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PROFESSIONAL ECOLOGICAL SOLUTIONS



ECOLOGY

TREE PROTECTION FENCING

SITE PREPARATION & CLEARANCE

HABITAT MANAGEMENT & ENHANCEMENT

Report	Preliminary Ecological Appraisal
Site Name	Land at Allington Lane, Chartwell Green, West End, SO30 3HN
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Executive Summary

Ecosupport Ltd was instructed to undertake a Preliminary Ecological Appraisal (PEA) of land located along Allington Lane. This was required to identify any potentially important ecological features on site and assess the potential impacts towards the change in use of the site and construction of stables. As part of this assessment, the following surveys were undertaken:

- Walkover survey with UK Habs habitat assessment (June 2024)
- Desk based search (including data from the local records centre) (June 2024)

The site lies adjacent to a SINC and priority habitat and is considered likely to support commuting and foraging Bats, Badgers and Hedgehogs along with low potential for reptiles. As a result, a proportionate mitigation strategy has been produced to ensure all legally protected and/or notable species are appropriately protected during construction and operation. In addition, Ecological Enhancements have been specified.

1.0 INTRODUCTION

1.1 Brief

Ecosupport Ltd was commissioned to undertake a Preliminary Ecological Appraisal (PEA) of land located along Allington Lane. The purpose of the PEA was to assess any ecological impacts that may arise as a result of future development. The objectives of the survey were as follows:

- Identify and classify any priority habitats;
- Assess the ecological value of the site;
- Identify any signs of protected species and potential features that may support them

NB: If the works do not take place within 18 months of this report¹ then the findings of this survey will no longer be considered valid and may require updating.

1.2 Site Description & Location

The site comprises grassland located along Allington Lane, Chartwell Green, West End, SO30 3HN (centred on OS grid reference SU 47433 16179) (**Fig 1**). The wider environment is rural consisting of agricultural land, grazed pasture and patches of woodland.

Figure 1. Location of the site (GoogleMaps, 2024).



¹ <https://cieem.net/wp-content/uploads/2019/04/Advice-Note.pdf>

1.3 Proposed Development

Proposals entail the change of use of the site from agricultural land to equestrian and erection of stables (Fig 2).

Figure 2. Proposed Development.



2.0 RELEVANT LEGISLATION AND POLICY

2.1 Legislation

2.1.1 *The Conservation of Habitats and Species Regulations (Amendment) (EU Exit) 2019*

The Conservation of Habitats and Species Regulations 2017 transposes the EU Habitats Directive (Council Directive 92/43/EEC) into UK domestic law. It provides protection for sites and species deemed to be of conservation importance across Europe. It is an offence to deliberately capture, kill or injure species listed in Schedule 2 or to damage or destroy their breeding sites or shelter. It is also illegal to deliberately disturb these species in such a way that is likely to significantly impact on the local distribution or abundance or affect their ability to survive, breed and rear or nurture their young.

The Conservation of Habitats and Species Regulations 2019 (EU Exit) makes changes to the three existing instruments which transpose the Habitats and Wild Birds Directives so that they continue to work (are operable) upon the UK's exit from the European Union (EU). These include The Conservation of Habitats and Species Regulations 2017 and The Conservation of Offshore Marine Habitats and Species Regulations 2017. This instrument also amends section 27 of the Wildlife and Countryside Act 1981 to ensure existing protections continue. The intention is to ensure habitat and species protection and standards as set out under the Nature Directives are implemented in the same way or an equivalent way when the UK exits the EU.

In order for activities that would be likely to result in a breach of species protection under the regulations to legally take place, a European Protected Species (EPS) licence must first be obtained from Natural England.

2.1.2 *The Wildlife and Countryside Act (1981) (as amended)*

This is the primary piece of legislation by which biodiversity is protected within the UK. Protected fauna and flora are listed under Schedules 1, 5 and 8 of the Act. They include all species of bats, making it an offence to intentionally or recklessly disturb any bat whilst it is occupying a roost or to intentionally or recklessly obstruct access to a bat roost. Similarly, this Act makes it an offence to kill or injure any species of British reptiles and also makes it an offence to intentionally kill, injure or take any wild bird or to take, damage or destroy their eggs and nests (whilst in use or being built).

The Wildlife & Countryside Act (1981) states that it is an offence to 'plant or otherwise cause to grow in the wild' any plant listed in Schedule 9 part II of the Act. This list over 30 plants including Japanese Knotweed (*Fallopia japonica*), Giant Hogweed (*Heracleum mantegazzianum*) and Parrot's Feather (*Myriophyllum aquaticum*).

2.1.3 *The Countryside and Rights of Way Act (2000)*

This Act strengthens the Wildlife & Countryside Act by the addition of "reckless" offences in certain circumstances, such as where there is the likelihood of protected species being present. The Act places a duty on Government Ministers and Departments to conserve biological diversity and provides police with stronger powers relating to wildlife crimes.

2.1.4 Natural Environment and Rural Communities Act (2006)

Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006 requires that public bodies must have due regard to the conservation of biodiversity with a particular regard to species and habitats considered to be of greatest conservation importance. This means that Planning authorities must consider biodiversity and the list of species and habitats of importance when planning or undertaking activities.

