



Preliminary Ecological Appraisal

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Report	Preliminary Ecological Appraisal
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Client	Ken Parke Planning Consultants Ltd
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Executive Summary

Ecosupport Ltd was instructed by Ken Parke Planning Consultants Ltd to undertake a Preliminary Ecological Appraisal (PEA) of a parcel of land adjacent to 37 Chalk Lane, Sidlesham, Chichester. 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 Sussex Biodiversity Records Centre (SxBRC) (December 2023)
- Preliminary Ecological Appraisal (December 2023)
- Preliminary Roost Assessment (December 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:

- Potential for foraging and commuting Badgers
- Moderate potential for breeding and nesting birds
- Recreational pressure upon the Pagham Harbour SPA
- Recreational pressure upon the Solent and Dorset Coast SPA

In the absence of any mitigation measures, the proposed development is anticipated to result in **potential adverse effects**. Following the mitigations outlined in section 6, will ensure no adverse ecological impact from the proposed works.

1.0 INTRODUCTION

1.1 Brief

Ecosupport Ltd was commissioned by Ken Parke Planning Consultants Ltd to conduct a Preliminary Ecological Appraisal (PEA) of a parcel of land adjacent to 37 Chalk Lane, Sidlesham, Chichester (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.

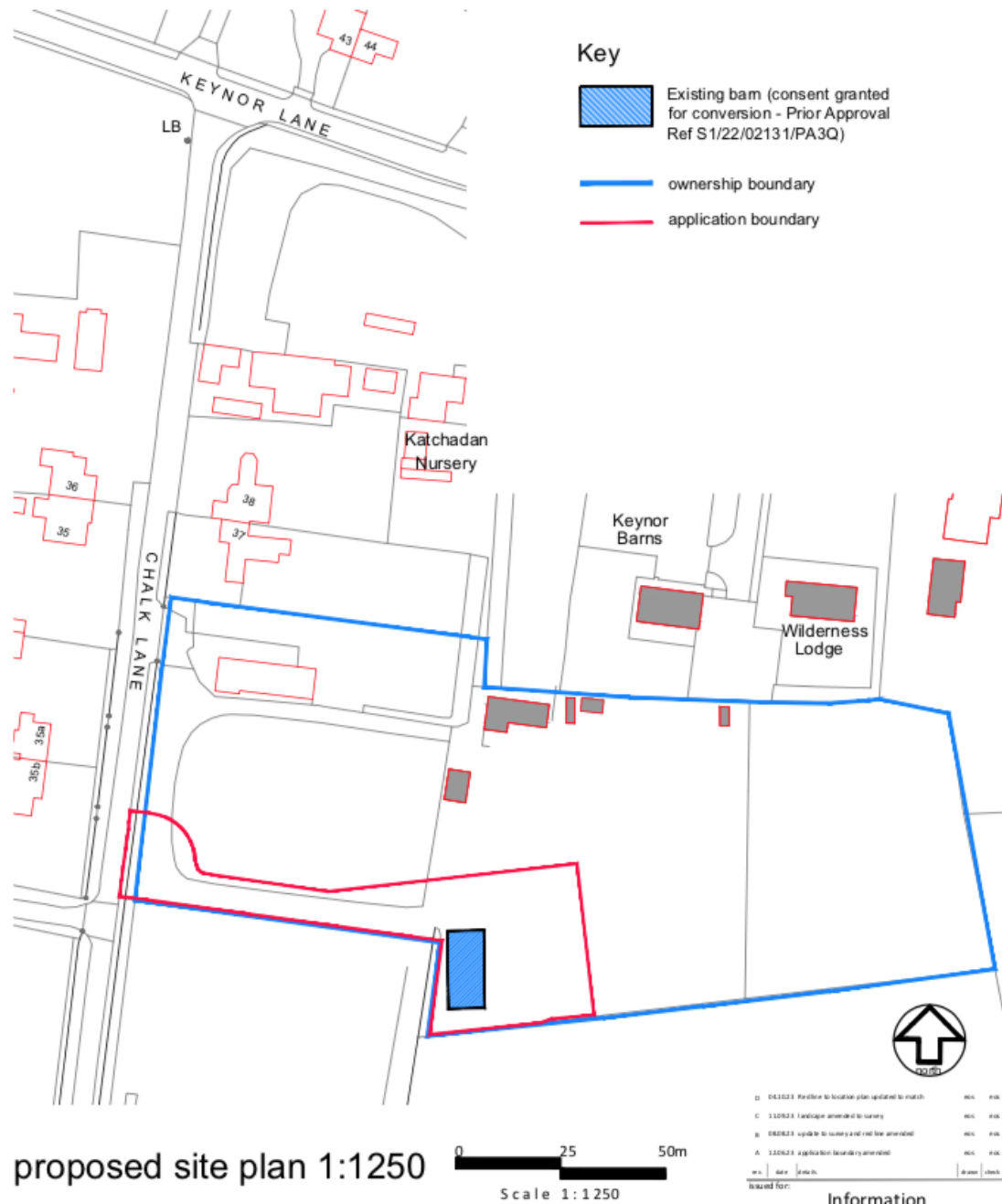
NB: If the works do not take place within 18 months of this report¹ then the findings of this survey will no longer be considered valid and may require updating.

