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PROFESSIONAL ECOLOGICAL SOLUTIONS



ECOLOGY

TREE PROTECTION FENCING

SITE PREPARATION & CLEARANCE

HABITAT MANAGEMENT & ENHANCEMENT

Report	Preliminary Ecological Appraisal
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Executive Summary

Ecosupport Ltd was instructed by Mr Magnus Leask and Miss Cailah Leask to undertake a Preliminary Ecological Appraisal (PEA) of Barncroft, Farm Close, Hamble-le-Rice, SO31 4RZ and associated land. This was required in order to identify any potentially important ecological features that may be affected by the proposed development. As part of this assessment, the following surveys were undertaken:

- Preliminary Ecological Appraisal (December 2022)
- Preliminary Roost Assessment (December 2022)

The following important ecological features were identified on site following the conclusion of the above survey work and may be subject to adverse impacts in the absence of suitable mitigation / compensation:

- Low potential for roosting bats (no further survey work required see **4.4.1**)
- Low potential for breeding and nesting birds

In the absence of any mitigation measures, the proposed development is anticipated to result in a **possible adverse impact**. Suitable enhancement measures will be outlined within the final section of this report.

1.0 INTRODUCTION

1.1 Brief

Ecosupport Ltd was instructed by Mr Magnus Leask and Miss Cailah Leask to undertake a Preliminary Ecological Appraisal (PEA) of Barncroft, Farm Close, Hamble-le-Rice, SO31 4RZ (here after referred to as 'the site'). The purpose of this survey was to assess any ecological impacts that may arise as a result of the proposed development. The objectives of the survey were as follows:

- Identify and classify any priority habitats;
- Assess the ecological value of the site;
- Identify any signs of protected species and potential features that may support them
- Make recommendations for further survey work as necessary;
- Make recommendations for any necessary ecological avoidance and mitigation where possible at PEA stage.

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

1.2 Site Description & Location

The site is comprised of a garage and associated land located at Barncroft, Farm Close, Hamble-le-Rice, SO31 4RZ (Centred on grid reference: SU 4823006946) (**Fig 1**). The site is bound by Farm Close to the west and Meadow Lane to the south. The northern and eastern aspects of the site are bound by residential dwellings. The site is located in the village of Hamble-Le-Rice, predominantly comprised of residential dwellings and public green spaces. The River Hamble and Hamble Point Marina are located to the east.

Figure 1. Aerial site plan with approximate redline boundary with land ownership indicated in red (Google Earth, 2022).



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

1.3 Proposed Development

Development plans include the conversion of the existing boat storage building to a self-contained 1 bedroom dwelling with vehicle parking and associated landscaping.

2.0 RELEVANT LEGISLATION AND POLICY

2.1 Legislation

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

This instrument 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.

This 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.

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

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

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

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

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

This Act strengthens the Wildlife & Countryside Act by the addition of "reckless" offences in certain circumstances, such as where there is the likelihood of protected species being

present. The Act places a duty on Government Ministers and Departments to conserve biological diversity and provides police with stronger powers relating to wildlife crimes.

2.1.4 Natural Environment and Rural Communities Act (2006)

The Natural Environment and Rural Communities (NERC) Act 2006 requires that public bodies have due regard to the conservation of biodiversity. This means that Planning authorities must consider biodiversity when planning or undertaking activities. Section 41 of the Act lists species found in England which were identified as requiring action under the UK Biodiversity Action Plan and which continue to be regarded as conservation priorities under the *UK Post – 2010 Biodiversity Framework*.

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.

2.2 Policy

2.2.1 National Planning Policy Framework (NPPF) 2021

Section 15 of the National Planning Policy Framework (NPPF) 'Conserving and enhancing the natural environment' states that planning policies and decisions should contribute to and enhance the natural environment. They should do this by protecting and enhancing sites of biodiversity and minimising impacts on and providing net gains for biodiversity, including establishing coherent ecological networks.

The plan states to protect and enhance biodiversity plans should identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks. This includes the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and stepping stones that connect them. Plans should identify the protection and recovery of priority species and opportunities for securing measurable net gains for biodiversity.

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

- if significant harm to biodiversity resulting from a development cannot be avoided, adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact;
- development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and
- development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to 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.

2.2.2 Local: Eastleigh Borough Council Local Plan

The Eastleigh Borough Local Plan 2016 – 2036 has a number of policies relating to ecology with the relevant ones listed below;

'General Approach

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

protect, conserve and enhance all:

international, national and local nature conservation designations;

and

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;

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

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

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

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.

