

Ecological Impact Assessment of land  
at Clearedwood Field  
Aberhafesp

Newtown

Powys

SY16 3HR

(central grid ref SO0495.9324)

By Churton Ecology  
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## **SUMMARY**

### Background

Churton Ecology was instructed to carry out an Ecological Assessment of land at Clearedwood Field, Aberhafesp, Newtown, Powys, SY16 3HR (central GR SO0495.9324).

The proposal is for three holiday lodges. Access will be via an existing field gateway.

The site is approximately 0.2ha.

### Method of study

A desk study and an Extended Phase 1 habitat survey were carried out in order to assess the current ecological value of the site and to identify potential impacts and ecological constraints and make recommendations for general mitigation, compensation and further surveys, as appropriate.

### Baseline ecological conditions

There are no special sites for nature conservation in the 2km surrounds but woodland (a UK priority habitat) is located close to the site and elsewhere in the surrounds.

The site largely supports habitat of low biodiversity value. The south boundary hedgerow is of higher value and is considered to be an important ecological feature of the site. The nearby woodland and stream are considered to be important ecological feature of the site's area of influence.

Bats (roosting, foraging & commuting), Dormouse, Badger and nesting birds are considered to be important ecological features of the site and/or the site's area of influence.

### Mitigation and enhancements

With mitigation measures in place for the stream, woodland, hedgerow, bats, Dormouse, Badger and nesting birds - i) the necessary precautions in place re construction run-off or any discharges in the operational phase ii) avoidance and/or protection of root protection zones of trees and hedgerow iii) scrub loss in woodland and woodland edge kept to a minimum iv) a suitable lighting strategy and v) scrub removal outside both the bird nesting season and the Dormouse hibernation and breeding periods, see 5.1.3 - there will be no significant residual negative effects on these habitats or protected species.

With enhancements in place (planting of new native hedgerow along the west site boundary, a continued non-grazing regime in woodland areas, removing young Cypress from the

nearby woodland and installing bird boxes on nearby trees) there may be an increase (or maintenance) in the biodiversity value of the site/site surrounds.

## 1 INTRODUCTION

Churton Ecology was instructed to carry out an Ecological Assessment of land at Clearedwood Field, Aberhafesp, Newtown, Powys, SY16 3HR (central GR SO0495.9324).

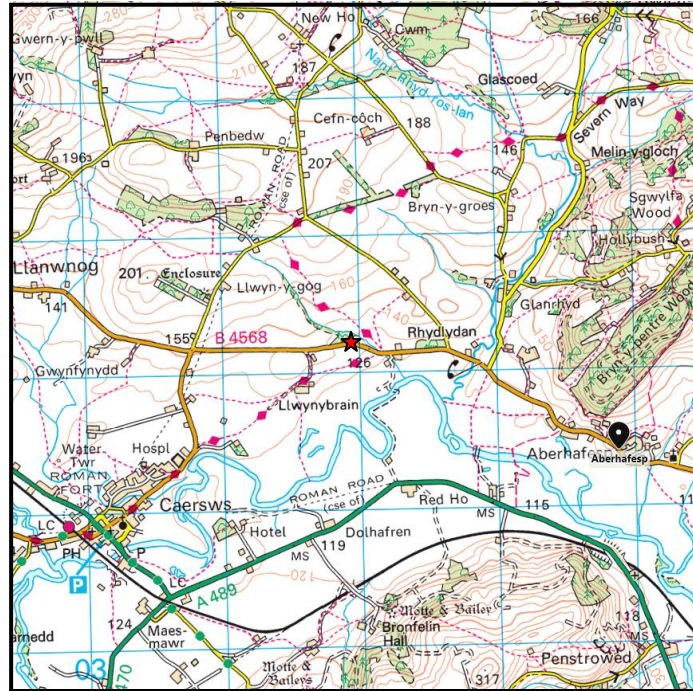


Figure 1: Site location (red star)

The proposal is for three holiday lodges. Access will be via an existing field gateway. There will be a package treatment plant for the foul drainage; the output will go into the nearby stream. The site is approximately 0.2ha.

