



ecosupport



Report	Preliminary Ecological Appraisal
Site Name	Land East of Posbrook Lane, Titchfield
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Client	Foreman Homes Ltd
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Table of Contents

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 Regulations (2017)</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>NERC Act</i>	7
2.1.5 <i>Protection of Badgers Act</i>	7
2.2 POLICY.....	8
2.2.1 <i>National</i>	8
2.2.2 <i>Local</i>	8
3.0 METHODOLOGY	10
3.1 DESK STUDY.....	10
3.1.1 <i>Data Request</i>	10
3.1.2 <i>Waterbodies</i>	10
3.2 FIELD SURVEY.....	10
3.2.1 <i>Habitats</i>	10
3.2.2 <i>Badger</i>	10
3.3 ASSESSMENT METHODOLOGY	11
3.3.1 <i>Introduction</i>	11
3.3.2 <i>Valuation</i>	11
3.4 LIMITATIONS	11
4.0 ECOLOGICAL BASELINE	12
4.1 DESKTOP STUDY.....	12
4.1.1 <i>Designated sites</i>	12
4.1.2 <i>Ecological network</i>	15
4.2 VEGETATION SURVEY RESULTS	17
4.2.1 <i>Poor semi-improved grassland</i>	17
4.2.2 <i>Hedgerow</i>	18
4.2.3 <i>Scrub</i>	18
4.2.4 <i>Tall ruderal</i>	19
4.3 BATS	19
4.3.1 <i>Pre-existing data</i>	19
4.3.2 <i>On site habitat assessment</i>	20
4.4 REPTILES	20
4.4.1 <i>Pre-existing data</i>	20
4.4.2 <i>On site habitat assessment</i>	20
4.5 GREAT CRESTED NEWTS	20
4.5.1 <i>Pre existing data</i>	20

4.5.2 Water bodies within 500m	20
4.6 HAZEL DORMOUSE	21
4.6.1 Pre-existing information.....	21
4.6.2 Site assessment.....	22
4.7 WINTERING BIRDS.....	22
4.7.1 Pre-existing information.....	22
4.7.3 Site assessment.....	23
4.8 BoCC / NOTABLE BIRDS.....	23
4.8.1 Pre-existing data.....	23
4.8.2 Site assessment.....	24
4.9 BADGERS.....	24
4.9.1 Pre-existing data.....	24
4.9.2 Site assessment.....	25
5.0 LIKELY ECOLOGICAL IMPACTS IN ABSENCE OF MITIGATION	26
5.1 INTRODUCTION.....	26
5.2 SITE PREPARATION AND CONSTRUCTION	26
5.2.1 Impacts to onsite habitats.....	26
5.2.2 Impacts to wildlife.....	26
5.3 SITE OPERATION	27
5.3.1 Impacts to wildlife.....	27
5.3.2 Impacts to statutory designated sites.....	27
5.4.1 Impacts to non-statutory designated sites.....	28
6.0 MITIGATION & RECOMMENDATIONS	29
6.1 INTRODUCTION.....	29
6.2 SOLENT & SOUTHAMPTON WATER SPA/RAMSAR.....	29
6.3 PROTECTION OF TREES	29
6.4 BIRDS	30
6.4.1 BoCC / notable birds.....	30
6.4.2 Overwintering birds.....	30
6.4.3 Avoiding impacts to nesting birds.....	30
6.5 BATS	30
6.6 HAZEL DORMICE	30
6.7 BADGERS.....	30
6.8 REPTILES	31
6.9 ENHANCEMENTS	31
6.9.1 Planting	31
6.9.2 Hedgehogs.....	31
6.9.3 Bat and bird bricks	32
7.0 REFERENCES.....	34

Executive Summary

Ecosupport Ltd was instructed by Foreman Homes to conduct a Preliminary Ecological Appraisal (PEA) on a parcel of land east of Posbrook Lane, Titchfield. The purpose of this survey was 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:

- Extended phase I habitat survey (September 2019)

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:

- Moderate potential for birds of conservation concern
- Moderate potential for Badger foraging and commuting
- Confirmed presence of reptiles
- Moderate potential for foraging and commuting bats
- Confirmed presence of Dormice
- High potential for overwintering birds

In the absence of any mitigation measures, the proposed development is anticipated to result in **certain adverse effects**.

Suitable mitigation measures will be outlined within mitigation reports that will accompany this document.

1.0 INTRODUCTION

1.1 Brief

Ecosupport Ltd was commissioned by Foreman Homes Ltd Homes to conduct a Preliminary Ecological Appraisal (PEA) of land east of Posbrook Lane, Titchfield (hereafter referred to as 'the site') in preparation for an application for outline planning permission. Previous surveys were completed by Ecosupport Ltd in 2016-2017 in preparation for an outline planning application to include the current site and the rest of the wider horse pasture as part of a larger planning application, though permission was not granted.

The purpose of this survey was to assess any ecological impacts that may arise as a result of the new proposed development. The objectives of the survey were as follows:

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

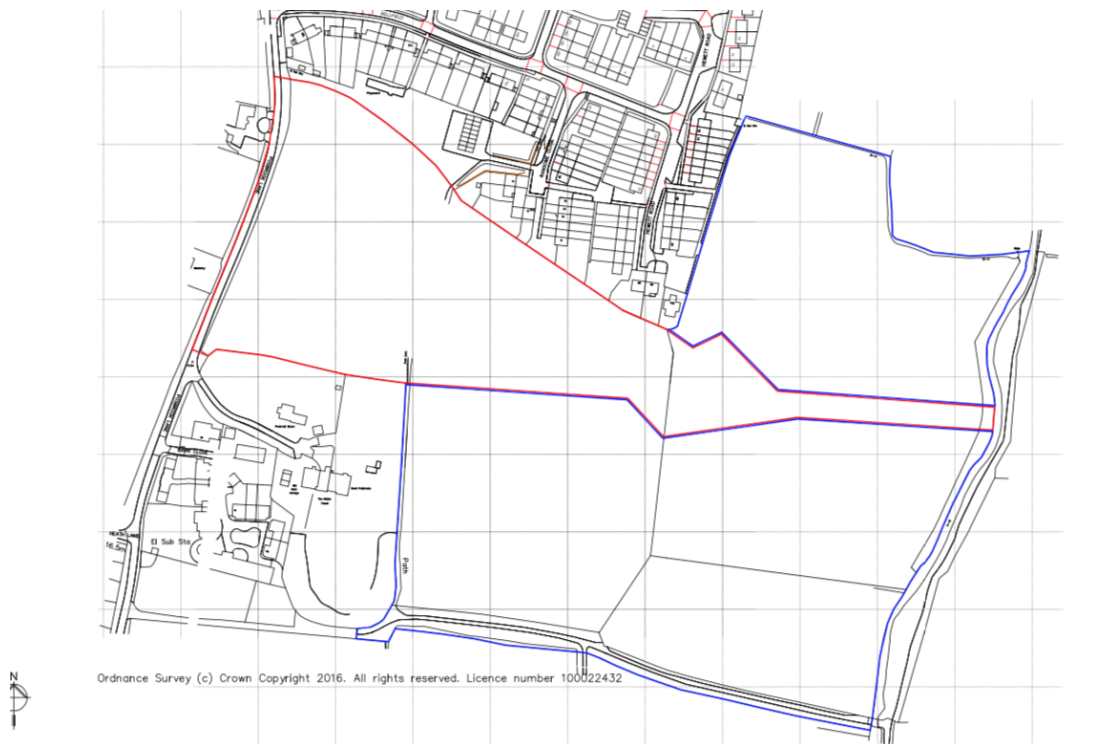
NB If the development does not take place within 18¹ months of this report then the findings of this survey will no longer be considered valid and should be repeated.

1.2 Site Description & Location

The site comprises of a parcel of land located immediately east of Posbrook Lane, PO14 4JD (centred on OS grid reference SU537 051) (**Fig 1**). The west of the site is bounded by Posbrook Lane, the north of residential houses, the east by horse pasture and the Meon River and the south by arable fields. The wider environ is semi-rural with the site residing to the south of Titchfield village.

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

Figure 1. Google aerial image (2019) with the sites approximate redline boundary.



1.3 Proposed Development

At this stage it is understood that the development will consist of 57 dwellings with associated gardens, landscaping and drives with an access road linking the dwellings to Posbrook Lane (**Fig 2**).

Figure 2. Proposed residential development of up to 60 dwellings on the land east of Posbrook Lane.



2.0 RELEVANT LEGISLATION AND POLICY

2.1 Legislation

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

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.

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

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

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

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

2.1.4 *NERC Act*

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

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

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

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

2.2.2 Local

Policy CS4 of the Fareham Borough Local Plan (GI and Geological Conservation) includes a requirement to protect habitats important to the biodiversity of the Borough, including statutory (such as SPAs) and non-statutory (such as Sites of Importance for Nature Conservation SINC) designated sites. It also states that:

'Where possible, particularly within identified Biodiversity Opportunity Areas, sites will be enhanced to contribute to the objectives and targets set out in the UK, Regional, County and Local Biodiversity Actions Plans'.

There is also a requirement to provide GI as part of future development proposals stating:

'GI will be created and safeguarded through:

- Investing in appropriate management, enhancement and restoration, and the creation of new resources including parks, woodland and trees and wildlife habitats;*
- Not permitting development that compromises its integrity and therefore that of the overall GI framework'.*

It also details that mitigation to prevent adverse effects on sensitive European sites in and around the Borough will be implemented in conjunction with other local authorities. This mitigation will include provision of alternative recreational space and developer contributions where appropriate. It states:

'Development likely to have an individual or cumulative adverse impact will not be permitted unless the necessary mitigation measures have been secured'.

3.0 METHODOLOGY

3.1 Desk Study

3.1.1 Data Request

A data request was submitted to Hampshire Biodiversity Information Centre (HBIC) to ascertain any records held of nature conservation designations and protected species within 1 km of the boundary of the site.

The data search covered:

- Statutory and non-statutory designations such as SINC
- Records of protected and notable species (including Geese and Waders)

3.1.2 Waterbodies

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

3.2 Field Survey

3.2.1 Habitats

The field survey work which forms the basis of the findings of this report was carried out by Lyndsey McBean, a Project Ecologist with Ecosupport (3 years post BSc graduation experience) and assisted by Gareth Ainscough (the author), an Assistant Project Ecologist with Ecosupport (2 years post MSc graduation experience) on the 23rd September 2019.

The Phase 1 Habitat survey (JNCC, 2010) methodology was adopted which is a method of classifying and mapping wildlife habitats in Great Britain. It was originally intended to provide “...relatively rapidly, a record of semi-natural vegetation and wildlife habitat over large areas of the countryside”. The standard Phase 1 Habitat survey methodology has been ‘extended’ in this report to include the following:

- Floral species lists for each identified habitat;
- Descriptions of habitat structure, the evidence of management and a broad assessment of habitat condition;
- Mapping of additional habitat types (e.g. hardstanding);
- Identification of Priority Habitats under Section 41 of the NERC Act;
- Evidence of, or potential for, the presence of certain species/groups

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.

3.3 Assessment Methodology

3.3.1 Introduction

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

3.3.2 Valuation

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

3.4 Limitations

There were not considered to be any significant limitations on the results of the survey with all areas of the site accessible and the survey conducted at a suitable time of year for vascular flowering plants.

4.0 ECOLOGICAL BASELINE

4.1 Desktop Study

4.1.1 Designated sites

Fig 3 displays the map provided by HBIC showing the statutory designations within 1 km whilst **Fig 4** displays the non-statutory designations. **Tables 1 and 2** below provide a greater level of detail on the designations.

Table 1. Statutory designated sites within 1km.

Site Name	Designation	Distance & Direction
Southampton and Solent Water	SPA and Ramsar	0.5 km S
Titchfield Haven	SSSI / LNR/ NNR	0.5 km S
Kites Croft	LNR	0.8 km NW

Table 2. Non-statutory designated sites within 1km of the site.

