

# Caebettin Farm, Kerry Preliminary Ecological Appraisal

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**Prepared for Hughes Architects**

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Prepared by:                                
Clare Knight  
Senior Ecologist                              27/05/2022

Checked and Approved  
for Issue by:                                
Stephen Wilson  
Director                                      13/06/2022

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## ***SURVEY AND REPORT VALIDITY***

It is important that planning decisions are based on up-to-date ecological reports and survey data. However, it is difficult to set a specific timeframe over which reports or survey data should be considered valid, as this will vary in different circumstances. In some cases there will be specific guidance on this (such as for the age of data which may be used to support an EPS licence application) but in circumstances where such advice does not already exist, the Chartered Institute of Ecology and Environmental Management (CIEEM) has provided the general advice set out below.

<b><i>Age of Data / Survey / Report</i></b>	<b><i>Validity</i></b>
<b>Less than 12 months</b>	Likely to be valid in most cases.
<b>12-18 months</b>	<p>Likely to be valid in most cases with the following exceptions:</p> <ul style="list-style-type: none"> <li>Where a site may offer existing or new features which could be utilised by a mobile species within a short timeframe;</li> <li>Where a mobile species is present on site or in the wider area, and can create new features of relevance to the assessment;</li> <li>Where country-specific or species-specific guidance dictates otherwise.</li> </ul>
<b>18 months to 3 years</b>	<p>A professional ecologist will need to undertake a site visit and then review the validity of the report.</p> <p>Some or all of the other ecological surveys updated.</p>
<b>Protected Species Licensing</b>	Licence applications usually only possible using data less than 2 years old

The likelihood of surveys needing to be updated increases with time and is greater for mobile species or in circumstances where the habitat or its management has changed significantly since the surveys were undertaken. Factors to be considered include (but are not limited to):

- Whether the site supports, or may support, a mobile species which could have moved on to site, or changed its distribution within a site;

- Whether there have been significant changes to the habitats present (and/or the ecological conditions/functions/ecosystem functioning upon which they are dependent) since the surveys were undertaken, including through changes to site management;

- Whether the local distribution of a species in the wider area around a site has changed (or knowledge of it increased), increasing the likelihood of its presence.

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## 1 INTRODUCTION

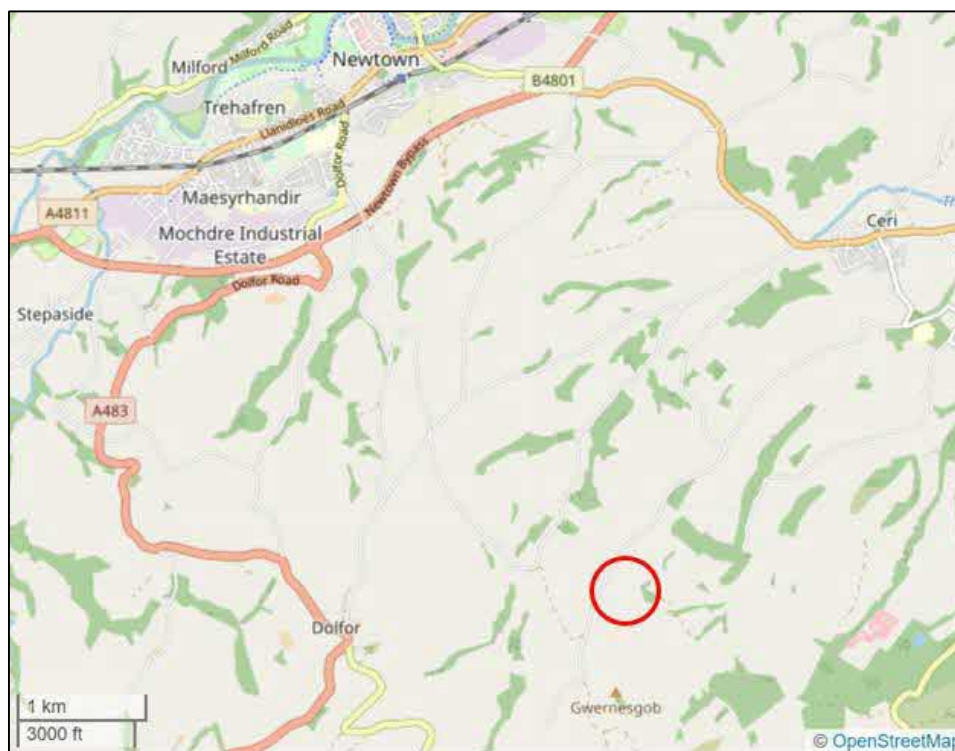
### 1.1 Purpose of Report

This Preliminary Ecological Appraisal (PEA) has been completed in connection with a residential development on land at Caebettin Farm, Kerry, Newtown, Powys (OS Grid Location SO 126 875). The location of the proposed development sites is shown in *Figure 1* and the proposed development plans are fully detailed in *Section 4*.

The site survey was carried out on 5<sup>th</sup> May 2022 by Turnstone Ecology Ltd and consisted of a Phase 1 Habitat Survey and a Protected Fauna Survey and Habitat Suitability Assessment.

This report details survey and assessment methodology along with the results of a desk-based study and on-site surveys. It also provides an assessment of potential impacts and appropriate mitigation to offset any impacts associated with the proposal and to satisfy national and local planning policies.

*Figure 1. Location of proposed development*



### 1.2 Ecological Context

The proposed development site is located in a rural setting approximately 4 km south-east of Newtown, Powys and comprises a grass field and access track, which leads to Caebettin Farm to the south-east (*Figures 2 and 3*). The proposals involve the construction of a detached dwelling and associated

soakaway, driveway and garden within the grass field. Access will utilise the existing hardstanding track and a new passing place will be created on the lane to the north of site.