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:

implementing:

the Solent Recreation Mitigation Strategy (requiring contributions from residential developments within 5.6 kilometres of the Solent Special Protection Area to the Strategy); and the interim and any future New Forest Recreation Mitigation Strategy if required; or alternative agreed site specific measures to address recreational disturbance;

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

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

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

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:

there are no alternative solutions;

the adverse effects are unavoidable;

measures are taken to mitigate or, as a last resort, compensate for the adverse effects;

there is an overall biodiversity net gain; and

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

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:

- there are no alternative solutions;*
- the adverse effects are unavoidable;*
- measures are taken to mitigate or, as a last resort, compensate for the adverse effects;*
- there is an overall biodiversity net gain; and*
- 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

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

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

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

- there have been thorough habitat and species surveys;*
- the great crested newt strategic survey and strategy have been considered in all developments within 500m of a great crested newt pond; and*
- 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 2021 NPPF.

3.0 METHODOLOGY

3.1 Desk Study

3.1.1 Waterbodies

Any ponds located within 250m of the proposed development (smaller radius used due to the small scale of the proposals) 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 Lewis Lakudzala BSc (Hons), MRes and Kelly Clarke on the 13th December 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 Badger

The site was thoroughly searched for evidence of use by Badgers (*Meles meles*), with the specific aim of identifying the presence and location of any setts. In accordance with the *Badgers and Development: A Guide to Best Practice and Licensing* (Natural England, 2011) guidance, the survey accounted for a 30m from the site's boundary (observed where possible i.e. does not conflict with private dwellings). Evidence of Badgers could include latrines, dung pits, feeding remains and foraging evidence, trails and setts.

3.2.3 Bats

An assessment was made of the suitability of the buildings on site to support roosting bats based on the presence of any Potential Roost Features (PRFs) during December 2022. 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 in *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collins, 2016) and was conducted by Lewis Lakudzala.

Table 1. Guidelines for assessing the potential suitability of a built structure for roosting bats (reproduced from BCT (Collins (ed) 2016)).

Suitability	Description of Roosting Habitats
Negligible	Negligible habitat features on site are likely to be used by roosting bats
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions ² and/or suitable surrounding habitat to be used on a regular basis or by a large number of bats (i.e. unlikely to be suitable for maternity or hibernation).
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
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 and surrounding habitat.

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.

² For example, in terms of temperature, humidity, height above ground level, light levels or levels of disturbance.

3.4 Limitations

3.4.1 Habitats

The only minor limitation was that the walkover was not conducted during the appropriate time of year for flowering vascular plants. However, given the nature of the habitats on site, it is not considered to have impacted the accuracy of the habitat classifications.

This survey does not constitute a full site assessment for invasive species, such as Japanese Knotweed (*Fallopia japonica*).

