

# Preliminary Ecological Survey PEA



Site Address
Sea Lodge, Tregurrian Hill,
Newquay, Cornwall
TR8 4AD

GR: SW 84830 65137

March 2022 (Updated 29/10/2023)

Version 2

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#### 1. Contract Details

Preliminary Ecological Appraisal: Extended Phase 1 Ecology Survey		
Grid Reference:	SW 84830 65137	
Client:	Henry Ashworth	
Architect/Planning Consultant:	Ben White Architecture	
Date of Survey:	15/03/2022 (site checked 30/08/2023)	
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Workflow Number	PEA2022164	
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## **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, unless specifically stated otherwise.

## **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, unless the site has been maintained in exactly the same condition, in which case the report can be considered valid for 24 months. Please be aware that some Local Planning Authorities (LPAs) require an update once 12 months has elapsed. If work has not commenced within this period, an updated survey by a suitably qualified ecologist may be required.

## **Legal and Moral Constraints and Responsibilities Summary**

An overview of relevant legislation and responsibility is given within the Appendices: Planning Policy and Legislation. Constraints exist for development where specific habitats or species are, or are potentially, within or adjoining a site proposed for development. Therefore, avoidance, mitigation, compensation and enhancement for a site will apply.

In all instances where Mitigation is given, also refer to:

- Any further survey work for protected species (Phase 2 Surveys) recommended, or their results.
- General Good Practice during Construction Stage.
- Law and Legislation pertaining to specific species (plants and animals)
- Prevention of the spread of native and non-native invasive plants and animals.
- Avoidance of Wildlife Crime http://www.nwcu.police.uk/

Further advice if species are found onsite during development may be sought from Ecological Surveys Ltd (Tel: 01503 240846 or 07736 458609) or Natural England.

## What is a Preliminary Ecological Appraisal (PEA)?

Preliminary Ecological Appraisal (PEA) is the term used to describe a rapid assessment of the ecological features present, or potentially present, within a site and its surrounding area (the zone(s) of influence in relation to a specific project (usually a proposed development)). A PEA normally comprises a desk study and a walkover survey. It should be considered to be a simplified form of an ecological survey and assessment.

The key objectives of a PEA are to:

- identify the likely ecological constraints associated with a project;
- identify any mitigation measures likely to be required, following the 'Mitigation Hierarchy'
- identify any additional surveys that may be required to inform an Ecological Impact Assessment (EcIA) should one be required; and
- identify the opportunities offered by a project to deliver ecological enhancement.

[CIEEM, 2017a]

The primary audience for a PEA is the client or developer and relevant members of the project team, such as the architect, planning consultant and landscape architect. It is normally produced to inform a developer (or other client), and their design team, about the key ecological constraints and opportunities associated with a project, possible mitigation requirements and any detailed further surveys required to inform an Ecological Impact Assessment (EcIA).

Many PEA's are written in a form which might not be accepted by the LPA as it might lack sufficient detail. Our report is written in a manner to support smaller scale developments, or developments taking place in locations which are not of high biodiversity value, without upgrading to a full EcIA.

Please Note: if the PEA reveals the presence of protected / priority species and / or habitats or the potential for the proposal to impact upon protected sites, it may be necessary to upgrade the PEA into an EcIA to ensure its acceptance by the LPA.

## 2. Non-technical Summary

Purpose of the report:	To present the results of the Extended Phase 1 Habitat Survey undertaken at Sea Lodge, hereafter referred to as 'the Site'; assess the impacts of the proposed development on the important ecological features identified; and detail applicable compensation, mitigation measures and biodiversity enhancements as appropriate.
Project Description	The demolition of the current dwelling and construction of a new residential dwelling within a similar footprint. A new parking area and access point is proposed within an area of scrub habitat.

Efficacy of the PEA Report	This report with associated documents is considered sufficient for the size and scale of predicted impacts as a result of the proposal.	
The following may or will be required in association with this PEA	' '	
	<ul> <li>The following Mitigation Strategy has been provided:         <ul> <li>Dormouse Mitigation Strategy for the removal of scrub habitat. Ecological Supervision is required for this procedure for the protection of dormice and nesting birds.</li> <li>Bat Emergence Survey x1</li> </ul> </li> </ul>	
Habitat Regulation Assessment (HRA) likely?	It is considered possible that the LPA will request an HRA and we advise urgent consultation with the LPA to clarify this requirement.	
Important Ecological Features (IEF)	The presence of an IEF on site, or in a location which could potentially be impacted by the development or post development activities will need to be Mitigated for.	
IEF Designated sites	Onsite: - None  Offsite: - None	
IEF Habitats	Onsite: - Dense scrub - Amenity and shrubs - Ornamental hedgerow - Native, species poor hedgerow	