The north-western and north-eastern site boundaries are formed by mature hedgerows. No formal boundaries are located along the south-eastern and south-western edges of site where the grass field extends away. A pond is located approximately 100m south-east of the development site and contributes to a small watercourse, which is a tributary of the Afon Miwl. A small area of broadleaved woodland is located approximately 250m south-east of site and Pen-y-Castle Wood, a large mixed broadleaved and conifer woodland is located approximately 450m north-east of site. The wider landscape is dominated by agricultural fields, scattered woodlands, watercourses and farms.

Figure 2. Proposed development site (red line boundary)



Figure 3. Aerial image of proposed area of works and surrounding landscape (www.google.com/maps)





## 2 METHODS

### 2.1 Desk-based Study

Information relating to designated sites and historic records of protected species within 2 km of the proposed development site were obtained from Magic ([www.magic.gov.uk](http://www.magic.gov.uk)) and other freely available information on the internet, such as planning portals.

Any species-specific historic records are detailed within the relevant species accounts in the *Results* section.

### 2.2 Phase 1 Habitat Survey

The survey methods were based on the Phase 1 Habitat Survey approach (Joint Nature Conservation Committee 2010), which is a standardised method to survey main habitat types. Plant nomenclature in this report follows Rose (*Revised Edition 2006*) for native, naturalised, and garden varieties of vascular plant. Introduced species and garden varieties are not always identified.

### 2.3 Protected Fauna Survey and Assessment

The habitats on site were assessed for suitability for protected fauna that occur in the region and obvious signs and incidental sightings of protected species were noted where present. Taking into consideration the geographical region and habitat types on and adjacent to site, the protected species and species groups that could be encountered are listed below.

- Badger
- Bats
- Dormouse
- Nesting birds
- Great Crested Newt
- Reptiles

Details of initial survey methods for each relevant species are given below.

#### 2.3.1 Badger

Where access allowed, a comprehensive assessment was carried out to identify areas that are used by Badgers (*Meles meles*) for foraging and sett digging. Signs of Badgers including setts, foraging signs, paths and latrines were recorded where present.

### 2.3.2 Bats

Any buildings and trees on or adjacent to the site were visually surveyed to assess them for their potential to support roosting bats, although a thorough inspection of all potential roosting features would not be undertaken as part of the Phase 1 survey.

Habitats were assessed for their suitability for use by foraging or commuting bats. Areas of particular interest vary between species, but generally include sheltered areas and those habitats with good numbers of insects, such as woodland, scrub, hedges, watercourses, ponds, lakes and more species-rich or rough grassland.

### 2.3.3 Dormouse

Habitats were assessed for their general suitability for use by Dormouse (*Muscardinus avellanarius*), which generally use areas of dense woody vegetation cover. Dormice are most likely to be found where there is a wide diversity of woody species contributing to three-dimensional habitat complexity, a number of food sources, plants suitable for nest-building material and good connectivity to other areas of suitable habitat. A search for hazelnuts opened by Dormouse was also completed on and adjacent to site.

### 2.3.4 Nesting birds

Habitat that might be used by nesting birds was identified and actively nesting birds or evidence of nesting birds noted where present. Special consideration was given to the potential presence of Barn Owl (*Tyto alba*), which is a Schedule 1 protected bird species.

### 2.3.5 Great Crested Newt

The suitability of any aquatic and terrestrial habitat on the site, and in the immediate vicinity, was assessed for suitability for use by Great Crested Newts (*Triturus cristatus*). Great Crested Newts are known to travel up to 500 m between breeding ponds and suitable terrestrial habitat, so a desk-based search was undertaken for any ponds up to 500 m from the site using OS maps and aerial imagery. The terrestrial habitat between the site and these ponds, and therefore connectivity to the site, was also considered.

One pond within 500m of the site was assessed using the Habitat Suitability Index (HSI) developed by Oldham et al. (2000), which is a derived from systems developed by the US Fish and Wildlife Service. It is a numerical index, between 0 and 1, where 0 indicates unsuitable habitat and 1 represents optimal habitat. The HSI for the Great Crested Newt uses ten factors (suitability indices (SI) 1 to 10), which are thought to affect Great Crested Newts as follows:

- geographic location (SI 1);
- surface area (SI 2);
- hydrology (drying) (SI 3);
- water quality (SI 4);

shade (SI 5);  
 presence of water fowl (SI 6);  
 presence of fish (SI 7);  
 number of adjacent water features (SI 8);  
 terrestrial habitat (SI 9); and  
 macrophyte cover (SI 10).

Each factor is scored using field and desk-based survey. These ten scores are then converted to SI scores using a scale from 0.01 to 1 from graphs given in Oldham et al. (2000) and a HSI result is calculated using the following formula:

$$\text{HSI} = (\text{SI1} \times \text{SI2} \times \text{SI3} \times \text{SI4} \times \text{SI5} \times \text{SI6} \times \text{SI7} \times \text{SI8} \times \text{SI9} \times \text{SI10})^{1/10}$$

Further research by Brady (unpublished) has developed a system for using HSI scores to define pond suitability for Great Crested Newts according to the following categories:

HSI	<0.5	= poor
HSI	0.5 – 0.59	= below average
HSI	0.6 – 0.69	= average
HSI	0.7 – 0.79	= good
HSI	> 0.8	= excellent

HSI cannot guarantee the presence or absence of Great Crested Newts however, there is a positive correlation between HSI scores and presence and abundance. Generally, ponds with high HSI scores are likely to support larger populations. The relationship is however not sufficiently precise to conclude that any pond with a high HSI will support newts in high populations, or that any pond with a low score will support low numbers of newts or no newts at all.

