



Preliminary Ecological Appraisal

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Report	Preliminary Ecological Appraisal
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Executive Summary

Ecosupport Ltd was instructed by Peregrine Mears Architects to undertake a Preliminary Ecological Appraisal (PEA) at Land off Green Crescent, Gosport. A previous PEA was completed by Ecosupport Ltd in 2019 to support planning application 19/00235/FULL, however, that assessment is now over 18 months old and therefore, is no longer considered valid. This updated PEA was required in order to identify any potentially important ecological features at the site. As part of this assessment, the following surveys were undertaken:

- Walkover survey with UK Habs habitat assessment (November 2023)
- Preliminary Roost Assessment (November 2023)

The following important ecological features were identified on site following the conclusion of the above survey work and may be subject to adverse impacts in the absence of suitable mitigation / compensation:

- Confirmed presence of nesting birds within the mature Ash tree
- Low potential for breeding and nesting birds
- Low potential for foraging and commuting Badgers
- Low potential for reptile species

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) have been identified as well as provide targeted ecological enhancements.

1.0 INTRODUCTION

1.1 Brief

Ecosupport Ltd was commissioned by Peregrine Mears Architects to undertake a Preliminary Ecological Appraisal (PEA) at Land off Green Crescent (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 future 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 small parcel of land located off Green Crescent, Gosport, PO13 0DS (centred on OS grid reference SU 58409 02233 (**Fig 1**)). The site is bounded on all sides by residential housing with associated gardens. The wider environ is largely urban in nature with some small areas of amenity grassland areas. Allotments and an area of woodland (including Spiny Woods and Rowner Copse) also lie to the south of the site.

Figure 1. Redline boundary of the site (Google Satellite, 2023).

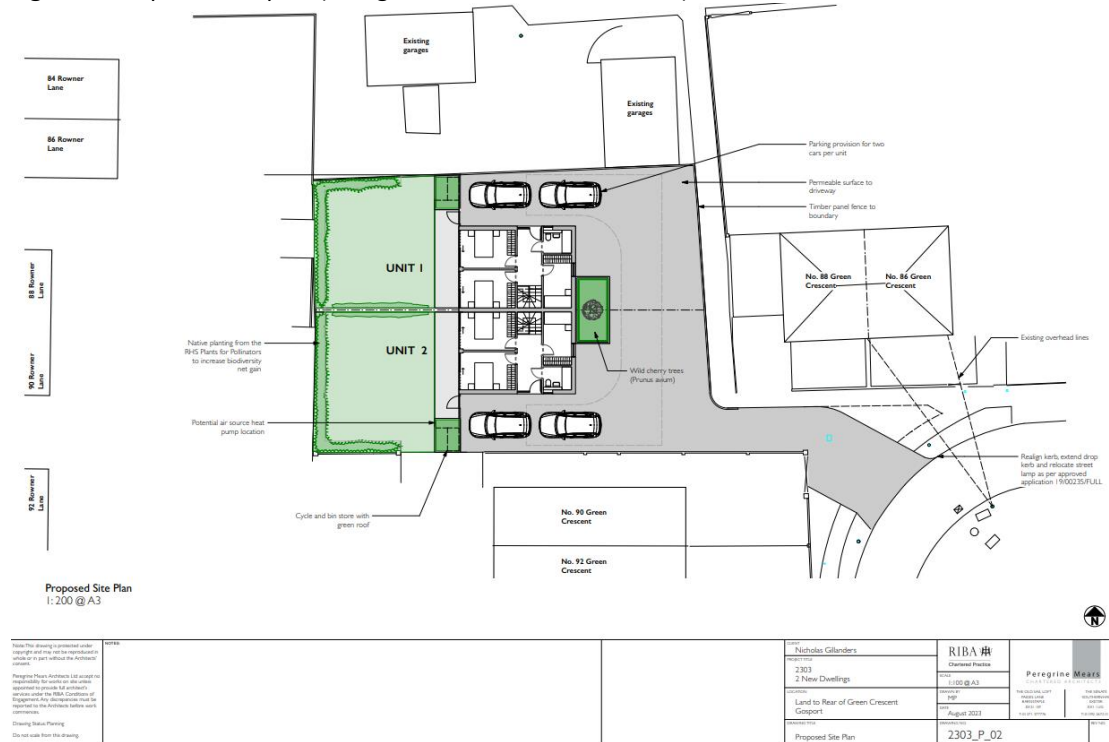


¹ <https://cieem.net/wp-content/uploads/2019/04/Advice-Note.pdf>

1.3 Proposed Development

It is understood the proposals are for two new semi-detached dwellings with gardens and access of Green Crescent (Fig 2).

