



HYBRID ECOLOGY LTD
joined up thinking

Preliminary Ecological Appraisal:

Land at Woodcotes, Sandon, Hertfordshire

SG9 0QZ

On behalf of:

Sworders

Prepared by:

Gemma Holmes BSc (Hons) ACIEEM

Report version:

Version 1:

January 2024

Summary

Land at Woodcotes, Sandon, was visited on 7th December 2023 in connection with a development proposal. This report supports a planning application to North Hertfordshire District Council.

This report provides the results of a baseline survey and makes recommendations for further detailed survey, mitigation, and enhancement as appropriate in the context of the proposal, referring to planning policy and best practice guidance where appropriate.

The report is required to inform design, and to provide the Local Planning Authority with certainty on impacts to designated sites, Priority Habitats and legally protected species.

Designated sites and Priority Habitats

- The site is not subject to a statutory or non-statutory nature conservation designation.
- No Priority Habitats are present on or adjacent to the site.

Habitats and species

- General: The site contains buildings, hard standing, grassland, scrub, trees and hedgerows.
- Legally protected species: One of the buildings is used by roosting (and potentially nesting) barn owls. There is potential for roosting bats, reptiles and nesting birds. Further surveys are required to ensure the development delivers appropriate mitigation.
- Nesting birds: There is a high risk of nesting birds in buildings, trees, and scrub. All site clearance work will take place between October and February inclusive, which will avoid the main nesting season.

Enhancement proposal

The proposal has scope to include biodiversity enhancements. They could involve tree and hedgerow planting, and habitat boxes for barn owls, bats, solitary bees, and nesting birds.

A Biodiversity Enhancement Strategy / Landscape Ecological Management Plan are recommended to secure the proposed measures. Ultimately these measures will contribute to Government aims under Paragraph 174(d) of the National Planning Policy Framework 2021 and Local Plan policies which encourage all development to demonstrate biodiversity net-gain.

Table of Contents

1.0	INTRODUCTION	4
2.0	PLANNING POLICY AND LEGISLATION	6
3.0	METHODOLOGY: DESKTOP STUDY	13
4.0	METHODOLOGY: HABITATS AND SPECIES	14
5.0	RESULTS: DESKTOP STUDY	17
6.0	RESULTS: PHASE 1 HABITAT SURVEY	17
7.0	RESULTS: PROTECTED/PRIORITY SPECIES SCOPING	22
8.0	ECOLOGICAL CONSTRAINTS AND OPPORTUNITIES	34
9.0	CONCLUSIONS	37
	REFERENCES	38

Figures:

Figure 1.	Location plan
Figure 2.	Survey boundary
Figure 3.	Guidelines for assessing potential suitability of development sites for bats (BCT, 2016)
Figure 4.	Annotated survey plan
Figure 5.	Photographs

Appendices:

Appendix 1.	Mapping provided by HERC
Appendix 2.	Planting for pollinators
Appendix 3.	Appropriate habitat boxes for the site

1.0 Introduction

Personnel

- 1.1 This report has been prepared by Gemma Holmes; Consultant Ecologist at Hybrid Ecology Ltd. Gemma is a qualified ecologist with 17 years' experience in professional survey work and is an Associate member of the Chartered Institute of Ecology and Environmental Management (CIEEM). Gemma holds licences to survey for great crested newt and bats in the UK (Licence numbers 2015-19096-CLS-CLS and 2016-27305-CLS-CLS respectively).

Brief

- 1.2 Sworders instructed Hybrid Ecology to produce a Preliminary Ecological Appraisal for Land at Woodcotes, Sandon, Hertfordshire (central grid reference TL 3235 6449). The proposal involves development of three agricultural buildings. A location plan is provided in Figure 1 and the survey boundary is provided in Figure 2. A layout has not been provided.

Aims

- 1.3 This report aims to advise the client/developer and relevant members of the project team as to the key ecological constraints and opportunities associated with this project and any necessary mitigation requirements to ensure legal obligations in respect of protected species, designated sites and habitats are met.

Limitations

- 1.4 Whilst every effort has been made to provide a comprehensive description of the site, no investigation could ensure the complete characterisation and prediction of the natural environment. Wildlife is transient and mobile, and results of a survey can reasonably vary from one day to the next or across the seasons.
- 1.5 The protected species assessment provides a view of the likelihood of protected species occurring on the site based on the known distribution of species in the local area and the suitability of the habitat. However, it should not be taken as providing a full and definitive survey of any protected species/group.
- 1.6 In accordance with CIEEM Report Writing Guidelines (December 2017), this report is valid for 18 months beyond the survey date. Beyond this, habitats are reasonably expected to have changed to warrant an updated survey. Beyond 18 months, this report should not be accepted in support of a planning application.

Figure 1. Location plan

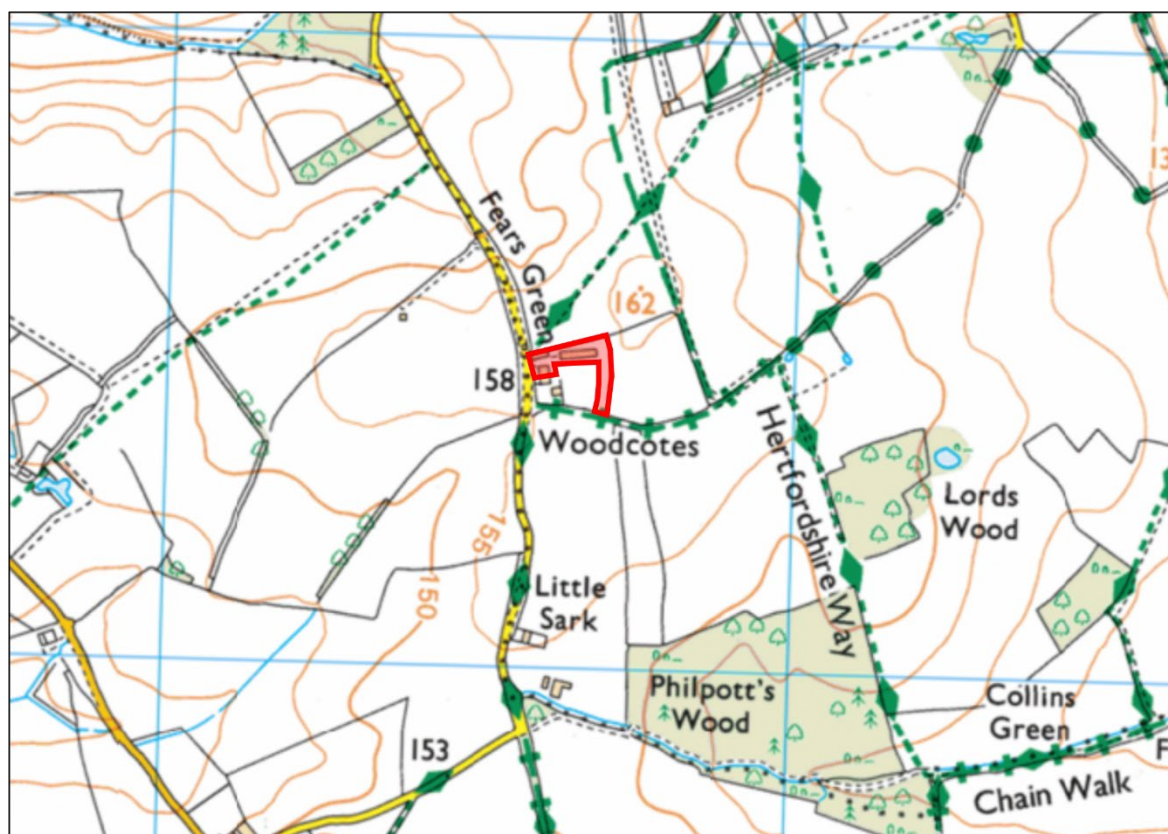
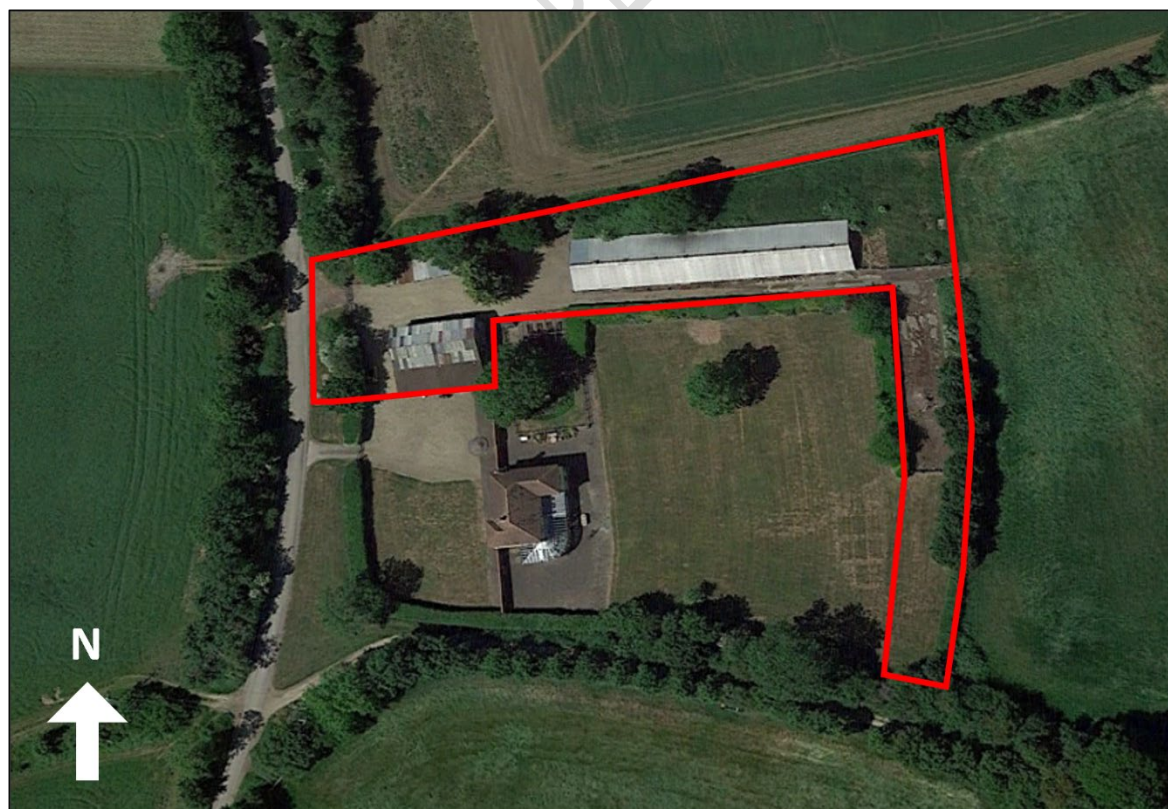