### 2.3.6 Reptiles

The site was assessed for suitability for use by widespread species of reptiles, with particular attention paid to those features that could be used as basking areas (*e.g.* south-facing slopes), hibernation sites (*e.g.* banks, walls, piles of hardcore) and opportunities for foraging (*e.g.* rough grassland and scrub). The site was assessed for its suitability for the commoner reptile species which have broadly similar habitat requirements but more specific requirements include those shown below (Beebee & Griffiths 2000).

Common Lizards (*Zootoca vivipara*) use a variety of habitats from woodland glades to walls and pastures, although one habitat they use is brownfield sites

Slow-worms (*Anguis fragilis*) use similar habitats to Common Lizards, and are often found in rank grassland, gardens and derelict land

Grass Snakes (*Natrix helvetica*) have broadly similar requirements to Common Lizards but with a greater reliance on ponds and wetlands, where they prey on amphibians

Adder (*Vipera berus*) use a range of fairly open habitats with some cover, but are most often found in dry heath

## 2.4 Constraints

May is an ideal time to undertake Phase 1 surveys as the majority of plants will be present and identifiable, as such there were no constraints to the on-site survey.

## 2.5 Criteria for Assessment

The scientific value of habitats for nature conservation is assessed according to widely accepted criteria of which the most important are naturalness, extent, rarity, and diversity.

The assessment of impacts is based on the principles within Chartered Institute of Ecology and Environmental Management (CIEEM) Environmental Impact Assessment (EIA) Guidance (2018) which assesses the impacts of the proposal on ecological receptors taking in to consideration extent, duration, reversibility, timing, frequency and certainty.

Mitigation and enhancement is designed to reduce the level of impact upon receptors and provide ecological enhancement in order to meet current legislation and planning policy. The information below has therefore been considered during assessment.

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Criteria that have been developed to assist in the identification of statutory Sites of Special Scientific Interest (SSSIs) (JNCC 2013)

Habitats and species of Principal Importance included under Section 41 (England) and Section 42 (Wales) of the Natural Environment and Rural Communities (NERC) Act 2006

The legal status of habitats and species according to The Conservation of Habitats and Species Regulations 2017 (as amended)

CIEEM Guidelines (2018) for assessing the value of ecological receptors within a defined geographical context using the following categories: international (*i.e.* Europe); UK and national (England); regional; county; Unitary Authority; local or parish; and zone of influence. Receptors are identified as ‘important’ at these levels, or as ‘not important’

Species protected by European directives

Species protected by the *Wildlife and Countryside Act 1981* (as amended)

Other species listed as scarce or notable in literature issued by conservation organisations or learned societies *e.g.* vascular plant species listed in Stewart *et al.* (1994) and Red and Amber List Birds of Conservation Concern (Eaton *et al.* 2015)

Local Wildlife Site selection criteria

National Policy Planning Framework (NPPF), 2019

BS42020:2013 – Biodiversity Code of practice for planning and development

Protected species handbooks and best practice guidelines

The Powys Local Biodiversity Action Plan (BAP), which identifies and prioritises local habitats and species of conservation importance. These habitats and species are stated as

Habitats: Upland oak woodland, Lowland woodpasture and parkland, Wet woodlands, Coniferous woodland, Scrub and ffridd, Linear habitats (hedges and verges), Rivers and stream, Mesotrophic waters, Lowland raised bog, Rhos pastures, Lowland meadows, Lowland dry acid grassland, Upland calcareous grassland, Upland and lowland heath, Traditional orchards and Farmland and Gardens.

Species: Alien Plant species, Allis Shad (*Alosa alosa*) & Twaite Shad (*Alosa fallax*), Brown Hare (*Lepus europaeus*), Brown Trout (*Salmo trutta*), Climbing Corydalis Weevil (*Procas granulicollis*), Curlew (*Numenius arquata*), European Otter (*Lutra lutra*), Fairy Shrimp (*Chirocephalus diaphanous*), Floating Water Plantain (*Luronium natans*), Globeflower (*Trollius europaeus*), Great Crested Newt, Hazel Dormouse, High Brown Fritillary (*Fabriciana adippe*), Nightjar (*Caprimulgus europaeus*), Pearl-bordered Fritillary (*Boloria euphrosyne*), Pillwort (*Pilularia globulifera*), Pipistrelle Bat (*Pipistrellus pipistrellus* & *P. pygmaeus*), Red Kite, Red Northern Wood Ant (*Formica lugubris*), Red Squirrel (*Sciurus vulgaris*), River Jelly Lichen (*Collema dichotomum*), River Lamprey (*Lampetra fluviatilis*), Slender Green Feather Moss (*Hamatocaulis vernicosus*), Tree Sparrow (*Passer montanus*), Water Vole, Waxcap Grasslands, White-clawed Crayfish (*Austropotamobius pallipes*) and Wood Bitter Vetch (*Vicia orobus*).

### 3 RESULTS

#### 3.1 Desk Study

##### 3.1.1 Designated Sites

There are no statutory designated sites within 2 km of the proposed development site.

#### 3.2 Ecological Surveys

Phase 1 habitat types recorded within and immediately adjacent to the proposed development sites are listed below.

- Improved grassland
- Hedgerow and trees
- Hardstanding
- Pond

Figure 4. Aerial view of proposed development site and passing place ([www.google.com/maps](http://www.google.com/maps))



The site or immediately adjacent areas contain habitat suitable for the protected species listed below.

