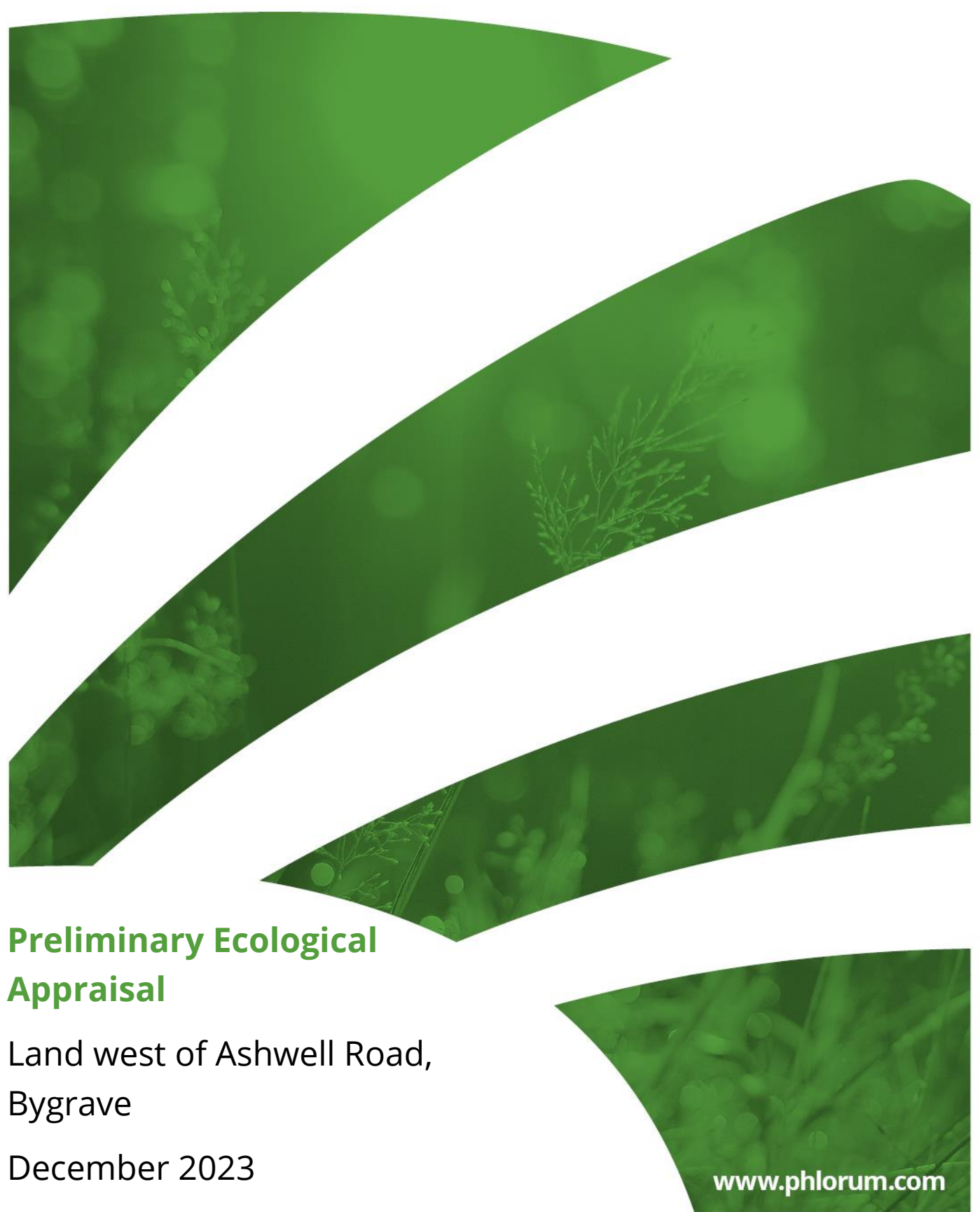


The background of the page is composed of several overlapping, wavy, green shapes that create a sense of movement and depth. These shapes are filled with a blurred image of green foliage, giving the background a natural and organic feel.

Preliminary Ecological Appraisal

Land west of Ashwell Road,
Bygrave

December 2023

Preliminary Ecological Appraisal

Land west of Ashwell Road, Bygrave

04/12/2023

Pathfinder Clean Energy (PACE) UKDEV Ltd

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Document Control:

Project no.:		Project name:		
10476		Land west of Ashwell Road, Bygrave		
Rev:	Written by:	Checked by:	Authorised by:	Date:
Rev0	Charley Scales	Paul Carter	Richard Schofield	21 April 2021
Rev1	Livia Dry	Paul Carter	Richard Schofield	04 December 2023

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All work has been carried out within the terms of the brief using all reasonable skill, care and diligence.

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Appendix D – Plant species list

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Non-technical Summary

Phlorum Ltd was commissioned by Pathfinder Clean Energy (PACE) UKDEV Ltd to undertake an updated Preliminary Ecological Appraisal which was carried out at Land west of Ashwell Road, Bygrave on the 24th October 2023 after the previous site visit on the 18th March 2021. The site visit was undertaken in order to determine whether any ecological constraints could affect the proposed works for the site.

Current proposals are for the construction of a solar energy farm. The survey area extended over approximately 54 hectares (ha).

This revision is to update the redline boundary, and to update the site visit and recommendations.

The main findings of the surveys are as follows:

- 👁️ The site is not subject to any statutory or non-statutory designations. The closest statutory site is Ashwell Springs SSSI which is located 2.3km to the north at its closest point. The closest non-statutory site is Park Wood Meadow and Ponds LWS located 0.8km to the south-east at its closest point.

- 👁️ The site comprised of an arable field, hedgerows, scrub, ruderal vegetation, modified grassland, track, line of trees, several individual trees and a ditch.



- 👁️ If any boundary trees are to be removed in order to facilitate works, then targeted surveys in respect to roosting bats and a preliminary roost assessment is recommended in order to determine presence or likely absence.

- 👁️ Previous to the updated site visit being undertaken it was agreed that a bat activity transect, and static detector survey would be undertaken seasonally under a low potential for foraging and commuting bats. The autumn survey was undertaken on the 24th October 2023, with the remaining surveys to be conducted within the 2024 survey season.

- A precautionary approach to site clearance in respect to **badgers, breeding birds, reptiles, water voles, otters, stag beetles and hedgehogs** is recommended to minimise any adverse impacts on this group.

Further information on precautionary working practices and additional surveys together with recommended mitigation and enhancement measures are discussed in Section 5.

1. Introduction

Background

- 1.1 Phlorum Ltd has been commissioned by Pathfinder Clean Energy (PACE) UKDEV Ltd to undertake a Preliminary Ecological Appraisal, to inform the potential ecological constraints of proposed future development of the Land west of Ashwell Road, Bygrave, Baldock, Letchworth, Hertfordshire SG7 5RH (hereafter referred to as “the site”).
- 1.2 The purpose of the Preliminary Ecological Appraisal was:
 -  to identify the major habitats present;
 -  to identify the potential for any legally protected species to be present; and
 -  to recommend any additional ecological surveys, if required.
- 1.3 As part of the assessment, a desktop review and a site visit were carried out. The results of which were used to assess the nature conservation importance of the site and the potential of the site to support protected species.
- 1.4 This report has been compiled in accordance with current guidelines (British Standard 42020:2013 Biodiversity. Code of Practice for Planning and Development, 2013 and CIEEM, 2017 and 2018).
- 1.5 It is understood that the proposed development includes the construction of a solar energy farm.

Site Location

- 1.6 The site primarily consisted of a large arable field ploughed for crops. The northern boundary of the site had a track running along the edge along with a dry drainage ditch. The eastern, western, and southern boundaries of the site had lines of hedgerow, scrub, and trees along with modified grassland, and ruderal vegetation.
- 1.7 The National Grid Reference for the centre of the site is TL 26244 37046. The survey area extended over approximately 54 hectares (ha).

2. Methodology

Desk Study & Consultations

Database and Map Search

- 2.1 The desktop study involved conducting database searches for statutory and non-statutory designated sites, legally protected species and features of interest within a 2km radius of the site. The database and map search was based on available information provided by the following sources:
-  Herts Environmental Records Centre (HERC, 2023);
 -  Multi-Agency Geographical Information for the Countryside (MAGIC, 2023);
 -  Ordnance Survey mapping;
 -  Aerial photography; and
 -  The Woodland Trust online Ancient Tree Inventory.

Review of Previous Report

- 2.2 The desk study has involved the review of the following previous reports carried out for the site:
-  Preliminary Ecological Appraisal (Phlorum, 2021a); and
 -  Badger Survey Report (Phlorum, 2021b).
 -  Site Walk over (Phlorum, 2023).

Habitat Survey and Assessment

- 2.3 Phlorum Limited carried out an ecological survey of the site on 24th October 2023. The survey was carried out by a suitably qualified ecologist, Livia Dry, who has over 2 years' professional experience of undertaking ecological surveys. The survey results and assessment were reviewed by Paul Carter (BSc (Hons), MBA and awaiting MCIEEM application), an ecologist with over 20 years of experience of managing ecological and landscaping projects, and by the project director Richard Schofield (BSc (Hons), MSc, CSJK, MCIEEM, MIEMA, CEnv), with over twenty years of experience in managing projects. The weather conditions during the survey were cool, cloudy with a light breeze.

- 2.4 The field survey comprised a walkover inspection of the land and habitats present. The survey followed standard Phase 1 survey methodology (JNCC, 2010) and covered all accessible parts of the site, including boundary features. The description of the site habitats has used the code/referencing from The UK Habitat Classification User Manual 2.0 (UKHab 2023). UKHab uses primary habitat codes, either on their own or followed by one or more secondary codes. Each individual code is separated by a space. Habitats were described and mapped (Figure 1: Appendix A). A list of plant species was compiled, together with an estimate of abundance made according to the DAFOR scale. The DAFOR scale provides an estimate of the relative abundance of plant species within the Survey Area (Appendix D).
- 2.5 This assessment provides information on the habitats in the survey area and identifies actual or potential presence of legally protected or otherwise notable species/habitats in or immediately adjacent to the site.
- 2.6 Target notes highlighting a particular feature of ecological interest are provided in Appendix B, with associated photographs.
- 2.7 Scientific names are given after the first mention of a species, thereafter, common names only are used. Nomenclature follows Stace (2010) for vascular plant species.

