



# **LAND TO THE SOUTH WEST OF 40 HILL LANE, BARNHAM, WEST SUSSEX**

## **PRELIMINARY ECOLOGICAL ASSESSMENT REPORT**

**Draft Report**

May 2020

|                         |                                 |
|-------------------------|---------------------------------|
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## Executive Summary

This report has been prepared by CC Ecology Ltd on behalf of Ms Christine Chamberlain in relation to a planning application for the development of a Site known as Land to the South West of 40 Hill Lane, Barnham, West Sussex. The proposal for the site includes the construction of a sand school in place of a large modern agricultural barn, as well as native hedgerow planting around the boundaries of the Site. A planning application was submitted to Arun District Council (reference no. BN/22/20/PL) and the principal has been accepted although ecological surveys were requested to fully support the application.

A Preliminary Ecological Appraisal of the Site was undertaken by Matthew Clarke of CC Ecology Ltd on Thursday 7<sup>th</sup> May 2020.

None of the habitats within the Site boundary are considered to have any real intrinsic nature conservation value although there is limited potential for protected species to be present in existing vegetation.

The boundary hedgerows are considered to have potential to support dormice, nesting birds as well as foraging and commuting bats. It is recommended that these habitats are retained, protected and enhanced as part of the proposals.

The habitat has some potential to support the more common and widespread species of reptile. Recommendations are made to continue to manage the height of the grassland sward with careful strimming in the area that this is currently taking place. Further vegetation clearance and ground clearance should be carried out under a working method statement and under the supervision of a suitably qualified ecologist to ensure compliance with the relevant legislation protecting reptiles.

Recommendations for enhancing the site for biodiversity as a whole, in line with local biodiversity objective and planning policy have been included within this report.

# 1. Introduction

## Background

- 1.1 A planning application for the construction of a Sand School on Land to the South West of 40 Hill lane, Barnham (the Site) was submitted to Arun District Council and a request was made to support the application with an ecological survey of the Site.
- 1.2 CC Ecology Ltd was commissioned by Chris Pope of Pope Stevens Architecture, on behalf of Ms Christine Chamberlain in May 2020 to undertake a Preliminary Ecological Appraisal of the Site in order to support the planning application this was carried out by Matthew Clarke 7 May 2020.
- 1.3 The results of this survey are included within this report in addition to recommendations for mitigation and enhancements for biodiversity.

## Development Proposals

- 1.4 Current proposals for the Land to the South West of 40 Hill Lane, Barnham rear include the construction of a Sand School on land previously occupied by polytunnels. The proposals also include native hedgerow planting along the northern and southern boundaries of the Site.
- 1.5 The Sand School is intended for private use.
- 1.6 For the indicative layout for the proposed scheme refer to **Map 1**.

## Site Context

- 1.7 Land to the South West of 40 Hill Lane includes an area of land owned by the residents of 40 Hill Lane. The Site is approximately 1.9 ha located immediately to the south of Hill Lane, at ordnance survey grid reference SU96020369. The general area immediately surrounding the site is low density residential housing along the road backed by plant nurseries, with open countryside comprised mainly of arable fields.
- 1.8 There are no statutory designated nature conservation sites with 5km of the Site boundary. The closest statutory nature conservation site is Climping Beach Site of Special Scientific Interest (SSSI) located approximately 5.8km away to the south east of the Site. Other Sites located within the vicinity of the Site include Arundal Park SSSI located 6.5km to the North East, Fairmile Bottom SSSI located 5.6km to the North East, Bognor Reef SSSI located approximately 5.6km to the south west and further to the South West Pagham Harbour Special Protection Area (SPA), 9.7km away.

## Relevant Legislation and Policy Implications

### *Relevant Legislation*

- 1.9 The key legislative provisions of relevance to this report with respect to the development proposals and their potential effects on ecological features are listed below, with further detail provided in **Appendix 1**.

- The Habitats and Species Regulations 2017
- The Wildlife and Countryside Act 1981
- The Countryside and Rights of Way (CROW) Act 2000
- The Natural Environment and Rural Communities (NERC) Act 2006

### *Biodiversity Action Plans*

- 1.10 The UK Biodiversity Action Plan (BAP) was the Government's response to the 1992 Convention on Biodiversity (The Rio Convention), with the aim of halting the loss of biodiversity in the UK. The new UK post-2010 Biodiversity Framework replaces the previous UK Biodiversity Action Plan and is the government's response to the new strategic plan on the United Nations Convention on Biological Diversity (CBD). Although the UK Post-2010 Biodiversity Framework supersedes the UK BAP, the UK BAP lists of priority species and habitats still remain an important reference source for identifying habitats and species of principal importance within England, Wales, Northern Ireland and Scotland. Within England Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 list species and habitats of principal importance for the conservation of biodiversity.

