

Preliminary Ecological Appraisal  
Land on the north side of South Hill Road  
March 2024

A report by

Alexander Stuart BSc (Hons), MSc - Ecologist

## Report details

Site name: Land on the north side of South Hill Road  
Site address: South Hill Road, Callington, Cornwall, PL17 7LH  
Grid reference: SX 35021 71453  
Survey date: 18<sup>th</sup> March 2024  
Report date: 28<sup>th</sup> March 2024  
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Report no: WOR-4387

## Declaration of compliance

### BS 42020:2013

This study has been undertaken in accordance with British Standard 42020:2013 Biodiversity, Code of practice for planning and development.

### Code of Professional Conduct

The information which we have prepared is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

## Validity of survey data and report

The findings of this report are valid for 12 months from the date of survey. If work has not commenced within this period, an updated survey by a suitably qualified ecologist will be required.

## Non-technical summary

Western Ecology has been commissioned to complete a preliminary ecological appraisal of land at South Hill Road, Cornwall. This survey related to the creation of a burial site.

To ensure compliance with nature conservation legislation and planning policy, the following recommendations are made with regards to habitats:

### Cornish Hedgebank

All retained hedge habitat should be protected from accidental damage during the construction phase by a minimum 2m buffer zone. Any loss in extent of native hedge habitat would be a material consideration to a planning application. Under current proposals, no hedge habitat is to be lost.

To ensure compliance with nature conservation legislation and planning policy, the following recommendations are made with regards to species:

### Amphibians Reptiles

The site has potential to provide hibernation and foraging habitat for common amphibians and reptiles. Reasonable Avoidance Measures are recommended during site clearance.

### Bats

Mature trees onsite have been assessed as providing potential for roosting bats. If the proposals show that these trees will be either removed or directly impacted (such as tree management works), an aerial inspection of these trees by a suitably qualified and licensed ecologist will be required prior to the commencement of works. If any evidence of bats is found, further surveys may be required.

Precautionary mitigation in relation to external lighting and light-averse bat species should be adopted to allow them to continue to use site boundaries and minimise light pollution from the development.

### Birds

It is likely that occasional common bird species nest within dense boundary habitats and trees within the Site. Any management activities affecting these habitats should be completed during the period September to February inclusive, outside the accepted bird nesting season. If this is not practicable, within 24 to 48 hours prior to the start of works these habitats should be thoroughly inspected by a suitably qualified person prior to disturbance or removal. If nesting birds are found, all activities likely to damage the immediate area should be delayed until chicks have fledged.

### Badgers (and other Mammals)

Badgers likely use the site for foraging. If there is potential that mammals may become trapped within the site during the construction phase of a development, RAMs would be necessary.

### Common Dormouse

There is an unknown potential for dormice to be present within the hedges bordering the Site. Construction activities have potential to impact individual animals through accidental damage and disturbance to hedge habitat. All retained hedge habitat should therefore be protected from construction activities by a minimum 2m wildlife buffer zone.

### Biodiversity Enhancement

A biodiversity net gain of 10% will be required for this development. Simple measures for biodiversity enhancement are also recommended within this report.

### Further Survey Work

No further survey work is recommended.

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# 1. Introduction

Western Ecology has been commissioned to complete a preliminary ecological appraisal of land at South Hill Road, Cornwall. This survey related to the creation of a burial site.

## 1.1. Survey aims

The survey and this report identify features of conservation importance that could constitute a constraint to any future proposals for this site. Where appropriate, recommendations for impact avoidance, mitigation and possible post-development enhancement are made to ensure compliance with wildlife legislation and relevant planning policy.

This survey has been prepared in accordance with the 'Guidelines for Preliminary Ecological Appraisal' produced by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2017).

## 1.2. Site location

The Site is located within a rural area, in the northern extremity of the town of Callington, South-east Cornwall. The village of Kelly Bray is located nearby to the east. It is bordered by hedge-agricultural land on all sides.

## 2. Survey methodology

### 2.1. Desktop survey

A desktop survey identified any nature conservation sites that may be affected by the proposals. This comprises an important part of the assessment process, providing information on ecological issues that may not be apparent during the site survey.

Consultees for the data search included:

- A biological record data search was provided by ERCCIS, with a radius of 1km from the centre of the Site.
- Natural England - GIS dataset of SSSI Impact Risk Zones, statutory nature conservation sites, priority habitats and granted European Protected Species license applications.

