



ecosupport

Land at Home Farm

Preliminary Ecological Appraisal
(PEA)

Author(s):

Lewis Lakudzala BSc (Hons), MRes

Client:

Wykeham Homes

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Executive Summary

Ecosupport Ltd was instructed by Wykeham Homes to undertake a Preliminary Ecological Appraisal (PEA) of a parcel of land located at Home Farm, St Johns Road, Hedge End. 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:

- Data request submitted to the Hampshire Biodiversity Information Centre (HBIC)
- Extended phase I habitat survey (also assign UK Habs types)

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:

- High potential for breeding and nesting birds
- Suitability for Dormice
- Suitable habitats for foraging and commuting bats
- Low potential for common reptile species
- Badger setts on-site (confirmed to be inactive)

In the absence of any mitigation measures, the proposed development is anticipated to result in, **certain adverse impacts** (significance level to be determined following phase II survey work where considered appropriate). In addition to this, measures are outlined within section 6.0 of this document to mitigate where impacts (which includes further survey work where considered appropriate) been identified as well as provide targeted ecological enhancements.

1.0 INTRODUCTION

1.1 Brief

Ecosupport Ltd was commissioned by Wykeham Homes to conduct a Preliminary Ecological Appraisal (PEA) of a parcel of land located at Home Farm, St Johns Road, Hedge End (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 a proposed residential 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 comprises of a large parcel of grassland with areas of scrub and a mature treeline located around the outer boundaries of the site located at Home Farm, St Johns Road, Hedge End, SO30 0DR (centred on OS grid reference SU4824512099) (**Fig 1**). Residential dwellings associated with Home Farm bound the site to the southeast while woodland bounds the site to the north and northeast. The M27 bounds the site to the west. In the wider landscape the site is located within hedge end, a suburban town predominantly comprised of residential dwellings with scattered patches of grassland and woodland.

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

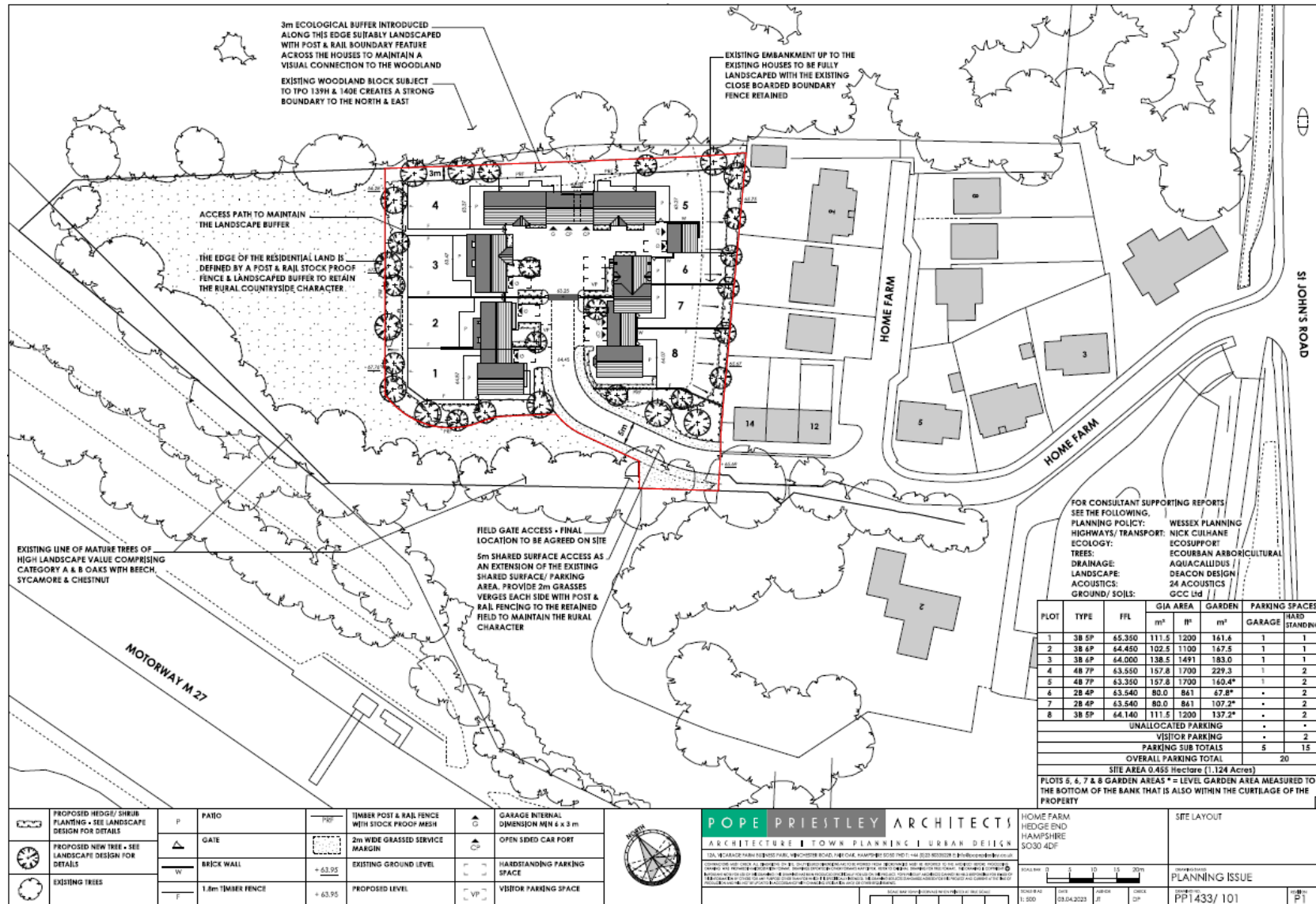
Figure 1. Redline boundary of the site indicating the developable area.



1.3 Proposed Development

At this stage it is understood the current proposals would entail a residential development of 9 dwellings and associated landscaping (**Fig 2**).

Figure 1. Proposed site layout for the site (Pope Priestley Architects, 2022).



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 Parrots 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

Section 15 of the National Planning Policy Framework (NPPF, 2021) 'Conserving and enhancing the natural environment' states that planning policies and decisions should contribute to and enhance the natural environment. They should do this by protecting and enhancing sites of biodiversity and minimising impacts on and providing net gains for biodiversity, including establishing coherent ecological networks.