Figure 2. Survey boundary (approximate)



2.0 Planning Policy and Legislation

National Planning Policy Framework (2021): Conserving and Enhancing the Natural Environment

Please note the below policies have been taken directly from the National Planning Policy Framework, which can be found here: [National Planning Policy Framework - GOV.UK \(www.gov.uk\)](https://www.gov.uk/national-planning-policy-framework)

Paragraph 174

2.1 Planning policies and decisions should contribute to and enhance the natural and local environment by:

- a) 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);
- b) 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;
- c) Maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
- d) Minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- e) 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.

Paragraph 179

2.2 To protect and enhance biodiversity and geodiversity, plans should:

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

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

Paragraph 180

2.3 When determining planning applications, local planning authorities should apply the following principles:

- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- b) development on land within or outside a 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 normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
- c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and
- d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

Paragraph 181

2.4 The following should be given the same protection as habitats sites:

- a) potential Special Protection Areas and possible Special Areas of Conservation;
- b) listed or proposed Ramsar sites; and
- c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

Paragraph 182

2.5 The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

Local Planning Policy

The following information is taken from the North Herts Local Plan 2011-2031

Policy NE4: Biodiversity and geological sites

Planning permission will only be granted for development proposals that appropriately protect, enhance and manage biodiversity in accordance with the hierarchy and status of designations and features listed in Policy SP12.

All development should deliver measurable net gains for biodiversity and geodiversity, contribute to ecological networks and the water environment, and/or restore degraded or isolated habitats where possible.

Applicants should, having regard to the status of any affected site(s) or feature(s):

- a) Submit an ecological survey that is commensurate to the scale and location of the development and the likely impact on biodiversity, the legal protection or other status of the site;
- b) Demonstrate that adverse effects can be avoided and / or satisfactorily minimised having regard to the hierarchy of protection below:
 - i. locating on an alternative site with a less harmful impact;
 - ii. providing adequate mitigation measures; or
 - iii. as a last resort compensated for.

The acceptability of approach(es) to avoidance, mitigation and compensation will be commensurate with the status of the asset(s) likely to be affected by the application; Compensation is unlikely to be an appropriate solution for proposals affecting nationally or internationally designated sites other than in the most exceptional circumstances.

- c) Include appropriate measures to manage construction impacts by demonstrating how existing wildlife habitats supporting protected or priority species will be retained, safeguarded and managed during construction;
- d) Integrate appropriate buffers of complimentary habitat for designated sites and other connective features, wildlife habitats, priority habitats and species into the ecological mitigation and design. The appropriateness of any buffers will be considered having regard to the status of the relevant habitat. 12 metres of complimentary habitat should be provided around wildlife sites

(locally designated sites and above), trees and hedgerows. It may be necessary to exceed this distance for fragile habitats such as ancient woodland or to provide appropriate root protection for mature trees; and

- e) Provide a long-term management and monitoring plan including mitigation measures as necessary.

Local Geological Sites are ratified by the Herts & Middlesex Wildlife Trust (HMWT) and are afforded the same protection as Local Wildlife Sites.

Policy SP12: Green infrastructure, landscape and biodiversity

We will accommodate significant growth during the plan period whilst ensuring the natural environment is protected and enhanced. We will:

- a) Protect, identify, manage and where possible enhance a strategic multi-functional network of green infrastructure;
- b) Consider and respect landscape character, scenic beauty and locally sensitive features, particularly in relation to the Chilterns Area of Outstanding Natural Beauty;
- c) Protect, enhance and manage designated sites in accordance with the following hierarchy of designations and features:
 - Internationally designated sites
 - Nationally designated sites
 - Locally designated sites;
 - Non-designated sites that include important habitats and species
- d) Protect, enhance and manage biodiversity networks including wildlife corridors, ancient woodlands and hedgerows, wetland and riverine habitats, Local Geological Sites, protected species, priority species and habitats, and non-designated sites of ecological value and ensure measurable net gains for biodiversity; and
- e) Protect other open spaces and support provision of new and improved open space.

Legislation: Protection of Designated Sites, Habitats and Species

Please note this section is a summary of legislation only and should not be taken as a definitive interpretation of any wildlife law. UK wildlife legislation can be found here: [Legislation.gov.uk](https://www.legislation.gov.uk)

Designated sites

RAMSAR

- 2.6 Ramsar sites are designated under the Convention on Wetlands of International Importance especially as Waterfowl Habitat. Wetlands are designated, protected and promoted in order to stem the progressive encroachment on and loss of wetlands, which are broadly defined to include marsh, fen, peatland and water.

Special Areas of Conservation (SAC)

- 2.7 Special Areas of Conservation are sites designated by Member States under the EC Habitats Directive. The aim is to establish a network of important high quality conservation sites that will make a significant contribution to conserving habitats and species considered to be most in need of conservation at an international level.

