Preliminary Ecological Appraisal

For

White Planning

Three Mile Cross

Great Lea

RG7 1NP

Reference: Q20488

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Disclaimers

All information set out in this report is true and based on the opinions and knowledge of ProHort at the time of writing. This report has been set out for the sole use of the client under the conditions set out in this document.

This report was prepared to the standard set out in the Chartered Institute of Ecology and Environmental Management's (CIEEM) Code of Professional Conduct. Adhering to this guidance, this report is considered valid for a period of 12 months after the date of the site visit, after this date this report will no longer be an accurate assessment of the current conditions of the Site/project area.

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Summary

A Preliminary Ecological Appraisal (PEA) was undertaken at Three Mile Cross, Great Lea, RG7 1NP (SU71046852) to support a planning application to support a planning application to construct four dwellings and associated parking and landscaping. A site survey was undertaken on 01/06/2026 and a desktop study was undertaken in June 2026.

The appraisal assessed the current ecological value of habitats within the Site and their potential to support protected and notable species.

Overall, no further surveys are required to determine species presence within the Site.

For full details, please read the report in its entirety.

1. Introduction

ProHort Limited have been commissioned by White Planning, of Three Mile Cross, Great Lea, RG7 1NP (SU71046852) to conduct a Preliminary Ecological Appraisal (PEA), hereafter referred to as the 'Site'. The purpose of the survey was to assess the likely presence of rare or protected species, to identify any features, habitats or species which would constitute potential constraints to any development which may take place on the Site, and to make recommendations for mitigation and/or further survey work.

This report sets out the results of a desk-based study and a survey of the Site, undertaken on 01/06/2026. A PEA is required to support a planning application.

1.1. Site location

The Site is a short sward modified grassland with a line of trees and scrub present along the western border (Figure 1). It is located at Three Mile Cross, Great Lea, RG7 1NP (SU71046852), to the south of Reading and to the west of Wokingham. The surrounding area is characterised by a predominately rural and suburban landscape, with arable fields, scattered areas of woodland, and residential properties. Site access is off Great Lea.

There are plans to develop the site, the planning application involves the construction of four dwellings and the associated parking and landscaping.

During the site visit on 01/06/2026 evidence of recent tree clearance was noted, see images in Appendix 4, therefore the aerial imagery present in Figure 1 is inaccurate regarding current habitat type, however the red line boundary of the site remains unchanged.

Figure 1 – Red line boundary of the Site
Taken from Bing Maps (© 2024 Microsoft Corporation, © 2024 Maxar, ©CNES (2024) Distribution Airbus DS)

1.2. Historic Context

According to opensource historic mapping, little has changed in the close surrounding area in recent years. Records from the mid twentieth century show a pond was formerly present in the southern end of the site. The construction of the M4 approximately 350 metres north of the site in the late twentieth century created fragmentation in the wider landscape, with former agricultural land to the north of the M4 being developed into a predominately urban and commercial area.

2. Methodology

2.1. Aims and Objectives of the Survey

The aims and objectives of this report are as follows:

- To record and describe the current habitats and species present within the Site.
- To identify any occurrences or rare and/or protected plant species within the Site.
- To identify any invasive, non-native plant species.
- To undertake a habitat appraisal and assess the potential of the site to support protected species.
- To identify any potential ecological concerns or constraints that could influence the development and provide feedback on appropriate mitigation measures to avoid, mitigate or compensate for impacts on protected species and other local wildlife.

2.2. Desk Top Study

The purpose of a desk study is to collect baseline ecological data held by statutory and non-statutory consultees. This includes any records of species from the Site and the surrounding 2km.

To ensure the information within this report is current, only species data collected within the last 10 years was considered. This data is used as an indicator of species presence and should not be used to indicate absence.

A search on DEFRA's open source, online MAGIC Maps tool was used to identify any designated sites, priority habitats, and previous protected species licences within 2km of the Site.

Data provided by the Site's Local Record Centre was used to identify any non-statutory designated sites and any protected and notable species records within 2km of the Site.

Any trees with the Site or any trees affected by the proposed works will be checked to identify any existing Tree Preservation Orders (TPO). The local authority maps/records where searched.

2.3. Habitat Survey

A survey was completed of the defined boundary of the Site as well as the surrounding area, where applicable. The Site area was assessed in accordance with the UK Habitat Classification Version 2.0 (UKHab Ltd 2023). A species list of flora was compiled for each habitat and an estimate of abundance was assigned using the DAFOR (Dominant, Abundant, Frequent, Occasional, or Rare) sale (Walker *et al*. 2010). The Site was then assessed for its suitability for any protected and notable species. The surrounding area was assessed for any evidence or suitability for any protected and notable species.

2.4. Preliminary Roost Assessment

A Preliminary Roost Assessment (PRA) was undertaken on any objects of interest within the Site (buildings or trees etc. where applicable) in reference to the Bat Conservation Trust (BCT) Good Practice Guidelines 4th Edition (Collins, 2023). A thorough search for evidence of bats was undertaken in any internal loft spaces or voids and on any external features of any appropriate buildings, notably any windowsills, walls, floors and flat surfaces.

A ground level tree assessment for all individual trees and tree groups within the Site was undertaken to determine any bat roosting potential. A note was made of any features (e.g. cracks, holes, crevices, loose bark, or dense ivy *Hedera helix*) or evidence of bats visible from ground level.

Evidence of roosting bats include:

- Presence of live/dead bats.
- Bat droppings (can be distinguished from rat/mouse droppings by their crumbly texture).