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

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

- if significant harm to biodiversity resulting from a development cannot be avoided, adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the

benefits of the development in the location proposed clearly outweigh both its likely impact;

- development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and
- development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

2.2.2 Local – Eastleigh Borough Council

New Strategic Policy S10 'Green Infrastructure' is subject to proposed amendments that are currently out to public consultation. These include re-numbering the Policy to S9 Green Infrastructure which is still to seek the provision of connected habitats, linking the network of designated sites and existing priority sites.

This new strategic policy cross-refers to new Policy DM11 Nature Conservation which is also proposed to be amended to read...

'Policy DM11, Nature conservation

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 S910).

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 in the absence of alternative solutions. A 'project level' Habitat Regulations Assessment will be required. 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. seeking contributions towards measures set out in the Southern Damselfly Conservation Strategy (or other strategy) specifically to deliver biodiversity net gain.

National and Local Designations

4. Development will not be permitted if it is likely (either individually or in combination with other developments) to have a direct or indirect adverse effect on a Site of Special Scientific Interest (SSSI), Site of Importance for Nature Conservation (SINC) or Local Nature Reserve (LNR) as shown on the policies map (or on a more recent plan provided by the Hampshire Biodiversity Information Centre) unless it can be demonstrated that:

a. there are no alternative solutions;

b. the adverse effects are unavoidable;

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

d. there is an overall biodiversity net gain; and

e. if there are any residual adverse effects, the benefits of the development 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 1 km of the boundary of the site.

The data search covered:

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

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 Lewis Lakudzala BSc (Hons), MRes (ecologist with Ecosupport) on the 23rd September 2022. Weather conditions during the survey comprised temperatures of 18 °C and moderate clouds.

Habitats on site pre-development were identified in accordance with the categories specified for a UK Habitats survey, using Habitat Definitions Version 1.1 (UKHab Ltd., 2020). This was chosen as an appropriate habitat categorisation system as it fits within the Biodiversity Metric 3.1 calculation. Where appropriate primary habitat codes were used although for some habitat types, the use of secondary habitat codes was necessary as well.

3.2.2 Badger

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

3.2.3 Bats

An non-exhaustive assessment of any notable trees on site was undertaken by Lewis Lakudzala during the initial walkover survey. This followed BCT (Collins (ed) 2016) best practice survey guidelines searching for any PRFs / evidence of bat occupation and assigning a roost potential assessment as outlined in **Table 1** below.

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

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

3.3 Assessment Methodology

3.3.1 Introduction

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

3.3.2 Valuation

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

3.4 Limitations

3.4.1 Habitats

The walkover was not conducted during the appropriate time of year for flowering vascular plants. However, given the nature of the habitats on site, it is not considered to have impacted the results of the vegetation survey.

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

4.0 ECOLOGICAL BASELINE

4.1 Designated Sites

4.1.1 Statutory Designated

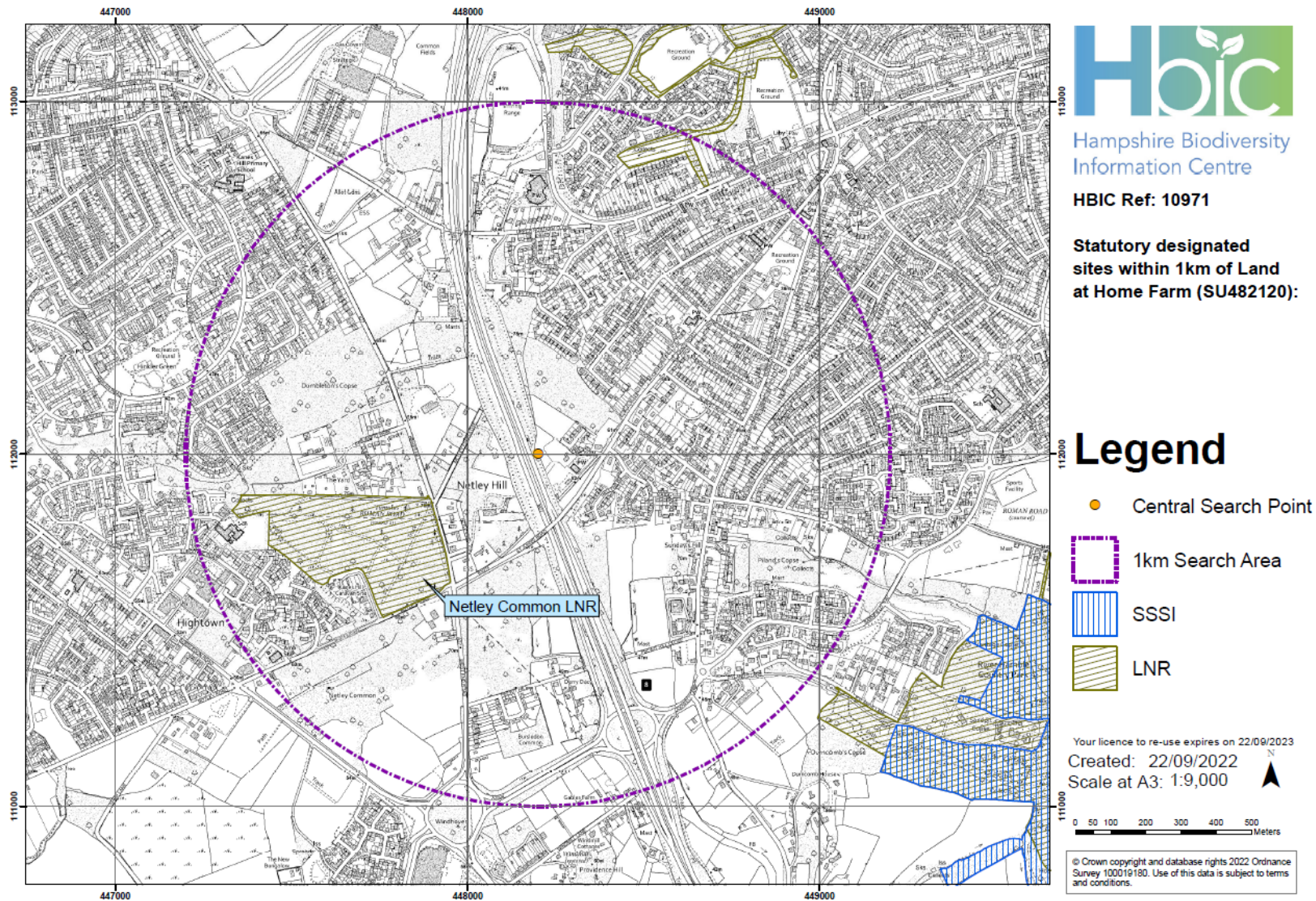
The statutory designated sites identified by HBIC are shown in **Fig 3**.