### *Planning Implications*

- 1.11 The Government has set out its policies for the protection and enhancement of biodiversity in the planning system in The *National Planning Policy Framework (NPPF)* which states that plan policies and planning decisions should aim to maintain, and enhance, restore or add to biodiversity and geological conservation interests'. The key principles of the NPPF describe the importance of avoiding, mitigating and compensating for adverse effects.
- 1.12 The Land to the South West of 40 Hill Lane comes under Arun District Council. Part of Arun District is under the South Downs National Park and is governed by the National Park Planning policy. The area that Land South West of 40 Hill Lane is located is outside of the National Park. The development for the Arun District that falls outside of the National Park comprises of the:
- The West Sussex Waste Local Plan 2014;
  - The Joint Minerals Local Plan 2018;
  - The Arun Local Plan 2011-2031 (July 2018);
  - 'Made' Neighbourhood Plans
- 1.13 Planning policy of relevance to the proposals in respect of ecology at Land South West of 40 Hill Lane are laid out in the Arun Local Plan 2011-2031 (July 2018), Chapter 17: Natural Environment:

### *Policy ENV SP1*

### *Natural Environment*

*Arun District Council will encourage and promote the preservation, restoration and enhancements of biodiversity and the natural environment through the development process and particularly through policies for the protection of both designated and non-designated sites. Where possible it shall also promote the creation of new areas for habitats and species. In relation to designated sites, development will be permitted where it*

*protects sites listed in Tables 17.1-17.7 that are recognised for the species and habitats contained within them.*

### *Policy ENV DM3*

#### *Biodiversity Opportunity Areas*

##### *Development Shall:*

- a. Retain and sympathetically incorporate locally valued and important habitats, including wildlife corridors and stepping stones*
- b. Be designed in order to minimise disturbance to habitats*

*Development proposals that do not reasonably address opportunities for enhancing these through their design, layout and landscaping or access/management shall not be permitted. Where a development scheme would result in habitat loss, mitigation measures will be proposed as part of the proposed scheme and such measures agreed with the Local Planning Authority prior to the determination of any planning application. Within Biodiversity Opportunity Areas (BOAs) identified on the Policies Maps or where likely to have an impact on species or habitats within the BOAs, any application for planning permission shall include a properly conducted survey of the presence of that species and habitat and impact(s) that development may have on the BOA.*

### *Policy ENV DM5*

#### *Development and Biodiversity*

*Development schemes shall, in the first instance, seek to achieve a net gain in biodiversity and protect existing habitats on site. They shall also however incorporate elements of biodiversity including green walls, roofs, bat and bird boxes as well as landscape features minimising adverse impacts on existing habitats (whether designated or not). Development schemes shall also be appropriately designed to facilitate the emergence of new habitats through the creation of links between habitat areas and open spaces. Together, these provide a network of green spaces which serve to reconnect isolated sites and facilitate species movement.*

*Where there is evidence of a protected species on a proposed development site, planning applications shall include a detailed survey of the subject species, with details of measures to be incorporated into the development scheme to avoid loss of the species. This involves consideration of any impacts that will affect the species directly or indirectly, whether within the application site or in an area outside of the site, which may be directly affected by the proposals. All surveys shall be carried out at an appropriate time of the year and shall be undertaken by a qualified and, where appropriate, suitably licensed person.*

*All developments shall have regard to Natural England's standing advice for protected species.*

## 2. Methodology

### Introduction

- 2.1 Methodology for the evaluation of the Site and assessment of the potential impacts has been based on the Guidelines for Ecological Impact Assessment (EcIA) in the UK and Ireland published by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2016). Protected species and vegetation surveys have all been based upon best practice guidelines published by various organisations in respect of the species group being surveyed.