Protected Species Assessment

- 2.8 The potential for the site to provide habitat for protected species was assessed from field observations in conjunction with results of the desk study. The site was inspected for indications of the presence of protected species including:
-  Habitat considered suitable to support widespread reptile species including areas with a scrub/grassland mosaic and potential hibernation sites;
 -  On-site ponds offering potential breeding opportunities for great crested newts (*Triturus cristatus*) and the presence of suitable terrestrial habitat including hedgerows and rough grassland;
 -  The presence of features in and on trees indicating potential for roosting bats (Chiroptera), including knot and rot holes and loose bark. Secondary evidence of bats including staining, droppings, and feeding remains were also looked for;
 -  The presence of nesting habitat for breeding birds, including mature trees, dense scrub, and hedgerows, and direct evidence of bird nesting including bird song, old nests etc.;
 -  Habitats considered suitable to support badger (*Meles meles*) setts, and evidence in the form of hair, pathways, and latrines;
 -  Presence of woodland and/or hedgerows providing suitable habitat to support hazel dormice (*Muscardinus avellanarius*);

-  Riparian habitat supporting suitable features for water voles (*Arvicola amphibius*) and otters (*Lutra lutra*), and the
 -  Presence of nationally protected and/or invasive plants.
- 2.9 The potential presence for protected species is categorised as **Negligible, Low, Moderate, High, or Present**, based on the findings of the field survey and on the evaluation of existing data.
- 2.10 The purpose of this assessment is to identify whether more comprehensive Phase 2 surveys for protected species or mitigation should be recommended.

Caveat

Data Search Constraints

- 2.11 It is important to note that, even where data is held, a lack of records for a defined geographical area does not necessarily mean that there is a lack of ecological interest; the area may be simply under-recorded.

Survey Constraints

- 2.12 Ecological surveys are limited by factors that affect presence of plants and animals such as seasonality. Whilst every effort has been made to provide a comprehensive description of the site, no investigation can ensure the complete characterisation of the environment.
- 2.13 The survey was carried out late in the growing season and therefore many species may not have been visible above ground or readily identifiable.
- 2.14 The appraisal does not constitute a full botanical survey, or a Phase 2 pre-construction survey that would include accurate GIS mapping for invasive or protected plant species. This survey provides a preliminary view of the likelihood of protected species occurring on the site based on the suitability of the habitat, known distribution of the species in the local area, and any direct evidence on the site. It is therefore used as a tool to recommend further protected species surveys (or other species of significant nature conservation interest) if on the basis of the preliminary assessment or during subsequent surveys, it is considered reasonably likely that protected species may be present.
- 2.15 It is however considered that the survey was sufficiently rigorous to assess the ecological value of the site.

Limitations

- 2.16 This appraisal also does not constitute as a full invasive species survey. All surveys are subject to the conditions on site at the time of the survey. Site surveys are non-intrusive and rely on the visual identification of aboveground growth. If parts of a site are inaccessible, then these areas can often not be surveyed unless they can be viewed from other areas. If any aboveground growth is being managed or has been disturbed or covered, or the below ground growth is dormant, then it may be impossible for us to identify invasive plants in these areas during our non-intrusive survey.

3. Baseline Conditions

Aerial Photography and OS Maps

- 3.1 Aerial photographs and OS maps in combination with the site visit show the site to be located in a predominantly rural area with the main land-use being agricultural. Fields are joined by hedgerow and tree lines. There are small, irregular blocks of woodland scattered across the surrounding landscape. Ashwell Road runs along the eastern boundary of the site. The village of Bygrave is located adjacent to the south-east corner of the site at its closest point. The A505 is located approximately 1.6km to the east. The A1(M) is located approximately 2.4km to the south-west.
- 3.2 There was no standing water on-site at the time of the site survey. A dry drainage ditch ran along the northern site boundary. There was no standing water within 250m of the site.
- 3.3 Aerial photographs and OS maps show the site to be predominantly an arable field with trees and hedgerows boarding the site. There appear to be one pond and one drainage ditch within 500m of the site.

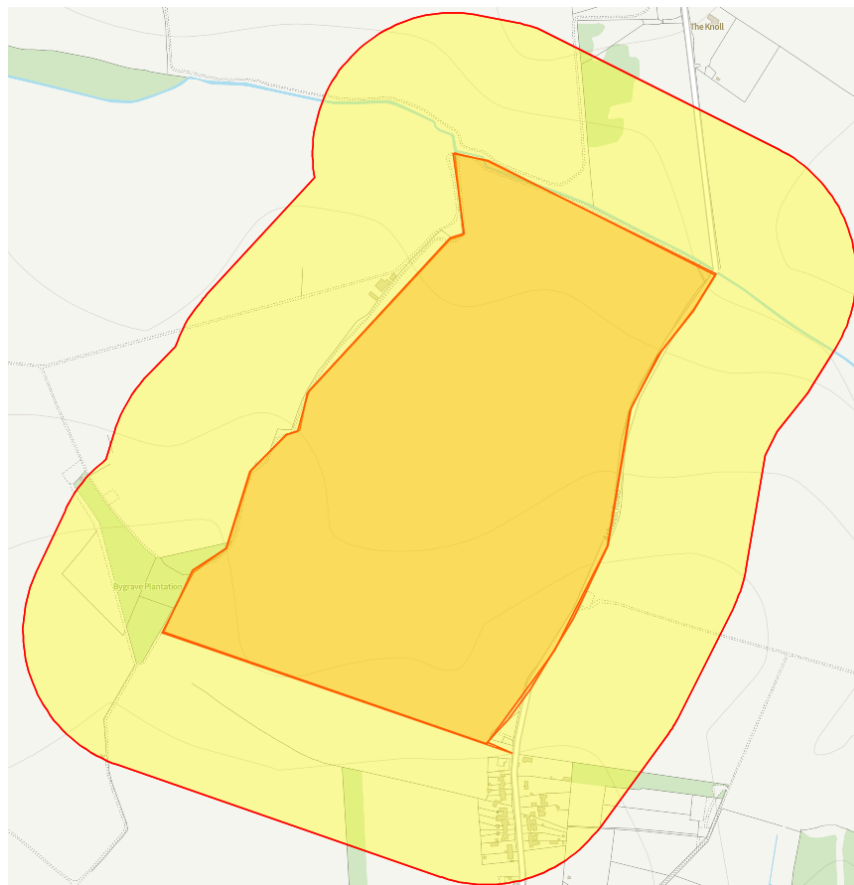


Image 1: Showing one drainage ditch within 250m of the site (which has noted to be dry in 2021, June 2023 and October 2023).

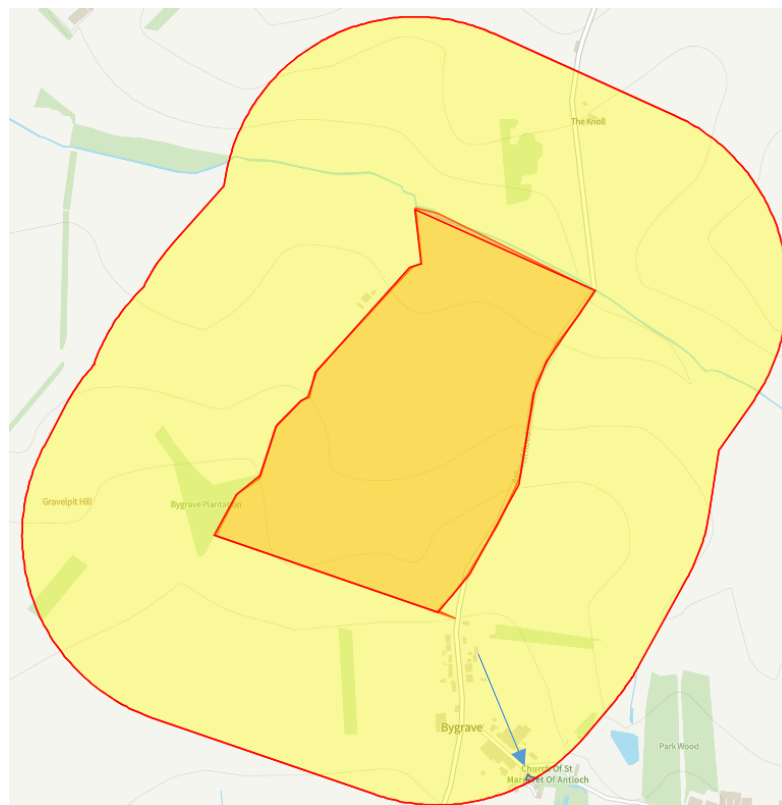


Image 2: Showing one pond, and one drainage ditch (which has noted to be dry in 2021, June 2023 and October 2023) within 500m of the site.

Statutory and Non-Statutory Designated Sites

Statutory Sites

- 3.4 There are no statutory sites within 2km of the application site. The closest statutory designated site is Ashwell Springs Site of Special Scientific Interest (SSSI). Table 1 provides further details on this statutory site.

Table 1: Details on Ashwell Springs SSSI

Site Name	Reason for Designation	Area (ha)	Distance from the Site
Ashwell Springs SSSI	The site has at least 9 springs which flow into the springhead basin with numerous <i>Gammarus pulex</i> , shrimps and flat worms.	0.2	2.3km to the north.

Non-Statutory Sites

- 3.5 The closest non-statutory designated site is St Margaret's Churchyard, Bygrave Local Wildlife Site (LWS). Table 2 provides a list of non-statutory sites within 2km of the site.