Map Label	SINC Ref	SINC Name	SINC Criteria	Distance & Direction (Km)
1	FA0044	Hookgate / North Heath/ Chilling Moor Copses	1A/5A	1 W
2	FA0049	The Wildnerness	1Cii/6A	1 NW
3	FA0052	St Margret's Copse	1A/5B/6A	0.9 N
4	FA0055	Titchfield Canal	5A/5B	Immediately adjacent E
5	FA0056	Great Posbrook Farm Wader Roost - 3	6B	0.16 S
6	FA0057	Hollam Hill Farm Meadows	2B	0.02 E
7	FA0058	Bridge Street Meadow	2D	0.3 NE
8	FA0059	Meon Valley Meadows and Woodland	1A/Cii/2B/5B/6A	0.15 NE

Figure 3. Statutory sites within 1km of the site as provided by HBIC.

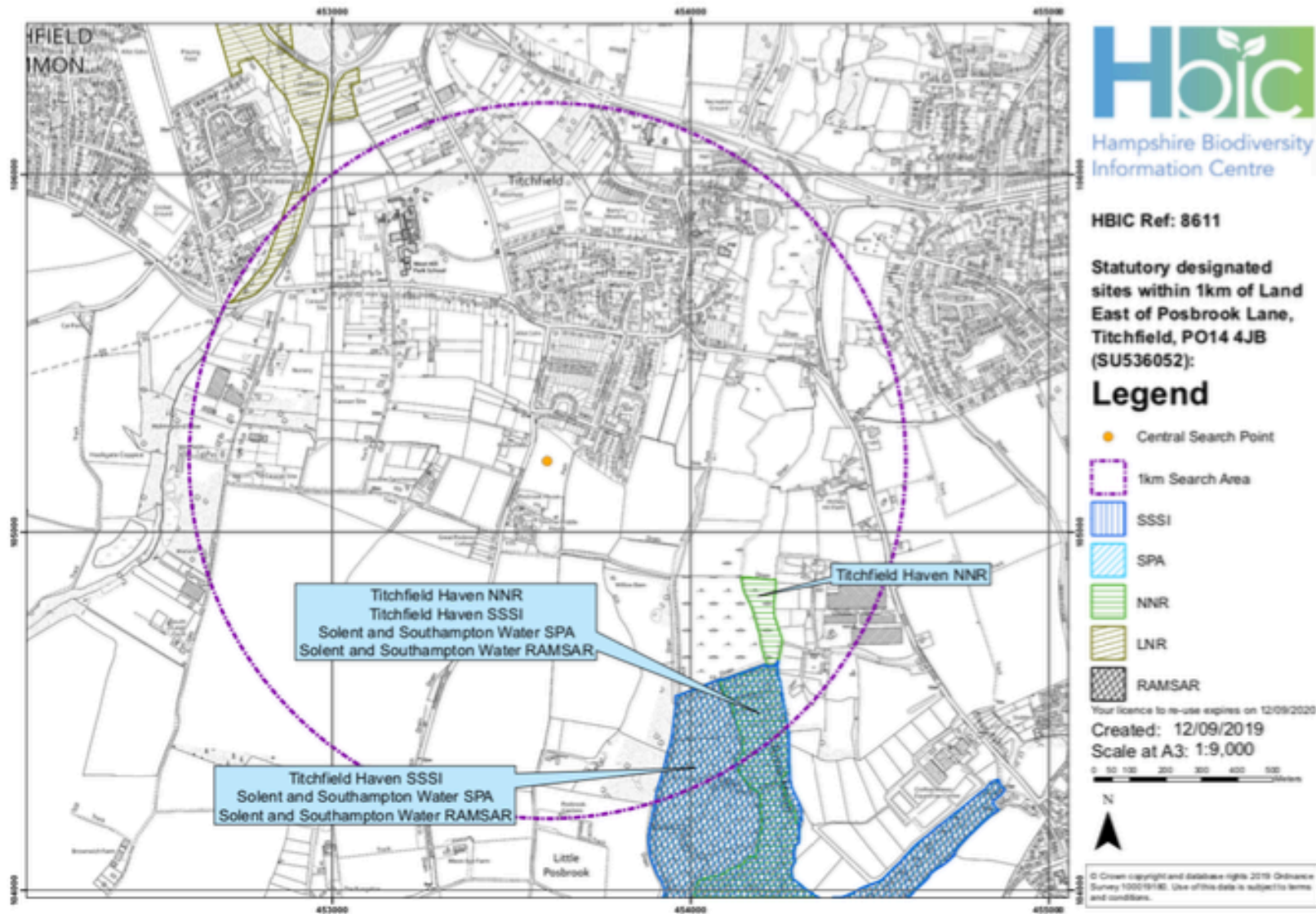
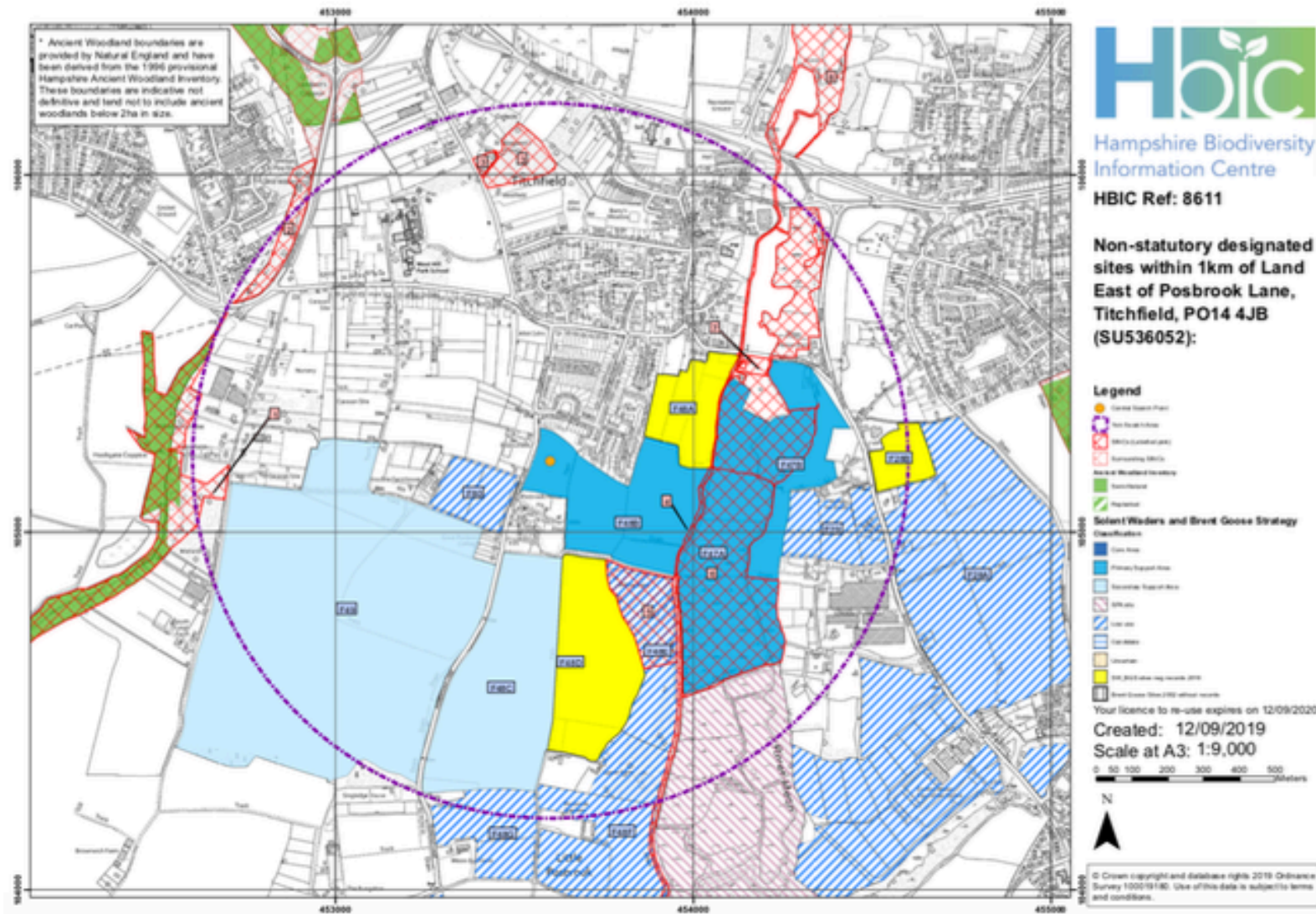