Figure 2. Proposed site plan (Peregrine Mears Architects 2023).



2.0 RELEVANT LEGISLATION AND POLICY

2.1 Legislation

2.1.1 *The Conservation of Habitats and Species Regulations (Amendment) (EU Exit) 2019*

The Conservation of Habitats and Species Regulations 2017 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.

The Conservation of Habitats and Species Regulations 2019 (EU Exit) 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.

In order for activities that would be likely to result in a breach of species protection under the regulations to legally take place, a European Protected Species (EPS) licence must first be obtained from Natural England.

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

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

The Wildlife & Countryside Act (1981) states that it is an offence to 'plant or otherwise cause to grow in the wild' any plant listed in Schedule 9 part II of the Act. This list over 30 plants including Japanese Knotweed (*Fallopia japonica*), Giant Hogweed (*Heracleum mantegazzianum*) and Parrot's Feather (*Myriophyllum aquaticum*).

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

This Act strengthens the Wildlife & Countryside Act by the addition of "reckless" offences in certain circumstances, such as where there is the likelihood of protected species being present. The Act places a duty on Government Ministers and Departments to conserve biological diversity and provides police with stronger powers relating to wildlife crimes.

2.1.4 Natural Environment and Rural Communities Act (2006)

Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006 requires that public bodies must have due regard to the conservation of biodiversity with a particular regard to species and habitats considered to be of greatest conservation importance. This means that Planning authorities must consider biodiversity and the list of species and habitats of importance when planning or undertaking activities.

Section 41 of the Act lists species and habitats found in England which are considered to be priority species and were identified as requiring action under the UK Biodiversity Action Plan. The latest update to the list of Section 41 habitats of principal importance under the *UK Post – 2010 Biodiversity Framework* includes 56 listed habitats including arable field margins, traditional orchards, hedgerows and several specific habitats within the categories of coastal, grassland, freshwater, inland rock, marine, wetland and woodland. The latest update to the list of Section 41 species of principal importance was in May 2014 and now includes a list of 943 species covering a range of species including vertebrates, terrestrial and marine invertebrates, plants and fungi.

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.

2.1.6 The Environment Act (2021)

The Environment Act 2021 is the UK's new legislation for environmental protection in the UK, which includes protection of water quality, clean air, and biodiversity among other key protections. This Act provides the government power to set targets to reach long-term aims relating to the environment, which will be periodically reviewed and updated. This legislation also establishes a new environmental watchdog organisation, the Office for Environmental Protection (OEP), which will hold the government accountable on environmental issues.

Part 6 of The Environment Act relates to nature and biodiversity. This section makes provision for biodiversity net gain to be a condition of planning permission in England and a requirement for nationally significant infrastructure projects. Biodiversity net gain will require maintenance for a period of at least 30 years after the completion of enhancement works to be achieved.

The legislation also includes updates to existing environmental legislation, such as the NERC Act 2006, to strengthen biodiversity enhancement rather than just conservation and includes a requirement for local, or relevant, authorities to publish biodiversity reports. Further, The Environment Act places a requirement on responsible authorities to prepare local nature recovery strategies, which will outline nature conservation sites and priorities and opportunities for recovering or enhancing biodiversity within the local area. Within England, the legislation also provides Natural England with the power to publish 'species conservation strategies' and 'protected site strategies' to identify activities that may affect a species or site's status and outline their opinions on measures that would be appropriate to avoid, mitigate or compensate any adverse impacts.

2.2 Policy

2.2.1 National

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

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

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

To protect and enhance biodiversity plans should:

identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and stepping stones that connect them and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation;

and promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species and identify and pursue opportunities for securing measurable net gains for biodiversity.

The NPPF states determining planning applications, local planning authorities should apply the following principles:

a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately

mitigated, or, as a last resort, compensated for, then planning permission should be refused;

b) development on land within or outside a SSSI, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of SSSI;

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

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

2.2.2 Local – Gosport Borough Council

Gosport has a diverse range of biodiversity and geological assets which include: internationally important Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar sites; nationally important Sites of Special Scientific Interest (SSSIs); as well as locally important Sites of Importance for Nature Conservation (SINCs). The Borough also has numerous locations which contain important habitats and species that are identified on the UK List of Priority Species and Habitats and the Hampshire Biodiversity Action Plan. Gosport is an important location for feeding and roosting Brent Geese and wading birds. Under national, regional and local policy, these special and sensitive habitats will have continued protection. It will also be important to enhance biodiversity within the Borough.