Table 2: Non-statutory sites within 2km of the site

Site Name	Reason for Designation	Area (ha)	Distance from the Site
St Margaret's Churchyard, Bygrave LWS	The building and environs are important for protected species.	0.0	600m to the southeast
Park Wood Meadow and Ponds LWS	An area of uneven grassland supporting a moderately diverse neutral grassland community, a pit with calcareous banks and several seasonally wet ponds connected by a small watercourse.	5.5	1km to the southeast
Partridge Hall Field LWS	Field supporting long-standing secondary grassland with old hedges around the margin. Most of the site is open scrub with neutral/calcareous grassland supporting species such as Lady's Bedstraw (<i>Galium verum</i>), Cowslips (<i>Primula vulgaris</i>), Common Knapweed (<i>Centaurea nigra</i>), Greater Knapweed (<i>Centaurea scabiosa</i>), Common Birds-foot-trefoil (<i>Lotus corniculatus</i>), Ox-eye Daisy (<i>Leucanthemum vulgare</i>), Meadow Vetchling (<i>Lathyrus pratensis</i>), Ploughman's-spikenard (<i>Inula conyzae</i>) and Crosswort (<i>Cruciata laevipes</i>). The latter two plant species are both considered to be scarce plant species in Hertfordshire. There is also a diverse fauna which includes breeding Willow Warbler (<i>Phylloscopus trochilus</i>) and four species of butterfly. Wildlife Site criteria: Grassland indicators.	1.98	1.5km to the north
Bygrave Lane by A505 LWS	Roadside verge supporting a good calcareous flora, including Common Valerian (<i>Valeriana officinalis</i>) and Great Pignut (<i>Bunium bulbocastanum</i>), a possible Herts Vulnerable species. Wildlife Site criteria: Grassland indicators.	0.02	1.7km to the southeast

Icknield Way, SW of Slip End (A505) LWS	Central reservation and banks of A505. Verges support species-rich calcareous rough grassland on steep banks with scrub, and planted broadleaf trees and shrubs. Good mix of calcareous species including Greater Knapweed (<i>Centaurea scabiosa</i>), Wild Basil (<i>Clinopodium vulgare</i>) and Dwarf (or Stemless) Thistle (<i>Cirsium acaule</i>). Broomrape (<i>Orobancha minor</i>) has also been recorded. The south-east side of the reservation is most species-rich. Wildlife Site criteria: Grassland indicators.	4.36	1.8km to the east
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Ancient Woodland

- 3.6 There is no ancient woodland covering any part of the site or immediately adjacent to the site. No trees on or adjacent to the site are listed on the Woodland Trusts' Ancient Tree Inventory.
- 3.7 The closest area of ancient woodland is Park Wood which is situated 580m to the southeast.

Review of Previous Reports

[REDACTED]

[REDACTED]

[REDACTED] Site walk over and letter report (Phlorum, 2023) – An updated site visit was undertaken in June 2023. Here it was established that no significant changes had been found on site and that the recommendations remain the same from the previous site visit undertaken in 2021. [REDACTED]

Habitats

Site Summary

- 3.11 The site comprised arable field (c1), hedgerow (h2), scrub (h3h), ruderal vegetation (c 81), modified grassland (g4), track (c 839), line of trees (w 33), trees (c 200), ditch (g 50).
- 3.12 The main habitats recorded within the site are described below. The UKHab code is shown in the bracket after the habitat type (UKHab 2023). Additional details are shown on the habitat survey plan in Appendix A, and the target notes are listed in Appendix B.
- 3.13 The site currently contains no mapped existing habitats of significance (HERC, 2023). However, it is noted that the woodland adjacent to the redline immediately offsite to the southwest is noted to be priority habitat – deciduous woodland.

Arable Field (c1)

- 3.14 The site predominantly consisted of an arable field which has been regularly ploughed for crop use (see Photograph 1 in Appendix B).

Hedgerow (h2)

- 3.15 Hedgerow lined the eastern and western boundaries of the site.
- 3.16 The eastern hedgerow was mostly defunct and species poor with species including elm (*Ulmus sp.*), dogrose (*Rosa canina*) and scattered trees throughout which included ash (*Fraxinus excelsior*) and field maple (*Acer campestre*) (See Photograph 1 in Appendix B).
- 3.17 The western boundary hedgerow had species included hawthorn (*Crataegus monogyna*), dog rose, blackthorn (*Prunus spinosa*), privet sp. (*Ligustrum sp.*) and holly (*Ilex aquifolium*) (see Photograph 6 in Appendix B).

Scrub (h3h)

- 3.18 There were areas of scattered scrub along the field margins, particularly along the western boundary line. Species noted include brambles (*Rubus fruticosus*), hawthorn and common ivy (*Hedera helix*) (see Photograph 6 in Appendix B).

Ruderal Vegetation (c 81)

- 3.19 Here was a small area of ruderal vegetation in the southeastern corner of the site boundary. Species identified were common hogweed (*Heracleum sphondylium*), nettle (*Urtica dioica*), burdock (*Arctium sp.*), wild teasel (*Dipsacus fullonum*), spear thistle (*Cirsium vulgare*), bristly oxtongue (*Helminthotheca echioides*), dock (*Rumex sp.*) (see photograph 2 in Appendix B).

- 3.20 Species previously identified in this area in March 2021 which were not readily identifiable during the most recent visit in October 2023 include ivy-leaved speedwell (*Veronica hederifolia*), white deadnettle (*Lamium album*), greater periwinkle (*Vinca major*), ground-ivy (*Glechoma hederacea*), lesser celandine (*Ranunculus ficaria*), common mallow (*Malva sylvestris*) and forget-me-not sp. (*Myosotis* sp.).

Modified Grassland (g4)

- 3.21 The majority of the field margins consisted of modified grassland. Here species such as common nettle, Yorkshire fog (*Holcus lanatus*), perennial ryegrass (*Lolium perenne*), common daisy (*Bellis perennis*), yarrow (*Achillea millefolium*), cleavers (*Galium aparine*) (see Photograph 6 in Appendix B).
- 3.22 Species previously identified in this area in March 2021 which were not readily identifiable during the most recent visit in October 2023 including cow parsley (*Anthriscus sylvestris*), violet sp. (*Viola* sp.), chickweed (*Stellaria media*), doves foot cranes bill (*Geranium mole*), lords and ladies (*Arum maculatum*), and speedwell sp. (*Veronica* sp.).

Track (c 839)

- 3.23 A gravel track ran along the entire northern boundary of the site and along the western boundary (see Photograph 8 in Appendix B).

Line of Trees (w 33)

- 3.1 There were several tree lines around the southwestern, and northwestern boundary of the site. Species noted include ash (*Fraxinus excelsior*), cherry sp. (*Prunus* sp.), field maple (*Acer campestre*), hawthorn, common ivy and common holly (*Ilex aquifolium*) (see Photograph 3 in Appendix B).
- 3.2 The southern line of trees identified within the March 2021 survey are no longer within the development boundary line, with the new boundary being over 100m from this tree line.

Trees (c 200)

- 3.3 Across the northern boundary of the site, beyond the track, was a dry drainage ditch (see Photograph 2 and 9 in Appendix B).

Ditch (g 50)

- 3.4 Across the northern boundary of the site, beyond the track, was a dry drainage ditch (see Photograph 8 in Appendix B).

Target Note (TN)

- 3.5 The following features of interest were noted during the survey and have been marked on Figure 1:





Protected Species

- 3.6 Legislation relating to the protected species referred to in this section is included in Appendix C.
- 3.7 The following paragraphs detail the suitability of the on-site habitats to support protected species and include information from the data search for protected, rare and otherwise notable species returned within a 2km radius.

Bats

- 3.8 The data search showed multiple records of bats from the genera pipistrelle (*Pipistrellus*), long eared (*Plecotus*), myotis (*Myotis*), serotine (*Eptesicus*), and Noctule/Leisler's (*Nyctalus*), within the 2km search area within the past 15 years. There was also a single record for barbastelle (*Barbastella*) within the data search, however, it is not clear when this record was made.
- 3.9 There were no buildings on the site. There were however a high number of trees, including mature trees, and some of these may contain suitable features for roosting bats. The trees however have not been individually assessed since it is understood that all trees are to be retained.
- 3.10 The majority of the site, including the areas of arable land and grassland, has little value for foraging and commuting bats. The hedgerows and tree lines, onsite stream, may however be used by foraging and commuting bats.
- 3.11 Overall, it was considered that the trees on site offered a mixture of **low and moderate** potential for roosting bats. However, as there are currently no plans to remove these trees, no further surveys are required. If plans change and removal of trees will occur, then it is recommended that a Preliminary Roost Assessment (PRA) is undertaken.
- 3.12 Overall, it was considered that the main site area offered **low** potential for foraging and commuting bats. At the time of this report, one transect survey had already been completed with following intended to be undertaken during the 2024 survey season.

Amphibians

- 3.13 The data search showed two records of great crested newt within 2km of the site within the past 15 years. Aerial photographs and maps show one pond and one drainage ditch within 500m of the site.

- 3.14 During the survey no water was seen on-site. Most of the habitat on-site is unsuitable for amphibians with only the field margins providing features that could support foraging and commuting newts. However, due to the closest pond/water body sitting roughly 485m to the southeast with the town of Bygrave sitting between the development site and the pond, it is considered unlikely that great crested newts would utilise this site. Research has also shown that at distances greater than 200-250m capture operations will hardly ever be appropriate for great crested newts (Cresswell & Whitworth, 2004).
- 3.15 It was considered that the site offered **negligible** potential for breeding newts and **negligible** potential for foraging and commuting newts.

Reptiles

- 3.16 The data search showed no records of reptiles within 2km of the site within the past 15 years.
- 3.17 During the survey it was noted that the areas modified, ruderal vegetation and ruderal vegetation around the arable field margins was suitable habitat for foraging reptiles.
- 3.18 Overall, the site was assessed as having a **moderate** potential to support reptiles around the field margin and a **negligible** potential to support reptiles on the arable field which took up the majority of the site.

Birds

- 3.19 Several Red or Amber listed Birds of Conservation Concern¹ (BoCC), and notable² bird species were returned by the data search that may utilise habitats within the site. Species include skylark (*Alauda arvensis*), lapwing (*Vanellus vanellus*), and yellowhammer (*Emberiza citrinella*).
- 3.20 During the survey it was noted that the onsite treeline and hedgerow provided suitable habitat for nesting birds.
- 3.21 Overall, it was considered that the site offered **high** potential for breeding.

Badgers



¹ Birds of Conservation Concern status is prioritised into high concern (Red), medium concern (Amber) and low concern (Green) (Eaton et al, 2009). Red-list species are those that are globally threatened according to the IUCN criteria; those whose population or range has declined rapidly in recent years; and those that have declined historically and have not shown a substantial recent recovery. Amber-list species are those with an unfavourable conservation status in Europe; those whose population or range has declined moderately in recent years; those whose population has declined historically but made a substantial recent recovery; rare breeders; and those with internationally important or localised populations. Green-list species are those that fulfil none of the criteria.

² Notable Birds are based on a list of birds that are particularly scarce or vulnerable either at national or a regional level. The majority of these bird species are designated as Schedule 1 species, under the Wildlife and Countryside Act 1981 (as amended), or listed as red or amber-listed BoCC.