Section 41 of the Act lists species and habitats found in England which are considered to be priority species and were identified as requiring action under the UK Biodiversity Action Plan. The latest update to the list of Section 41 habitats of principal importance under the *UK Post – 2010 Biodiversity Framework* includes 56 listed habitats including arable field margins, traditional orchards, hedgerows and several specific habitats within the categories of coastal, grassland, freshwater, inland rock, marine, wetland and woodland. The latest update to the list of Section 41 species of principal importance was in May 2014 and now includes a list of 943 species covering a range of species including vertebrates, terrestrial and marine invertebrates, plants and fungi.

2.1.5 Protection of Badgers Act

The Protection of Badgers Act (1992) relates to the welfare of Badgers (*Meles meles*) as opposed to nature conservation considerations. The Act prevents:

- The wilful killing, injury, ill treatment or taking of Badgers and / or
- Interference with a Badger sett
- Damaging or destroying all or part of a sett
- Causing a dog to enter a set and
- Disturbing a Badger while it is occupying a sett

Provisions are included within the Act to allow for the lawful licensing of certain activities that would otherwise constitute an offence under the Act.

2.1.6 The Environment Act (2021)

The Environment Act 2021 is the UK's new legislation for environmental protection in the UK, which includes protection of water quality, clean air, and biodiversity among other key protections. This Act provides the government power to set targets to reach long-term aims relating to the environment, which will be periodically reviewed and updated. This legislation also establishes a new environmental watchdog organisation, the Office for Environmental Protection (OEP), which will hold the government accountable on environmental issues.

Part 6 of The Environment Act relates to nature and biodiversity. This section makes provision for biodiversity net gain to be a condition of planning permission in England and a requirement for nationally significant infrastructure projects. Biodiversity net gain will require maintenance for a period of at least 30 years after the completion of enhancement works to be achieved.

The legislation also includes updates to existing environmental legislation, such as the NERC Act 2006, to strengthen biodiversity enhancement rather than just conservation and includes a requirement for local, or relevant, authorities to publish biodiversity reports. Further, The

Environment Act places a requirement on responsible authorities to prepare local nature recovery strategies, which will outline nature conservation sites and priorities and opportunities for recovering or enhancing biodiversity within the local area. Within England, the legislation also provides Natural England with the power to publish 'species conservation strategies' and 'protected site strategies' to identify activities that may affect a species or site's status and outline their opinions on measures that would be appropriate to avoid, mitigate or compensate any adverse impacts.

2.2 Policy

The National Planning Policy Framework (NPPF) (2023) sets out the Government's planning policies for England and how these should be applied. It provides a framework within which locally-prepared plans for housing and other development can be produced.

Chapter 15 'Conserving and enhancing the natural environment' states that planning policies and decisions should contribute to and enhance the natural and local environment by protecting and enhancing sites of biodiversity, the wider benefits from natural capital and ecosystem services, minimising impacts on and providing net gains for biodiversity.

The NPPF states that plans should distinguish between the hierarchy of international, national and locally designated sites and that the scale and extent of development within all these designated areas should be limited, while development within their setting should be sensitively located and designed to avoid or minimise adverse impacts on the designated areas.

To protect and enhance biodiversity plans should:

identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and stepping stones that connect them and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation;

and promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species and identify and pursue opportunities for securing measurable net gains for biodiversity.

The NPPF states determining planning applications, local planning authorities should apply the following principles:

a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

b) development on land within or outside a SSSI, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of SSSI;

c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists;

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

3.0 METHODOLOGY

3.1 Desk Study

3.1.1 Data Search

A data request was submitted to Hampshire Biodiversity Information Centre (HBIC) to identify nearby records of legally protected and notable species, priority habitat and designated sites.

3.1.2 Waterbodies

Any ponds located within 500m of the proposed development were searched for using Ordnance Survey and HBIC maps and available aerial images.

3.2 Field Survey

3.2.1 Habitats

The field survey work which forms the basis of the findings of this report was carried out by Tristanna Boxall BSc (Hons) MCIEEM (Senior Ecologist with Ecosupport Ltd) on the 27th June 2024.

Habitats on site pre-development were identified in accordance with the categories specified for a UK Habitats survey, using Habitat Definitions Version 2.0 (UKHab Ltd., 2023). This was chosen as an appropriate habitat categorisation system as it fits within the Biodiversity Metric 4.0 calculation. Where appropriate primary habitat codes were used although for some habitat types, the use of secondary habitat codes was necessary as well.

3.2.2 Badger

The site was thoroughly searched for evidence of use by Badgers (*Meles meles*), with the specific aim of identifying the presence and location of any setts. In accordance with the *Badgers and Development: A Guide to Best Practice and Licensing* (Natural England, 2011). Evidence of Badgers could include latrines, dung pits, feeding remains and foraging evidence, trails and setts.