Special Protection Areas (SPA)

- 2.8 Special Protection Areas are designated under the EC Birds Directive, to conserve the habitat of certain rare or vulnerable birds and regularly occurring migratory birds. Any significant pollution or disturbance to or deterioration of these sites has to be avoided.

National Nature Reserves (NNR)

- 2.9 National Nature Reserves are statutory reserves established for the nation under the Wildlife and Countryside Act, 1981. NNRs may be owned by relevant national body (e.g. Natural England in England) or established by agreement; a few are owned and managed by non-statutory bodies. NNRs cover a selection of the most important sites for nature conservation in the UK.

Sites of Special Scientific Interest (SSSI)

- 2.10 Sites of Special Scientific Interest are areas notified under the Wildlife and Countryside Act, 1981, as being of 'special interest for nature conservation'. They represent the finest sites for wildlife and natural features in Great Britain supporting many characteristic, rare and endangered species, habitats and natural features. Notification as a SSSI is primarily a legal mechanism organised by Natural England and selected according to specific criteria.

Local Nature Reserves (LNR)

- 2.11 Land owned, leased or managed by Local Authorities and designated under the National Parks and Access to the Countryside Act. A site of some nature conservation value managed for educational objectives – no need for SSSI status. Some reserves are managed by a non-statutory body.

Local Wildlife Site / Wildlife Sites

- 2.12 Local Wildlife Sites (LoWS) are non-statutory sites designated at a county level as being of conservation importance and often recognised in Local authority development plans. The aim of this identification is to protect such sites from land management changes, which may lessen their nature conservation interest, and to encourage sensitive management to maintain and enhance their importance. Although LoWS have no statutory protection they are a material consideration in the planning process.

Regionally Important Geological / Geomorphological Site (RIGS)

- 2.13 Regionally Important Geological/Geomorphological Sites are non-statutory earth science sites. The RIGS networks are locally based voluntary groups drawing on both professional and interest groups identifying sites using a methodical and rational approach. RIGS are analogous to non-statutory biological sites – they are not a second tier but sites of regional or local importance in their own right.

Legally protected and Priority Species

- 2.14 The two principal wildlife statutes, directly related to the NPPF and local planning policy, are the Conservation of Habitats and Species Regulations (The Habitats Regulations, 2019, EU Exit as amended) that deals with internationally important sites and species, and the Wildlife and Countryside Act 1981 (as amended) (from here on referred to as WCA, 1981) that deals with nationally important sites.
- 2.15 Certain habitats and species are protected as SSSI under the WCA (1981). Some of these are more strictly protected as proposed or designated SPA, SAC and Ramsar Sites under the Habitats Regulations (2019). These designations protect features and resources listed as being of international importance from both direct and indirect effects arising from a range of issues including proposed development.
- 2.16 Certain species listed on Schedule 5 of the WCA (1981), including all bat species, great crested newt, hazel dormouse and otter are also protected under Schedule 2 of the Habitats Regulations (2019) making them European Protected Species (EPS). Taken together it is illegal to:
- Deliberately kill, injure or capture any wild animal of EPS;
 - Deliberately disturb wild animals of any EPS in such a way to be likely to significantly affect:
 - The ability of any significant groups of animals of that species to survive, breed, rear or nurture their young; or
 - The local distribution of that species.
 - Recklessly disturb a EPS or obstruct access to their place of rest;
 - Damage or destroy breeding sites or resting places of such animals;
 - Deliberately take or destroy the eggs of such an animal;
 - Possess or transport any part of a EPS, unless acquired legally; and/or
 - Sell, barter or exchange any part of an EPS.
- 2.17 A range of species other than birds, including water vole is protected from disturbance and destruction under the WCA (1981) through inclusion on Schedule 5.

- 2.18 All breeding birds are protected from deliberate destruction under the WCA (1981). Certain species are further protected from disturbance at their nest sites being listed on Schedule 1 of the WCA (1981).
- 2.19 Common reptiles including common lizard, slow-worm, grass snake and adder are protected under the WCA (1981), they are listed as Schedule 5 species, therefore part of Section 9(1) and section 9(5) apply; the Countryside and Rights of Way Act 2000 (CRoW) also strengthens their protection.
- 2.20 Badger is protected from sett disturbance and destruction under the Protection of Badgers Act (1992).
- 2.21 Section 40 of the NERC Act 2006 places a legal duty on local authorities to conserve biodiversity. Section 41 (S41) sets out a list of species and habitats of principal importance. These species are known as Priority Species and are those identified as requiring action under the former UK Biodiversity Action Plan (BAP) and which continue to be regarded as conservation priorities under the UK Post-2010 Biodiversity Framework.
- 2.22 Native, species-rich hedgerows are protected as being 'important' under the Hedgerow Regulations (1997).
- 2.23 Japanese Knotweed *Fallopia japonica*, along with a number of other introduced and invasive species, are listed under Schedule 9 of the WCA (1981). Japanese knotweed is highly invasive and its rhizomes cause damage to built structures. Hence it is also classed as controlled waste under the Environment Protection Act (1990) and has therefore either to be removed and disposed of in a licensed landfill or the rhizomes buried to a depth of at least 5m.

3.0 Methodology: Desktop Study

Mapping exercise

- 3.1 Aerial imagery (Google Earth Pro, 2023) was used to examine the landscape context of the site in relation to significant ecological assets such as woodland, established hedgerows, grassland and any naturalised features that would allow wildlife use and dispersal.
- 3.2 Multi-Agency Geographical Information for the Countryside (MAGIC) mapping was used to:
- Determine the proximity to international, national and locally designated sites and whether the site lies within the Zone of Influence/Impact Risk Zone, as appropriate.
 - Identify any areas of land mapped by Natural England as Priority Habitat within 250 metres of the site.
 - Identify any European Protected Species (EPS) mitigation licenses granted by Natural England for great crested newt or bats within a 2km radius of the site that could be relevant to this development.

Biological Records Search

- 3.3 A biological records search for legally protected and priority species was ordered from Hertfordshire Environmental Records Centre in December 2023. The search also included designated sites and Priority Habitats.

4.0 Methodology: Habitats and Species

Phase 1 Habitat Survey

- 4.1 An ecological walkover survey was carried out on 7th December 2023 by ecologist Anthony Owers (BSc Hons). The survey included all land shown in Figure 2.
- 4.2 The survey was undertaken broadly in accordance with the Handbook for Phase 1 Habitat Survey (JNCC 2010). This is a standard technique for obtaining baseline ecological information for areas of land, including proposed development sites.

Protected/priority species scoping

- 4.3 The survey also included an assessment of the site's potential to support any legally protected species; or Species and Habitats of Principal Importance (Priority Species), as identified by Section 41 of the Natural Environment and Rural Communities Act (2006).
- 4.4 The site was assessed for its suitability for the protected animals that are likely to occur in the area. Taking into account the results of the desk study, the location and habitats on site, a scoping assessment was carried out for:
- Bats (roosting, foraging and commuting)
 - Great crested newts *Triturus cristatus* (GCN) – terrestrial only.
 - Hazel dormice
 - Otter and water vole
 - Badger *Meles meles*
 - Birds (including breeding and wintering birds)
 - Invertebrates
 - Reptiles
 - Rare and notable plant species
 - Invasive non-native plant and animal species
 - Other notable species.
- 4.5 Where best practice guidelines exist, these have been used to assess the likelihood that individual species will be present, for example Bat Surveys: Good Practice Guidelines (BCT 2016) and Habitat Suitability Index for Great Crested Newt (Oldham et al, 2000).
- 4.6 In accordance with BCT, 2023, the suitability of habitats on the site for bats was assessed in accordance with Figure 3. The assessment included a thorough internal/external inspection of all buildings, and a ground-level assessment of trees for features that bats could reasonably use – including cavities, bark lesions, woodpecker holes, fluting, hazard beams, along with any external evidence such as droppings (note droppings decay quickly on trees) and staining/rub marks on the stem/limb.