Figure 4. Goose and Wader sites (2019 strategy) within 1km of the site as provided by HBIC.



Of the listed SINCS (**Table 2**), three fall within 200m of the eastern and south eastern boundaries of the site. FA0056 designated for a Wader roost, FA0057 designated for unimproved grassland, and FA0059 designated for ancient semi-natural woodland, other semi-natural woodland of restricted distribution in the county, semi-improved grassland which retain a significant element of unimproved grassland, wetlands, and a site that supports one or more notable species, see **Fig 4**.

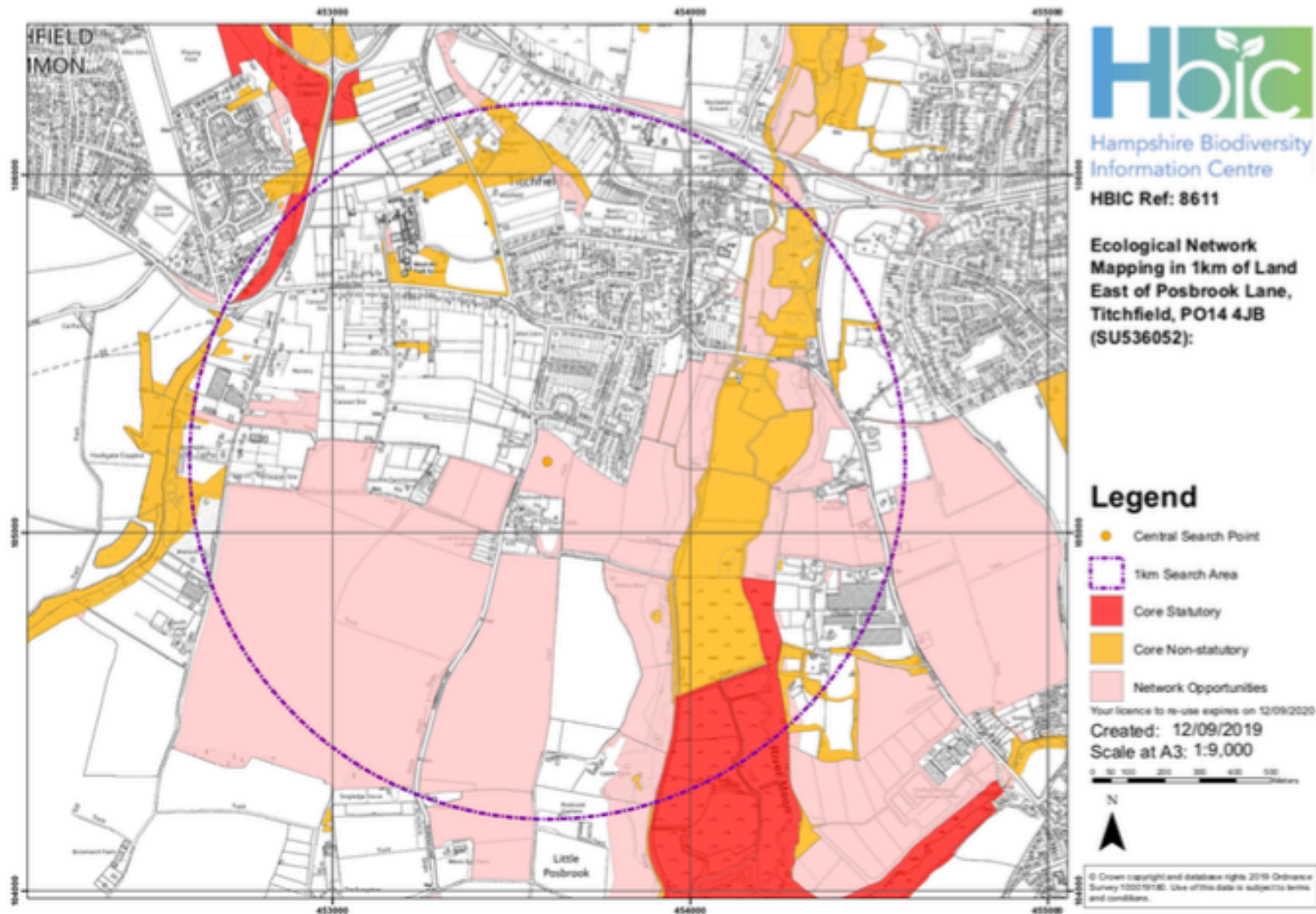
4.1.2 Ecological network

A recent addition to the data received from HBIC now includes the provision of information about the local Ecological Network designations, the aim of which is 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 with part of the southern boundary woodland and eastern boundary tree line falling within the 'core non-statutory' designation.

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



4.2 Vegetation Survey Results

The vegetation within the site has been described below using the broad Phase I habitat classification terminology as described with JNCC (2010). 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:

- Poor semi-improved grassland
- Hedgerow
- Scrub
- Ruderal

4.2.1 Poor semi-improved grassland

Improved grassland was the dominant habitat on site (**Fig 6**), currently managed as horse pasture. The sward height is very low with some areas grazed to ground level (particularly the western side). Species noted included Common Knotgrass (*Polygonum aviculare*), Meadow Grass (*Poa* spp), Cock's Foot (*Dactylis glomerate*), Perennial Ryegrass (*Lolium perenne*), Greater Plantain (*Plantago major*), Broad Leaved Dock (*Rumex obtusifolius*), Ribwort Plantain (*Plantago lanceolate*), Redshank (*Persicaria maculosa*), White Clover (*Trifolium repens*), Red Clover (*Trifolium pratense*), Autumn Hawkbit (*Scorzoneroides autumnalis*), Pigweed (*Chenopodium album*), Creeping Thistle (*Cirsium arvense*), Spear Thistle (*Cirsium vulgare*), Ragwort (*Jacobaea vulgaris*), Nettle (*Urtica dioica*), Dandelion (*Taraxacum officinale*), Common Mouse-ear (*Cerastium fontanum*), Yarrow (*Achillea millefoium*), Cat's Ear (*Hypochaeris radicata*) and Creeping Buttercup (*Ranunculus repens*).

Figure 6. Poor semi-improved grassland dominating the site.



4.2.2 Hedgerow

The west of the site is bounded by a Bramble (*Rubus fruticosus*)- dominated intact hedgerow running from the south to the north of the site (**Fig 7**), although the majority of this falls outside the site boundary. Woody species noted included Hawthorn (*Crataegus monogyna*), Blackthorn (*Prunus spinosa*) and Dog Rose (*Rosa canina*). The eastern side of the redline boundary borders a small section of mature that forms the boundary to part of the Titchfield Canal SINC. This is of a similar species composition to other hedgerow habitat onsite. The hedgerows along the eastern boundary (boarding the SINC) support a number of mature specimens with the ground flora (Blue Bells (*Hyacinthoides non-scripta*) and Wood Anemone (*Anemone nemorosa*) indicating some form or ancient origin.