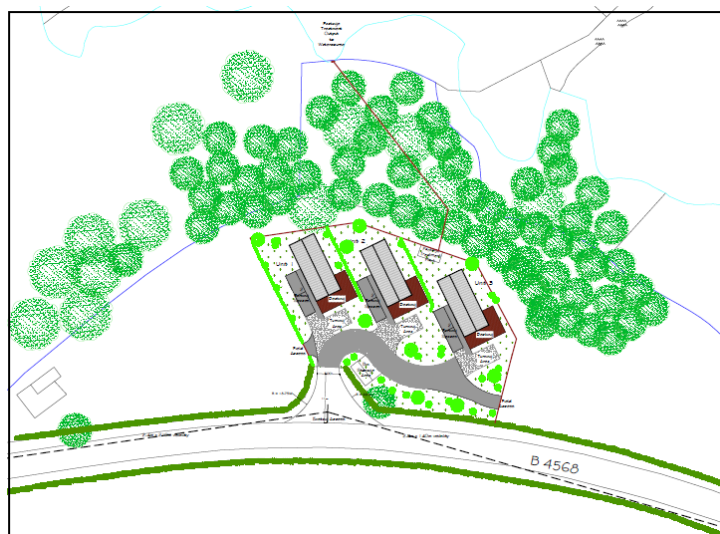


Figure 2: Site plan

The Ecological Assessment aimed to i) provide and evaluate ecological information with relevance to the proposed works, based on the results of a field survey and desk study ii) identify and assess any potential significant impacts that might occur if the site is developed (before and after mitigation) iii) identify any further survey work or mitigation measures that might be necessary prior to the validation of a planning application iv) identify appropriate enhancement measures.

## **2 METHODOLOGY**

### **2.1 Scope of the ecological appraisal**

The ecological features considered included i) all habitats within the site and the immediate surrounds, noting presence or not of priority habitats ii) presence and/or potential for presence of protected, priority or notable species within the site and the immediate surrounds iii) potential Great Crested Newt breeding habitats within 250m of the site and iv) presence of special sites for nature conservation in the wider surrounds that might be affected by the development.

### **2.2 Desk study**

A desk study was carried out to identify protected species and habitats as well as national and local designated sites within 2km of the site. Searches were conducted using the following sources:

- MAGIC maps
- Map of Local Wildlife Sites supplied by Montgomeryshire Wildlife Trust

OS maps and aerial photographs were used to identify landscape features of potential ecological interest including hedgerows, tree-lines, ponds, streams, ditches and areas of likely (semi-) natural value.

### **2.3 Habitat survey**

A habitat survey of the site and immediate surrounds was conducted on 14/2/2020 by Kate Thorne following the JNCC (2010) Phase 1 methodology. These are represented on the Phase1 habitat map in Figure 3.

In the text, plant species are referred to using their English names. Nomenclature follows Stace, C. (2011) New Flora of the British Isles.

All habitats were assessed, and their importance/value noted based on botanic diversity and/or their potential to support uncommon or rare species of fauna (e.g. axiophytes/Red Data Book species).

All hedgerows that might either be removed or otherwise negatively impacted were assessed according to the Hedgerow Regulations (1997).

## **2.4 Protected species survey**

A range of protected and priority species surveys was also carried out on 14/2/20.

### **2.4.1 Bat species**

#### *Roost survey*

Features on or immediately bordering the site were assessed from the ground for their potential to support bat roosts.

#### *Habitat Assessment*

A general habitat suitability assessment of the site and surrounds was carried out to determine their value as foraging and commuting habitat.

### **2.4.2 Great Crested Newt**

#### *Aquatic habitats*

Potential breeding water bodies in the 250m surround were sought on maps. None were noted.

#### *Terrestrial habitat*

The habitats on site and in the surrounds were assessed for their suitability to provide resting places or areas suitable for shelter or protection (referred to as terrestrial habitats). The potential for newts to traverse the site and any dispersal limitations that might interrupt such migrations were also considered.

### **2.4.3 Otter and Water Vole**

The water course near the site was assessed for its suitability to support either of these two species.

### **2.4.4 Dormouse**

Suitable woodland and hedgerow habitats were noted within or adjacent to the site.

Dispersal links and barriers to suitable woodland habitats were also considered in relation to peripheral (hedgerow) links.

#### **2.4.5 Badger**

Burrows and surface nests were sought on site and within a 50m surround (at least).

Other evidence of site use, such as latrine pits, paths, snuffle holes, feeding remains and hairs (in burrow spoil or snagged along trails) were also sought.

#### **2.4.6 Birds**

Habitats with potential to support common, priority or Schedule 1 species of bird were sought within the site and surrounds.