1.2 Site Description & Location

The site comprises of a barn and driveway adjacent to 37 Chalk Lane, Sidlesham, Chichester, PO20 7LW (centred on OS grid reference SZ 85215 97564) (**Fig 1**). The western aspect of the site is bound by Chalk Lane, whilst the southern and northern aspect is bound by residential dwellings and associated land, and the eastern aspect is bound by adjacent field. The immediately surrounding environ is semi-urban with the town of Sidlesham to the north with surrounding woodland, areas of grassland and arable land.

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

Figure 1. Site location plan showing the development area (redline) within the context of the wider site (blue line) (EOS Architecture, 2023).



D	041023	Redline to location plan updated to match	eos	eos
C	110623	Landscaping amended to survey	eos	eos
B	090823	update to survey and red line amended	eos	eos
A	120623	application boundary amended	eos	eos
eos	eos	drawn	check	

Information	
project:	project no: 2210
Proposed Dwellings	draw no: 010
Home Barn Place	rev: D
37 Chalk Lane	
drawing:	scale: As specified
Location and site plan	drawn by: eos
	date: 12.06.23
	checked by: eos
	date: 26.06.23

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1.3 Proposed Development

It is understood that the proposals are to demolish the existing barn and erection of two semi-detached dwellings (Fig 2).

Figure 2. View of the proposed development (EOS Architecture, 2023).



2.0 RELEVANT LEGISLATION AND POLICY

2.1 Legislation

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

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)

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.

2.1.6 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 Planning Policy Framework (NPPF) 2023

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;

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 – Chichester District Council Local Plan 2014 - 2029

Chichester's Local Plan recognises that the natural environment is a key factor in terms of attracting residents, investment and tourism to the area and that one of these key environmental assets is biodiversity. The Plan seeks to protect and enhance the environmental assets, whilst allowing development in areas where potential environmental harm is minimal or can be adequately mitigated.

Countryside protection policies and the development of green infrastructure will provide links both for wildlife and for residents and help to protect the separate identity and distinct character of individual settlements.

The Plan emphasises that both Chichester and Pagham Harbour are internationally recognised sites of nature conservation importance, subject to a high level of environmental protection under European Union and UK legislation. Along with the Medmerry Realignment which is subject to the same protection as designated European sites.

All new developments are encouraged to take account of and incorporate biodiversity into their features at the design stage. Policy 49 protects sites of biodiversity importance, which contain wildlife features that are of special interest. Exceptions will only be made where no reasonable alternatives are available and the benefits of development clearly outweigh the negative impacts. Where a development proposal would result in any significant harm to biodiversity and geological interests that cannot be prevented or mitigated, appropriate compensation will be sought.

The Local Plan states that "Conserving biodiversity is not just about protecting rare species and designated nature conservation sites". It also encompasses the more common and widespread species and habitats. The Council will seek to preserve and enhance the biodiversity diversity of the district.

Policy 49 'Biodiversity' states that planning permission will be granted for development where it can be demonstrated that:

- The biodiversity value of the site is safeguarded;
- Demonstrable harm to habitats or species which are protected or which are of importance to biodiversity is avoided or mitigated;
- The proposal has incorporated features that enhance biodiversity as part of good design and sustainable development;
- The proposal protects, manages and enhances the District's network of ecology, biodiversity and geological sites, including the international, national and local designated sites (statutory and non-statutory), priority habitats, wildlife corridors and stepping stones that connect them;
- Any individual or cumulative adverse impacts on sites are avoided;
- The benefits of development outweigh any adverse impact on the biodiversity on the site. Exceptions will only be made where no reasonable alternatives are available; and

planning conditions and/or planning obligations may be imposed to mitigate or compensate for the harmful effects of the development.