Netley Common LNR is located 0.2km southwest of the site.

The site is located within the zone of influence for Solent Maritime SAC which is located 2.2km to the east.

The site is located within the zone of influence for Solent and Southampton Water SPA, Ramsar which is located 2.6km to the east.

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



Please note: The boundaries for statutory sites have been provided as digital data from Natural England (NE); this digital data is indicative not definitive. Paper maps produced by NE at the time the sites were designated show the official site boundaries.

4.1.2 Locally Designated / Non-Statutory

The locally designated sites identified by HBIC are shown in **Fig 4** with a summary of these sites presented in **Table 2**.

Figure 4. Non-statutory designated sites located within 1 km of the site as provided by HBIC.

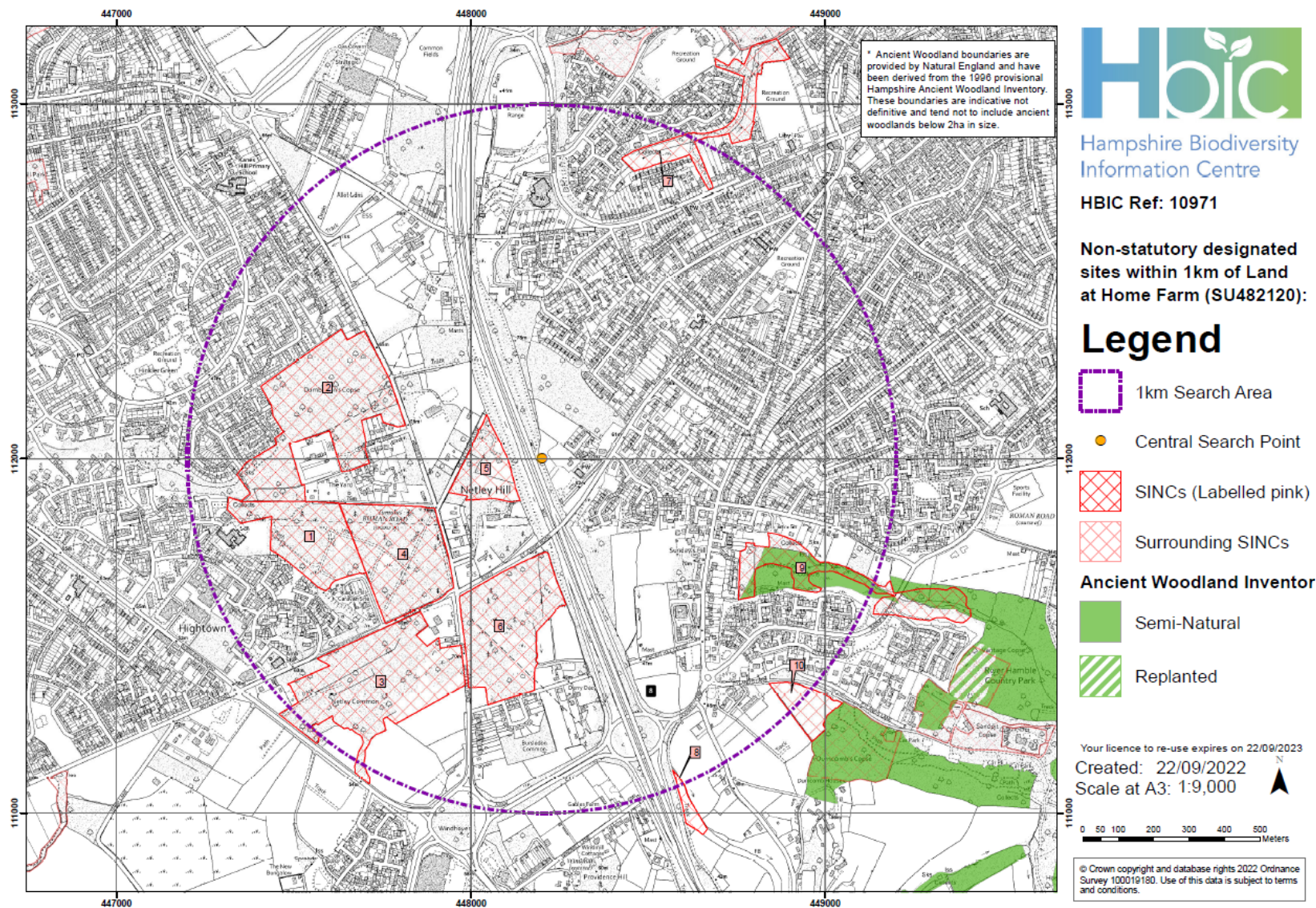


Table 2. Summary of locally designated sites within 1 km of the site as provided by HBIC and shown in Fig 4 above.

Map Label (as per Fig 4) / SINC Reference	Name	SINC Criteria	Species Supported that meet Section 6 of SINC Selection Criteria	Distance from Site
1 / SO0041	Netley Common, Southampton	2B/3A/3Bii/5 B		0.6 km SW
2 / EA0062	Dumbleton's Copse	3Bii		0.5 km W
3 / EA0067	Windhover (Netley Common South)	3A/3Bi		0.5 km SW
4 / EA0068	Netley Common, Hound	2B/3A/3Bii/5 B		0.2km W
5 / EA0072	Netley Hill Heath	3A/3Bi		0.1km W
6 / EA0075	Peewit Hill	3A/3Bi/6A	<i>Schoenus nigricans</i>	0.2km S
7 / EA0086	Bridget Mary Garden	1Cii/5Biii		0.9 km NE
8 / EA0091	Oakleigh Meadow	2B		0.9km SE
9 / EA0093	Piland's Copse	1A		0.8km SE
10 / EA0094	Durncomb's Copse Meadow	2B		0.9km SE