Hazel Dormice

- 3.26 The data search showed no records of dormice within 2km of the site within the past 15 years.
- 3.27 The hedgerows along the boundary on site had multiple sections of missing hedgerow along both the western and eastern boundary. Therefore, it was felt unlikely the dormice would utilise this site. The site did not contain the type or density of vegetation that would be suitable for supporting either breeding or commuting dormice.
- 3.28 Overall, it was considered that the site offered **negligible** potential to support breeding dormice and **negligible** potential to support commuting dormice.

Water Voles & Otters

- 3.29 The data search showed no records of water vole, and one record of an otter within the 2km search area in the past 15 years.
- 3.30 The site did not contain the aquatic habitat and vegetation types that would support breeding, foraging or commuting water vole or otters. The drainage ditch along the northern boundary of the site was dry at the time of the survey but is connected to the River Ivel located 4km to the west at its closest point.
- 3.31 Overall, it was considered that the site offered **negligible** potential to support breeding water voles & otters and **low** potential to support commuting and foraging water voles and otters.

Hedgehogs

- 3.32 The data search showed records of hedgehogs (*Erinaceus europaeus*) within 2km of the site within the past 15 years.

3.33 No direct evidence of hedgehogs was seen on the site. However, the presence of short grassland along the field margins could have provided the hibernation and foraging areas for this species.

3.34 Overall, the site offered **low** potential for hedgehogs.

Stag Beetles

3.35 The data search showed no records of stag beetle (*Lucanus cervus*) within 2km of the site within the past 15 years.

3.36 No direct evidence of stag beetles was seen on the site. However, the presence of vegetation along the field margin boundaries could have provided the dead wood required for this species.

3.37 Overall, the site offered **low** potential for stag beetle.

Invasive Plants

3.38 The data search showed no records of plant species occurring within the 2km search area in the past 15 years. These plants are listed as invasive in Schedule 9 Part II of the Wildlife and Countryside Act (1981 amended).

3.39 During the survey no specimens were seen of plant species that are listed in Schedule 9 Part II of the Wildlife and Countryside Act (1981 amended).

4. Evaluation

- 4.1 On the basis of the information available from the habitat survey and desk study, the site has been evaluated in terms of its potential for biodiversity, support of protected species and habitats, and the contribution the area makes as part of the wider landscape. The nature conservation value of the site has been assessed following standard criteria developed by CIEEM (2017 and 2018) and in accordance with BS 24040:2013 Biodiversity – code of practice for planning and development. This is provided below.
- 4.2 The biodiversity value of protected species within the site is a preliminary evaluation based upon the desk study records, habitat suitability, and the conservation status of the species in question. It should be noted that where European Protected Species (EPS) or species of Principle Importance for the Conservation of Biodiversity are present on-site they may be valued at a lower level/scale where it is considered likely that populations would not be of sufficient importance to justify designation at a higher level. However, regardless of their biodiversity value, such species are still subject to national and/or European legislation.
- 4.3 Key aspects of relevant planning policy regarding conservation, including an explanation of species referred to as being of 'Principal Importance for Conservation of Biodiversity' and European Protected Species and habitats, are provided in the Legislation section in Appendix C.

Geographic Evaluation

Features of International Importance

- 4.4 Features of International Importance are principally sites covered by international legislation or conventions. The Conservation of Habitats and Species Regulations 2017 (as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 implements the Natural Habitats and Wild Fauna and Flora (92/43/EC) (Habitats Directive) in England and Wales. The Regulations mainly deal with the protection of sites with certain habitats and populations of species that are important for nature conservation in a European context, i.e. Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).
- 4.5 The site is not subject to any international statutory nature conservation designations. The closest site of International Importance is Eversden and Wimpole Woods SAC located 16km to the north. The designated habitats/qualifying species of this SAC is barbastelle bat (*Barbastella barbastellus*), in particular there are habitats present to support a summer maternity roost. The majority of the site does not provide any supporting habitat for this designated site or its qualifying species.

Features of National Importance

- 4.6 Features of national importance include Sites of Special Scientific Interest (SSSIs) which are designated under the Wildlife and Countryside Act 1981 (as amended). The site is not subject to any national statutory nature conservation designations and it is not considered that any habitats or populations or assemblages of species within the site would meet the criteria for the designation of SSSIs at an appropriate geographic level³.
- 4.7 The closest designated site of national importance for nature conservation is Ashwell Springs SSSI located 2.3km to the north. The site does not provide any supporting habitat for this SSSI.
- 4.8 The site is also located within the 5km Impact Risk Zone of Ashwell Springs SSSI, but the site does not have any supporting habitat for this SSSI.

Features of Regional (i.e. Hertfordshire) Importance

- 4.9 The site does not include any features of value at this level neither is it likely to be selected as a SINCC based on the results of the current survey.

Features of District (i.e. North Hertfordshire) Importance

- 4.10 The site is relatively large but the majority of the habitat present is unsuitable for most species (arable) and does not support any features that were considered to be of value at this level.

Features of Local (i.e. Bygrave) Importance

- 4.11 The site does support features at its field margins that were considered to be of value at this level. This includes the tree lines, hedgerow, scrub and ruderal vegetation.

Features of Value Immediate Vicinity (c. 250m) of the Project.

- 4.12 The on-site trees, hedgerow and vegetation at the field margins are of value within the immediate vicinity and provides suitable habitat to support protected species including badgers, bats, reptiles and breeding birds. It also forms part of the wider ecological network of habitats in the locality, providing wildlife corridors for mobile species to move through the landscape.

Summary

- 4.13 Overall, on the basis of the survey results and the above criteria, habitats within the site are considered largely to be of ecological value within the local and immediate vicinity only. The site provides suitable habitat to support several protected species and groups including badgers, bats, reptiles and breeding birds at the field's margins. However, populations of these are unlikely to be locally significant.

³ JNCC Guidelines for selection of biological SSSIs (see <http://jncc.defra.gov.uk/page-2303#download>).

Local Plan Evaluation

- 4.14 It is considered that the statutory North Hertfordshire District Council Local Plan (Adopted 2011) contains the following nature conservation policies relevant to the site. A list of the policies is provided below. The full text of the relevant policies is contained in the Legislation section in Appendix C and this should also be referred to.

North Hertfordshire District Council Local Plan (2011-2031)

11 Natural Environment

Policy NE1: Landscape

Planning permission will be granted for development proposals that:

- a. Respect the sensitivities of the relevant landscape character area and accord with the guidelines identified for built development and landscape management;*
- b. Do not have a detrimental impact on the appearance of their immediate surroundings and the landscape character area unless suitable mitigation measures can satisfactorily address the adverse impact;*
- c. Are designed and located to ensure the health and future retention of important landscape features; and*
- d. Have considered the long term management and maintenance of any existing and proposed landscaping.*

Policy NE2: Green infrastructure

Planning permission will be granted where development:

- a. Protects, conserves and where possible enhances the green infrastructure network;*
- b. Avoids the loss, fragmentation, severance or negative impact on the function of the green infrastructure network;*
- c. Is accompanied by a plan for the long term maintenance and management of any new green infrastructure proposed; and*
- d. Has suitable mitigation measures or appropriate replacement to satisfactorily address adverse impacts on the green infrastructure network.*

Policy NE12 : Renewable and low carbon energy development

Proposals for renewable and low carbon energy development which would contribute towards reducing greenhouse gas emissions will be permitted subject to an assessment of the impacts upon:

- i. Landscape quality, landscape character and visual amenity, including consideration of cumulative impacts of development;*
- ii. Environmental assets;*
- iii. The historic environment, including the impact on the setting of historic assets;*
- iv. The transport network;*
- v. Air quality;*
- vi. Aviation interests; and*
- vii. The amenity of residents.*

5. Discussion and Recommendations

Discussion

- 5.1 The survey site is located at the Land west of Ashwell Road, Bygrave, Baldock, Letchworth, Hertfordshire SG7 5RH. The survey area extended over approximately 54 hectares (ha). Habitats that have the potential to be impacted by the development proposals include arable land, hedgerow, scrub, ruderal vegetation, modified grassland, track, and trees.
- 5.2 Design proposals include construction of a solar energy farm.

- 5.4 Habitats within the proposed development area were assessed as being of value to wildlife within the local vicinity with potential to support badgers, bats, breeding birds, reptile, otters, water voles, hedgehogs and stag beetles and these species may pose a constraint to works.
- 5.5 It is recommended that the remaining targeted surveys in respect to commuting and foraging bats, is continued to determine presence or likely absence.
- 5.6 In addition, a precautionary approach to site clearance in respect to **badgers, breeding birds, reptiles, water voles, otters, stag beetles** and **hedgehogs** is recommended to minimise any adverse impacts on these species' groups.
- 5.7 Details regarding specific mitigation, including further surveys and precautionary working practices together with habitat enhancement measures are provided below.

Recommendations

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

 [REDACTED]

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[REDACTED]

Breeding Birds

- 5.15 The on-site trees, hedgerows, scrub and arable fields may provide suitable nesting habitat for a range of bird species including lapwings and skylarks. All nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended).
- 5.16 In order to avoid any potential impact on breeding birds, the clearance of any trees, hedgerows should be undertaken outside the main bird nesting season which runs from March to August inclusive⁴, with clearance works possible between September and February. Where this is not possible, an ecologist would need to check the vegetation for active nests and signs of bird breeding activity.
- 5.17 In the event that a nest is found, an exclusion zone around the nest would be established. Works would have to cease within this buffer area until the young birds have fledged.

Bats

- 5.18 Bats receive protection under The Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017 (as amended).
- 5.19 It is understood that no trees are to be removed to facilitate the proposed development. If any trees are to be removed a preliminary roost assessment or aerial bat tree assessment will need to be conducted to understand the potential for roosting bats.
- 5.20 Depending on the suitability of any trees proposed for removal two or three emergence and re-entry surveys would be recommended in order to provide information on if and how bats are using the site. Surveys can only be undertaken during the active period for bats taken to run between May and September with at least 2 between May and August.
- 5.21 The results of the bat surveys can then be used to inform specific mitigation and enhancement measures for this species group to include a lighting scheme that is sympathetic to bats.