Figure 3. Guidelines for assessing potential suitability of development sites for bats (BCT, 2023)

Table 4.1. Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement.

Potential suitability	Description	
	Roosting habitats in structures	Potential flight-paths and foraging habitats
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).	No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide continuous lines of shade/protection for flight-lines, or generate/shelter insect populations available to foraging bats).
Negligible ^a	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.	No obvious habitat features on site likely to be used as flight-paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions ^b and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats ^c).	Habitat that could be used by small numbers of bats as flight-paths such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions ^b and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for flight-paths such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions ^b and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation site.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for flight-paths such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

The Mitigation Hierarchy

4.7 All development is expected to meet the highest planning standards and follow the Mitigation Hierarchy of avoid, mitigate, compensate and enhance to ensure that significant natural environment impacts are avoided.

- Avoid - Avoiding any loss of or damage to wildlife sites or to protected / Priority species – development must not damage or destroy important national and Local Wildlife Sites.
- Mitigate - Impacts considered unavoidable should be mitigated at the site where the impact occurs, if at all possible.
- Compensate - Any remaining significant biodiversity loss should be compensated for, as close to the area of loss as possible.
- Enhance - Improve degraded ecosystems/return an area to original ecosystem including creating new habitat - habitat creation should be a standard feature of all new development, wherever it is.

Evaluation criteria

4.8 Ecological features (designated sites, habitats, and species) were evaluated where possible in relation to a geographical context (i.e. International, National, Regional, Metropolitan, County, District, Borough, Local and Site), in accordance with CIEEM Ecological Impact Assessment Guidelines (2016). Criteria include designations, quality of habitat in relation to the site context, ability to support notable assemblages of species, contribution to habitat connectivity, dispersal opportunities or providing intrinsic ecological value.

5.0 Results: Desktop Study

Landscape context

- 5.1 The site is approximately 0.45ha and situated approximately 1km northeast of the main village settlement of Sandon. The site is bordered to the north by an arable field. A meadow borders the site to the east, beyond which is an arable field. A residential property (Woodcotes) and associated garden borders the site to the south. A country lane borders the site to the west, beyond which is an arable field. The wider landscape is characterised by extensive areas of farmland, field boundary hedgerows, small woodlands and copses, and low-density rural development.

Designated sites/Priority Habitats

Relevant maps provided by Herts Environmental Records Centre (HERC) are provided in Appendix 1.

- 5.2 The site is not designated for any conservation reason.
- 5.3 There are no European designated sites within 8km. The nearest is Eversden and Wimpole Woods Special Area of Conservation (SAC) which is located approximately 16km to the north.
- 5.4 There is one nationally designated site within 2km of the site. Blagrove Common Site of Special Scientific Interest (SSSI) is located approximately 1.6km to the south. This 5ha site is designated for its botanical interest. The site falls outside of the criteria defined within Natural England's 'impact risk zones', therefore it is unlikely that the development will influence this SSSI. This, combined with the small scale of the proposed development and the disparity between habitat types means there will be no significant direct or indirect effects on the SSSI.
- 5.5 There are thirteen non-statutory designated Local Wildlife Sites (LoWS) located within 2km of the site. The nearest to the site are Lords Wood (450m southwest) and Philpotts Wood (470m south), with the remainder >880m away. Given the small scale of the development and the intervening habitats in the agricultural landscape, it is unlikely that either LoWS will be directly or indirectly impacted.
- 5.6 There are no Priority Habitats on, or adjacent to, the site. The HERC ecological networks map identifies several areas of priority habitat within the surrounding landscape. The nearest is located approximately 450m southeast of the site. This woodland habitat will not be impacted by the proposed development.
- 5.7 The site falls within a zone that contains no mapped existing habitats of any significance. Therefore, in the context of the ecological network dataset, these areas are suitable for appropriate development.

Natural England EPS licences

- 5.8 There are three granted EPS licences identifiable using www.magic.gov.uk within 2km of the site, all located between 0.9km and 1.3km to the southwest, in the village of Sandon. They include two licences related to multi-species bat roosts, and one related to disturbance of great crested newt resting habitat. The details from MAGIC are provided below:

Site Check Report Report generated on Fri Dec 08 2023
You selected the location: Centroid Grid Ref: TL31813439
 The following features have been found in your search area:

Granted European Protected Species Applications (England)

Case reference of granted application	EPSM2013-6044
Species group to which licence relates	Amphibian
Species on the licence	Great Crested Newt
Site county of licence	Hertfordshire
Licence Start Date	09/09/2013
Licence End Date	30/06/2016
Does licence impact on a breeding site	N
Does licence allow damage of breeding site	
Does licence allow damage of a resting place	
Does licence allow destruction of breeding site	N
Does licence allow destruction of a resting place	Y
Does licence impact on a hibernation site	Unknown
NERC agreement reference	Unknown

Site Check Report Report generated on Fri Dec 08 2023
You selected the location: Centroid Grid Ref: TL32303439
 The following features have been found in your search area:

Granted European Protected Species Applications (England)

Case reference of granted application	2019-43358-EPS-MIT
Species group to which licence relates	Bat
Species on the licence	BARB,BLE,C-PIP,NATT
Site county of licence	Hertfordshire
Licence Start Date	07/11/2019
Licence End Date	03/11/2024
Does licence impact on a breeding site	Y
Does licence allow damage of breeding site	Y
Does licence allow damage of a resting place	Y
Does licence allow destruction of breeding site	Y
Does licence allow destruction of a resting place	Y
Does licence impact on a hibernation site	Unknown
NERC agreement reference	Unknown

Site Check Report Report generated on Fri Dec 08 2023
You selected the location: Centroid Grid Ref: TL32093461
 The following features have been found in your search area:

Granted European Protected Species Applications (England)

Case reference of granted application	EPSM2010-2257
Species group to which licence relates	Bat
Species on the licence	C-PIP;BLE;NATT
Site county of licence	Hertfordshire
Licence Start Date	16/09/2010
Licence End Date	15/09/2012
Does licence impact on a breeding site	Y
Does licence allow damage of breeding site	
Does licence allow damage of a resting place	
Does licence allow destruction of breeding site	Y
Does licence allow destruction of a resting place	Y
Does licence impact on a hibernation site	Unknown
NERC agreement reference	Unknown

6.0 Results: Habitat Survey

A habitat plan with annotated target notes is provided in Figure 4. Photographs from the site visit are provided in Figure 5. For full details on legally protected species, please refer to Section 7. Latin names appear in the text once.

6.1 The total area surveyed is approximately 0.45 hectares and includes the following habitats:

- Buildings
- Neutral grassland
- Scrub
- Trees
- Hedgerows
- Bare ground / hard standing

Buildings

6.2 Three buildings are present on the site, a former livestock shed (B1), an open-fronted barn (B2), and a small open-fronted shed (B3).

6.3 B1 is a timber-framed, single storey structure with timber cladding on the exterior walls and a corrugated sheet metal roof. There are gaps in the external cladding and some of the skylights along the ridge are open providing internal access to wildlife. The internal walls and ceiling are clad in polystyrene sheets which are in varying degrees of disrepair. The eastern gable end has an open doorway which provides access for barn owls. The structure is divided into three spaces by internal walls, with evidence of barn owl in the eastern and central spaces. The western space is used for storage and subject to intermittent human disturbance.

6.4 B2 is an open-fronted barn which adjoins a brick walled garage which we understand is being retained under the proposals. The barn has solid concrete block lower walls, with a timber frame clad in sheet metal and cement fibre sheets. The back wall that adjoins the garage has two long vertical cracks which could be accessed by crevice roosting bat species.

6.5 B3 is a small, open-fronted timber frame shed with sheet metal roof and solid concrete block partition walls. The building is in a state of disrepair and is gradually collapsing.

