



41 KINGSWAY, CHANDLER'S FORD

PRELIMINARY ECOLOGICAL APPRAISAL

05/02/2024

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PROJECT NO.: KINGSW-2024

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Executive Summary

SoEcology Ltd was commissioned by Sebastian Hoenig to produce a Preliminary Ecological Appraisal Report to inform on potential ecological constraints associated with renovating 41 Kingsway, Chandler's Ford, SO53 1EL, grid reference: SU 43887 21359.

The development proposals are for a loft conversion and a rear extension, which will include the removal of the detached garage.

A Preliminary Ecological Assessment was undertaken in January 2024, which included a Preliminary bat Roost Assessment of the buildings on-site. The survey recorded bat droppings within the bungalows loft and it is assessed to be of high suitability for roosting bats. The garage and garden shed are not suitable for roosting bats. In response to the Preliminary bat Roost Assessment findings, further bat surveys are required for the bungalow to confirm presence/likely absence of bats roosting and determine roost status where present. Further surveys include three dusk emergence surveys between May and September 2024, with at least three weeks spacing between each survey.

The proposals will not result in a net increase in residential dwellings and the Site is not located within or adjacent to a statutory designation. However, pollution control measures for the wet ditch on-site have been proposed within this report as it runs into Monks Brook; a tributary of the River Itchen, which is afforded national and international protection.

The habitats on-site, great crested newt, badger, water vole and otter have been scoped out for further assessment. Measures to avoid a loss in biodiversity have been inherently incorporated into the design proposals, as the extension will predominantly be retained within the existing hardstanding and building footprint.

Mitigation measures have been provided in this report for invasive plants, reptiles, hedgehog and nesting birds, to avoid a wildlife offence from being committed. Due to the small scale and nature of the proposals no further surveys are needed for these ecological features.

This PEAR report is not suitable for planning submission and is not intended for this purpose and will be superseded by an Ecological Impact Assessment (EIA) report once the bat surveys have been completed to confirm presence/likely absence of bat roost(s) and to provide a methodology for mitigation, where applicable. Compensation and enhancement recommendations are provided in this report with the aim to achieve a net gain in biodiversity in accordance with the National Planning Policy Framework.

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1 Introduction

SoEcology Ltd was commissioned by Sebastian Hoenig to produce a Preliminary Ecological Appraisal Report for 41 Kingsway, Chandler's Ford, SO53 1EL, grid reference: SU 43887 21359.

The purpose of the PEAR report is to inform the client about the key ecological constraints and opportunities associated with the project, possible mitigation requirements and any detailed further surveys required to inform an Ecological Impact Assessment (EclA). It is not appropriate to submit this PEAR as part of a planning application.

The proposals are to renovate the bungalow, which will include a loft conversion and rear extension.

The purpose of the PEAR report is:

- To identify the likely ecological constraints associated with a project;
- To identify any mitigation measures likely to be required;
- To identify any additional surveys that may be required to inform an EclA; and
- To identify the opportunities offered by a project to deliver ecological enhancement (CIEEM, 2017).

This report may require amending if the proposals change since the report submission date displayed on the front page. It is important to note that the survey results are valid for 12 months from the date of the last site visit. If this time elapses the survey will need to be updated.

This report was written by Sophie Lancaster, an Ecologist working in private consultancies since 2013. Sophie has completed a masters (MSc) in Environmental Consultancy and is an Associate member of the Chartered Institute of Ecology and Environmental Management (ACIEEM). Sophie holds protected species licences for bats (level 2 class licence) and great crested newt (class 1). Sophie is a capable botanist and has undertaken National Vegetation Classifications and is thus capable of undertaking UKHab surveys to Level 5. Sophie has undergone formal training for UKHab assessments and the Biodiversity Metric through CIEEM. Sophie keeps up to date on the changes in Biodiversity Metric and attends available webinars.

2 Planning Policy and Legislation

This section does not provide a comprehensive list of nature conservation policies and legislation within the United Kingdom. The policies and legislation listed below are those relevant to the project only.

2.1 National Planning Policy

The most recent National Planning Policy Framework (NPPF) was published in September 2023. The NPPF sets out the Government's planning policies for England and how these should be applied. Paragraphs of relevance within the NPPF include:

Paragraph 174 of the NPPF states that *"Planning policies and decisions should contribute to and enhance the natural and local environment by:/... minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures."*

Paragraph 175 of the NPPF states that *"plans should/... take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries."*

Paragraph 179 of the NPPF states that *"To protect and enhance biodiversity and geodiversity, plans should:*

- a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and
- b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

Paragraph 180 of the NPPF states that *"When determining planning applications, local planning authorities should apply the following principles:*

- a) *if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- b) *development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*
- c) *development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons¹ and a suitable compensation strategy exists; and*

¹ For example, infrastructure projects (including nationally significant infrastructure projects, orders under the Transport and Works Act and hybrid bills), where the public benefit would clearly outweigh the loss or deterioration of habitat.

- d) *development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.*

Paragraph 181 of the NPPF also states that potential Special Protection Areas, possible Special Areas of Conservation and proposed Ramsar sites are to be afforded the same protection as designated Special Protection Areas, Special Areas of Conservation and Ramsar sites.

The NPPF is also complemented by the Circular 06/2005: Biodiversity and Geographical Conservation – Statutory Obligations and Their Impacts Within The Planning System (Office of the Deputy Prime Minister, 2005). Paragraph 99 states that *“It is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision.”*

The Hedgerows Regulations 1997 were made under Section 97 of the Environment Act 1995. The Circular provides a comprehensive statement of planning requirements in relation to hedgerows: *“They aim to protect important hedgerows in the countryside by controlling their removal through a system of notification to local planning authorities. The system applies to most countryside hedgerows in England and Wales, and covers hedgerows on, or adjoining land used for agriculture or forestry, the breeding or keeping of horses, ponies or donkeys, common land or village greens, SSSIs, or local nature reserves. They do not apply to garden hedges. To be important, the hedgerows must meet certain criteria set out in the Hedgerow Regulations 1997. Permission for removal of a hedgerow is not required if it is less than 20 metres long (unless both ends join with other hedgerows or it is part of a longer hedgerow), or is in, or borders a garden. Similarly, permission to remove a hedgerow is not required in certain circumstances for emergency/access purposes.”*

2.2 The Environment Act

The Environment Act was passed in November 2021, after the Environment Bill received Royal Assent. Under Schedule 14 of the Act biodiversity net gain is a mandatory condition for planning applications, with most developments required to achieve a 10% net gain in biodiversity. As this proposal is a householder application it is exempt from the net gain in biodiversity requirements.

2.3 Local Planning Policy

The Eastleigh Borough Local Plan 2016-2036 was adopted on 25 April 2022. It sets out the policies and plans to guide future development to 2036. Policy DM11 is in relation to nature conservation.