- Staining from fur around access points.
- The presence of feeding remains, such as insect wings and casings.
- Absence of cobwebs around crevices

A building/tree would be identified as a 'confirmed' bat roost if evidence of roosting bats was recorded.

Evidence of bats is often concealed and/or inaccessible due to remote nature of the roost. Therefore, where no evidence of roosting bats was recorded, an assessment on the availability of potential roosting areas and bat access points around the building/tree, as well as the quality/availability or surrounding bat habitat, was conducted. The building/tree was then assigned a category that is based on a sliding scale of 'negligible' to 'high potential' (based on Collins, 2023).

2.5. Great Crested Newt Habitat Suitability Index Assessment

Ponds within 250 m of the Site, where possible, were assessed for the suitability for Great Crested Newts (GCN). The assessment of these ponds followed the GCN Habitat Suitability Index (HSI) methods (ARG UK, 2010). The HSI methods assess a number of parameters that influence breeding populations of GCN. These parameters include: location, pond size, permanence of pond, water quality, bank shading, waterfowl activity, presence of fish, number of ponds within the surrounding area, terrestrial habitat type, and macrophyte cover of the pond. Each of these variables can score a number between 0 and 1 and the geometric mean of these numbers provide a final value which can be used to categorise the suitability level (poor, below average, average, good, or excellent). These categories can then be used to inform the need for further surveys.

2.6. Legislation and Policy

Appendix 2 sets out the relevant policies and environmental and wildlife legislation relevant to the Site. The project must follow these documents, and this report is set out to avoid any offenses being committed regarding these policies and legislations.

2.7. Limitations of the Survey

There were no limitations to the survey; the whole of the site was accessible on foot, allowing the full appraisal of habitats and species present. There were no buildings on site to assess. The survey was conducted outside of the main flowering season, therefore there may have been flora species present on Site that were not visible at the time of the survey. It should be noted that a single visit cannot always ascertain the presence or absence of a protected species. However, an assessment is made of the likelihood for protected species to occur based on habitat characteristics and ecology of each species. Where there is potential for protected species, additional survey work may be required to ascertain their presence or absence.

Data on species that has been obtained from local records, are sometimes only available at low spatial resolutions and are constrained by the voluntary nature of the contributions and what has been chosen to be submitted. While these records provide a useful indication of species recorded in the local area, the data is not necessarily an accurate reflection of species assemblages or abundance in the vicinity.

3. Results

3.1. Designated Sites

No statutory designated sites were identified within 2km of the Site. However, there were eight non-statutory designated sites identified within 2 km of the Site (Table 1).

Site and Designation	Distance from the Site	Connectivity	Site description
Great Lea Pond	11m N	High – close proximity to the site, with no significant dispersal barriers	A mosaic of silted pools which supports at least 6 species of pond flora, including water violet. Dense scrub/secondary woodland is present, along with dead wood.
Shinfield Park, Nore's Hill	1650m E	Low, the M4 Motorway acts as a significant dispersal barrier	A mixed woodland with areas of semi natural ancient woodland present. Dormouse were recorded at this site in 1987.
The Grove	1800m E	Low, the M4 Motorway acts as a significant dispersal barrier	Two ponds are present on the site, with a mixture of grassland, scrub, secondary woodland, and broadleaved plantation.
Clare's Green Road Grasslands	1482m SE	Moderate, open agricultural areas and wooded blocks provide connectivity, but residential areas and the A33 act as dispersal barriers	Semi improved grassland, surrounded and bisected by hedgerows.
Woods between Whitehouse and Highlands	1992m S	Moderate, open agricultural areas and wooded blocks provide connectivity, however the distance, and the A33 act as dispersal barriers	Mixed deciduous woodland priority habitat, with ponds and scrub also present on site. There are records of great crested newt on site.
Burghfiled Gravel Pits	1773m NW	Low, the M4 Motorway acts as a significant dispersal barrier	Comprised of wooded areas and gravel pits. Records show the site attracts several species of birds covered under the Wildlife and Countryside Act Schedule 1
St Mary's Church, Shinfield	1955M S	Moderate, open agricultural areas and wooded blocks provide connectivity, but residential areas and the A33 act as dispersal barriers	Berkshire local geological site, Grade 1 listed church
Kennet Valley East	1181m NW	High, open agricultural area and several wooded blocks provide connectivity	Biodiversity opportunity area. Contains the River Kenet which is classed as a site of special scientific interest in the section between Marlborough and Woolhampton. Several habitat types present including; wet woodland, reedbeds, lowland meadow and wet grassland.

3.2. Priority and Notable Habitats

The priority habitats (outlined in Section 41 of the Natural Environment and Rural Communities Act 2006 (as amended)) within 2km of the Site are outlined in Table 2 below.

Table 2 – All priority habitats within 2km of the Site; taken from Magic Maps in June 2026.

Priority habitat	No. of sites within 2km	Closest site	Connectivity
Priority Habitat Inventory - No main habitat but additional habitat exists (England)	10	c.656m east	Low - Residential area, and the M4 Motorway may pose a barrier for some species
Woodpasture and Parkland BAP Priority Habitat (England)	5	c.3m north	High - Close proximity, no significant dispersal barriers
Priority Habitat Inventory - Traditional Orchards (England)	5	c.225m southwest	Moderate - Open fields may pose a barrier
Priority Habitat Inventory - Deciduous Woodland (England)	50	c.2m north	High - Close proximity, no significant dispersal barriers
Ancient Woodland (England)	3	c.1733m northeast	Low - Open fields, A33 (Basingstoke Road), M4 Motorway, residential areas may pose a barrier

It is considered that multiple hedgerows and ponds within 2km of the Site may meet criteria of priority habitats.