3.3 Assessment Methodology

3.3.1 Introduction

The methodology for the assessment of the likely ecological effects of the proposed development is based on CIEEM's *Guidelines for Ecological Assessment in the UK* (CIEEM 2018). Although this assessment does not constitute a formal Ecological/ Environmental Impact Assessment, the CIEEM guidelines provide a useful framework for assessing ecological impacts at any level.

3.3.2 Valuation

Features of ecological interest are valued on a geographic scale. Value is assigned on the basis of legal protection, national and local biodiversity policy and cultural and/or social significance.

3.4 Limitations

There is not considered to be any limitations of the survey work, with the walkover being conducted during the optimum time of year for vascular flowering plants. However, this survey does not constitute a full site assessment for invasive plant species such as Japanese Knotweed (*Fallopia japonica*).

4.0 ECOLOGICAL BASELINE

4.1 Desk study

4.1.1 Designated Sites / Priority Habitat

No designated sites and/or priority habitats were recorded within the redline boundary however the site is adjacent to wet and lowland mixed deciduous woodland Priority Habitat (**Fig 3**), the majority of which is classified as a SINC Copse by Oaklands House (**Fig 4**). Copse by Oaklands House SINC is classified due to the presence of 'ancient semi-natural woodland' / 'wet woodland'.

Figure 3. Near-by Priority Habitats (HBIC, 2024).