Neutral grassland

6.6 Two areas of grassland are present on the site, one managed lawn in the southeastern corner, the other unmanaged rank grassland in the northeastern corner. The lawn comprises creeping buttercup *Ranunculus repens*, doves-foot-cranesbill *Geranium molle*, dandelion *Taraxacum agg*, perennial rye grass *Lolium perenne*, annual meadow grass *Poa annua*, cocks foot *Dactylis glomerata* and bent *Agrostis sp*.

The area of unmanaged rank grassland is predominantly false oat grass *Arrhenatherum elatius* and cocks foot, with nettle *Urtica dioica*, thistle *Cirsium sp.*, dock *Rumex sp.*, burdock *Arctium sp.* and cleavers *Galium aparine*.

Scrub

- 6.7 Small patches of bramble *Rubus fruticosus* and elder *Sambucus nigra* scrub are located in the rank grassland to the north of B1.

Trees

- 6.8 Established trees are present along the northern boundary. Species include oak *Quercus robur*, ash *Fraxinus excelsior*, and cypress. Two of the oak trees have wounds and features that could be used by bats and birds. Smaller trees are present along the road on the western boundary. Species include birch *Betula pendula*, field maple *Acer campestre*, holly *Ilex aquifolium* and dogwood *Cornus sanguinea*.

Hedgerows

- 6.9 A native hedgerow runs along most of the eastern boundary of the site. The southern third is managed through cutting, with the remainder unmanaged and outgrown. Species include field maple, dogwood, hawthorn *Crataegus monogyna* and bramble.
- 6.10 A managed laurel hedge runs along part of the southern boundary.

Bare ground / hard standing

- 6.11 A combination of gravel and concrete hardstanding provides vehicular access into the site. The gravel is mostly devoid of vegetation, while the concrete is partially covered with moss. Other species in these areas include chickweed *Stellaria media*, pineapple weed *Matricaria discoidea*, mugwort *Artemisia vulgaris*, yarrow *Achillea millefolium*, dandelion and bristly ox-tongue *Helminthotheca echioides*.

Habitats evaluation:

- The habitats present on the site are of local importance to wildlife, specifically B1 for barn owls. B1 and B2 could also be used by roosting bats.
- The area of rank grassland and scrub could support a transient population of reptiles.
- Two oak trees on the northern boundary could be used by roosting bats.
- Trees, hedgerows, scrub, and buildings could all be used by nesting birds.
- The habitats on the site are relatively common and widespread in the local area.

Figure 4. Annotated site plan



Figure 5. Photographs

B1 western and southern aspects



B1 interior (western section)



B1 interior (eastern section)



Owl pellets, droppings, and feathers in eastern section of B1



B1 eastern aspect and rank grassland



B2 western and northern aspects



B2 interior



B3 southern aspect



Oak tree on the northern boundary with bat roosting potential



Managed lawn grassland in the southeastern corner of the site



7.0 Results: Protected/Priority Species Scoping

This section includes data search results, habitat requirements for species/species groups and an assessment in the context of the proposal.

Bats

Data search:

- 7.1 There are records for common pipistrelle, soprano pipistrelle, brown long-eared, serotine, barbastelle, and Natterer's bats within 2km of the site.

Habitat requirements:

- 7.2 In buildings, bats are found inside loft voids, under hang tile cladding, weatherboards, inside soffit boxes and any sheltered, dry crevice. Bats typically hibernate in cellars, cavity walls and bunkers. In trees, bats are typically found in woodpecker holes, flaking bark, wounds, and hazard beams. The largest roosts are found close to foraging resources such as woodland and water.

Assessment:

- 7.3 B1 and B2 are assessed as having **Moderate** bat roosting potential. B1 has numerous crevices and voids behind insulation boards and gaps in the timber walls. B2 has niches in two large vertical cracks in the back wall, along with potential crevices where the roof timbers meet the blockwork back wall.
- 7.4 B3 is assessed as having **Negligible** bat roosting potential due to a lack of sheltered crevices and the open nature of the structure which leaves it exposed to inclement weather.
- 7.5 Further surveys of B1 and B2 are required - two dusk emergence surveys between May and August inclusive. If roosting bats are identified during either survey, then a third survey will be required to provide sufficient information for an EPS licence application.
- 7.6 The two oak trees on the northern boundary exhibit feature that could be used by roosting bats. The eastern-most tree has a wound on a branch at 7m facing east. The western-most tree has a significant wound on the main stem between 0.5m and 4m facing north, with exposed heartwood, woodpecker holes and cracks. It is recommended that both trees are retained. However, if any works are planned (i.e. felling or pruning), then they must be climbed and inspected for bats beforehand by qualified ecologists.
- 7.7 The site provides suitable foraging habitat for bats in the form of grassland, trees, and hedgerows. Given the small size of the site and limited extent of these habitats, the site is assessed as being important to local foraging bats species at a 'site level' only.

Requirements for further survey, avoidance, mitigation, compensation and enhancement

Further survey requirement	Two emergence surveys of B1 and B2 between May and August inclusive. If works are proposed to the two oak trees on the northern boundary, they will require a climbed inspection to determine their suitability and look for evidence indicating the presence of roosting bats.
Avoidance	None
Mitigation	Lighting will be controlled and directed away from retained trees and newly installed bat roost features.
Compensation	None
Enhancement	Integrated bat roost features are recommended on buildings. Clusters of bat boxes could be installed on suitable mature trees on the wider Woodcotes site.

Great crested newt (GCN)

Data search

- 7.8 There are records of great crested newt records within 2km of the site.

Habitat requirements:

- 7.9 Breeding sites are mainly medium-sized ponds, though ditches and other waterbody types may also be used less frequently. Ponds with ample aquatic vegetation (which is used for egg-laying) seem to be favoured.
- 7.10 Great crested newts do not require very high water quality but are normally found in ponds with a circum-neutral pH. Broad habitat type varies greatly, the most frequent being pastoral and arable farmland, woodland, scrub, and grassland. There are also populations in coastal dunes and shingle structures.
- 7.11 Great crested newts can be found in rural, urban and post-industrial settings, with populations less able to thrive where there are high degrees of fragmentation. The connectivity of the landscape is important, since great crested newts often occur in metapopulations that encompass a cluster of several or many ponds.

Assessment:

- 7.12 There are no ponds on the site and no identifiable ponds within 500m of the site boundary.

- 7.13 The nearest pond is located approximately 550m to the southeast in Lords Wood. This pond is surrounded by arable fields and although some suitable terrestrial habitat is present on the site, the lack of connectivity and presence of dispersal barriers mean that GCN is unlikely to be present and affected by this proposal.
- 7.14 Cresswell (2004) found that the most comprehensive mitigation, in relation to avoiding disturbance, killing or injury to great crested newt is appropriate within 50m of a breeding pond. Cresswell's research found that it will also almost always be necessary to actively capture newts 50-100m away. However, at distances greater than 100m, it was discovered that attempts to capture newts may not be necessary or the most effective option to avoid incidental mortality. At distances greater than 200-250m, Cresswell found that capture operations will hardly ever be appropriate. No further survey is necessary.

Requirements for further survey, avoidance, mitigation, compensation and enhancement

Further survey requirement	None
Avoidance	None
Mitigation	In the unlikely event that great crested newts are encountered at any point during site maintenance, clearance or construction, work will immediately cease until ecological advice has been sought.
Compensation	NA
Enhancement	None

Dormouse

Data search

- 7.15 No dormouse records were returned by HERC within 2km of the site.

Habitat requirements:

- 7.16 The hazel dormouse requires wooded habitats, usually semi-natural woodland containing hazel coppice and oak, and a rich understorey cover through which to disperse safely between trees (English Nature 2006).

Assessment:

- 7.17 Most of the site provides poor-quality dormouse habitat as it comprises buildings and hard standing. The scrub, trees and hedgerows provide some sub-optimal habitat for this species, but these areas are small in area and lack both the structure and species composition favoured by dormice. Furthermore, these habitats lack arboreal connectivity to potentially suitable woodland habitats in the wider landscape. It is considered highly unlikely that dormice are present on the site or would disperse through it. No further survey is necessary.