	- Building
IEF Species	Offsite: - None  Onsite: - Bats (potential for foraging and commuting) - Hazel dormouse (potential in scrub and native hedgerows) - West European hedgehog (potential) - Birds (potential for nesting)  Offsite: - None
Invasive Non-native Species (Schedule 9 species)  If present, a legal obligation exists to avoid spreading these plants into the wider environment.	On site: None recorded  In the immediate vicinity: Not known
Avoidance Measures Avoidance – Significant harm to wildlife species and habitats should be avoided through the design.	Avoid impacts to the following habitats: - All hedgerows are to be retained Shrubs to be retained where possible.
Mitigation Measures 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.	<ul> <li>Follow Dormouse Mitigation strategy, with Ecological Supervision</li> <li>Orchard creation</li> <li>1 metre permanent buffers along all hedgerows</li> <li>2 x built in bird boxes</li> <li>Artificial Lighting Strategy</li> <li>Covered trenching / suitably positioned plank to permit escape and capped pipework at night</li> <li>Impact avoidance during the construction phases</li> </ul>
Enhancement Measures Ecological enhancement measures are those that improve the ecological condition of the development site (or an alternative site) after the development is complete. Ecological enhancement measures must, therefore, be over and above any avoidance, mitigation and compensation measures required to neutralise the impacts of the development on wildlife.	<ul> <li>Hedgerow management</li> <li>Built-in bat provision</li> <li>Solitary bee provision</li> <li>Landscaping to benefit wildlife</li> <li>Provision of wildlife access (150mm x 150mm) at base of any site/garden fences</li> </ul>
Landscape and Ecological Management Plan (LEMP) A LEMP clarifies the timings and process which must be followed to ensure the biodiversity protection and enhancement of the site, during	- Not recommended for this site.

and post-development, as well as landscape considerations.	
Biodiversity Losses & Gains Summary	There is an expected loss of 0.025ha of dense scrub and 0.038ha of amenity garden. Creation of orchard (2 semi-mature apple trees already in situ) of approximately 0.018ha in current area of amenity garden.

Any works which negatively impact the biodiversity of this site, post the results of this ecological survey being received verbally, or in writing, could constitute a Wildlife Crime (Appendix F. Wildlife Crime; <a href="http://www.nwcu.police.uk/">http://www.nwcu.police.uk/</a>).

#### 3. Introduction

Ecological Surveys Ltd were commissioned to undertake a Preliminary Ecological Appraisal (PEA) to include the potential for legally protected and notable species of the Site, and to assess the potential impact of the development on the biodiversity of the Site and its immediate environs. Ecological Surveys Ltd undertook an Ecological Appraisal of this site in 2016, followed by a Re-assessment Report of the site with a Bat Emergence Survey in 2018. The site's report PEA and Bat Emergence Survey was updated in 2023.

Only habitats which are present on site or adjoining the site are included and no discussion is entered into regarding habitats which are not present.

## 3.1 Survey Aims

The survey and this report identify features of conservation importance that could constitute a constraint to the proposals for this Site. Where appropriate, recommendations for impact avoidance, mitigation and 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, 2017a).

## 3.2 Site Description

The site is located on the western edge of the village of Tregurrian in north Cornwall. The site location is given in Figure 3.1.

The site surveyed comprises two areas of scrub which has encroached from the northern and southern boundaries towards the access track, which passes through the centre of the site. To the west of the site is a detached bungalow and garden. Access is onto Tregurrian Road, which is located to the north of the site. Local habitats are rural and dominated by arable and improved field systems. Watergate Bay is located 650m to the west.

The area surveyed is approximately 0.311 hectares in extent.