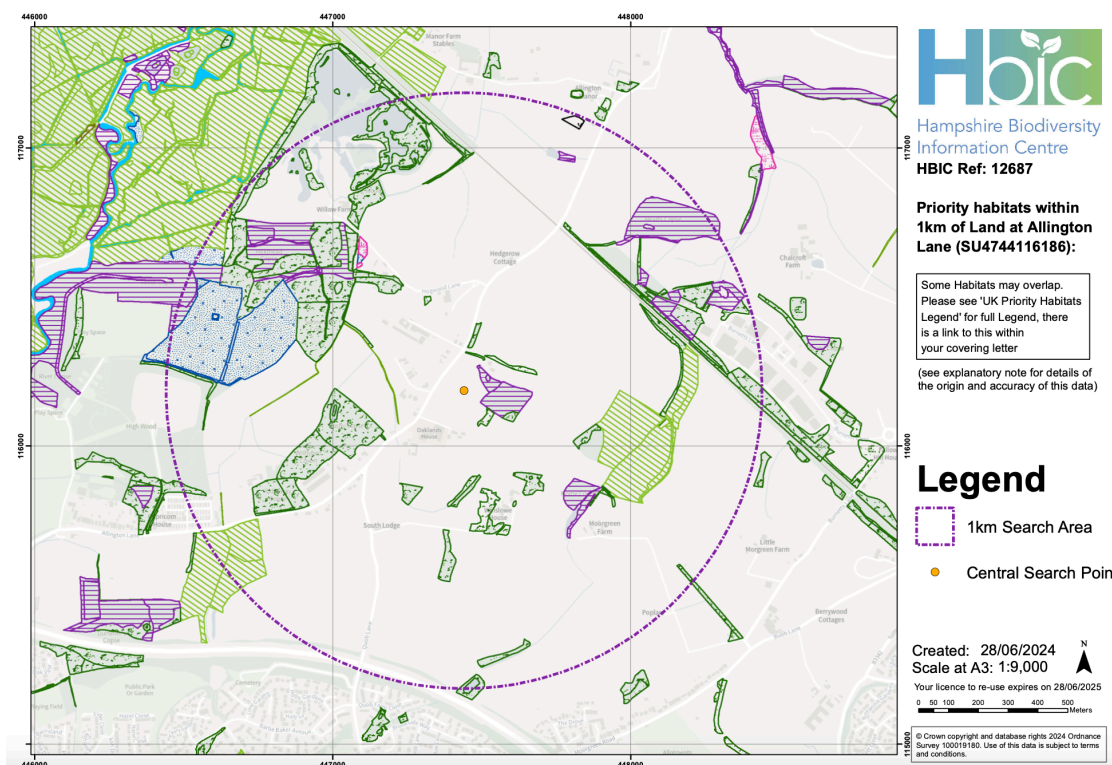
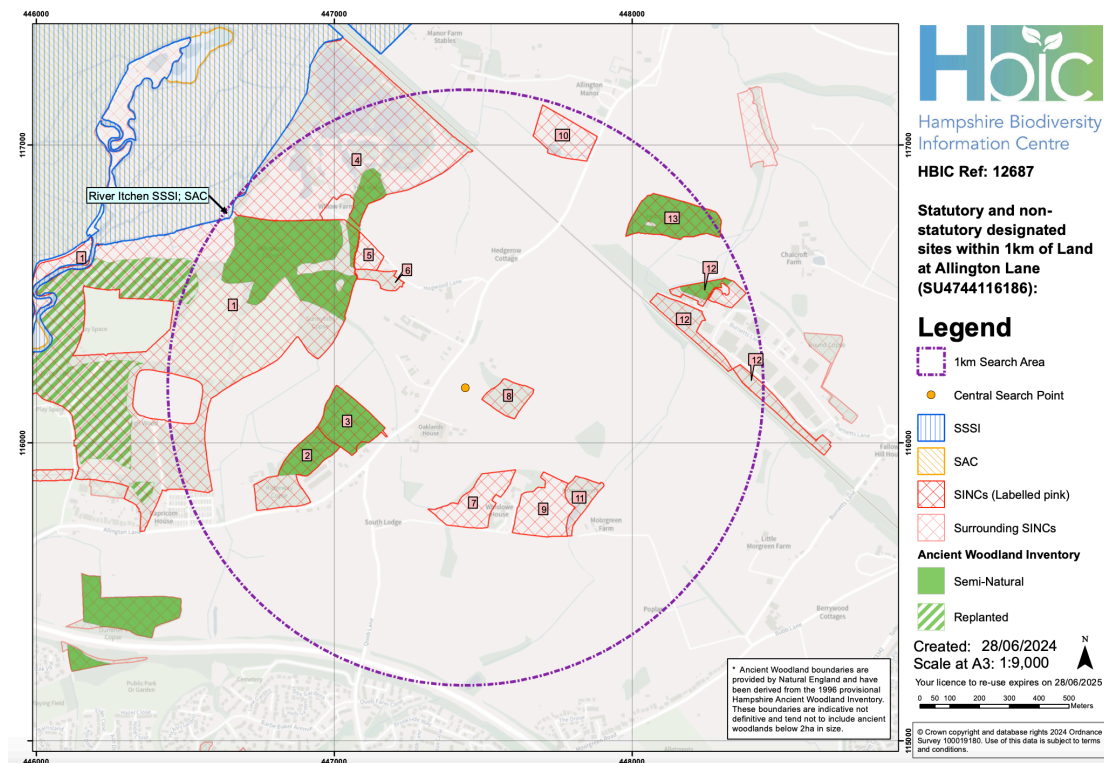
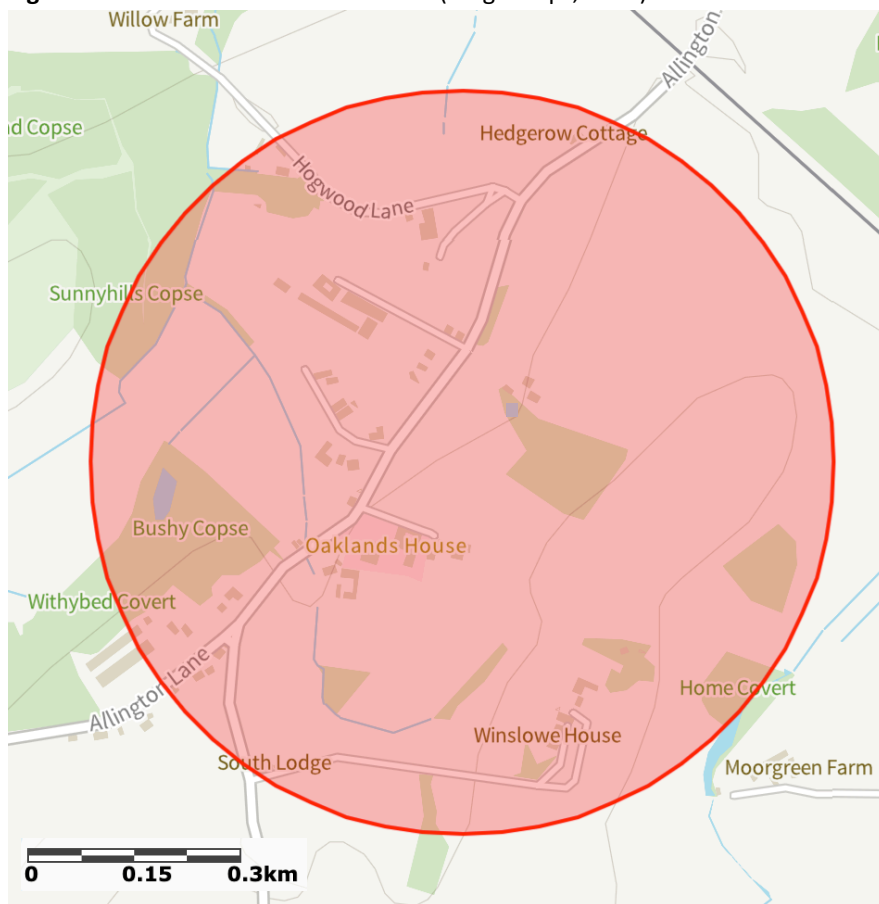


Figure 4. Near-by SINCs (HBIC, 2024).

4.1.2 Waterbodies

Two ponds were identified within 500m of the site (**Fig 5**). A pond lies within the adjacent woodland, 70m at the closest point but 155m from the proposed stable construction. An additional pond was recorded 344m to the west across Allington Lane.

Figure 5. Ponds within 500m of the site (MagicMaps, 2024).



It was not possible to gain access to the pond within the woodland and it was not visually accessible from the redline boundary therefore it was not possible to undertake a HSI assessment.