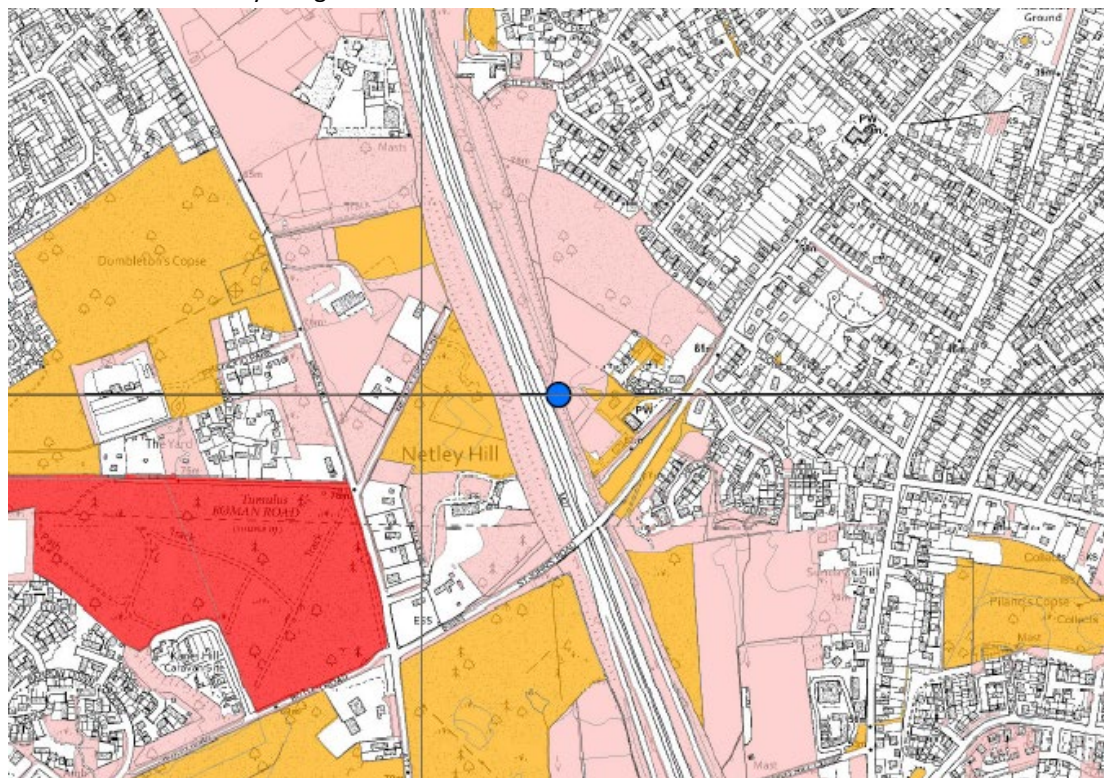
4.1.3 Ecological Network

The data received from HBIC also 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)

As per **Fig 5** below, the site is located within a Network Opportunities area and lies adjacent to a core non-statutory ecological network located to the west.

Figure 5. Ecological network mapping provided by HBIC indicating the area targeted for development on site is outside of any designation within the network.



4.2 Vegetation Survey Results

The vegetation within the site has been described below using the UK Habs Habitat Definitions Version 1.1 (UKHab Ltd., 2020). The below species noted should not be considered an exhaustive list and instead refer to dominant, characteristic and other noteworthy species associated with each community within the survey area. The habitat types on site comprise (approximate spatial extent shown in the habitat map appended):

- Modified grassland (*g4*)
- Mixed scrub (*h3*)
- Line of trees (*w1g6*)

4.2.1 Modified grassland (*g4*)

This is the dominant habitat type present within the development area and was considered to fall within this habitat type due to the relatively low forb diversity in the sward (was consistently < 9 species / m²). Species composition was dominated by grass species such as Rye Grass (*Lolium perenne*), Cocks Foot (*Dactylis glomerata*), False Oat-grass (*Arrhenatherum elatius*) (**Fig 6**). Forbs were limited to occasional (sometimes locally frequent) White Clover (*Trifolium repens*), *Rumex* spp, *Ranunculus* spp, Common Stinging Nettle (*Urtica dioica*), *Crisium* spp, Fleabane (*Pulicaria dysenterica*), Self-heal (*Prunella vulgaris*), Cats Ear (*Hypochaeris radicata*), Birds-foot-trefoil (*Lotus corniculatus*) and Ribwort Plantain (*Plantago lanceolata*).

Figure 6. View of the modified grassland taken from the western part of the site (taken September, 2022).



4.2.2 Mixed scrub (h3)

An area of Gorse (*Ulex europaeus*) dominated scrub had established along the northern boundary between the tree line and grassland (**Fig 7**). The only other species recorded in this area was Bramble (*Rubus fruticosus*).

Figure 7. The Gorse scrub present along the northern boundary of the site (taken September, 2022).



4.2.3 Line of Trees (w1g6)

A line of trees was present around the boundaries of the site (**Fig 8**), not including the eastern boundary, which was bordered by residential housing. The tree line supported a well-established, variety of native species. The following species noted: Oak (*Quercus robur*), Ash (*Fraxinus excelsior*), Sycamore (*Acer pseudoplatanus*), Sweet Chestnut (*Castanea sativa*), Hornbeam (*Carpinus betulus*), Silver Birch (*Betulus pendula*), Hawthorn (*Crataegus monogyna*), Beech (*Fagus sylvatica*), and Scots Pine (*Pinus sylvestris*). Understorey vegetation was present along the southern boundary and consisted of Holly (*Ilex aquifolium*), Hazel (*Corylus avellana*) Hawthorn.

Figure 8. The line of trees located along the southern edge of the area of the site taken from the southeast corner (taken September, 2022).



4.3 Bat Survey Results

4.3.1 Pre-existing Data

The data request from HBIC returned the following bat records within 2 km of the site (**Table 3**).

Table 3. List of bat records within 2 km of the site provided by HBIC.