A list of bird species using the site and its immediate surrounds was established during the survey and, where possible, old nests were attributed to species.

#### **2.4.7 Reptiles**

The habitats within the site were assessed for their potential to support the 'widespread' reptile species. Areas were assessed for their potential to provide permanent, seasonal and/or temporary reptile habitats.

#### **2.4.8 Other protected or priority species**

The presence of other protected species was considered. However, where no suitable habitats exist and/or where no impacts can be reasonably predicted, some species can be immediately discounted. For other priority species that might require specialist survey, (e.g. invertebrates, nocturnal, cryptic or migratory animals) a botanical survey provided the basis for predicting habitat suitability and subsequently any further survey work that may be necessary.

### **3 BASELINE CONDITIONS**

#### **3.1 Designated sites**

##### **3.1.1 Statutory sites**

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

##### **3.1.2 Local Wildlife Sites and priority habitats**

There are no Local Wildlife Sites within 2km of the site.

The woodland adjacent to the site is mapped as broadleaved woodland which extends north-westwards along the stream. There is additional broadleaved woodland (11ha) at just over 1km to the north-west and other areas between 1.5km and 2km to the north (3ha), east (several areas) and south-east. Another smaller area of woodland (1.4ha) is present at nearly 1km to the north. No other priority habitats are mapped on MAGIC but hedgerows are frequent in the area and the River Severn runs west-east at 600m to the south of the site.

The river valley is associated with extensive flood plain grassland.

#### **3.2 Habitats on site and in the immediate surrounds**

##### **3.2.1 Overview and evaluation of habitats**

The site is part of a small grassland field. There is woodland along the north of the field but this is not part of the site. The field is partially open to this woodland which extends to but does not include the stream.

The south boundary of the site comprises largely native roadside hedge, with some non-native hedge flanking the site entrance.

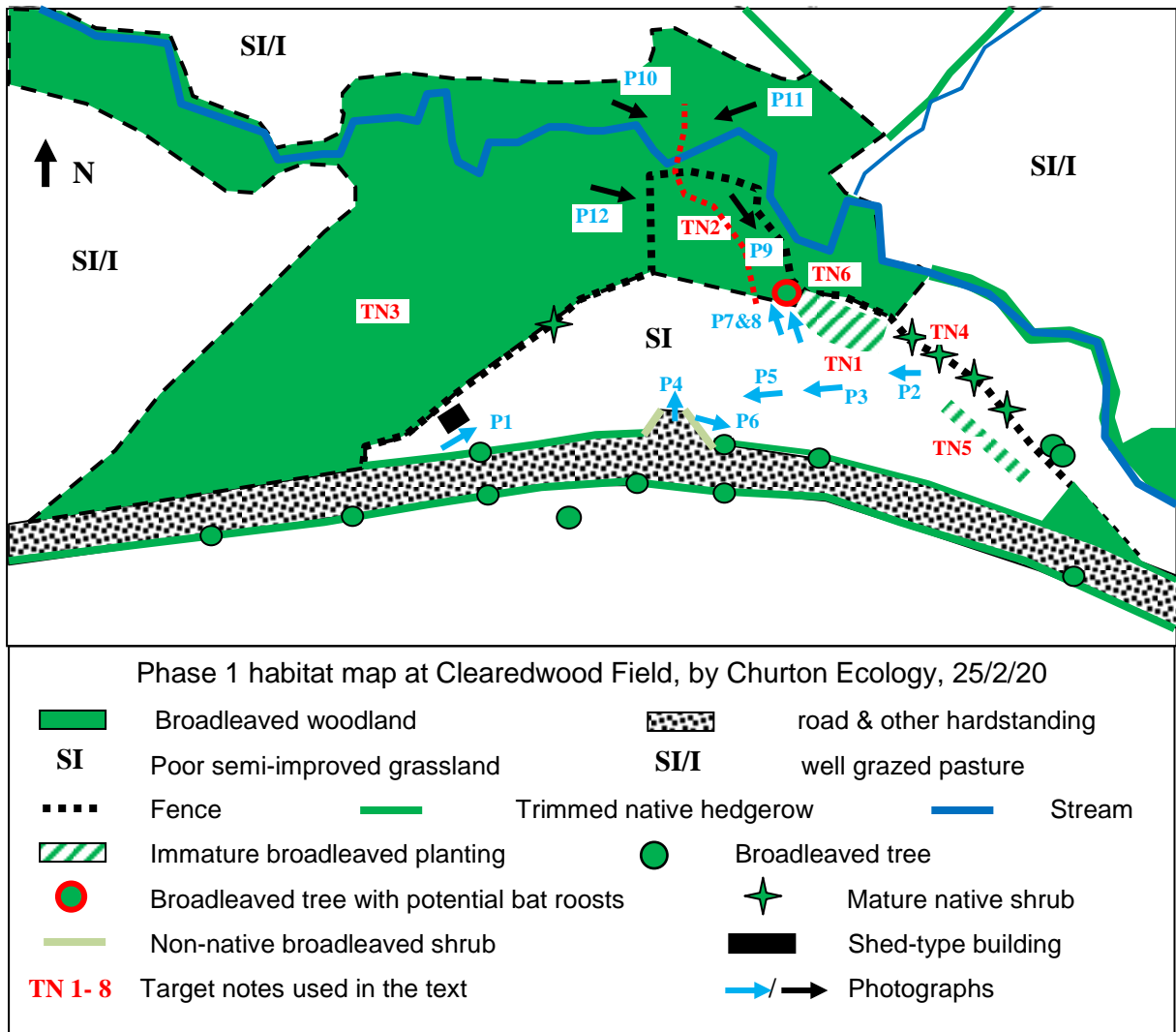
The grassland, which is poor semi-improved, is not a priority habitat and is not considered to be an important ecological feature of the site.