4.2 Habitat Survey Results

The vegetation within the site has been described below using the UK Habs Habitat Definitions Version 2.0 (UKHab Ltd., 2023). The below species noted should not be considered an exhaustive list and instead refer to dominant, characteristic and other noteworthy species associated with each community within the survey area. The habitat comprises Modified Grassland (g4) with scattered trees (32) and areas of tussocky grassland (128) and scattered scrub (10) and bracken (12).

4.2.1 Modified Grassland (g4)

The site consisted of modified grassland (g4) which had recently been cut (**Fig 6**). Species within the main body of the field were limited to common grasses including Tufted Hair Grass (*Deschampsia cespitosa*), Yorkshire Fog (*Holcus Lanatus*), Compact Rush (*Juncus conglomeratus*), Meadow Buttercup (*Ranunculus acris*), Clover (*Trifolium Sp.*) and Bird's foot Trefoil (*Lotus corniculatus*).

Figure 6. Recently cut grassland (June, 2024).



Within the centre of the field a brash pile was noted along with a patch of unmanaged grassland (**Fig 7**).

Figure 7. Patch of unmanaged grassland within centre of the site (June, 2024).



Along Allington Lane a Willow (*Salix Sp.*) tree line was recorded along with a tussocky grassland understorey (**Fig 8**). Here species recorded included Nettles (*Urtica dioica*), Willowherb (*Epilobium Sp.*), Hogweed (*Heracleum sphondylium*) and some scattered Bramble. Three mature Oak trees were also recorded here.

Figure 8. Longer grassland trip running parallel to Allington Lane (June, 2024).



Along the woodland areas edge dense and scattered Bracken was noted (**Fig 9**) along with some areas of longer grassland (**Fig 10**).

Figure 9 and 10. Woodland edge (June, 2024).



4.3 Bats

4.3.1 Nearby Records

The data search returned records of Serotine, Daubenton's, Whiskered, Natterer's, Noctule, Common and Soprano Pipistrelle and Brown Long-eared bats.

4.3.2 Onsite Assessment

The site provides habitats suitable for commuting and foraging bats.

4.4 Badgers and Hedgehogs

4.4.1 Nearby Records

The data search returned a single record of Badgers and Hedgehogs within 2km of the site.

4.4.2 Onsite Assessment

The habitats on site offer opportunities for both commuting and foraging Badgers and also Hedgehogs although no evidence was found.

4.5 Reptiles

4.5.1 Nearby Records

Records of Slow Worm and Grass Snake were returned in the data search.

4.5.2 Onsite Assessment

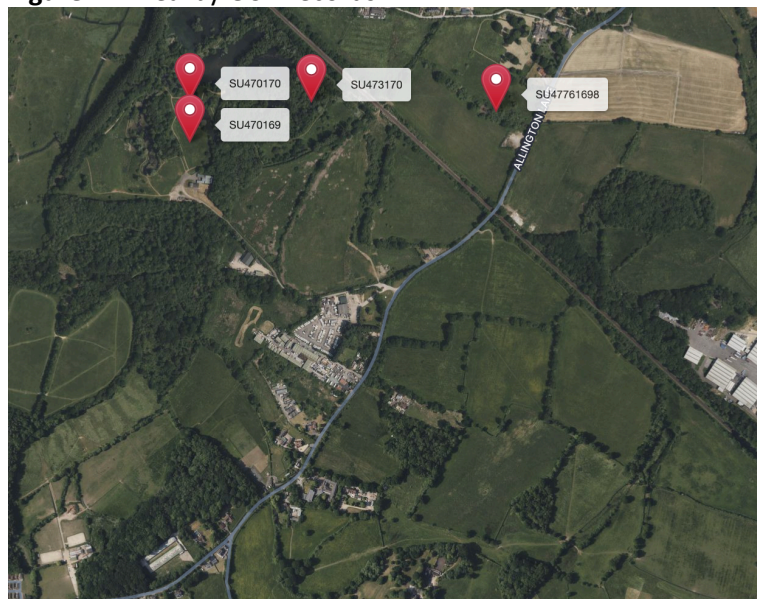
Due to the uniform management approach across the majority of the site, it lacks structural diversity and is not considered optimal for reptiles. The boundaries however are considered to provide opportunities for reptiles.

4.6 GCN

4.6.1 Nearby Records

Four Records of GCN were returned within 2km of the site. The nearest record is 740m north of the site and separated via Allington Lane (**Fig 11**).

Figure 11. Nearby GCN records.



4.6.2 Onsite Assessment

As outlined above, the majority of the site lacks structural diversity and is not considered optimal for terrestrial GCN however the boundaries do hold potentially suitable habitat if present.

4.7 Nesting Birds

4.7.1 Nearby Records

Numerous bird records were returned, considered likely due to the rural nature of the surrounding area.

4.7.2 Onsite Assessment

The boundary habitats and offsite woodland offer opportunities for nesting birds.