3.0 METHODOLOGY

3.1 Desk Study

3.1.1 Data Request

A data request was submitted to the Sussex Biodiversity Records Centre (SxBRC) 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 Local Wildlife Sites (LWS)
- Records of protected and notable species

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 Katalin Balazs BSc (Hons) MSc and Madison Errington BSc (Hons) ACIEEM, ecologists with Ecosupport Ltd, on the 12th December 2023. Weather conditions during the survey comprised temperatures of 14 °C and sunny.

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. Where appropriate primary habitat codes were used although for some habitat types, the use of secondary habitat codes was necessary as well.

3.2.2 Badger

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

3.2.3 Bats

An assessment was made of the suitability of the barn on site to support roosting bats based on the presence of any Potential Roost Features (PRFs) during December 2023. This involved the use of 8 x 42 close focus binoculars and a high-powered torch (where required) for a more detailed inspection of any features. The survey conformed to current best practice guidance as described in *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (4th Edition,

Collins, J. (ed) 2023) and was conducted by Katalin Balazs BSc (Hons) MSc (working under class level 1 licence of Ashley James 2021-10059-CL17-BAT).

Table 1. Guidelines for assessing the potential suitability of a built structure for roosting bats (reproduced from BCT (Collins, J. (ed) 2023)).

Suitability	Description of Roosting Habitats
Negligible	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. 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 and not a classic cool/stable hibernation site, but could be used by individual hibernating bats).
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, such as maternity and hibernation – the categorisation described in this table is 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. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation site.

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

Although the survey was taken outside the optimum timing for the identification of botanical interest, it was considered that the majority of species present could be suitably identified;

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

this was therefore not considered to represent a significant limitation to the overall assessment. This survey does not constitute a full site assessment for invasive plant species such as Japanese Knotweed (*Fallopia japonica*).

3.4.2 PRA

There were not considered to be any limitations of the PRA with all areas of the buildings accessible.

4.0 ECOLOGICAL BASELINE

4.1 Designated Sites

4.1.1 Statutory Designated

SxBRC identified the following statutory designated sites within the 1 km search radius (**Fig 3**) with a summary of these sites presented in **Table 2**..

- Pagham Harbour SPA, SSSI, Ramsar and LNR (0.6 km east)
- Solent and Dorset Coast SPA (0.9 km south-east)