3.4.2 PRA Limitations

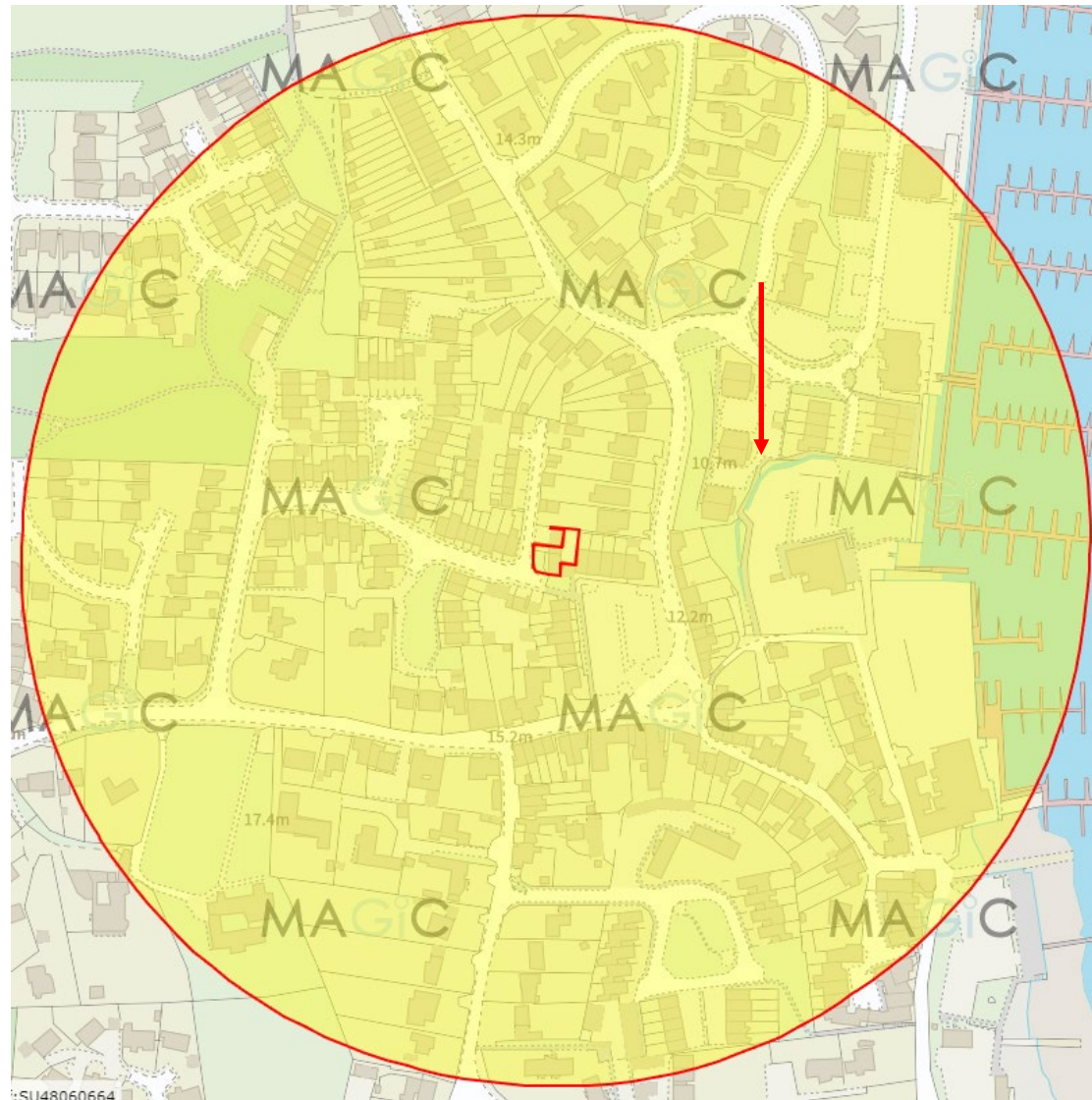
There were not considered to be any significant limitations during the preliminary roost assessment (PRA).

4.0 ECOLOGICAL BASELINE

4.1. Waterbodies

The only waterbody present within 250m of the site is a small stream present 75m to the east of the site (**Fig 2**).

Figure 2. Waterbodies within 250m of the site boundary (Magic Maps, 2022)



4.3 Vegetation 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 comprise:

- Hedgerow (h2)
- Developed land; sealed surface (u1b)
- Buildings (u1b5)

4.3.1 Hedgerow (h2)

A Laurel hedgerow was present along the corner of the southwest boundary (**Fig 3**). Understorey species recorded included: Red Dead Nettle (*Lamium purpureum*), Petty Spurge (*Euphorbia peplus*), Dandelion (*Taraxacum agg.*) and Bramble (*Rubus fruticosus*).

Figure 3. View of the hedgerow along the corner of the south and west boundary (taken December 2022)



4.3.2 Developed land; sealed Surface (u1b)

The driveway and parking area to the east of the property are constructed of hard standing in the form of tarmac and are joined by a section of brick paving with small amounts of establishing vegetation (**Fig 4**).

Figure 4. Area of developed land; sealed surface used for parking (taken December 2022)



4.3.3 Buildings (u1b5)

The final habitat type on site was building with further descriptions of all buildings on site provided in **Figure 5** below.

4.4 Bats

4.4.1 Preliminary Roost Assessment (Garage)

The building comprises a single-storey garage of rendered brick construction with wooden soffits and clay roof tiles (**Fig 5**). Internally the loft space was constructed with a typical wooden truss design with non-breathable roofing membrane (**Fig 5**).

Externally, the roof tiles were in a good state of repair and the majority of tiles were flush with no gaps present. Three PRFs were identified on the eastern elevation at the time of the survey. One gap was recorded where a missing tile was present with an additional two gaps identified from slipped/warped tiles (**Fig 5**). Internally, the lining was in a good state of repair and no evidence of bat occupation was noted inside the structure.

It should also be noted that the current proposals include only change of use to the garage. Plans for the new dwelling include the provision of plasterboard ceiling and loft insulation, but otherwise the roof structure will not be impacted by the development. The site is located within a built-up urban area with habitats predominantly comprising hard standing and buildings, therefore suitable foraging habitat and well-connected linear features are not present. Taking this into account the garage is considered to be of **Low roost potential**, however **no further survey work is required** as the proposals do not impact the roof.

Figure 5. View of the eastern (rear) elevation with annotations of internal areas and any PRFs recorded (taken December 2022).