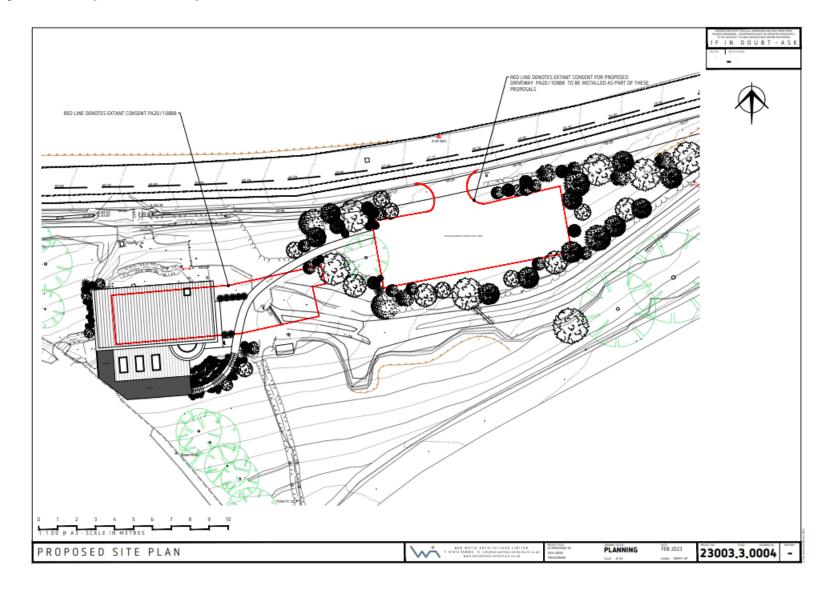
#### 3.3 Proposed Development

Details of the proposed development, including a layout and design, were provided by the client before any survey work was undertaken. The layout of the proposed development is given in Figure 3.2.

An overview only is given here. The LPA should satisfy themselves that the associated planning documents submitted with this report reflect the understanding of the impact of the works.



**Figure 3.2 Layout of Proposed Development** 



## 4. Methodology

This Preliminary Ecological Appraisal encompasses the establishment of the ecological baseline by undertaking a desktop survey, drawing on existing information and data, and a field survey; initial evaluation of the impacts of the proposed development on the designated sites, habitats and species found both on the Site and in the immediate vicinity of the Site and the identification of measures to mitigate the impacts; and the identification of ways to enhance the biodiversity of the area.

## 4.1 Desktop Survey

A desk-top survey was undertaken, collating existing data for the following relating to both the Site itself and the area within a two-kilometre radius:

- Statutory and non-statutory wildlife and earth science sites
- BAP Priority Inventory Habitats
- Legally protected and nationally notable species

Websites were consulted (refer to References).

In light of the habitats present within the site, a biological records search was not commissioned as it was not considered appropriate for the scale and probable impact of the proposed development.

## 4.2 Field Survey

A field survey was undertaken by the cited ecologist. The field survey included carrying out an Extended Phase 1 Habitat Survey, consisting of a walkover assessment of the Site using Phase 1 Habitat Survey methodology (JNCC, 2010, as amended by the Institute of Environmental Assessment (IEA, 1995)). This is a standard technique for classifying and mapping British habitats. All areas within the Site were surveyed, the main plant species recorded, and habitat type mapped. Indicators of ecological value were also noted, including the presence or signs of any legally protected or rare species.

Plant species were identified according to Stace (2019).

A search was also made to identify the presence of any invasive non-native species (particularly those listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended)), including Japanese knotweed (*Reynoutria japonica*) and Himalyan balsam (*Impatiens glandulifera*).

Any buildings onsite were assessed for their potential to support roosting bats (using the criteria set out in Appendix D). Buildings were examined both externally and internally to consider the potential and actual use by bats, as well as by nesting birds.

## 4.3 Survey Constraints

All areas of the site were readily accessible, and the time spent on site was considered appropriate to obtain all the details required for each habitat and species to enable an assessment to be made. Although some plant species would not have been visible during the survey period, the botanical diversity was considered sufficient to be able to classify and assess the habitats present, as well as their potential for supporting legally protected and notable species.

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 only valid for two years, after which time it will need updating. It being accepted that some LPA's now expect a survey to be updated after twelve months.

#### 4.4 Assessment

All ecological data and information gained through both the desktop survey and the survey work were evaluated. The important ecological features were then identified and evaluated against the potential impacts/effects that the proposed development may have on the ecology of the Site and surrounding area.

The biodiversity importance of each designated site, habitat and species is evaluated on a geographic scale: international, national, county and local.

Evaluation of designated sites considers their designation; their ecological and landscape relationship with the proposed site; and the species and/or habitat types for which the site was designated.

Evaluation of habitats considers their designation; their area, quality and viability; diversity and connectivity to the wider landscape; and structural diversity and species-richness.

Evaluation of species considers their designation, including legal protection and rarity.