3.3. European Protected Species Licences

12 European Protected Species licences were identified within 2km of the Site (Table 3).

Table 3 – All granted European Protected Species licences within 2km of the Site; taken from Magic maps June 2026.

Species	Distance from Site	Dates	Connectivity
Brown Long-eared, Common pipistrelle	c.1952m	23/09/2016 - 30/09/2026	Moderate - connective features such as treelines and the stream Foudry brook, however areas of

			open fields may pose a barrier
Common pipistrelle	c.1848m	04/10/2013 - 30/10/2013	Low - areas of open fields, the A33 (Basingstoke road), and residential areas may pose a barrier
Common pipistrelle	c.1087m	28/09/2015 - 31/10/2015	Low - areas of open fields, residential areas, and the M4 motorway may pose a barrier
Brown Long-eared, Common pipistrelle	c.1090m	04/11/2015 - 03/11/2020	Low - areas of open fields, the A33 (Basingstoke road), and residential areas may pose a barrier
Common pipistrelle, Soprano pipistrelle	c.1970m	02/11/2015 - 30/10/2020	Low - areas of open fields, and the M4 motorway may pose a barrier
Common pipistrelle, Soprano pipistrelle	c.1925m	24/02/2016 - 23/02/2021	Low - areas of open fields, the A33 (Basingstoke road), and residential areas may pose a barrier
Brown Long-eared, Soprano pipistrelle	c.897m	10/12/2012 - 31/12/2014	Low - areas of open fields, residential areas, and the M4 motorway may pose a barrier
Common pipistrelle	c.1443m	06/10/2009 - 31/08/2011	Low - areas of open fields, residential areas, and the M4 motorway may pose a barrier
Brown Long-eared, Common pipistrelle	c.1640m	06/10/2009 - 05/10/2011	Low - areas of open fields, the A33 (Basingstoke road), and residential areas may pose a barrier
Brown Long-eared	c.1640m	04/10/2017 - 31/10/2017	Low - areas of open fields, the A33 (Basingstoke road), and residential areas may pose a barrier
Brown Long-eared	c.1640m	21/12/2017 - 30/04/2018	Low - areas of open fields, the A33 (Basingstoke road), and residential areas may pose a barrier
Brown Long-eared	c.1640m	11/05/2018 - 31/10/2018	Low - areas of open fields, the A33 (Basingstoke road), and residential areas may pose a barrier

3.4. Tree preservation Orders

No TPOs were found surrounding within directly surrounding the Site.

3.5. UK Habitat Classification Survey

3 UKHab habitats were identified within the Site:

- g4 Modified grassland, 33 line of trees
- 33 Line of trees
- 50 Ditch

An on-site habitat plan is shown in Appendix 3 and photographs of the Site are shown in Appendix 4. Each of these habitats are described in Table 4 below.

Table 4 – All UKHabs classification descriptions.

Habitat Type	Habitat Description	Flora Species
g4 Modified grassland	Short sward grassland located on site. This habitat makes up the majority of the site.	**Abundant**: Yorkshire fog (*Holcus lanatus*) **Frequent**: Creeping buttercup (*Ranunculus repens*), Annual meadow grass (*Poa annua***)** **Occasional**: Crane's bill (*Geranium* sp.), Field thistle (*Cirsium discolor*), Broadleaved dock (*Rumex obtusifolius*) **Rare**: Yarrow (*Achillea millefolium*), Common rush (*Juncus effusus*), Stinging nettle (*Urtica dioica*), Cow parsley (*Anthriscus sylvestris*), mint (*Mentha* sp.), bramble (*Rubus fruticosus)*, spiny nightshade (*Solanum acanthodapis*), cock's foot (*Dactylis glomerata*)
33 Line of trees	Line of trees present on site in two areas, line of trees 1 (LT1) is located on the northern boundary of the site, and line of trees 2 (LT2) is located along the eastern boundary of the site.	**LT1:** **Abundant:** Willow (*Salix* sp.) **Frequent:** Ash (*Fraxinus excelsior*) **LT2:** **Abundant:** Willow (*Salix* sp.) **Occasional:** Ash (*Fraxinus excelsior*), Hawthorn (*Crataegus monogyna*)
50 Ditch	Two ditches present on site, ditch 1 (D1) is located on the northern boundary of the site, and ditch 2 (D2) is located along the eastern boundary of the site.	

3.6. Species Records

A search of local biological records was conducted by the Thames Valley Environmental Records Centre up to 2km from the Site. Only records within the past 10 years were included in the following assessment. The records were filtered based on the relevance to the project proposal.

3.6.1 Badgers

The records returned 27 occurrences of Badger (*Meles meles*) within 2km of the Site, the closest being c.506m south from the site.

The site offers low suitability for badger setts, due to the absence of features such as woodland, scrub, hedgerows, or undisturbed ground typically associated with sett construction. Open agricultural spaces to the south, and residential areas to the east are also significant dispersal barriers. However, the adjacent woodland to the north of the site does provide suitable habitat for badgers, including potential sett locations and foraging opportunities.

During the Site visit no signs of badgers were found and the grassland present on site may provide a suitable habitat for commuting and foraging badgers.

Additionally, it is unlikely the proposed works will impact any of the present populations of Badger surrounding the Site. Overall, the likelihood for the Site to support Badgers is negligible and no action is required. However, precautionary measures should be taken when conducting work on Site, as the Site may be used by badgers for foraging and commuting.

