



ecosupport



**Annex, Hatts Copse
Farm**

Preliminary Ecological Appraisal
(PEA)

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Client:

Brinton King

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Executive Summary

Ecosupport Ltd was instructed by Brinton King to conduct a Preliminary Ecological Appraisal (PEA) of the Annex at Hatts Copse Farm, Botley to identify any potentially important ecological features that may be affected by the proposals. As part of this assessment, the following surveys were undertaken:

- Desktop search using available online resources
- Extended phase I habitat survey (Oct 2022)
- Preliminary roost assessment (Oct 2022)

No important ecological features have been identified on site following the conclusion of the above survey work and therefore the proposed development is **not anticipated to result in any adverse impacts to ecology**. General recommendations and enhancement are outlined within **Section 6.0** of this document.

1.0 INTRODUCTION

1.1 Brief

Ecosupport Ltd was instructed by Brinton King to conduct a Preliminary Ecological Appraisal (PEA) on Hatts Copse Farm, Botley. The purpose of this survey was to assess any ecological impacts that may arise as a result of the proposed works. The objectives of the survey were as follows:

- Assess the ecological value of the site
- Identify any signs of protected species and potential features that may support them
- Make recommendations for further survey work as appropriate.
- Make recommendations for any necessary ecological avoidance, mitigation and compensation measures where possible at a PEA stage
- Make recommendations for site ecological enhancements as per planning policy

NB If the development does not take place within 18¹ months of this report then the findings of these surveys will no longer be considered valid and should be repeated.

1.2 Site Description & Location

The site comprises of the annex building and surrounding area at Hatts Copse Farm, Brook Lane, Botley, Southampton, SO30 2ER (centered on OS grid reference SU 50593 12360) (**Fig 1**). The site is located within the centre of the hard standing area within wider property of Hatts Copse Farm, with the main dwelling and gardens to the west, further outbuildings to the east, a shed, hard standing and grassland to the south and further hard standing and gardens to the north. The property boundary is also adjacent other residential dwellings/gardens to the north and east and a parcel of woodland to the south. The wider environ is semi-rural, located within an area of agricultural and woodland parcels between the two villages of Hedge End and Botley, located 500m west and 700m northeast respectively (**Fig 2**).

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

Figure 1. Satellite imagery showing site location (Google Maps, 2022)

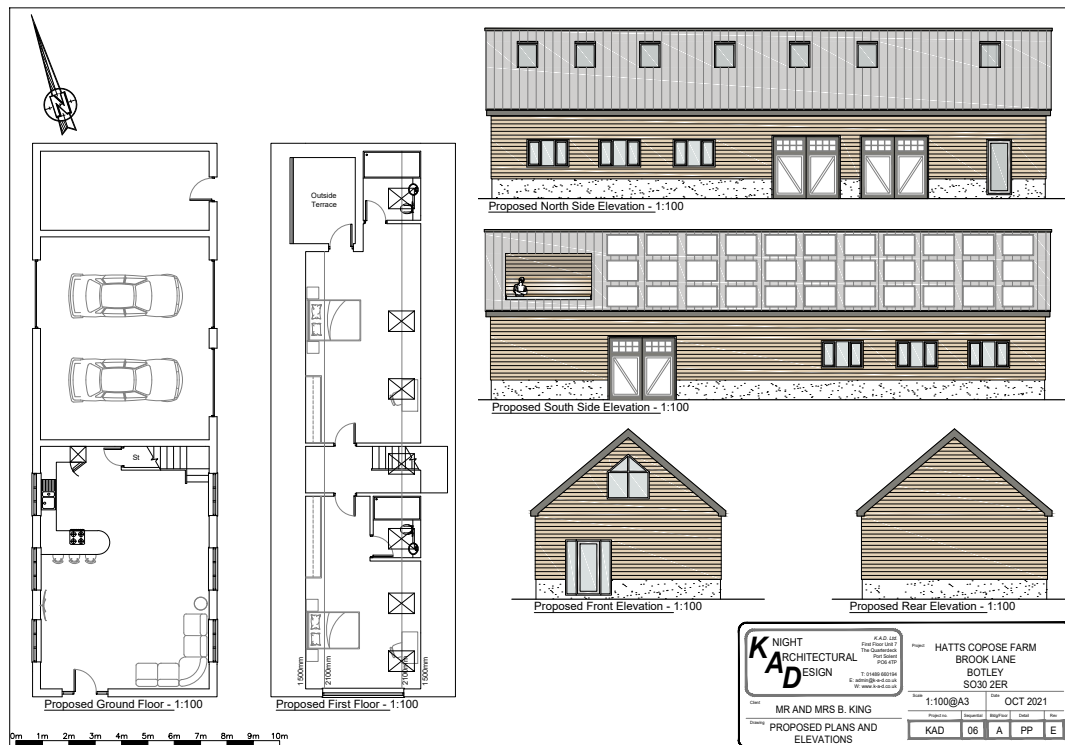


Figure 2. Satellite imagery showing site location in wider context (Apple Maps, 2022)