### Defining the Zone of Influence

- 2.2 In order to define the spatial scope of the Preliminary Ecological Appraisal it is necessary to predict the likely zone of influence of the development proposals for the Land to the South West of 40 Hill Lane. The zone of influence of a proposed development is defined by CIEEM's EcIA guidelines as '*...the areas/(ecological) resources that may be affected by the biophysical changes caused by a development, both in the construction and operational phases*'.
- 2.3 The types of activities that might occur as a result of the development of the Site and the likely biophysical changes (in the absence of mitigation) include:
- a. Ground and vegetation clearance will be required to facilitate the construction of the sand school; this may have an impact on vegetation with the potential to support protected species; and
  - b. Increase of noise, dust and lighting during the construction and operation phases of the development.
- 2.4 The site falls within the SSSI Impacts Risk Zones which is used to identify risks to protected sites such as SSSI's SPA's and SAC's as a result of development. LPA's are asked to consult Natural England on developments that are located within the Impact Risk Zone that fall within certain categories. With reference to Natural England's MAGIC Map construction of a Sand School or similar activities are not included within the list of developments where LPA's are requested to consult Natural England.
- 2.5 The proposed development is relatively low impact both during the construction and operational phases it is therefore unlikely that the zone of influence will extend much beyond the Site boundary.

### Desktop Study

- 2.6 A desktop study was undertaken to obtain information regarding protected species on the site and within the zone of influence. This involved searching the National Biodiversity Network website, assessing the known distribution of bats in Britain (Richardson, 2001), as well as interrogating Natural England's "Nature on the Map" (MAGIC) to establish protected sites and habitats within the zone of influence of the proposals.
- 2.7 A records request was made to Sussex Biodiversity Records centre to obtain records of protected and notable species within 2km of the site boundary. Records were not yet returned prior to completing this report.

## **Phase 1 Habitat Survey**

- 2.8 A Preliminary Ecological Appraisal walkover survey of the Site was undertaken on 7 May 2020 by Matthew Clarke of CC Ecology Ltd. The survey is essentially an ecological appraisal of the site. The habitats and features within the site boundary were mapped and classified, in addition any evidence of or potential for protected species to be on the site or within the zone of influence was noted.

## **Bats**

### *Ground Level Tree Inspection*

- 2.9 A daytime inspection for bats was carried out in combination with the PEA. The trees and buildings were examined for evidence that bats may be using, or previously have used, them for roosting. Such evidence may include:
- The presence of bats;
  - Bat droppings within the building or on external surfaces on and/or immediately adjacent to the tree; and
  - Staining or scratch marks around suitable bat roost locations..
- 2.10 The inspection of trees noted any roost potential such as woodpecker holes, peeling bark, splits and cracks. Any trees with notable potential roosting opportunities for bats were graded according to the level of potential they have to support bats.
- 2.11 Any buildings on Site that were located within the zone of influence of the proposals were externally inspected and were graded (negligible, low, moderate or high) as to their potential to support roosting bats.

## **Reptiles**

- 2.11 During the PEA, habitats within the site boundary were assessed for their potential to support reptiles. The habitats considered to be suitable for reptiles were mapped. No further targeted surveys for these species have been conducted.

## **Dormice**

- 2.12 Habitats within and adjacent to the Site boundary were considered for their potential to support dormice. The species of boundary and woody habitats were noted and the composition of species, as well as links to other patches of suitable habitat in the surrounding area was considered. During the desktop study, aerial maps were referred to assess how well linked any suitable habitats on the site are to surrounding habitats in the wider landscape.

## **Amphibians**

- 2.13 During the PEA the site was searched for any ponds. Ordnance survey maps and aerial photos were assessed for the presence of ponds within 500m of the boundary. The terrestrial habitats within and adjacent to the site boundary were assessed for their

suitability for amphibian species and habitats were mapped and described during the PEA survey.

### **Badgers**

- 2.14 The Site and its environs was searched for any evidence of badger activity as well as setts. Any signs were mapped, and any holes were classified according to their use.

### **Survey Constraints**

- 2.15 Bats will often roost in places that are inaccessible to the surveyor. During the inspection of trees due regard was paid to the noting of features that have the potential to support roosting bats and if any potential roost features were noted the tree was graded as to its potential to support roosting bats, in line with best practice guidelines.
- 2.16 A PEA is not targeted to any particular species and although it may be possible to determine the presence of protected species within the Site boundary it is no indication of the likely absence of any protected species. In line with best practice guidelines the habitats within and adjacent to the Site boundary were assessed for their potential to support protected species and more targeted protected species surveys recommended if considered necessary.
- 2.17 The record search commissioned of Sussex Biological Record Centre had not be returned prior to completing this report although an extensive search for records was additionally made using online resources. If possible the report will be updated whilst it is planning, although it is considered unlikely that the assessment of the Site will change considerably.

