



ecosupport



Preliminary Ecological Appraisal (PEA)

114 Pine Road

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Report	Preliminary Ecological Appraisal
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Executive Summary

Ecosupport Ltd was instructed by Jacqui Cunningham to undertake a Preliminary Ecological Appraisal (PEA) of 114 Pine Road, Chandlers Ford, Eastleigh, S053 1JT. 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 (September 2022)
- Preliminary Roost Assessment (September 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
- Potential for foraging and commuting badgers
- Low potential for breeding and nesting birds

In the absence of any mitigation measures, the proposed development is anticipated to result in, **certain adverse impacts** (significance level to be determined following additional survey work). Suitable mitigation measures will be outlined within reports that will accompany this document following the conclusion of the additional survey work recommended.

1.0 INTRODUCTION

1.1 Brief

Ecosupport Ltd was instructed by Jacqui Cunningham to undertake a Preliminary Ecological Appraisal (PEA) of 114 Pine Road, Chandlers Ford, Eastleigh, S053 1JT. (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.

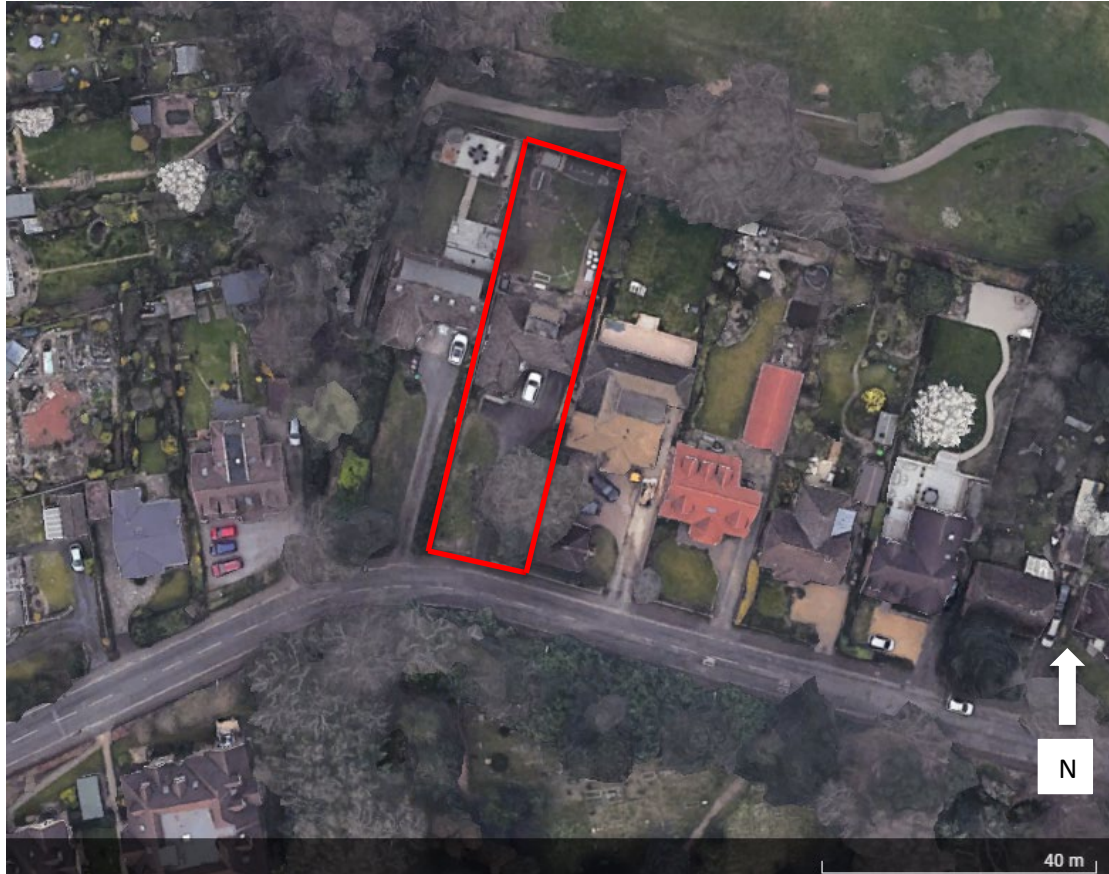
NB: If the works do not take place within 18 months of this report¹ then the findings of this survey will no longer be considered valid and may require updating.