Requirements for further survey, avoidance, mitigation, compensation and enhancement

Further survey requirement	None
Avoidance	None
Mitigation	None
Compensation	NA
Enhancement	None

Otter and water vole

Data search:

- 7.18 No records for either species were returned by HERC within 2km of the site.

Habitat requirements:

- 7.19 Both species require flowing water, deep enough to support foraging behaviour and with connectivity into the wider landscape.

Assessment:

- 7.20 There is no suitable aquatic habitat on or adjacent to the site. The absence of both species on the site and in the immediate local area can be predicted with a high level of confidence. No further survey is required.

Requirements for further survey, avoidance, mitigation, compensation, and enhancement

Further survey requirement	None
Avoidance	None
Mitigation	None
Compensation	NA
Enhancement	NA

Reptiles

Data search

- 7.21 There are single records for grass snake, slow worm and common lizard within 2km of the site.

Habitat requirements:

- 7.22 Common lizard, slow worm, grass snake and adder require mosaic habitats with features in which to bask, forage and shelter. These habitats need to have onward connectivity for dispersal. Suitable habitats include grassland with scrub edges or small woodland coppices (Edgar et al. 2010).

Assessment:

- 7.23 The site contains some suitable habitat for foraging and basking reptiles within the unmanaged grassland to the north and east of B1. The scrub and hedgerow bases provide shelter habitat for reptiles. The arable field beyond the northern boundary has a wide margin that is left uncultivated, and this increases the size of potential habitat available for species such as common lizard and slow worm. The meadow to the east of the site also provides potential habitat for reptiles when the sward is growing. We understand that work is restricted to the buildings only. If the grassland/scrub areas are included /planned to be cleared as part of any development, further presence/absence survey will be required to adhere to wildlife legislation and planning policy.

Requirements for further survey, avoidance, mitigation, compensation and enhancement

Further survey requirement	Presence/absence survey <u>if grassland areas are required to be cleared.</u>
Avoidance	Retain all longer/unmanaged grassland areas.
Mitigation	NA
Compensation	NA
Enhancement	The site could be enhanced for reptiles by stacking log piles around boundaries, particularly areas within/surrounded by longer grassland and scrub.

Birds

Data search

- 7.24 Numerous records of birds were provided within 2km of the site, including species protected under Schedule 1 of the WCA (1981) such as merlin *Falco columbarius*, peregrine falcon *Falco peregrinus*, Eurasian hobby *Falco subbuteo*, red kite *Milvus milvus*, and barn owl *Tyto alba*.

Habitat requirements:

- 7.25 Nesting birds can be found in scrub, trees and buildings between March and September inclusive (note some species, including pigeon, will nest all year round).

Assessment:

- 7.26 Two barn owls were observed flying out of B1 (former chicken shed) at the opening on the eastern gable end. Approximately 100x owl pellets of varying stages of decay, were recorded in the western and central sections of the building. Precautionary measures and mitigation are necessary.
- 7.27 Continuity of occupation will be maintained by creating alternative provision at least 30 days before development begins. This will initially be achieved by installing a barn owl nest box on a suitable tree on the site, or as close as possible within the wider parts of the landowner's property.
- 7.28 The legality of the development will be maintained by carrying out development works (including all building demolition and vegetation clearance) outside of the breeding season, which is March to September.
- 7.29 A permanent nest/roost site space will need to be designed into one of the newly proposed structures to ensure adequate compensation for the loss of the existing site in the former chicken shed (B1). The ideal building will be at least 4 metres tall within which a small owl hole and nest space can be created close to the top. Where there is no residual loft space the owls' nest space can often be incorporated within the fabric of the roof or upper wall. See images of integrated barn owl nest/roost features from The Barn Owl Trust here: <https://www.barnowltrust.org.uk/sitemap/galleries/photoguide-provision-barn-owls-within-buildings/>
- 7.30 The site provides nesting habitat for generalist garden birds in the buildings, trees, hedgerows, and scrub. Old nests were observed in the hedgerow on the eastern boundary.

Requirements for further survey, avoidance, mitigation, compensation and enhancement

Further survey requirement	None
Avoidance	Carry out all tree work and building demolition between October and February to avoid the nesting season.
Mitigation	If active nests are found during site clearance, all works must cease in the area and the nest left undisturbed with a species-appropriate buffer (advised by project ecologist) until the young have fledged.
Compensation	Installation of a barn owl nest box on a suitable mature tree on the wider site. The box must be installed a minimum of 30 days prior to demolition works on B1.
Enhancement	Incorporate a permanent barn owl nest/roost feature into the structure of a new building. There is scope to install a variety of bird boxes on retained trees and on new buildings. Open-fronted bird boxes could be installed in established boundary vegetation.

Legally protected plants/invertebrates

Data search

- 7.31 The data search returned numerous records of plants and invertebrates within 2km of the site. Many of these records are for species associated with woodland habitats.

Assessment:

- 7.32 The site is predominantly hard standing, buildings and managed lawn grassland which are either unsuitable or low-quality habitats for species identified in the data search. The rank grassland and scrub habitats outside the development footprint offer some potential habitat for moth and butterfly species. However, these habitats are small and are surrounded by arable fields with only limited hedgerow connectivity to similar habitat in the wider landscape and are highly unlikely to support significant assemblages of invertebrates.
- 7.33 No invasive species listed under Schedule 9 of the WCA (i.e. Japanese knotweed) were recorded on the site.

Requirements for further survey, avoidance, mitigation, compensation and enhancement

Further survey requirement	None
Avoidance	None
Mitigation	None
Compensation	None
Enhancement	The site could be improved with inclusion of wildlife friendly shrubs to attract pollinators. Boxes for solitary bees are also recommended in open and sunny locations on the site.

Badger

Data search results

7.34 Confidential – available on request.

Habitat requirements:

7.35 Badger is a widespread, common mammal and is legally protected due to persecution rather than rarity or conservation significance.

7.36 European badger requires habitats in which to build their setts and in which to forage. Badgers preferentially choose sloping banks (road verges, railway embankments, woodlands) with easy-dig substrate for sett building where foraging habitat is available.

Assessment:

7.37 No badger setts were identified on or adjacent to the site, and there were no signs badger disperse across the site.

7.38 As mammals, including badger could be transient around the area, the mitigation measures provided below are recommended to remove any residual risk of harm during construction.

Requirements for further survey, avoidance, mitigation, compensation and enhancement

Further survey requirement	None
Avoidance	- Any trenches or deep pits that are to be left open overnight should be provided with a means of escape should a badger enter. This could simply be in the form of a roughened plank. - Any trenches/pits should be inspected each morning before work commences to ensure no badgers have become trapped overnight. Should a badger be found then formal ecological advice must be sought before work commences for the day. - The storage of topsoil or other 'soft' building materials within the site should be given careful consideration. To avoid the adoption of any mounds, they should be subject to daily inspections before work commences. - Open pipework with a diameter of more than 120mm should be properly covered at the end of the day to prevent badgers entering and becoming trapped. Again, should a badger trap itself then formal ecological advice must be sought before work commences for the day.
Mitigation	None
Compensation	None

8.0 Ecological Constraints and Opportunities

Constraints:

Bats

- 8.1 There is potential for roosting bats in both mature oak trees on the northern boundary of the site. If any works are proposed to these trees, they will require a climbed inspection to confirm the presence of absence of roosting bats. It is highly recommended that both trees are retained under the development proposals.
- 8.2 B1 and B2 are assessed as having **moderate** bat roost suitability, particularly for crevice roosting species such as pipistrelle sp. Two emergence surveys are required for each building to determine presence/likely absence. These surveys can be conducted between May and September, with a minimum of three weeks between each survey.