### 3. Survey results and evaluation

#### Designated Sites

- 3.1 No Statutory Designated Nature Conservation Sites are located within 5km of the Site boundary.

#### Habitats and Features

- 3.2 Refer to **Map 2** for the habitats and features present within the Land to the South West of 40 Hill Lane.
- 3.3 The application site is located to the south of Hill Lane in includes all of the land owned by the resident of 40 Hill Lane. Whilst the area included within the planning application includes the whole area, the main impacts are located on the northern half of the Site with the sand school being constructed here. However, the broad habitats across the whole site are described within this report.
- 3.4 The Site is bound by fence lines on all four sides and additional native hedgerow and tree lines located outside of the fence lines. These are comprised of species such as Hawthorn *Crataegus monogyna*, Ash *Fraxinus excelsior*, Willow *Salix sp.*, and Blackthorn *Prunus spinosa*. The hedgerows and tree lines are low in species diversity but are continuous around the boundaries of the site apart from gaps where two access points are present leading from Hill Lane.
- 3.5 Outside of the western and southern boundaries a public footpath is present. Along the southern boundary is an old canal which is dry.
- 3.6 Much of the land is comprised of species poor semi-improved grassland which are currently used as horse paddocks and grazed and will largely remain the same following the development. The Site is subdivided up with fences into various paddocks. Identification of plants within the grazed paddock was difficult because the sward is maintained very short due to the grazing but includes Perennial Rye Grass *Lolium perenne*, Yorkshire Fog *Holcus lanatus*, Cocksfoot *Dactylis glomerata*, Creeping Buttercup *Ranunculus repens*, Dock *Rumex obtusifolius*, White Clover *Trifolium repens*, and Ragwort *Jacobaea vulgaris*.
- 3.7 In the north west section of the Site some buildings are present. A large corrugated metal modern agricultural barn, and wooden shed, stables and field shelters. These buildings are proposed to remain intact and are described in more detail below.
- 3.8 The area where the sand school is proposed to be positioned includes the framework for three old polytunnels with the main structures no longer present. In and around the north western section of the Site the area is comprised of semi-improved grassland. Prior to the survey the majority of this area had been strimmed with more tussocky grassland and ruderals located around the edges of the Site. Species noted include Perennial Rye Grass, Yorkshire Fog, Cocksfoot, Meadow Foxtail *Alopecurus pratensis*, Red Campion *Salvia dioca*, Creeping buttercup, Stinging Nettle *Urtica dioca*, Hogweed *Heracleum sphondylium*, Greater Stitchwort *Stellaria holostea*, Common Dock, and Cleavers *Galium aparine*.

- 3.9 Within the central area where the old polytunnels are located are some earth mounds which have been come colonised with grassland species and ruderals.
- 3.10 A small orchard is present comprising of four trees, a mixture of apple and walnut. In addition there are scattered young willow trees located in and around the area.

### **Bats**

- 3.8 None of the trees within the site boundary were found to have bat roost potential. However, the site and the hedgerows bounding the Site do have potential to support commuting and foraging bats.
- 3.9 A large modern agricultural barn is located within the Site boundary (although no being directly impacted upon by the proposals) and this was externally inspected during the PEA walkover survey.
- 3.10 The large modern agricultural barn is constructed with corrugated tin on both walls and roof. The roof is pitched and gabled and most likely single skin with no crevices. No evidence of roosting bats was noted and the building was considered to have very low potential to support roosting bats. A small number of gaps where corrugated metal sheets overlap at the gable ends could potentially be used by occasional single bats, although these features are of very low suitability.

### **Badgers**

- 3.11 The Site was searched for any evidence of badger activity as well as the presence of badger setts.
- 3.12 No badger setts were noted and no areas of thick scrub are present that could mask badger setts. It is likely that if Badgers are present within the surrounding area that they would use the horse paddocks for foraging.

### **Nesting Birds**

- 3.13 The hedgerows bordering the site and young scattered trees within the boundary of the site are likely to provide suitable bird nesting opportunities for common garden bird species.