Taxon Name	Species Name	Number of Records	Further Information
<i>Eptesicus serotinus</i>	Serotine	14	Majority of records from emergence surveys
<i>Barbastella barbastellus</i>	Western Barbastelle	3	All records from 2017
<i>Myotis spp</i>	Myotis bat	6	All but 1 record from 2017
<i>Myotis mystacinus</i>	Whiskered bat	2	Both from iRecords
<i>Myotis mystacinus</i> / <i>Myotis Brandtii</i>	Whiskered bat / Brandt's bat	6	Majority from trapping records
<i>Myotis nattereri</i>	Natterer's bat	3	Records 2007-2016
<i>Pipistrellus spp</i>	Pipistrelle bat species	39	2 maternity roosts
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	58	Records a mix of roosts, harp trap captures, statics and aural bat detector recordings
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	32	Records a mix of roosts, harp trap captures, statics and aural bat detector recordings
<i>Nyctalus noctula</i>	Noctule	15	Majority of records from aural detectors
<i>Plecotus spp</i>	Long-eared bat	6	Majority of records from aural detectors
<i>Plecotus auritus</i>	Brown Long-eared	21	Records a mix of roosts, harp trap captures, statics and aural bat detector recordings

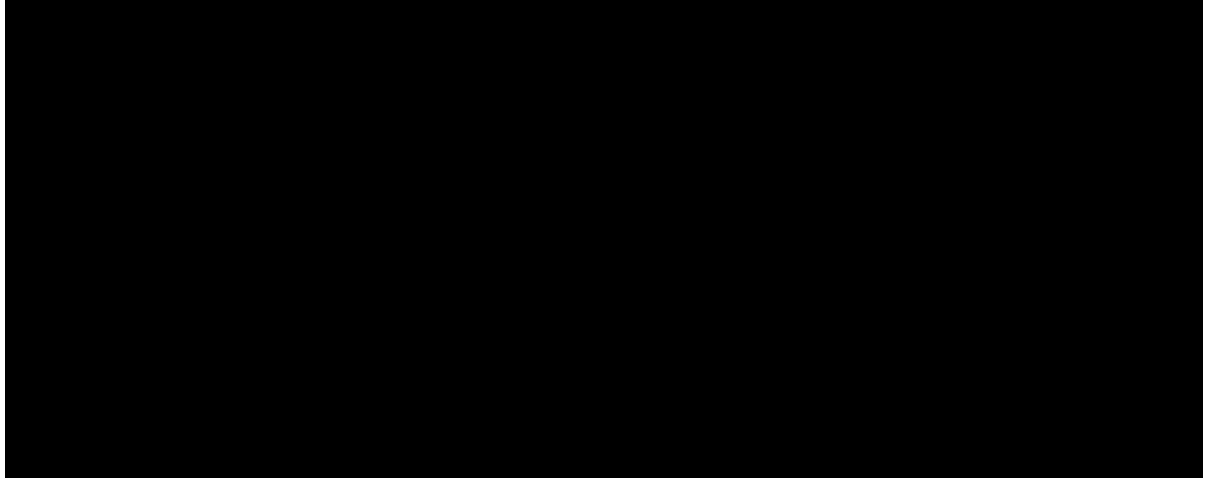
4.3.2 PRA (Trees)

Although a roost assessment of all trees on site was not undertaken at the time of the walkover, one mature Sweet Chestnut (*Castanea sativa*) tree within the line of trees located along the southern part of the site was noted as supporting a PRF in the form of a woodpecker hole (Fig 8). Based on the number of PRFs, this was considered to be of **Low** roost potential (the approximate location of this tree is shown in the appended habitat map).

4.3.3 Foraging and Commuting Habitat

Whilst the site is largely dominated by neutral grassland which offers limited forb diversity (and therefore will be of limited value to invertebrates), the site supports linear features in the form of mature tree lines which could be utilised by commuting and foraging bats. Furthermore, the site borders / includes an extensive woodland area to the northwest and

could therefore provide an important foraging area for any nearby roosts upon emergence. Taking the above into account, and the abundance of local records (especially for the more common UK species) the site is considered to be of **Moderate – High** potential for foraging and commuting bats.



1



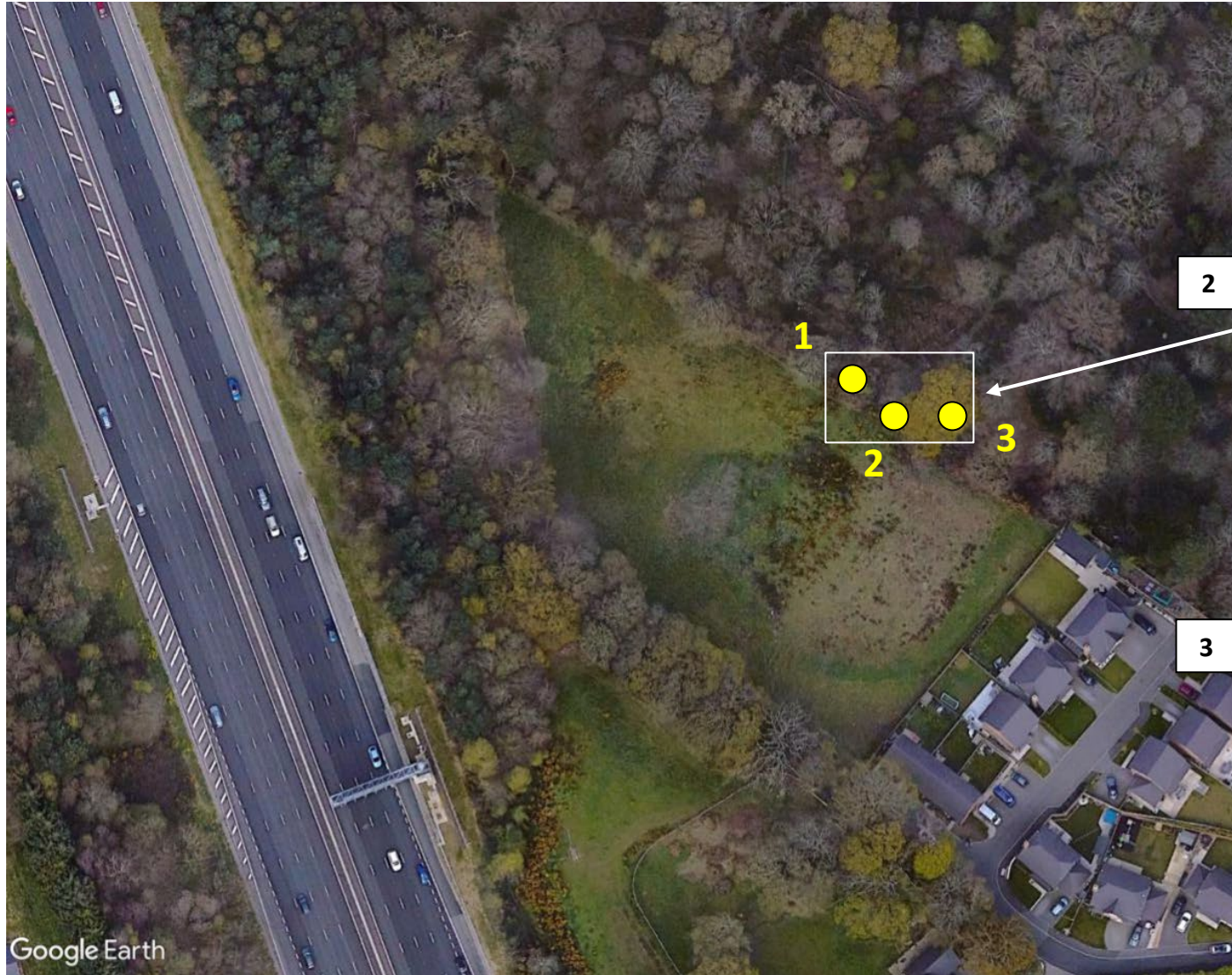
2



3



Figure 9. Google earth image of the site with the approximate locations of the Badger setts on site (yellow circles).