Reptiles

- 8.3 Retain all unmanaged/rank grassland areas surrounding the buildings. If this is not possible, a presence/absence survey is required.

Birds

- 8.4 Barn owls roost and potentially nest within the former chicken shed (B1). Any demolition work will be undertaken outside the breeding season. Furthermore, compensatory roost/nest habitat must be provided a minimum of 30 days prior to building demolition. This can be achieved by installing a barn owl nest box on a suitable tree as close to the building as possible. It is also recommended that a permanent nest/roost feature is incorporated into a new structure on the site to ensure long-term provision for barn owls on the site.
- 8.5 The site is also suitable for a variety of widespread nesting birds. Building demolition and vegetation clearance will be undertaken between October and February inclusive to avoid the main nesting season.

Opportunities:

- 8.6 Biodiversity net-gain is now encouraged under Paragraph 174(d) of the National Planning Policy Framework (2021). The following recommendations are reasonable and proportionate and would contribute to net-gain. They could be secured by condition, such as a Biodiversity Enhancement Strategy or similar, where required:

- Tree and hedgerow planting: Native tree and hedgerow planting should be included in the landscape design.
- Planting for pollinators: Area of the site should be enhanced through planting shrubs that are wildlife friendly and will attract pollinating insects. A list of suitable shrubs for pollinators are provided in Appendix 2.

- Barn owl nest box: Installed on a suitable mature tree on the site or the adjacent land under the same ownership.
- Integrated bat roost features: One bat roost feature such as tube, tile or brick is recommended on each building, ideally facing south and above eaves height.
- Integrated bird nest boxes: One integrated bird nest feature is recommended on each new building, facing north or east and above eaves height.
- Bat boxes on trees: It is recommended that three bat boxes are installed on suitable mature trees on the site (or on land on the wider Woodcotes plot). Boxes will be installed above 3 metres and face south, south-east and south-west.
- Solitary bee hives: At least one solitary beehive is recommended in a sunny position in an area of grassland.

Suitable habitat boxes for the site are provided in Appendix 3.

9.0 Conclusions

- 9.1 Hybrid Ecology was instructed to carry out an ecological assessment in relation to a proposed development at Woodcotes, Sandon, Hertfordshire.
- 9.2 A mapping exercise and desk study were undertaken to determine constraints relating to designated sites, Priority Habitats and protected species. A survey was carried out in December 2023 to map habitats and identify any potential for/evidence of legally protected species. The survey also identified opportunities for ecological enhancement.
- 9.3 The site comprises agricultural buildings, hard standing, grassland, scrub, trees, and hedgerows. The site supports roosting (and potentially nesting) barn owls, and is suitable for bats, transient reptiles, and nesting birds. Further surveys are required.
- 9.4 Provided all further survey, avoidance, mitigation, compensation and enhancement measures detailed in this report are complied with, it is considered that the proposal can be made acceptable with minimal impact to local biodiversity.

Enhancement opportunities

- 9.5 The development proposal has scope to include biodiversity enhancements. They could include planting of new native tree and hedgerows, planting for pollinators and habitat boxes for bats, barn owls, nesting birds and solitary bees. These measures will contribute to biodiversity net-gain in accordance with Paragraph 174(d) of the NPPF (2021). The design, maintenance and management could be secured by a condition.

References

BCT, 2023. Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition). The Bat Conservation Trust, London.
http://www.bats.org.uk/pages/batsurveyguide.html?_sm_au=ijVSrSJrZMIR1Psj

BS 5837, 2012. Trees in Relation to Design, Demolition and Construction – Recommendations.

CIEEM, 2015. Guidelines for Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester.
Available at: http://www.cieem.net/data/files/Publications/Ecological_Report_Writing_23.12.2015.pdf

Conservation of Habitats and Species Regulations, 2017. Available at:
http://www.legislation.gov.uk/uksi/2010/490/pdfs/uksi_20100490_en.pdf

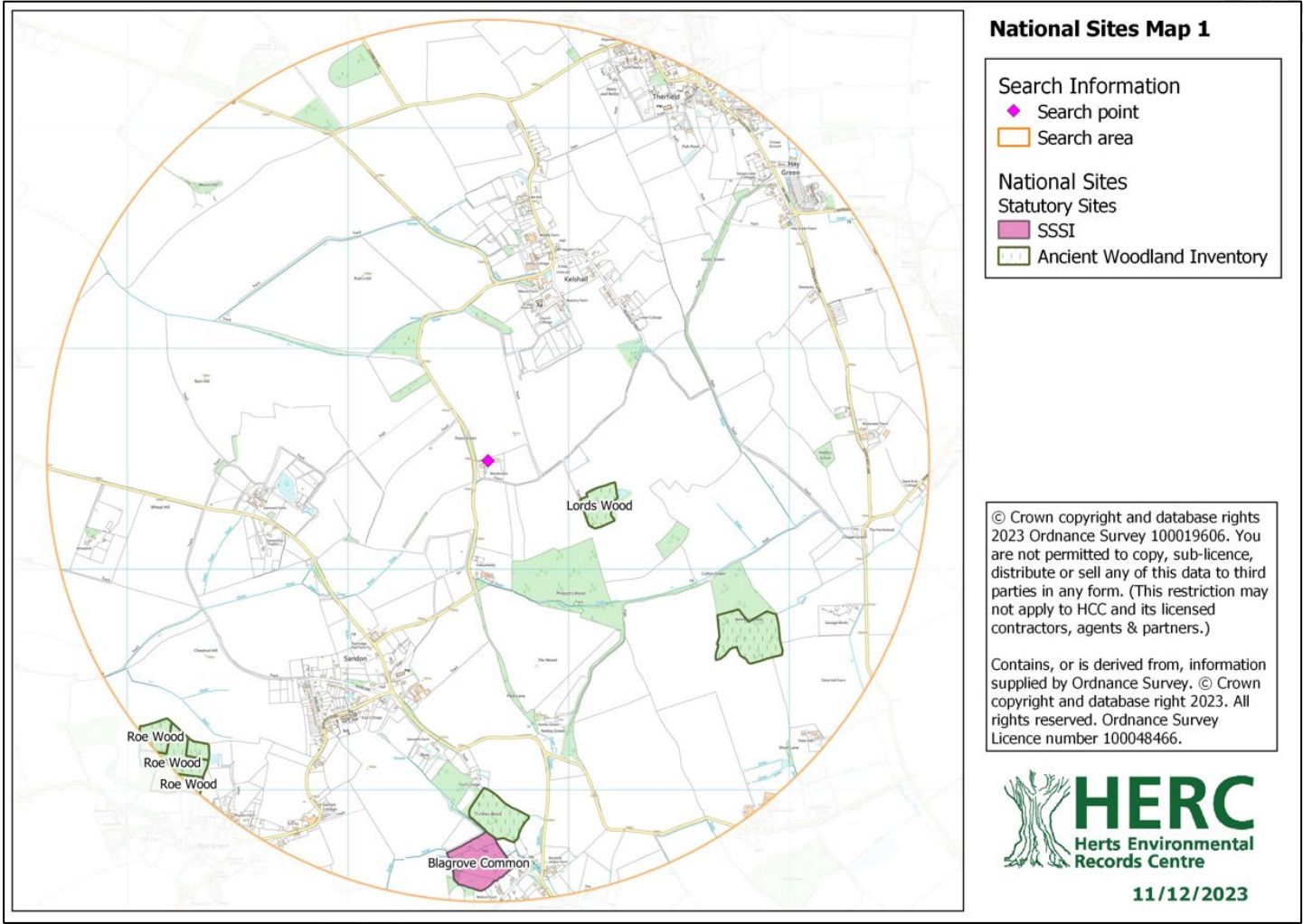
JNCC, 2010. Handbook for Phase 1 habitat survey: A technique for environmental audit. JNCC. Available at:
http://jncc.defra.gov.uk/PDF/pub10_handbookforphase1habitatsurvey.pdf?_sm_au=ijVN1vPTstvVv1Dt