1.2 Site Description & Location

The site is comprised of one dwelling with associated land located at 114 Pine Road, Chandlers Ford, Eastleigh, S053 1JT (Grid reference: SU 42907 22176) (**Fig 1**). The site is bound by Pine Road to the south and residential properties to the east and west. The north of the site is bound by a recreational ground. In the wider landscape the site is located within Chandlers Ford, a residential area predominantly comprised of residential properties.

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

Figure 1. Aerial image of the site with approximate redline boundary (Google Earth 2022).



1.3 Proposed Development

Development plans propose a loft conversion along with new front and rear facing dormer windows.

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

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 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 on the 26th September 2022. Weather conditions during the survey comprised temperatures of 15 °C, light cloud cover and dry conditions.

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 September 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.

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.

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

3.4.2 PRA Limitations

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

4.0 ECOLOGICAL BASELINE

4.1. Waterbodies

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

Figure 2. Small stream present within 250m of the site (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:

- Modified grassland (g4) - with scattered trees (11)
- Hedgerow (h2b) - with scattered trees (11)
- Developed land; Sealed surface (u1b)
- Buildings (u1b5)

4.3.1 Modified grassland (g4) – with scattered trees (11)

Modified Grassland was present in both the front and rear gardens of the dwelling and was well managed (**Fig 3**). The following species were noted within the habitat: Ribwort Plantain (*Plantago lanceolata*), Dandelion (*Taraxacum agg.*), Yarrow (*Rumex sanguineus*), White Clover (*Trifolium repens*), Cat's-ear (*Hypochaeris radicata*), Privet (*Ligustrum ovalifolium*) and Laurel (*Prunus spp.*). There were a number of trees in the rear garden including two Silver

Sirch (*Betula pendula*) and a Pine (*Pinus spp.*). In the front garden there was an ornamental *Acer spp.* (Fig 4).

Figure 3. Modified grassland present at the rear of the dwelling (taken September 2022).



Figure 4. Ornamental *Acer spp.* in the front garden (taken September 2022).



4.3.2 Hedgerow (h2b) with scattered trees (11)

To the south of the property, along the eastern boundary a hedgerow was present (**Fig 5**) along with a number of mature trees (**Fig 6**). Species recorded included Holly (*Ilex aquifolium*), Laurel (*Prunus sp.*), Ivy (*Hedera helix*), Cuckoo-pint (*Arum maculatum*), Common Box (*Buxus sempervirens*), Beech (*Fagus sylvatica*), Rowan (*Sorbus aucuparia*), Yew (*Taxus baccata*), Cypress (*Cupressus spp.*), Buddleia (*Buddleja davidii*), Privet (*Ligustrum ovalifolium*), Scots Pine (*Pinus sylvestris*) and Pedunculate Oak (*Quercus robur*).

Figure 5. Hedgerow present along the eastern boundary of the site with scattered mature trees (taken September 2022).