1. **General Approach** - 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).
- 2. 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:

- 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.
- 3. 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:
- 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 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.

4. **Priority habitats, protected and priority species and 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:
 - 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
5. **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.
6. **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.
7. **Surveys** - 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.

2.4 International Designated Sites

Internationally designated sites include Special Protection Areas (SPAs), Ramsar sites and Special Areas of Conservation (SAC).

SPAs, Ramsar sites and SACs form the Natura 2000 network of sites of nature conservation significance within Europe. SACs are designated under the Habitats Directive² to ensure the favourable conservation status of each habitat type and species. SPA's are designated under the Birds Directive and are designated for 194 threatened species, all of which being migratory bird species. Ramsar are afforded to wetlands of international importance, designated under the Ramsar Convention.

Within the UK these designations are protected under the Conservation of Habitats and Species Regulations 2017 (as amended) and Local Planning Authorities (LPA) are required to review all planning applications for potential to affect internationally designated sites. The application site does not need to be on or adjacent to an internationally designated site to have a potential impact. Where an LPA deems a significant effect on a European site to be likely, an Appropriate Assessment is to be undertaken to determine the implications of the development for the site's conservation objectives.

² Council Directive on the conservation of wild birds of 2nd April 1979 (79/409/EEC) and Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora of 21st May 1992

2.5 Nationally Designated Sites

National designations include Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNR).

In accordance with Section 28 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 9 of the Countryside and Rights of Way Act 2000, LPAs are required to notify Natural England of a developments potential to likely damage a SSSI before granting planning permission. If a development is anticipated to affect a national designation an Appropriate Assessment is not required, however, the LPA will determine appropriate course of action to prevent adverse effects on the designation. Natural England will be consulted whether or not the application site is located on or adjacent to a SSSI, as indirect effects are also considered. SSSIs designations also frequently cover the same footprint of international designations.

NNR are offered the same level of protection under the National Parks and Access to the Countryside Act 1949, strengthened by the Wildlife and Countryside Act 1981 (as amended).

2.6 Locally Designated Sites

Local Nature Reserves (LNRs) are statutory designations afforded by Local Authorities, protected under the National Parks and Access to the Countryside Act 1949 and the Natural Environment and Rural Communities Act 2006. LNRs qualify for their importance to wildlife, geology, education or public enjoyment and are frequently also SSSIs. They are protected against on site or adjacent development and development that negatively impacts a LNR will only be granted in exceptional circumstances. The level of protection is decided locally via Local Plans and local-by-laws and varies from site to site.

2.7 Non-statutory Locally Designated Sites

Non-statutory designations are site designated by Local Authorities for their nature conservation value at a local level. The name given to such designations differs between Local Authorities from Local Wildlife Sites (LWSs), Sites of Importance to Nature Conservation (SINCs) or Sites of Nature Conservation Importance (SNCIs). The means of their protection is the same as for LNR (see paragraph 2.6).

2.8 Protected Species Legislation

2.8.1 Plants

Protection

Schedule 8 of the Wildlife and Countryside Act 1981 (as amended) provides a comprehensive list of species that are protected under Section 13, which protects the plants listed from picking and the sale of plants or parts of plants. The list includes species such as bluebell *Hyacinthoides non-scripta*.

Nine higher plant species and four lower plant species are afforded additional protection under Annex II of the Habitats Directive. Species listed on Annex II are those where their conservation requires the designation of SACs. Species on the list that are present within the south of England include: shore dock *Rumex rupestris*; marsh saxifrage *Saxifraga hirculus*; early gentian *Gentianella angelica*, creeping marshwort *Apium repens*; western rustwort *Marsipella profunda*; and, pearlwort *Petalophyllum ralfsii*.

Invasive Species

Schedule 9, Part II of the Wildlife and Countryside Act 1981 (as amended) lists invasive plants, which uncontrolled are likely to have a significant adverse impact on biodiversity; other environmental

interests; or, social or economic interests. The Act makes it an offence to plant or otherwise cause to grow in the wild any plant listed. Species commonly recorded include: variegated yellow archangel *Lamiastrum galeobdolon* subsp. *argentatum*; Himalayan balsam *Impatiens glandulifera*; Spanish bluebell *Hyacinthoides hispanica*; Virginia creeper *Parthenocissus quinquefolia*; Japanese knotweed *Fallopia japonica*; Montbretia *Crocsmia x crocosmiiflora*; rhododendron *Rhododendron ponticum*; and New Zealand pigmyweed *Crassula helmsii*.

2.8.2 Reptiles

There are six species of reptile within the UK. The smooth snake *Coronella austriaca* and sand lizard *Lacerta agilis* are our only European protected species under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended), which makes it an offence to:

- a) Deliberately capture, injure or kill;
- b) Deliberately disturb or recklessly disturb whilst in its structure or place of shelter or protection;
- c) Damage or destroy a breeding site or resting place;
- d) Obstruct access to structures or places of shelter and protection;
- e) Keep, transport, sell or exchange, or offer for sale or exchange, any live or dead animal; and
- f) Take or destroy eggs.

If found guilty of any of the above offences you can be sent to prison for up to six months and receive an unlimited fine.

Slow-worm *Anguis fragilis*, common lizard *Zootoca vivipara*, adder *Vipera berus* and grass snake *Natrix helvetica* are protected in the UK under Schedule 5 of the Wildlife and Countryside Act (1981), which makes it illegal to intentionally kill, injure, sell or trade such animals.

2.8.3 Birds

All birds, their nests and eggs are protected under the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to:

- a) Intentionally kill, injure or take a wild bird;
- b) Possess a wild bird or the egg of a wild bird;
- c) Damage and destroy or take an egg of a wild bird;
- d) Take, damage or destroy a nest whilst in use;
- e) Advertise or sell any wild bird or their eggs; and
- f) Use prohibited methods to kill or take wild birds.

Additional protection is offered to birds listed under Schedule 1 of the Wildlife and Countryside Act, such as barn owl *Tyto alba*. The Schedule makes it an offence to intentionally or recklessly disturb listed birds when nest building, in or near a nest that contain young and disturb dependent young.

If found guilty of any of the above offences you can be sent to prison for up to six months and receive an unlimited fine.

Additional protection is offered to birds listed under Annex I of the Birds Directive. Species listed on Annex I are those where their conservation requires the designation of SPA's. Although it is important to note that the recording of the species listed does not automatically qualify a site for SPA status. The species listed include a large number of waders found along the south coast of England, as well as, but not limited to, kingfisher *Alcedo atthis*, Dartford warbler *Sylvia undata*, nightjar *Caprimulgus europaeus* and stone curlew *Burhinus oedipnemus*.