When assessing the impact of the development and changes to the baseline conditions on site, predictions will be made which focus solely on the zone of influence whilst taking into consideration the lifespan of the development and the significant impacts as identified from the proposed work operations throughout the lifespan of the development.

The proposed development aims to firstly avoid and then mitigate against any potential effects/impacts on the local ecology/biodiversity, ensuring compliance with nature conservation legislation. It aims to achieve this by applying the mitigation hierarchy (as mentioned in Paragraph 175 of the National Planning Policy Framework and detailed in Paragraph: 018 Reference ID: 8-018-20140306 of National Planning Practice Guidance) as follows:

**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.

Appropriate measures to avoid and/or minimise the significant negative effects on the important ecological features have been identified. These mitigation measures aim firstly to avoid the overall effect/impact, or for those that cannot be avoided, reduce their overall effect value. It is not always possible to fully mitigate an adverse effect to neutral levels.

Under the National Planning Policy Framework, NPPF, (HM Government, 2021) local planning policies and decisions should 'contribute to and enhance the natural and local environment by:

- a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
- c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
- d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
- f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

[Taken from NPPF 2021, Section 15. Conserving and enhancing the natural environment, paragraph 174]

Thus, the mitigation hierarchy should be applied when considering the impacts of developments and local planning decisions on the natural environment, with the protection of important wildlife sites, habitats, species and ecosystem services; the avoidance of impacts, mitigating these impacts where appropriate, and then achieving biodiversity net gain through enhancements.

Section 15 of the NPPF 2021 goes on to state that 'when 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 Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

- 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; and
- d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements 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.'

[Taken from NPPF 2021, Section 15. Conserving and enhancing the natural environment, paragraph 180]

The aim of development should be to deliver biodiversity net gain on site as well as limiting damage to important ecological features. Using the information gained during the desktop survey and the extended Phase 1 habitat survey, and the ecological requirements of habitats, species and local environmental conditions, biodiversity enhancements for the Site have been considered, providing opportunities to increase the diversity of habitats and species on site.

In line with Defra recommendations, developments will be monitored for up to 30 years to ensure that they accord with their biodiversity obligations to mitigate losses and achieve biodiversity gain; these obligations will be secured by way of planning conditions.

## 5. Results/Baseline Ecological Conditions

This section presents the findings from the site survey and desktop study. The information is presented in three distinct sections:

- Designated sites
- Habitats
- Species

## **5.1 Designated Sites**

Designated sites of international, national and local importance are listed below, along with their approximate distance from the proposed development.

Designation	Name (if applicable)	Distance	
Statutory Sites			
Special Area of Conservation (SAC):	Bristol Channel Approaches Marine SAC Breney Common and Goss and Tregoss Moors Newlyn Downs Penhale Dunes	950m to the W 9.8km to the SE 10km to the S 10.4km to the SW	
Special Protection Area (SPA):	None	n/a	
RAMSAR:	None	n/a	
<b>World Heritage Site:</b>	None	n/a	
Site of Special Scientific Interest (SSSI):	None	n/a	
Areas of Outstanding Natural Beauty (AONB):	None	n/a	
National Nature Reserve (NNR):	None	n/a	
Local Nature Reserve (LNR):	None	n/a	
Non-statutory Sites			
County Wildlife Site (CWS):	Mawgan Porth to Newquay	400m to the SW	
County Geology Site (CGS):	None	n/a	

## **Natural England Consultation**

The site lies within a SSSI Impact Risk Zone, but the type of development (rural, residential) is less than 50 units, therefore consultation with Natural England is not required.

## **Habitats Regulation Assessment (HRA)**

The site is within 1km of a Marine SAC and within the Zone of Influence, as identified by Cornwall Council, of Penhale Dunes SAC.

Dependent on the type and scale of proposal, the developers could be required to provide a shadow screening assessment to the local planning authority (LPA) to aid in its Habitats Regulations Assessment of the likely impact on the SAC's and Marine SAC.

A 'Habitats Regulation Assessment' (HRA) **might** be required on this site and consultation with the LPA is recommended. Refer to <u>Appendix G. Habitats Regulation Assessment (HRA)</u> for details.