The location of nature conservation sites was examined to determine their ecological and landscape relationships with the proposed site. An assessment was then made of how the sites may be affected by the proposal, taking into account these relationships, and the species and/or habitat types for which the nature conservation site was chosen.

SSSI Impact Risk Zones are areas where the change to the environment could either create significant damage to a local SSSI, or might require additional planning and consultation in order to avoid impacting such sites. The assessments are made according to the particular sensitivities of the features for which the SSSI is notified, and specifies the types of development that have the potential for adverse impacts.

In compliance with the terms and conditions relating to its commercial use, the full desk study data is not provided within this report.

### 2.2. Field survey

A Preliminary Ecological Appraisal of the site was completed by Alexander Stuart BSc (Hons), MSc.

The survey was undertaken at 10:30 on 18<sup>th</sup> March 2024. Weather conditions during the survey were dry, with an air temperature of 10°C, and light wind.

Habitats were classified using the Phase 1 Habitat Survey methodology developed by the Joint Nature Conservation Committee (JNCC, 2010) and modified by the Institute of Environmental Assessment (IEA, 1995). Habitats encountered are described within the Results section, with a map included within the report. Plant species were identified according to Stace (1997).

### 2.3. Method for valuation of habitats

The ecological value of habitats present is provided in line with Guidelines for Ecological Impact Assessment (CIEEM, 2018), and those which are important in terms of legislation or policy are identified.

The nature conservation value, or potential value, of the habitat is determined within the following geographic context:

- International importance (e.g. internationally designated sites such as Special Areas of Conservation, Special Protection Areas, Ramsar sites);
- National importance (e.g. nationally designated sites such as Sites of Special Scientific Interest or species populations of importance in the UK context);
- County importance (e.g. SNCI, habitats and species populations of importance in the context of Cornwall);
- Local importance (e.g. important ecological features such as old hedges, woodlands, ponds);
- Site importance (e.g. habitat mosaic of grassland and scrub which may support a diversity of common wildlife species);
- Negligible importance. Usually applied to areas such as built development or areas of intensive agricultural land.

The examples are not exclusive and are subject to further professional ecological judgment.

### 2.4. Survey constraints

All areas of the Site were readily accessible. Due to the timing of the survey, constraints relating to plant identification were present.

It should be noted that habitats, and the species they may support, change over time due to natural processes and because of human influence. In line with current guidelines, the survey on which this report is based is valid for one year, after which time it will need updating. This report is valid until 18<sup>th</sup> March 2025.

### 2.5. Study area

The study area for the desktop survey is within 1km. The study area for the Preliminary Ecological Appraisal was the likely footprint of the proposed development, hereafter referred to as the 'Site', and its immediate boundaries. This is the area included within the line described as "Survey area" within the legend of Map 1.



## 3. Results

### 3.1. Site description

The Site comprised mostly of hedgebank-lined improved grassland. An access track extended southwards towards the nearby road network. Scrub fringed the western and southern edges of the southern field. A collapsed shed was present in the centre.

### 3.2. Phase 1 habitats

Habitats have been classified using the Phase 1 Habitat Survey methodology and are described below and detailed in Map 1. Habitats which are important in terms of legislation or policy are identified. Plant species that characterise each of these habitats are identified, although this is for descriptive purposes, and comprehensive inventory is not provided.

Table 1: Habitat description, biodiversity value and extent.

Habitat	Description	Biodiversity value
Improved Grassland	Improved grassland fields comprising mainly perennial rye grass, with red fescue and cocksfoot, formed the majority of the Site. Other species present within the grassland included dock, dandelion, white clover, and spear thistle. These fields were at a short sward.	Site
Building	A collapsed metal shed was present in the centre of the Site. It was open-sided with a corrugated sheet metal roof.	Negligible
Cornish Hedgebank	<p>Cornish hedgebank with species-rich hedgerow with trees formed the majority of the Site boundaries. Species included mainly blackthorn, with hawthorn, oak, hazel, sycamore, holly, elder, and gorse. Understorey species including navelwort, foxglove, primrose, ivy, nettles, cleavers, and hart's tongue fern. The southern stretch of hedgebank also featured three-cornered leek growing at its base.</p> <p>Cornish hedgebank with species poor hedgerow formed the southern, roadside boundary. It was formed mostly of willow and blackthorn, with dogrose, nettles, and navelwort below.</p>	Site Habitat of Principle Importance Local BAP priority Habitat
Scrub	Bramble scrub lined the southern and western boundaries of the southern field.	Site
Access track	The access track extends from the main site area to the road to the west. This comprised slate gravel, with encroachment from the neighbouring grassland species.	Negligible

### 3.3. Desktop survey

The biological records search found a number of notable species within the geographical parameters of the search (Table 2).