Figure 7. Bramble-dominated hedgerow bounding the western side of the site.



4.2.3 Scrub

Patches of Bramble-dominated scrub bordered the north of the site (**Fig 8**). These areas are largely in isolated patches with limited connectivity to neighbouring woody/scrubby habitats. As well as Bramble, one patch also supports Blackthorn.

Figure 8. Patch of scrub to the north of the site.



4.2.4 Tall ruderal

Nettle- dominated tall ruderal vegetation was noted to be bordering the grassland in multiple places on the western and southern side (**Fig 9**). This habitat also supports a low growth of Bramble.

Figure 9. Patch of tall ruderal vegetation on the southern side.



4.3 Bats

4.3.1 Pre-existing data

HBIC have provided the following bat records from within 1km of the site; Serotine (*Eptesicus serotinus*) 2 records, *Myotis* spp 1 records, Natterer's Bat (*Myotis nattereri*) 2 records, Noctule (*Nyctalus noctula*) 5 records, *Pipistrellus* spp 2 records, Common Pipistrelle (*Pipistrellus pipistrellus*) 15 records, Soprano Pipistrelle (*Pipistrellus pygmaeus*) 7 records, *Plecotus* spp 1 record, Brown Long Eared (*Plecotus auritus*) 1 record and unidentified bat species (*Chiropera* spp) (1 record).

Previous bat activity surveys completed by Ecosupport Ltd on the wider horse pasture in the 2016-2017 active season found bat activity to be dominated by *Pipistrellus* spp with occasional *Plecotus* spp, *Noctules* and *Myotis* spp. Monitoring with static detectors during the same period of time found similar results, although *Serotines* were also detected. Bat activity was largely evenly spread around the site, although static monitoring found activity to be slightly increased along the lane running along the southern boundary of the site.

4.3.2 On site habitat assessment

The site comprises of grazed horse pasture with species rich hedgerows and mature tree lines bounding parts of the wider horse pasture. Based on the nature of the habitats on site and immediately surrounding the site (which include flood plain and areas of woodland some of which are designated as SINCs) the site is considered to be of **Moderate** potential for foraging and commuting bats.

4.4 Reptiles

4.4.1 Pre-existing data

HBIC held records for the following reptile species from within 1km; Grass Snakes (*Natrix natrix*) (1 record).

Phase II reptile surveys were completed on this site in preparation for an outline planning application for the wider horse pasture by Ecosupport Ltd in 2017 in which 3 juvenile Grass Snakes were recorded.

4.4.2 On site habitat assessment

The site is of limited potential to support reptiles with the majority being grazed horse pasture of low sward height and lacking in the required structure and heterogeneity. There are however some areas of unmanaged longer grassland around sites margins which are considered to be suitable for common reptiles. Due to the presence of patches of suitable habitat and the records of reptiles onsite in 2017, it is considered that reptiles are **Confirmed** onsite.