Precautionary method of work should entail:

- Immediately prior to the start of works all construction/site staff to be involved with the works will be briefed on issues relating to otters prior to works through a toolbox talk by a qualified ecologist/ECoW.
- Works must take place during daylight hours, and no overnight lighting should be installed beyond the necessary level for health and safety.
- Ensure excavations or trenches are inspected each morning and evening to ensure no badgers have become trapped.
- Open pipework with a diameter of more than 120mm should be properly covered or capped at the end of the working day to prevent badgers from entering and becoming trapped.
- Litter, tools and potentially dangerous materials on site should be cleared at the end of the working day. Care should be taken that there are no sharp metal objects or pointed protrusions on the ground which could seriously injure a badger due to their poor eyesight.
- The storage of topsoil or other “soft” building materials within the site should be given careful consideration. Badgers will readily adopt such mounds and dig setts which would then be afforded the same protection as established setts. To avoid the adoption of such mounds, they should be subject to daily inspections before work commences or alternative measures put in place, such as being fenced off for higher-risk areas.
- During the work, the storage of any chemicals should be contained in such a way that they cannot be accessed or knocked over by any roaming badgers.

- If it becomes apparent at any time that the works could impact a sett or an entrance to a sett, all works must cease and an ecologist must be consulted on the appropriate action or mitigation, if necessary.

3.6.2 Bats

The records search and European Protected Species licence application identified breeding, foraging and resting bats were locally present. 368 records of bats were returned by the data search. However, the proposed works will not impact any potential roost sites, and it is unlikely any changes to the Site will significantly impact any foraging habitat. Therefore, these results were not analysed further.

The bat species returned by the local records are detailed in Table 5.

Table 5 – bat records.

Species	Number of records
Barbastelle (*Barbastella barbastellus*)	9
Bechstein's bat (*Myotis bechsteinii*)	37
Lesser noctule (*Nyctalus leisleri*)	13
Noctule (*Nyctalus noctule*)	55
Common pipistrelle (*Pipistrellus pipistrellus*)	89
Soprano pipistrelle (*Pipistrellus pygmaeus*)	52
Brown long-eared bat (*Plecotus auritus*)	19
Nathusius Pipistrelle (*Pipistrellus nathusii*)	29
Unspecified Long-eared Bat sp. (*Plecotus* sp.)	8
Unspecified Myotis Bat sp. (*Myotis* sp.)	25
Unspecified Nyctalus Bat species (*Nyctalus* sp.)	1
Unspecified Pipistrelle species (*Pipistrellus sp.)*	16
Serotine	13
Unspecified bat species	2

3.6.3 Birds

There were 35 species of protected or priority bird species (species listed in Section 41 of the Natural Environment and Rural Communities Act 2006 or Schedule 1 of the Wildlife and Countryside Act 1981) returned by the local records (Table 6).

Table 6 – bird records

Species name	Number of records	Likelihood of presence on site
Schedule 1		
Barn Owl (*Tyto alba*)	1	Low - Site offers few resources and is not very suitable for nesting and hunting.
Black-winged Stilt (*Himantopus himantopus*)	1	Negligible - Site offers no resources and is not suitable for nesting and hunting.

Brambling (*Fringilla montifringilla*)	3	Moderate - The site offers some resources and shelter, providing suitable but not optimal conditions for either nesting, foraging, and species use
Cetti's Warbler (*Cettia cetti*)	54	Moderate - The site offers some resources and shelter, providing suitable but not optimal conditions for either nesting, foraging, and species use
Dartford Warbler (*Curruca undata*)	3	Moderate - The site offers some resources and shelter, providing suitable but not optimal conditions for either nesting, foraging, and species use
Fieldfare (*Turdus pilaris*)	13	Moderate - The site offers some resources and shelter, providing suitable but not optimal conditions for either nesting, foraging, and species use
Firecrest (*Regulus ignicapilla*)	5	Moderate - The site offers some resources and shelter, providing suitable but not optimal conditions for either nesting, foraging, and species use
Goldeneye (*Bucephala clangula*)	1	Negligible - Site offers no resources and is not suitable for nesting and hunting.
Green Sandpiper (*Tringa ochropus*)	27	Negligible - Site offers no resources and is not suitable for nesting and hunting.
Greenshank (*Tringa nebularia*)	3	Negligible - Site offers no resources and is not suitable for nesting and hunting.
Kingfisher (*Alcedo atthis*)	23	Negligible - Site offers no resources and is not suitable for nesting and hunting.
Little Ringed Plover (*Charadrius dubius*)	1	Negligible - Site offers no resources and is not suitable for nesting and hunting.
Peregrine Falcon (*Falco peregrinus*)	5	Low - Site offers few resources and is not very suitable for nesting and hunting.
Pintail (*Anas acuta*)	2	Negligible - Site offers no resources and is not suitable for nesting and hunting.
Red Kite (*Milvus milvus*)	57	Low - Site offers few resources and is not very

