



ecosupport

Preliminary Ecological Appraisal (PEA)

30-32 Queens View

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Client:

Eastleigh Borough Council

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Table of Contents

EXECUTIVE SUMMARY.....	4
1.0 INTRODUCTION	5
1.1 BRIEF	5
1.2 SITE DESCRIPTION & LOCATION.....	5
1.3 PROPOSED DEVELOPMENT	6
2.0 RELEVANT LEGISLATION AND POLICY	7
2.1 LEGISLATION	7
2.1.1 <i>The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations (2019)</i>	7
2.1.2 <i>The Wildlife and Countryside Act (1981) (as amended)</i>	7
2.1.3 <i>The Countryside and Rights of Way Act (2000)</i>	7
2.1.4 <i>Natural Environment and Rural Communities Act (2006)</i>	8
2.1.5 <i>Protection of Badgers Act</i>	8
2.2 POLICY.....	8
2.2.1 <i>National Planning Policy Framework (NPPF) 2021</i>	8
<i>Local: Eastleigh Borough Council</i>	9
3.0 METHODOLOGY	12
3.1 DESK STUDY.....	12
3.1.1 <i>Data request</i>	12
3.1.2 <i>Waterbodies</i>	12
3.2 FIELD SURVEY.....	12
3.2.1 <i>Habitats</i>	12
3.2.2 <i>Badger</i>	12
3.2.3 <i>Bats</i>	13
3.3 ASSESSMENT METHODOLOGY.....	13
3.3.1 <i>Introduction</i>	13
3.3.2 <i>Valuation</i>	14
3.4 BNG.....	14
3.4.1 <i>Habitat Assessment</i>	14
3.4.2 <i>Habitat Distinctiveness</i>	14
3.4.3 <i>Habitat Condition</i>	14
3.5 LIMITATIONS	15
3.5.1 <i>Habitats</i>	15
3.5.2 <i>PRA Limitations</i>	15
4.0 ECOLOGICAL BASELINE	16
4.1 DESIGNATED SITES	16
4.1.1 <i>Statutory Designated Sites</i>	16
4.1.2 <i>Non-Statutory Designated Sites</i>	18
4.1.3 <i>Solent Waders and Brent Goose areas</i>	20
4.1.4 <i>Ecological Network</i>	22
4.1.5 <i>Waterbodies</i>	25

4.2 VEGETATION SURVEY RESULTS	25
4.2.1 Modified grassland (g4) with secondary codes (32) scattered trees, (81) ruderal / ephemeral, (828) vegetated garden, (847) introduced shrub.....	25
4.2.3 Bramble Scrub (h3d).....	27
4.2.4 Hedgerow (h2).....	27
4.2.7 Developed land; sealed surface (u1b).....	28
4.2.8 Buildings (u1b5) with secondary code (818) residential buildings.....	28
4.3 BAT SURVEY RESULTS.....	29
4.3.1 Pre-existing Information.....	29
4.3.2 Buildings.....	29
4.4 BADGERS	36
4.4.1 Pre-existing Information.....	36
4.4.2 Site Survey	36
4.5 REPTILES	36
4.5.1 Pre-existing Information.....	36
4.5.2 On site Habitat Assessment.....	36
4.6 BREEDING AND NESTING BIRDS.....	36
4.6.1 Pre-existing Information.....	36
4.6.2 On site Habitat Assessment.....	36
5.0 LIKELY ECOLOGICAL IMPACTS IN ABSENCE OF MITIGATION	37
5.1 INTRODUCTION.....	37
5.2 SITE PREPARATION AND CONSTRUCTION	37
5.2.1 Impacts to Habitats.....	37
5.2.2 Impacts to Wildlife.....	37
5.3 SITE OPERATION	38
5.3.1 Impacts to Wildlife.....	38
6.0 RECOMMENDATIONS	39
6.1 INTRODUCTION.....	39
6.2 BATS	39
6.3 REPTILES	39
6.4 AVOIDANCE OF IMPACTS TO NESTING BIRDS	40
6.5 SOLENT AND SOUTHAMPTON WATER SPA 'ZONE OF INFLUENCE'	40
6.6 ENHANCEMENTS.....	40
6.6.1 Bats	40
6.6.2 Birds	41
6.7 BNG	42
6.7.1 Condition Assessment	43
6.7.2 Species-rich Grassland.....	43
6.7.3 Individual Tree planting.....	44
7.0 REFERENCES.....	47

Executive Summary

Ecosupport Ltd was instructed by Eastleigh Borough Council to undertake a Preliminary Ecological Appraisal (PEA) of 30-32 Queens View, Netley, Southampton. 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:

- Phase I habitat survey (June 2022)
- Preliminary roost assessment (buildings) (June 2022)
- Desktop survey submitted to Hampshire Biodiversity Information Centre (HBIC) (February 2023)

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
- Low potential for common reptile species
- Moderate 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 Eastleigh Borough Council to undertake a Preliminary Ecological Appraisal (PEA) of 30-32 Queens View, Netley, Southampton SO31 5EA (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.

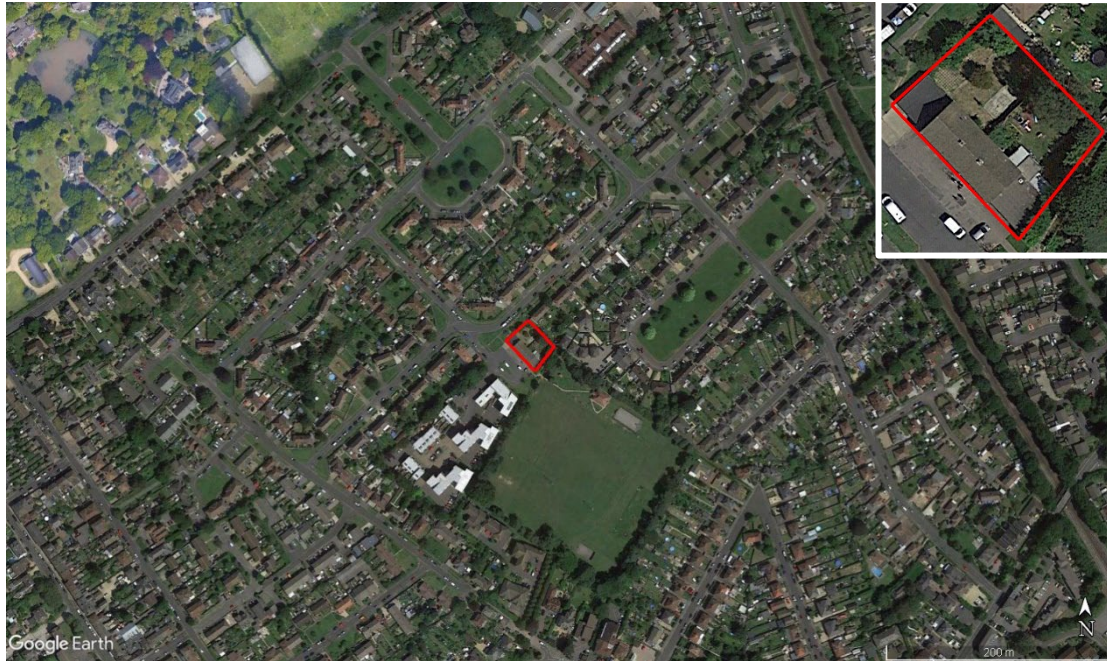
NB: If the works do not take place within 18 months of this report¹ then the findings of this survey will no longer be considered valid and may require updating.

1.2 Site Description & Location

The site is comprised of two dwellings, a garage, a convenience store and a food bank with associated land located off 30-32 Queens view, Netley, Southampton SO31 5EA (Grid reference: SU45869 08814) (**Fig 1**). Residential properties and associated land bound the site to the east, while the site is bound by Queens view to the north and Castle Road to the west. To the south the property is bound by Netley recreational ground. In the wider landscape the site is located within Netley, a coastal town predominantly comprised of residential properties with scattered patches of recreational grassland and trees.