1.3 Proposed Development

It is understood that the development will involve the demolition of the existing annex and construction of a new annex in its place (**Fig 3**).

Figure 3. Proposed layout plan for the site

2.0 RELEVANT LEGISLATION AND POLICY

2.1 Legislation

2.1.1 *The Conservation of Habitats and Species Regulations (2017) (as amended)*

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

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

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

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

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

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

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

2.1.4 *NERC Act*

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

Planning authorities must consider biodiversity and the list of species and habitats of importance when planning or undertaking activities.

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

2.1.5 Protection of Badgers Act

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

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

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

2.1.6 The Environment Act (2021)

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

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

The legislation also includes updates to existing environmental legislation, such as the NERC Act 2006, to strengthen biodiversity enhancement rather than just conservation and includes a requirement for local, or relevant, authorities to publish biodiversity reports. Further, The Environment Act places a requirement on responsible authorities to prepare local nature recovery strategies, which will outline nature conservation sites and priorities and opportunities for recovering or enhancing biodiversity within the local area. Within England, the legislation also provides Natural England with the power to publish 'species conservation strategies' and 'protected site strategies' to identify activities that may affect a species or

site's status and outline their opinions on measures that would be appropriate to avoid, mitigate or compensate any adverse impacts.

2.2 Policy

2.2.1 National

The revised National Planning Policy and Framework (NPPF) (last updated February 2019) replaces the previous NPPF (published 2012, revised July 2018) and sets out the Government's vision for biodiversity in England in line with the country's 25 Year Environment Plan. The revised NPPF is supported by the National Planning Practice Guidance (NPPG) (published January 2016, last updated July 2019). The relevant section of the Guidance concerning biodiversity is 'Natural Environment: Biodiversity, Geodiversity and Ecosystems'. Under this Guidance, Local Authorities' duty to have due regard to the conservation of biodiversity under the NERC Act (2006) is highlighted.

Chapter 15 of the revised NPPF, 'Conserving and Enhancing the Natural Environment', together with associated guidance within the NPPG, outlines key principles related to the natural environment.

Development plans should contribute to and enhance the natural environment. Plans should take both an individual and strategic approach to minimising biodiversity impacts, creating, conserving, restoring and enhancing priority habitats and habitat networks, protecting and aiding in the recovery of priority species and their populations, and providing measurable biodiversity net gains. Individual developments must consider how they can contribute to habitat networks in the wider area (including as part of the Nature Recovery Network), thereby increasing their resilience to current and future pressures.

2.2.2 Local

On a local scale, the site falls within the jurisdiction of Eastleigh Borough Council. The Eastleigh Borough Local Plan 2016 – 2036 has a number of policies relating to ecology with the relevant ones listed below;

'General Approach

1. The Council will work with statutory and voluntary agencies and developers, and will determine planning applications, to:

a. protect, conserve and enhance all:

- i. international, national and local nature conservation designations; and*
- ii. networks of natural habitats and features, including the Local Ecological Network, Priority Biodiversity Areas and Priority Biodiversity Links, watercourses, wetland complexes, woodland trees, and trees and hedgerows important to biodiversity and local character; and facilitate their adaptation to climate change wherever possible;*

b. assist in achieving national, county and local biodiversity targets as set out in Biodiversity Action Plans (BAPs);

c. seek a net gain of biodiversity on all development sites (including sites for redevelopment) through the protection, enhancement and connection of existing and provision of new habitats and features of nature conservation interest compatible with the native biodiversity characteristics of the Borough, having regard to local geodiversity and soils; and

d. contribute to major elements of the PfSH Green Infrastructure Strategy and other strategies for the provision and enhancement of multifunctional green infrastructure including green routes, ecological networks and biodiversity enhancements (see strategic policy S9).