		suitable for nesting and hunting.
Redwing (*Turdus iliacus*)	39	Moderate - The site offers some resources and shelter, providing suitable but not optimal conditions for either nesting, foraging, and species use
Whimbrel (*Numenius phaeopus*)	1	Negligible - Site offers no resources and is not suitable for nesting and hunting.
Wood Sandpiper (*Tringa glareola*)	2	Negligible - Site offers no resources and is not suitable for nesting and hunting.
Section 41		
Bullfinch *(Pyrrhula pyrrhula)*	20	Moderate - The site offers some resources and shelter, providing suitable but not optimal conditions for either nesting, foraging, and species use
Cuckoo *(Cuculus canorus)*	35	Moderate - The site offers some resources and shelter, providing suitable but not optimal conditions for either nesting, foraging, and species use
Dunnock *(Prunella modularis)*	32	Moderate - The site offers some resources and shelter, providing suitable but not optimal conditions for either nesting, foraging, and species use
Herring Gull *(Larus argentatus)*	4	Negligible - Site offers no resources and is not suitable for nesting and hunting.
House Sparrow *(Passer domesticus)*	14	Moderate - The site offers some resources and shelter, providing suitable but not optimal conditions for either nesting, foraging, and species use
Lapwing *(Vanellus vanellus)*	38	Negligible - Site offers no resources and is not suitable for nesting and hunting.
Lesser Redpoll *(Acanthis flammea cabaret)*	2	Moderate - The site offers some resources and shelter, providing suitable but not optimal conditions for either nesting, foraging, and species use
Linnet (*Linaria cannabina*)	41	Moderate - The site offers some resources and shelter, providing suitable but not optimal conditions for either

		nesting, foraging, and species use
Marsh tit (*Poecile palustris*)	1	Moderate - The site offers some resources and shelter, providing suitable but not optimal conditions for either nesting, foraging, and species use
Reed Bunting (*Emberiza schoeniclus*)	42	Moderate - The site offers some resources and shelter, providing suitable but not optimal conditions for either nesting, foraging, and species use
Skylark (*Alauda arvensis*)	39	Moderate - The site offers some resources and shelter, providing suitable but not optimal conditions for either nesting, foraging, and species use
Song Thrush (*Turdus philomelos*)	44	Moderate - The site offers some resources and shelter, providing suitable but not optimal conditions for either nesting, foraging, and species use
Spotted Flycatcher (*Muscicapa striata*)	3	Moderate - The site offers some resources and shelter, providing suitable but not optimal conditions for either nesting, foraging, and species use
Starling (*Sturnus vulgaris*)	18	Moderate - The site offers some resources and shelter, providing suitable but not optimal conditions for either nesting, foraging, and species use
Tree Pipit (*Anthus trivialis*)	1	Moderate - The site offers some resources and shelter, providing suitable but not optimal conditions for either nesting, foraging, and species use
Yellow Wagtail (*Motacilla flava flavissima*)	1	Moderate - The site offers some resources and shelter, providing suitable but not optimal conditions for either nesting, foraging, and species use
Yellowhammer (*Emberiza citronella*)	31	Moderate - The site offers some resources and shelter, providing suitable but not optimal conditions for either

	nesting, foraging, and species use

The onsite trees have limited potential for nesting birds, and there are no buildings present on site therefore, there is negligible potential for barn owl nesting. The grassland present on site has limited potential for ground-nesting birds.

3.6.4 Great Crested Newt

The local record search returned 9 occurrences of Great Crested Newt (*Triturus cristatus*) (GCN). The closest record was c.411m northwest of the site. Connectivity of this point to the site is low, as while there are patches of woodland in proximity, there are no connecting watercourses, with open agricultural areas and Hartley Court Road to the north of the site acting as dispersal barriers.

No ponds were located within the Site. Two ponds were present within 250m of the Site boundary. Table 7 outlines the results from the HSI survey of the surrounding ponds.

Table 7 – HSI results.

Pond number	Grid reference of pond	Pond suitability
P1	SU70946860	Poor (HSI Score 0.42)
P2	SU70936866	Poor (HSI Score 0.26)

The terrestrial habitat surrounding the Site is suitable for GCN due to the proximity to grassland and woodland within the surrounding area. However, the ponds present within 250m of the survey site show poor suitability for GCN, and within the site itself there is low habitat suitability as the site comprises of predominately short sward grassland.

Given the lack of breeding habitat for GCN within the Site and surrounding area, the proposed works can be considered as having a low impact on GCN breeding populations. Therefore, no further surveys are required.

3.6.5 Other Mammals

One record of Hazel Dormice (*Muscardinus avellanarius*) was returned from the records search, with the location being approximately 1080m from the Site. No evidence of Hazel Dormice was found on Site, and the Site is not connected to a woodland block with a known Dormouse population. Overall, the likelihood for the Site to support Hazel Dormice is negligible and no further action is required.

No records of otter (*Lutra lutra*), water voles (*Arvicola amphibius*), white-clawed crayfish (*Austropotamobius pallipes*), or beaver (*Castor fiber*) were returned by the records search.

The nearest watercourse to the Site was Foudry brook, a small stream approximately 708m from the Site. The Site does not contain a watercourse and there is no watercourse directly surrounding the Site. Overall, the likelihood for the Site to support watercourse species is negligible and no further action is required.

35 records of hedgehog (*Erinaceus europaeus*), and no records of brown hare (*Lepus* europaeus) were returned from the records search. Small sections of brambles along the western border of the site, and the grassland present on site may provide a suitable habitat for commuting and foraging hedgehogs. Any rubble or brash piles present on Site, see Appendix 4 for images, could be utilised by hedgehogs. These piles should be removed by hand during the proposed works and should not be removed during the hibernation period. No further surveys are required to determine if hedgehogs

are present onsite, however precautionary measures should be taken when conducting work on Site, as the Site may be used by hedgehogs for foraging and commuting.