Table 2. Recent notable species records within 1km (2013-2024).

Taxon	Scientific Name	Common Name	Records
Bird	<i>Columba oenas</i>	Stock Dove	1
	<i>Cuculus canorus</i>	Cuckoo	1
Insect - butterfly	<i>Lasiommata megera</i>	Wall	1
Terrestrial mammal	<i>Erinaceus europaeus</i>	West European Hedgehog	19
	<i>Sorex araneus</i>	Eurasian Common Shrew	1

#### Statutory Nature Conservation Sites (SNCS)

There are no SNCS located within 1km of the Site, however it falls within the Zone of Influence of Plymouth Sound and Estuaries SAC.

#### Non-statutory Nature Conservation Sites (NNCS)

There is one NNCS located within 1km of the Site, with details below.

##### Bearlands County Wildlife Site (CWS)








This NNCS is located approx. 0.6km south of the proposed Site. The site comprises mixed broadleaved woodland, bracken/mixed scrub and unimproved grassland, fen, purple moor grass, rush pasture, and hazel coppice. It supports notable plant species and invertebrate species.

#### Impact Risk Zones

The Site is not within an area identified as a SSSI Impact Risk Zone for this type of development.



**Legend**

-  Survey Area (approx.)
-  Trees with Bat Potential
-  Cornish hedgebank
-  Scrub
-  Building
-  Track
-  Improved grassland

Title: Map 1. Phase 1 habitats

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### 3.4. Potential for species of nature conservation importance

Habitats have been assessed from the results of the field survey for their potential to support protected species (Table 3). Where there is no potential for a species or species group to be present within the site they may be scoped out at this stage.

Table 3. Potential for species of nature conservation importance

Species	Assessment	Likely value
Amphibians	Habitats within the Site do not provide potential for breeding amphibians. Low numbers of foraging and/or hibernating amphibians may utilise the Site boundaries.	Potentially present at boundaries
Badgers	No badger setts were observed within or immediately adjacent to the Site's boundaries. Foraging badgers are likely active within the area, and the Site is suitable for foraging.	Foraging Only
Bats	Three trees onsite were identified as presenting low potential for roosting bats.	Roosting: Low
	The linear nature of the hedges provide some suitable foraging and commuting habitat for bats. The Site is well-connected to good-quality foraging habitat nearby. The site and its surroundings are likely unlit at night, increasing suitability for light-averse bats.	Foraging: Moderate
Birds	The hedgebanks and mature trees provide nesting opportunities for a range of common passerine bird species.	Moderate
Common Dormouse	The majority grassland habitat onsite is unsuitable for dormice. The densely vegetated hedgebanks offer some limited suitability, but are relatively species-poor and often heavily managed and/or defunct. Although no records were recovered from within 1km of the Site, they are present within the wider area.	Potentially present at boundaries
Hedgehog	The hedgerows and rough grassland habitats provide potential refuge and foraging opportunities for hedgehogs.	Moderate
Reptiles	The majority of the Site comprised managed improved grassland, which is of little value to reptiles. The dense boundary features and may hold value for foraging and/or hibernating reptiles.	Potentially present at boundaries
Otter	No watercourses are associated with the site. This species does not need to be considered further.	Negligible
Water Vole	No watercourses are associated with the site. This species does not need to be considered further.	Negligible
Notable invertebrates	Habitats at this Site are likely to support common and widespread invertebrates, although priority invertebrate habitats such as flushes, suitable brown-field land, and soft rock cliffs are absent from the Site. These species do not need to be considered further.	Negligible
Notable plants	Habitats within the Site provide little potential for notable or rare plants and they do not need to be considered further.	Negligible
Invasive non-native plants (INNS)	No Schedule 9 listed INNS (Wildlife and Countryside Act 1981 (as amended) were identified onsite.	Negligible

## 4. Evaluation of ecological features and potential impacts

### 4.1. Introduction

Ecological features that have the potential to be present have been assessed in light of current nature conservation policy, planning policy and wildlife legislation by an experienced ecologist (see Appendix 1). Where necessary, the ecological value of an ecological feature is given along with the potential effect of a proposed development.

If it is considered that the proposed development is likely to have no effect on features that have been identified as present, or potentially present, they may be scoped out at this stage.