International Designations

2. Development which is likely (either individually or in combination with other developments) to adversely affect the integrity of an international or European nature conservation site will not be permitted subject only to imperative reasons of overriding public interest and securing any necessary compensatory measures in the absence of alternative solutions. A 'project level' Habitat Regulations Assessment will be required where there are likely significant effects or uncertainty. Any mitigation measures required to ensure no adverse impact must be implemented at the appropriate time.

3. The Council will work with PfSH, Natural England, the Environment Agency and other wildlife organisations to develop and implement with developers a strategic approach to the protection and enhancement of international and European sites from the direct and indirect effects of development. Within Eastleigh Borough this will include:

a. implementing:

i. the Solent Recreation Mitigation Strategy (requiring contributions from residential developments within 5.6 kilometres of the Solent Special Protection Area to the Strategy); and

ii. the interim and any future New Forest Recreation Mitigation Strategy if required; or alternative agreed site specific measures to address recreational disturbance;

b. preserving the water quality and flows within the Itchen and Hamble, Southampton Water and Solent;

c. protecting the River Itchen SAC, in particular the maintenance and where appropriate restoration of habitats and qualifying species to favourable conservation status (as defined by article 1 of the Habitats Directive); and

d. seek contributions towards measures set out in the Southern Damselfly Conservation Strategy (or other strategy) specifically to deliver biodiversity net gain.

National and Local Designations

4. Development will not be permitted if it is likely (either individually or in combination with other developments) to have a direct or indirect adverse effect on a Site of Special Scientific Interest (SSSI), Site of Importance for Nature Conservation (SINC) or Local Nature Reserve (LNR) as shown on the policies map (or on a more recent plan provided by the Hampshire Biodiversity Information Centre) unless it can be demonstrated that:

- a. there are no alternative solutions;*
- b. the adverse effects are unavoidable;*
- c. measures are taken to mitigate or, as a last resort, compensate for the adverse effects;*
- d. there is an overall biodiversity net gain; and*
- e. if there are any residual adverse effects which cannot be avoided, mitigated or compensated, the benefits of the development must clearly outweigh the adverse effects on the nature conservation value of the site and any broader impacts on national and local designations.*

Priority habitats, protected and priority species and the local ecological network

5. Development will not be permitted if it is likely (either individually or in combination with other developments) to have a direct or indirect adverse effect on priority habitats, protected or priority species, or on the local ecological network unless it can be demonstrated that:

- a. there are no alternative solutions;*
- b. the adverse effects are unavoidable;*
- c. measures are taken to mitigate or, as a last resort, compensate for the adverse effects;*
- d. there is an overall biodiversity net gain; and*
- e. if there are any residual adverse effects, the benefits of the development clearly outweigh the adverse effects on priority habitats, priority and protected species, and the local ecological network.*

Irreplaceable habitats

6. Development will not be permitted if it results in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees), unless there are wholly exceptional reasons and a suitable compensation strategy exists.

Buffers

7. Buffers free from development will be provided to designated sites to avoid/mitigate impacts, including recreational impact and impacts on edge habitats, and to maintain dark skies.

Surveys

8. Development will not be permitted unless it can be demonstrated that:

- a. there have been thorough habitat and species surveys;*
- b. the great crested newt strategic survey and strategy have been considered in all developments within 500m of a great crested newt pond; and*
- c. the strategic bat trapping survey has been considered in all developments within the locality of a woodland or connected habitat networks.'*

2.3 Biodiversity Action Plans & UK Post-2010 Biodiversity Framework

The UK Post-2010 Biodiversity Framework (JNCC & DEFRA, 2010) supersedes the UK Biodiversity Action Plan 1992-2012 (UKBAP), setting out goals relating to nature conservation at a UK scale, for example the reduction and reversal in the decline of threatened species and improving the status of biodiversity. The specific habitats and species contained within the UKBAP continue to be regarded as conservation priorities under the UK Post-2010 Biodiversity Framework and are required to be a material consideration in the planning process under the 2019 NPPF.

3.0 METHODOLOGY

3.1 Desk Study

3.1.1 Designated sites and priority habitat

A search utilising Magic Map was undertaken to establish the presence of statutory designated sites within 1km and priority habitats either on or directly adjacent to the site.

3.1.2 Protected species

A search for Natural England EPS licence returns within 1km was undertaken using freely available online resources (Magic Map, 2022).

3.1.3 Waterbodies

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

3.2 Field Survey

3.2.1 Habitats

The field survey work which forms the basis of the findings of this report was carried out by Lyndsey McBean and Louise Davies, experienced ecologists with Ecosupport Ltd, on the 6th of October, 2022.