Precautionary method of work should entail:

- Immediately prior to the start of works all construction/site staff to be involved with the works will be briefed on issues relating to hedgehogs prior to works through a toolbox talk by a qualified ecologist/ECoW.
- Dense areas of vegetation are hand checked and visually inspected to ensure that no animals are sheltering within.
- The works should preferably be undertaken outside the hedgehog hibernation period which is typically November- March/April.
- Removal of vegetation should be done so by hand where possible and good practice should be always followed when clearing the Site.
- Vegetation renderings should be removed on the day where possible and checked if left for a period longer than overnight before being disposed of.
- Any rubble or brash piles created as a result of the proposed works or already present on Site could be utilised by hedgehogs. These piles should be removed by hand during the proposed works and should not be removed during the hibernation period.
- Holes, pipes and containers should be covered overnight to avoid animals becoming injured/trapped. Mammal ladders should be adopted where needed.
- In the unlikely event that a hedgehog is found works should cease immediately and the animal should be allowed to move on. In case the animal is suspected to be injured or is found during the day wandering around it is best to place the animal in a small box with air holes and a suitable animals hospice should be consulted.

3.6.6 Reptiles

Records of three lizard species were returned from the records search: 8 Common Lizard (*Zootoca vivipara*), 3 Grass Snake (*Natrix helvetica*), 46 Slow-worm (*Anguis fragilis*). There is negligible potential for the habitats present on site to support breeding, commuting, and foraging reptiles, no evidence of reptiles was found onsite at the time of the survey. Overall, the likelihood for the Site to support reptiles is negligible and no further action is required.

3.6.7 Amphibians

Records of three amphibian species were returned from the records search: 5 Common Frog (*Rana temporaria*), 1 Common Toad (*Bufo bufo*), 7 Great Crested Newt (*Triturus cristatus*). The closest instance being approximately 410 metres from site. The site is mostly cleared grassland with few damp areas, or leaf litter, so it is considered low suitability for amphibians such as frogs, toads, and smooth newts. There are two ponds within 250m of the site, both of which were assessed as being poor quality.

Any rubble or brash piles created as a result of the proposed works or already present on Site could be utilised by amphibians. See Appendix 3, habitat plan with target notes showing the location of piles present on site at the time of surveying. These piles should be removed by hand during the proposed works and should not be removed during the hibernation period.

Overall, the likelihood for the Site to support amphibians is low and no further action is required.

3.6.8 Invertebrates

165 records of 18 priority invertebrate species (Section 41 in the Natural Environment and Rural Communities Act (NERC) 2006 (as amended)) were returned by the data search. This includes a range of moth species such as; August Thorn (*Ennomos quercinaria*), Blood-vein (*Timandra comae*), Buff Ermine (*Spilosoma lutea*), Centre-barred Sallow (*Atethmia centrago*), Cinnabar (*Tyria jacobaeae*), Dusky Thorn (*Ennomos fuscantaria*), September Thorn (*Ennomos erosaria*). No butterfly species records were returned by the search; however records of Stag beetles (*Lucanus cervus*) were retrieved.

None of these species are reliant on species or habitats that will be impacted by the proposed works.

3.7. Preliminary Roost Assessment

None of the buildings or trees on the Site will be impacted by the proposed works. Therefore, they were not assessed for bat or breeding bird potential.

3.7.1 Bat Building Assessment

There are no buildings present on the Site.

3.7.2 Bat Tree Assessment

Table 4 – Description of all onsite trees

Tree species	Description	Bat roosting potential
Ash (*Fraxinus excelsior*) T1	80mm diameter at breast height 7m in height No signs of bats No potential roosting features No signs of nesting birds T3 is positioned along the western border of the site, see Image 11 in Appendix 4.	Negligible

If any trees on Site are due to be impacted by the proposed works, the trees will need to be inspected by an ecologist within 48 hours of works commencing. If evidence of nesting birds are found, a 5 m exclusion zone must be created around the tree and left in place until the birds have fledged.

3.7.3 Foraging and Commuting Bats

The general surrounding area has high suitability for commuting and foraging bats, due to the Site's proximity to several wooded blocks, open agricultural spaces, and the presence of connective features such as hedgerows and lines of trees, which could offer some foraging opportunities for commuting bats.

Licence records show that brown long eared (*Plecotus auritus*), common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), lesser horseshoe (*Rhinolophus hipposideros*), greater horseshoe (*Rhinolophus ferrumequinum*), Daubenton's (*Myotis daubentonii*),

serotine (*Eptesicus serotinus*) are present within 2km of the Site. Due to the suitability for foraging and commuting bats in the area, it is recommended that an Artificial Lighting Strategy is implemented throughout the proposed works (see section 4.1.1).

3.7.4 Conclusions on Roosting Bats

A Preliminary Roost Assessment (PRA) of the site was undertaken, and the tree present (T1) was considered to hold a 'negligible potential' for roosting bats due to a lack of bat roosting provisions and potential access points. Roosting bats are considered to not be impacted as part of the proposed works, as there is negligible potential for bats to be roosting in the tree surveyed (T1). Therefore, no further action is needed.

It must be noted that the PRA provides a current assessment of the bat roosting potential on Site. It is always possible for bat species to ingress at any point in the future, and therefore it is recommended that if 18 months pass and no works have been undertaken, and/or if the condition of the buildings change, an updated PRA is required to assess whether to potential of the buildings to support roosting bats has altered.

In the unlikely event bats are encountered at any stage, work will cease and Natural England or a suitably qualified bat ecologist must be sought for advice by the applicant/landowner. The applicant must be aware of the severe penalties associated with bat crimes and their legal obligations to report this information.

3.8. Evaluation

Based on these results, no further considerations are required before the proposed works begin.