### 4.2. Habitats of nature conservation importance

#### Protected habitats

Habitats are protected under international and national legislation including The Conservation of Habitats and Species Regulations (Amendment (EU Exit)) 2019, and Wildlife and Countryside Act 1981 (as amended). These have been formulated into policy measures, with many examples protected under formal site designations such as SSSIs and SACs.

No habitats of European Community Importance as defined within The Conservation of Habitats and Species Regulations (Amendment (EU Exit)) 2019 were present within this site. Protected habitats of this type are not a consideration for this project.

#### Notable habitats

Sixty five habitats are listed as being of principal importance, in the Secretary of State's opinion, for the purposes of conserving biodiversity. Under section 41 (England) of the NERC Act (2006) there is a need for these habitats to be taken into consideration by a public body when performing any of its functions with a view to conserving biodiversity. These habitats are the subject of National and Local Biodiversity Action Plans.

Hedgerows are given particular protection under the Protection of Hedgerows Act 1997.

#### Cornish hedgebank

The Site's hedgebank habitats qualify as Habitats of Principal Importance and a Local BAP priority Habitat.

Any loss in extent of this habitat would be a material consideration to a planning application and mitigation would be recommended. Under current proposals, no hedgebank is proposed to be removed. Mitigation is recommended to protect against accidental damage.

### 4.3. Species of Nature Conservation Importance

#### Overview

Many native wild plants and animals are protected by law with the two main legal instruments being the Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations (Amendment (EU Exit)) 2019. The latter consolidates amendments to the Conservation (Natural Habitats, &c) Regulations 1994 which transposed into UK Law the EU Habitats Directive.

1150 species of fungi, plant or animal are listed as being of principal importance, in the Secretary of State's opinion, for the purposes of conserving biodiversity. Under section 41 (England) of the NERC Act (2006) there is a need for these species to be taken into consideration by a public body when performing any of its functions with a view to conserving biodiversity. These species are the subject of National and Local Biodiversity Action Plans.

#### Amphibians

The four native widespread amphibians (Common Frog, Common Toad, Common Newt and Palmate Newt) are given limited protection from trade under the Wildlife and Countryside Act 1981 (as amended).

Great Crested Newt and Natterjack Toad and their breeding sites and resting places (during all parts of their lifecycle) are fully protected under the Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017. They are identified as European Protected Species. Under these laws it is an offence to:

- capture, kill, disturb or injure Great Crested Newts and Natterjack Toads (on purpose, or by not taking enough care);
- damage or destroy a breeding or resting place (even accidentally);
- obstruct access to their resting or sheltering places (on purpose, or by not taking enough care);
- possess, sell, control or transport live or dead newts, or parts of them;
- take Great Crested Newt or Natterjack Toad eggs.

The very rare Pool Frog, only recently recognised as a native amphibian, is fully protected under the Wildlife and Countryside Act 1981 (as amended) from killing, injury, trade and disturbance, whilst their habitats are also protected.

Great Crested Newt, Natterjack Toad, Common Toad and Pool Frog are listed as species 'of principal importance for the purpose of conserving biodiversity'.

There is some potential for low numbers of widespread amphibians to be active within the dense site boundaries, during their terrestrial and/or hibernation phases. These areas are outside of the scope of the development, and any animals which may be present will be protected by the recommended mitigation for Cornish hedgebanks (see Section 5.1, below). No further mitigation is recommended.

## Badgers

Badgers are protected from persecution or ill-treatment under the Protection of Badgers Act 1992. Under the Act, it is an offence to:

- wilfully kill, injure or take, or attempt to kill, injure or take, a badger;
- damage a badger sett or any part of it;
- destroy a badger sett;
- obstruct access to, or any entrance of, a badger sett;
- cause a dog to enter a badger sett; or
- disturb a badger when it is occupying a badger sett.

The site and its surroundings are suitable for foraging badgers. There may be potential for Badgers to get trapped within the Site during the construction phase. Precautionary mitigation for foraging badgers is recommended.

## Bats

Bat species and their breeding or resting places (roosts) are protected under the Wildlife and Countryside Act 1981 (as amended), and The Conservation of Habitats and Species Regulations (Amendment) (EU Exit) 2019. They are identified as European Protected Species. Under these laws it is an offence to:

- capture, kill, disturb or injure bats (on purpose or by not taking enough care);
- damage or destroy a breeding or resting place (even accidentally);
- obstruct access to their resting or sheltering places (on purpose or by not taking enough care); or
- possess, sell, control or transport live or dead bats, or parts of them.