⁴ It should be noted that this is the main breeding period. Breeding activity may occur outside this period (depending on the particular species and geographical location of the site) and thus due care and attention should be given when undertaking potentially disturbing works at any time of year.

- 5.22 Where a roost is likely to be impacted by the works, and where avoidance is not possible, it may be necessary to obtain a European Protected Species Mitigation (EPSM) Licence before the works can proceed and to complete any necessary mitigation.
- 5.23 Such a licence would need to be obtained from Natural England once full planning permission is in place. The application will require the drafting of a detailed mitigation strategy including timing and construction methods in addition to the mitigation measures proposed. Natural England currently require 30 working days to determine a licence application.
- 5.24 Due to the low habitat suitability of the main site area to support foraging and commuting bats, and the fact that the proposed development of a solar farm will result in a long-term change in habitat structure, it has been recommended that a series of bat activity transect surveys are carried out for the main site area only. One survey should be carried out per season, totalling three surveys altogether. It is also recommended that one static detector is left at strategic points within the main site area to record five consecutive days of bat activity for each season.
- 5.25 The bat activity transects, and static detector surveys will provide information of how bats use the main site area, which will inform any mitigation and enhancement requirements.
- 5.26 The bat activity transects, and static detector surveys commenced in October 2023 and are expected to be completed in Summer 2024, with a separate report containing the survey results and recommendations to follow.

Reptiles

- 5.27 All reptiles are protected under the Wildlife and Countryside Act 1981 (as amended).
- 5.28 Whilst there is suitable habitat for reptiles within the main site area and along the cable route, the proposed development is considered to have a relatively low impact on any potential reptile populations that may be present. The development will be mostly focused on central field areas, which are sub-optimal for reptiles, and little vegetation is to be removed.
- 5.29 It is therefore felt that a precautionary approach to vegetation clearance should be sufficient to safeguard this protected species group. This would involve vegetation clearance to be carried out in stages in order to avoid any potential impacts on reptiles. This work should be supervised by a suitably experienced ecologist.

Water Voles

- 5.30 Water voles are protected under the Wildlife and Countryside Act 1981 (as amended).

- 5.31 The onsite habitats were considered to provide limited potential for water vole and therefore, at this stage, no further survey is considered necessary. It is however considered necessary to adopt a precautionary approach to works to safeguard this protected species. This will require a suitably qualified ecologist carrying out an updated walkover survey of the site immediately prior to works starting on the site. The ecologist will then give a toolbox talk to the on-site contractors prior to the start of works to discuss a precautionary approach to works.
- 5.32 It is also recommended that any on-site bankside vegetation is cut to ground level using handheld strimmer's or similar prior to ground works commencing in order to make the ditch unsuitable for this species group and discourage use of this feature during works. These works should be overseen by a suitably qualified ecologist.

Otters

- 5.33 Otters and their places of refuge are protected at a European level under the EC Habitats Directive (as amended 2010) and have full protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).
- 5.34 Although potential foraging habitat for otters was identified on site, no otters or secondary signs of otters were found on the site. It is therefore recommended that a precautionary approach will be required to safeguard this protected species. This will require a suitably qualified ecologist carrying out an updated walkover survey of the site immediately prior to works starting on the site. The ecologist will then give a toolbox talk to the on-site contractors prior to the start of works to discuss a precautionary approach to works.

Stag Beetles

- 5.35 Stag beetles are a Species of Principle Importance for the UK, therefore a precautionary approach to the clearance of all dead wood should be taken during works. Where possible the standing dead wood around the site boundaries should be retained as part of the works. Where any dead trees pose a health and safety risk, the above ground section should be felled and the arisings stacked on the ground. The tree base and root system of these trees should be retained where possible.
- 5.36 Where it is not possible to retain these areas, the root system of the dead trees should be removed under an ecological watching brief and any larvae encountered should be removed to suitable retained deadwood habitat elsewhere around the site boundaries.

Hedgehogs

- 5.37 Hedgehogs are listed on the Natural Environment and Rural Communities (NERC) Act 2006 Section 41 as a Species of Principal Importance. They are a rapidly declining species.

- 5.38 Hedgehogs need short grass areas to search for invertebrate prey. Log piles and decaying vegetation are used to forage and hibernate in. Areas of leaf litter can be collected and used in nests. Dense scrub areas are also useful to build hibernation nests during winter. Wildlife friendly corridors allow hedgehogs and other wildlife to migrate across a site. These are discussed in the Wildlife Friendly Pathways Section below.

Habitat Retention

- 5.39 All retained trees, including all adjacent off-site trees should be protected in accordance with British Standards (BS 2012) 5837:2012 Trees in Relation to Design, Demolition and Construction. The root protection areas of any retained trees must be left free from excavation and disturbance, and protected during any proposed works. Protection should be in the form of fencing and signs installed for the duration of the works.

Habitat Enhancement

- 5.40 New development offers the opportunity for habitat enhancement in accordance with national and local planning policy and some recommendations are included below.

Bird and Bat Boxes

- 5.41 Additional bird nesting and bat roosting provision could be incorporated into new design proposals. These could be installed on trees. Some recommendations are made below as a guide.
- 5.42 Bat roosting opportunities could be provided through the installation of boxes on or remaining trees, such as the Schwegler 2F, or other makes of a similar design, such as Chavenage Bat box. There are a range of bat boxes available and these can be selected to suit the development and bat species in the locality.
- 5.43 Bird boxes could be installed in the remaining trees which could include the following Schwegler bird house or 1B makes, or similar designs from alternative suppliers.
- 5.44 Further details of the bird and bat boxes are provided in Appendix F.
- 5.45 Bat boxes should be installed at appropriate locations ideally with south-east, south, or south-west facing aspects at least 3m from ground level. Ideally, they need to be exposed to 6-8 hours of direct sunlight, but sheltered from strong winds.
- 5.46 Bird Boxes should be located out of prevailing wind, rain, and strong sunlight, ideally with a clear flight path to the entrance. Ideally, they should be installed two to four metres from the ground facing north or north-east.

Wildlife Friendly Pathways

- 5.47 The increase in building can result in ecological areas which are unconnected. Effectively these are ecological islands, and often there is no way for wildlife to migrate to and from these areas. One way to reduce the impact and allow wildlife, including hedgehogs, to migrate across sites is to install wildlife friendly pathways across a site. This can include a range of things such as wildlife corridors, such as hedgerows and scrub or rough grassland corridors, but also installing holes in fences. Wildlife holes, often referred to as hedgehog holes, help wildlife migrate through areas. The holes need to be at least 13cm by 13cm, at ground level.

Compensatory Planting

- 5.48 Additional tree and shrub planting could be incorporated into the landscape proposals to compensate for any removal to facilitate the works. Planting should include a high proportion of native species and be of local provenance where possible. These should be carefully selected to ensure they contain species suitable for the area. Some species of known wildlife value are listed in Appendix E.

6. Conclusions

6.1 The site survey revealed the following habitats:

-  Arable field (c1);
-  Hedgerow (h2);
-  Scrub (h3h);
-  Ruderal vegetation (c 81);
-  Modified grassland (g4);
-  Track (c 839);
-  Line of trees (w 33);
-  Trees (c 200); and
-  Ditch (g 50).

6.2 The site is not subject to any statutory or non-statutory designations. The closest statutory site is Ashwell Springs SSSI which is located 2.3km to the north at its closest point and the survey area does not support any features that contribute to the designation of this site.

6.3 The following protected species surveys are recommended in order to determine presence or likely absence, or how these species are utilising the site:

-  Bat;

6.4 In addition, a precautionary approach to site clearance in respect to **badgers, breeding birds, reptiles, water voles, otters, stag beetles** and **hedgehogs** is recommended to minimise any adverse impacts on these species' groups.

6.5 It has been recommended that the site is enhanced by introducing some compensatory planting and installing bat and bird boxes.

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8. Glossary of Terms

BAP	Biodiversity Action Plan
BRC	Biological Records Centre
CIEEM	Chartered Institute of Ecology and Environmental Management
Habitats Directive	Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora
LNR	Local Nature Reserve
LWS	Local Wildlife Site
MAGIC	Multi-Agency Geographical Information for the Countryside
NNR	National Nature Reserve
Nomenclature	The system of devising of names for plants
NPPF	National Planning Policy Framework
PEA	Preliminary Ecological Appraisal- formerly referred to as a Phase 1 Habitat Survey
SAC	Special Area of Conservation
SINC	Site of Importance for Nature Conservation
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest

Figures and Appendices

Appendix A

Habitat Map



Figure 1: Ashwell Road

Drawn by: LD
 On the: 22/01/2024
 Not to Scale
 Ref: 10476



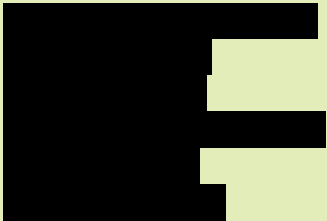
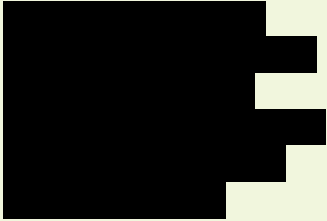
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Appendix B

Photographs

Photographs

Photo No.	Feature (Target Note No.)	Photograph of Feature
1	Arable field and hedgerow facing north along the eastern boundary	 24 Oct 2023 15:16:39 77-79 Ashwell Road Hertfordshire England
2	Area of ruderal vegetation which sits to the southeast of the site.	 24 Oct 2023 15:40:16 76 Ashwell Road Bygrave Hertfordshire England

3	Line of trees and offsite woodland along the southwestern boundary.	 24 Oct 2023 16:19:52 43 Clothall Road Hertfordshire England
4		 24 Oct 2023 16:21:31 Unnamed Road Hertfordshire England
5		 24 Oct 2023 16:41:48

6	Hedgerow along the western boundary with large gaps and nettle and bramble scrub present.	 24 Oct 2023 16:55:49 Unnamed Road Hertfordshire England
7		 24 Oct 2023 17:15:07 Unnamed Road Hertfordshire England
8	Northern boundary of the site with track and dry ditch. Looking east.	 24 Oct 2023 17:26:03 77-79 Ashwell Road Hertfordshire England

9

Tree along the eastern boundary of the site with potential for roosting bats.



Appendix C

Legislation

Legislation

This section contains information pertaining to the legislation and planning policy applicable in Britain. This information is not applicable to Northern Ireland, the Republic of Ireland the Isle of Man or the Channel Islands. Information contained in the following appendix is provided for guidance only.