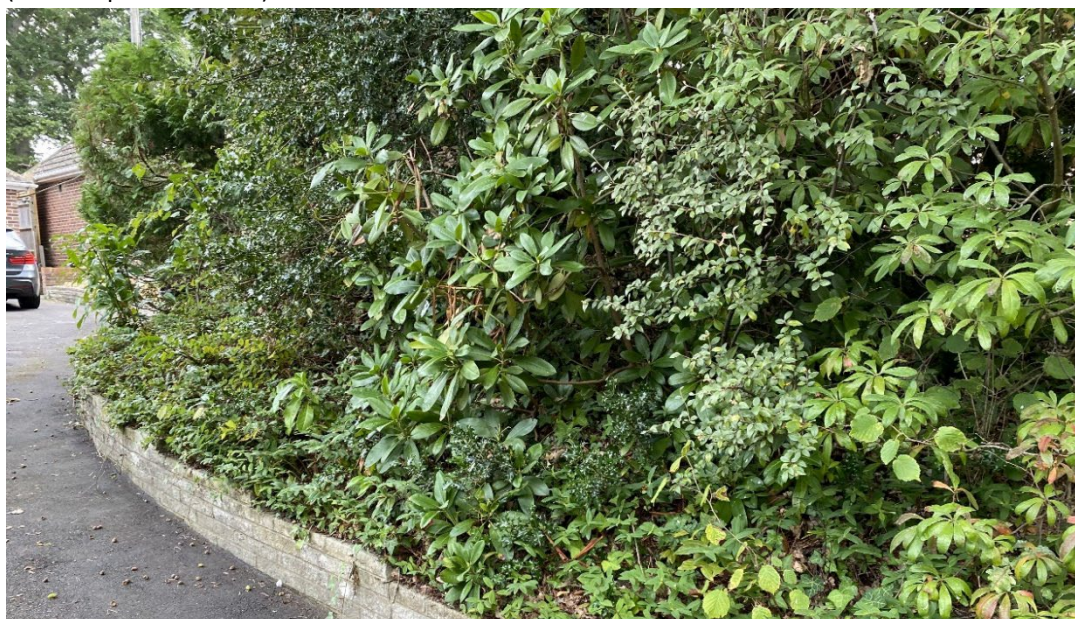
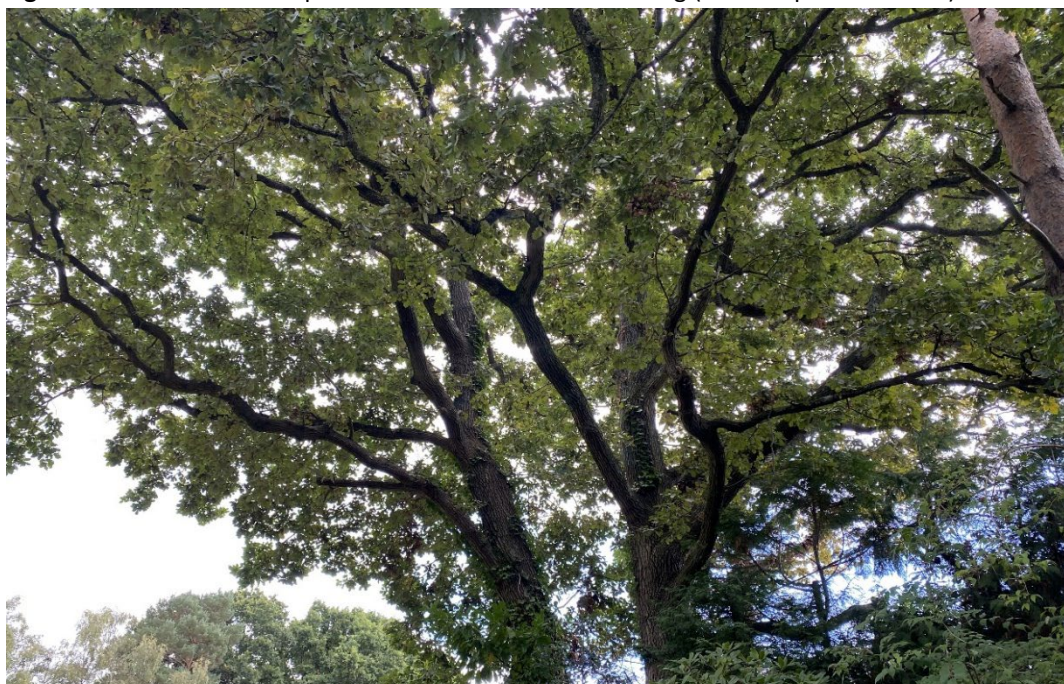


Figure 6. Mature Oak trees present to the front of the dwelling (taken September 2022).



4.3.3 Developed land; sealed surface (u1b)

To the front of the property there was an area of hard standing in the form of a tarmac driveway (**Fig 7**).

Figure 7. Area of developed land; Sealed surface used as a driveway (taken September 2022).



4.3.4 Buildings

The final habitat type on site was building with further descriptions of all buildings on site provided in **Table 2** below.

4.4 Bat Survey Results

4.4.1 Buildings

The findings of the preliminary roost assessment of all buildings on site is outlined in **Table 2** below.

Table 2. Results of the preliminary roost assessment undertaken of all built structures on site.