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

Figure 1. Aerial image of the site with approximate redline boundary provided.



1.3 Proposed Development

The current proposals are for the demolition of the buildings on site and construction of 9 new dwellings and 22 parking spaces with bicycle storage and associated landscaping works.

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

The National Planning Policy Framework (NPPF) (2023) sets out the Government's planning policies for England and how these should be applied. It provides a framework within which locally-prepared plans for housing and other development can be produced.

Chapter 15 'Conserving and enhancing the natural environment' states that planning policies and decisions should contribute to and enhance the natural and local environment by protecting and enhancing sites of biodiversity, the wider benefits from natural capital and ecosystem services, minimising impacts on and providing net gains for biodiversity.

The NPPF states that plans should distinguish between the hierarchy of international, national and locally designated sites and that the scale and extent of development within all these designated areas should be limited, while development within their setting should be sensitively located and designed to avoid or minimise adverse impacts on the designated areas.

To protect and enhance biodiversity plans should:

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 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.

The NPPF states 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 SSSI, 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 SSSI;
- c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists;
- 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.

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 Damsely 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.'

3.0 METHODOLOGY

3.1 Desk Study

3.1.1 Data request

A data request was submitted to the Hampshire Biodiversity Information Centre (HBIC) to ascertain any records held of nature conservation designations and protected species within the wider area which could be impacted upon as a result of the proposed plans.

The data search covered:

- Statutory designated sites
- Non-statutory designations such as Sites of Importance for Nature Conservation (SINC)
- Records of protected and notable species

3.1.2 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, Ecologist with Ecosupport (2 years post-graduation experience) and Amy Johnston BSc (Hons) on the 14th June 2022. Weather conditions during the survey comprised temperatures of 18 °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 2.0 (UKHab Ltd., 2023). This was chosen as an appropriate habitat categorisation system as it fits within the Biodiversity Metric 4.0 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 June 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 (working under class level 2 licence of Adam Jessop 2015-13366-CLS-CLS).

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

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

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 BNG

3.4.1 Habitat Assessment

Habitats on site pre-development were identified in accordance with the categories specified for a UK Habitats survey, using Habitat Definitions Version 2.0 (UKHab Ltd., 2023). This was chosen as an appropriate habitat categorisation system as it fits within the Biodiversity Metric 4.0 calculation.

A condition assessment, in line with the Biodiversity Metric 4.0 Technical Supplement, was carried out on the Site on the 31st July 2023. The area of identified habitats is calculated in hectares (ha), ignoring linear features or ditches (the area is measured to the centre line of such features). The length of linear features is measured separately in kilometres (km). The dominant habitat type was selected, according to those defined by UKHab Ltd (2023). Where there was disparity between the UK classification for habitat type and those present within the Biodiversity Metric 4.0 calculator tool, this was noted within the condition assessment tables.

3.4.2 Habitat Distinctiveness

Each habitat was assigned a score for distinctiveness, according to the Biodiversity Metric 4.0 calculator tool and Technical Supplement (Natural England, 2022). This ranged from Poor - High for most habitats, or Not Applicable (e.g. Developed Land – Sealed Surface). Using the tool, habitats were assigned a score based on their distinctiveness.

3.4.3 Habitat Condition

The condition of each habitat was assessed following criteria set out in the Biodiversity Metric 4.0 Technical Supplement (Natural England, 2021), which includes detailed assessment criteria for different habitats. The condition of each habitat was assessed individually on site but was found to be the same for each type across the site. Therefore, the results of the habitat condition for each habitat are grouped together for each habitat.

3.5 Limitations

3.5.1 Habitats

There were not considered to be any limitations of the survey results with all areas of the site to be impacted upon accessible and the survey conducted at the appropriate time of year.

3.5.2 PRA Limitations

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

4.0 ECOLOGICAL BASELINE

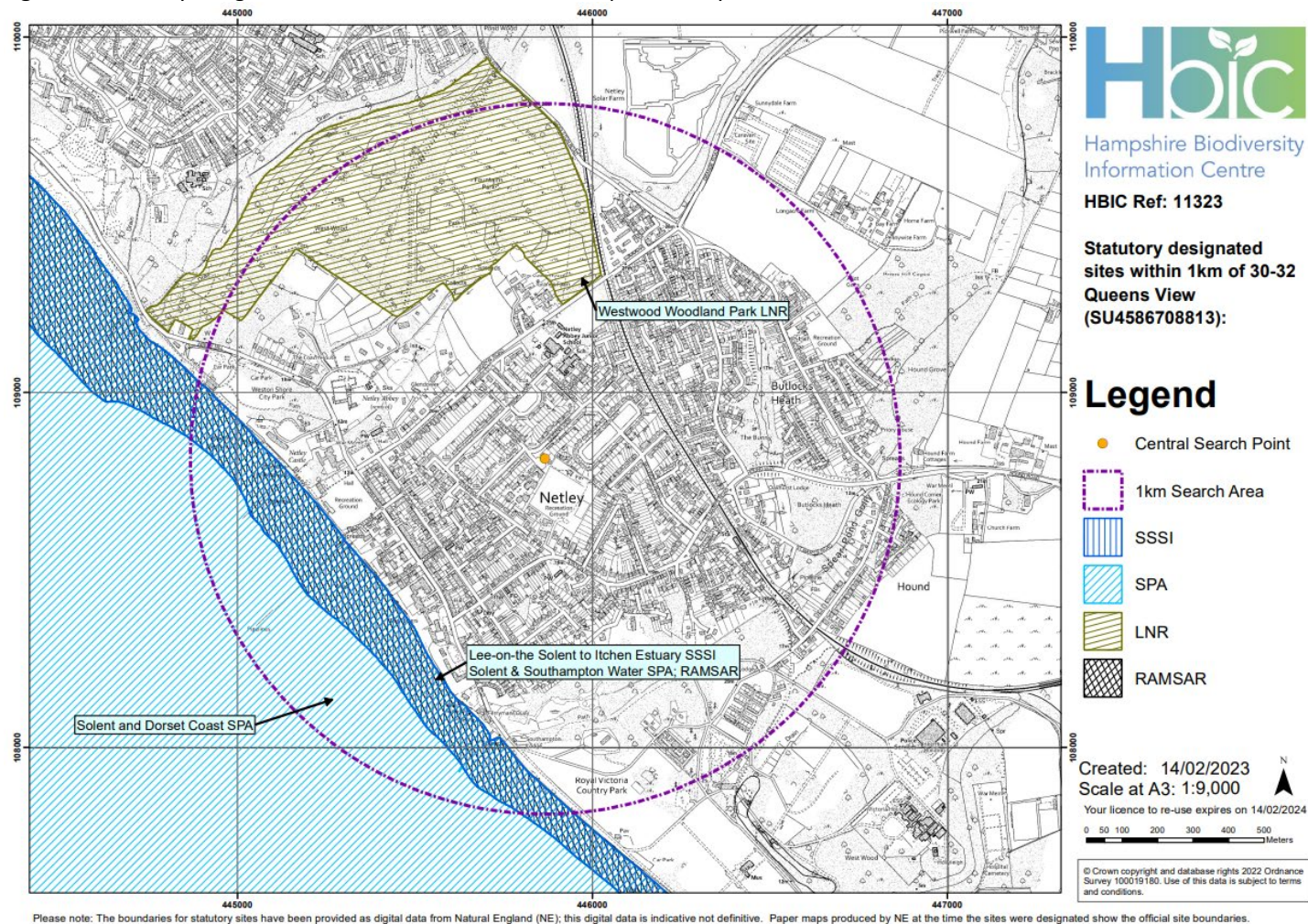
4.1 Designated Sites

4.1.1 Statutory Designated Sites

Fig 3 below displays the map provided by HBIC with the statutory designated sites located within 1 km of the site. This has identified the following sites within the search radius (**Table 2**).