Seven species of bat are listed as species “of principal importance for the purpose of conserving biodiversity”.

The grassland habitat which accounts for the majority of the Site provides relatively poor foraging habitat, due to a lack of supported insect prey. Any loss of low value grassland habitats to development is considered to be unlikely to impact local bat populations. However, the linear habitats associated with the Site (such as hedges and trees) which are present at the boundaries are likely to provide some foraging and commuting opportunities.

The proposed development will be unlit at night and the site boundaries will not be impacted. In addition to this, the planting of trees will likely enhance the Site for foraging bats over the long term. No mitigation is recommended.

## Birds

All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended) from being killed, injured or captured whilst their nests and eggs are protected from being damaged, destroyed or taken. Birds which are listed under Schedule 1 of the Act are given additional protection against disturbance.

Fifty-nine species of bird are listed as species “of principal importance for the purpose of conserving biodiversity”.

It is likely that common and widespread birds nest within dense hedge and mature trees present at the boundaries. These habitats are to remain intact during development. If management works with the potential to impact nesting birds occurred outside the accepted bird nesting season, no mitigation would be recommended. However, if this is not the case, mitigation would be recommended.

### Common Dormouse

Common (or Hazel) Dormice, and their breeding and resting places, are protected under the Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations (as amended (EU Exit)), 2019. They are identified as a European Protected Species. Under these laws, it is an offence to:

- Capture, kill, disturb, or injure Common Dormice (on purpose or by not taking enough care);
- Damage or destroy a breeding or resting place (even accidentally);
- Obstruct access to their resting or sheltering places (on purpose or by not taking enough care); or
- Possess, sell, control or transport live or dead dormice, or parts of dormice

Although it is unknown if dormice are present within the area, the boundary hedges offer potential habitat for dormice, and the Site is well connected to the hedgerow and woodland network within the wider area.

Under current proposals, no hedge is to be lost, however accidental disturbance and/or harm to any dormice which may be present is possible. Precautionary mitigation should be adopted.

Disturbance during the operational phase is possible. This may include disturbance from additional light spill, increased noise, vehicle movements, and human presence during maintenance visits. However, the development will not be lit at night, and there will be sufficient stand-off distances between the development footprint and suitable habitat. Taking this into account, with the agricultural baseline of the site, impacts to Dormice during the operational phase are considered to be unlikely.

### Hedgehog

Hedgehogs are partially protected under the Wildlife & Countryside Act and may not be trapped without a licence from Natural England. Hedgehogs are listed as a species “of principal importance for the purpose of conserving biodiversity”.

There is potential that Hedgehogs forage within the Site. Development may have potential to fragment foraging habitat and create a barrier to dispersal across the Site. Simple mitigation relating to badgers (and other mammals) will also apply to hedgehog, and no further mitigation is recommended.

### Reptiles

All native reptiles are protected to some degree under the Wildlife and Countryside Act 1981 (as amended), whilst our two rarest species, the Sand Lizard and Smooth Snake, are given full protection under the Act, and also identified as European Protected Species.



The four common species (Slow Worm, Adder, Grass Snake and Common (Viviparous) Lizard) are protected from deliberate killing, injury and trade. All six native reptiles are listed as species “of principal importance for the purpose of conserving biodiversity”.

There is some potential for low numbers of common reptiles to be active within the dense site boundaries. Mitigation for amphibians would also apply to reptiles, and no further mitigation is recommended.

## 5. Recommendations for mitigation and further surveys

### 5.1. Mitigation

Where there is potential that a proposed development will have a significant<sup>1</sup> effect on a valued ecological feature of nature conservation interest, recommendations for mitigation are made based on the mitigation hierarchy suggested in Paragraph: 018 Reference ID: 8-018-20140306 of National Planning Practice Guidance;

Avoidance –significant harm to wildlife species and habitats should be avoided through design.

Mitigation – where significant harm cannot be wholly or partially avoided, it should be minimised by design, or by the use of effective mitigation measures that can be secured by, for example, conditions or planning obligations.

Compensation – where, despite whatever mitigation would be effective, there would still be significant residual harm, as a last resort, this should be properly compensated for by measures to provide for an equivalent value of biodiversity.

Where the detail of a proposal is unknown, such as in outline planning applications, general mitigation will be suggested. This should be re-addressed once final plans are known.