Hedgerow, which is predominantly native, is a UK priority habitat. The road-side hedgerow classes as an 'important' one under the Hedgerow Regulations, and is considered to be an important ecological feature of the site.

The woodland, which has some features suggestive of ancient semi-natural woodland, is a UK priority habitat, and is considered to be an important ecological feature of the site's area of influence.

The stream, as a tributary of the River Severn, which is a UK priority habitat, is considered to be an important ecological feature of the site's area of influence.





**Figure 3:** Phase 1 habitat map



**Photo 1:** whole field viewed from the west



**Photo 2:** whole viewed from the east

### 3.2.2 Site habitat descriptions

#### Poor semi-improved grassland

The grassland sward had not been recently grazed and the sward is tall and dense.

Yorkshire-fog (a grass favoured by cessation of grazing) is the dominant grass; other grass species include Fescue, Common Bent, Cock's-foot and a little Rye-grass. Several common meadow herbs are present [Clover, Daisy, Knapweed, Common Sorrel, Common Mouse-ear, Self-heal, Dandelion and Creeping Buttercup, also Lesser Celandine].

Some Soft Rush is present but is most frequent just to the west of the site. Other localised damp-loving species include Bog Stitchwort and Greater Bird's-foot-trefoil, with Yellow Sedge and Lesser Spearwort near the field corner in the west.

Nuisance species include Creeping Thistle and Dock.

Bracken and some Bramble grow in the site peripheries, extending into the woodland and hedgerow.

In the east end of the field off-site there are number of planted immature fruit and other trees (TN5) and a remnant mature hedge along the north boundary (TN4).



**Photo 3:** site viewed from the north-east  
Red arrow = roadside hedge



**Photo 4:** site viewed from the entrance

### Boundary features

#### *Road-side hedgerow*

The south/road-side hedgerow supports a number of native shrubs [Hazel, Elder, Hawthorn, Ash, Blackthorn and Dog & Field Rose], also Ivy, Honeysuckle and Bramble.

The hedge is trimmed, with 3 immature multi-stemmed trees [non-native Sycamore x 2, and Ash x 1].

At some stage the field gateway has been set back deeper into the field; this is flanked by well established non-native flowering hedge [Forsythia and Flowering Currant].

The ground flora includes some woodland species [Herb Robert, Dog's Mercury, Wood Avens and Male-fern] with a few other common hedgerow species – Greater Stitchwort,

Ground-ivy and Red Campion. The hedge runs with a parallel hedgerow, on the other side of the road.



**Photo 4:** roadside hedge west of entrance to site



**Photo 5:** roadside hedge east of entrance

### *Woodland*

Woodland and plantation is present off-site along the north side of the field, and the site is bordered by woodland edge which has frequent Bracken and some Bramble. To the north-east of the site there is an immature plantation of Poplar trees (TN1) in the same ownership and open to the site.