Designated sites considered Important Ecological	- None
Features with respect to the proposed development:	

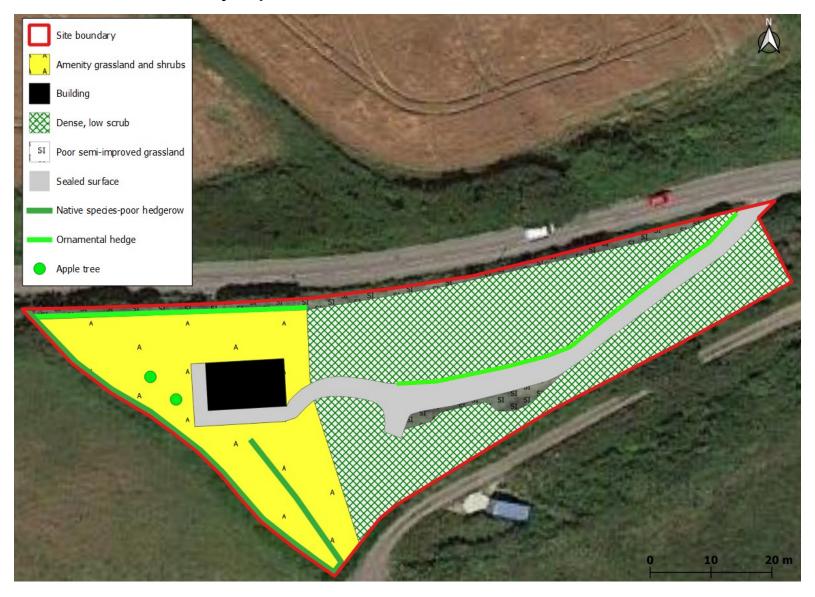
#### **5.2 Habitats**

This section details the habitats present on the Site and recorded during the Extended Phase 1 Habitat Survey, along with important habitats within the vicinity of the site. Figure 5.1 maps the Phase 1 habitats recorded onsite during the field survey and Table 5.1 summarises the area of each of these habitats.

Table 5.1. Phase 1 habitats associated with the site

Phase 1 Habitat Type - Area	Area (ha)
Dense scrub	0.155
Amenity and shrubs	0.089
Sealed surface	0.037
Poor, semi-improved grassland	0.02
Building	0.01
Habitat Type – Linear	Length (km)
Ornamental, non-native hedgerow	0.215
Native species poor hedgerow	0.093

Figure 5.1 Extended Phase 1 Habitat Survey Map



#### **Dense Scrub**



Dense scrub south of the track

#### Onsite

There are two areas of scrub on site. One area is to the south of the track and is dominated by bramble (*Rubus fruticosus* agg.), with young blackthorn (*Prunus spinosa*) and European gorse (*Ulex europaeus*). To the north of the track, behind the privet hedgerow, is an area of willow (*Salix* sp.) and Japanese privet (*Ligustrum japonicum*) scrub.

Scrub is valued primarily for supporting a wide range of higher plants, herbivorous insects and birds. The scrub onsite provides habitat for potential protected species such as dormice, foraging habitat for bats and hedgehogs and nesting habitat for birds. It is an important biodiversity feature providing an area of semi-natural habitat for a range of species.

An area of scrub is proposed for removal to create a new access point from the road and a parking area. A Dormouse Mitigation Strategy must be followed for the protection of hazel dormice and nesting birds.

Scrub Area Onsite	0.155ha	
Offsite	Not known	
Legal Constraints	The scrub offers habitat for protected species and nesting birds	
Important Ecological Feature	Yes	
Further Survey Work	Not required	
<b>Avoidance Measures</b>	None required	
Mitigation Measures	<ul> <li>Follow Dormouse Mitigation Strategy with</li> <li>Ecological Supervision</li> <li>Artificial Lighting Strategy</li> <li>Built-in bird provision</li> <li>Orchard creation</li> </ul>	
<b>Enhancement Measures</b>	- Not required	

Poor, Semi-Improved Grassland



Entrance drive

#### Onsite

There are strips of mown grassland along the track and on the bank next to the road on the northern boundary. The grassland has some ruderals present including common nettle (Urtica dioica) and hedge woundwort (*Stachys sylvatica*). This habitat is of low value to wildlife and does not provide habitat for protected species.

Area of Grassland Onsite	0.02ha	
Offsite	There are no priority grassland habitats within 500m of the site	
Legal Constraints	None	
Important Ecological Feature	No	
Further Survey Work	Not required	
<b>Avoidance Measures</b>	None required	
Mitigation Measures	<ul> <li>Maintain grassland and ruderals cut short to prevent habitation by protected species</li> </ul>	
<b>Enhancement Measures</b>	<ul><li>Grassland creation</li><li>Orchard creation</li></ul>	

#### **Bare Ground**

#### Onsite

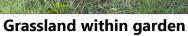
The access track comprises two strips of concrete, with grass growing in the middle. There are also areas of hardstanding around the house. These habitats are of no value to protected species and have not been considered further.