Species

The objective of the EC Habitats Directive⁵ is to conserve plants and animals which are considered to be rare across Europe. The Directive is transposed into UK law by The Conservation of Habitats and Species Regulations 2017 (as amended) (formerly The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) and The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended).

The Wildlife and Countryside Act 1981 (as amended) implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and also implements the obligations set out for species protection from the Council Directive 2009/147/EC (formerly 79/409/EEC) on the Conservation of Wild Birds (EC Birds Directive) in Great Britain.

Various amendments have been made since the Wildlife & Countryside Act came into force in 1981. Further details pertaining to alterations of the Act can be found on the following website: www.opsi.gov.uk. Key amendments have been made through the Countryside and Rights of Way (CROW) Act (2000) and Nature Conservation (Scotland) Act 2004.

There are a number of other legislative Acts affording protection to species and habitats. These include:

-  Countryside and Rights of Way (CROW) Act 2000;
-  Deer Act 1991;
-  Natural Environment & Rural Communities (NERC) Act 2006;
-  Protection of Badgers Act 1992; and
-  Wild Mammals (Protection) Act 1996.

Badgers

Badgers and their setts are protected under the Protection of Badgers Act (1992), which consolidated and added to the previous Badger Acts of 1973 and 1991. Under this legislation it is an offence to:

-  cruelly ill-treat a badger, including use of tongs and digging;

⁵ Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora.

-  intentionally or recklessly cause a dog to enter a badger sett;
-  intentionally or recklessly damage, destroy or obstruct access to a badger sett⁶ or any part thereof;
-  intentionally or recklessly disturb⁷ a badger when it is occupying a badger sett;
-  possess or control a dead badger or any part of a badger;
-  sell or offers for sale, possesses, or has under his control, a live badger; and
-  wilfully kill, injure, take, or attempt to kill, injure, or take a badger.

A Development Licence will be required from Natural England for any development works affecting an active badger sett, or to disturb badgers while individuals are occupying the sett. Depending on the nature of the works and the specifics of the sett, badgers could be disturbed by work near the sett even if there is no direct interference or damage to the sett itself. Natural England has issued guidelines on what constitutes a licensable activity. There is no provision in law for the capture of badgers for development purposes and therefore it is not possible to obtain a licence to translocate badgers from one area to another.

Bats

Bats are protected under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). This act protects individuals from:

-  intentional or reckless disturbance (at any level);
-  intentional or reckless obstruction of access to any place of shelter or protection; and
-  selling, offering, or exposing for sale, possession or transporting for purpose of sale.

In addition, all species of bat are fully protected under The Conservation of Habitats and Species Regulations 2017 (as amended) through their inclusion on Schedule 2. Regulation 41 prohibits:

-  deliberate killing, injuring, or capturing of Schedule 2 species (all bats);
-  deliberate disturbance of bat species as to impair their ability:
 - (i) to survive, breed, or reproduce, or to rear or nurture young; and
 - (ii) to hibernate or migrate.

⁶ A badger sett is defined in the legislation as *"any structure or place which displays signs indicating current use by a badger"*. This includes seasonally used setts. Natural England (2009) have issued guidance on what is likely to constitute current use of a badger sett: www.naturalengland.org.uk/Images/WMLG17_tcm6-11815.pdf

⁷ For guidance on what constitutes disturbance and other licensing queries, see Natural England (2007) Badgers & Development: A Guide to Best Practice and Licensing. www.naturalengland.org.uk/Images/badgers-dev-guidance_tcm6-4057.pdf, Natural England (2009) Interpretation of 'Disturbance' in relation to badgers occupying a sett www.naturalengland.org.uk/Images/WMLG16_tcm6-11814.pdf, Scottish Natural Heritage (2002) Badgers & Development. www.snh.org.uk/publications/online/wildlife/badgersanddevelopment/default.asp and Countryside Council for Wales (undated) Badgers: A Guide for Developers. www.ccw.gov.uk.

- 🌿 deliberate disturbance of bat species as to affect significantly the local distribution or abundance of the species;
- 🌿 damage or destruction of a breeding site or resting place; and
- 🌿 keeping, transporting, selling, exchanging, or offering for sale whether live or dead or of any part thereof.

A European Protected Species Mitigation (EPSM) Licence issued by Natural England will be required for works liable to affect a bat roost or for operations likely to result in a level of disturbance which might impair their ability to undertake activities listed above. A licence is required to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and monitored.

Breeding Birds

Under the Wildlife & Countryside Act, 1981 (as amended), a wild bird is defined as any bird of a species that is resident in or is a visitor to the European Territory of any member state in a wild state. Game birds, however, are not included in this definition (except for limited parts of the Act). They are covered by the Games Acts, which fully protect them during the closed season.

Under the Wildlife & Countryside Act, 1981 (as amended), all birds, their nests and eggs are protected under Sections 1-8 of the Act and it is an offence, with certain exceptions, to:

- 🌿 intentionally (or recklessly in Scotland) kill, injure, or take any wild bird;
- 🌿 intentionally (or recklessly in Scotland) take, damage or destroy (or, in Scotland, otherwise interfere with) the nest of any wild bird while it is in use or being built;
- 🌿 intentionally take or destroy the egg of any wild bird;
- 🌿 have in one's possession or control any wild bird, dead or alive, or any part of a wild bird, which has been taken in contravention of the Act;
- 🌿 have in one's possession or control any egg or part of an egg which has been taken in contravention of the Act;
- 🌿 use traps or similar items to kill, injure or take wild birds;
- 🌿 have in one's possession or control any bird (dead or alive) unless registered, and in most cases ringed, in accordance with the Secretary of State's regulations; and
- 🌿 in Scotland only, intentionally or recklessly obstruct or prevent any wild bird from using its nest.

Certain rare species receive additional special protection under Schedule 1 of the Act and Annex 1 of the European Community Directive on the Conservation of Wild Birds (2009/147/EC). This affords them protection against:

- 🌿 intentional or reckless disturbance while it is building a nest or is in, on or near a nest containing eggs or young;
- 🌿 intentional or reckless disturbance of dependent young of such a bird;

- in Scotland only, intentional or reckless disturbance whilst lekking; and
- in Scotland only, intentional or reckless harassment.

The British Trust for Ornithology (BTO) has a list of birds that are Species of Conservation Concern. These birds are not legally protected but where they are found on site they should be given planning consideration. The criteria for birds listed as amber (medium conservation concern) include:

- historical population decline during 1800-1995, but recovering: population has more than doubled over last 25 years;
- moderate (25-49%) decline in UK breeding population over last 25 years;
- moderate (25-49%) contraction of UK breeding range over last 25 years;
- moderate (25-49%) decline in UK non-breeding population over last 25 years;
- species with unfavourable conservation status in Europe (Species of conservation Concern);
- five year mean of breeding pairs in the UK;
- ≥50% of UK breeding population in 10 or fewer sites;
- ≥50% of UK non-breeding population in 10 or fewer sites;
- ≥20% of European breeding population in UK; and
- ≥20% of NW European (wildfowl), East Atlantic Flyway (waders) or European (others) non-breeding populations in UK.

Hazel Dormice

The hazel dormouse (*Muscardinus avellanarius*) is fully protected under The Conservation of Habitats and Species Regulations 2017 through its inclusion on Schedule 2. Regulation 41 prohibits:

- deliberate killing, injuring, or capturing;
- deliberate disturbance as to impair its ability:
 - (i) to survive, breed, or reproduce, or to rear or nurture young; and
 - (ii) to hibernate or migrate.
- deliberate disturbance as to affect significantly the local distribution or abundance of the species;
- damage or destruction of a breeding site or resting place; and
- keeping, transporting, selling, exchanging, or offering for sale whether live or dead or of any part of this species.

The hazel dormouse is also currently protected under the Wildlife and Countryside Act 1981 (as amended) through its inclusion on Schedule 5. Under this Act, this species is additionally protected from:

- intentional or reckless disturbance;

-  intentional or reckless obstruction of access to any place of shelter or protection; and
-  selling, offering or exposing for sale, possession or transporting for purpose of sale.

A European Protected Species Mitigation (EPSM) Licence issued by Natural England will be required for works liable to affect dormouse breeding or resting places (N.B. this is usually taken to mean dormouse 'habitat') or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above. The licence will allow derogation from the relevant legislation but will also to enable appropriate mitigation measures to be put in place and monitored.

Herpetofauna (Reptiles and Amphibians)

The following species receive full protection under the Conservation of Habitats and Species Regulations 2017 (as amended) through their inclusion on Schedule 2.

-  sand lizard (*Lacerta agilis*);
-  smooth snake (*Coronella austriaca*);
-  natterjack toad (*Epidalea calamita*);
-  great crested newt (*Triturus cristatus*); and
-  pool frog (*Pelophylax lessonae*).

Under this legislation, Regulation 41 prohibits:

-  deliberate killing, injuring or capturing of species listed on Schedule 2;
-  deliberate disturbance of any Schedule 2 species as to impair their ability:
 - (i) to survive, breed, or reproduce, or to rear or nurture young; and
 - (ii) to hibernate or migrate.
-  deliberate disturbance of any Schedule 2 species as to affect significantly the local distribution or abundance of the species;
-  deliberate taking or destroying of the eggs of a Schedule 2 species;
-  damage or destruction of a breeding site or resting place; and
-  keeping, transporting, selling, exchanging, or offering for sale whether live or dead or of any part of a species.

With the exception of the pool frog, these species are also currently listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Under this Act, they are additionally protected from:

-  intentional or reckless disturbance (at any level);
-  intentional or reckless obstruction of access to any place of shelter or protection; and

- 🌿 selling, offering or exposing for sale, possession or transporting for purpose of sale.

Other native species of herpetofauna are protected solely under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). These species include:

- 🌿 adder (*Vipera berus*);
- 🌿 grass snake (*Natrix natrix*);
- 🌿 common lizard (*Zootoca vivipara*); and
- 🌿 slow-worm (*Anguis fragilis*).

Under this legislation, for these species it is prohibited under Section 9(1) & (5) to:

- 🌿 intentionally (or recklessly in Scotland) kill or injure these species; or
- 🌿 sell, offer, or expose for sale, possess, or transport for purpose of sale these species, or any part thereof.