Table 2. Statutory designated sites located within 1 km as shown in **Fig 3** map provided by HBIC.

Name	Designation(s)	Distance to site
Westwood Woodland Park	LNR	0.44 Km N
Lee on Solent to Itchen Estuary	SSSI	0.45 Km SW
Solent and Southampton waters	SPA	0.45 Km SW
Solent and Southampton waters	RAMSAR	0.45 Km SW
Solent and Dorset coast	SPA	0.45 Km SW

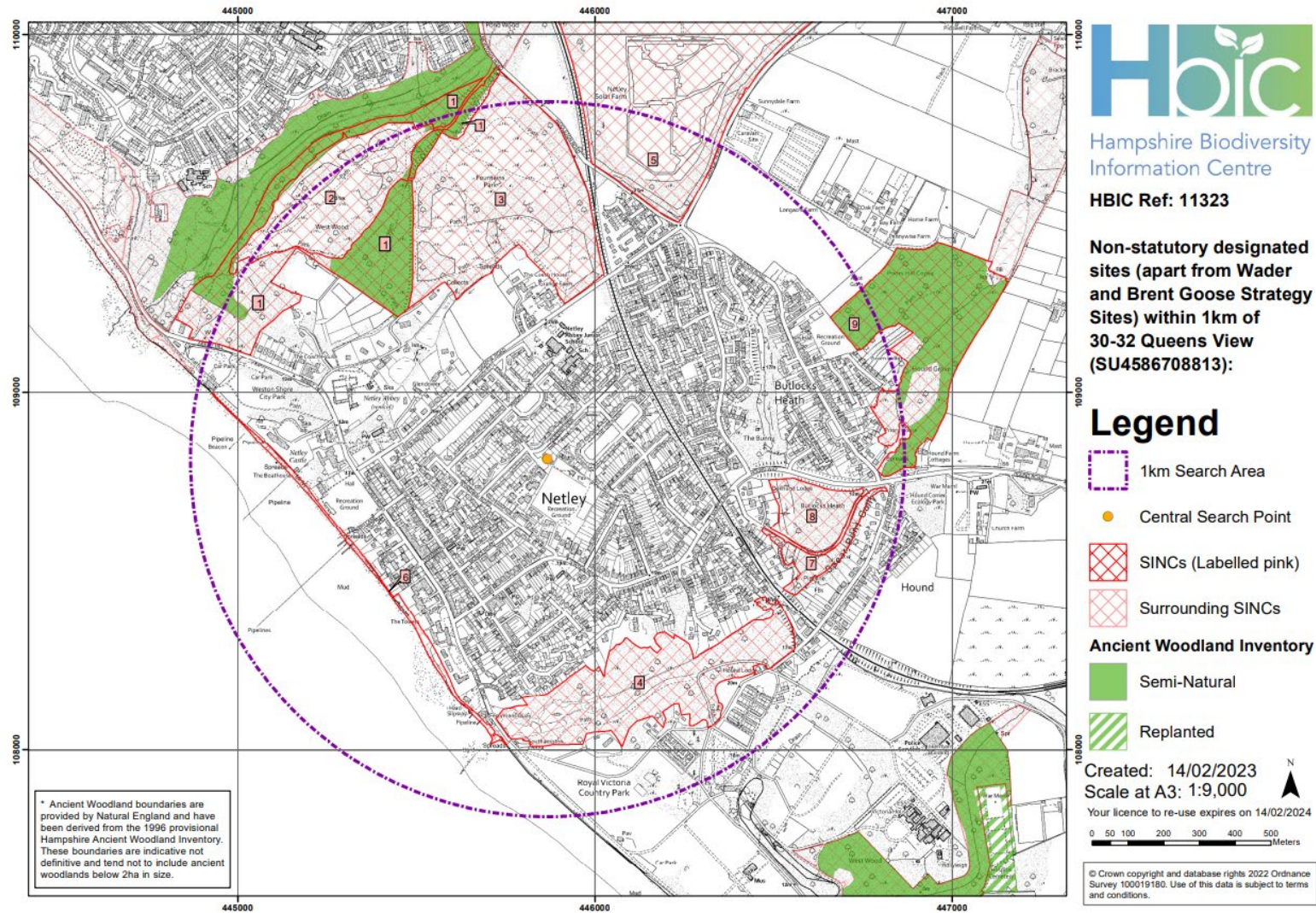
Figure 2. Statutory designated sites within 1km of the site as provided by HBIC.

4.1.2 Non-Statutory Designated Sites

Fig 4 below displays the map provided by HBIC with the non-statutory designated sites located within 1 km of the site. This has identified the following sites within the search radius (**Table 3**).

Table 3. Non statutory designated sites located within 1 km as shown in **Fig 3** map provided by HBIC.

Map Label	Status	SINC Ref	SINC Name	Central Grid Ref.	SINC Criteria	Area (ha)
1	SINC	EA0019	West Wood, Hound	SU45200970	1A	15.25
2	SINC	EA0141	West Wood Central Grassland	SU45300955	2D	10.29
3	SINC	EA0140	West Wood Grange Field	SU45750955	2D/7A	22.14
4	SINC	EA0029	Netley Lodge	SU46100820	1A/1Cii/5B	13.99
5	SINC	EA0136	Netley Farm Closed Landfill Site	SU46251006	6A	45.52
6	SINC	EA0147	Netley to Hamble Shore	SU46470734	4A	3.19
7	SINC	EA0039	Spear Pond Gully	SU46600850	1B	1.74
8	SINC	EA0040	St. Mary's Road Wood	SU46600860	1D	3.52
9	SINC	EA0046	Priors Hill Copse/Hound Grove	SU46900920	1A	14.54

Figure 3. Non-statutory designated sites within 1km of the site as provided by HBIC.