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

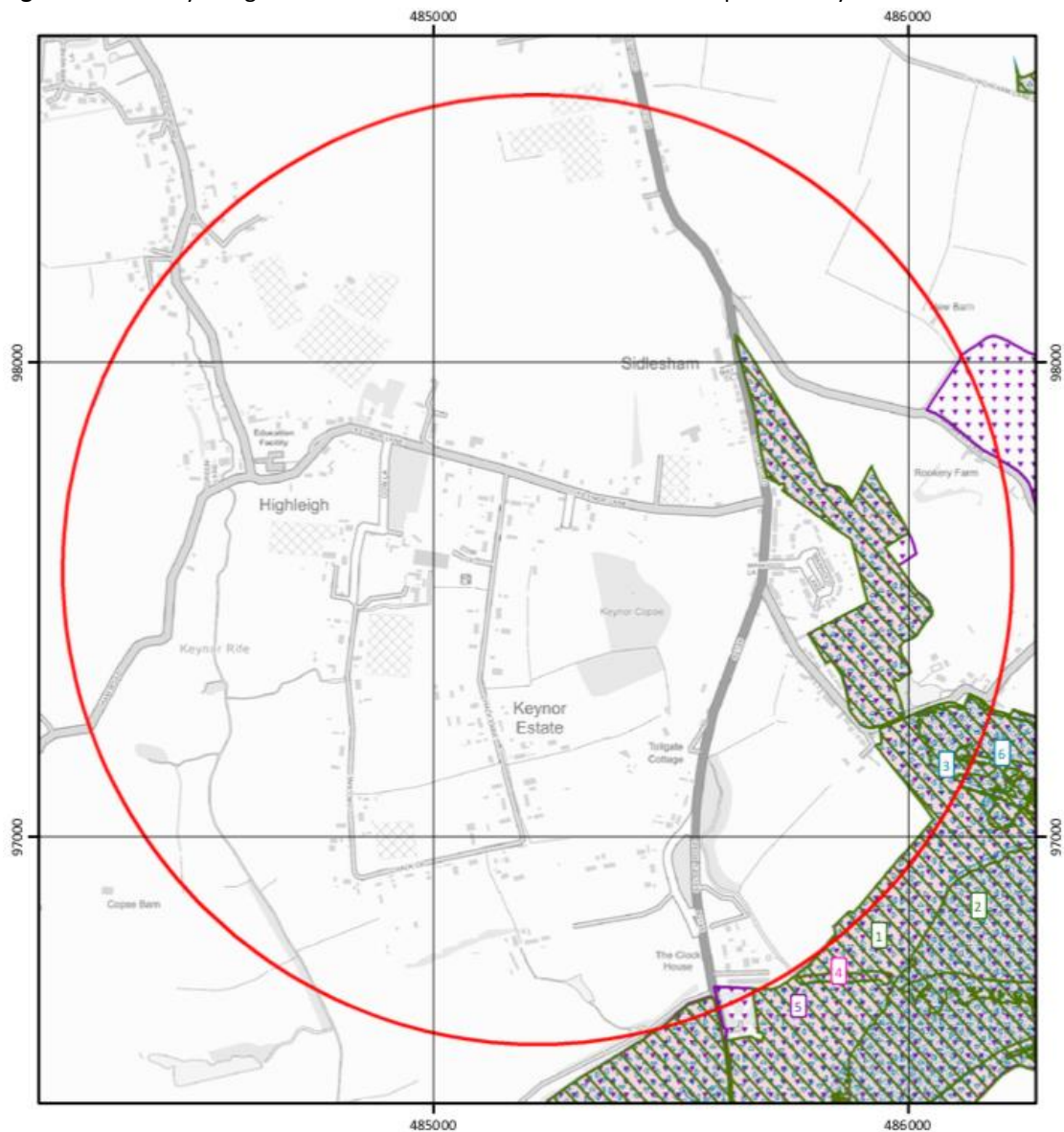


Table 2. Summary of statutory designated sites within 1 km of the site as provided by SxBRC and shown in **Fig 3** above.

Map Label (as per Fig 3) / SxBRC Code	Site Name	Designation	Distance to Site
1	Pagham Harbour	SPA	0.6 km E
2	Solent and Dorset Coast	SPA	0.9 km SE
3	Pagham Harbour	Ramsar	0.6 km E
4	Pagham Harbour	SSSI	0.6 km E
5	Pagham Harbour	LNR	0.6 km E
6	Pagham Harbour	Marine conservation Zone	0.6 km E

4.1.2 Locally Designated / Non-Statutory

The locally designated sites identified by SxBRC are shown in **Fig 4** with a summary of these sites presented in **Table 3**.

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



Table 3. Summary of locally designated sites within 1 km of the site as provided by SxBRC and shown in Fig 4 above.

Map Label (as per Fig 4) / SxBRC Code	Site Name / Designation	Habitats Present	Distance to Site
1	C13 – Keynor Copse (LWS)	Semi-natural woodland.	0.2 km E
2	Pagham Harbour (LGS)	Tidal inlet with double shingle spit at the entrance. Mud flats and marshes. Key site for coastal geomorphology. Also includes SW end of Bognor foreshore underlain by Tertiary sediments of London Clay Formation.	0.3 km E

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:

- Artificial unvegetated – unsealed surface (u1c)
- Buildings (u1b5)

4.2.1 Artificial unvegetated – unsealed surface (u1c)

The driveway and the area around the barn were formed of crushed asphalt with some vegetation at the southern and eastern elevation of the barn formed of Bramble (*Rubus fruticosus*), Cleavers (*Galium aparine*), Nettle (*Urtica dioica*), Perennial rye-grass (*Lolium perenne*) and moss.

Figure 5. View of the artificial unsealed surface at the eastern elevation of the barn (taken December 2025).



4.2.2 Buildings (u1b5)

The final habitat type on site was the barn with further descriptions provided in **Table 4** below.