### **Reptiles**

- 3.14 Records of Slow Worm *Anguis fragilis*, Common Lizard *Zootoca vivipara*, Adder *Vipera berus* and Grass Snake *Natrix natrix*, all within 3km of the Site boundary, with records for Slow Worm the most common.
- 3.15 Whilst much of the Site is heavily grazed and unsuitable for reptiles the areas of longer tussocky grassland bordering the trimmed area in the top north western corner of the Site are more suitable for reptiles and therefore have moderate potential to support the more common and widespread species of reptile, such as Slow Worm, Common Lizard and Grass Snake. The earth mounds located within the area formally housing polytunnels are also suitable and piles such as these may have the potential to support hibernating reptiles

during the winter. Any patches of longer grassland and ruderal habitat may also support reptiles if present in the surrounding area.

### **Dormice**

- 3.17 Records of dormice are present within 5km of the Site. The nearest record is noted approximately 2.8km to the north west of the Site for a European Protected Species Licence granted in respect of this species. Other records are located north of Barnham.
- 3.18 The hedgerows and treelines that bound the Site are of native fruiting species that could provide both a food source and cover for nesting Dormice. From looking at aerial maps of the Site and the surrounding area, hedgerows surrounding the site do seem to link to the surrounding landscape although habitats to the south of the Site look more unsuitable for this species, comprising of large arable fields and more sparse field boundaries with likely defunct, less well connected hedgerows. Habitats to the north, on the other side of Hill lane are more suitable with smaller fields, thicker more well-connected hedgerows and a landscape inter-dispersed with small patches of woodland.
- 3.19 Hill Lane may present a small barrier to dispersal for Dormice to access habitats around the Site boundary, although if Dormice are present in the surrounding landscape there is potential for them to utilise the boundaries of the Site.

### **Amphibians**

- 3.20 Records of Great Crested Newt are present within 5km of the Site, although are relatively sparse and located to the south in more coastal location more than 3km from the Site boundary.
- 3.21 Various drains and ditches are present within the surrounding landscape although no water is present within the Site boundary; the old canal that runs along the southern boundary of the site is dry and doesn't ever hold water. The closest pond is located approximately 310m to the west of the Site.
- 3.22 Habitats within the Site boundary are suitable for terrestrial Great Crested Newts and other amphibians. These are the areas of more tussocky grassland and ruderals as well as the hedgerow bases. The paddocks are grazed to heavily and the strimmed area would not be suitable in its current state. There is limited potential for this species to be present within the majority of the Site

- 3.23 In addition, it is considered unlikely that Great Crested Newts would reach the site. Radio-tracking studies have shown that adult great crested newts typically remain within 100m of their breeding pond (Jehle 2000) with a maximum dispersal of 150m (Jehle & Arntzen 2000). In addition, drift fencing and pitfall trap capture rates decline significantly at distances over 50m from the breeding pond and are rarely effective at distances over 100m from a breeding pond (Cresswell & Whitworth 2004). Whilst it is still possible for Great Crested Newts to disperse the 300m distance from the nearest pond the habitats in the Site boundary are not optimal for terrestrial newts; no other ponds are located within commutable distance for Great Crested Newts and therefore it is unlikely that Great Crested Newts would disperse across the Site to reach other breeding sites within a metapopulation.
- 3.24 Taking all of these aspects into consideration it is considered unlikely that Great Crested Newts are present within the site boundary.

### **Other species**

- 3.25 No other protected or notable species were recorded during the survey.

## 4. Potential impacts in the absence of mitigation

### Introduction

- 4.1 This section details the potential ecological impacts of the proposal in the absence of mitigation. The potential activities are identified with reference to the scheme, as identified in **Section 1**. Recommended mitigation and enhancements to ensure that the favourable conservation status of protected species is maintained, and that enhancements are made for biodiversity in compliance with the relevant legislation and planning policy, is detailed in **Section 5**.

### Impacts to Sites and Habitats

- 4.2 No valuable habitats within the site boundary will be affected by the proposed development.
- 4.3 There are no proposed changes to the access and therefore the bounding hedgerows will remain intact with no changes. Additional native hedgerow planting is proposed along the southern and northern boundaries which will provide an enhancement to the Site for biodiversity.