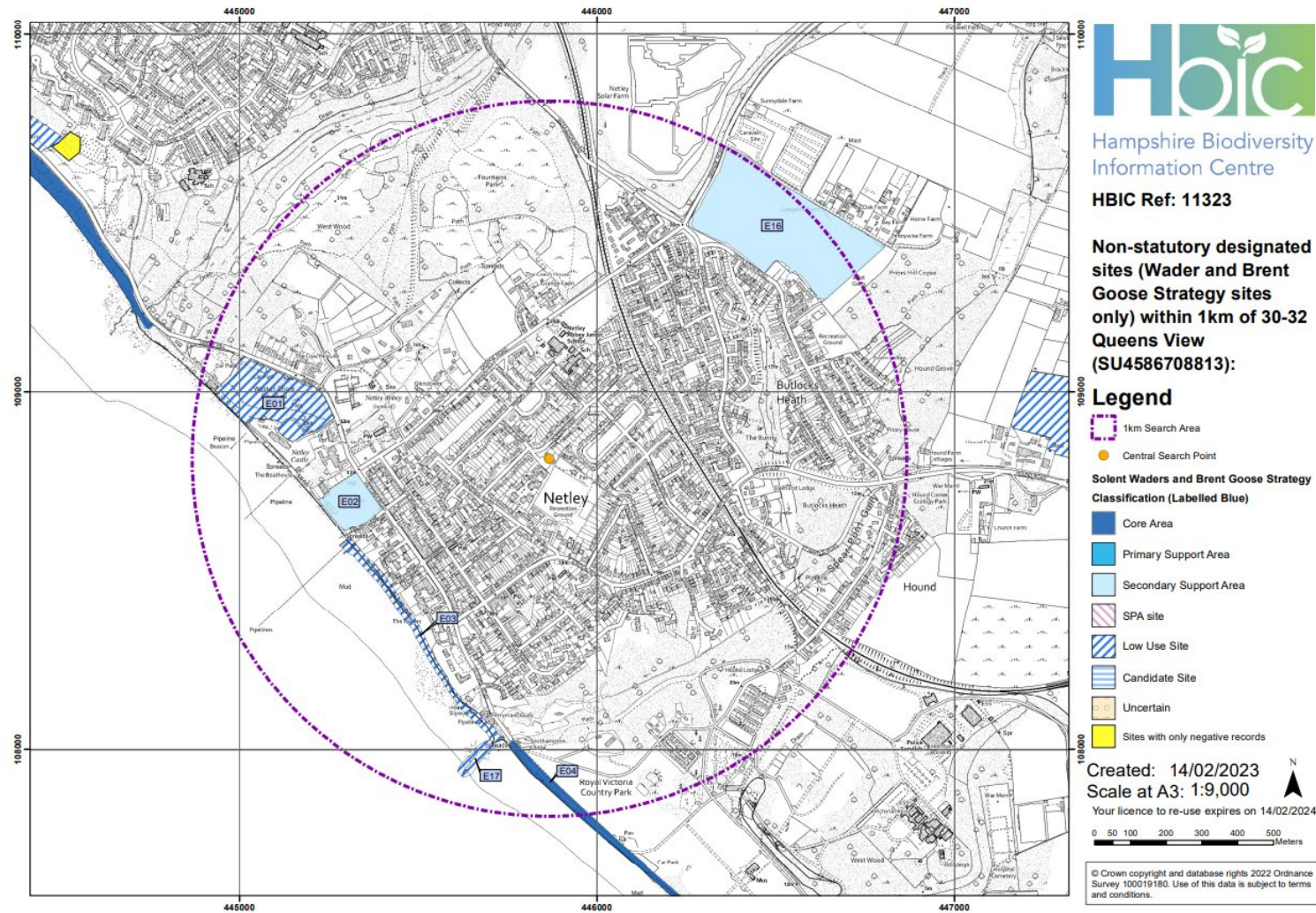
4.1.3 Solent Waders and Brent Goose areas

Figure 4 below displays the map provided by HBIC with the Solent waders and Brent goose areas located within 1 km of the site. This has identified the following sites within the search radius (**Table 4**).

Table 4. Solent Waders and Brent Goose strategic classifications within 1km as provided by HBIC (**Fig 4**).

Site Code	Max Count	SPA	GB Score	SPA Score	SPA Assm Score	Total Score	Num Recs	Classification
E01	30	Solent.and.Southampton. Water	0	0	0	0	3	Low Use Site
E02	115	Solent.and.Southampton. Water	2	1	2	3	15	Secondary Support Area
E03	35	Solent.and.Southampton. Water	0	0	0	0	22	Low Use Site
E04	16	Solent.and.Southampton. Water	0	0	0	0	3	Core Area
E16	35	Solent.and.Southampton. Water	2	0	2	2	14	Secondary Support Area
E17	7	Solent.and.Southampton. Water	0	0	0	0	2	Low Use Site

Figure 4. Solent waders and brent goose sites within 1km of the site as provided by HBIC.



4.1.4 Ecological Network

A recent addition to the data received from HBIC now includes the provision of information about the local Ecological Network designations. An ecological network is a group of habitat patches that species can move easily between maintaining ecological function and conserving biodiversity. Through appropriate management, ecological networks can provide a connected collection of refuges for wildlife. Establishing the network will enable biodiversity to recover from recent declines and create a more resilient natural environment. The aims of the network are to:

- Improve the quality of current wildlife sites by better habitat management;
- Increase the size of existing wildlife sites
- Enhance connections between sites, either through physical corridors or through 'stepping stones'
- Create new sites; and
- Reduce pressure on wildlife by improving the wider environment (Court & Ritter, 2016)

For this scheme, habitats included within the network within a 1 km radius are shown in **Fig 5** below. There are a number of Core Statutory areas, Core Non-statutory areas and areas for network opportunity within 1km of the site.