Objective 22 of 'Creating a sustainable environment' is to protect and enhance the Borough's biodiversity including natural assets such as the coast and harbour.

Policy LP44: Protecting species and other features of nature conservation importance states that planning permission will not be granted on a site that would have an adverse impact on a protected species or its habitat unless it can be clearly demonstrated that there is an overriding need for the development that outweighs the significance of the nature conservation feature. In such instances, the planning authority will impose conditions on the planning permission or require a planning obligation to:

- a) facilitate the survival of individual members of the species;
- b) reduce disturbance to a minimum;
- c) provide alternative habitats to sustain at least the current levels ^[1]_[2] of population of the species;
- d) take opportunities to enhance their habitat.

Development proposals should ensure that habitats and species on the UK List of Priority Habitats and Species and included within Hampshire Biodiversity Action Plans are protected and populations strengthened. In addition planning permission will not be granted for development which would adversely affect, directly or indirectly, features of nature conservation importance unless it can be demonstrated that the justification for the development outweighs their importance for nature conservation or amenity value. Appropriate management of these features will be secured by the imposition of planning conditions and by entering management agreements with landowners where appropriate. Where such features are lost as part of a development proposal, the Borough Council will use conditions and/or planning obligations to ensure no net loss of biodiversity. Development proposals should be aiming to achieve a net gain in biodiversity. There are numerous sites which are likely to contain animal and plant species which are protected by law (as detailed above). All local authorities have a statutory obligation to conserve biodiversity under the Natural Environment and Rural Communities (NERC) Act 2006. The duty encourages local authorities to maximise opportunities for conserving and enhancing the natural environment.

The presence of a protected species is a material consideration when determining a planning proposal, particularly if it is likely to result in harm to the species. Planning applications will therefore need to be supported by the relevant ecological surveys and studies if applicable. Where relevant the Borough Council will attach appropriate planning conditions or require planning obligations in order to secure the protection of the particular species and take opportunities to enhance their habitat.

3.0 METHODOLOGY

3.1 Desk Study

3.1.1 Data Search

Any designated sites and protected species within 1km of the site were searched for using freely available online resources.

3.1.2 Waterbodies

Any ponds located within 250m 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 Amy Johnston BSc (Hons) (Project Ecologist with Ecosupport Ltd) on the 24th November 2023.

Habitats on site pre-development were identified in accordance with the categories specified for a UK Habitats survey, using Habitat Definitions Version 2.0 (UKHab Ltd., 2023). This was chosen as an appropriate habitat categorisation system as it fits within the Biodiversity Metric 4.0 calculation. Where appropriate primary habitat codes were used although for some habitat types, the use of secondary habitat codes was necessary as well.

3.2.2 Badger

The site was thoroughly searched for evidence of use by Badgers (*Meles meles*), with the specific aim of identifying the presence and location of any setts. In accordance with the *Badgers and Development: A Guide to Best Practice and Licensing* (Natural England, 2011) guidance, the survey accounted for 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

The trees present on site were subject to a Ground Level Roost Assessment (GLRA) in order to identify any potential roost features present (PRF's). This assessment was undertaken by Amy Johnston BSc (Hons) during the walkover survey (acting under the licence of Lyndsey Barratt NE Class level 1 licence 2018-38386-CLS-CLS). This followed BCT (Collins (ed) 2023) best practice survey guidelines searching for any Potential Roost Features / evidence of bat occupation and defining the type of PRF as per **Table 1** below.

Table 1. Categorisation of PRF's that can be utilised by bats (BCT survey guidelines 2023).

Table 6.2. Guidelines for categorising the potential suitability of PRFs on a proposed development site for bats, to be applied using professional judgement.	
Suitability	Description
PRF-I	PRF is only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats.
PRF-M	PRF is suitable for multiple bats and may therefore be used by a maternity colony.

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

The walkover conducted was carried out outside of the optimum time of year for vascular flowering plants. Given the nature of the habitat types present and the species recorded this is not considered to have affected the accuracy of the site's valuation. Similarly, this survey does not constitute a full site assessment for invasive plant species such as Japanese Knotweed (*Fallopia japonica*).