4.3 Bat Survey Results

4.3.1 Pre-existing Data

The data request from SxBRC returned the following bat records within 1 km of the site (**Table 4**).

Table 4. List of bat records within 1 km of the site provided by SxBRC.

Taxon Name	Species Name	Number of Records	Further Information
<i>Eptesicus serotinus</i>	Serotine Bat	1	Field observation
<i>Myotis daubentonii</i>	Daubenton's Bat	1	Field observation
<i>Nyctalus noctula</i>	Noctule Bat	1	Bat detector record
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	15	6 records from roosts and 9 records from aural detector.
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	34	30 bats found at a maternity roost, a record from field observation and 3 records from aural detector.
<i>Plecotus auritus</i>	Brown Long-eared	1	Record of droppings

4.3.2 Buildings

The findings of the preliminary roost assessment of the building on site are outlined in **Fig 6** below. To summarise, the main barn was constructed of concrete base and metal frame with corrugated metal on the sides and roof. The metal sheets were well sealed and connected. Therefore, the barn was found to be of **negligible potential** for roosting bats due to the limited PRF's and the lack of thermoregulation required by roosting bats.

Figure 6. View of the northern elevation of the barn with annotations of the internal space and any PRF's present (taken December 2023).

Negligible potential

View of the eastern elevation of the barn.



View of the internals of the main barn with gaps present within wooden beams and brickwork. However, no evidence of bats was found.



4.4 Badgers

4.4.1 Pre-existing Information

Due to confidentiality requested by local Badger groups, SxBRC were unable to return records of Badger (*Meles meles*) within the 1 km search radius. However, using freely available resources, 1 Badger record was identified within 1 km of the site.

4.4.2 Site Assessment

During the walkover survey on site, no evidence of Badgers was noted, however a gap through the fence was found at the south-western elevation of the barn. The site is considered to provide suitable foraging habitat for Badgers given that it has grassland areas and is connected to further suitable surrounding habitat. Taking this into consideration, along with the Badger record within 1 km of site, there is considered to be **potential for foraging and commuting Badgers** on site.

4.5 Reptiles

4.5.1 Pre-existing Information

SxBRC returned records of Slow Worm (*Anguis fragilis*, 15 records), Grass Snake (*Natrix helvetica*, 13 record), Adder (*Vipera berus*, 12 records) and Common Lizard (*Zootoca vivipara*, 36 records) within the 1 km search radius. The closest of these records being of a Common Lizard approximately 0.3 km from the site.

4.5.2 Site Assessment

The habitats on site do not provide suitable habitat for reptiles as it is comprised of the existing barn and hard standing. Therefore, the habitats on site to be impacted upon are considered to be of **negligible potential** for reptiles.