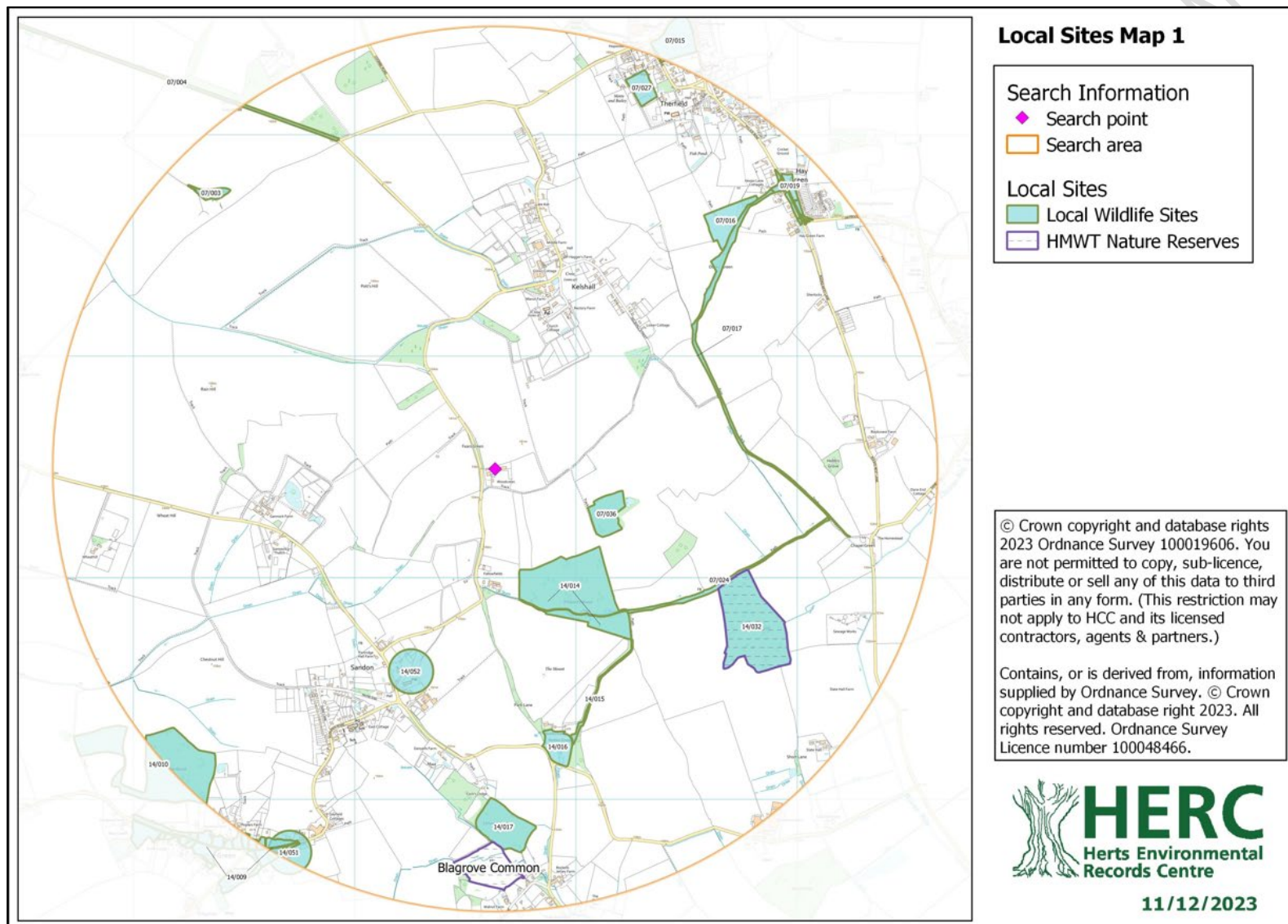
Multi-Agency Geographical Information for the Countryside (2023). Available at: [Magic Map Application \(defra.gov.uk\)](https://magicmap.defra.gov.uk/)

Natural Environment and Rural Communities Act (NERC Act), 2006, as amended. Available at:
<http://www.legislation.gov.uk/ukpga/2006/16/contents>

National Planning Policy Framework, 2021. Available at: [16. Conserving and enhancing the historic environment - National Planning Policy Framework - Guidance - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/92506/16.Conserving_and_enhancing_the_historic_environment_-_National_Planning_Policy_Framework_-_Guidance_-_GOV.UK.pdf)

Appendix 1. Mapping provided by Herts Environmental Records Centre







Appendix 2. Planting for pollinators

Flowers for bees

Allium species

Bird's foot trefoil (Lotus corniculatus)

Clovers (Trifolium species, for example red clover and white clover)

Cornflower (Centaurea cyanus)

Cranesbill (Geranium species)

Crocus species

Devil's bit scabious (Succisa pratensis)

Heliotrope (Heliotropium cultivars)

Hemp agrimony (Eupatorium cannabinum)

Honesty (Lunaria annua)

Lavender (Lavandula species)

Love-in-a-mist (Nigella damascena)

Marjoram (Origanum species)

Michaelmas daisies (Aster species)

Types of single-flowered rose species (Rosa species)

Rosemary (Rosmarinus officinalis)

Rosebay willowherb (Chamaenerion angustifolium)

Scabious (Scabiosa species)

Snowdrops (Galanthus species)

Sunflower (Helianthus annuus)

Teasel (Dipsacus fullonum)

Thyme (Thymus species)

Flowers for butterflies

Alyssum (Lobularia maritima)

Aubretia (Aubrieta deltoidea)

Blackberry (Rubus fruticosus)

Bugle (Ajuga reptans)

Candytuft (Iberis amara)

Catmint (Nepeta x faassenii)

Dandelion (Taraxacum officinale)

Globe thistle (Echinops species)

Heather (Calluna vulgaris)

Hebe species

Ice plant (Sedum spectabile) – not dark red cultivars

Knapweeds (Centaurea species)

Marigold (Calendula officinalis)

Mignonette (Reseda odorata)

Thistle (Cirsium species and Carduus species)

Verbena bonariensis

Verbena rigida

Appendix 3. Habitat boxes appropriate for the site

“Habibat” integrated bird and bat box designs

<http://www.habibat.co.uk/integrated-products>

Integrated Bat Boxes

Integrated Bat Boxes



Habibat 3S Bat Box Range



Habibat Unfaced Bat box



Habibat 001 Bat Box
Standard Facing





Vivara Pro woodcrete open-fronted bird box



Vivara Pro sparrow terrace

All Vivara Pro boxes can be found here - [Search results \(wildcare.co.uk\)](https://www.wildcare.co.uk/search-results)

SINGLE CREVICE BAT BOX

TWO CREVICE BAT BOX



£36

£48

Individually Handmade - Specifications are in CM and approximate.

External: 43 high x 21.5 wide x 6.8 deep.

Internal: 41 x 16.5 x 1.8 crevices @ 1.

Made with small groups of crevice dwelling bat species in mind, such as pipistrelles. Approx. 4.75kg

Individually Handmade - Specifications are in CM and approximate.

External: 43 high x 21.5 wide x 6.8 deep.

Internal: 41 x 16.5 x 1.8 crevices @ 2.

Made with small groups of crevice dwelling bat species in mind, such as pipistrelles. Approx. 6.75kg

Bat boxes for trees [Home | Greenwood's Ecohabitats \(greenwoodsecohabitats.co.uk\)](https://www.greenwoodsecohabitats.co.uk/home)



[Solitary Bee Hive](#) | [Buy Online at Vine House Farm](#) -



Barn owl nest box for trees

Examples of long-term barn owl nest/roost features that can be incorporated into structures can be found here: [Nest provision for Barn Owls within buildings - The Barn Owl Trust](#)