Habitats on site pre-development were identified in accordance with the categories specified for a UK Habitats survey, using Habitat Definitions Version 1.1 (UKHab Ltd., 2020). This was chosen as an appropriate habitat categorisation system as it fits within the Biodiversity Metric 3.1 calculation. Where appropriate primary habitat codes were used although for some habitat types, the use of secondary habitat codes was necessary as well.

3.2.2 Bats – Preliminary Roost Assessment

An assessment was made of the suitability of the building(s) on site to support roosting bats based on the presence of any Potential Roost Features (PRFs). This involved the use of 8 x 42 close focus binoculars and a high-powered torch (where required) for a more detailed inspection of any features. The survey conformed to current best practice guidance as described *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collins (ed), 2016).

3.3 Assessment Methodology

3.3.1 Introduction

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

3.3.2 Valuation

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

3.4 Limitations

The habitat survey was conducted outside of the optimal season for vascular flowering plants. However, given the nature of the habitat types present, it is not considered this would have affected the sites valuation and therefore there were no significant limitations on the habitat survey.

Pond 3 was not possible to access to conduct a Habitat Suitability Index assessment, however due to the lack of suitable terrestrial habitat on site and the 'poor' classification of the closer ponds, this was not considered to be a significant limitation as it is not considered there is any potential for GCN within the site.