2.8.4 Bats

All UK species of bat are fully protected as a European Protected Species under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended), which makes it an offence to:

- a) Deliberately capture, injure or kill;
- b) Deliberately disturb a bat while in a structure or place of shelter or protection;
- c) Damage or destroy a breeding site or resting place;
- d) Obstruct access to their resting or sheltering place; and
- e) Keep, transport, sell or exchange, or offer for sale or exchange, any live or dead animal.

If found guilty of any of the above offences you can be sent to prison for up to six months and receive an unlimited fine.

Foraging and commuting routes are not directly protected under the legislation, however, there is potential for the loss of habitats or alterations (e.g. increased light pollution) could result in an offence being committed. The loss of the only suitable commuting habitat to a roost could result in the damage /destruction/obstruction of a roost.

Four British bat species are afforded additional protection under Annex II of the Habitats Directive. These species include barbastelle *Barbastella barbastellus*; Bechstein's bat *Myotis bechsteinii*; greater horseshoe bat *Rhinolophus ferrumequinum*; and, lesser horseshoe bat *Rhinolophus hipposideros*. Species listed on Annex II are those where their conservation requires the designation of SACs.

2.8.5 Other mammals

The Wild Mammal Protection Act 1996 makes it an offence for any person to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering to any wild mammal. This includes red fox *Vulpes Vulpes*, deer and European rabbits *Oryctolagus cuniculus*.

2.8.6 Habitats and Species of Principle Importance

Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006, provides a list of habitats and species of principle importance for the conservation of biodiversity in England. The list provided under Section 41 succeeds the UK Biodiversity Action Plan (BAP). Section 40 of the NERC Act requires governing bodies such as LPA's to ensure the conservation of biodiversity is regarded during their decision making process. The species list includes many species referred to within Section 2.0 of this report, as well as, brown hare *Lepus europaeus* and harvest mouse *Micromys minutus*.

3 Methodology

This section of the report details the scope of the assessment, data acquired, surveys undertaken and how potential impacts are assessed.

3.1 Scope of the Assessment

For all projects it is imperative that the zone of influence is established. CIEEM defines zone of influence to be *“the area over which ecological features may be affected by biophysical changes as a result of the proposed project and associated activities”* (CIEEM, 2018). The zone of influence is determined by a suitably experienced ecologist, taking into consideration the site proposals, desk study and field survey results. The zone of influence differs for each ecological feature³. Section 4.0 identifies the projects zone of influence for each ecological feature.

The scope of the assessment initially takes into consideration all possible ecological features that have potential to be impacted by the proposal. The baseline ecological conditions (Section 4.0) includes the outcomes of the desk study and field survey(s), which results in a process of elimination, with ecological features assessed to be likely absent not considered further in the report. Scoping is an ongoing process influenced by further surveys and assessment. Further surveys are required where an impact on an ecological feature cannot be avoided.

3.2 Desk Study

3.2.1 Local Environmental Record Centre

Hampshire Bat Group (HBG) was contacted in January 2024 to provide data on bats within a 2km radius of the Site. A data search request for additional ecological features including non-statutory designations was not deemed necessary due to the small scale and nature of the proposals.

3.2.2 Multi-Agency Geographic Information for the Countryside

Defra's Multi-Agency Geographic Information for the Countryside (MAGIC) online resource was also accessed in January 2024. A search was undertaken to identify any statutory designated sites within a 1km radius and to detect whether the Site is located within the varying buffer zones of internationally designated sites, which require additional consideration in regard to in-direct effects. The Impact Risk Zones (IRZ) were also obtained from MAGIC, which are used to help guide and assess planning applications for likely effects on SSSIs. MAGIC was also accessed to identify any European Protected Species (EPS) mitigation licence applications for protected species within a 2km radius and to identify whether the Site is within the Core Sustenance Zone (CSZ)⁴ for a communal bat roost, to help define the Zone of Influence for the species.

3.2.3 Additional Data Sources

Online mapping resources such as OS mapping was used to identify the presence of habitats such as ponds and woodland and hedgerow networks within the surrounding landscape to aid in assessing the Sites connectivity to notable habitats/green corridors and its potential for protected and notable species colonisation. Particular attention was given to the presence of ponds and other waterbodies within a 500m metre (m) radius to assess the Sites potential to support great crested newt.

³ Ecological features – habitats, species and ecosystems that may be affected given the nature of the proposals and geographical location of the application site.

⁴ Core Sustenance Zone (CSZ) is defined as “the area surrounding a communal bat roost within which habitat availability and quality will have a significant influence on the resilience and conservation status of the colony using the roost” (Collins, 2023).

GoogleEarth and MAGIC maps were used to collate existing baseline habitat data in advance of the habitat survey to plan the survey appropriate and determining the hierarchical level of classification and scale of mapping required (Butcher, 2020). GoogleEarth timeline is also useful for determining historic management and the possibility for ecological features to be present despite existing sub-optimal conditions, due to habitual tendencies.

3.3 Field Survey

Habitat Survey

The survey followed the UK Habitat Classification (UKHab) system (UKHab Ltd, 2023). This classification system integrates with the Phase 1 habitat survey classification which has been the prominent mapping system for ecologists until recently. UKHab integrates NVC, European Nature Information System (EUNIS) and Farm Environment Plan (FEP). The UKHab is also the classification system for in Natural England's Statutory Biodiversity Metric and thus, is used to determine biodiversity net loss/gain resulting from a development.

UKHab is hierarchical in the level of classification that can be attained, comprising a total of 5 levels. Level 1 being broad and Level 5 being very specific (NVC level classification). This survey followed the professional edition hierarchy (UKHab-P) and surveyed up to Level 4.

Extra detail on the classified habitats is provided by the inclusion of secondary codes. Secondary codes provide additional information on the environment, management and origin of mapped features. Secondary codes also replace mosaic habitats, which are now mapped by the primary habitat with a secondary code combination. In some instances, secondary codes provide important subdivisions of habitats not covered by Primary Habitat levels and are always included where relevant within a survey.

The Site is mapped using the fine-scale minimum mapping unit (MMU) 25m², 5m length, as detailed survey effort is deemed necessary for the planning application.

The UKHab survey is mapped using QGIS mapping software. The key follows the UK Hab Basic Edition Suggested Symbolology (Butcher, 2020). The variation in habitats are distinguished by an Alpha Code (A-Z). Where the UKHab primary habitat is the same but the secondary codes differ, a separate Alpha Code is required. A table of the variations of primary and secondary codes recorded on site is in Section 4.2 of this report.

For each habitat species composition, management, vegetation structure and age or permanence, where evident is recorded and an assessment of the habitats suitability to support protected and notable species is undertaken.

Preliminary bat Roost Assessment

The habitat survey considers the potential for protected species, as mentioned in the above paragraph, however, some species require more detailed assessment in the field to confirm potential for presence, such as roosting bats. For this reason, Preliminary bat Roost Assessment is detailed separately in this methodology, below.