- Badger
- Bats
- Dormouse
- Nesting birds
- Great Crested Newt
- Reptiles

### 3.3 Phase 1 Habitat Survey

#### 3.3.1 Improved grassland

The proposed development site is dominated by a short-sward improved grassland (*Plate 1*) consisting of common grass species including Annual Meadow Grass (*Poa annua*) and Crested Dog's-tail (*Cynosurus cristatus*). Forb species recorded within the grassland include Creeping Buttercup (*Ranunculus repens*), Meadow Buttercup (*Ranunculus acris*), Common Dandelion (*Taraxacum officinale* agg.), White Clover (*Trifolium repens*), Speedwell (*Veronica* sp.), Cuckoo Flower (*Cardamine pratensis*), Yarrow (*Achillea millefolium*), Common Chickweed (*Stellaria media*) and Sedge (*Carex* sp.).

*Plate 1. Improved grassland within development footprint (looking south-west from access track)*



#### 3.3.2 Hedgerow and trees

Well managed mature hedgerows with sparse understorey alongside post and wire fence form the north-western (*Plate 2*) and north-eastern (*Plate 5*) boundaries of the grassland field. Species within these hedgerows include Hawthorn (*Crataegus monogyna*), Hazel (*Corylus avellana*), Blackthorn (*Prunus spinosa*), Rose (*Rosa* spp.) and Ash (*Fraxinus excelsior*). Ground flora along the hedgerow base includes Foxglove (*Digitalis purpurea*), Violet (*Viola* sp.), Cleavers (*Galium aparine*), Honeysuckle (*Lonicera periclymenum*), Yarrow, Common Nettle (*Urtica dioica*), Greater Stitchwort (*Stellaria holostea*), Broadleaved Dock (*Rumex obtusifolius*), English Bluebell (*Hyacinthoides non-scripta*), Wood Anemone (*Anemone nemorosa*) and Cow Parsley (*Anthriscus sylvestris*). The section of hedgerow to the north-east of site where the passing place will be created is a continuation of the north-western boundary hedgerow and species within the hedgerow and associated ground flora are comprised of a similar mix (*Plate 3*).

*Plate 2. North-western boundary hedgerow (looking south-west)*



*Plate 3. Section of hedgerow to north-east of site where passing place will be created (looking north-east)*



A young Ash tree is present along the north-western hedgerow, approximately 30m from the site entrance track (*Plate 4*).



*Plate 4. Ash tree within the north-western hedgerow*



### 3.3.3 Hardstanding

A hardstanding track runs along the north-eastern edge of the grassland field and parallel to the north-eastern boundary hedgerow and leads from the lane to the east of site to the existing buildings at Caebettin Farm (*Plate 5*). The track has no botanical value.

*Plate 5. Access track and north-eastern edge of the grassland field (looking south-east from the road)*



### 3.3.4 Pond

A well-established pond is located approximately 100m south-east of the development area (*Plate 6*). Aquatic vegetation within the pond includes Brooklime (*Veronica beccabunga*), Watermint (*Mentha*

*aquatica*), Water Starwort (*Callitriche stagnalis*), Water Plantain (*Alisma plantago-aquatica*), Common Water Crowfoot (*Ranunculus aquatilis*) and Soft Rush (*Juncus effusus*). There are two mature conifer trees and Willow (*Salix* sp.) trees on the south-western edge.

*Plate 6. Pond to the south-east of site (looking south-west)*



### **3.4 Protected Fauna**

#### **3.4.1 Badger**

No Badger setts or evidence of activity were recorded within or immediately adjacent to the boundaries of the proposed development site.

The improved grassland and boundary hedgerows are suitable habitats for setts to be located in and these areas also provide suitable foraging habitat.

#### **3.4.2 Bats**

There are no features suitable for roosting bats on or adjacent to the proposed development site.

The boundary hedgerows provide suitable habitat for foraging and commuting bats however the short sward improved grassland that dominates the development footprint is unlikely to be of importance for foraging bats.

#### **3.4.3 Dormouse**

There are two records of Dormouse from 1990 (*T. Stretton; NBN*) approximately 800m north of the proposed development site. No evidence of Dormouse was found during the survey, which included a nut and nest search along the boundary hedgerows.

The grassland is unsuitable for Dormouse but field boundary hedgerows provide some suitable cover and foodplants and there is some connectivity to woodlands in the wider area, which provide more extensive optimal habitat.

#### 3.4.4 Birds

Suitable breeding bird habitat within the application site is limited to the boundary hedgerows and trees.

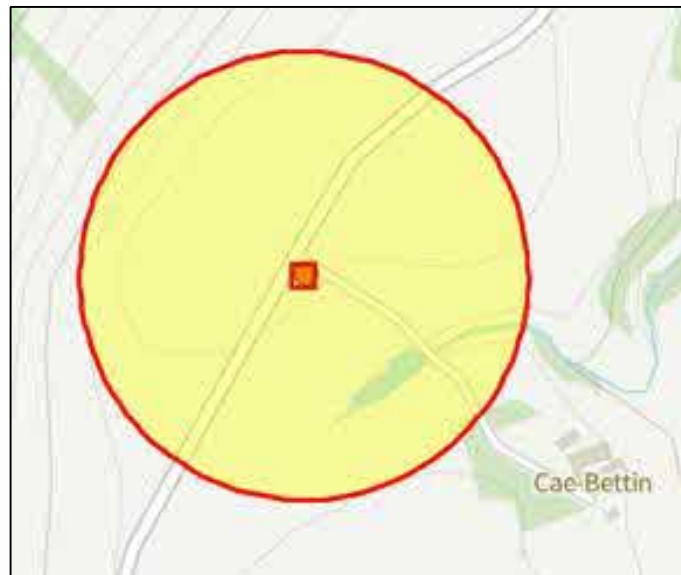
Due to the close proximity to hedgerows and trees, short sward of the grassland and current grazing regime it is considered very unlikely that ground nesting birds will occur within the development footprint.