4.0 ECOLOGICAL BASELINE

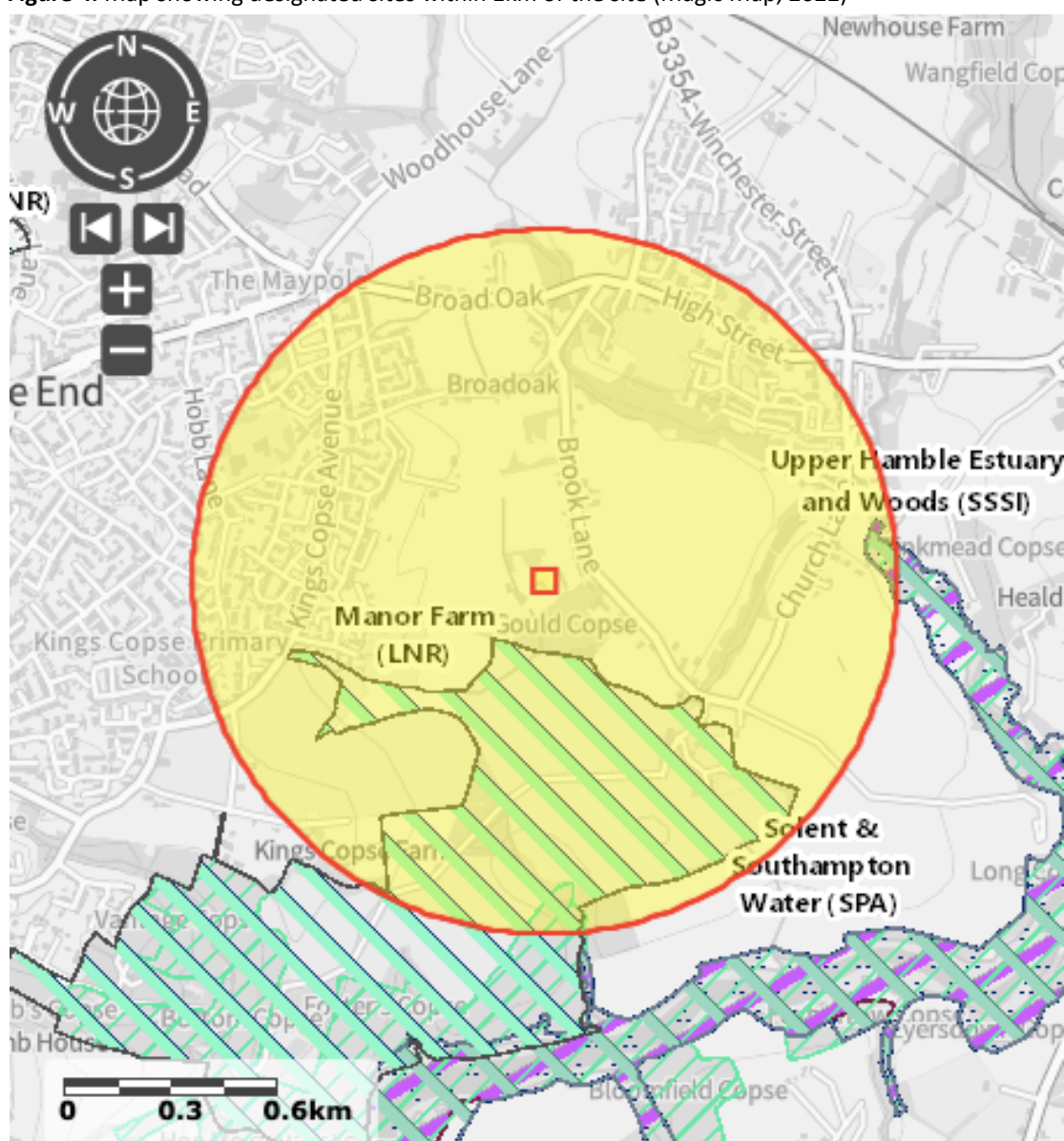
4.1 Desktop Study

4.1.1 Designated sites

The search utilising online resources has identified the following statutory designated sites within 1km of the site (**Fig 4**):

- Manor Farm Local Nature Reserve (LNR) – 180m south
- Solent & Southampton Water Ramsar & Special Protection Area (SPA) – 900m east
- Upper Hamble Estuary and Woods Site of Special Scientific Interest (SSSI) - 900m east
- Solent Maritime Special Area of Conservation (SAC) - 900m east

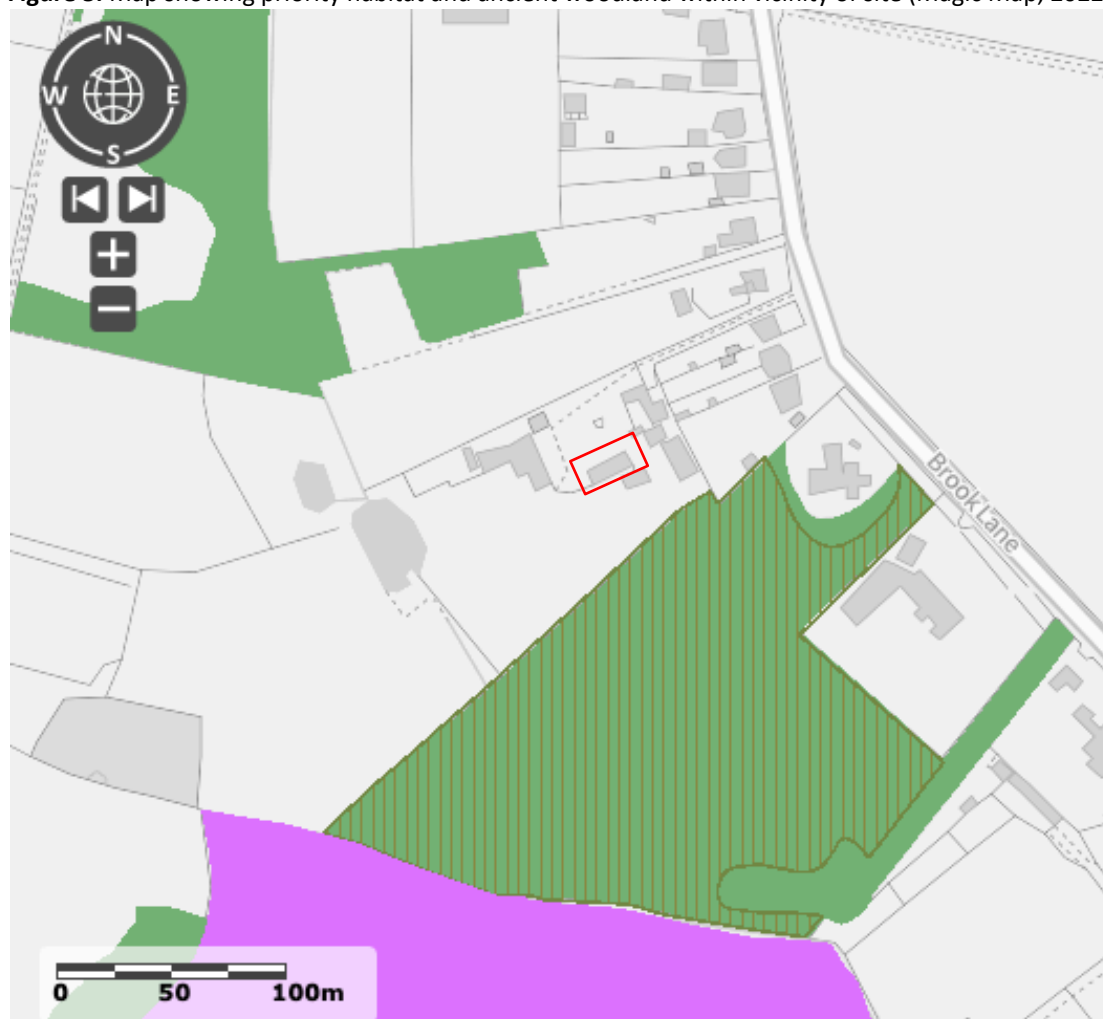
Figure 4. Map showing designated sites within 1km of the site (Magic Map, 2022)



