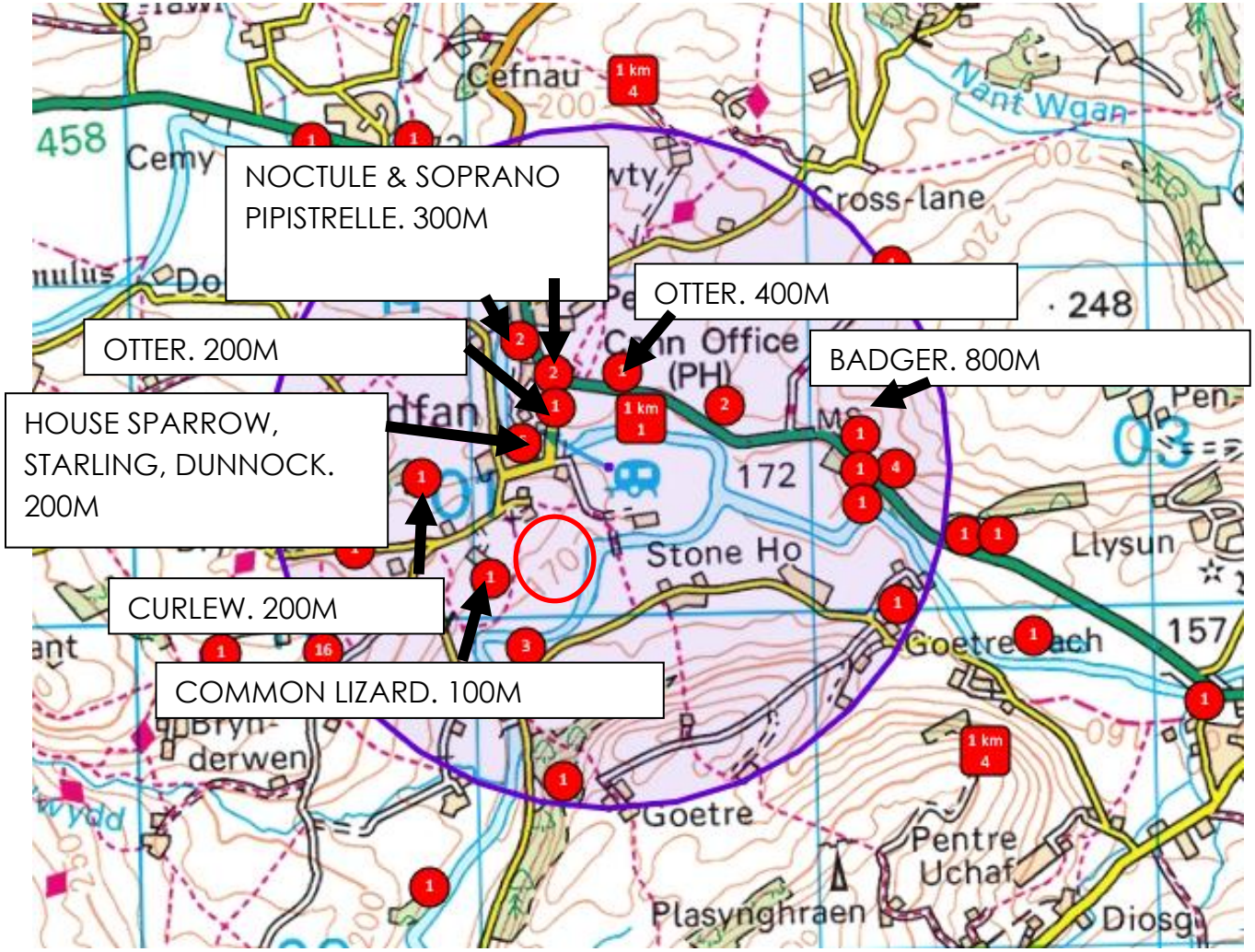


**Table 1. Priority species within 1 km of proposed development site.**

| Name | Common name | UK conservation status | Legal status UK | Distance (m) |
|---|---|---|---|---|
| Numenius arquata | Curlew | AMBER (BOCC) | Sch 1 | 562 |
| Passer domesticus | House Sparrow | RED (BOCC) | - | 256 |
| Prunella modularis | Dunnock | AMBER (BOCC) | - | 256 |
| Euphydryas aurinia | Marsh Fritillary | UKBAP | Sch 5 | 808 |
| Erinaceus europaeus | Hedgehog | UKBAP | - | 758 |
| Lutra lutra | Otter | UKBAP | Sch 5 | 114 |
| Meles meles | Badger | Common | Sch 5 | 745 |
| Myotis nattereri | Natterer's Bat | Common | Sch 5 | 256 |
| Nyctalus noctule | Noctule Bat | UKBAP | Sch 5 | 264 |
| Pipistrellus pipistrellus | Common Pipistrelle | Common | Sch 5 | 363 |
| Pipistrellus pygmaeus | Soprano Pipistrelle | UKBAP | Sch 5 | 219 |
| Zootoca vivipara | Common Lizard | UKBAP | Sch 5 | 525 |

**APPENDIX 1 PHOTOGRAPHS**

| | |
|---|---|
|  |  |
| The field site. | Existing access track. |
|  |  |
| Wider field site. | Adjacent river corridor. |