The buildings on-site were assessed for their roosting bat suitability in accordance with the Bat Conservation Trust (BCT) best practice guidance (Collins, 2023). This includes a search of the external elevations for evidence of bats such as droppings and urine staining and potential roosting features such as lifted tiles and fascia's. The Equipment used during the PRA of the buildings includes a recording form, a camera, binoculars, high powered torch and endoscope.

An internal inspection was also undertaken for evidence of bats such as droppings and any access opportunities for bats using a high-powered torch. The buildings roosting bat suitability is scored as either negligible, low, medium, high or confirmed in accordance with the BCT criteria, which determines the necessary mitigation requirements.

The Site does not support trees at risk of being directly or indirectly impacted by the development, which required the need for a tree PRA.

Table 3-1: BCT guidelines on assessing potential suitability and subsequent mitigation.

Potential suitability	Description	Mitigation
None	No habitat features on site likely to be used by any roosting bats at any time of year (complete absence of crevices or suitable shelter).	None
Negligible	No obvious habitat features on-site. However, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.	Professional judgement. Precautionary measures likely.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of year. The potential roost site does not provide enough space, shelter, protection, appropriate conditions, or suitable surrounding habitat to be used by large numbers of bats.	Buildings: One dusk emergence survey. May to August. Trees: precautionary measures likely.
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 significance (e.g. maternity or hibernation roost).	Two dusk emergence survey visits. May to September, with at least one survey between May and August
High	A structure with one or more potential roost sites that are obviously suitable for large numbers of bats on a more regular basis and potentially longer periods of time due to their size, shelter, protection, conditions and surrounding habitat. These structures have the potential to support a roost of high conservation significance.	Three dusk emergence survey visits. May to September, with at least two surveys between May and August

The habitat survey and PRA was undertaken by SoEcology Ltd Ecologist Sophie Lancaster. Sophie attained an MSc in environmental Consultancy in 2013, since which she has worked full-time as an Ecologist for private consultancies undertaking habitat and protected species surveys. Sophie is an Associate member of the Chartered Institute of Ecology and Environmental Management (CIEEM). The survey was undertaken on the 19 January 2024 at 2pm and for the duration of the survey the weather was 5°C/Beaufort Scale 0 (calm)/10%cloud cover.

3.3.1 Limitations

There are intrinsic limitations associated with a PRA of a building, as it is not always possible to scope out the presence of bats, as they can roost within inaccessible areas such as between roof lining and tiles and within cavity walls. A PRA is only capable of scoping in the presence of bats via the identification of direct evidence such as individuals, droppings and urine staining.

A full biological record centre desktop study was not undertaken as part of this assessment and bat data was attained only. This is as a full record centre desktop study was not considered necessary given the limited scale of impacts.

All internal spaces of the property were accessed during the PRA and no limitations beyond those intrinsically associated with the PRA methodology were recorded.

It is not possible for the surveyor to confirm presence/likely absence for all ecological receptors and assessments are made on the likelihood of presence based on whether there is suitable habitat on-site, the site connectivity and geographical positioning and desk-top study data.

3.4 Assessment

The assessment evaluates the importance of ecological features and the impact and residual effect of a development in accordance with CIEEM (2018) guidance⁵.

The importance of an ecological feature is based on geographical context, in accordance with the following scale of reference:

- International and European
- National
- Regional
- County/ Metropolitan/ other-local authority wide area
- River Basin District
- Local
- Site
- Negligible⁶ or likely absent⁷

The geographical evaluation is determined by professional judgement and legislation and policy documents and data on the distribution of species and habitats. Ecological features assessed as “negligible” or “likely absent” are not considered beyond Section 4.0. Ecological features assessed to be of site value in Section 4.0 are not considered to be important at a geographical scale and can be scoped out of further assessment. However, the loss of ecological features of “site value” may be considered cumulatively for compensation and/or enhancement measures to adhere to national and local policy e.g. no net loss of biodiversity. It is important to note that habitats are assessed separately to species and a habitat assessed to be of site value or negligible value may have potential or be confirmed to support protected species and will indirectly undergo further assessment regarding said specie(s).

Within this PEAR the assessment process ends with providing geographical scale of importance within Section 4, survey results. Where further surveys are required, a geographical scale is not provided as this can only be established once the further surveys are undertaken and the conservation status of the protected species/habitat is confirmed.

⁵ CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.

⁶ E.g. Land absent of vegetation e.g. hardstanding and buildings

⁷ Protected species assessed to be likely absent from Site.

Once the further survey requirements identified within this report are completed, this PEAR can be superseded with an ECIA. The assessment process will continue within the ECIA report by assessing potential impacts, provide mitigation recommendations in response and, determining residual impact (likely impact if mitigation measures are implemented) at a geographical scale. Where a negative residual impact is identified compensation measures and enhancement recommendations will be provided.

4 Baseline Ecological Conditions

This section of the report details the baseline ecological conditions of the Site based on the desktop study, UKHab survey results and potential for protected species presence. An assessment of ecological value at a geographical scale is made for each ecological feature based on the survey results.

4.1 Designated Sites

The desk top study identified no statutory designations within a 1km radius of the Site. The nearest designation is Hocombe Mead LNR located 1.4km north-west, designated for its ancient woodland and wet meadows.

The proposals will not result in an increase in residential properties and therefore, no impacts are anticipated on designations further afield from an increase in recreational pressure. However, the stream within the front garden flows to Monks Brook, which is a tributary to the River Itchen and the estuary which is afforded national and international protection in the form of River Itchen SAC & SSSI; Solent and Southampton Water SPA & Ramsar; Lee-on-the Solent to Itchen Estuary SSSI. The ditch flows during times of heavy rain and winter months only and is heavily culverted and runs through an urban setting and therefore, potential pollution impacts to the river and estuary from the renovation will be minimal. However, avoidance measures are advisable and designated sites are considered further in Section 5.0 of this report.

4.2 Habitats

The habitats present on-site are listed in Table 4-1 below. The table should be read in conjunction with the UKHab survey plan, found in Appendix 8.2.

Table 4-1: List of habitats present on-site based on the UKHab classification system and the geographical scale of value of each habitat. The UKHab survey plan is in Appendix 8.2.