4.0 ECOLOGICAL BASELINE

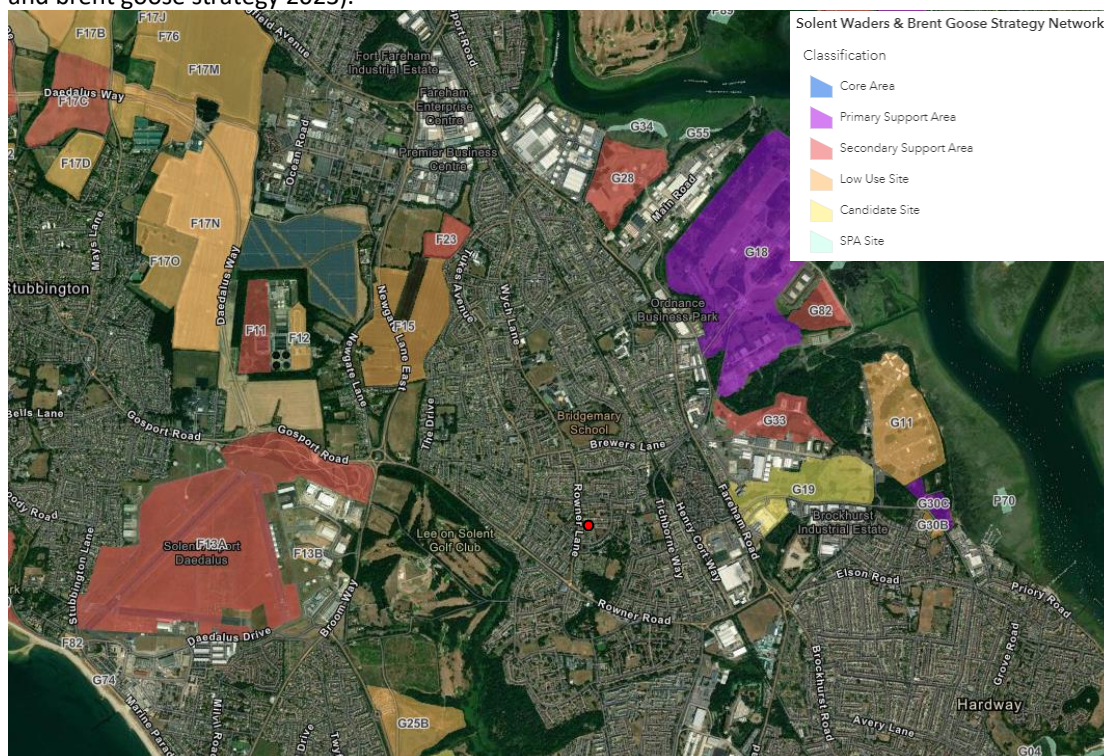
4.1 Desk study

4.1.1 Designated Sites / Protected Species

The only designated site found within 1km of the site is the Wild Grounds SSSI and LNR. This is located approximately 0.9km southwest of the site. However, the site is located within the 5.6km buffers of the Solent and Southampton Waters and the Portsmouth Harbour SPA's. The site was also noted to be 700m from the nearest Solent Waders and Brent Geese strategy site which is a candidate site to the east as per **Fig 3** below.

Within 1km of the site, one record of a bat EPSL was identified.

Figure 3. Solent waders and brent geese sites within proximity to the site (red circle) (Solent Waders and brent goose strategy 2023).



4.1.2 Waterbodies

No waterbodies were identified within 500m of the site.

4.2 Habitat Survey Results

The vegetation within the site has been described below using the UK Habs Habitat Definitions Version 2.0 (UKHab Ltd., 2023). The below species noted should not be considered an exhaustive list and instead refer to dominant, characteristic and other noteworthy species associated with each community within the survey area. The habitat types on site comprise:

- Other neutral grassland (g3c) with bare ground (510)
- Lowland mixed deciduous woodland (w1f) with line of trees (33)
- Bramble scrub (h3d) with scattered trees (32)
- Artificial unvegetated, unsealed surface (u1c) with wet (503)

- Developed land; sealed surface (u1b) with car park (804)

4.2.1 Other neutral grassland (g3c) with bare ground (510)

The habitat type was present throughout the centre of the site (**Fig 4**). Large areas of bare ground were present. Species noted in this habitat included: Perennial Rye Grass (*Lolium perenne*), Yorkshire Fog (*Holcus lanatus*), Cocksfoot (*Dactylis glomerata*), Dove's Foot Cranesbill (*Geranium molle*), Ribwort Plantain (*Plantago lanceolata*), Greater Plantain (*Plantago major*), Cleaver (*Galium aparine*), White Clover (*Trifolium repens*), Daisy (*Bellis perennis*), Dandelion (*Taraxacum agg.*), Common Nettle (*Urtica dioica*), Broadleaved Dock (*Rumex obtusifolius*), Rosebay Willowherb (*Chamerion angustifolium*), Ragwort (*Senecio jacobaea*), Creeping Buttercup (*Ranunculus repens*) and Creeping Cinquefoil (*Potentilla reptans*).