To the north there is an area of ancient woodland (TN2) with Oak (several mature trees) and Birch in the canopy and Holly, Sallow, Hazel, Honeysuckle and Ash saplings in the understorey, also a little non-native content – Norway Maple and Sycamore, with immature Cypress along the north edge. There are some ancient woodland indicator species in the ground flora – Primrose, Wood Sedge and Wood Sanicle – with some other woodland species [Buckler-fern, Wood Avens and Wood Dock]. This area is also in the same ownership and open to the site.

TN3 to the north-west of the site is in different ownership and is enclosed on all sides by fencing; some of the woodland is similar to TN2 but much of it is wet woodland with Ash, Alder and Birch in the canopy. Bluebell was noted in this woodland area but is likely to be widespread.

The area TN3 and much of TN2 extend to a small stream but are not open to it.



**Photo 6:** Oak (TN6) with bat roost features viewed from the SE



**Photo 7:** woodland (TN2) open to the site viewed from the SE near Oak (TN6)



**Photo 8:** TN2 woodland, viewed from the NW



**Photo 9:** stream by TN2 woodland, viewed from the SW. Red dots = Badger trail



**Photo 10:** TN2 extending to stream, viewed from the east. Red dots = Badger trail



**Photo 11:** TN2 woodland from the boundary of TN3, viewed from the NW

### **3.2.3 Habitats in the site surrounds**

The site is located in a rural setting next to the B4568 (south) between the small settlements of Aberhafesp and Llanwnog and near the larger settlement of Caersws. The site is on high ground above the Severn floodplain to the south.

### **3.2.4 Flora**

All the plant species found on site during the survey are common species, but there are some indicators of ancient woodland just off site.

## **3.3 Protected and priority species**

### **3.3.1 Bats**

#### *Roosts*

A mature Oak (TN6), with a hollow trunk, near the south boundary of the woodland (i.e. just off-site) has potential to support bat roosts.

Roosting bats may, therefore, be an important ecological feature of the site's area of influence.

#### *Foraging and commuting*

The hedgerow and woodland edge offer good foraging habitat and may be used as flyways.

Foraging and commuting bats are considered to be an important ecological feature of the site.

### **3.3.2 Great Crested Newt**

#### *Field survey*

There are no pools within 250m surround of the site where GCN might breed. It is, therefore, highly unlikely that Great Crested Newt is present on this site.

Great Crested Newt is not considered to be an important ecological feature of the site. Therefore, no further survey, impact assessment or mitigation is required.

### **3.3.3 Otter and Water Vole**

No evidence of Otter was found along the stream but water levels had recently been high and evidence may have been lost.

The fast flowing small stream (at 25m distance from the site), in association with woodland, has some suitability for Otter to shelter but foraging opportunities are likely to be poor.

The stream, with little marginal vegetation, appears unsuitable for Water Vole.

Otter and Water Vole are not considered to be important ecological features of the site or the site's area of influence. Therefore, no further survey, impact assessment or mitigation is required.

#### **3.3.4 Dormouse**

The site has some potential to support this species, hedgerow being the only habitat on the site that Dormouse might use here, although its trimmed nature makes it less suitable. Dormouse may, however, use the nearby woodland particularly as it links to other areas of woodland.

Dormouse has to be considered an important ecological feature of the site.

#### **3.3.5 Badger**

A marked trail runs from the site, through the area of older woodland that is open to the site (TN2) and across the stream – this was confirmed as a Badger trail by noting a typical footprint. Across the site there is no marked trail, although there are several minor 'runs' attributed to Rabbit. No marked trail passes southwards through the road hedge. No sett was found in any of the woodland along the north side of the field or in the nearby bank to the north of the stream.

Badger is considered to be an important ecological feature of the site.

#### **3.3.6 Reptiles**

The site has some suitability for Slow-worm whilst the sward is long.

However, given that the field is likely to have a grazing history and is isolated from any other suitable areas for reptile species, none are likely to be present on the site.

Reptiles are not considered to be an important ecological feature of the site. Therefore, no further survey, impact assessment or mitigation is required.

### **3.3.7 Birds**

#### *Field survey*

Only a very few birds were noted during the field survey due largely to the survey being outside the bird breeding season and the weather being poor. These included Raven and Buzzard.

Some bird of prey species might use woodland trees near the site for breeding but no nests were noted in tree tops near the site. Barn Owl, a specially protected species which breeds in tree holes, might nest in holes in nearby trees but this is considered unlikely as the 'rough grassland' area is much too small for its foraging needs.