UKHab Primary Code	UKHab Secondary Code	Description	Scale of Importance
U1	50; 108; 203; 847	Built-up areas and gardens – <i>dry ditch; frequently mown lawn; mature tree; introduced shrub.</i>	Site
U1b5	-	Buildings	Negligible
U1b	-	Developed land; sealed surface	Negligible
W	827	Woodland - <i>Garden</i>	Local
R1	-	Standing water and canals	Site

The vegetated garden comprises a managed lawn with a high density of moss and fine grasses. Herbaceous species are sparse and the most predominant species recorded was daisy *Bellis perennis*. Located on the eastern end of the lawn boundary is a dry ditch, which acts as a line of separation between the traditional manicured garden and the woodland habitat that makes up the rest of the rear garden. Considering the rear garden ditch was dry in January and when the months prior had been wetter than average, it is considered highly likely that this ditch rarely holds water. No detailed survey was undertaken of the woodland habitat as it is sufficiently distanced from the works and is not to be impacted. The introduced shrub predominantly borders the Site boundaries and includes: cherry laurel *Prunus laurocerasus*, *Daphne* sp., witch-hazel *Hamamelis* sp., Japanese skimmia *Skimmia japonica*, *Rhododendron* sp., *Hydrangea* sp., rose *Rosa* sp. and firethorn *Pyracantha* sp. The most notable ecological feature within the Site is a mature oak *Quercus robur* located on the western

boundary, on the top of the western bank of the wet ditch. The mature oak tree is sufficiently distanced from the construction area and is not to be impacted.

The scale of importance given to the seasonal ditch on-site was “site” as the scale of importance from a habitat perspective is determined irrespective of its association with designated sites but based on the likely impacts if the on-site section of ditch was lost. The ditch is a man-made structure that is heavily culverted along its length and no aquatic vegetation was recorded within the ditch at the time of the survey, which despite the time of the year, is considered to be likely a true representation of aquatic vegetation present due to the heavy shading. At the time of the survey the water levels were 5-10cm deep and fast flowing. The banks to the stream were between 1.5 to 2m in height and steep, and predominantly comprised introduced shrubs. It is known that the ditch is dry during the summer months and is not continuously flowing and due to the extensive culverting and its urban route, it does not provide an important habitat for aquatic species and fish are absent.

4.3 Protected Species

4.3.1 Plants

There are two varieties in the *Rhododendron* species group that are listed as invasive under Schedule 9 of the Wildlife and Countryside Act 1981, namely *Rhododendron ponticum* and *Rhododendron ponticum* x *Rhododendron maximum*. Under the Act it is illegal to plant or otherwise cause to grow this plant in the wild. It is not confirmed that the *Rhododendron* on-site are the invasive varieties and were relatively small.

The invasive, yellow variegated archangel *Lamium galeobdolon* subsp. *argentatum* is present on-site. This invasive species is listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). Under the Act it is illegal to plant or otherwise cause to grow this plant in the wild.

The Site does not support plants of nature conservation value and the notable plants recorded are invasive varieties only. Therefore, the Site is assessed to be of negligible value for plants.

4.3.2 Invertebrates

The Site offers a nectar resource for invertebrates, however, due to the Site's manicured nature and small size, it is unlikely that notable species and assemblages rely on it. Overall, the Site is assessed to be of **site value** for invertebrates.

4.3.3 Amphibians

Research has concluded that in terms of distance travelled by great crested newt from breeding ponds, they have been found at highest densities within terrestrial habitats of up to 200m and many studies have concluded a maximum migratory range of approximately 250m from a pond (Franklin, 1993) (Jehle, 2000) (Oldham, 1986). OS maps recorded the nearest standing waterbody to be located 255m north, which is part of with Hiltingbury Lakes and is the water source for the on-site wet ditch. The Lakes are managed by Eastleigh Borough Council and are active fishing lakes. The lakes are not known to support great crested newt and are unsuitable for supporting the species due to their large size, with fish stock and waterfowl presence. Hiltingbury Lakes are also isolated and surrounded by dense residential development.

A search for great crested newt records on Magic maps did not record any confirmed registrations and the nearest registration is located more than 3km west of the Site.

Overall, great crested newt are assessed to be locally absent and thus, **likely absent** on-site and are not considered further in this report.

4.3.4 Reptiles

Mature gardens are suitable for supporting low numbers of reptiles, with slow-worm frequently found in gardens within built-up landscapes. Slow-worms are found within compost piles, unmanaged grassland and areas of shrub and herbaceous growth that provides dense ground cover. The lawn on-site is not suitable for sheltering slow-worm, albeit does provide basking opportunities. The introduced shrub on-site predominantly lacks in dense ground cover and is relatively bare and open and thus, unsuitable for sheltering slow-worm. The only exception being the introduced shrub habitat located on the banks of the wet ditch. The presence of aquatic habitat may also attract species such as grass snake. The woodland habitat located within the rear half of the back garden does provide suitable habitat for reptiles including potential hibernacula opportunities.

Overall, due to the small extent of suitable reptile habitat, the Site would not support a viable population in its own right, but there is potential for a low population of widespread species of reptile to be present. Therefore, the Site is assessed to be of **site value** for widespread species of reptile.

4.3.5 Birds

The Site's small size makes it unsuitable for ground nesting birds and it is of limited suitability for over-wintering birds, however, small numbers of over-wintering species may occasionally occur. Due to the sites limited suitability for such species, ground nesting birds and over-wintering birds are not considered further in this report.

A bird box was recorded on the south-west elevation of the bungalow. No other potential nesting bird opportunities associated with the building was recorded. The potential for birds nesting within the dense introduced shrub cannot be ruled out. The woodland and mature oak are suitable nesting habitats on-site, which are to be retained and not impacted by the works.

The habitats suitable to support birds within the Site are widespread and makes up a very small percentage of suitable nesting habitat within the local landscape, therefore the habitats are assessed to be of **site value** for birds.

4.3.6 Badgers

No evidence of badger was recorded on site, such as, snuffle holes, prints and latrines, and the local landscape is dominated by enclosed gardens, which makes it sub-optimal for commuting badger. The managed grassland and woodland offers foraging opportunities, although limited in extent. The school playing fields that backs onto the property can also provide suitable foraging habitat for badger.

Overall, the rear garden woodland is significantly separated by the proposed works and the likelihood of badger accessing the garden and a clan being present within the local landscape considering the extensive fragmentation from the sub-urban development is considered unlikely. Overall, due to the nature of the proposals, site visit and desk-top study, the likelihood of impacts on badger is **negligible** and they are not considered further in this report.

4.3.7 Bats

HGB returned records of at least 10 bat species within a 2km radius in the last 10 years. The most notable record is of western barbastelle, considered rare and afforded extra protection under Annex II of the Habitats Directive. The nearest western barbastelle record is located 600m north-west in year 2018. Other species recorded within a 2km radius of the Site include soprano pipistrelle *Pipistrellus pygmaeus*, noctule *Nyctalus noctula*, long-eared bat species *Plecotus* sp., common pipistrelle *P. pipistrellus*, serotine *Eptesicus serotinus*, brown long-eared bat *P. auritus*, Daubenton's bat *Myotis daubentonii*, *Myotis* species, Whiskered/Brandt's bat/*Alcathoe M. mystacinus/M. brandtii/M. alcathoe*; Brandt's bat, whiskered bat, Natterer's bat *M. nattereri* and Leisler's bat *N. leisleri*.