Figure 4. View of grassland present on site with bare ground (taken November 2023).



4.2.2 Lowland mixed deciduous woodland (w1f) with line of trees (33)

A line of trees was present along the southern and western boundary (**Fig 5**). Tree species noted included: Ash (*Fraxinus excelsior*), Dogrose (*Rosa canina*), Dogwood (*Cornus sanguinea*), Oak (*Quercus spp.*), and Hazel (*Corylus avellana*). There was an understory of Ivy (*Hedera helix*), Common Nettle (*Urtica dioica*) and Bramble (*Rubus fruticosus*).

Figure 5. View of the line of trees preset along the southern and western boundaries (taken November 2023).



4.2.3 Bramble scrub (h3d) with scattered trees (32)

Along the eastern boundary of the site, there was an area of dense Bramble scrub with Ash trees present (**Fig 6**).

Figure 6. View of the bramble scrub with ash trees (taken November 2023).



4.2.4 Artificial unvegetated, unsealed surface (u1c) with wet (503)

This habitat was present on site in the form of a gravel parking area. It was noted to be wet with large puddles forming (**Fig 7**).

Figure 7. View of the area of gravel present on site (taken November 2023).



4.2.5 Developed land; sealed surface (u1b)

This habitat was present as the access off of Green Crescent (**Fig 8**). It consisted of a concreted area used as access to neighbouring properties and the site itself.

Figure 8. View of the hard standing present on site (taken November 2023).



4.3 Bat Survey Results

The trees on site were assessed for any potential for roosting bats. The majority of the trees present on site were found to not be mature enough to contain PRF's. The mature ash tree present in the south western corner of the site had no PRF's present. Therefore, the trees on-site are considered to be of **negligible potential** for roosting bats.

4.4 Badgers

During the walkover, no mammal holes were identified on site, however, a number of mammal trails were noted through the scrub and tree line (**Fig 9**). The habitat present on site is very limited for badgers and is isolated within a heavily urbanised area. Therefore, the site is considered to be of **low potential** for foraging and commuting Badgers.

Figure 9. View of the mammal run noted on site (taken November 2023).



4.5 Reptiles

The grassland and scrub on site can be considered suitable for reptiles as it offers the structure heterogeneity favoured by reptile species. Using freely available resources 25 records of common reptile species were found within 1 km of the site. However, the area of suitable habitat itself is small and fully isolated within a heavily urbanised area. Therefore, the site is considered to be of **low potential** for reptile species.

4.6 GCN

Similar to reptiles above, the grassland and scrub present on site can be considered to offer suitability for GCN. However, no water bodies were found within 500m of the site, and using freely available resources, no records of GCN were found within 1km of the site. Considering the small area of habitat present, the lack of suitable waterbodies and local records, the site is considered **negligible potential** for GCN.

4.7 Notable and Birds of Conservation Concern (BoCC)

During the walkover, the mature Ash tree present in the southwestern corner of the site was noted to contain a birds nest (**Fig 10**) and therefore is considered to have a **confirmed presence** of breeding and nesting birds.

The tree line and scrub present on site also provide a variety of nesting opportunities for breeding and nesting birds. Therefore, the site is considered to be of **low potential** for breeding and nesting birds.

Figure 10. View of the birds nest present in the mature Ash tree (taken November 2023).



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

The proposed development will result in the loss of grassland, scrub and both mature and young trees. In the absence of enhancement measures, the loss or damage to these habitats would have an **adverse impact** to habitats of **site** value.

5.2.2 Impacts to Wildlife

The mature Ash tree present on site was found to have a confirmed presence of nesting birds. Therefore, if the tree is removed while birds are actively nesting or breeding, this could result in direct loss to the nest and/or create disturbance. Similarly, the habitats on site have also been identified as having potential for breeding and nesting birds. Therefore, in the absence of mitigation, an **adverse impact** is possible at the **local level**.