4. Biodiversity Mitigation and Enhancement Plan

4.1. Mitigation

All the following measures should be adhered to throughout the proposed works to protect local fauna and flora:

- In the situation where any protected, notable or vulnerable animals are encountered during the works all work must stop and a suitable ecologist should be consulted before continuing.
- Any trenches created by the works should be covered overnight or a means of escape should be provided for any fauna that enters it.
- The creation of rubble, soil or brash piles should be avoided where possible as these can be used by hedgehogs, reptiles and amphibians.
- Using artificial lights between dusk and dawn should be avoided/minimised where possible.
- Avoid using unnecessary chemicals during the works and if any chemicals are required leakages are avoided through fuel drip trays, drip-capture devices and/or spill mitigation devices.

4.1.1 Artificial Lighting Strategy

Artificial lighting can impact local bats as it can impede their ability to forage successfully and can deter bats from commuting across the property. Therefore, to ensure any lighting disturbance on bats is minimised, the following strategy for artificial lighting around the property will be adhered to:

- Where lighting is required for health and safety purposes only, any external lighting required as part of the scheme (e.g. security lighting) will be motion triggered, set on timers (1 minute or less) and directional towards the ground to avoid upward light spill.
- Any light spill must be directed away from the roof and from surrounding tree canopies and vegetation.
- All luminaires used will lack UV elements when manufactured. Metal halide, fluorescent sources will 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 spectrum (ideally <2700 Kelvin) must be adopted to reduce blue light component.
- Luminaires must feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats.
- Internal luminaires will be recessed where installed in proximity to windows to reduce glare and light spill.
- The use of specialist bollard or low level downward directional luminaires to reduce upwards lighting spill can be considered, however, should be used as a final resort.
- Column heights should be carefully considered to minimise light spill. Only luminaires with an upward light ratio of 0% and with good optical control must be used.
- Luminaires will always be mounted on the horizontal, i.e., no upward tilt.

4.2. Recommendations for biodiversity enhancement (delete any that don't apply)

The below measures are recommended to increase viable habitat for specific species within the local environment:

- At least 1 bat roosting box should be installed on the on Site building or mature trees. The box should be 1FW Schwegler Bat Hibernation Boxes (available at nhbs.com) or of a similar standard and be mounted at least 4m from the ground. The box should face between southwest and southeast and should remain unobstructed.
- At least 1 bird box should be installed on the on Site building or mature trees. These boxes should be to target a variety of species (e.g. Schwegler 1B 32mm bird box to target tits, redstart, nuthatch, flycatchers, wrynecks or sparrows; or Vivara Pro Woodstone Swift nest box etc.).
- A Biocube planter (available at bioscapes.co.uk) should be placed within the Site to create a habitat for a variety of species.
- Green and Blue Bee bricks (available at greenandblue.co.uk) should be used within the brick walls of the building to be constructed.
- Transporting of any offsite soil should be avoided. However, where unavoidable, ensure soil is peat free.
- Avoid pollutants and litter/debris within the Site and the surrounding area.

Appendix 1 Reference List and Useful Sources

- **Amphibian and Reptile Groups of the UK (2010)** Advice Note 5: Great Crested Newt Habitat Suitability Index. London, Amphibian and Reptile Groups of the UK.
- **British Standards (2012)** BS 5837: 2012 – Trees in relation to design, demolition and construction. London, British Standards Institution.
- **British Standards (2020)** BS 42020: 2013 - Biodiversity Code of Practice for Planning and Development. London, British Standards Institution.
- **British Standards (2021)** BS 8683: 2021 - Process for designing and implementing Biodiversity Net Gain. London, British Standards Institution.
- **CIEEM (2017a)** Guidelines for Preliminary Ecological Appraisals (2nd Edition). Winchester, CIEEM.
- **CIEEM (2017b)** Guidelines on Ecological Report Writing (2nd Edition). Winchester, CIEEM.
- **CIEEM (2018)** Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.1. Winchester, CIEEM.
- **CIEEM (2019)** Advice Note: On the Lifespan of Ecological Reports & Surveys. Winchester, CIEEM.
- **Collins, J. (ed.) (2023)** Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition). The Bat Conservation Trust, London.
- **Department for Levelling Up, Housing & Communities (2023)** National Planning Policy Framework. London, Department for Levelling Up, Housing & Communities.
- **HMSO (1981)** Wildlife and Countryside Act 1981 [online]. Available at: http://www.legislation.gov.uk/ukpga/1981/69
- **HMSO (2000)** Countryside and Rights of Way Act 2000 [online]. Available at: http://www.legislation.gov.uk/ukpga/2000/37/contents
- **HMSO (2017)** Conservation of Habitats and Species Regulations 2017 [online]. Available at: http://www.legislation.gov.uk/uksi/2017/1012/contents/made
- **HMSO (2006)** Natural Environment and Rural Communities Act 2006 [online]. Available at: Natural Environment and Rural Communities Act 2006 (legislation.gov.uk)
- **Magic database (2024)** http://www.magic.gov.uk/MagicMap.aspx
- **Reason, P.F. & Wray, S. (2023)** UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Ampfield, CIEEM.
- **UKHab Ltd (2023)** UK Habitat Classification Version 2.0. Available at: ukhab.org.
- **Walker, K., Pearman, B.E., McIntosh, J. & Lockton, A. (2010)** BSBI Recording the British and Irish flora 2010-2020. Annex 1: Guidance on sampling approaches. Cumbria, Botanical Society of Britain and Ireland.