#### Further survey work

Where further survey work is not recommended, this is because it is the professional judgement of the ecologist that adequate information is already available and further surveys would not make any material difference to the assessment provided.

Where the information within this report is insufficient to allow a full description of the nature conservation features of the site along with a robust assessment of the potential effects on these features, further survey work will be recommended.

### 5.2. Habitats of nature conservation importance

#### Cornish Hedgebank

All retained hedge habitat should be protected from accidental damage during the construction phase by a minimum 2m buffer zone. This protection zone should be delineated by a suitable fence and maintained for the duration of the works, and there should be no access, storage of materials, ground disturbance, burning or contamination within the fenced areas.

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<sup>1</sup> For the purposes of this report, a practical approach has been taken to define the term 'significant'. If an effect is sufficiently important to be given weight in the planning process or to warrant the imposition of a planning condition, it is likely to be 'significant' in the context of the level under consideration (BSI, 2013).

### 5.3. Protected species and species of nature conservation importance

To ensure compliance with nature conservation legislation and planning policy, the following recommendations are made with regards to species:

#### Amphibians and Reptiles

There is potential for common amphibians and reptiles such as toads, Slow Worm, and common lizard to be present in the rough habitats and hedgebanks that are associated with the Site and its boundaries.

Further survey work is not considered appropriate or proportionate due to the limited footprint of the proposed works, and the high potential for Reasonable Avoidance Measures (RAMs) to successfully ensure that no amphibians/reptiles are killed or injured during development. By following simple mitigation, any adverse impact can be avoided.

During vegetation clearance, the following RAMs will be adopted:

#### Clearance in terrestrial (active) period

If vegetation clearance is to occur during late March to October areas to be affected by construction activities should be de-vegetated prior to any site activities under the supervision of a suitably qualified ecologist.

Vegetation will initially be cut to a height of no more than 20cm, having first used an ecologist to walk and inspect the ground. After at least 48hrs a second cut will be made as close to ground level as possible. The cuts should be directed toward retained habitat. This should ensure that amphibians/reptiles, if present, are displaced from the works area.

#### Clearance during the hibernation period:

Site clearance should be avoided during November to mid-March as there is unknown potential for hibernating amphibians/reptiles to be present. If this is planned but unavoidable, it is recommended that vegetation is cut back to ground level during the active season (see above) and kept close-managed to deter hibernating amphibians/reptiles within the Site footprint.

If any amphibian/reptile is detected on site, it must be carefully picked up, placed in a clean bucket and moved to an area of suitable habitat (e.g. edges of damp grassland/scrub, away from any development footprint).

#### Badgers (and other mammals)

To prevent any restriction of movement and animals becoming trapped during the construction phases of a development, the following is recommended:

- Permanent fencing should be fitted with suitable holes to allow small mammals, such as hedgehogs, to continue using the site through the operation of the proposed development.

- Site security fencing along the boundaries should leave a gap of at least 2 metres wide between the fence and any woodland, hedgerow or scrub;
- Any trenches left open at night should have some means of escape for mammals, such as the placement of a scaffolding board at one end;
- Any site security fences should have a gap at each corner sufficient to allow mammals to exit the Site should they gain entry.

### Birds

It is highly likely that common and widespread birds nest within the onsite hedges and trees. Any management activities affecting these habitats should be completed during the period September to February inclusive, outside the accepted bird nesting season. If this is not practicable, within 24 to 48 hours prior to the start of works these habitats should be thoroughly inspected by a suitably qualified person prior to disturbance or removal. If nesting birds are found, all activities likely to damage the immediate area should be delayed until chicks have fledged.

### Common Dormouse

There is an unknown potential for dormice to be present within the suitable hedges bordering the Site. Construction activities have potential to impact individual animals through accidental damage and disturbance to hedge habitat. Precautionary measures are recommended to minimise the risk of this impact.

All retained hedge habitat should therefore be protected from construction activities by a minimum 2m wildlife buffer zone. This protection zone should be explained during site inductions and delineated by suitable fencing and signage. No construction activities should take place within this buffer zone. This will ensure that it is unlikely that any Dormice present within these habitats would be disturbed in a way that could be considered an offence, during the construction phase.

## 5.4. Summary of net gains and losses

Table 4 provides a summary of net gains and losses to biodiversity resulting from the proposed development with mitigation, but without biodiversity enhancement.