The following species are listed in respect to Section 9(5) of Schedule 5 of the Wildlife & Countryside Act 1981 (as amended) which only affords them protection against sale, offering or exposing for sale, possession, or transport for the purpose of sale:

- 🌿 common frog (*Rana temporaria*);
- 🌿 common toad (*Bufo bufo*);
- 🌿 smooth newt (*Lissotriton vulgaris*); and
- 🌿 palmate newt (*L. helveticus*).

Water Voles

The water vole (*Arvicola amphibius*) (= *terrestris*) is fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to:

- 🌿 intentionally kill, injure, or take (capture) this species;
- 🌿 intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection;
- 🌿 intentionally or recklessly disturb water voles while they are occupying a structure or place used for shelter or protection; and
- 🌿 sell, offer, or expose for sale, or have in his possession or transport for the purpose of sale, any live or dead water vole or part of this species.

Where development works are liable to affect habitats known to support water voles, Natural England must be consulted. All alternative design options must have been explored and communicated to Natural England in order to demonstrate that works have tried to avoid contravening the legislation e.g. the use of alternative sites, appropriate timing of works to avoid times of the year in which water voles are most vulnerable etc. Conservation licences for the capture and translocation of water voles may be issued by Natural England for the purpose of development activities if it can be shown that the

activity has been properly planned and executed and thereby contributes to the conservation of the population.

Otters

Otters (*Lutra lutra*) are fully protected under The Conservation of Habitats and Species Regulations 2017 through their inclusion on Schedule 2. Regulation 41 prohibits:

- 🌿 deliberate killing, injuring, or capturing of otters;
- 🌿 deliberate disturbance as to impair their ability:
 - (i) to survive, breed, or reproduce, or to rear or nurture young; and
 - (ii) to hibernate or migrate.
- 🌿 deliberate disturbance as to affect significantly the local distribution or abundance of the species;
- 🌿 damage or destruction of a breeding site or resting place; and
- 🌿 keeping, transporting, selling, exchanging, or offering for sale whether live or dead or of any part of this species.

Otters also receive protection under the Wildlife and Countryside Act 1981 (as amended) through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- 🌿 intentional or reckless disturbance (at any level);
- 🌿 intentional or reckless obstruction of access to any place of shelter or protection; and
- 🌿 selling, offering, or exposing for sale, possession or transporting for purpose of sale.

A European Protected Species Mitigation (EPSM) Licence issued by Natural England will be required for works liable to affect breeding or resting places or for activities likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above. The licence is to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and monitored.

Wild Mammals

All wild mammals are protected against intentional acts of cruelty under the 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 intent to inflict unnecessary suffering.

To avoid possible contravention of this legislation, due care and attention should be taken when carrying out works that have the potential to impact any wild mammal as described above.

Plants

Wild plants are protected under the Wildlife and Countryside Act 1981 (as amended) which makes it an offence for an 'unauthorised' person to intentionally (or recklessly in Scotland) uproot wild plants. An authorised person can be the owner of the land on which the action is taken, or anybody authorised by them.

Some rare plant species also receive full protection under Schedule 8 of the Wildlife and Countryside Act 1981 (as amended). This prohibits:

- ➊ intentionally (or recklessly in Scotland) picking, uprooting, or destruction of any wild Schedule 8 species (or seed or spore attached to any such wild plant in Scotland only); and
- ➋ selling, offering, or exposing for sale, or possessing or transporting for the purpose of sale, any wild live or dead Schedule 8 plant species or parts.

In addition to the legislation outlined above, several plant species are fully protected under Schedule 5 of The Conservation of Habitats and Species Regulations 2017. Regulation 45 makes it an offence to:

- ➊ deliberately pick, collect, or destroy a wild Schedule 5 species; and
- ➋ be in possession of, or control, transport, sell, or exchange any wild live or dead Schedule 5 species or anything derived from it.

A European Protected Species Mitigation (EPSM) Licence issued by Natural England will be required for works liable to affect species of plant listed under The Conservation of Habitat and Species Regulations 2017.

Invasive Plant Species

Certain plants are listed on Part II of Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) in respect to Section 14(2). Species include:

- ➊ Japanese knotweed (*Reynoutria japonica*);
- ➋ giant hogweed (*Heracleum mantegazzianum*);
- ➌ Himalayan balsam (*Impatiens glandulifera*);
- ➍ certain species of rhododendron (*Rhododendron* sp.); and
- ➎ certain species of cotoneaster (*Cotoneaster* sp.).

Species listed are non-natives whose establishment or spread in the wild may be detrimental to native wildlife. Inclusion on Part II of Schedule 9 therefore makes it an offence to:

- ➊ plant or otherwise cause these species to grow in the wild.

This legislation makes it is an offence to cause species listed to grow in the wild. Therefore, if they are present on site and development activities have the potential to cause the further spread of these species to new areas, it will be necessary to ensure appropriate measures are in place to prevent this.

Habitats

International Statutory Designations

-  Special Protection Areas (SPAs): Terrestrial SPAs are afforded protection by The Conservation (Natural Habitats, &c.) Regulations 1994 ((as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019) and offshore SPAs are afforded protection under The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended by EU Exit Regulations 2019). SPAs are designated under the EC Birds Directive (Council Directive 2009/147/EC on the Conservation of Wild Birds). SPAs are areas recognised as important habitat for rare and migratory birds within the European Union (rare birds as listed on Annex I of the Directive).
-  Special Areas of Conservation (SACs): These areas are designated under the EC Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora), designated for the habitats and (non-bird) species listed on Annexes I and II to the Directive under the same regulations as detailed for SPAs.
-  Ramsar sites: These areas are wetlands designated under the Convention on Wetlands of International Importance (1971). Wetlands can include areas of marsh, fen, water, or peatland and may be natural or artificial, permanent, or temporary. Ramsar sites are underpinned through prior notification as Sites of Special Scientific Interest (SSSIs) and as such receive statutory protection under the Wildlife & Countryside Act 1981 (as amended) with further protection provided by the Countryside and Rights of Way (CROW) Act 2000.

National Statutory Designations

-  Sites of Special Scientific Interest (SSSIs): These sites are designated by the countryside agencies (for example Natural England) under the Wildlife & Countryside Act 1981 (as amended). Prior to 1981 these were designated under the National Parks and Access to the Countryside Act 1949. Improved mechanisms for the protection of SSSIs have also been introduced by the Countryside and Rights of Way Act 2000 (in England and Wales).
-  National Nature Reserves: These sites are also designated by the countryside agencies under the Wildlife & Countryside Act 1981 (as amended).

Local Statutory Designations

-  1949 Local Nature Reserves (LNRs): These sites are designated by local authorities under the National Parks and Access to the Countryside Act 1949. These are sites recognised for their wildlife or geological interest at a local level and are managed for nature conservation.

Non-Statutory Designations

-  Local Wildlife Sites: Areas of local conservation interest may be designated by local authorities. The terminology for these sites varies depending on the county. They can be called Sites of Nature Conservation Importance (SNCI's), Sites of Importance for Nature Conservation (SINCs), County Wildlife Sites (CWS), Listed Wildlife Sites (LWS), Local Nature Conservation Sites (LNCS), and Sites of Biological Importance (SBIs). The designation criteria may vary between counties. Local Wildlife Sites are of material consideration when planning applications are being determined.
-  The Hedgerow Regulations 1997: These have been compiled to protect 'important' countryside hedgerows from damage or removal. A hedgerow is considered important if it (a) has existed for 30 years or more; and (b) satisfies at least one of the criteria listed in Part II of Schedule 1 of the Regulations. Under the Regulations, it is against the law to remove or destroy certain hedgerows without permission from the local planning authority. Hedgerows covered by these regulations include those on or adjacent to common land, SSSIs (including all terrestrial SACs, NNRs and SPAs), LNRs, land used for agriculture or forestry, and land used for the keeping or breeding of horses, ponies, or donkeys.

National Planning Policy

-  The National Planning Policy Framework (NPPF) (2021) replaces the former NPPF 2019, 2018 and 2012, and the former PPS9 document and emphasises the need for sustainable development. The Framework specifies the need to protect and enhance biodiversity and geodiversity, identify 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 that connect them. Plus partnerships for habitat management, enhancement, restoration, or creation. The Framework aims to promote the conservation, restoration, and enhancement of priority habitats, ecological networks, and the protection and recovery of priority species. In determining a planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from adverse harm; appropriate mitigation or compensation measures are in place where significant harm cannot be avoided; opportunities to incorporate biodiversity in and around developments are encouraged; and planning permission is refused for development resulting in the loss or deterioration of irreplaceable habitats including aged or veteran trees and also ancient woodland.

Local Planning Policy

North Hertfordshire District Council Local Plan (2011-2031)

11 Natural Environment

Policy NE1: Landscape

Planning permission will be granted for development proposals that:

- a. Respect the sensitivities of the relevant landscape character area and accord with the guidelines identified for built development and landscape management;*
- b. Do not have a detrimental impact on the appearance of their immediate surroundings and the landscape character area unless suitable mitigation measures can satisfactorily address the adverse impact;*
- c. Are designed and located to ensure the health and future retention of important landscape features; and*
- d. Have considered the long term management and maintenance of any existing and proposed landscaping.*

Policy NE2: Green infrastructure

Planning permission will be granted where development:

- a. Protects, conserves and where possible enhances the green infrastructure network;*
- b. Avoids the loss, fragmentation, severance or negative impact on the function of the green infrastructure network;*
- c. Is accompanied by a plan for the long term maintenance and management of any new green infrastructure proposed; and*
- d. Has suitable mitigation measures or appropriate replacement to satisfactorily address adverse impacts on the green infrastructure network.*

Policy NE9: Water quality and environment

Planning permission for development proposals will be granted where they make appropriate space for water, including (as applicable):

- a. Maintaining a minimum 9 metre wide undeveloped buffer zone from all designated main rivers;*
- b. Maintaining a minimum 5m wide undeveloped buffer zone for ordinary watercourses; and*
- c. River restoration and resilience improvements where proposals are situated close to a river or considered to affect nearby watercourses.*

Policy NE12: Renewable and low carbon energy development

Proposals for renewable and low carbon energy development which would contribute towards reducing greenhouse gas emissions will be permitted subject to an assessment of the impacts upon:

i. Landscape quality, landscape character and visual amenity, including consideration of cumulative impacts of development;

ii. Environmental assets;

iii. The historic environment, including the impact on the setting of historic assets;

iv. The transport network;

v. Air quality;

vi. Aviation interests; and

vii. The amenity of residents.