HBG returned 22 confirmed bat roost locations within a 2km radius of the Site. The closest bat roosts are located approximately 400m from the Site and include Serotine, soprano pipistrelle, brown long-eared bat. The most notable roost record is from 2020 of a Natterer's bat maternity roost located 1.9km north-west.

Magic returned records of four European Protected Species (EPS) mitigation licence applications to facilitate the destruction/damage of resting places and breeding sites. The closest licence application is from 2015 located 400m west. The licence was granted to lawfully facilitate the destruction of non-breeding roosts of serotine, common pipistrelle, soprano pipistrelle, brown long-eared bat.

Table 4-2 below provides a comprehensive result of known bat roost locations and EPS licence applications for bat roosts within a 2km radius.

Table 4-2: Locations of bat roosts recorded within a 2km radius of the Site in the past 10 years.

Roost Location	Year of Record	Bat species	Roost Status	EPS Licence Ref.
400m west	2015	Serotine, common pipistrelle, soprano pipistrelle, brown long-eared bat.	Summer roost	2017-27981-EPS-MIT
400m west	2019	Brown long-eared bat	Unknown	
400m west	2017	Serotine	Unknown	
400m north	2021	Brown long-eared bat, soprano pipistrelle	Day roost	
450m north	2020	Soprano pipistrelle	Non-breeding	2020-49783-EPS-MIT
500m east	2021	Common pipistrelle	Day roost	
600m north-west	2015	Pipistrellus sp. and long-eared bat	Unknown	
620m north-west	2018	Common pipistrelle	Unknown	
700m north	2013	Pipistrellus sp. and serotine	Unknown	
820m north-east	2018	Common pipistrelle	Day roost	
1km north-east	2015	Brown long-eared bat	Unknown	
1km north-east	2016	Common pipistrelle and soprano pipistrelle	Non-breeding	2016-21370-EPS-MIT
1km north-east	2019	Soprano pipistrelle	Unknown	
1km north-east	2019	Common pipistrelle	Unknown	
1.2km north	2017	Brown long-eared bat	Unknown	
1.3km south-west	2015 & 2017	Brown long eared bat	Unknown	
1.3km south-west	2017	Common pipistrelle	Unknown	
1.4km north	2022	Brown long-eared bat, common pipistrelle and soprano pipistrelle	Unknown	
1.7km north-west	2019	Long-eared bat	Day roost	
1.8km north-west	2017	Common pipistrelle	Unknown	

1.8km north-west	2019	Brown long-eared bat	Unknown	
1.8km north-west	2019	Brown long-eared bat	Unknown	
1.85km north-east	2017	Brown long eared bat, common pipistrelle and soprano pipistrelle	Non-breeding	2017-28716-EPS-MIT
1.9km north-east	2018	Pipistrelle sp.	Unknown	
1.9km north-west	2020	Natterer's bat	Maternity roost	
1.9km south	2018	Common pipistrelle	Unknown	

A total of 26 confirmed roosts have been recorded within a 2km radius, which is a higher-than-average data return. The quantity of roost registrations is reflective of the area, which supports a high density of properties but within a leafy sub-urban setting, which is effluent and property renovations which would initiate bat surveys are more likely. The leafy suburban design also makes the area suitable for foraging and commuting bat species that are more tolerant to light pollution and increases likelihood of bats roosting within the properties.

Internal Inspection

The bungalow comprises a vast loft space, reaching a height of around 3m at the apex. The loft is fully boarded and has been recently cleared out. A low number of bat droppings (~20) were recorded on the insulation towards the eaves where boarding is not present and thus, were not brushed away during the clear out of the loft. The droppings look indicative of long-eared bat, however, DNA sampling has yet to be undertaken. Droppings were collected in the instance that further surveys do not confirm species, which is plausible due to some species calls being very difficult to distinguish between.

The bitumen 1f felt lining in the loft was torn in multiple locations and the tiles were visible behind, which enables bat entry/egress into the loft space.

The garage is open to the roof internally and has not been cleared. The garage was fully searched and no evidence of bats was recorded. The garage is single skinned and comprises a pitched corrugated asbestos roof, visible from the inside and no voids are present suitable for bats to roost within.

External Inspection

The bungalow is brick-built with uPVC soffits and windows in very good condition and no gaps evident. The tiled roof is in very good condition and no obvious signs of lifting present and the only notable gap beneath the tiles being associated with a flue pipe on the rear side of the property.

The garage, small, shiplap garden shed and greenhouse are absent of suitable roosting bat features and are of **no suitability** for roosting bats.

Overall, the bungalow is of **high suitability** to support bats with the presence of droppings within the loft void.

4.3.8 Water Vole & Otter

Heavily culverted watercourses, such as the wet ditch that runs through the Site are a deterrent for water vole. This wet ditch is also known to be dry in the summer months and combined with the wet

ditch running through a suburban setting where human disturbance and domestic cat predation would be high, water vole are considered **likely absent**. The wet ditch does not support fish and thus, does not provide a food resource for otter. Hiltingbury Lakes is fish stocked and would provide a food source, but as a fishing lake in an urban setting, such sightings would be documented, and the culverted nature of the ditch would result in a high risk of road casualties if they were present. Overall, otter is considered **likely absent**.

4.3.9 Other Wildlife

There is potential for hedgehog *Erinaceus europaeus* to utilise the Site and they are a species of principal importance under Section 41 of the NERC Act and a Biodiversity Action Plan (BAP)⁸ species. Hedgehog are also listed as vulnerable to extinction in the UK by the Red List for British Mammals.

4.4 Baseline Conditions Overview

The Site is located within the zone of influence of the following designated sites River Itchen SAC & SSSI; Solent and Southampton Water SPA & Ramsar; Lee-on-the Solent to Itchen Estuary SSSI. Due to the stream within the front garden being a tributary to Monks Brook, which leads to the River Itchen and the estuary.

The Site comprised habitats of site value or habitats of higher distinctiveness but due to the nature of the development, are sufficiently distanced from the construction works and do not require mitigation.

The following protected species are considered likely absent from Site and are not considered further in this report: great crested newt; badger; water vole and otter.

The Site is considered to be of site value for the following protected species: reptiles; nesting birds; invertebrates and hedgehog. Invasive plant species frequently found within private gardens are also present. No further surveys are deemed necessary, however, precautionary mitigation measures are provided in Section 5 of this report, where deemed necessary, to avoid the risk of a wildlife offence being committed.

The bungalow is assessed to be of high suitability for roosting bats and further surveys are required.

⁸ UK BAP was superseded in 2012 by the UK Post-2010 Biodiversity Framework. However, UKBAP it is still referred to as the species and habitats agreed under UK BAP still form the basis of conservation action today.

5 Potential Ecological Constraints and Recommendations

In accordance with CIEEM guidelines, where ecological features have been evaluated at “site value”, no further assessment is deemed necessary as the impact on these receptors is not likely to be of significance. However, mitigation measures may still be required to ensure compliance with current wildlife legislation and best practice guidelines.