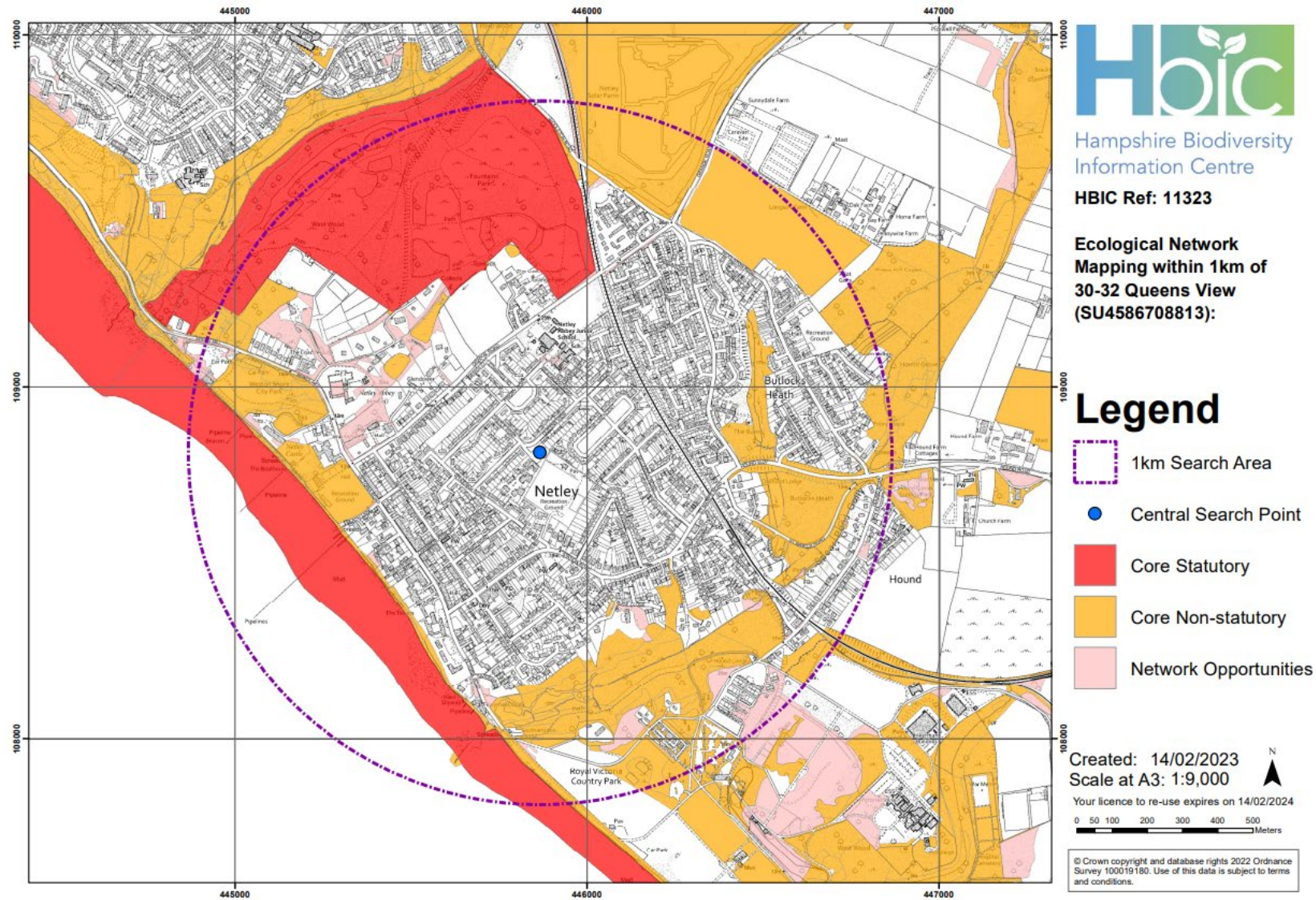
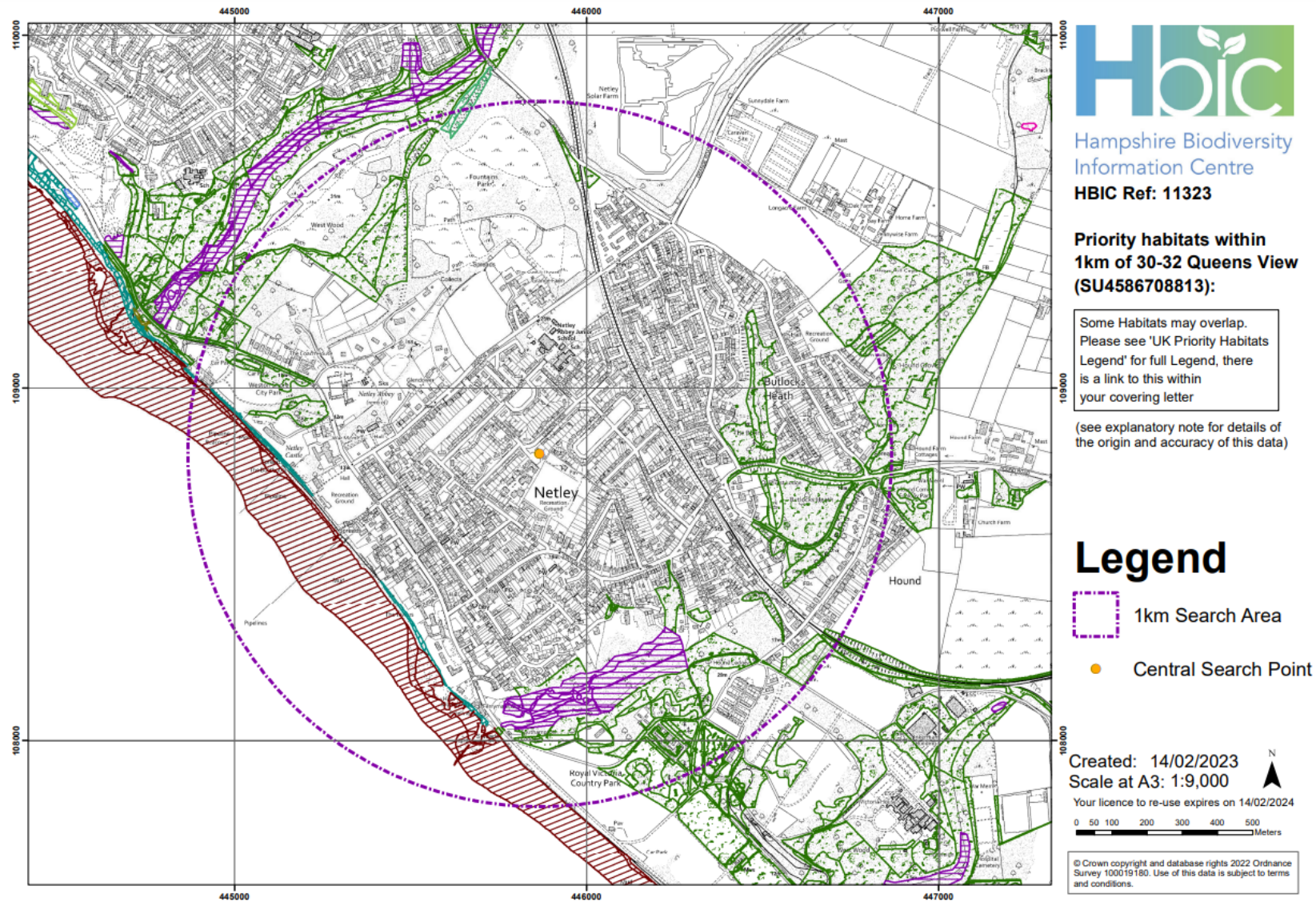
Figure 5. Ecological network map within 1 km of the site as provided by HBIC.

Figure 6. Priority habitats within 1km of the site as provided by HBIC.

4.1.5 Waterbodies

There were no waterbodies within 250m of the proposed development.

4.2 Vegetation Survey Results

The vegetation within the site has been described below using the UK Habs Habitat Definitions Version 2.0 (UKHab Ltd., 2023). 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 secondary codes (32) scattered trees, (81) ruderal / ephemeral, (828) vegetated garden, (847) introduced shrub
- Bramble Scrub (h3d)
- Hedgerow (h2)
- Developed land; sealed surface (u1b)
- Buildings (u1b5) with secondary code (818) residential buildings

4.2.1 Modified grassland (g4) with secondary codes (32) scattered trees, (81) ruderal / ephemeral, (828) vegetated garden, (847) introduced shrub

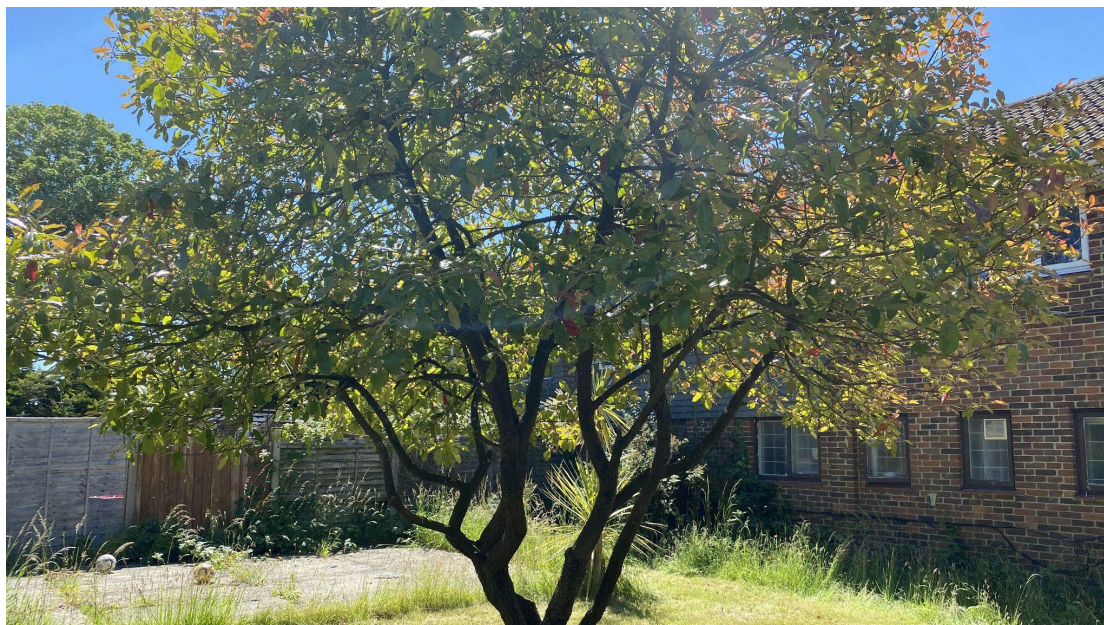
This type of grassland covered two areas to the northeast of the main dwellings in the gardens of 30 and 32 Queens view (**Fig 7**). These areas are regularly maintained therefore support a lower sward length with limited species diversity. Grass species dominated this habitat (the species composition was broadly similar across all areas), and species recorded included White Clover (*Trifolium repens*), Dandelion (*Taraxacum agg.*), Common Daisy (*Bellis perennis*), Cats ear (*Hypochaeris radicata*) and Ribwort Plantain (*Plantago lanceolata*).

Figure 7. Amenity grassland present at the northeast of 30 and 30A Queens View (taken June 2022).