The grassland being small and enclosed is unsuitable for ground nesting birds.

The site and immediate surrounds only offer suitable habitat for birds that breed in hedgerow, scrub and mature trees.

Birds that nest in hedgerow, scrub and mature trees are considered to be an important ecological feature.

### **3.3.8 Other priority species**

No evidence of or potential for other protected or priority species was noted. Some species may use the site but the site is unlikely to be essential for maintaining populations.

### **3.4 Survey limitations**

There were no significant survey limitations.

### **3.5 Further survey recommendations**

None are required.

### **3.6 Personnel**

Kate Thorne has about twenty years experience surveying sites for development and conservation purposes, covering Ecological Impact Assessment, botanical and vegetation surveys, and surveys for the range of protected species most typically relevant to planning proposals. She holds NE and NRW bat and Dormouse survey and mitigation licences and is an accredited agent to survey for Great Crested Newt. She holds an IdQ in Vascular Plants (Natural History Museum) and has been a botanical tutor for the Field Studies Council and Keele University (also the BSBI county recorder for vascular plants in Montgomeryshire) and

has years of experience assessing and monitoring vegetation. She is also experienced in breeding bird survey techniques.

## **4 ASSESSMENT OF IMPACTS AND EFFECTS**

This section identifies and describes all the potential impacts (with significant effects) which might arise from development of the site in the absence of avoidance measures and/or mitigation, only on important ecological features (habitats or species) of the site and the site's area of influence identified in the 'Baseline Conditions'. Impacts cover those in the construction and operational phases.

The significance of any residual effects is further discussed with mitigation in place, and/or suggested enhancements.

The important ecological features identified at this site include i) the stream near the site ii) woodland adjacent to the site iii) hedgerow iv) bats v) Dormouse v) Badger and vi) breeding birds (birds that use hedgerow, scrub and mature trees only).

### **4.1 Habitat assessment**

#### **4.1.1 Designated sites and priority habitats in the surrounds**

##### *Potential (pre-mitigation) impacts*

There are no special sites for nature conservation in the 2km surround, and the site is of a size and type of development that is highly unlikely to have any significant negative effect on any surrounding priority habitats, but see stream below.

##### *Significance of residual effects after avoidance and mitigation*

Not applicable.

#### **4.1.2 Site habitats**

##### *Potential impacts before and after mitigation*

There will be permanent loss of approximately 0.2ha of non priority habitat (poor semi-improved grassland). The impact of this habitat loss is unlikely to have a significant negative effect on biodiversity.

Loss of hedgerow for access is not envisaged as the access will use the existing field gateway; this has already been altered to improve visibility. If further widening of the access



is required, with a small loss of hedgerow, there may be issues with Dormouse and breeding birds, see below under species.

There may be an adverse effect on the stream if the necessary precautions are not in place regarding construction run-off, and drainage during the operational phase. However, the planned package treatment plant for the foul drainage will provide a high quality output into the watercourse.

The hedgerow, and mature trees along the woodland edge and within the woodland, may be compromised by construction works, if these features are not avoided and/or protected. There is a large gap where the treatment plant is proposed between mature trees, which also offers a route to the lower land (for the pipe) where only smaller trees and shrubs are present. The small diameter pipe from the treatment plant to the stream (and the plant itself) is, therefore, thought unlikely to affect root protection zones of any of the mature trees near its route.

#### *After enhancement*

Planting of native hedgerow along the west, continued cessation of grazing in the woodland in the same ownership and removal of non-native immature Cypress from the woodland, will enhance the nearby woodland.

## **4.2 Protected species**

### **4.2.1 Bats**

#### **Potential (pre-mitigation) impacts**

There will be no loss of roosts and no loss of foraging habitat or flyways as a result of development.

However, the boundary hedgerow, woodland edge and Oak (TN6) may be compromised by inappropriate external lighting, with potential adverse effects on tree roosts, flyways and foraging habitat.

#### *Significance of residual effects after mitigation*

With avoidance and mitigation in place i) no or minimal lighting during the construction phase and ii) a sensitive lighting plan in the operational phase, there will be no significant negative effect on biodiversity.

*After enhancement*

With the nearby woodland enhanced by the i) continued non-gazing regime and ii) removal of all Cypress trees, the site will be enhanced for bats.