5.0 LIKELY ECOLOGICAL IMPACTS IN ABSENCE OF MITIGATION

5.1 Introduction

The CIEEM guidelines (CIEEM 2018) require that the potential impacts of the proposals should be considered in absence of mitigation. In order for a significant adverse effect to occur, the feature being affected must be at least of local value. However, in some cases, features of less than local value may be protected by legislation and/or policy and these are also considered within the assessment. Although significant effects may be identified at this stage of the assessment, it is often possible to provide appropriate mitigation.

5.2 Site Preparation and Construction

5.2.1 Impacts to Habitats

The proposed development will result in the permanent loss of a small area of grassland. Therefore, in the absence of mitigation there will be a **minor negative** impact at **site level**.

Proposals are located a significant distance from the neighbouring woodland (approximately 140m) and therefore it is considered highly unlikely the SINC and/or priority woodland will be negatively impacted during construction. Therefore, it is considered there will be **negligible impacts**.

Area of impact associated with the construction of the stables and hardstanding is also set back from the tree line and scattered trees. Therefore, it is considered there will be **negligible impacts**.

5.2.2 Impacts to Wildlife

Reduction in grassland habitat will result in the small loss of bat, Badger and Hedgehog foraging habitat. This would have a **likely minor negative impact at a site level**.

Given the distance of the GCN records from the site and Allington Lane acting as a dispersal barrier it is considered unlikely the nearby population will be negatively impacted by proposals. Although it was not possible to assess the pond within the neighbouring woodland it was possible to assess the habitats surrounding the pond. These are considered superior to those on site. Finally given the area of impact is approximately 100m from this pond, even if GCN were present it is considered unlikely they would be directly negatively impacted. Therefore, it is considered there will be likely **negligible impacts towards GCN**.

If reptiles were present within the longer grassland to be impacted during the construction of the access and hardstanding there is potential, they could be harmed or killed. Given the small area to be impacted it is considered any effect would be limited. Therefore, if reptiles are present, there is potential for **minor negative impact at site level**.

5.3 Site Operation

5.3.1 Impacts to Habitats

Horses gaining accidental access to the neighbouring woodland have potential to negatively impact the woodland (i.e. pooching given the wet woodland type). Other direct effects of

development can cause the loss or deterioration of woodland trees by damaging roots and understorey, damaging or compacting soil and changing the woodland ecosystem by removing the woodland edge. Excessive grazing within 15m may result in direct impacts towards the woodland. Therefore, there is ***potential for negative impacts at county level.***

The structure of the grassland will be modified via the introduction of horses and resulting grazing however the floral diversity will be retained as a result it is considered the ***impacts will be negligible.***

5.3.2 Impacts to Wildlife

If the development were to result in an increase in lighting within the general area from external lights this could affect the behaviour, particularly foraging, of nocturnal wildlife. Therefore, an ***adverse impact is possible*** on Badgers, bats and Hedgehogs.

The modification of the grassland will alter foraging resources (i.e. associated invertebrates) however it is considered the new management will open the site making it more accessible for Badgers and Hedgehogs and the site will continue to support commuting and foraging bats. As a result, it is considered the ***impacts will be negligible.***

6.0 RECOMMENDATIONS

The below sections outline a number of recommendations for the development and ensures and proposed mitigation and compensation is appropriate and proportionate. In addition to this, measures are outlined to protect the existing features of value and provide enhancements post development.

6.1 Protection of Retained Vegetation

All existing trees will be protected from damage during the works. They will be fenced using standard arboricultural tree protection measures which include protection of the canopy and prevents root compaction.

6.2 Protection of Woodland

As per Natural England and Forestry Commission Guidelines, a 15m buffer will be established along the woodland edge. A fence will be erected to prevent animals gaining access into this buffer. A similar approach has recently been agreed under H/23/96274 where a SINC woodland has been protected by a 15m buffer.

6.3 Bats

6.3.1 Sensitive Lighting

It is recommended that no new lighting be introduced on site. If lighting is required it will comply with the published Guidance Note 08/23 Bats and Artificial Lighting at night (ILP / BCT, 2023) produced via a collaboration between the Institute of Lighting Professionals (ILP) and the Bat Conservation Trust (BCT):

- Metal halide, compact fluorescent sources should not be used
- LED luminaires will be used due to their sharp cut-off, lower intensity, good colour rendition and dimming capability
- A warm white light source (2700Kelvin or lower) will be adopted to reduce blue light component
- Light sources will feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone, 2012)
- Only luminaires with a negligible or zero Upward Light Ratio, and with good optical control, should be considered - See ILP GN01
- Luminaires will always be mounted horizontally, with no light output above 90° and/or no upward tilt
- Lighting should be set on motion sensors and set to as short a possible a timer as the risk assessment will allow.

6.3.2 Bat Boxes

It is recommended that at least two bat boxes are erected on site. The following woodstone models are recommended:

- 1 No Vivara Pro Miramare Large WoodStone bat box
- 1 No Vivara Pro Large Multi Chamber WoodStone bat box

Bat boxes to be sited on trees using the galvanised steel hanger and aluminium nail provided. They will be positioned at a height of between 3-6m from ground level in open

sunny positions.