4.6 Great Crested Newts

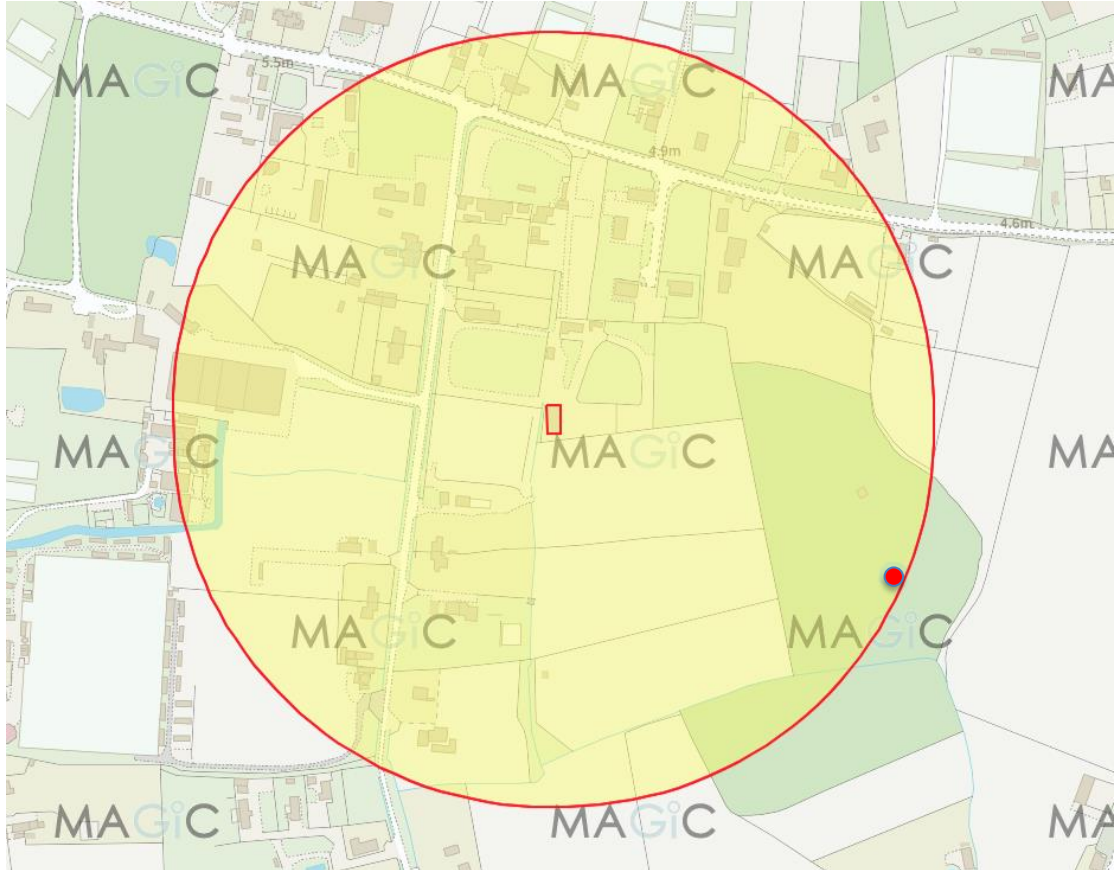
4.6.1 Pre-existing Information

SxBRC did not return any records of GCN presence from within 1 km search radius. However, SxBRC did return records of Smooth Newt (*Lissotriton vulgaris*, 18 records), Common Toad (*Bufo bufo*, 3 records) and Common Frog (*Rana temporaria*, 8 records) with the closest record being of a Common Frog at approximately 0.45 km south-east from the site.

4.6.2 Water Bodies Within 250 m

One pond was identified within 250 m of the site following a review of OS maps and aerial imagery. The approximate location of this is shown in **Fig 7** below. However, no formal HSI assessment of this pond was undertaken during the walkover survey due to the lack of GCN records and the unsuitability of the site. Therefore, the site is considered to be of **negligible potential** for GCN.

Figure 7. The waterbody located within 250m of the site to the south-east (Magic Maps 2023).



4.7 Notable and Birds of Conservation Concern (BoCC)

4.7.1 Pre-existing Information

SxBRC have returned records for a total of 107 'notable and protected' bird species including a number of NERC S41 listed species and Birds of Conservation Concern (BoCC) (the list will not be reproduced here due to the number of records).

4.7.2 Site Assessment

The hedgerows and mature trees on the wider site provide ideal habitat for nesting, breeding and foraging birds. The site is situated within a surrounding environ that provides an ideal mosaic of habitats including arable fields, woodland and 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 ***moderate 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

There are no habitats of significant ecological value that will be lost as a result of the works, with the majority of the site comprising of hardstanding surfaces and building, only considered to be of value at the **Site** level. Therefore, the development is assessed as having **minor adverse impact** to habitats of significance at the site level.

5.2.2 Impacts to Wildlife

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**.

In the absence of mitigation, the works may result in damage to the adjacent mature trees. This could cause disturbance, harm or even death of individual birds (if present). Therefore, **an adverse impact is likely** at the **local level**.

5.3 Site Operation

5.3.1 Impacts to Wildlife

The development will likely result in an increase in lighting within the general area from any additional external lights on the new dwellings. This can affect the behaviour, particularly foraging, of nocturnal wildlife. Therefore, an **adverse impact is likely** on bats, badgers, and other nocturnal wildlife (i.e., Hedgehogs).

5.3.2 Impacts to Designated Sites

The site is located within the recreational zone of influence 3.5 km buffer for Pagham Harbour SPA and also within the 5.6 km buffer for Solent and Dorset Coast SPA. The proposals involve a development of two semi-detached dwellings and therefore will result in possible increased visitor pressure to the SPA. 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 and measures are outlined to protect the existing features of value and provide enhancements post development.