4.5 Reptiles

4.5.1 Pre-existing Information

HBIC returned records for Slow Worm (*Anguis fragilis*, 8 records), Common Lizard (*Zootoca vivipara*, 8 records) and Adder (*Vipera berus*, 12 records) from within the 1 km search radius.

4.5.2 On site Habitat Assessment

The majority of the habitats on-site can be considered to offer limited potential for reptiles as the main grassland area dominating the site lacks the structure typically favoured by reptiles (Edgar et al., 2010). Notwithstanding this, the grassland edge along the eastern boundary and scrub on the northern boundary do support the structure and heterogeneity favoured by common reptile species. However, the identified areas of grassland and scrub can be considered isolated from additional areas of suitable habitat. Taking this into account, in addition to the number of reptile records nearby, the site is considered to be **Low** potential for reptiles.

It should be noted that the areas identified as suitable reptile habitat are to be retained within the current proposals (**Fig 1**)

4.6 Great Crested Newts

4.6.1 Pre-existing Information

No records for Great Crested Newts (*Triturus cristatus*) were returned by HBIC within 1km of the site.

4.6.2 Water Bodies Within 500 m

Historic satellite imagery () identified one pond was identified within 500m of the site following a review of OS maps and aerial imagery with the approximate location of this shown in **Fig 10** below (**NB** formal HSI was not undertaken at the time of the initial walkover survey due access constraints).

Figure 10. Historic satellite imagery of the pond located within 500m of the site (**NB the pond shown is not currently present on current OS Maps and aerial images therefore likely to be ephemeral**).

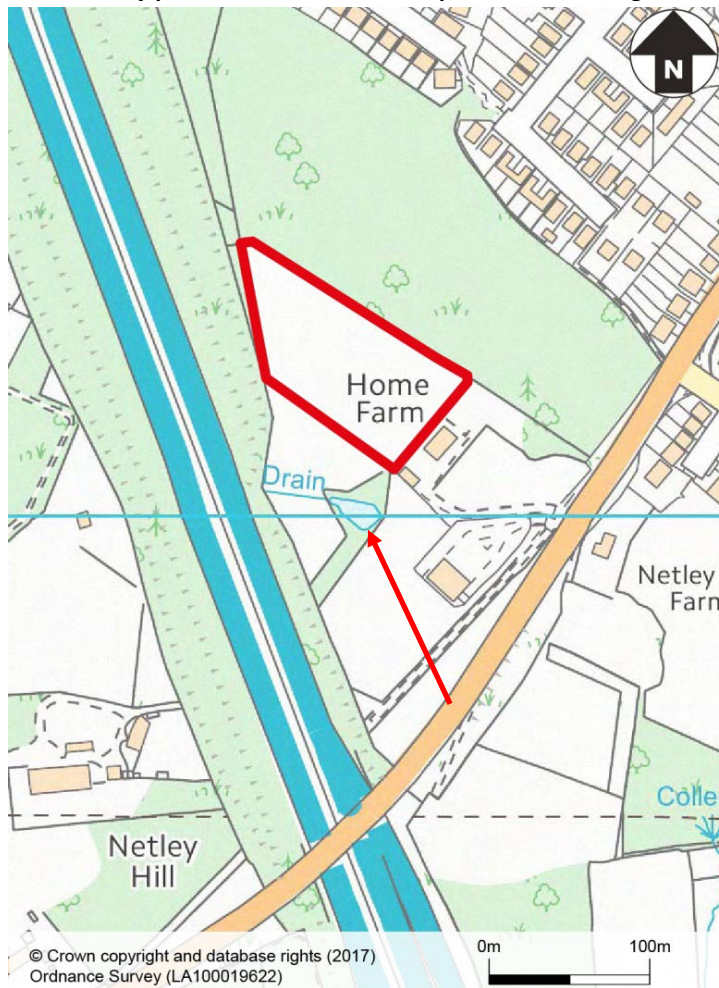


Figure 11. OS maps displaying no pond currently present within 500m of the site (OS Maps, 2023).