6.4 Mammals

If excavations are required, a means of escape (e.g. a ramp) will be left in excavations overnight in case of animals falling in. A member of staff on site should be responsible for ensuring that this is carried out before leaving the site each day.

6.5 Reptile and GCN Precautionary Approach

To add confidence that reptiles and GCN will not be negatively impacted a precautionary approach will be implemented.

6.5.1 Toolbox Talk

Before any works commence an Ecologist must brief all site operatives. This briefing must include details of the legal protection of reptiles and GCN, all precautionary steps that must be taken during the proposed works, an annotated key detailing the appearance, characteristics of GCN and what actions need to be taken if, in the unlikely event a GCN is found on site when the Ecologist is not present.

6.5.2 Habitat reduction

Following the toolbox talk, initially the vegetation will be reduced to 10cm under the supervision of an Ecologist. After 24-48 hours, this vegetation will be taken down to ground level. All works will be directional (i.e. towards retained, unimpacted habitats).

Once at ground level, it is imperative the vegetation is then maintained at this level so that it remains unsuitable for both reptiles and amphibians.

6.5.3 Timing

These works will be undertaken during the active reptile period (April – September) when temperatures are above 12°C with sunshine.

6.5.4 Steps to be taken in unlikely event GCN are found

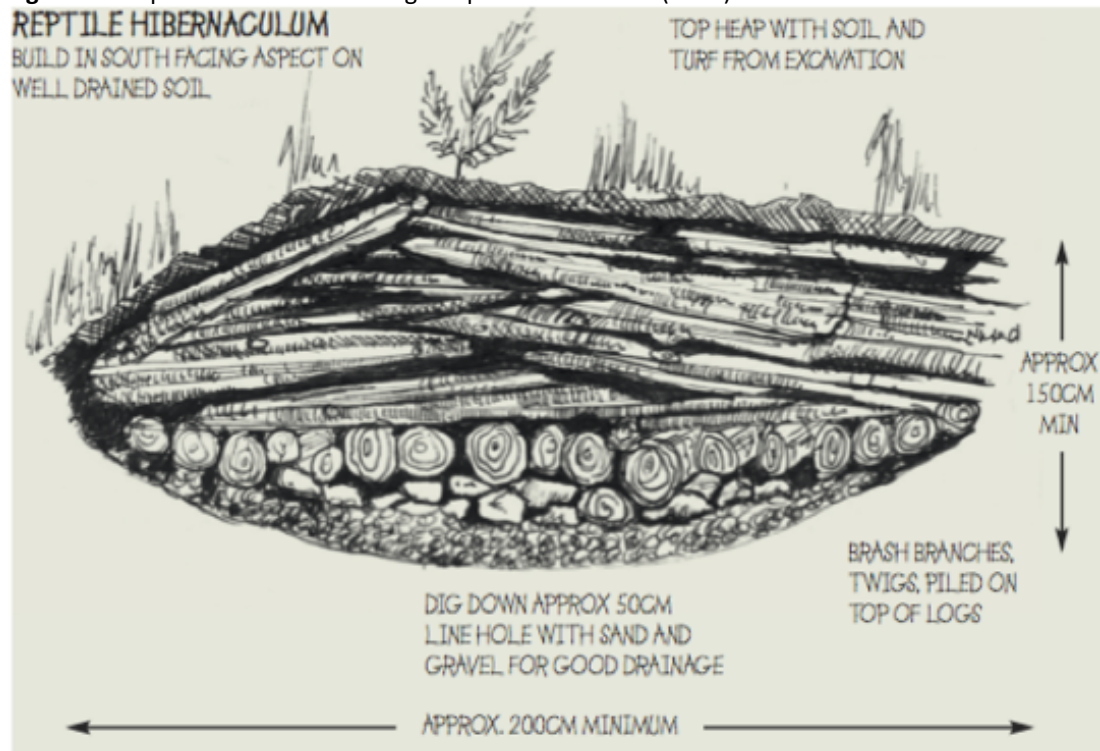
In the unlikely instance that a GCN is found during any works, all works must immediately stop and Natural England will need to be contacted.

6.5.5 Enhancements

A wood-based hibernacula will be constructed on site. This will provide shelter and hibernation opportunities as well as providing a significant habitat resource for invertebrates.

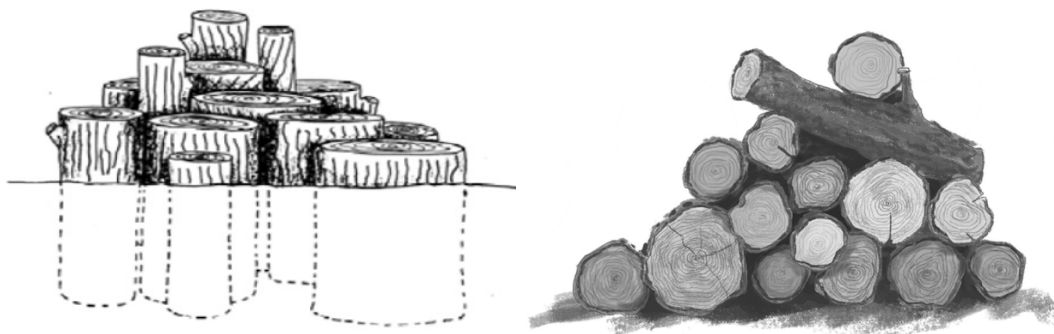
Fig 12 illustrates hibernacula design that follows best practice guidelines (HART, 2009). The size of the hibernaculum will be at least 5m².