### Impacts to Fauna

- 4.4 The hedgerows are considered to have the highest value to biodiversity and as well as potential to support protected species such as nesting birds, Dormice, and commuting and foraging bats. This habitat will remain intact and therefore impacts on these species will be reduced or negligible. In the absence of mitigation, any increased external lighting to the Site may impact on protected species utilising these habitats by impacting on the well-connected dark corridor that is currently present.
- 4.5 Removal of the young trees that are present in and around the proposed development area may have an impact on nesting birds. The disturbance of birds at the nest and damage or removal of nest sites would result in an offence under the Wildlife and Countryside Act 1981. In addition, the removal of vegetation would result in a net loss of nest sites and foraging areas within the local area.
- 4.6 The creation of the Sand School will have an effect on the area of land located in and around where the old polytunnels were once present. Habitats within this area have the potential to support the more common and widespread species of reptile. In the absence of mitigation, the clearance of habitats within the Site boundary may result in harm to reptiles if they are present and this would cause an offence under the Wildlife and Countryside Act 1981.

## 5. Opportunities for mitigation and enhancement

### Introduction

- 5.1 In order for the proposals to comply fully with applicable legislation and planning policy, it is necessary to mitigate or compensate for the ecological impacts as identified in **Section 4**. The NPPF also places an onus on developments to provide ecological enhancements and to meet local biodiversity objectives wherever possible. Within this section mitigation measures are recommended to ensure that sensitive habitats and protected species are considered during the construction and operation phases of the development, in compliance with applicable legislation and planning policy.

### Mitigation

#### *Birds*

- 5.2 All species of bird are protected at the nest. Any development that could affect nesting birds should take place outside of the nesting bird season, usually considered March-August (though this is dictated by regional variations in weather and temperature conditions). Works that need to be undertaken within the nesting bird season should be undertaken immediately following an early morning bird survey to assess whether the works area is being used by nesting birds at the time of the works.
- 5.3 If nesting opportunities within scrub vegetation is removed it is recommended that to compensate for this a variety of bird boxes are installed around the site on retained barns, sheds and boundary trees.

#### *Dormice and Bats*

- 5.4 The hedgerows around the Site are considered to have potential to support Dormice (albeit not as high potential as habitats to the north of Hill Lane) as well as foraging and commuting bats.
- 5.5 The boundary habitats are proposed for retention with no changes to the existing hedgerows. New native hedgerows are proposed to run alongside the northern and southern hedgerows. It is recommended that a good mix of native fruiting hedgerows species are used to ensure that the Site is enhanced for biodiversity in line with local and national planning policy. In time these new hedgerows will provide additional food sources and cover for wildlife as well as increase connectivity around the Site and within the wider landscape for a range of species.

- 5.6 It is recommended that any new external lighting is of low level and directional (shining inwards) to avoid light spill to the more sensitive boundary habitats.

#### *Reptiles*

- 5.7 Habitats within the Site boundary are considered to be largely unsuitable for reptiles within the paddocks and area around the proposed Sand School when management of the grassland has taken place. It is recommended that work to manage the length of the grassland continue with regular strimming up until the construction of the Sand School commences. There are still patches of habitat within the area of proposed work that have potential to support reptiles and therefore it is recommended that any ground clearance

works are carried out under a working method statement and supervised by a suitably qualified ecologist to ensure that any reptiles present at the time of works are moved out of harms way to areas of retained suitable habitat within the Site boundary.

- 5.8 It is recommended that the boundary habitats comprising of longer grass and ruderals are retained and enhanced for reptiles with once annual cut with a strimmer in the autumn. Further enhancements within these areas for reptiles and biodiversity as a whole could include the provision of log piles and patches seeded with native wildflowers.

#### *Amphibians*

- 5.9 Whilst is considered highly unlikely that Great Crested Newts are located within the Site boundary, it is recommended that works are carried out under a precautionary working method statement. The same methods employed to destructive search the area in respect of reptiles should be used to carefully search all natural and artificial refugia during the ground clearance works. Any vegetation and ground clearance should be carried out under the supervision of a suitably qualified ecologist. In the unlikely event that Great Crested Newts are found work should stop immediately and the advising ecologist will contact Natural England.

### **Enhancements**

- 5.10 In addition to the installation of bird boxes on trees within the Site some simple measures can be taken to ensure that the proposals include enhancements for biodiversity as a whole, in line with national and local planning policy. The impacts of the proposals on ecological features is low and within the mitigation strategy described above for all protected species there is scope to positively enhance the site for biodiversity as a whole. The mitigation described above does not only mitigate and compensate for impacts on species but also increases and enhances the habitats available within the site boundary.
- 5.11 Recommended enhancements include:
- The planting of native, fruiting hedgerow species and the net increase of hedgerow habitat;
  - The creation of log piles;
  - The seeding of wildflower seed mix; and
  - The installation of bat and bird boxes on mature trees.