4.5 Great Crested Newts

4.5.1 Pre existing data

HBIC do not hold any records of GCN presence from within 1km of the site.

4.5.2 Water bodies within 500m

Only one pond was identified within the defined 500m search radius from the site with this located 300m to the south (see **Fig 10**). Another pond was noted approximately 400m to the east however as this was across the Meon, it was scoped out (as running water bodies would present a significant barrier to dispersal).

The owners of the pond were approached during April 2017 at which time access to the pond to undertake a formal HSI was refused. That being said it was mentioned that the pond supports both fish and a high number of Eels meaning the likelihood of any GCN being

present would likely be negligible. Therefore it is considered there is a **Negligible** potential for GCN onsite.

Figure 10. The single pond (red arrow) located within 500m of the site (redline) (the ditch bounding the south of the site would only be periodically wet dependant on rainfall levels). Crown copyright, reproduced under OS licence number 100049162



4.6 Hazel Dormouse

4.6.1 Pre-existing information

Although HBIC hold no records of Dormice (*Muscardinus avellanarius*) within 1km of the site, there are well known populations around the hedgerows and woodland blocks in the local area (Ecosupport staff were involved in surveying the Chilling area on behalf of TEP in 2014 where a number of Dormice were noted in tubes). Additionally, previous Phase II nest tube surveys carried out on the wider site by Ecosupport Ltd in 2017 identified a Dormouse nest indicating confirmed presence of Dormice (**Fig 11**). Although this does not fall within the current development footprint, the habitat is linked to suitable habitat onsite.

Figure 11. Approximate location of the nest tube with a probable Dormouse nest in (red circle).



4.6.2 Site assessment

Although the site lacks in connectivity to larger areas of woodland, given the high number of local records and the presence of Dormice in seemingly unsuitable hedgerow habitat (such as those found in Hunts Pond Road for example) and the confirmed presence of Dormice on the wider site in 2017, the site would be considered to hold **Confirmed** presence of Dormice.

4.7 Wintering Birds

4.7.1 Pre-existing information

Fig 3 provides the survey information for Brent Geese (*Brantra bernicla*) and waders as provided in the 2019 strategy as provided by HBIC. **Table 3** provides more information on the numbers observed in each of the land parcels listed in **Fig 4**.

Site Code	Maximum Count of Waders & Brent Geese	Classification
F28A	5	Low use
F29	1	Low use
F47B	130	Primary Support Area
F48B	82	Primary

		Support Area
F48C	63	Secondary Support Area
F48E	7	Low use
F48G	3	Low use
F80	26	Low use
F48F	1	Low use
F47A	200	Primary Support Area
F49	90	Secondary Support Area
F47C	380	SPA site
F47D	630	SPA site

As can be seen from the table above, the site itself forms part of a 'primary support area' for Brent Geese and waders, with a total of 82 records provided by the 2010 strategy.

4.7.3 Site assessment

With a closely grazed short sward height (required by overwintering birds for grazing and clear sight lines), and given the close proximity of the site to the Solent SAC and Titchfield Haven NNR, and being a 'primary support area' for waders and Brent Geese (forming qualifying features of the SPA), the site is considered to provide a **High** potential for overwintering birds.

4.8 BoCC / Notable Birds

4.8.1 Pre-existing data

HBIC have provided an extensive list of BOCC within 1 km of the site with the following considered to be some of the more relevant species listed; Skylark (*Alauda arvensis*), Tree Pipit (*Anthus trivialis*), Marsh Harrier (*Circus aeruginosus*), Hen Harrier (*Circus cyaneus*), Hawfinch (*Coccothraustes coccothraustes*), Quail (*Coturnix coturnix*), Cuckoo (*Cuculus canorus*), Yellowhammer (*Emberiza citrinella*), Merlin (*Falco columbarius*), Peregrine (*Falco peregrinus*), Hobby (*Falco Subbuteo*), Pied Flycatcher (*Ficedula hypoleuca*), Brambling (*Fringilla montifringilla*), Linnet (*Linaria cannabina*), Grasshopper Warbler (*Locustella naevia*), Nightingale (*Luscinia megarhynchos*), Black Kite (*Milvus migrans*), Red Kite (*Milvus milvus*), Grey Wagtail (*Motacilla cinerea*), Yellow Wagtail (*Motacilla flava*), Spotted Flycatcher (*Muscicapa striata*), Wheatear (*Oenanthe oenanthe*), Osprey (*Pandion haliaetus*), House Sparrow (*Passer domesticus*), Honey-buzzard (*Pernis apivorus*), Black Redstart (*Phoenicurus ochrurus*), Redstart (*Phoenicurus phoenicurus*), Bullfinch (*Pyrrhula pyrrhula*), Firecrest (*Regulus ignicapilla*), Whinchat (*Saxicola rubetra*), Siskin (*Spinus spinus*), Starling (*Sturnus*

vulgaris), Redwing (*Turdus iliacus*), Song Thrush (*Turdus philomelos*), Fieldfare (*Turdus pilaris*), Ring Ouzel (*Turdus torquatus*), Mistle Thrush (*Turdus viscivorus*), Barn Owl (*Tyto alba*) and Lapwing (*Vanellus vanellus*).

4.8.2 Site assessment

The hedgerows and scrub on site would provide good opportunities for tree-nesting birds and the presence of Bramble provides protection to nests for smaller bird species. Additionally, the grassland onsite is considered to provide foraging opportunities for local birds of prey such as Barn Owl and Marsh Harrier (with many records of both nearby), although the short sward height of the grass and continual disturbance by both grazing animals and members of the public means the habitat is less desirable for ground nesting birds. Considering the large number of local records and the presence of some suitable nesting and foraging habitat, the site is considered to be of **Moderate** potential for BoCC/notable birds.

4.9 Badgers

4.9.1 Pre-existing data

HBIC has provided a single record for Badgers within 1km of the site boundary. Additionally, a Badger sett was located to the east of the wider horse pasture during the PEA carried out by Ecosupport (2017) for the previous planning application (**Fig 12**) which currently lies approximately 27m from the redline boundary.

Figure 12. Approximate location of Badger main sett in 2016.