In assessing renewable and low carbon energy proposals against the above criteria the Council will give significant weight to their local and wider benefits, particularly the potential to reduce greenhouse gas and other harmful emissions, and the social benefits of community owned schemes where this is relevant. Proposals for decentralised energy schemes associated with development of the strategic sites allocated in the Plan will be encouraged subject to an assessment of the impacts. In all cases, end of life/redundant plant, buildings, apparatus, and infrastructure must be removed and the site restored to its former state or a condition agreed with the Council

Appendix D

Plant Species List

Plant Species List

Scientific nomenclature follows Stace (2010) for vascular plant species and British Bryological Society (BBS) Special Volume No. 5 *English Names for British Bryophytes* for bryophyte species. Vascular plant common names follow the Botanical Society of the British Isles 2003 list, published on its web site, www.bsbi.org.uk. The plant species list was generated as part of a Phase 1 Habitat survey and does not constitute a full botanical survey.

Abundance was estimated using the DAFOR scale as follows:

D = dominant, A = abundant, F = frequent, O = occasional, R = rare, L = locally

Key to qualifiers: G = garden origin, P = planted, Y = young, S = seedling or sucker, T = tree, H = hedge, W = water, ? = identification uncertain.

Plant list for 2023 survey

Scientific Name	Common Name	Abundance	Qualifier
<i>Acer campestre</i>	Field maple	O	T
<i>Achillea millefolium</i>	Yarrow	F	
<i>Arctium sp.</i>	Burdock	R	
<i>Bellis perennis</i>	Common daisy	O	
<i>Cirsium vulgare</i>	Spear thistle	O	
<i>Crataegus monogyna</i>	Hawthorn	A	H
<i>Dipsacus fullonum</i>	Wild teasel	O	
<i>Fraxinus excelsior</i>	Ash	F	T
<i>Galium aparine</i>	Cleavers	O	
<i>Hedera helix</i>	Common ivy	O	
<i>Helminthotheca echinoides</i>	Bristly Oxtongue	F	
<i>Heracleum sphondylium</i>	Hogweed	A	
<i>Holcus lanatus</i>	Yorkshire fog	A	
<i>Ilex aquifolium</i>	Holly	O	

<i>Lolium perenne</i>	Perennial rye	A	
<i>Prunus sp.</i>	Cherry	O	
<i>Prunus spinosa</i>	Blackthorn	O	H
<i>Rosa canina</i>	Dog rose	O	H
<i>Rubus fruticosus</i>	Brambles	O	
<i>Rumex sp.</i>	Dock	A	
<i>Ulmus sp.</i>	Elm	O	T,H
<i>Urtica dioica</i>	Nettle	A	

Plant list for 2021 survey which were not seen during the most recent survey.

Scientific Name	Common Name	Abundance	Qualifier
<i>Anthriscus sylvestris</i>	cow parsley	F	
<i>Arum maculatum</i>	Lords and ladies	F	
<i>Geranium mole</i>	Doves foot cranes bill	O	
<i>Glechoma hederacea</i>	Ground ivy	O	
<i>Lamium album</i>	White dead-nettle	O	
<i>Ligustrum sp.</i>	Privet sp.	R	H
<i>Malva sylvestris</i>	Common mallow	O	
<i>Myosotis sp.)</i>	forget-me-not sp.	O	
<i>Ranunculus ficaria</i>	Lesser celandine	O	
<i>Stellaria media</i>	Chickweed	O	
<i>Veronica hederifolia</i>	Ivy-leaved speedwell	O	
<i>Veronica sp.</i>	Speedwell	R	
<i>Vinca major</i>	greater periwinkle	R	
<i>Viola sp.</i>	Violet sp.	O	

Appendix E

Suggested Compensatory Planting

Suggested Compensatory Planting

This section provides a list of plants which are of proven value to wildlife. The list is not exhaustive and merely provides a guide for suggested planting for wildlife value. Planting should be tailored on a site by site basis. The list includes some native and ornamental species however the emphasis should always be on the use of predominantly native species.

N = Native, NN = Non-native.

This list includes species that may be harmful if handled or ingested. Schedule 9 (Part 2) of the Wildlife and Countryside Act, 1981 (as amended) includes a list of invasive plants, including aquatic species, that should always be avoided in planting schemes.

Large Shrubs

Hedge veronica/Hebe (*Veronica* spp.) NN

Hawthorn (*Crataegus monogyna*) N

Blackthorn (*Prunus spinosa*) N

Rose: dog rose (*Rosa canina*), field rose (*R. arvensis*), burnet rose (*R. pimpinellifolia*) N

California lilac (*Ceanothus* spp.): (*C. arborea*) NN

Wild privet (*Ligustrum vulgare*) N

Common holly (*Ilex aquifolium*) N

Barberry (*Berberis* spp.): (*B. darwinii*), (*B. thunbergii*), (*B. x stenophylla*) NN

Daisy Bush (*Olearia* spp.): (*O. x hastii*), (*O. macrodonta*), (*O. traversii*) NN

Firethorn (*Pyracantha coccinea*) NN

Hazel: (*Corylus avellana*) N, (*C. maxima*) NN

Viburnum (*Viburnum* spp.): wayfaring tree (*V. lantana*) N, guelder rose (*V. opulus*) N, laurustinus (*V. tinus*) NN. Note: *V. lantana* can become invasive in more open habitats.

Dogwood (*Cornus sanguinea*) N

Broom (*Cytisus scoparius*) N

Escallonia (*Escallonia macrantha*) NN

Hardy fuchsia (*Fuchsia magellanica*) NN

Buckthorn (*Rhamnus cathartica*) N

Spindle (*Euonymus europaeus*) N

Tutsan (*Hypericum androsaemum*) N

Yew (*Taxus baccata*) N

Trees

Cherry (*Prunus* spp.): wild cherry (*P. avium*), bird cherry (*P. padus*), domestic plum (*P. domestica*) N, or cherry plum (*P. cerasifera*) NN

Ash (*Fraxinus excelsior*) N

Apple (*Malus* spp.): edible apple (*M. domestica*), crab apple (*M. sylvestris*) N

Pear (*Pyrus* spp.): edible pear (*P. communis*) NN

Small-leaved lime (*Tilia cordata*) N

Silver birch (*Betula pendula*) N

Yew (*Taxus baccata*) N

Black poplar (*Populus nigra*) N

Foxglove tree (*Paulownia tomentosa*) NN

Beech (*Fagus sylvatica*) N

Climbers

Jasmine (*Jasminum* spp.): summer jasmine (*J. officinale*), winter jasmine (*J. nodiflorum*) NN

Ivy (*Hedera helix*) N

Climbing hydrangea (*Hydrangea anomala* ssp. *petiolaris*) NN

Honeysuckle (*Lonicera* spp.): (*L. periclymenum*) N

Clematis (*Clematis* spp.) NN

Hop (*Humulus lupulus*) N

Firethorn (*Pyracantha atalantioides*) NN

Bulbs

English bluebell (*Hyacinthoides non-scripta*) N

Squill species (*Scilla* spp.) N/NN

Snowdrop (*Galanthus nivalis*) N

Winter aconite (*Eranthis hyemalis*) E

Crocus species (*Crocus* spp.) NN

Wild Daffodil (*Narcissus pseudonarcissus*) N

Onion species (*Allium* spp.) N/NN. Note: *Allium triquetrum* (three cornered leek) and *Allium paradoxum* (few-flowered leek) are Schedule 9 invasive plant species.

Wood anemone (*Anemone nemorosa*) N

Lesser celandine (*Ficaria verna*) N

Appendix F

Bird and Bat Box Designs

Bird and Bat Box Designs

Bird Boxes

Example	Type	Dimension D x W x H (cm)	Target Species	Location
	Schwegler Nest Box 1B Hole-fronted 26mm entrance hole	16 x 16 x 23	Multi-purpose, including: 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.	Suitable walls or semi-mature/mature trees and shrubs; attached to a tree trunk or hung from branches. Ideal points include discrete areas away from predators, such as against walls, plant, and metal supports.
	Schwegler Bird House 32mm entrance hole	15 x 21 x 33	Multi-purpose, including: great-, blue-, marsh-, and coal tit, redstart, nuthatch, pied flycatcher, and sparrows.	Fixed to a semi-mature/mature tree trunk, wall or fence using the hanging bracket on the back. Between 1.5 m and 3 m high, and should be sited higher if area has a particularly high cat population.

Example	Type	Dimension D x W x H (cm)	Target Species	Location
	Schwegler Sparrow Terrace 1SP	20 x 43 x 24.5	House sparrow. It may also occasionally attract tits, redstarts, and spotted flycatchers.	In an elevated position such as on post/platform within dense shrub/tree planting or on top of lighting columns. Alternatively, they could be attached to the side of a building. The terrace can be fixed on to the surface of a suitable wall or incorporated into the wall. It is suitable for all types of houses in built-up areas, and on industrial and agricultural buildings such as barns, sheds, and factories. Due to its weight (15kg), it is not suitable for fences or garden sheds. Ideally place the terrace two metres or more above the ground. Either install on the surface of the wall using the plugs and screws provided or install directly into the wall. Cleaning is not necessary. The front panel can be removed by turning the screw hook.

Bat Boxes

Example	Type	Dimension D x W x H (cm)	Target Species	Location
	2F Schwegler Bat Box (General Purpose) with or without Double Front Panel	16 x 16 x 33	Without panel: Particularly successful with brown long-eared bat. Also used by noctule. With panel: Ideal for crevice-dwelling species: pipistrelles, Myotis species (particularly Daubenton's), Leisler's, and serotine.	On trees or buildings and at a height of 3 to 6m. In open sunny positions and in groups of 3 to 5 facing different directions. Please note that once bats have inhabited a roost site they may only be disturbed by licensed bat workers.
	Chavenage Bat Box	10 x 18 x 38	Small crevice-dwelling bats: e.g. pipistrelles.	On trees in gardens or woodland and also on house walls. 2.5 - 5m high on a building, mature tree, or vegetation line (trees/tall hedge) or on a feeding/flight route in partial daytime sun. Please note that once bats have inhabited a roost site they may only be disturbed by licensed bat workers.



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