The Site is approximately 0.15ha in size and comprises buildings, hardstanding, manicured garden, a wet ditch and a woodland garden. The proposals are for a loft conversion and a rear extension which will require the removal of the garage and will predominantly be retained within the existing hardstanding and building footprint. The design of the proposed development has followed the mitigation hierarchy; firstly, impacts to biodiversity have been largely avoided by retaining the works within existing developed land and significantly distanced from the woodland habitat. Secondly, adverse effects have been avoided or minimised through mitigation measures and lastly where there are significant residual adverse ecological effects despite the mitigation proposed, these can be offset by appropriate compensatory measures.

Due to the ditch within the front garden being a tributary to Monks Brook, which leads to the River Itchen and the estuary. The Site is located within the zone of influence of the following designated sites River Itchen SAC & SSSI; Solent and Southampton Water SPA & Ramsar; Lee-on-the Solent to Itchen Estuary SSSI.

Due to the nature of the development no further consideration is required for the habitats on-site.

The proposals are anticipated to result in no to minimal net loss of biodiversity. Despite the inherently low impacts, the application will not adhere to the NPPF aim for a net gain in biodiversity without the provision of enhancements. Enhancements are provided for the ecological features highlighted in this report only and more detailed habitat enhancements will be provided within the EclA report, which will supersede this report and will be submitted for planning approval.

The presence of widespread species of reptile, nesting birds, and hedgehog could not be scoped out, however, due to the nature of the development and the habitats on-site, no further surveys are deemed necessary and the risk of impacts can be avoided via precautionary mitigation measures.

The ecological features requiring further consideration is invasive plant species. The only further surveys required prior to planning submission is roosting bat surveys.

5.1 Designated Sites

Potential Impacts

Without appropriate mitigation measures the proposals risk polluting the wet ditch that runs through the Site with building rubble, chemical spills and dust. This wet ditch flows into Monks Brook, which is a tributary to the River Itchen and the estuary which is designated for the following designations: River Itchen SAC & SSSI; Solent and Southampton Water SPA & Ramsar; Lee-on-the Solent to Itchen Estuary SSSI. The pollution impact if unmitigated is very low and non-significant due to the culverted nature of the wet ditch, its location; running through a suburban setting where it is likely subject to gardeners herbicides and road run-off etc; and the ditch does not hold water all year round.

Potential Mitigation measures

To avoid the risk of debris and pollutants entering the wet ditch the following precautions are to be taken:

- Any chemical storage is to be located at least 5m from the wet ditch;
- A spill kit will be maintained on site at all times in order to react to any chemical spills which may occur.
- In the unlikely circumstance litter such as, equipment or materials falls into the ditch, it is to be physically removed from the ditch as soon as possible;
- The Environment Agency should be contacted to report the incident and for further advice. The current incident hotline is 0800 80 70 60;
- Any skips are to be placed on the existing driveway, which is relatively distanced from the ditch;
- Under no circumstances will waste water be emptied into the ditch;
- To avoid the amount of dust entering the ditch Heras fencing is to be installed in front of the introduced shrub banks (existing shrubs provide a natural barrier). The Heras fencing is to be dressed with a geo-textile fabric to limit the amount of dust and debris from leaving the Site and entering the ditch.

Potential Compensation and Enhancement Measures

N/A

5.2 Protected Species

5.2.1 Plants

Potential Impacts

The retention of the invasive yellow variegated archangel and rhododendron (if confirmed to be *R. ponticum*), as classified under Schedule 9 of the Wildlife and Countryside Act 1981 is detrimental to the local environment. Under the act it is an offence to plant or allow these species to be released into the wild.

Potential Mitigation measures

The yellow variegated archangel is to be removed from Site, to prevent its spread. This is to be achieved through excavation, provided that the roots are fully removed. If the rhododendron is confirmed as *R. ponticum* it is to be felled and if stump removal is not possible it is to be injected with herbicide.

Potential Compensation and Enhancement Measures

The removal of invasive species is an enhancement. When considering landscaping around the property, planting is to avoid species that are toxic to bees, such as *Rhododendrum* spp. Consideration can also be given to providing all-year round food source for pollinators, as warmer winters are disturbing hibernating patterns of insects. The Royal Horticultural Society provide an extensive list of pollinator plants that flower by season (Royal Horticultural Society, 2019).

5.2.2 Reptiles

Potential Impacts

There is potential for widespread species of reptile to utilise the Site in low numbers. There is a minor risk of reptiles being harmed during the construction phase.

Potential Mitigation measures

The only habitat within proximity of the construction zone that has potential to support sheltering reptiles is the dense shrub banks associated with the wet ditch. The shrub bank is to be inherently protected as part of the pollution control measures detailed in Section 5.1.

Potential Compensation and Enhancement Measures

The planting of flower beds with dense ground cover and the creation of a log pile within the rear garden.

5.2.3 BirdsPotential Impacts

The removal of dense shrubs and the bird box on-site risk harming active bird nests and the reduction of suitable nesting habitat.

Potential Mitigation measures

The removal of any introduced shrub and bird box to be lost or impacted by the works should be undertaken outside the breeding bird season which extends from March to September, inclusive. If this is not possible, a suitably experienced ecologist will be present within 24 hours prior to clearance to inspect the suitable nesting habitat for active nests. Any active nests will be retained within a suitable buffer determined by the ecologist until the young have fledged. Such checks can be combined with bat mitigation, which will be occurring as part of the planning process.

Potential Compensation and Enhancement Measures

It is recommended that the bird box is translocated to a tree within the woodland.

Installation of bird boxes on suitable sized trees on-site and the incorporation of integrated bird box on the northern elevation of the property will increase the nesting opportunities on-site.

5.2.4 BatsPotential Impacts

The proposal will result in the destruction of a bat roost and the construction phase risks disturbing roosting bats and risk resulting in the death and/or injury of bats if unmitigated. The proposals will result in the loss of the loft space and the removal of the tiled roof, which is the likely entry/egress feature.

Due to the small scale and nature of the proposals, no impacts on foraging and commuting bats are anticipated.

Potential Mitigation measures

Roost characterisation surveys are to be undertaken in the form of three dusk emergence surveys. The bat survey season extends from May to September and each survey must be spaced apart by at least three weeks. Only one of the three surveys can be undertaken within the month of September.

Each survey is to be undertaken by two surveyors who will record any bat emergences/re-entries and provide information on general bat activity within the Site. Each surveyor will be equipped with bat detectors and paired with a Night Vision Aid in the form of Infra-Red (IR) cameras and IR torches. One additional unmanned set of Night Vision Aids installed onto a tall tripod will be positioned on the

south-west corner of the property, which cannot be covered by the two surveyors due to the tight plot. The dusk surveys will commence 15 minutes before sunset until 1.5-2hours after sunset.