**4.2.2 Dormouse***Potential (pre-mitigation) impacts*

Any hedgerow or scrub removal from woodland edge or woodland has the potential to disturb, kill or injure Dormouse.

Loss of hedgerow is not envisaged at this site but there may be some minor loss of woodland/woodland edge scrub/shrub.

*Significance of residual effects after mitigation*

With mitigation in place (scrub/.shrub removal kept to a minimum and carried out only when Dormouse is active and not breeding and outside its hibernation period), there is highly unlikely to be any adverse effect on this species during works or in the longer term.

**4.2.3 Badger***Potential (pre-mitigation) impacts before and after mitigation*

Badger activity may be compromised by inappropriate external lighting, but this is unlikely to have a significant negative effect on this species. A sensitive lighting strategy will anyway be in place for bats

**4.2.4 Birds***Potential (pre-mitigation) impacts*

Loss of hedgerow and trees is not envisaged but there may be minor loss of scrub along the woodland edge and in the woodland. Works (in the construction phase) that may damage or destroy a nest of any wild bird whilst it is in use must be avoided during any development as this would constitute an offence.

*Significance of residual effects after mitigation*

With mitigation in place - removal of hedgerow and scrub outside the breeding season - there will be no significant effect on biodiversity and any offence against breeding birds will be avoided.

*After enhancement*

The provision of new native hedgerow (and internal garden shrubs) and bird boxes on nearby trees will enhance the site for hedgerow/scrub nesting birds.

**4.3 Legal status****Bats**

All UK bat species are protected under both UK and European Law. Essentially this makes it unlawful to; deliberately capture, injure or kill a bat; intentionally or recklessly disturb a bat whilst it occupies a roost or deliberately cause disturbance to a bat or group of bats; damage or destroy the roosting site of a bat; intentionally or recklessly obstruct access to a bat roost.

Notably, legal protection gives absolute protection to bat roosts and their continued functionality, regardless of deliberate, intentional or reckless action. Legal protection also extends to seasonal roosts which are not always occupied by bats throughout the year.

Disturbance caused through excessive noise or lighting and/or alterations to the landscape could potentially impact on bat roosting, foraging and/or commuting habitats and may have legal implications with regards European disturbance/roost deterioration laws. It is therefore the duty of the relevant competent authority to take habitat severance, disturbance and land use change issues and their potential for impact on bat populations into consideration when assessing applications for the relevant consent.

**Dormouse**

Dormouse is protected under both UK and European Law. Essentially this makes it unlawful to; deliberately capture, injure or kill a Dormouse; intentionally or recklessly disturb an Dormouse whilst it uses a place of rest, shelter or protection or deliberately cause disturbance to an Dormouse or group of Dormice; damage or destroy a breeding site or resting place of a Dormouse; intentionally or recklessly obstruct access to any structure or place that it uses for shelter or protection.

Notably, legal protection gives absolute protection to breeding and resting places used by Dormouse, regardless of deliberate, intentional or reckless action.

Disturbance caused through excessive lighting and/or alterations to the landscape could potentially impact on the foraging and/or transitional habitats of Dormouse and may have legal implications with regards European disturbance laws. It is therefore the duty of the Planning Authority to take lighting and land use change issues and their potential for impact on Dormouse populations into consideration when assessing planning applications.

### Badger

Badgers are protected by UK Legislation under The Protection of Badgers Act 1992. The Act is primarily based upon animal welfare and - unlike most animal protection legislations - it is not an indication of species rarity. Essentially the law makes it an offence to; wilfully kill, injure, take, possess or cruelly ill-treat a badger, or attempt to do so; interfere with a sett by damaging or destroying it; obstruct access to, or any entrance of, a badger sett; or disturb a badger when it is occupying a sett. To receive legal protection a sett must be in 'current or recent use', as defined by the presence or absence of observable field signs.

### Birds

With the exception of Schedule 1 listed bird species, which receive a higher level of protection against breeding disturbance, all common species of bird are protected during their breeding activities under the Wildlife and Countryside Act 1981.

Essentially, this makes it an offence to intentionally take, damage or destroy the nest of any wild bird whilst that nest is occupied or being built; intentionally take or destroy the egg of any wild bird.

## **5 PROPOSED AVOIDANCE MEASURES, MITIGATION AND ENHANCEMENT**

### **5.1 Avoidance measures and mitigation**

#### **5.1.1 Site habitats**

The stream must be safeguarded from construction run-off, and drainage during the operational phase – a package treatment plant with a pipe running out to the stream is planned for the latter.