4.9.2 Site assessment

On completion of the walkover, no signs of foraging or commuting mammals were found and no mammal burrows were found within or adjacent to the site. Despite this, the grassland is considered to provide both a foraging and commuting opportunity for local Badgers and, considering their transient nature, could be utilised in future by individual Badgers seeking new territory. Considering the presence of a local record for Badgers and the presence of suitable onsite habitat, the site is considered to hold **Moderate** potential for Badgers.

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 onsite habitats

The development will result in the disturbance to and permanent loss of the majority of the poor semi-improved grassland onsite, although this will be in part replaced with amenity grassland making up the rear gardens of the new dwellings. Despite the fact the amenity grassland will have a lower diversity of species than the poor semi-improved grassland, the heavy management of amenity grassland will somewhat mimic the currently heavily grazed nature of the poor semi-improved grassland (which in itself is limiting the diversity of botanical species onsite). It is therefore considered a **minor adverse impact is likely** to grassland habitats onsite.

It is only anticipated the development will result in a minor loss to hedgerow habitat to make room for an access road into the development from Posbrook Lane. Despite this, the plans incorporate additional hedgerow planting to the south of the proposed development, the western boundary of the northern parcel of land and the far western boundary of the site (**Fig 2**) plus the additional planting of bordering small trees along the access road. It is considered this will result in a **likely positive impact** to wooded habitats on site.

The site has been designated as an 'opportunity' for the ecological network. With the proposed additional planting of hedgerow, it is considered this will enhance the habitat both on the site and in the wider environment by broadening the wildlife corridor to the south of the site and, depending on the woody species planted, could provide additional onsite opportunities for nationally scarce species such as Dormice. It is considered this will result in a **likely positive impact** to the county level ecological network.

5.2.2 Impacts to wildlife

The removal of the hedgerow could result in the disturbance of nesting birds and damage to their nests. Therefore, it is considered an **adverse impact is likely**.

The site has been identified as a 'primary support area' for waders and Brent Geese with a recent maximum count of 82 birds. The proposals will result in the disturbance to and loss of the grazed semi-improved grassland used by these species with the replacement amenity grassland in the gardens not a suitable like-for-like replacement of habitats for Brent Geese and waders. Therefore, it is considered an **adverse impact is likely** on Brent Geese and waders.

As the habitats have not greatly changed since the Phase II reptile surveys were completed in 2017, it is considered unlikely the status of the reptile population on site will have changed. As a result of the confirmed presence, it is considered an **adverse impact is likely**.

The removal of and building nearby to hedgerow habitat has the potential to disturb/destroy Dormouse summer and winter hibernation nests and/or result in the killing/injuring of individuals. Additionally, the proposals will result in some loss of onsite Dormouse habitat. Therefore, it is considered **an adverse impact is likely** if Dormice are found to be present.

Clearance works and excavations have the potential to disrupt the commuting habits of foraging mammals (including Badgers) with open excavations posing the risk of trapping individuals if suitable mitigation measures are not followed. Digging associated with the installation of the water pipes to the east of the site has the potential to disturb the main Badger sett if the works fall within 30m of the sett. Additionally, should any new Badger setts be created in the time between the walkover and the commencement of the works, there is the potential to disturb or destroy a Badger sett. Therefore, an **adverse impact is likely**.

The loss of grassland for the development will result in the loss of bat foraging habitat, although it is considered the creation of a hedgerow habitat could introduce new foraging opportunities in the future if beneficial woody species are used. Additionally, the gardens associated with the new dwellings will replace some of the lost poor semi-improved grassland with amenity grassland which provides some foraging opportunities. Therefore, a **minor adverse impact is likely** on foraging and commuting local bat species.

5.3 Site Operation

5.3.1 Impacts to wildlife

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

There is the potential for operational disturbance to Dormouse habitat through increased lighting and increased vulnerability to cat predation. Therefore, an **adverse impact is likely** if Dormice are found to be present.

5.3.2 Impacts to statutory designated sites

5.3.2.1 Solent & Southampton Water SPA/Ramsar & Titchfield Haven SSSI/LNR/NNR

As the proposals involves a net gain of dwellings and the site lies within the 5.6km zone of influence, it is considered possible there will be a **likely adverse impact** to the Solent & Southampton Water SPA/Ramsar through increased recreational disturbance.

5.3.2.2 Kites Croft LNR

The proposed development lies 0.86km from the Kites Croft LNR and, as such, it is considered the close proximity of other statutory and non-statutory designated sites will be more at risk from increased visitor pressure considering a development of this size.

Additionally, with the LNR already falling within a heavily urbanized environ, it is not considered a new development of this scale and distance will cause a significantly larger recreational pressure compared to current baseline levels. Therefore, it is considered an **adverse impact is unlikely** on the designated site.

5.4.1 Impacts to non-statutory designated sites

5.4.1.1 Great Posbrook Farm Wader Roost- 3

The FA0056 (designated for a Wader roost) SINC is located within 160 m of the southern boundary of the site however this is within private ownership and afforded some degree of screening by the boundary tree lines (both on site and across the track). It is therefore not considered there will be **no adverse impacts** to this SINC or its designating features once the site is operational.

5.4.1.2 Hollam Hill Farm Meadows (Meon Valley)

The FA0057 SINC is designated for semi-improved grasslands which retain a significant element of unimproved grassland. The habitats within this SINC are not considered to be particularly sensitive to nearby development, although a public right of way (PRoW) does run through the site which is likely to attract visitors from the proposed development. Therefore, it is considered a **minor adverse impact is likely**.

5.4.1.3 Meon Valley Meadows & Woodland

The FA0059 SINC for ancient semi-natural woodland, other semi-natural woodland of restricted distribution in the county, semi-improved grassland which retain a significant element of unimproved grassland, wetlands and a site that supports one or more notable species. The designated area does border a public footpath with access to the proposed development site which is likely to attract visitors from the proposed development. Therefore, it is considered **a minor adverse impact is likely**.

5.4.1.4 Titchfield Canal

Although the SINC lies immediately adjacent to the eastern side of the redline boundary, it is understood the development footprint does not extend to the eastern section of the site with this section being reserved for underground surface water pipes. As such, it is therefore considered there will be a **Negligible impact** to the SINC.