Appendix 2 Planning Policy & Legislation

National Planning Policy Framework 2024

The National Planning Policy Framework (NPPF) (Ministry of Housing, Communities and Local Government, 2024) sets out the government's planning policies for England and how these are expected to be applied. The NPPF states that 'planning policies and decisions should contribute to and enhance the natural and local environment by:

- Protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils in a manner commensurate with their statutory status or identified quality in the development plan.
- Recognising the intrinsic character and beauty of the countryside and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland.
- Minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.
- Preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions, such as air and water quality, taking into account relevant information such as river basin management plans.

A list of principles which local planning authorities should follow when determining planning applications is included in the NPPF which includes the following:

- Distinguish between international, national and locally designated sites.
- Allocate land with the least environmental or amenity value.
- Maintain and enhance habitats and green infrastructure networks.
- Enhance natural capital at a catchment or landscape scale across local authority boundaries.
- Give weight to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty.
- Map and safeguard components of local wildlife-rich habitats and wider ecological networks, including wildlife corridors and stepping stones, and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation.
- Promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species
- If significant harm 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.
- Development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not 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 Sites of Species Scientific Interest.
- 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; and development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

The Wildlife and Countryside Act (WCA) 1981

The WCA is the primary piece of legislation relating to nature conservation in Great Britain. The Act is supplemented by provisions in the CRoW Act 2000 and the NERC Act 2006.

Part 1 of this act makes it an offence to intentionally or recklessly kill, injure or take any wild bird, to take, damage or destroy the nest of any wild bird while that nest is in use or being built, and/or to take or destroy an egg of any wild bird.

Part 1 also makes it an offence to intentionally or recklessly disturb any wild bird included in Schedule 1 of the act, and to take, damage, or destroy the nest of any wild bid included in Schedule ZA1. Schedule 5 list non-avian species that are afforded various protections under Sections 9.1a, 9.1b, 9.2, 9.4a, 9.4a (Wales), 9.4b, 9.4c, 9.5a and 9.5b.

Schedule 8 lists plant species that are protected from intentionally picking, uprooting or destroying under Section 13.

Schedule 9 lists non-native invasive plants for which it is an offence under Section 14 to plant or otherwise cause to grow in the wild any part of said plants.

The Conservation of Habitats and Species Regulations 2017

Section 43 of Part 3 of this legislation makes it an offence to do any of the following with regards to European Protected Species (animals) as listed on Schedule 2:

- Deliberately capture, injure or kill any wild animal of a European protected species. • Deliberately disturb wild animals of any such species.
- Deliberately takes or destroy the eggs of such an animal.
- Damage or destroy a breeding site or resting place of such an animal. (Note: no intentionality is necessary to prosecute this activity).

Section 43 of Part 3 of this legislation makes it an offence to do any of the following with regards to European Protected Species (plants) as listed on Schedule 5:

- Deliberately pick, collect, cut, uproot or destroy a wild plant of a European Protected Species.
- Be in position of or to transport said plant.

The Countryside and Rights of Way (CRoW) Act 2000

The CRoW Act applies only to England and Wales, and importantly adds the word “reckless” to the offence of damaging or destroying a place a bat uses for shelter or rest or disturbing a bat while using a roost.

Natural Environment and Rural Communities Act 2006

Section 40 of Part 3 of this act compels public bodies (local authorities, police, fire and health authorities, and utility companies) with exercisable functions within England to consider actions to be taken to conserve and enhance biodiversity in England—in particular to have regard to the United Nations Environmental Programme Convention on Biological Diversity of 1992, any relevant local nature recovery strategies, and any relevant species conservation strategy or protected site strategy (prepared by Natural England).

Section 41 of Part 3 of this Act ensures the publishing of a list containing species and habitat types that are of principle importance for the purpose of conserving or enhancing biodiversity in England.

Wild Mammals (Protection) Act 1996.

Under this legislation it is an offence to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with the intent to inflict unnecessary suffering.

Protection of Badgers Act 1992

Under this legislation it is an offence to (or intend to, or to be reckless as to whether your actions would have these consequences):

- Wilfully kill, injure or take a badger (or attempts to do so).
- Damage or destroy any part of a badger sett. (Note: no intentionality is necessary to prosecute these activities).
- Obstruct access to a badger sett. (Note: no intentionality is necessary to prosecute these activities).
- Disturb a badger when it is occupying a sett. (Note: no intentionality is necessary to prosecute these activities).

Appendix 3 Habitat Plan of the Site

Figure 2 Habitat plan of the site, Target notes marker shows the location of brash piles present on site at the time of the survey.

Appendix 4 Additional Photographs

Image 1- Pond 1, approximately 80m northwest of the site.

Image 2 – Pond 2, approximately 145m northwest of the site

Image 3 - g4 Modified grassland present to the east of the site

Image 4 – View of the site from the northeast corner, line of trees 1 present along the northern border of the site

Image 5 – View of the site from the northeast corner, showing line of trees 2 present on the eastern border of the site

Image 6 - Line of trees 1, present along the northern boundary of the site

Image 7 - Line of trees 2, the eastern border of the site

Image 8 - Western border of the site, g4 Modified grassland and brambles present

Image 8 - Western border of the site, g4 Modified grassland. T1 and other trees visible.

Image 9 – View of the site from the northwest corner, T1 and other trees visible.

Image 10 – T1 located on the western border of the site.

Image 11 – Ditch 1, present along the northern border of the site.

Image 12 – Ditch 2, present along the eastern border of the site.

Image 13 – Ash piles present in the centre of the site

Image 14 – Brash and rubble pile present in the centre of the site, unidentified tree stump present. See Appendix 3, habitat plan with target notes showing the location in more detail.