The site has been identified as having a very limited potential for reptile species. If any individual reptiles are present, the works could result in the disturbance, harm and even death of these individuals. Therefore, in the absence of mitigation, this could result in an **adverse impact** at the **site level**.

The proposed works may require the creation of some excavations. This may lead to Badgers and other mammals becoming trapped or injured during the works. Therefore, in the absence of mitigation an **adverse impact is possible** at the **local level**.

5.2.3 Impacts to Designated Sites

The site located within 1km of a number of sites identified for Solent Waders and Brent Geese with the nearest being 700m away. However, considering the small scale of the proposals, the habitats present on site, and the location of the site within a heavily urban area, it is considered any impact of the development upon these sites will be **negligible**.

5.3 Site Operation

5.3.1 Impacts to Wildlife

The site lies within a fairly lit area with nearby street lamps and lights from residential properties. However, it is anticipated that new lighting (during construction or post-development) will result in **minor adverse impact** to nocturnal species (such as commuting and foraging Badgers).

5.3.2 Impacts to Designated Sites

The site is located with 3km of the Solent and Southampton waters SPA and within 1.3km of the Portsmouth Harbour SPA. Due to there being a net increase in dwellings the development could result in an increase in visitor pressure upon the SPA. Therefore, an adverse impact is likely on a site of **international value**.

Due to the net addition of 2 dwelling on site, the development will result in an increase in nitrogen input into the WwTW draining into the Solent. Natural England has stated there is uncertainty as to whether new growth will further deteriorate designated sites due to an increase in nutrient inputs from wastewater. Therefore, a minor adverse impact is possible on the Solent and Southampton Water SPA, a site of **international significance**.

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 Solent and 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, 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 2023 a sliding scale of contribution, based upon the number of dwellings per residential unit, was introduced:

- £443 for 1 bedroom dwelling
- £639 for 2 bedroom dwelling
- £834 for 3 bedroom dwelling
- £980 for 4 bedroom dwelling
- £1150 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 Nutrient Neutrality

To ensure the scheme does not adversely affect the Solent Marine European designated sites through an increase in nitrate loading, a nitrogen budget calculation will need to be undertaken with credits purchased to offset this as required.

6.4 Reptiles

As the site has been identified as having limited potential for reptiles, it is considered proportionate that a precautionary working method is followed. As an area of optimal reptile habitat will remain unaffected by the proposed plans along the northwestern boundary the most suitable method to ensure no reptiles are harmed in the unlikely case that they are present on site, would be a strim and push exercise. This would encourage reptiles on the site to move away from the works area naturally and towards the suitable habitat to be retained. This will involve the following steps.

The habitat within the works area will be made unsuitable by strimming in temperatures above 12°C when reptiles are more mobile. The strimming will be carried out in a two strim cycle with the first cut to 10cm and the second to ground level. This cut will take place in one direction towards the suitable habitats along the western boundary of the blue line area in order to give any reptiles a chance to leave the area. It will also be necessary to ensure the other parts of the site are maintained at a short sward height (and thus unsuitable for reptiles) immediately prior to works commencing.

6.5 Sensitive Lighting

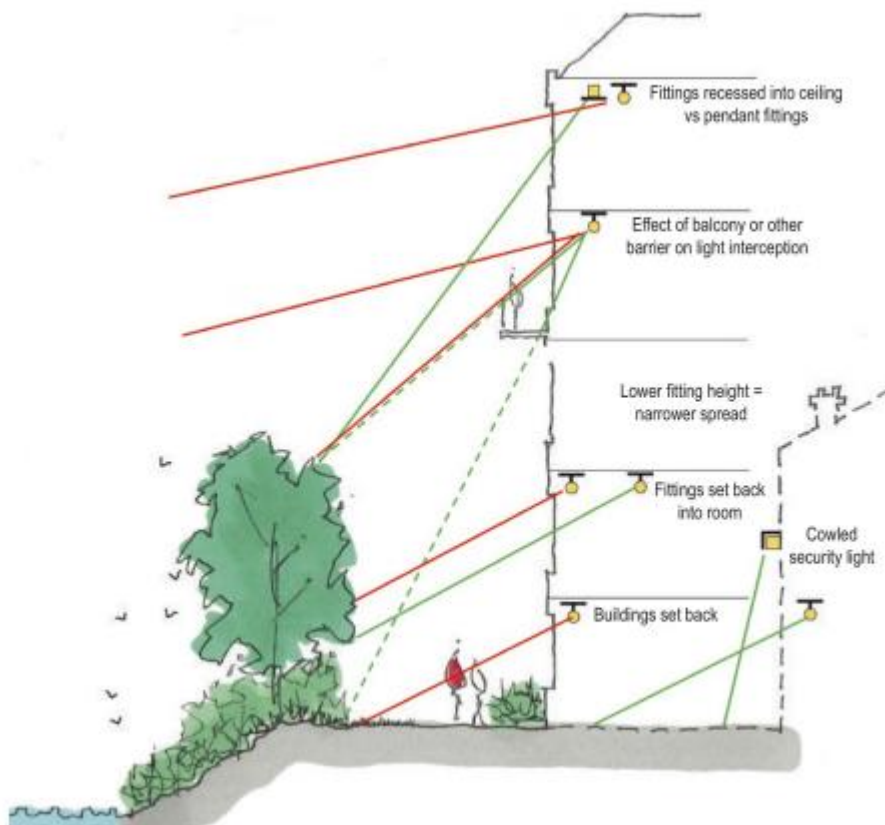
To ensure any additional lighting used on the externals of the new dwellings has no impact on nocturnal species, its recommended that the following outlined in a document produced (*Guidance Note 08/23 Bats and Artificial Lighting in the UK*) via a collaboration between the Institute of Lighting Professionals (ILP) and the Bat Conservation Trust (BCT), is followed. This outlines the latest recommendations to minimise the impacts of increased artificial lighting on bats. The key recommendations within this document have been outlined below and will be implemented as far as is practicable.