4.1.2 Priority habitat

The desktop search identified ancient and semi-natural woodland and priority habitat deciduous woodland to the immediate south of the site (**Fig 5**).

Figure 5. Map showing priority habitat and ancient woodland within vicinity of site (Magic Map, 2022)



4.2 Habitat Survey Results

The vegetation within the site has been described below using the UK Habs Habitat Definitions Version 1.1 (UKHab Ltd., 2020). The below species noted should not be considered an exhaustive list and instead refer to dominant, characteristic and other noteworthy species associated with each community within the survey area. The habitat types on site are described below with the secondary codes indicated after in brackets.

- Artificial unvegetated; unsealed surface (u1c)
- Buildings (u1b5)

4.2.1 Artificial Unvegetated; Unsealed Surface (u1c)

There was a large gravel area to the front of the main dwelling and surrounding the annex on site (seen in **Figs 6 & 7**). While outside the boundary line, it should also be noted this gravel area extends to the driveway at the east of site, which serves as the vehicle entrance to the site.

4.2.2 Buildings (u1b5)

The annex on site (**Fig 6**) is to be impacted by the proposals covered within this report and is described in further detail in **Section 4.3.2**. There were also a number of outbuildings within the property adjacent the site to the east and south (**Figs 6 & 7**).

Figure 6. Annex building (right) and adjacent outbuilding to the south, view from eastern aspect



Figure 7. Outbuildings along the eastern boundary of the site (taken October 2022).



4.3 Bat Survey Results

4.3.1 Pre-existing information

Magic Maps identified four granted EPSLs for bats within 1km of the site:

- EPSM2012-4681 – Common Pipistrelle, Soprano Pipistrelle, Brown Long-eared, Natterer's Bat – 700m SE
- 2014-2168-EPS-MIT - Common Pipistrelle, Soprano Pipistrelle, Brown Long-eared, Natterer's Bat – 700m SE

- EPSM2013-6597 – Common Pipistrelle, Soprano Pipistrelle – 700m SE
- EPSM2012-5125 – Common Pipistrelle – 700m NE

4.3.2 Preliminary Roost Assessment (PRA) – Building

Only the annex is due to be impacted by the proposals and therefore a detailed roost assessment was not carried out on the remainder of the buildings on site.

The annex comprised a single storey building of red-brick construction with a tile-effect corrugated metal roof and uPVC soffits, fascias and guttering (**Fig 8**). The materials used for the roof are not considered conducive for bat roosts and, externally, no PRFs were noted that may allow access into the loft space.

Internally, the loft space was well sealed (**Fig 9**) with only one minor gap noted on the southern aspect of the building, but with no potential access points to the internals of the building. No evidence of bats, such as droppings, was found.

Given the above, the annex was deemed to be of **negligible potential** for roosting bats.

Figure 8. View of the annex on site



Figure 9. View of the internal loft space within the annex (taken October 2022).



4.4 Badgers & Hedgehogs

No evidence of Badger was noted whilst undertaking the PEA and the habitat on site is not considered suitable for Badgers. However, given the close proximity of suitable habitat in the form of woodlands and unmanaged grasslands nearby, there is low potential for Badgers and/or hedgehogs to commute through the site.