The cabin 'gardens' must be fenced along the north to safeguard the woodland. However, controlled access to the woodland would be acceptable

The hedgerow, and mature trees along the woodland edge, must be protected during construction by Heras fencing which should run 2m to the north of the road hedge and south of the woodland canopy overhang.

#### **5.1.2 Bats**

In general all external lighting must be minimised and fixed on the lowest column practical with light spread kept well below the horizontal using cowls, hoods, screens or simply by downward directionality to avoid illuminating (semi-)natural habitats in the site peripheries

(existing woodland edge and hedgerows, and new hedgerows). Bulbs must be low intensity with a narrow or UV reduced spectrum (<150W, high or low pressure sodium types or LEDs). LED bulbs with a warm white spectrum (ideally <2700Kelvin) should be used to reduce the blue light component. PIR systems must be set on a short timer and responsive only to larger moving objects. There must be no allowance for permanent security lighting.

Note: refer to Bats and Artificial Lighting in the UK (Bat Conservation Trust) for further information <https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/>

### **5.1.3 Dormouse**

Any removal of woodland and woodland edge Bramble and/or shrub must be carried out between September and late October (inclusive) or in late February/March, outside the breeding season and prior to/after the core (Dormouse) hibernation period. These works may need to be preceded by a search of such habitat and/or overseen, both by a licensed ecologist.

### **5.1.4 Badger**

The bat mitigation re external lighting also applies to Badger

### **5.1.5 Birds**

The nests of actively breeding birds should be avoided during the works period; this will largely apply to the woodland edge scrub..

If nests are encountered then works should cease or avoid that area until the young have departed the nest. Construction works that may affect nesting birds, including tree and scrub removal, should be carried out as follows:

- During the nesting season between March 1<sup>st</sup> and July 31<sup>st</sup> after an ecologist has inspected the hedgerow, tree, shrub or field margins for signs of nesting birds. This is highly likely to result in delays to the project and it is not recommended.
- Between 31<sup>st</sup> July and March 1<sup>st</sup> - outside the breeding season - when birds are unlikely to be nesting. This is the most suitable or preferred means of mitigation.
- After bird access into the hedgerow, tree or shrub has been suitably obstructed prior to March 1<sup>st</sup>. This may work better for hedgerow or shrub removal but is impractical for use with trees and the field margins. Typically connected lengths of debris netting can be draped over the hedgerow/shrub and pegged tightly into the ground either side.

### 5.1.6 Other

The following points are generally considered to be good practice procedures:

If any trench is left open overnight then it will be left with a sloping end or ramp to provide an escape route for any animal that may fall in.

If pipe work is left open overnight, then the open end will be capped off to prevent animals seeking refuge and becoming trapped when work resumes.

## 5.2 Enhancements

### *Hedgerow and shrub/small trees*

Planting of native hedgerow along the west boundary of the site will create a new wildlife corridor linking to existing ones.

Additional planting of garden shrubs will also enhance the site for wildlife, particularly if shrubs/small trees are used which provide nectar and fruit.

Native shrub species for the new hedgerow should include species such as *Corylus avellana* (Hazel), *Crataegus monogyna* (Hawthorn), *Ilex aquifolium* (Holly), *Acer campestre* (Field Maple), *Euonymus europaeus* (Spindle), *Cornus sanguinea* (Dogwood) and *Viburnum opulus* (Guelder Rose).

### *Grassland*

The continuation of twice yearly grass cutting in the remainder of the field will improve the grassland for invertebrates. It will also maintain the non grazing regime of the woodland, thus allowing natural regeneration of trees and shrub and a spread of the woodland ground flora species.

### *Bird boxes*

Bird boxes, placed on nearby trees, could include ones suitable for small birds (e.g. Tit and Robin). Schwegler bird boxes (or other makes of long-lasting woodcrete construction) of different sizes (to suit different species of small birds) are recommended, as follows, and should be placed at a height of 1.5 – 3m. Unless there are trees or buildings which shade the box during the day, face the box between north and east, thus avoiding strong sunlight and the wettest winds.

1B Schwegler nest box with 26mm hole x 1

1B Schwegler nest box with 32mm hole x 1 (2-3m height)

2H Schwegler open fronted box x 1 (below 2m, well hidden in vegetation).

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