There is no suitable habitat on, or adjacent to site for nesting Barn Owl however the field margins, provide suitable habitat for hunting Barn Owl.

#### 3.4.5 Great Crested Newt

There are no apparent records of Great Crested Newts within 2 km of the site however Great Crested Newt eggs were observed in the pond located approximately 100m south-east of site during the survey. No further ponds are located within 250m of the site (*Figure 5*).

*Figure 5. Pond location within 250m buffer of proposed development site*



The proposed development site is dominated by short sward grassland which is unsuitable for foraging and hibernation due to a lack of dense cover and refuges but could be crossed during dispersal. Optimal habitat is limited to the boundary hedgerows which provide suitable cover and opportunities for foraging, dispersing and hibernating Great Crested Newt.

### **3.4.6 Reptiles**

There are no historic records of reptiles within 2 km of the site.

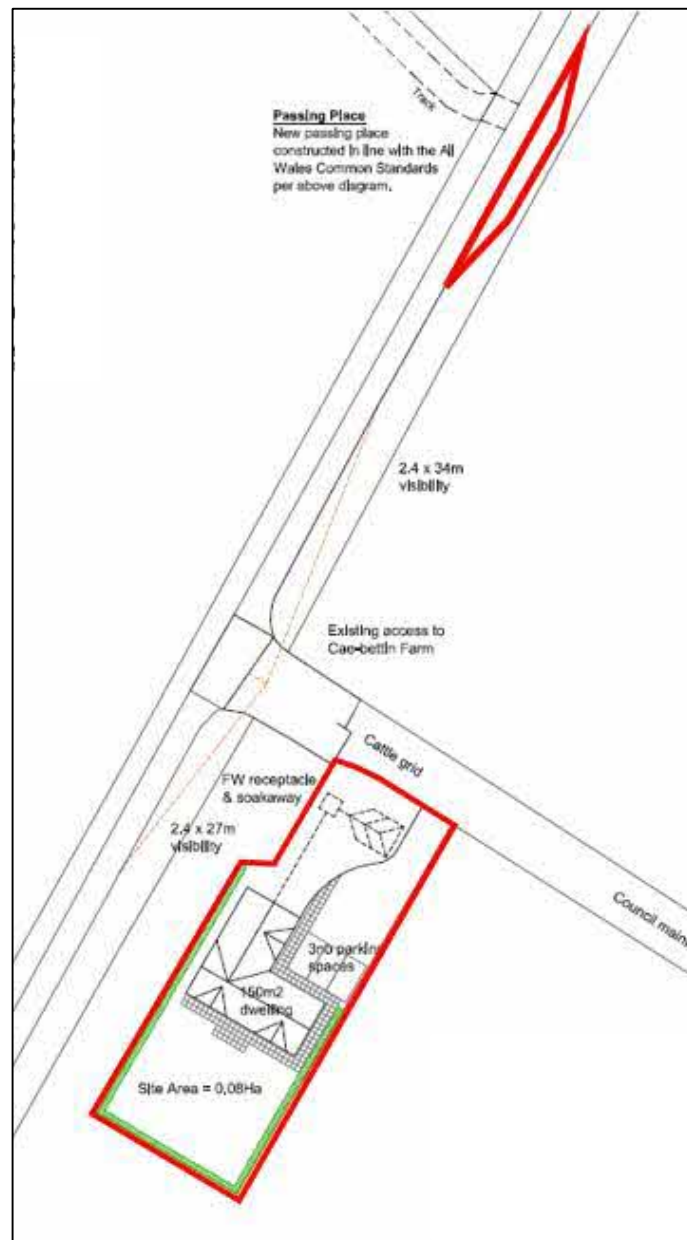
The short sward grassland is of poor suitability for foraging or hibernating reptiles due to a lack of dense cover, although it could be crossed during dispersal. Suitable habitat is limited to the boundary hedgerows, which provide suitable cover and opportunities for foraging, hibernating and/or dispersing reptiles and the pond to the south provides suitable habitat for foraging Grass Snake.

## 4 EVALUATION

### 4.1 Summary of Proposals

The proposals include the construction of a detached dwelling and associated soakaway, driveway and garden within and improved grassland field. Access will utilise the existing hardstanding track and a new passing place will be created on the lane to the north of site, within the grass verge (*Figure 6*). Proposed landscaping will include a new native species hedgerow around the garden.

*Figure 6. Proposed development plan*



The Powys BAP lists 17 Habitat Action Plans, which includes Hedgerows and 28 Species Action Plans,, which includes Great Crested Newt, Hazel Dormouse and Pipistrelle Bat (comprising Common

Pipistrelle and Soprano Pipistrelle). These habitats and species could be directly or indirectly affected by the proposed development and appropriate project design and mitigation will need to be adhered to ensure there will be no negative impacts on them as a result of the proposals. Ecological enhancements are also recommended to ensure the proposals result in a positive ecological gain which is in accordance with the National Planning Policy Framework.

## **4.2 Habitats**

### **4.2.1 General**

In order to protect habitats and maintain and increase biodiversity of the site the following mitigation measures and safe working methods will need to be incorporated into the proposals.