### **Residual Impacts**

- 5.12 Provided the mitigation recommended above is implemented in full, there should be no residual impacts to protected species and habitats as a result of the proposed works at the Land to the South West of 40 Hill Lane. By providing additional habitats as well as retaining and managing the more valuable habitats within the site boundary the favourable nature conservation status of protected and priority species will be retained, in addition to enhancing the site for biodiversity as a whole.

## 6. Conclusions and recommendations

### Conclusions

- 6.1 Within the site boundary no habitats to be impacted upon were considered to have any real intrinsic nature conservation value.
- 6.2 The boundary hedgerow habitats have the potential to support Dormice, nesting birds as well as foraging and commuting bats. It is recommended that these features are retained, protected and enhanced as part of the proposals.
- 6.3 Any removal of vegetation and ground clearance works should be carried out under the supervision of a suitably qualified ecologist and under a working method statement in order to comply with the Wildlife and Countryside Act 1981 in respect of reptiles.
- 6.4 Recommendations for mitigation and enhancement have been made and are listed below.

### Recommendations

- Retention, protection and enhancement of boundary vegetation;
  - Installation of bat and bird boxes on mature trees and retained barns;
  - Creation of log piles as invertebrate habitat;
  - The seeding of wildflower seed mix;
  - Any external lighting to shine inwards to the site and to be of a low lux level to avoid impacts on protected species that may use the boundary hedgerows.
- 6.5 Provided the mitigation recommended above is implemented in full, there should be no residual impacts to ecological features as a result of this development.

## 6. References

CIEEM (2016). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal, 2nd edition*. Chartered Institute of Ecology and Environmental Management, Winchester

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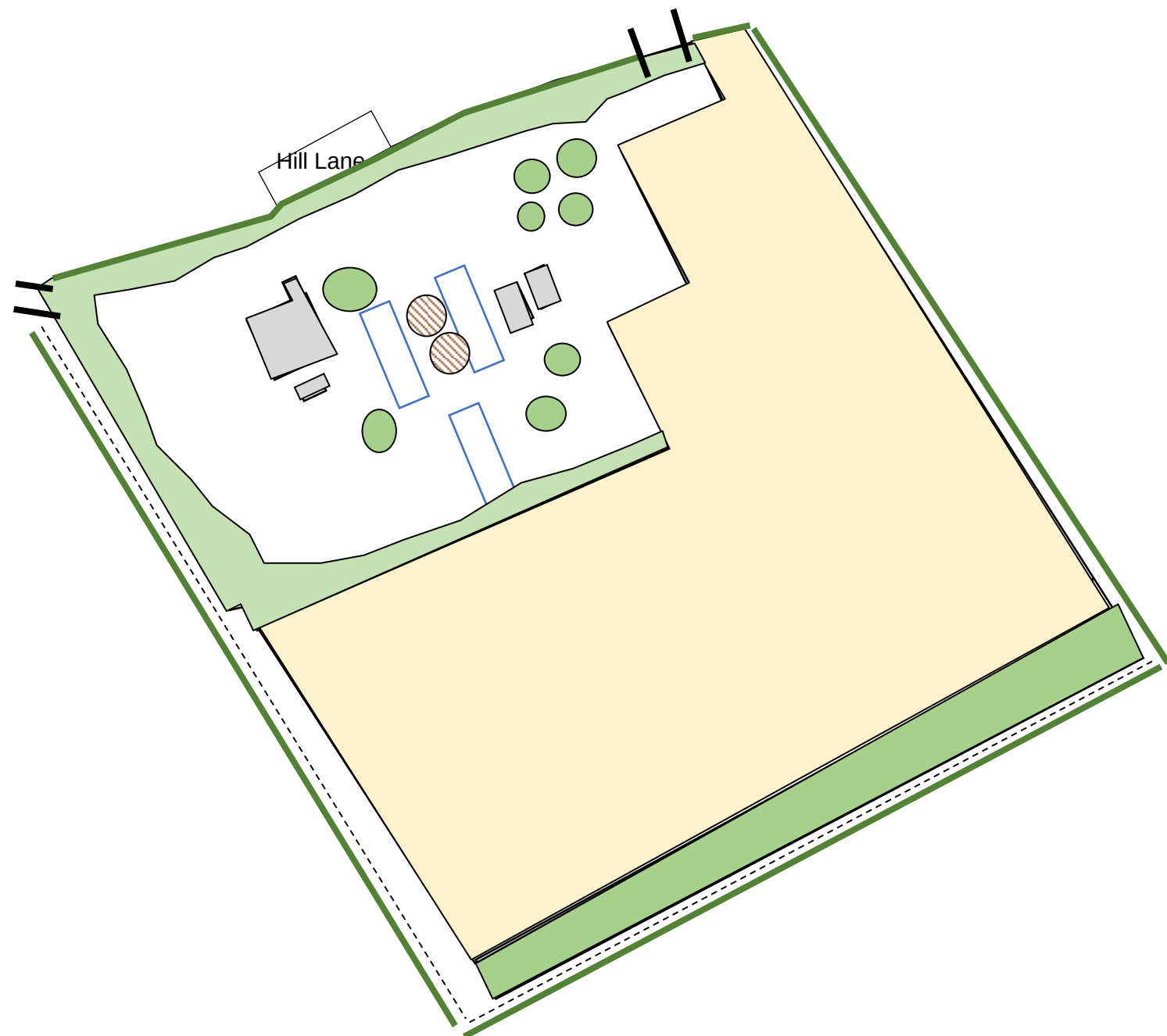
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# Map 1: Proposals