A number of scattered trees were located to the northeast of the main dwellings within and along the boundaries of the gardens. The garden for 30 Queens view included one mature Eucalyptus tree (*Eucalyptus sp.*), as well as a Cyprus (*Cupressus × leylandii*) and Holly tree (*Ilex aquifolium*). The garden for 32 Queens view included a mature Apple tree (*Malus domestica*) (Fig 8) and Sycamore (*Acer pseudoplatanus*).

Figure 8. Apple Tree located in the rear garden of 30 and 30A Queens view (taken June 2022).



Patches of ruderal species were located amongst areas of bare ground in the garden of 32 Queens View (Fig 9). Species recorded include Thistle (*Cirsium sp.*), Dandelion (*Taraxacum agg.*) and Ragwort (*Senecio jacobaea*).

Figure 9. Ruderal recorded along the northeastern boundary of the garden of 32 Queens View (taken June 2022).



Ornamental shrubs were also located in the rear gardens of the dwellings at the northeast of the site. Species recorded were all non-native ornamental species.

4.2.3 Bramble Scrub (h3d)

Areas of scrub were located along the northeastern (**Fig 10**), northwestern and southwestern boundary of the site. These were dominated by Bramble (*Rubus fruticosus*) and contained a similar species composition to the grassland adjacent. Additional Species recorded included Hawthorne (*Crataegus monogyna*) and Cocksfoot Grass (*Dactylis glomerata*).

Figure 10. Bramble scrub recorded along the north eastern boundary of the site (taken June 2022).



4.2.4 Hedgerow (h2)

A hedgerow was present along the northwestern boundary between the site and the edge of Queens View Road (**Fig 11**). The hedgerow supported Sycamore, Bamboo (*Bambusa* sp), Laurel (*Prunus* sp.) and Bramble.

Figure 11. The hedgerow located along the northwestern boundary of the site (taken June 2022).



4.2.7 Developed land; sealed surface (u1b)

Hard Standing was present in the form of a public footpath that ran along the south of 30-32 Queens View in addition to the garden of 30 Queens view, northeast of the dwelling (**Fig 12**). These areas were devoid of any significant vegetation.

Figure 12. Area of hard standing recorded in the garden of 30 Queens View (taken June 2022).



4.2.8 Buildings (u1b5) with secondary code (818) residential buildings

The final habitat type on site was building with further descriptions of all buildings on site provided in **Table 6** below.

4.3 Bat Survey Results

4.3.1 Pre-existing Information

HBIC have returned the following records from within 2 km of the site (**Table 5**).

Table 5. Bat records using a 2 km search radius as provided by HBIC.

Taxon Name	Common Name	No of Records	Max Abundance
<i>Chiroptera</i>	Bats	3	65
<i>Eptesicus serotinus</i>	Serotine	6	1
<i>Myotis</i>	Myotis Bat species	7	1
<i>Myotis daubentonii</i>	Daubenton's Bat	5	1
<i>Myotis mystacinus</i>	Whiskered Bat	5	3
<i>Myotis nattereri</i>	Natterer's Bat	35	18
<i>Nyctalus noctula</i>	Noctule Bat	20	48
<i>Pipistrellus</i>	Pipistrelle Bat species	27	119
<i>Pipistrellus nathusii</i>	Nathusius's Pipistrelle	4	1
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	58	8
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	33	6
<i>Plecotus</i>	Long-eared Bat species	5	3
<i>Plecotus auritus</i>	Brown Long-eared Bat	14	3

4.3.2 Buildings

The findings of the preliminary roost assessment of all buildings on site is outlined in **Table 6** below.

Table 6. 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
30 & 30a Queens View	Figure 13. Front (southwestern) elevation of 30 and 30A Queens View (Taken June 2022). 	Two-storey building of brick construction with hanging tiles and a pitched concrete tiled roof. (Fig 13). A garage was joined to the western elevation of the dwelling and was constructed of brick with a flat bitumen roof (Fig 14).	There were a number of gaps identified from broken hanging tiles on the southern elevation of the property (Fig 15).	Low Potential (<i>accounting for the urbanised nature of surroundings</i>)

Figure 14. Front elevation of the garage attached to 30 Queens view (taken June 2022).



Figure 15. Broken tile on the front (southwestern) face of the building (taken June 2022).



Figure 16. Internal view of the loft space of the dwelling (taken June 2022).



Figure 17. Gaps in the bitumen felt around a pipe (taken June 2022).



The dwelling supported a large loft space lined with bitumen felt that supported a typical wooden truss design (**Fig 16**). The space was regularly used for storage.

There was a gap identified in the bitumen felt lining around a PCV pipe (**Fig 17**).

32 Queens View	Figure 18. The front (southwestern) elevation of 32 Queens View (taken June 2022).  Figure 19. Gap between window pvc and tiles on the rear face of 32 Queens View (taken June 2022). 	Two-storey building of brick construction with a pitched concrete tiled roof and hanging tiles on the front and rear (Fig 18).	Similar to 30 & 30a, there were a number of slipped hanging tiles on the front elevation of the property. On the rear of the property there was a hole identified in a hanging tile, as well as a gap between the window PVC and the tiles (Fig 19). There was also a gap in the mortar just below the roof.	Low Potential (accounting for the urbanised nature of surroundings)
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Figure 20. Internal view within the loft space of the dwelling (taken June 2022).



Figure 21. Gaps in the bitumen lining of the loft space of 32 Queens View (taken June 2022).



The dwelling supported a moderate sized loft space with bitumen felt lining and wooden truss design (**Fig 20**). The space was regularly used for storage.

There were a number of holes in the bitumen felt lining (**Fig 21**).

Shed	Figure 22. Shed present in the garden of 32 Queens View (taken June 2022). 	Small shed of wooden construction with a bitumen felt roof and single window on the front (Fig 22).	No PRFs or signs of use by bats were identified.	<i>Negligible</i>
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4.4 Badgers

4.4.1 Pre-existing Information

HBIC returned 2 records of Badger within 1km of the site.

4.4.2 Site Survey

No evidence of resident Badgers was noted, although the dense scrub and grassland located around the site can be considered suitable habitat for foraging and commuting Badgers.

4.5 Reptiles

4.5.1 Pre-existing Information

HBIC returned records of a number of common reptile species within 1km of the site. This included 2 records of Slow Worm (*Anguis fragilis*) and 1 record of Common Lizard (*Zootoca vivipara*)

4.5.2 On site Habitat Assessment

The areas of scrub and amenity grassland at the boundaries of the 30 & 30a Queens View Garden (**Fig 7**) can be considered to offer limited potential for reptiles as the grassland areas are unmanaged and support a longer sward height and tussocky structure. However, these areas are small and lack connectivity to additional areas of suitable foraging habitat. It should also be noted that these areas will not be impacted within the current proposals. The areas of tall grass and scrub in the garden on 30 and 30A Queens view area can be considered to offer **Low** potential for common reptile species.

4.6 Breeding and Nesting Birds

4.6.1 Pre-existing Information

HBIC returned 435 records of 83 notable species from within 1km of the site. This included species such as; Arctic Skua (*Stercorarius parasiticus*), Barn Owl (*Tyto alba*), Common Scoter (*Melanitta nigra*), Dark-bellied Brent Goose (*Branta bernicla*), Great Northern Diver (*Gavia immer*), Hoopoe (*Upupa epops*), Kittiwake (*Rissa tridactyla*), Long-tailed Duck (*Clangula hyemalis*), Osprey (*Pandion haliaetus*), Peregrine (*Falco peregrinus*), Short-eared Owl (*Asio flammeus*), Velvet Scoter (*Melanitta fusca*), Whimbrel (*Numenius phaeopus*) and Yellow Wagtail (*Motacilla flava*).