4.5 Badgers

During the walkover no evidence of badgers was recorded on site. Additionally, there are no records of badgers within 1km of the site. Considering the site and surrounding habitats are primarily made up of hard standing and buildings, there is considered to be **negligible potential** for foraging and commuting Badgers on site.

4.6 Great Crested Newts

There are no suitable waterbodies within 250m of the site and as the site supports predominantly hard standing and buildings, no suitable terrestrial habitat for GCN is present. Therefore, the site is considered to be of **negligible potential** for GCN.

4.7 Breeding and Nesting Birds

The hedgerow present on site can be considered to offer suitable habitat for some breeding and nesting bird species. Therefore, the site is considered to support **low potential** for breeding and nesting birds.

4.8 Hedgehogs

The site mainly supports hard standing and buildings therefore does not provide suitable foraging and commuting opportunities for hedgehogs. Additionally, the majority of nearby hedgehog records are located at Hamble Common, which is 0.9km to the south of the site, it is therefore considered unlikely that hedgehogs will use the site.

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

As the hedgerow is to be retained within the current proposals, there are no habitats of significant ecological value that will be lost as a result of the works, with the majority of the site comprising of the hedgerow, hard standing, and buildings (habitats only considered to be of value at the **Site** level of significance).

5.2.2 Impacts to Wildlife

The removal of the trees and shrubs on-site could result in the disturbance of nesting birds and damage to their nests if conducted during the nesting season. Therefore, it is considered an **adverse impact is likely**.

5.3 Site Operation

5.3.1 Impacts to Wildlife

The development may result in an increase in lighting within the general area from external lights on the dwelling. This can affect the behaviour, particularly foraging, of nocturnal wildlife. Therefore, an **adverse impact is likely** on nocturnal species.

6.0 RECOMMENDATIONS

6.1 Introduction

The below sections outline a number of recommendations for further survey work required to fully assess the potential ecological impacts of the development and ensure and proposed mitigation and compensation appropriate and proportionate. In addition to this, measures are outlined to protect the existing features of value and provide enhancements post development.

6.2 Bats

The main dwelling was considered to have **low potential** to support roosting bats. As the current development proposals include only change of use to the garage with the provision of loft insulation, the roof will not be impacted by the development, therefore no further survey work is required.

In the case that the the roof is to be impacted by the development (such as with the addition of dormer windows or rooflights), one survey visit is required which will include one dusk survey or one dawn survey (as per the survey effort requirements from BCT 2016 **Table 2**). These surveys will need to be completed between May – September.

Table 2. Recommended minimum number of survey visits (from Table 7.3, BCT 2016).

Low Roost Suitability	Moderate Roost Suitability	High Roost Suitability / Known Roost
One survey visit. One dusk emergence or dawn re-entry survey.	Two separate survey visits. One dusk emergence and a separate dawn re-entry survey.	Three separate survey visits. At least one dusk emergence and a separate dawn re-entry survey. The third could be either dusk or dawn.

6.3 Avoidance of Impacts to Breeding and Nesting Birds

In order to avoid disturbance of breeding and nesting birds or damage to their nests, any maintenance on site will take place outside of the bird nesting season (typically March–August, dependent on weather). If this is not possible, the area to be cleared should be thoroughly checked by an ecologist immediately prior to clearance. If any active nests are found, they should be left undisturbed with a suitable buffer (ca. 5m) until nestlings have fledged.

6.3 Enhancements

6.3.1 Bats

As a general biodiversity enhancement, 1 General Purpose Bat Box will be erected at a suitable location on site to provide an additional roosting opportunity for bats potentially foraging across site (**Fig 6**).

Figure 6. General Purpose Bat Box (NHBS, 2022).



6.3.2 Birds

As a general enhancement, bird nest boxes can be implemented onto suitable locations around the site. These would maximise the species attracted to the site, and where possible these could be tailored to provide opportunities for red listed/BAP species known from the local area.

Schwegler 1B, Schwegler 2H or 2M Bird Boxes can be used. The 1B is the most popular box for garden birds and appeals to a wide range of species. The 2H is attractive to Robins, Pied Wagtails, Spotted Flycatcher, Wrens and Black Redstarts whilst the 2M is an example of a general-purpose design.

6.3.3 Hedgehogs

The site will incorporate 1 Hedgehog home (**Fig 8**) (such as the Igloo Hedgehog home or Hogitat Hedgehog house). This will be provided within the retained hedgerow on site and will provide a rapidly declining species with a place to shelter / hibernate.

Figure 8. Example of the Igloo Hedgehog Home.



7.0 REFERENCES

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