### **4.2.2 Mitigation**

#### *Pollution Control Measures*

Measures are to be put in place to ensure there are no significant negative impacts on the pond to the south of site or the watercourse to the south-east of site, which is a tributary of the Afon Miwl, and the species they support.

The proposed drainage and dirty water treatment methods will need to ensure that there are no impacts on the hydrology and ecology of the pond and watercourse and that no dirty water will enter the pond or watercourse and subsequently discharge into the Afon Miwl further downstream. Water treatment and discharge methods will be fully detailed in the planning application but should include the following:

- No work will be undertaken within 50m of the pond or watercourse;
- Spill kits will be stored within the site compound during construction and all spills will be cleaned up accordingly;
- All chemical substances and hazardous materials will be stored in accordance with Environment Agency (EA) guidelines and all diesel fuel and other lubricants will be stored in appropriate containers within double bunded storage areas;
- Any washing of concreting vehicles will be done well away from any ponds, watercourses and/or drainage systems;
- Any re-fuelling and re-lubrication will only be completed in an approved area in which a spill kit is available; and
- Any incidents / accidents would need to be immediately reported to the EA.

The proposed drainage methods and mitigation measures will ensure there will no significant negative impacts on the pond and/or watercourse and consequently no impacts further downstream on the Afon Miwl and the habitats and species they support.

### *Grassland*

The construction works will mainly affect ecologically poor improved grassland and therefore no specific habitat mitigation is required to negate this loss. However, in order to enhance the retained areas of grassland within the field surrounding site it is recommended the grassland be subject to low-intensity sheep grazing annually between August and October and February to March to allow the existing plants within the grassland to flower and set seed. To maintain and enhance floral diversity grazing (or cutting) of the grassland between April and July should be avoided.

### *Hedgerows and trees*

New species-rich boundary hedgerows will be planted with a mix of native broadleaved tree species including Hawthorn, Blackthorn, Crab Apple (*Malus sylvestris*), Hazel, English Oak (*Quercus robur*), Dog Rose (*Rosa canina* agg.), Rowan (*Sorbus aucuparia*), Holly (*Ilex aquifolium*), Dogwood (*Cornus sanguinea*), Wild Cherry (*Prunus avium*), Damson (*Prunus domestica insititia*), Honeysuckle and Field Maple (*Acer campestre*) to create dense and continuous hedgerows. The new hedgerow bases will be seeded with a suitable wildflower mix, the N9F Hedgerow Mix from [www.naturescape.co.uk](http://www.naturescape.co.uk) would be appropriate.

New hedgerows should be double planted with six plants per metre; mulchings or weed suppressing mats should be used to aid good establishment of woody species. Plants should be 80 – 100 cm bare root whips (1 + 1), planted between November and March and staked and protected with a bio-degradable treeguard to prevent pest damage.

Any additional tree planting around the site should comprise native species such as Oak, Rowan, Holly, Crab Apple, Field Maple, Wild Cherry, Damson and Alder (*Alnus glutinosa*).

All new and planted-up hedgerows and trees will be monitored for a minimum 5 years to check establishment and if die-back or failure to establish occurs then re-planting will be required. Re-planting will replace the original species and be of a similar size. Once established (probably when first laid) the tree guards should be removed, if they have not fully degraded.

The proposed areas of groundworks will need to be confined to areas that will not impact on the root systems of the existing hedgerow. An appropriate buffer (as detailed in BS5837:2012) will need to be established.

## **4.3 Protected Fauna**

### **4.3.1 Badger**

No setts or evidence of foraging or commuting Badger was recorded on or adjacent to the proposed development site. The improved grassland and hedgerow bases provide suitable habitat for sett creation as well as for foraging and commuting Badger.

The loss of a small area of improved grassland is unlikely to have a significant negative impact on foraging Badgers. The planting up of native fruit-bearing trees within the new hedgerows will mitigate this minor loss of foraging habitat.

Although significant negative impacts on Badgers are not predicted it is recommended mitigation measures are put in place to ensure Badgers do not become trapped within any excavation works associated with construction works. Excavations should either not be left uncovered overnight or ways of escape for Badgers provided (*e.g.* wooden planks or graded earth banks).

### **4.3.2 Bats**

The existing hedgerows and trees will be retained and unaffected by the proposals and this will ensure suitable bat foraging and commuting habitats around the site are maintained. The new hedgerow creation and proposed grassland management will ultimately improve the area for foraging/commuting bats.

Long term bat roosting provision should be incorporated on/within the new house and include a minimum of two bat tubes such as Schwegler IFR, or equivalent. Bat tubes provide integral roosting provision that is both discreet and secure, creating a self-contained unit that does not provide access into the wall cavity.

A lighting plan showing the location and specification for any proposed lights on the site will be produced. The lighting plan will reflect the Bat Conservation Trust Bats and Lighting in the UK guidance (2018) and will include directing lighting away from the retained and created hedgerows and trees and the use of downlighting to ensure that suitable roosting features and foraging and commuting habitats remain unlit.

### **4.3.3 Dormouse**

Suitable Dormouse habitat will not be directly impacted by the proposals and due to the age and distance from site of the historic records, limited connectivity to extensive suitable habitat and suitability of the habitats affected by the works, it is considered that the presence of Dormouse within hedgerows adjacent to site is highly unlikely. Therefore, no negative impacts on this species are predicted.



#### 4.3.4 Nesting Birds

The boundary hedgerows are all suitable habitats for nesting birds but given the habitat types present on site it is considered extremely unlikely that any ground nesting birds will occur within the project footprint and no *Schedule 1* breeding birds will be impacted.