4.5 Great Crested Newts

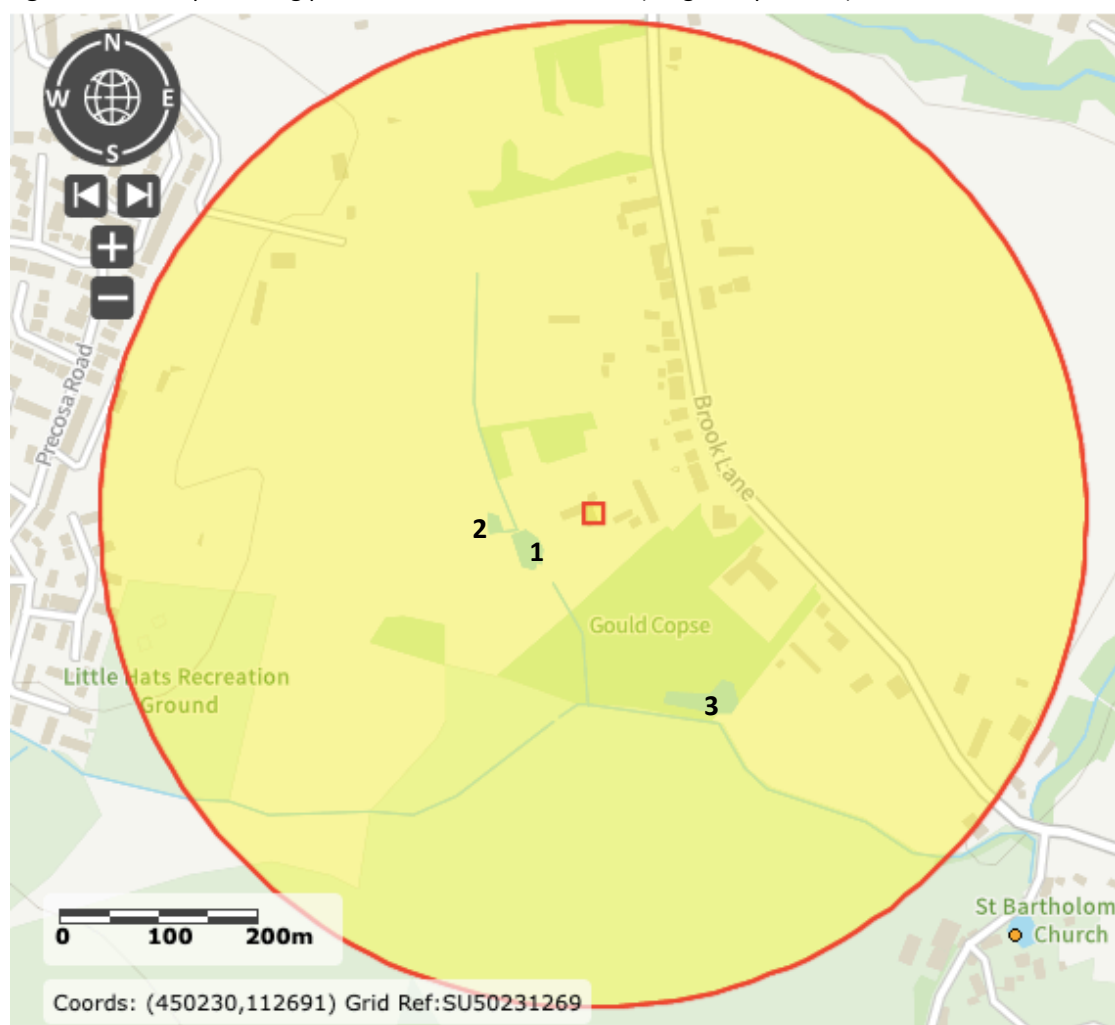
4.5.1 Desktop survey

A desk-based search for waterbodies identified three ponds within 500m of the site (**Fig 10**):

- **Pond 1** – 50m W – located within wider property
- **Pond 2** – 80m W – located within wider property
- **Pond 3** – 200m SE – located at edge of ancient woodland, with no barriers to dispersal

No records of GCN presence were identified within 500m on Magic Map. Two records of pond survey data identifying absence of GCN were identified 600m and 900m to the southeast of the site.

Figure 10. OS map showing ponds within 500m of the site (Magic Maps, 2022)



4.5.2 Habitat Suitability Index (HSI)

Ponds 1 (**Fig 11**) and 2 (**Fig 12**) were located within the wider property and were subject to an HSI assessment at the time of the walkover on site. This was to assess the suitability of the waterbodies to support GCN. The results of this are provided below in **Table 1**.

Table 1. Results of the HSI assessment on Pond 1 and Pond 2.