Figure 12. Reptile hibernaculum design as provided in HART (2009).



In addition, two log piles will be constructed. Not only will these will form ideal places of shelter for reptiles but also species such as Hedgehogs, and provide a significant habitat resource for invertebrates, which in turn will benefit local foraging bird and bat species. These log piles should be of a vertical and horizontal style (**Fig 13**).

Figure 13. Two different log pile styles will be utilized (PTES, 2024).



6.6 Nesting Birds

In order to enhance the site for breeding and nesting birds, at least two bird nest boxes will be erected within mature trees on site. Those constructed of woodcrete are favourable as they will last longer as opposed to wooden boxes.

- **32mm entrance hole** will attract Great Tit, Redstart, Nuthatch and House Sparrow and also bats.
- **26mm entrance hole** suits Blue, Marsh, Coal and Crested Tit and possibly Wren. All other species are prevented from using the nest box due to the smaller entrance hole.

6.7 Native Planting

Tree planting should utilise fruit bearing trees, providing food sources for birds and small mammals during the autumn and winter. Species that should be considered include:

- Hawthorn (*Crataegus monogyna*)
- Beech (*Fagus sylvatica*)
- Holly (*Ilex aquifolium*)
- Yew (*Taxus baccata*)
- Hornbeam (*Carpinus betulus*)
- Wild Cherry (*Prunus avium*)
- Crab Apple (*Malus sylvestris*)
- Elder (*Sambucus nigra*)
- Field Maple (*Acer campestre*)

Key tree species for enhancing the site for bats are Willow, Oak and Birch as they can support high numbers of insects. In addition, once matured they can eventually provide roosting opportunities for bats (see **Table 1** below).

Table 1. Tree species for foraging and roosting potential (Gunnell et al. 2012).

Native Tree species	Roosting potential	Supporting foraging
Oak	Very good	Very good
Willow	Minimal	Very good
Beech	Very good	Good
Ash	Good	Good
Elm	Good	Good
Birch	Minimal	Very good

7.0 CONCLUSION

The habitats within the area of impact are considered to be limited to site value. There are limited opportunities for legally protected and/or notable species which can be adequately protected via the measures outlined within this report. In addition, a number of enhancements have been specified to ensure the site is improved for local wildlife.

8.0 REFERENCES

ARG (2010) *Amphibian & Reptile Groups of the UK, ARG Advice Note 5, Great Crested Newt Habitat Suitability Index*, May 2010

Baker, J., Beebee, T., Buckley, J., Gent, A., Orchard, D. (2011) *Amphibian Habitat Management Handbook*. Amphibian and Reptile Conservation, Bournemouth.

CIEEM (2018) *Guidelines for Ecological Impact Assessment in the UK & Ireland*

Collins (ed) (2023) *Bat Surveys for Professional Ecologists: Good Practice Guidelines 4th Edition*

Department for Levelling Up, Housing and Communities (2023) 'National Planning Policy Framework' (NPPF)

Edgar, P., Foster, J. and Baker, J. (2010) 'Reptile Habitat Management Handbook'. Amphibian and Reptile Conservation, Bournemouth.

English Nature (2001) *'The Great Crested Newt Mitigation Handbook' Version: August 2001. English Nature.*

Froglife (2001) *Great Crested Newt Conservation Handbook.*

Gunnell, K., Grant, G. and Williams, C. (BCT) (2012) 'Landscape and Urban Design for Bats and Biodiveristy'

HMSO (1989). *Wildlife and Countryside Act (amended)*. HMSO, London.

HMSO (1992). *Protection of Badgers Act*. HMSO, London.

HMSO (2000). *The Countryside and Rights of Way Act*. HMSO, London.

HMSO (2006). *Natural Environment and Rural Communities Act*. HMSO, London.

HMSO (2017) *The Conservation of Habitats and Species Regulations*. Statutory Instrument 2010 No. 490. HMSO, London.

HMSO (2019). *The Conservation of Habitats and Species Regulations*. Statutory Instrument 2019 No. 579. HMSO, London.

HMSO (2021). *The Environment Act 2021*. HMSO, London. Available at: <https://www.legislation.gov.uk/ukpga/2021/30>

ILP / BCT (2023) *Guidance Note 08/23: Bats and Artificial Lighting at Night*.

Natural England, 2011 *Badgers and Development: A Guide to Best Practice and Licensing*

Natural England (2014) '*Standing Advice Species Sheet: Great Crested Newts*'. Available from: http://www.naturalengland.org.uk/Images/GreatCrestedNewts_tcm6-21705.pdf

UKHab Ltd. (2023). *UK Habitat Classification – Habitat Definitions Version 2.0* (July, 2023).