The survey results will enable the assessment of the Sites value to bats and provide appropriate mitigation within the superseding EclA report.

Potential Compensation and Enhancement Measures

Appropriate compensation and enhancement measures will be determined by the outcome of the bat surveys.

5.2.5 Other Mammals

Potential Impacts

The proposals are not anticipated to result in the loss of suitable foraging and sheltering habitat for hedgehog, however, there is a risk of harm/death of individuals sheltering within dense shrub growth.

Potential Mitigation measures

The only habitat within proximity of the construction zone that has potential to support sheltering hedgehog is the dense shrub banks associated with the wet ditch. The shrub bank is to be inherently protected as part of the pollution control measures detailed in Section 5.1.

Potential Compensation and Enhancement Measures

Refer to enhancements in Section 5.2.2.

6 Conclusions

The Site is approximately 0.15ha in size and comprises buildings, hardstanding, manicured garden, a wet ditch and a woodland garden. The proposal are for a loft conversion and a rear extension which will require the removal of the garage.

The habitats on-site, great crested newt, badger, water vole and otter have been scoped out for further assessment. Measures to avoid a loss in biodiversity have been inherently incorporated into the developments design proposals as it will predominantly be retained within the existing hardstanding and building footprint.

Pollution control measures for the wet ditch have been proposed within this report as it runs into Monks Brook which is a tributary of the Itchen, that is afforded national and international protection.

Mitigation measures have been provided in this report for invasive plants, reptiles, hedgehog and nesting birds, to avoid a wildlife offence from being committed.

The property has been identified to support suitable roosting bat features and bat droppings were found within the loft space. Further surveys have been recommended to confirm the presence/likely absence of roosting bats and for roost characterisation. The survey effort includes three dusk emergence survey, to be undertaken in the 2024 survey season.

This PEAR report is not suitable for planning submission and has been instructed as part of the registration process only and is to be superseded by an EclA report once the bat surveys have been completed to confirm presence/likely absence of bat roost(s) and to provide a methodology for mitigation, where applicable.

7 References

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8 Appendices

8.1 Photographs



Photograph 1: View of the front of the bungalow with a roof in good condition.



Photograph 2: View of the north-west elevation roof.



Photograph 3: View of the gravel driveway that leads to the garage.



Photograph 4: View of the north-east boundary shrub border, which is relatively bare.



Photograph 5: View of the front garden lawn with the wet ditch to the right.



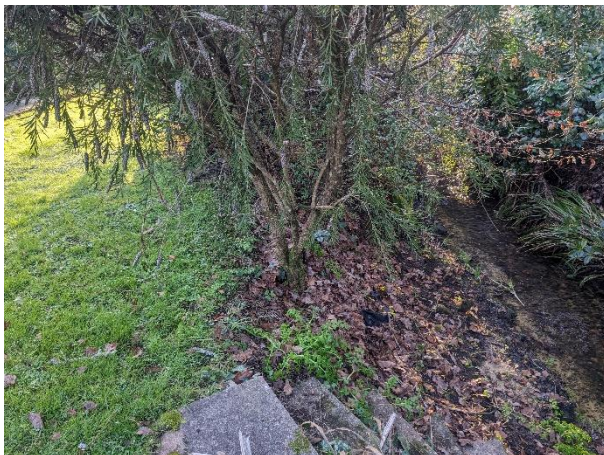
Photograph 6: View of the Site entrance which runs over the wet ditch.



Photograph 7: View of the wet ditch and the steep embankments.



Photograph 8: View of the introduced shrub embankment on the west flank of the stream.



Photograph 9: View of the wet ditches eastern flank embankment



Photograph 10: View of the front garden from the southern boundary looking north.



Photograph 11: View of the south-west roof elevation, within the only spot within the plot where it is visible.



Photograph 12: View of the bungalow from the rear.



Photograph 13: View of the flues where bat access to the loft from underneath surrounding tiles is possible.



Photograph 14: View of the soffits, which do not provide any gaps for bat access.



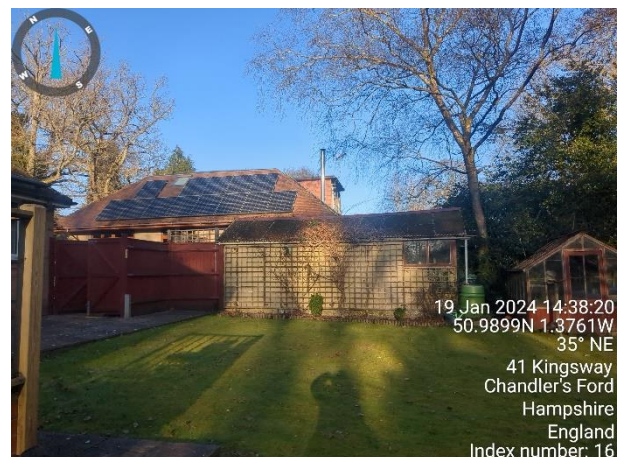
Photograph 15: Example view beneath a window frame of no missing mortar and no gaps for bats to access a cavity.



Photograph 16: View of the thin section of garden that runs along the southern flank of the bungalow.



Photograph 17: View of the shiplap shed on the southern boundary.



Photograph 18: View of the garage and manicured lawn to be impacted by works.



Photograph 19: View of the interior of the garage.



Photograph 20: View of the manicured lawn and rear of the bungalow.



Photograph 21: View of the wet ditch flowing fast and shallow.



Photograph 22: View of the woodland within the rear half of the back garden, which is suitably distanced from the works.



Photograph 23: View within the bungalows loft looking south.



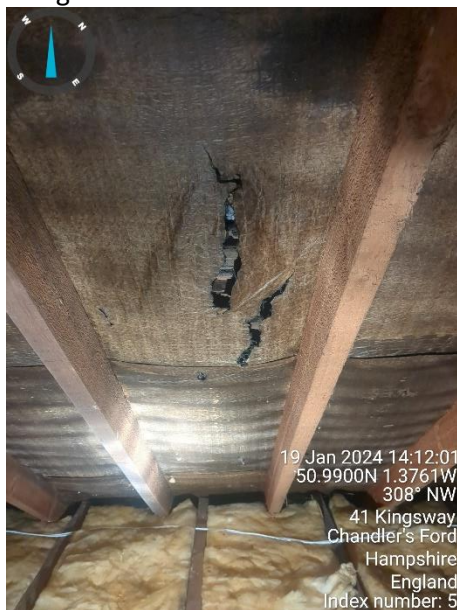
Photograph 24: View within bungalows loft looking north.



Photograph 25: View of a tear in the bitumen felt lining.



Photograph 26: View of the scattered bat droppings on the insulation.



Photograph 27: View of a tear in the bitumen felt lining.

8.2 UKHab Survey Plan