6.2 Bats

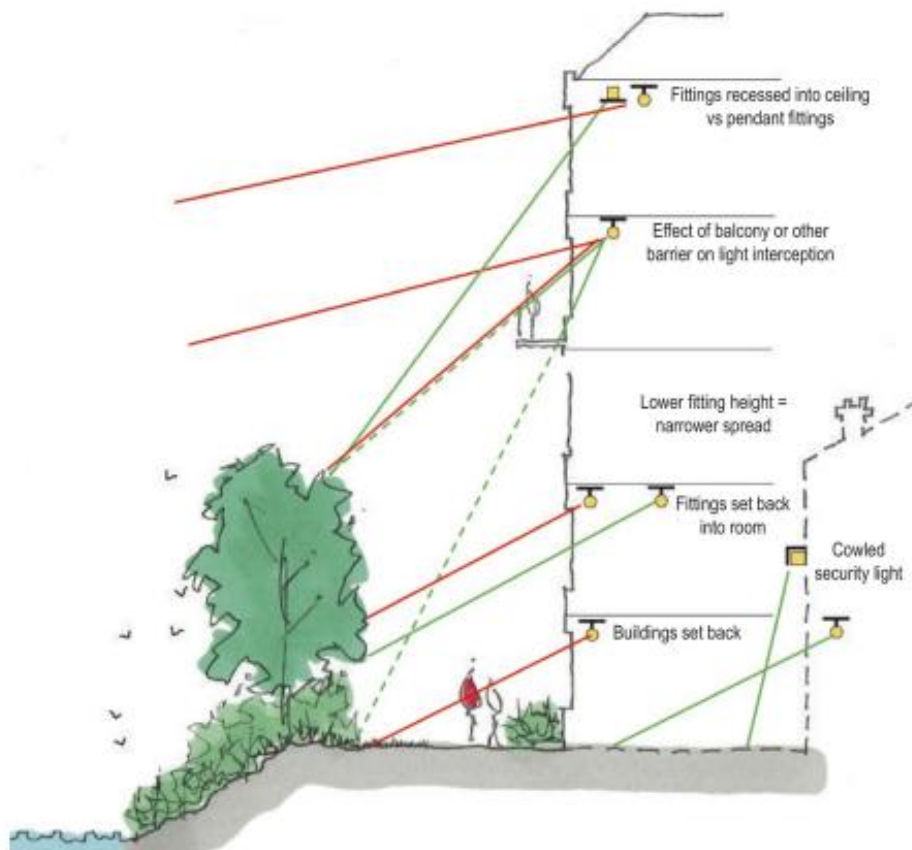
It is recommended that any lighting complies with the following newly published *Guidance Note 08/23 Bats and Artificial Lighting at night* (ILP / BCT, 2023) produced via a collaboration between the Institute of Lighting Professionals (ILP) and the Bat Conservation Trust (BCT), which outlines the latest recommendations to minimise the impacts of increased artificial lighting on bats. This document 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 **Fig 8**) 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 8. Internal lighting mitigation options (ILP 2023).



6.3 Badgers

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.

6.4 Avoidance of Impacts to Breeding and Nesting Birds

In order to avoid disturbance of breeding and nesting birds or damage to their nests, any maintenance on site should be undertaken outside of the bird nesting season (typically March

– August, dependent on weather). If this is not possible, the barn 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 (ca. 5m) until nestlings have fledged.

6.5 Pagham Harbour SPA

Pagham Harbour is designated as a Special Protection Area and Ramsar site, meaning that it is recognised at an international level for playing an important role linked to the movement of species, specifically waders and wildfowl.

Chichester and Arun District Councils have put in place a Strategic Scheme of Access Management and Mitigation (SAMM) for Pagham Harbour SPA. It is similar in principle to the Bird Aware Scheme in that it is funded in-perpetuity through S106 contributions and is delivered through wardening within the SPA, through the RSPB as site managers, as well as a wider programme of education and awareness-raising. This scheme sets a flat rate contribution of £938 per net additional dwelling (from 1 April 2023).

6.6 Solent and Dorset Coast SPA

Since July 2014 all applications for new residential planning permissions need to provide a means of mitigating the development's impact upon the ecological importance of the Special Protection Areas within and around the Solent.

Whilst applicants may propose alternative measures to mitigate the direct impact of their development on the Solent SPA, the simplest way of mitigating will be through the Solent Recreation Mitigation Strategy.