'Light sources, lamps, LEDs and their fittings come in a myriad of different specifications which a lighting professional can help to select. However, the following should be considered when choosing luminaires and their potential impact on Key Habitats and features:

- *All luminaires will lack UV elements when manufactured. Metal halide, compact fluorescent sources should not be used*
- *LED luminaires will be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability*
- *A warm white light source (2700Kelvin or lower) will be adopted to reduce blue light component*
- *Light sources will feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone, 2012)*
- *Internal luminaires can be recessed (as opposed to using a pendant fitting - See **Figure 11**) where installed in proximity to windows to reduce glare and light spill*
- *Waymarking inground markers (low output with cowls or similar to minimise upward light spill) to delineate path edges (see Case Study 1)*
- *Column heights will be carefully considered to minimise light spill and glare visibility. This should be balanced with the potential for increased numbers of columns and upward light reflectance as with bollards*

- Only luminaires with a negligible or zero Upward Light Ratio, and with good optical control, should be considered - See ILP GN01
- Luminaires will always be mounted horizontally, with no light output above 90° and/or no upward tilt
- Where appropriate, external security lighting will be set on motion sensors and set to as short a possible a timer as the risk assessment will allow. For most general residential purposes, a 1 or 2 minute timer is likely to be appropriate
- Use of a Central Management System (CMS) with additional web-enabled devices to light on demand Use of motion sensors for local authority street lighting may not be feasible unless the authority has the potential for smart metering through a CMS
- The use of bollard or low-level downward-directional luminaires is strongly discouraged. This is due to a considerable range of issues, such as unacceptable glare, poor illumination efficiency, unacceptable upward light output, increased upward light scatter from surfaces and poor facial recognition which makes them unsuitable for most sites. Therefore, they should only be considered in specific cases where the lighting professional and project manager are able to resolve these issues. See Case Study 6
- Only if all other options have been explored, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed. However, due to the lensing and fine cut-off control of the beam inherent in modern LED luminaires, the effect of cowls and baffles is often far less than anticipated and so should not be relied upon solely'

Figure 11. Internal lighting mitigation options (ILP 2023)



6.6 Breeding and Nesting Birds

In order to avoid disturbance of nesting birds or damage to their nests, clearance of the scrub and trees, will be undertaken outside of the bird-nesting season (typically March – August, dependant on weather). If this is not possible, areas proposed for clearance should be thoroughly checked by an ecologist immediately prior to clearance. If any active nests are found, they should be left undisturbed with a 5m buffer erected (barrier tape or similar) and monitored until the chicks have fledged.

6.7 Badgers

Although no evidence of Badgers was recorded on site, the site does have potential for foraging and commuting Badgers. Therefore, a walkover of the site is recommended to be undertaken by a suitably qualified ecologist in search of recent Badger activity immediately prior to works commencing. In the case that evidence of recent Badger activity is identified, further survey works may be required to assess the status of any potential Badger setts on site.

During the construction phase, any open excavations left overnight will either be covered to prevent commuting Badgers falling in or escape ladders will be used to prevent them from becoming trapped. Any open pipework will be checked and then capped nightly.