Table 4. Summary of net gains and losses to biodiversity

Nature conservation feature	Potential impact	Proposed mitigation	Outcome/Comments
Cornish Hedgebank	Accidental damage during construction.	Adoption of a minimum 2m protection zone with fencing.	Impact avoided
Amphibians/Reptiles	Harm during clearance	Simple RAMs during clearance is recommended.	Impact avoided
Badgers (and other mammals)	Becoming trapped within the site	Simple mitigation is recommended.	Impact avoided
Nesting Birds	Harm during hedgerow and tree management	Any activities affecting nesting habitats should be completed during the period September to February inclusive, outside the accepted bird nesting season.	Direct harm and injury avoided

Common Dormice	Disturbance/harm to individual animals during construction activities	Implementation of a minimum 2m wildlife protection zone along all hedgerow habitat during construction phase	Impact minimised
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## 6. Further survey work

Information within this report is sufficient to allow a robust assessment of the potential effects on the majority of ecological features associated, or potentially associated, with this site.

No further surveys are recommended.

## 7. Biodiversity Net Gain

A biodiversity net gain of 10% will be required for this development. Simple measures for biodiversity enhancement are also recommended within this report.

## 8. Biodiversity enhancement

In line with the Environment Act 2021, the majority of Local Planning Authorities (LPA) are now requiring suitable enhancements for wildlife within minor developments, with the aim of securing net gain. Although applying a measurable net gain does not apply to permitted development, change of use, or alterations to buildings and housing extensions, the LPA will likely seek proportionate enhancements for wildlife from these developments. Depending upon the LPA's requirements, this might include bat box/brick/tubes, bird box/bricks and bee bricks. If structurally inappropriate to the design, the use of alternative, but equivalent, wildlife features is possible.

Creating new habitats, enhancing existing habitats or providing new wildlife features, can all contribute towards biodiversity enhancement, and helping to rebuild habitat networks in the wider area improves ecological resilience and adaptation to climate change.

It should be noted that a biodiversity net gain of 10% may be required for this development. Biodiversity net gain calculations should be completed at the earliest practicable stage in the development to avoid significant re-design costs in the latter stages of the planning process.

Enhancements are additional to any measures necessary to deal with potential impacts on site, as they are an opportunity to provide new benefits for biodiversity as a consequence of the proposals being implemented.

For this development, we recommend:

- Two bat boxes per new building;
- Two bird boxes per new building;
- One sparrow terrace per new building;
- Two bee bricks per new building.
- hedgerow management

### 8.1. Bats

New roosting opportunities for bats can be created with the installation of bat boxes. Additional bat roosting opportunities should be created for crevice roosting bats by adding a built-in bat box, such as the Vivara Pro Build-in Woodstone bat tube (Figure 1), to the southern aspect of each of the new buildings, at least 2m above ground level, and away from artificial light sources. This should be fitted under the guidance of a suitably qualified ecologist.



Figure 1. Vivara bat tube.

A design such as the Vivara bat tube (Figure 1) provides roosting opportunities for cavity dwelling species which are likely to be active in the local area such as Pipistrelles, Brown Long-eared and Myotis and provides ideal ambient conditions for summer and maternity roosts.

## 8.2. Bird Boxes

New nesting opportunities could be provided for birds on the Site, through the provision of birdboxes such as bird blocks (Figure 1) fitted to the northern or eastern aspect of each new build. This block has been designed to encourage nesting for smaller garden birds, and can be built into the walls of new builds or fixed to the exterior. The block must be at least 2 metres from the ground, and positioned away from doors, windows, and vents to prevent disturbance.



Figure 1. Green and Blue bird block.

Other additional nesting opportunities that could be provided for birds on the Site could include the Sparrow Terrace (Figure 2), fitted to the northern or eastern aspect of any new build. This terrace has been designed to help redress the balance of falling House Sparrow numbers. The current UK population of 6 million pairs is half what it was in 1980 and this is thought to be due to habitat destruction and lack of suitable nesting spaces. Sparrows are social birds and like to nest in company.



Figure 2. Sparrow Terrace



This House Sparrow Nest Box is manufactured from WoodStone - a mix of concrete and FSC wood fibres. This material is strong and highly insulating which helps to provide a thermally stable environment within the box. It also protects against damage from predators such as cats, woodpeckers and squirrels. It has two breeding chambers making it particularly suitable for house sparrows as they prefer to nest in colonies.

The House Sparrow Nest Box can be integrated into the masonry of a new build or fixed onto an external wall of a conversion using strong screws and wall plugs (not included). If possible, it should be positioned near to vegetation and at a minimum of 2m above ground (taken from NHBS website).