Habitat creation, enhancement and management, such as the planting of new hedgerows and trees will have a positive impact on nesting birds at the site, providing further cover and food for a variety of farmland and garden species and the recommended grassland management within the field surrounding site will improve the habitats surrounding site for Barn Owl.

A combination of one House Sparrow (*Passer domesticus*) terrace box and one open-fronted nest box should be erected on the proposed dwelling.

#### 4.3.5 Great Crested Newt

Great Crested Newt are confirmed as breeding in the pond approximately 100m south-east of the development footprint but the grassland affected by the proposals is unlikely to be used by Great Crested Newts at any time of year with woodland to the south and east of the pond providing optimal terrestrial habitat. The boundary hedgerows do provide some opportunities for foraging, hibernating and dispersing however the hedgerows will be retained and unaffected by the proposed works.

Due to the distance between works and a pond with confirmed breeding Great Crested Newt and the extent and suitability of habitat affected by the proposals, the presence of Great Crested Newts within development footprint during works is considered unlikely. Precautionary Reasonable Avoidance Measures (RAMs) will be followed for the duration of works and will include the following measures:

Grassland on and around site to be maintained short pre and during excavation works to deter newts from occurring in these areas.

Prior to the start of works a suitably qualified ecologist will deliver a tool box talk to contractors and staff on site, informing them of the likelihood of encountering Great Crested Newt and what to do if they find Great Crested Newt.

Any excavations will be completed during daylight and backfilled (and suitably compacted) before nightfall or if this is not possible a ramp (or similar structure) will be provided to allow animals an opportunity to escape. Checks of any excavations for animals will also be undertaken prior to backfilling.

During construction, any storage of piles of materials and excavated earth on the site should be kept to a minimum and stored on hardstanding away from the boundaries and raised (*e.g.* on pallets) to deter Great Crested Newt from using them for temporary cover. Any excavated earth should be compacted on the day it is excavated and stored on site for a maximum of three nights.

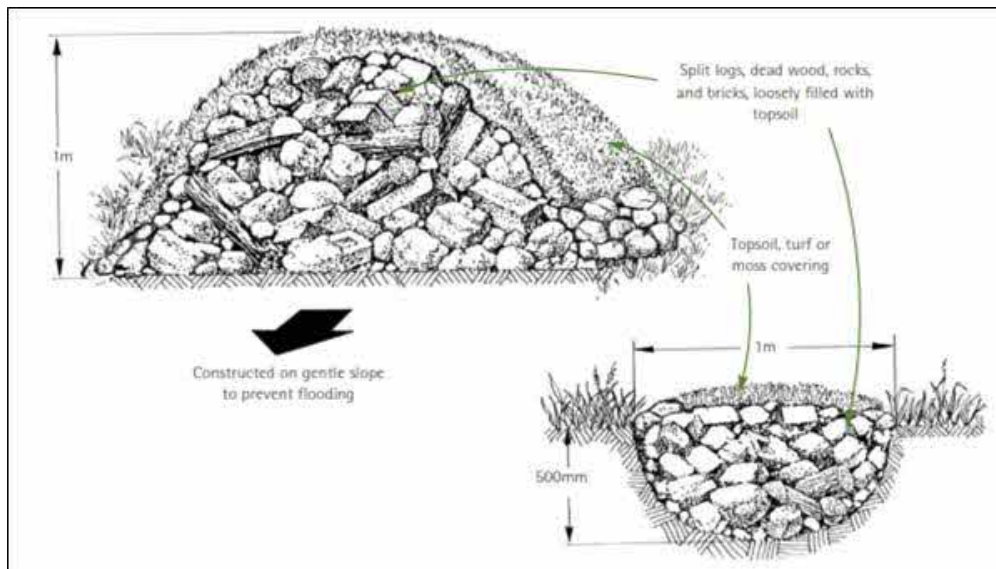
**If a Great Crested Newt or reptile is found during any stage of the above works all works must cease and a licensed Ecologist called to provide advice and/or attend site. In the event of a Great**

**Crested Newt being found Natural Resources Wales will need to be contacted to discuss an acceptable course of action.**

The proposed planting of new boundary hedgerows and recommended grassland management within the field surrounding site will ultimately improve the suitability of the site and adjacent habitats for Great Crested Newts.

The pond will be unaffected by the proposals and continue to be managed for the benefits of Great Crested Newts and other aquatic wildlife. Fish species should not be introduced and the pond will remain fenced off to prevent livestock from entering the water. A single hibernaculum (*Figure 7*) will be constructed at the north-eastern edge of the pond to provide an additional refuge.

*Figure 7. Example of hibernacula construction*



#### 4.3.6 Reptiles

The short sward improved grassland which will be affected by the proposals is of poor suitability for foraging or hibernating reptiles due to a lack of dense cover, although it could be crossed during dispersal. The boundary hedgerows do provide more suitable cover for foraging, hibernating and/or dispersing reptiles but will not be directly impacted by the proposals.

The presence of reptiles within the proposed works areas is considered unlikely however as some suitable habitat is present around the boundaries of site it is recommended safe working methods are put in place to ensure no reptiles are harmed. These measures should include habitat modification (e.g. cutting and maintaining vegetation to just above ground level prior to works) to discourage reptiles from occurring. During construction, any storage of piles of materials and excavated earth on the site should be kept to a minimum and away from the boundaries to deter reptiles from using them for temporary cover.

The proposed planting of new boundary hedgerows and recommended grassland management within the field surrounding site will ultimately improve the suitability of the site and adjacent habitats for reptiles.