6.8 Enhancements

6.8.1 Bat Bricks / Boxes

One of the two newly built dwellings will have Istock bat bricks (**Fig 12**) integrated within the external brick work. These features are entirely self-contained and available in a variety of different 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 12. Istock bat brick 'B' which will be integrated into the gable walls of one of the new dwellings on site.

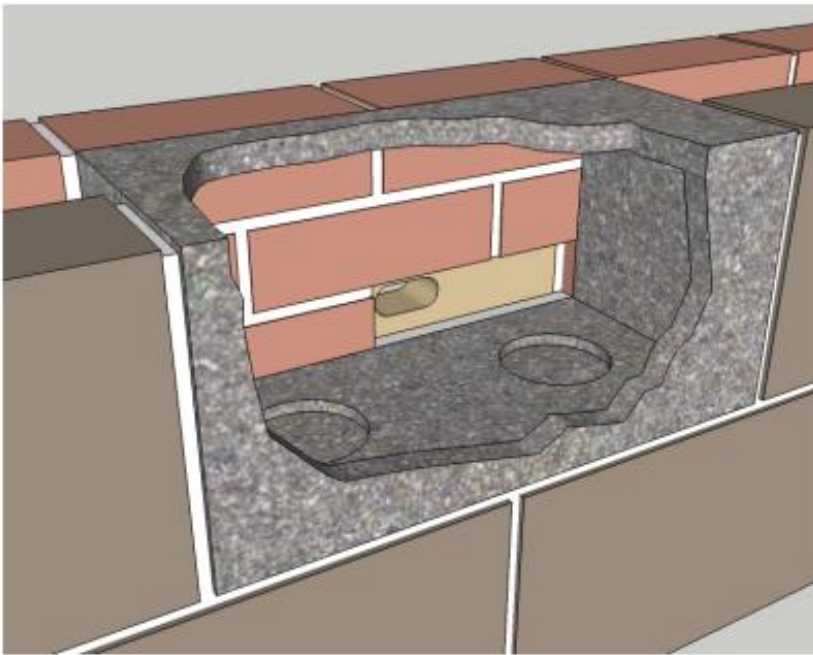


6.8.2 Swift Bricks

To act as biodiversity enhancement, both 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. The Swift bricks will ideally be placed on the south facing elevations.

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.



6.8.3 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 14**).

Figure 14. Example of Hedgehog Highway signage to be placed above fence gaps provided to allow movements between gardens.



6.8.4 Invertebrates

To increase opportunities for invertebrates within the site, two bee bricks will be included within each of the new builds of the site (Fig 13). The brick can be used in place of a standard, brick and provides cavities for solitary bee species such as Red Mason bees (*Osmia bicornis*) or Leafcutter bees (*Megachile* sp.), both non-aggressive native species. The bricks should be placed in a sunny location at a minimum height of 1m. It is highly recommended the brick is placed in a location where landscaping will include nearby pollinator-friendly plants.

Figure 15. Bee Bricks (NHBS)



7.0 CONCLUSION

A Preliminary Ecological Appraisal was undertaken of the site known as 'Land off Green Crescent' in order to identify any potential important ecological features. This identified the site as having a confirmed presence of nesting birds in a mature Ash tree on site and habitats of suitability for breeding and nesting birds and foraging and commuting Badgers. The site was also identified to have limited potential for reptile species within the grassland and scrub. Finally, the site is located within the 5.6 km buffer for the Solent and Southampton Waters and Portsmouth Harbour SPA. In order to mitigate any impacts upon these features, precautionary measures have been recommended for birds, Badgers and reptiles, with financial contributions and a nitrate calculation recommended for any impacts upon the SPA's. As well as this, a number of ecological features have been recommended to enhance the site for bats, birds and small mammals.

8.0 REFERENCES

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APPENDIX I – UKHAB MAP



Legend

- Site boundary

- Other neutral grassland (g3c)
Secondary code(s):
- 510 Bare ground

- Lowland mixed deciduous woodland (w1f)
Secondary code(s):
- 33 Line of trees

- Bramble scrub (h3d)
Secondary code(s):
- 32 Scattered trees

- Artificial unvegetated unsealed surface (u1c)
Secondary code(s):
- 503 wet

- Developed land. sealed surface (u1b)



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Map	UK Habs Map
Site	Land off Green Crescent
Client	Peregrine Mears Architects
Date	24/11/2023

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