4.6.2 On site Habitat Assessment

The mature tree, hedgerows and ornamental scrub can be considered to provide some suitable habitat for a range of bird species. However due to limited nesting opportunities, the site is considered to have **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 amenity grassland, hedgerows, ornamental planting and buildings (habitats only considered to be of value at the **Site** level of significance).

The northern boundary of 32 Queens View however supports mature Eucalyptus tree and can therefore be considered to be of **Local** value. Consequently, the development is assessed as having **minor adverse impacts** to habitats of significance at both the site (amenity grassland) and local levels (mature scattered trees via root zone compaction or removal).

It should be noted that at this stage it is not known whether the trees and hedgerows will be impacted by the proposed development.

The proposed development will take place within 1km of the Solent and Southampton Water SPA & Ramsar (a habitat considered to be of value at **International** level)

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 buildings 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**.

The areas of grassland and scrub around the boundaries of 30 & 30a Queens View hold potential to support reptiles. Therefore, an **adverse impact at site level** is possible if reptiles are present.

The site is within 1 km of core areas for Solent waders and Brent Geese (**Fig 3**). However, due to the distance from these areas and the nature of the urban properties isolating these areas from the site, an **adverse impact is unlikely** upon Brent geese and Solent waders present within 1km of the site.

5.3 Site Operation

5.3.1 Impacts to Wildlife

The development will 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.

A further impact assessment of the development upon wildlife can be undertaken once the species assemblage present on-site has been identified (i.e. through phase II surveys).

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 emergence or one dawn re-entry survey (**Table 7**). This survey will need to be completed between May – September.

Table 7. 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 Reptiles

Given the low suitability of the habitats on site for reptiles, it is considered adopting a precautionary approach to any clearance works would be prudent. This would entail the grassland areas being trimmed and cleared in two phases under the supervision of an Ecological Clerk of Works (ECoW).

If the vegetation is higher than 15cm, the first cut will be down to a height no lower than 15 cm with cut lines from inside the site to the outer edge to encourage any reptiles into the understory of the retained hedgerows / habitats with a second cut (the following day) taking it right down to ground level. If the grassland is shorter than 15cm then it should be cut down to ground level prior to any works taking place.

These works will be done immediately before any ground works to prevent the habitats re-growing and will be done during the active reptile period (April – September) when temperatures are above 12°C with sunshine. It is recommended the grassland is maintained to a low sward height post-clearing to prevent potential reptiles re-establishing on site prior to or during the construction works.

6.4 Avoidance of Impacts to Nesting Birds

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

6.5 Solent and Southampton Water SPA 'Zone of Influence'

The site lies within the vicinity (approximately 0.45 km to the south west) of the Solent and Southampton Water SPA and Ramsar. In order to mitigate for the likely increases in residential pressure upon this SPA, due to the high densities of wildfowl and waders for which the area is predominantly protected, the Solent Recreation Mitigation Strategy (SRMS) has been introduced in collaboration with Natural England, comprising a partnership of all local councils. Mitigation towards the SPA must be provided for all new recreational developments within the 5.6km disturbance zone of the SPA.

The simplest method of providing a necessary suitable and appropriate level of mitigation towards the SPAs associated with the Solent is via financial contributions. These contributions are used to enable the continued use of the coastline in a way that reduces the risks to the bird species of international importance that use the area, for example funding a team of rangers and implementing initiatives to encourage responsible dog walking (Solent Recreation Mitigation Partnership, 2014). It is considered that the contribution, in compliance with the recommendations presented within the SDMP, provides a suitable level of mitigation for the potential adverse impacts associated with the proposed scheme upon the Solent SPA.

In April 2022 a sliding scale of contribution, based upon the number of dwellings per residential unit, was introduced:

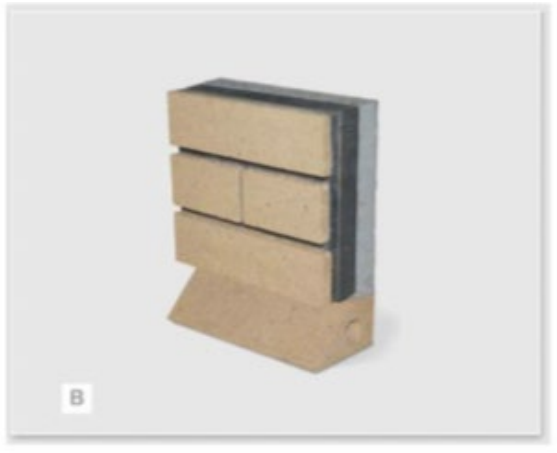
- £390 for each 1 bedroom property
- £563 for each 2 bedroom property
- £735 for each 3 bedroom property
- £864 for each 4 bedroom property
- £1,014 for each 5 bedroom property

6.6 Enhancements

6.6.1 Bats

To act as biodiversity enhancement, one bat brick will be included in the new extension. The bat bricks used should be the ibstock bat brick B as they are available in a variety of different brick colours and requires no maintenance (**Fig 23**). These will also be positioned as close to the eaves as possible, away from windows and in a position that will receive direct sunlight.

Figure 23. The Ibstock bat brick 'B' that will be incorporated into the development.



6.6.2 Birds

As a general enhancement, one Swift brick will be incorporated into the newly built dwelling. The 'CJ Wildlife swift maxi nesting box' with entrance via a CJ Wildlife 'Cambridge swift full face brick' (Fig 24) is recommended as it provides ideal nesting opportunities for swifts and the full face brick is available in different colours and can also be painted if necessary to blend in with the surrounding brickwork. If this model is not suitable for the building specifications, an alternative swift box with internal floor space exceeding 400cm squared must be used. A list of swift boxes can be found on the RSPB website via the following link (<https://www.rspb.org.uk/globalassets/downloads/about-swifts/swift-bricks.pdf>) however it is worth noting that some of these do not have an internal floor space exceeding 400cm squared and are therefore not considered appropriate.

Figure 24. CJ Wildlife swift maxi nesting box (left) and Cambridge Swift full-face brick (right) to be integrated into the newly built dwelling.



6.7 BNG

In accordance with the assessed condition assessment completed of habitats during the walkover, and the proposed site plan produced by Deacon Design (2023), calculations for the net gain to biodiversity completed in Defra Metric 4.0 has **achieved a net gain of 71.02% (or +0.20 habitat units)**. In addition to this, there is a **net gain of 131.96% to linear habitats (+0.41 units)**.

Figure 24. Screenshot taken from the Defra Metric 4.0 calculation headline results.

On-site baseline	Habitat units	0.28		
	Hedgerow units	0.31		
	Watercourse units	0.00		
On-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	0.48		
	Hedgerow units	0.72		
	Watercourse units	0.00		
On-site net change (units & percentage)	Habitat units	0.20		71.02%
	Hedgerow units	0.41		131.96%
	Watercourse units	0.00		0.00%
Off-site baseline	Habitat units	0.00		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Off-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	0.00		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Off-site net change (units & percentage)	Habitat units	0.00		0.00%
	Hedgerow units	0.00		0.00%
	Watercourse units	0.00		0.00%
FINAL RESULTS				
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	0.20		
	Hedgerow units	0.41		
	Watercourse units	0.00		
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	Habitat units	71.02%		
	Hedgerow units	131.96%		
	Watercourse units	0.00%		
Trading rules satisfied?	Yes ✓			

The 71.02% biodiversity net gain to habitat units is based on the creation of a species-rich grassland and the planting of 26 native trees around the site.

The 131.96% biodiversity net gain to hedgerow units is based on the creation of native hedgerows between the dwellings (recommended species include; Hawthorn, Hazel, Dog-rose, Field Maple and Holly).