Pond Number	Suitability Indices	Criteria Selected	Score Awarded
Pond 1	Location	Zone A	1.0
	Pond Area	950m ²	0.97
	Pond Drying	Never dries	0.9
	Water Quality	Poor	0.33
	Shade	40%	1.0
	Waterfowl	Major	0.01
	Fish	Possible	0.67
	Ponds within 1km	3	0.65
	Terrestrial Habitat Quality	Poor	0.33
	Macrophytes	10%	0.4
	HSI Score 0.42 "Poor"		
Pond 2	Location	Zone A	1.0
	Pond Area	250m ²	0.5
	Pond Drying	Never dries	0.9
	Water Quality	Moderate	0.67
	Shade	80%	0.6
	Waterfowl	Major	0.01
	Fish	Possible	0.67
	Ponds within 1km	3	0.65
	Terrestrial Habitat Quality	Moderate	0.67
	Macrophytes	15%	0.45
	HSI Score 0.43 "Poor"		

Both ponds scored < 0.5 in the HSI, giving them the suitability level "poor" for supporting a GCN population (as per ARG, 2010).

Figure 11. View of Pond 1 on site (taken October 2022).



Figure 12. View of Pond 2 on site (taken October 2022).



Pond 3 was located within private land and was not accessible at the time of the walkover on site. However, further assessment was not considered necessary given the lack of suitable terrestrial habitats on site combined with the 'poor' suitability of the closer ponds and therefore this was not considered a significant limitation.

4.5.3 On Site Assessment

The habitats to be directly impacted by the proposals include the annex building and the surrounding gravel driveway. These habitats are not considered to provide the suitable structure and heterogeneity required by GCN. Therefore, given the lack of nearby records, the poor suitability of the nearby ponds and the lack of habitat on site, it is considered there is **negligible potential** for GCN on site.

4.6 Reptiles

The habitats on site are not considered to be suitable for reptiles. Therefore, it is considered the site has **negligible potential** to support reptiles.

4.7 Nesting and Breeding Birds

The site is not considered to provide any suitable habitat for nesting birds.

5.0 LIKELY ECOLOGICAL IMPACTS IN ABSENCE OF MITIGATION

5.1 Introduction

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

5.2 Site Preparation and Construction

5.2.1 Impacts to habitats

The proposed plans will be limited to the existing building and gravel. As such, the habitats on site that are to be directly impacted upon are not considered to be of significant value and therefore there is a **negligible impact** to habitats.

5.2.2 Impacts to wildlife

The site is not considered to be highly suitable for any species. While there is some limited potential for mammals to be commuting through the site, there are not expected to be any significant excavations associated with the annex that would pose a threat to these species. Therefore, there is expected to be a **negligible impact** to wildlife.

5.2.3 Impacts to designated sites

Based on the limited scale of works, it is not considered the proposed development will have any significant impact on any designated sites.

5.3 Site Operation

Due to the limited scale of works and the building comprising a replacement building, it is considered there are no likely impacts as a result of the annex during site operation.

6.0 RECOMMENDATIONS, MITIGATION, COMPENSATION & ENHANCEMENTS

6.1 Introduction

Since there are no expected adverse impacts on ecology as a result of the proposed development, mitigation measures are not required. However, some general protective measures have been recommended below and enhancements will be included to ensure the development will result in a net gain to biodiversity.

6.2 Roof Underlining

Current guidelines are being reviewed with regards to new roof underlining's and bats. Recent research (Essah et al., 2021) has indicated that Breathable Roofing Membranes (BRMs) can cause entanglement and death of bats using roof spaces. Therefore, any new roof underlining associated with the new building should include bitumen roofing felt as opposed to BRM or other fibrous materials, as a precautionary measure.

6.3 Enhancements

6.3.1 Bat box

A Schwegler 2F bat box, or to similar specification, will be erected on a mature tree within the wider property as an enhancement.. Bat boxes of Woodcrete or Woodstone boxes are preferred which will not rot, leak, crack or warp, and will last for a longer period of time, making it suitable for long-term use (**Fig 13**). They also provide a rough surface for bats to cling on to and climb.

The box will be positioned a minimum of 4m above ground, although 5-7m is preferable to prevent disturbance from people and/or predators. It will be located in a position that will receive at least partial sun.

Figure 13. Example bat boxes to be installed: Schwegler 2F (left) and Schwegler 1FF (right)



7.0 CONCLUSION

A Preliminary Ecological Appraisal (PEA) was carried out on the annex at Hatts Copse Farm to inform the proposed development of the demolition of the existing building and new construction of a replacement annex. No potential for ecological constraints was identified as a result of the proposed development. General mitigation and enhancement measures have been recommended suitable for the scale of works.

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