Building	Figure	Description of Construction	PRFs / Evidence of Occupation	Assessed Roost Potential
114 Pine Road	Figure 8. External View of the southern elevation of 114 Pine Road (taken September 2022). 	One-storey building of brick construction (Fig 8). It had wooden soffits with clay roof tiles and hanging tiles on the rear dormer window (Fig 9).	Gaps were present beneath lead flashing and in the mortar on the northern elevation (Fig 10).	Low Potential

Figure 9. External view of the rear elevation of 114 Pine Road (taken September 2022)



Figure 10. Gap present in the mortar (taken September 2022)



	Figure 11. Internal view of the loft space (taken September 2022) 	The dwelling supported a loft space lined with bitumen felt that supported a typical wooden truss design (Fig 11).	No PRF's or evidence of occupation was recorded during the internal inspection.	
Shed 1 + 2	Figure 12. Storage sheds 1 and 2 present in the rear garden of the dwelling (taken September 2022). 	There were two storage sheds present in the rear garden of the property (Fig 12).	The sheds were in a good state of repair with no PRF's or evidence of occupation identified.	Negligible

4.5 Badgers

During the walkover no evidence of badgers was noted on site ,however given the site is made up of modified grassland, and given the suitable surrounding habitats, there is considered to be **potential** for foraging and commuting Badgers on site.

4.6 Reptiles

4.6.1 Site Assessment

The grassland areas on site did not support the required structure and heterogeneity favoured by reptile species due to regular management and short sward length. The site can also be considered somewhat isolated from areas of suitable reptile habitat and as such, the site is assessed as being of negligible potential for reptiles.

4.7 GCN

4.7.1 Site Assessment

The habitats on site do not provide the suitable structure and heterogeneity required by GCN and also will not be impacted by the works, as the proposals include the conversion of the existing roof space and re-roofing of the dwelling. The residential dwellings pose a barrier to movement between the nearby stream and the site therefore it is considered unlikely that terrestrial GCN will utilise the habitats on site. Taking all of the above into consideration, the site is considered to be of **Negligible potential** for GCN.

4.8 Breeding and Nesting Birds

Limited nesting opportunities are available within the hedgerows and ornamental planting for common bird species. Therefore, site is considered to support **Low potential** to support breeding and 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

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 modified grassland, hard standing, hedgerows and buildings (habitats only considered to be of value at the **Site** level of significance).

5.2.2 Impacts to Wildlife

At this stage, a full impact assessment of the potential impacts of the development phase of the scheme upon protected species is not possible as phase II surveys have not yet been undertaken to identify what species are present on site. Notwithstanding this, with suitability for a range of protected species identified impacts are likely to be **minor** in significance.

The building on site were both considered to hold potential for roosting bats. Therefore, an **adverse impact at site level** is possible if Phase II surveys determine there are roosting bats present.

The removal of the ornamental planting and hedgerows 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

As the main dwelling was considered to support **low** potential to support roosting bats, 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 5**). These surveys will need to be completed between May – September.

Table 3. 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 Roof underlining

In-line with Natural England guidance non-bitumen coated roofing membrane that has passed a 'snagging propensity test' (2022) or bitumen roofing felt (2015) should be utilised as opposed to Breathable Roof Membrane (BRM) for all roofing works as there is considerable evidence to suggest that BRM poses a threat to bats occupying a structure due to entanglement in the fibres (Natural England, 2015).

6.4 Enhancements

6.4.1 Bats

To act as biodiversity enhancement, one bat access tile is to be included in the new roof (**Fig 15**). The roofing tiles available from NHBS (<https://www.nhbs.com/heritage-clay-bat-access-tiles>) should be used as they will replicate the raised crevice features that bats roost in.

Figure 15. Bat access tile to be incorporated into the development (NHBS 2022)



7.0 REFERENCES

Bat Conservation Trust & Institute of Lighting Professionals (2018) *Bats and Artificial Lighting in the UK*

CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK & Ireland

Collins (ed) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines 3rd Edition

Eastleigh Borough Council local plan (2016 – 2036) Available online at:
<https://www.eastleigh.gov.uk/media/2053/appendix-1-eastleigh-borough-local-plan-2016-2036.pdf>

HMSO (2017) *The Conservation of Habitats and Species Regulations*. Statutory Instrument 2010 No. 490. HMSO, London.

HMSO (2000). *The Countryside and Rights of Way Act 2000*. HMSO, London.

HMSO (1981). *The Wildlife & Countryside Act 1981*. HMSO, London.

Natural England, 2011 *Badgers and Development: A Guide to Best Practice and Licensing*

Natural England, 2022. *Bats: apply for a mitigation licence (A13)*. Available online at: <https://www.gov.uk/government/publications/bats-apply-for-a-mitigation-licence>

NPPF (2021) Available online at:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1004408/NPPF_JULY_2021.pdf

UKHab Ltd. (2020). *UK Habitat Classification – Habitat Definitions Version 1.1* (September 2020).