6.7.1 Condition Assessment

The habitats on the site were assessed as the following conditions as per the criteria set out in the Biodiversity Metric 4.0 Technical Supplement (Natural England, 2021).

- Modified grassland (g4) – ‘Poor’ condition (failed essential criteria 1)
- Developed Land ; Sealed Surface (u1b) – Condition assessment n/a
- Buildings (u1b5) - Condition assessment n/a

6.7.2 Species-rich Grassland

Recommended grass species for this habitat type include Perennial Rye-grass (*Lolium perenne*), Common Bent (*Agrostis capillaris*), False Oat-grass (*Arrhenatherum elatius*), Yorkshire-fog (*Holcus lanatus*), Rough Meadow-grass (*Poa trivialis*) and Cock’s-foot (*Dactylis glomerata*). Herb planting may include Yarrow (*Achillea millefolium*), Ribwort Plantain (*Plantago lanceolata*), Red Clover (*Trifolium pratense*), Common Knapweed (*Centaurea nigra*), Bird’s-foot Trefoil (*Lotus corniculatus*), Common Mouse-ear (*Cerastium fontanum*), Meadow Buttercup (*Ranunculus acris*), Self-heal (*Prunella vulgaris*) and Creeping Thistle (*Cirsium arvense*).

Grassland Management

The areas of species rich grassland on site are to be established through the sowing of a wildflower mixture such as Emorsgate EM4 – Meadow Mixture for Clay Soils or Emorsgate EM6 – Meadow Mixture for Chalk and Limestone Soils.

The below management methods will be followed:

Wildflower areas do not require any additional watering or fertilizer. Cutting a meadow and removing the clippings retains low nutrient levels in the soil and suppresses coarse grasses which would otherwise out-compete the wildflowers. It is recommended the wildflower grassland undergoes two annual cuts. The growth should be cut back to a height of 50-75mm. The cut grass should be dried on site. Cuttings should be left in situ for approximately one week, after this the arisings are to be removed from site.

First year management: Perennial species take at least a full year to establish. For newly sown areas the first summer will be dominated by annual weeds arising from the soil seed bank and by grass growth. This should be controlled by mowing throughout the first year to minimise competition and weed seed production.

Management Once Established: During the second year it is recommended that the wildflower areas are left to flower and will be cut in mid-summer. However, this should not be cut in May or early June due to nesting birds. Mowing in mid-June brings a premature end to the flowers and can compromise nesting birds, which do not fledge until late July, insects and other wildlife. If some mowing has to take place at this time, sections should be cut at different dates to prolong the overall flowering season and give wildlife a chance to move. The second annual cut should be undertaken during late Autumn.

Grassland which is consistently cut late in the season, in August and September, year on year reduces species diversity as late cutting gives more time for coarse grasses and other dominant plants to grow unchecked. To maintain maximum diversity and flowering interest the buffer should be managed in sections at different times from late June to the end of August. Varying the mowing times from year to year is the best way to maintain a diverse balanced sward.

6.7.3 Individual Tree planting

26 individual small trees will be planted within the site, not inclusive of any ornamental or non-native species.

Recommended species planting of tree/shrub species may include:

- Hazel (*Corylus avellana*)
- Hawthorn (*Crataegus monogyna*)
- Blackthorn (*Prunus spinosa*)
- Field Maple (*Acer campestre*)
- Oak (*Quercus robur*)
- Rowan (*Sorbus aucuparia*)
- Silver Birch (*Betula pendula*)
- Wild Cherry (*Prunus avium*)

4.1.3.1 Management

Mycorrhizal Treatment

To ensure a successful establishment of the newly planted trees, it is recommended that mycorrhizal treatment to the tree roots is conducted **during the planting**, this would reduce the risk of tree mortality and increase the long-term tolerance of these trees to periods of drought or adverse soil conditions thus ensuring a higher chance of successful long-term establishment.

Weed Management

All newly planted trees must have a 1-metre exclusion zone whereby weeds are routinely and pro-actively removed for the **first 2 – 3 years**. Outlined within the section below, bark mulch is recommended around each tree and will act as an effective management method to also suppress weed colonisation.

Tree Protection (Tree Guards & Rabbit Mesh Guards)

All trees must have a form of tree guards installed to act as a form of protection from extreme weather or excessive foraging from wildlife. It is recommended that the mesh is approximately 12.5mm x 12.5mm aperture of 0.61m in height; however, due to the suitability on site and the surrounding habitats, this site may be at risk of Roe Deer. Therefore, it is recommended that the form of tree guards suitable to mitigate excessive foraging from this species is installed at a height above 1.2m and comprised of a guard such as weld mesh tree shelter or a suitable alternative.

During aforementioned weed removal, all aspects of the tree guards should also be routinely checked to ensure they are maintained in good condition and are firmly positioned within the soil. If the guards begin to split, they must be removed and disposed of responsibly and consequently replaced where required.

The trees and newly planted shrubs on site will also be protected through the implementation of mesh rabbit guards, along with bark mulch at the base to suppress any grass and weed colonisation. Monthly inspections on the newly planted trees will be undertaken, with weed removal / tree guard replacement as required. The bark mulch will also be maintained at a minimum level of 50mm for the **first 2 years** of establishment.

Selective Thinning

Once the newly planted trees / shrubs are established, selective thinning of retained or established trees will be conducted to promote regeneration and a vigorous, dense regrowth. Such work must be undertaken during the period October – February to avoid the breeding bird season. It is considered likely a botanical survey will identify areas of highest botanical value and this will influence the location of thinning, conducted by a suitably qualified botanist.

Where practical to do so, as determined by the arborist, some potential selected trees may be cut at 3-5m height and the standing stumps will be left in situ to rot as habitat for saprophytic invertebrates and a resource for woodland birds such as Woodpeckers and Nuthatch.

Rotational Coppicing

Occasional rotational coppicing may be required of the newly planted or retained trees on site to prevent overcrowding and promote natural new growth. All Hazel present on site will be managed on a rotational coppicing scheme. This involves cutting young trees down to a low level to promote new growth and prevent over-shading. This will be rotationally implemented, with only a small portion approximately 30% of Hazel coppiced **every 3 years** during winter months (November to March), but only once the Hazel has grown to a size that will be beneficial and appropriate.

Coppice management is best carried out on a rotation of approximately **every 6-10 years** for each tree, with timing staggered for plants to ensure there is continued connectivity at any given time. Retain some of the dead wood. Include some larger horizontal trunks and limbs as well as log piles and discarded brash. Leave wood piles in shady areas.

Invasive Species

Any invasive species, such as Japanese Knotweed (*Fallopia japonica*) Himalayan Balsam (*Impatiens glandulifera*), Rhododendron (*Rhododendron ponticum*), Giant Hogweed (*Heracleum mantegazzianum*), will be removed from the site, as these could have deleterious effects on native species. The removal of such species would open-up ground for restoration for natural re-generation. Invasive species will generally be removed by a combination of cutting back and removal of cut material from the site, followed by treatment of stumps, roots

or regrowth using an approved systemic herbicide (such as glyphosate). This process may need to be repeated over the course of several years.

Contractors will need to be shown the locations of the species and mark these where needed to help avoid native species being removed accidentally. Areas of bare ground created by this work will be left for natural regeneration (described below).

Replacement of Trees, Shrubs and Natural Regeneration

Recommendations may also include that any plants (newly planted or retained) that are removed, die or become seriously damaged or defective during the 30-year monitoring period shall be replaced like for like in the next planting season. If any of the plants fail, they will be replaced like-for-like.

Similarly, scope for tree and shrub species to establish by natural regeneration should be permitted where possible e.g. by creating space for new regeneration around existing specimens of the desired trees and shrub species. Ash regeneration could be an important part of the mix, it should not be cut out or destroyed unless suffering from Ash Dieback, and would benefit from being protected.

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