6.0 MITIGATION & RECOMMENDATIONS

6.1 Introduction

The below sections outline a number of recommendations to both mitigate and protect the existing features of value from potential impacts and provide enhancements post development.

6.2 Solent & Southampton Water SPA/Ramsar

The site lies within the vicinity of the Solent SPAs. 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, 2017). 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 2018 a sliding scale of contribution, based upon the number of dwellings per residential unit, was introduced:

- £337 for 1 bedroom dwelling
- £487 for 2 bedroom dwelling
- £637 for 3 bedroom dwelling
- £749 for 4 bedroom dwelling
- £880 for 5 bedrooms or more

Therefore, where there will be a net increase, a contribution can be made as follows either prior to planning permission being granted or by completing the SDMP Agreement and sending the completed form along with mitigation contribution to the Planning Agreements Officer at the Local Planning Authority or by completing a Unilateral Undertaking before planning permission is granted with an undertaking that the per dwelling payment will be made before the development is implemented.

6.3 Protection of Trees

All the existing hedgerows and trees that are to be retained should be protected from damage during the works. All retained hedgerows should be fenced using Heras fencing or similar to prevent access by machinery.

6.4 Birds

6.4.1 BoCC / notable birds

Due to the unchanged nature of the habitats onsite since the previous surveys were completed in 2017, it is not deemed necessary to complete an updated breeding bird survey, with it considered very likely the use of the site by BoCC/ notable birds has not significantly changed. Full mitigation measures will be submitted as part of the Phase II breeding bird survey report.

6.4.2 Overwintering birds

Due to the current designation of the site as a 'primary support area' for waders and Brent Geese (Solent Waders & Brent Goose Strategy, 2019), it is not deemed necessary to update the winter bird surveys carried out in the 2015-2016 season. Details regarding the habitat loss and associated mitigation / enhancement for this designation will be provided within the accompanying bird conservation area report.

6.4.3 Avoiding impacts to nesting birds

In order to avoid disturbance of nesting birds or damage to their nests, clearance of the hedgerow 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 Bats

The onsite habitats noted during the PEA had not considerably changed since the bat activity surveys were completed (2017) for the previous planning application. It is not considered likely the bat activity and species diversity has changed considerably and it is therefore deemed unnecessary to update these surveys. Relevant information regarding mitigation for foraging and commuting bats will be submitted as part of the bat mitigation report.

6.6 Hazel Dormice

Given the previous identified presence of Dormice on the site (**Fig 10**), with no change in the habitats since the last walkover it can be assumed Dormice will still be present. Although the Dormouse nest was identified on a hedgerow that now falls beyond the site boundary, the hedgerow/scrub habitats on site are well-connected to these hedgerows and it's considered highly likely Dormice will be transiently using them to travel between more suitable habitat elsewhere (i.e. the ancient woodland besides the River Meon to the east). It is not therefore considered necessary to update these surveys. Mitigation recommendations will be made in the accompanying Dormouse mitigation report.

6.7 Badgers

Installation of the surface water pipes should maintain a 30m buffer from the identified main Badger setts. During the construction phase, any open excavations left overnight should either be covered to prevent commuting Badgers falling in or escape ladders should be used to prevent them from becoming trapped. Any open pipework should be checked

and then capped nightly. It's also recommended an updated Badger survey is completed immediately prior to works commencement to check for any new setts.

6.8 Reptiles

With juvenile Grass Snakes already identified within the current site boundary (2017), and no change in the onsite habitats since these surveys were undertaken, it is not considered necessary to update these surveys. Mitigation recommendations will be made in the accompanying reptile mitigation report.

6.9 Enhancements

Species specific enhancement recommendations are made in the additional reports accompanying this application however more generic recommendations are detailed below.

6.9.1 Planting

As a general enhancement, any landscape planting will aim for a 70:30 ratio in favour of native species over non-natives and ornamentals (in line with the CIEEM guidance outlined within Smith & Day (2012)). Species that can be considered within any planting include: Rowan (*Sorbus aucuparia*), Alder (*Alnus glutinosa*), Hazel (*Corylus avellana*), Holly (*Illex aquifolium*), Silver Birch (*Betula pendula*), Small-leaved Lime (*Tilia cordata*) and Willow (*Salix* spp.). Non-natives and ornamentals should only be given a bias in formal locations where aesthetics is a priority.

6.9.2 Hedgehogs

The landscaping areas around each of the dwellings will have a Hedgehog home incorporated (such as the Igloo Hedgehog home or Hogitat Hedgehog house). This will be provided within or adjacent to areas of planted / retained trees / shrubs and will provide a rapidly declining species with a place to shelter / hibernate.

Should close-board fencing be installed at property boundaries provision will be made to promote site connectivity and extended foraging ranges and opportunities for European Hedgehog. Holes measuring 5 square inches will be made at the base of fences into and between each garden and the surrounding habitats, such as the ecology buffer strips. Small signage could be installed at these points to ensure they remain open upon completion of the development. The People's Trust for Endangered Species provide such signage, the purchase of which also supports conservation efforts (**Figure 13**).

Figure 13. Hedgehog habitat connectivity (PTES, 2017).



6.9.3 Bat and bird bricks

To act as biodiversity enhancement, each of the newly built dwellings will include one Swift brick and one bat brick. The Ibstock 'Eco Home for Swifts' brick will be installed (**Fig 14**) as this is a discreet and attractive box ideal for new dwellings. The box should be installed under the eaves or in high walls in shaded areas out of direct sunlight and away from windows. The installation of such boxes has also been shown to be beneficial for House Sparrows (*Passer domesticus*) which are a nationally declining species. The bat brick used should be the Ibstock bat brick B as this is available in a variety of different brick colours and requires no maintenance (**Fig 15**). Both boxes should be positioned as close to the eaves as possible and away from windows.

Figure 14. Ibstock eco home for swifts that will be incorporated into each of the newly built dwelling.



Figure 15. The Ibstock bat brick 'B' that will be incorporated into each of the newly built dwellings.



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