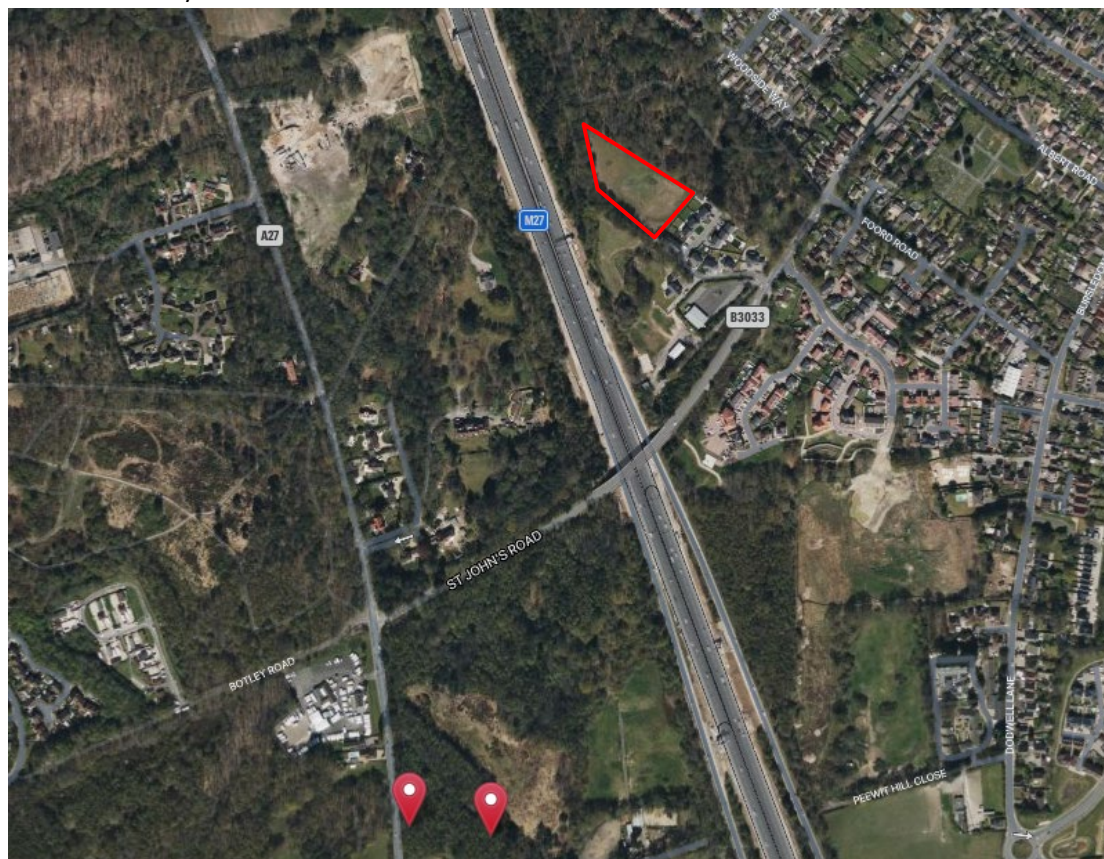


4.7 Hazel Dormouse

4.7.1 Pre-existing Information

HBIC returned 2 records of Dormouse (*Muscardinus avellanarius*) presence within 1km of the site with both of these indicated in **Fig 12** below.

Figure 12. The location of the two Dormouse records provided by HBIC relative to the approximate redline boundary of the site.



4.7.2 Site Assessment

The tree lines surrounding the field can be considered to provide suitable habitat for Dormouse as they are well established and formed by a variety of different native species of known benefit to Dormice (as per Bright et al., 2006). These features would provide a protracted source of food throughout the year and the site benefits from linkages into a wider area of woodland to the north and northwest. Based on the nature of the habitats on and adjacent to the site, and accounting for the records within 1km, the site is considered to be of **Moderate** potential for Dormice.

4.8 Notable and Birds of Conservation Concern (BoCC)

4.8.1 Pre-existing Information

HBIC returned a high number of records of birds of conservation concern within 1km of the site including a number of records for red listed species (the list will not be reproduced here due to the number of records).

4.8.2 Site Assessment

The tree line on-site supports provides ideal nesting habitat for tree nesting and foraging birds due to a range of mature, native species. The site is situated within a surrounding environment that provides an ideal mosaic of habitats, including arable land, woodland, hedgerows providing ideal foraging habitat for any nesting or breeding birds using the site. Due to the quantity of notable bird records and the ideal breeding and nesting bird habitat within and surrounding the site, the site is considered to be of **High** potential for nesting and breeding 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

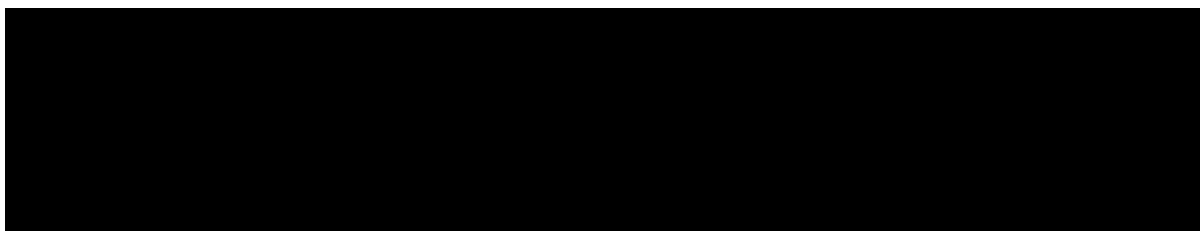
5.2.1 Impacts to Habitats

It is assumed the proposals will predominantly involve the loss of the areas of grassland which were only considered to be of value at the **Site** level of significance (i.e. modified grassland). The likely development works would also take place adjacent to the retained boundary tree lines of local value and therefore construction works could result in both direct (noise, dust, water pollution) and indirect (roost zone compaction) impacts. The loss or damage to these habitats and potential indirect effects would have a **moderate adverse impact** to habitats of **Local** value.

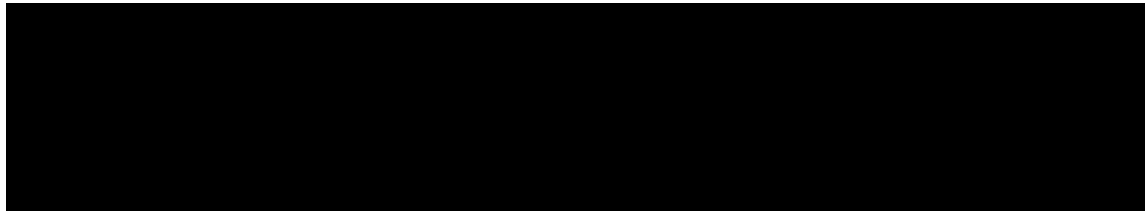
5.2.2 Impacts to Wildlife

The boundary tree lines present suitable habitats which could be used by breeding and nesting birds, with a diverse range of local records also returned by HBIC within a 1km radius of the site. Noise generated during on site activities has the potential to impact upon the nesting birds on site. Therefore, an **adverse impact is possible** if works are undertaken without adequate mitigation.

Suitable habitat for foraging and commuting bats was also identified. It should be considered that boundary vegetation is to be retained under current proposals and a buffer of several metres will be implemented between the new dwellings and boundary trees. In the absence of mitigation, the development is considered to have a **likely negligible adverse** impact on foraging and commuting bats.



5.3 Site Operation



5.3.2 Impacts to Designated Sites

The site is located 2.2km from the Solent Maritime SAC and 2.6km from the Solent and Southampton Water SPA, therefore within zone within which there is a risk of disturbance from an increase in visitor numbers and recreational disturbance. As such, in the absence of mitigation the operational phase of the development would have a ***likely significant effect*** on habitats of ***International Value***.

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

6.2.1 Foraging and Commuting

The site was considered to support a moderate – high quality habitat for foraging and commuting bats. Within the current proposals, all the boundary trees are to be retained, and a buffer, of several metres, is to be implemented between the gardens of the dwellings and boundary trees. As a result, the impacts to foraging and commuting bats are considered to be **negligible** therefore, **no further survey work is considered necessary**.