Map 2: Habitats and Features



| Key |                                                      |
|-----|------------------------------------------------------|
|     | Dried up canal                                       |
|     | Semi-improved Species poor grassland. Gazed Paddocks |
|     | Semi-improved grassland, managed with strimming      |
|     | Buildings                                            |
|     | Trees (mix of willow and fruit trees)                |
|     | Tussock semi-improved grassland                      |
|     | Native hedgerow                                      |
|     | Footpath                                             |
|     | Access track                                         |
|     | Framework for former polytunnels                     |
|     | Earth mounds                                         |

## Appendix 1

### Relevant Legislation

#### **CONSERVATION OF HABITATS AND SPECIES REGULATIONS 2017**

The Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations) transpose Habitats Directive into UK legislation. The Habitats Regulations provide for the designation and protection of European Sites and European Protected Species. European Sites include Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), which form part of the Natura 2000 network of protected areas across Europe.

European Protected Species (EPS) are those listed under Schedule 2 of the Habitats Regulations and include dormouse, great crested newt, otter and all species of bat. The regulations prohibit the deliberate capture, killing or disturbance of any EPS; it is also an offence to damage or destroy a breeding site or resting place of any of these species. In order to carry out a lawful operation (e.g. development work which has full planning permission) that may result in an offence under the Habitats Regulations, it is necessary to obtain a licence from Natural England. EPS Licences will only be granted after Natural England has been satisfied that there are no satisfactory alternative and that there will not be any adverse impacts on the favourable conservation status of the species.

#### **WILDLIFE AND COUNTRYSIDE ACT 1981**

The Wildlife and Countryside Act 1981 is the principle piece of legislative protection of wildlife in Great Britain. Various amendments have occurred since the original enactment. The Wildlife and Countryside Act contains both habitat and species protection. Certain bird, animal and plant species are afforded protection under Schedules 1, 5 and 8 of the Act. Measures for the protection of the countryside, National Parks, Sites of Special Scientific Interest (SSSIs) are also included within the Act.

#### **COUNTRYSIDE AND RIGHTS OF WAY ACT 2000**

The Countryside and Rights of Way (CROW) Act 2000 adds to the protection afforded in the WCA to SSSI's and other important sites for nature conservation. In addition, under the Act it became a criminal offence to "recklessly disturb" Schedule 1 nesting birds and species protected under Schedule 5 of the Wildlife and Countryside Act. It also enabled heavier penalties on the conviction of wildlife offences.

#### **THE NATURAL ENVIRONMENT AND RURAL COMMUNITIES ACT 2006**

The Natural Environment and Rural Communities (NERC) Act 2006 improved wildlife protection by amending the WCA. The main function of the NERC Act was to raise the profile of biodiversity amongst public authorities. Section 40 (S40) of the Act places a 'Biodiversity Duty' on all public bodies to have regard to the conservation of biodiversity when carrying out their normal functions.

## Appendix 2

Photos



**Land to the South West of 40 Hill Lane, Barnham**  
Preliminary Ecological Appraisal Report



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