The Solent Recreation Mitigation Strategy (December 2017) sets out the principle of the sliding scale of contribution to calculate the SRMS contribution for new residential development built within 5.6 km of the coastline. The contribution is calculated on the number of bedrooms per individual dwelling.

The current payment schedule for new residential development determined on or after **1 April 2023 (Table 5)**. There is also a flat rate applying to other types of overnight accommodation of £740 (usually used in cases of caravans, tents or gypsy and traveller sites).

Table 5. Details of the 2023/24 rates applicable to permissions granted on or after 1 April 2023.

Number of bedrooms	Amount	5% monitoring fee	Administration fee	Total
1	£443	£22.15	£23	£488.15
2	£639	£31.95	£23	£693.95
3	£834	£41.70	£23	£898.70
4	£980	£49.00	£23	£1,052.00
5+	£1,150	£57.50	£23	£1,230.50

This requires applicants to make a financial contribution in line with the revised Charging Schedule set out above before planning permission is granted by completing the SRMS Agreement and sending the completed form along with the mitigation contribution to the Planning Agreements Officer at the Local Planning Authority.

6.7 Enhancements

6.7.1 Bats

To act as biodiversity enhancement, the newly built dwellings will incorporate 1 No Ibstock bat brick each (**Fig 9**) 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.

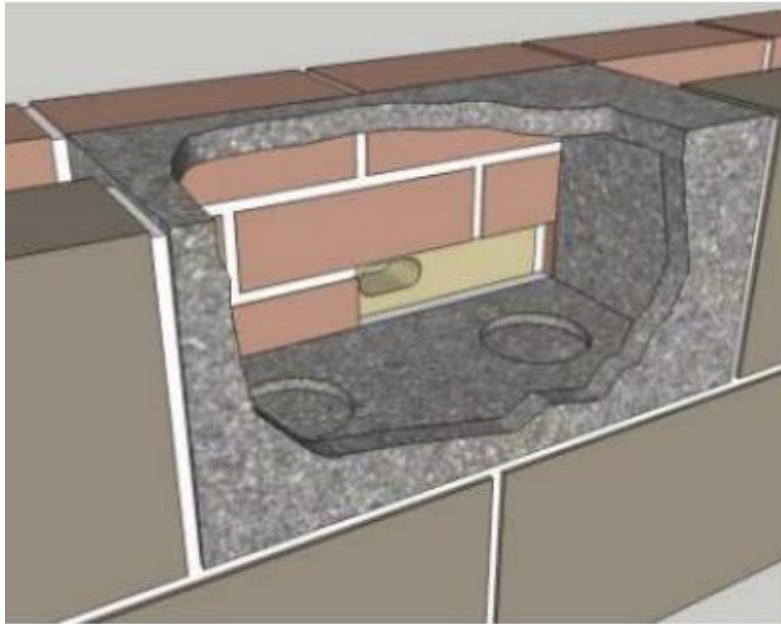
Figure 9. Ibstock bat brick 'B' which will be integrated into the newly built dwellings on-site.



6.7.2 Birds

To act as biodiversity enhancement, the newly built dwellings will incorporate one Swift brick each. The 'CJ Wildlife Swift maxi nesting box' (**Fig 10**) 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 10. 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.



6.7.3 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 11**).

Figure 11. Example of Hedgehog Highway signage to be placed above fence gaps provided to allow movements between gardens.



7.0 REFERENCES

CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK & Ireland

Chichester District Council (2015) 'Chichester Local Plan: Key Policies 2014 - 2029' Available online at: <http://www.chichester.gov.uk/CHttpHandler.ashx?id=24759&p=0>

Collins, J. (ed) (2023). *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th Edition)*. The Bat Conservation Trust, London. ISBN-978-1-7395126-0-6.

Department for Levelling Up, Housing and Communities (2023) '*National Planning Policy Framework*' (NPPF)

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.

ILP / BCT (2023) Guidance Note 08/2: Bats and Artificial Lighting at Night.

Natural England, 2011 *Badgers and Development: A Guide to Best Practice and Licensing*

Recreational Disturbance of Birds in Special Protection Areas (SPAs) (2023) *Guidance for planning in the Chichester Local Plan area*. Available online at <https://www.chichester.gov.uk/article/29757/Supplementary-planning-documents-and-policy-guidance>

UKHab Ltd. (2023). *UK Habitat Classification – Habitat Definitions Version 2.0* (July 2023).