6.2.2 Trees

If any trees are to be removed under the current proposals an updated ground level roost assessment should be undertaken. This should be done over winter when the trees are not in leaf (and the PRFs are more visible). If any trees that require removal have been identified as supporting PRFs, emergence / dawn re-entry surveys will be required to ascertain if they support any bat roosts.

6.3 Reptiles

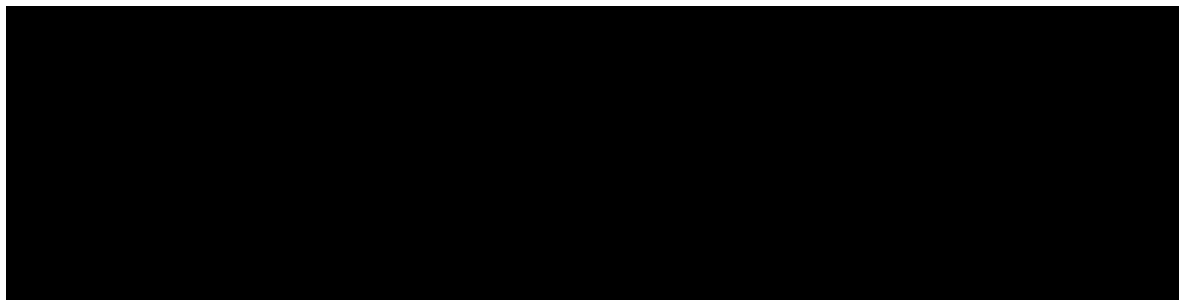
As the areas of scrub and grassland assessed as having potential to support common reptiles are to be retained within the current proposals, **it is recommended that a precautionary approach is adopted to any clearance works**. This would entail the grassland areas being strimmed and cleared in two phases 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 boundary 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 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 Dormice

The habitats on site can be considered suitable for Dormice with mature woodland supporting fruiting species is present around the site boundary. However, as no trees to be removed under the current proposals no further survey work is considered necessary. It is recommended that a 5m grassland buffer is implemented around the site boundary during the construction phase.



6.6 GCN

Previously, a pond was present within 500m of the site to the south, however at the time of the walkover survey this pond was no longer present. Additionally, no pond was identified within 500m of the site using aerial images and OS Maps. It is therefore considered that the pond is no longer present therefore there will be no impact to GCN on site.

6.7 Solent Maritime SAC and Solent & Southampton Water SPA 'Zone of Influence'

The site lies within the vicinity of the Solent Maritime SAC and Solent & Southampton Water SPA. In order to mitigate for the likely increases in residential pressure upon these designated sites, due to the high densities of wildfowl and waders for which the areas are predominantly protected, the Solent Recreation Mitigation Strategy (SRMS) has been introduced in collaboration with Natural England, comprising a partnership of all local councils. Mitigation 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

6.8 Nitrogen Mitigation in Solent

The site is likely to result in an increase in nitrogen run-off to the Solent through added waste to the wastewater treatment works due to the addition of new dwellings. Natural England has laid out guidance for calculating and mitigating any increased nitrogen from new development (Natural England 2022). A nitrogen budget calculation will need to be completed to measure the amount of increased nitrogen from the development and mitigation will be required to offset this.

6.9 Enhancements

6.9.1 Birds

To act as biodiversity enhancement, half of the newly built dwellings will incorporate one Swift brick. The 'CJ Wildlife Swift maxi nesting box' (**Fig 13**) with entrance via a CJ Wildlife 'Cambridge Swift full-face brick' (The Cambridge System is a concept comprising an entrance piece and a nest box embedded in the cavity and inner leaf. It is particularly suited to gable ends at roof-space level). 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 13. A schematic of how the Cambridge full face Swift brick leads into a cavity created by the prior installation of the Swift maxi nesting box.



6.9.2 Bats

Half of the newly built dwellings will also have Ibstock bat bricks (**Fig 14**) integrated within the external brick work. These features are entirely self-contained and available in a variety of colours to match different construction materials. They should ideally be placed on an elevation which will benefit from some degree of sunlight exposure and be located away from windows.

Figure 14. Ibstock bat brick 'B' which will be integrated into the half the new dwellings on-site.



6.9.3 Hedgehogs

To ensure permeability for small mammals across the site, the garden fences of the properties will ensure at least 2 gaps are present within the gravel boards / bases of each fence line to allow for movement of Hedgehogs between gardens and into the wider area. The gaps should be at least 15 cm high by 15 cm wide with permeability for small mammals.

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 (**Fig 15**).

Figure 15. Example of Hedgehog Highway signage to be placed above fence gaps provided to allow movements between gardens.



6.9 BNG

A biodiversity net gain assessment will be undertaken for the site using the latest Defra 3.1 metric. This will be provided as a separate document (the Excel workbook).

7.0 REFERENCES

- ARG (2010) Amphibian & Reptile Groups of the UK, ARG Advice Note 5, Great Crested Newt Habitat Suitability Index, May 2010
- CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK & Ireland
- Collins (ed) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines 3rd Edition
- Eastleigh Borough Council (2001-2011) Eastleigh Borough Council Local Plan Review
- Edgar, P., Foster, J., & Baker, J., (2010) Reptile Management Handbook, Amphibian and Reptile Conservation (ARC)
- HMSO (2000). *The Countryside and Rights of Way Act 2000*. HMSO, London.
- HMSO (1981). *The Wildlife & Countryside Act 1981*. HMSO, London.
- JNCC (2010) Handbook for Phase 1 Habitat Survey
- Natural England & Forestry Commission England (2014) Standing Advice for Ancient Woodland and Veteran Trees.
- Natural England, 2011 *Badgers and Development: A Guide to Best Practice and Licensing*
- UKHab Ltd. (2020). *UK Habitat Classification – Habitat Definitions Version 1.1* (September 2020).



Legend

— Site boundary

🎯 TN 1 - Badger setts

■ Modified grassland (g4)

▨ Line of trees (w1g6)

▤ Scrub (h3)



K4 Keppel, Daedalus Park
Daedalus Drive
Lee on the Solent, PO13 9FX
E: info@ecosupport.co.uk
T: 01329 832 841

Map	Uk Habs Map
Site	Land at Home Farm
Client	Wykeham Homes
Date	11/10/2022
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