## 5 LEGAL PROTECTION

This section briefly describes the legal protection afforded to the protected species referred to in this report. It is for information only and is not intended to be comprehensive or to replace specialised legal advice. It is not intended to replace the text of the legislation, but summarises the salient points.

### 5.1 Badger

Badger is protected in Britain under the *Protection of Badgers Act 1992* and *Schedule 6 of the Wildlife and Countryside Act 1981* (as amended). The legislation affords protection to Badgers and Badger setts, and makes it a criminal offence to:

- wilfully kill, injure, take, possess or cruelly ill-treat a Badger, or to attempt to do so;
- interfere with a sett by damaging or destroying it;
- to obstruct access to, or any entrance of, a Badger sett; or
- to disturb a Badger when it is occupying a sett.

### 5.2 Bats

All species of British bat are protected by *The Wildlife and Countryside Act 1981* (as amended) extended by the *Countryside and Rights of Way Act 2000*. This legislation makes it an offence to:

- intentionally kill, injure or take a bat;
- possess or control a bat;
- intentionally or recklessly damage, destroy or obstruct access to a bat roost; and
- intentionally or recklessly disturb a bat whilst it occupies a bat roost.

Bats are also European Protected Species listed on *Schedule 2 of the Conservation of Habitats and Species Regulations 2017* (as amended). This legislation makes it an offence to:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats in such a way as to be likely to (a) impair their ability to: (i) to survive, to breed or reproduce, or to rear or nurture their young, or (ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate; or b), to affect significantly the local distribution or abundance of the species to which they belong; and
- damage or destroy a breeding site or resting place of a bat; and
- possess, control, transport, sell, exchange a bat, or offer a bat for sale or exchange.

All bat roosting sites receive legal protection even when bats are not present.

Where it is necessary to carry out an action that could result in an offence under the regulations protecting bats and their roosts it is possible to apply for Mitigation Licence from Natural England (NE) or Natural Resources Wales (NRW). Three tests must be satisfied before this licence (to permit otherwise prohibited acts) can be issued:

Regulation 55(1)(a) states that licences may be granted to “preserve public health or public safety or 55(6)(a) other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment.”

Regulation 55(2) and 55(7)(a) states that a licence may not be granted unless “there is no satisfactory alternative”.

Regulation 55(7)(b) states that a licence, in respect of imperative reasons of overruling public interest (IROPI), cannot be issued unless the action proposed “will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range”.

### 5.3 Dormouse

The Dormouse is on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), and receives full protection under Section 9. This species is also listed on Schedule 2 of the Conservation of Habitats and Species Regulations 2010 (SI 2010/490) which gives them full protection under Regulation 41. Protection was extended by the Countryside and Rights of Way Act 2000 (the CRoW Act).

Under the above legislation it is an offence to:

- kill, injure or take an individual of such a species;
- possess any part of such species either alive or dead;
- intentionally or recklessly damage, destroy or obstruct access to any place or structure used by such species for shelter, rest, protection or breeding;
- intentionally or recklessly disturb such a species whilst using any place of shelter or protection;
- or
- sell or attempt to sell any such species.

Dormouse is included as a Priority Species in the UK Biodiversity Action Plan (UKBAP) and also as a species of principal importance for the conservation of biological diversity in England under Section 74 of the CRoW Act.

### 5.4 Nesting Birds

All species of bird are protected under *Section 1* of the *Wildlife and Countryside Act 1981* (as amended). The protection was extended by the CRoW Act.

The legislation makes it an offence to intentionally:

- kill, injure or take any wild bird;
- take, damage or destroy the nest of any wild bird while that nest is in use or being built; or
- take or destroy an egg of any wild bird.

Certain species of bird are listed on *Schedule 1* of the *Wildlife and Countryside Act 1981* (as amended) and receive protection under *Sections 1(4)* and *1(5)* of the Act. The protection was extended by the

CRoW Act. The legislation confers special penalties where the above mentioned offences are committed for any such bird and also make it an offence to intentionally or recklessly:

- disturb any such bird, whilst building its nest or it is in or near a nest containing dependant young; or
- disturb the dependant young of such a bird.

## 5.5 Great Crested Newt

Great Crested Newt is listed on *Schedule 5* of the *Wildlife and Countryside Act 1981* (as amended), and receive full protection under *Section 9*. These species are also listed as European Protected Species on *Schedule 2* of the *Conservation of Habitats and Species Regulations 2017* (as amended). Protection was extended by the *Countryside and Rights of Way Act 2000* (the CRoW Act).

Under the above legislation it is an offence to:

- kill, injure or take an individual of such a species;
- possess any part of such species either alive or dead;
- intentionally or recklessly damage, destroy or obstruct access to any place or structure used by such species for shelter, rest, protection or breeding;
- intentionally or recklessly disturb such a species whilst using any place of shelter or protection;
- or
- sell or attempt to sell any such species.

The Great Crested Newt is included as a Priority Species in the UK Biodiversity Action Plan (UKBAP) and also as a species of principal importance for the conservation of biological diversity in England under *Section 74* of the CRoW Act.

## 5.6 Common Reptile Species

Common Lizard, Grass Snake, Slow-worm and Adder are listed under *Schedule 5* of the *Wildlife and Countryside Act 1981* (as amended), in respect of *Section 9(5)* and part of *Section 9(1)*. This protection was extended by the CRoW Act.

Under the above legislation it is an offence to:

- intentionally or deliberately kill or injure any individual of such a species; or
- sell or attempt to sell any part of the species alive or dead.