### 8.3. Invertebrates

Where practicable, invertebrate bricks (Figure 3) could be fitted 1 to 2 metres above ground level on the southern side of a build. These attract solitary bees, wasps and other invertebrates.



Figure 3. A bee brick

### 8.4. Hedgerow Management

A sympathetic management regime could be adopted for any existing hedges. This could include the following:

- Trim the hedgerows between November to February to avoid the destruction of bird nests; and to allow any berry crops that are present to be used by wintering birds and other wildlife.
- Trim on a two- or three-year rotation, rather than annually, to ensure that thick nesting cover is available, and to boost any berry crop that generally develops on second-year growth. Cutting could also be targeted so that no more than a third of the total length is cut during one rotation.
- Rejuvenate hedges when they become gappy at the base, to keep them healthy, by laying rather than coppicing.
- Retain old, dying and dead trees where these are not a hazard, as they support important insect communities.

## 9. References

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## 10. Appendix 1:

Legislation and Policy used to assess habitats and species:

### European Habitats and Species Directive (CEC, 1992)

The main aim of the Habitats Directive is to promote the maintenance of biodiversity by requiring Member States to take measures to maintain or restore natural habitats and wild species listed on the Annexes to the Directive at a favourable conservation status, introducing robust protection for those habitats and species of European importance.

### European Red Data lists (IUCN, 2000)

International Union for Conservation of Nature (IUCN and the European Commission have been working together on an initiative to assess around 6,000 European species according to IUCN regional Red Listing Guidelines. Through this process they have produced a European Red List identifying those species which are threatened with extinction at the European level so that appropriate conservation action can be taken to improve their status.

### European Council Birds Directive (CEC, 1979)

The Directive provides a framework for the conservation and management of, and human interactions with, wild birds in Europe. An important part of this Directive is the identification and classification of Special Protected Areas (SPAs) to protected vulnerable bird species listed in Annex 1 of the Directive and regularly occurring migrating species.

### The Wildlife and Countryside Act (WCA) 1981 (as amended)

This Act is the primary legislation that protects animals, plants and certain habitats in the UK.

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

The Conservation of Habitats and Species Regulations (Amendment) (EU Exit) 2019 amends the previous Conservation of Habitats and Species Regulations 2017, which are one of the pieces of domestic law that transposed the land and marine aspects of the Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (“the Habitats Directive”) and elements of Directive 2009/147/EC on the conservation of wild birds (“the Birds Directive”) in England, Wales, and to limited extent, Scotland and Northern Ireland.

### Protection of Badgers Act 1992

The Protection of Badgers Act 1992 consolidated and improved previous legislation. Under the Act it is an offence to kill, injure or take a Badger, or to damage or interfere with a sett used by a Badger unless a licence is obtained from a statutory authority.

### The Hedgerow Regulations 1997

The Hedgerows Regulations 1997 protect certain hedgerows from being removed (uprooted or destroyed) if they meet certain criteria.

### [The Countryside and Rights of Way \(CROW\) Act 2000](#)

This Act increases measures for the management and protection for Sites of Special Scientific Interest (SSSI) and strengthens wildlife enforcement legislation.

### [Circular 06/2005 Biodiversity and geological conservation – statutory obligations and their impact within the planning system](#)

This circular provides administrative guidance on the application of the law relating to planning and nature conservation as it applies in England. It complements the national planning policy in the National Planning Policy Framework and the Planning Practice Guidance.

### [Natural Environment and Rural Communities Act 2006](#)

The Act made amendments to the both the Wildlife and Countryside Act 1981 and the Countryside and Rights of Way (CROW) Act 2000. For example, it extended the CROW biodiversity duty to public bodies and statutory undertakers.

### [UK Post-2010 Biodiversity Framework, 2012](#)

The 'UK Post-2010 Biodiversity Framework', published in July 2012, succeeds the UK BAP and 'Conserving Biodiversity – the UK Approach', and is the result of a change in strategic thinking.

### [National Planning Policy Framework, 2019](#)

The National Planning Policy Framework sets out the Government's planning policies for England and how these are expected to be applied. It contains a number of policies relating to ecology including "minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures".

### [The natural choice: securing the value of nature \(2011\) \(Natural Environment White Paper\)](#)

This White Paper outlines the Governments vision for the future of landscape and ecosystem services.

### [Biodiversity 2020](#)

This is a national strategy for England's wildlife and ecosystem services based on the White Paper.