Area of Bare Ground Onsite	0.037ha
Offsite	Not known

Legal Constraints	None
Important Ecological Feature	No
Further Survey Work	Phase 2 survey not required.
Avoidance Measures	None required
Mitigation Measures	Not required
<b>Enhancement Measures</b>	Not required

**Amenity grassland and shrubs** 







**Shrubs within garden** 

#### Onsite

There is a small area of grassland within the garden that has become overgrown. Species include cocksfoot (*Dactylis glomerata*), perennial ryegrass (*Lolium perenne*), creeping soft grass (*Holcus mollis*), dandelion (*Taraxacum* agg.) and ribwort plantain (*Plantago lanceolata*). The grassland is north facing and shaded from the south by hedgerows and is therefore not considered to be suitable for reptiles.

Shrubs within the garden area are mature and provide a diverse range of habitat and opportunities for nesting birds. Shrubs, including the apple trees are to be retained in situ.

Amenity grassland and shrubs Area Onsite	0.089ha
Offsite	Not known
Legal Constraints	The shrubs offer habitat for protected species (hazel dormice and west European hedgehog) and nesting birds
Important Ecological Feature	Yes
Further Survey Work	Not required
Avoidance Measures	Shrubs are to be retained in situ

Mitigation Measures	<ul><li>Artificial Lighting Strategy</li><li>Orchard creation</li></ul>
<b>Enhancement Measures</b>	- Not required

**Hedgerows** 





**Hedgerow along access track** 

**Native hedgerow along SW boundary** 

#### Onsite

There are two ornamental hedgerows on site. One runs through the site along the northern edge of the access track. The dominant species is Japanese privet (*Ligustrum japonicum*), with ivy (*Hedera helix*). The hedge is over two metres tall and has been clipped. The hedgerow offers habitat to nesting birds. There is a second ornamental hedgerow along the northern boundary of the garden.

There are two native, species poor hedgerows, one along the south-western boundary and one partially going through the garden. Species comprise sycamore (*Acer pseudoplatanus*), hawthorn (*Crataegus monogyna*), elder (*Sambucus nigra*) and ash (*Fraxinus excelsior*), with bramble.

Both hedgerows have potential to support nesting birds, hazel dormice and European hedgehog. Impact to all hedgerows is to be avoided.

heageneg. Impact to an neagerous is to be avoided.	
Length of Hedgerows Onsite	Ornamental, non-native hedgerow: 0.215km Native, species poor hedgerow: 0.093km
Offsite	Hedgerows are a feature of the surrounding landscape and connect the site to habitats within the wider landscape.
Legal Constraints	The hedgerows offer habitat for hazel dormice and nesting birds
Important Ecological Feature	Yes
Further Survey Work	Not required
<b>Avoidance Measures</b>	All hedgerows are to be retained
Mitigation Measures	- Not required
<b>Enhancement Measures</b>	- Hedgerow management

**Buildings** 





**South aspect** 

Western aspect

## Onsite

There is a detached building to the west of the plot. The building was assessed as having low bat potential and a Bat Emergence Survey was commissioned by the client. No bats emerged during the survey (refer to associated BESR for further details).

Offsite	The house is isolated on its plot but the village of Tregurrian is nearby to the east.
Legal Constraints	Bats: The building offered low potential for roosting bats. However, no bats were found during the Bat Emergence Survey. All bats and their roosts are protected by law.
	Birds: No nests are present but potential exists. All nesting birds and their eggs are protected by law from disturbance, harm or death. The structure must be retained where nesting and fledging is occurring, usually between March and September, but bird specific.
Important Ecological Feature	No
Further Survey Work	1 x Phase 2 Bat Emergence Survey completed (30/08/2023)
<b>Avoidance Measures</b>	None
Mitigation Measures	- In-built bird provision (x2)
<b>Enhancement Measures</b>	<ul><li>In-built bat provision (x1)</li><li>In-built solitary bee provision (x1)</li></ul>

## **Offsite Habitats**

## Offsite

Offsite habitats were considered, but there is to be no expected impact caused by this proposed development.

Legal Constraints	None
Important Ecological Feature	No
Further Survey Work	Not required
<b>Avoidance Measures</b>	None
Mitigation Measures	<ul><li>Artificial Lighting Strategy</li><li>Impact avoidance during the construction phases</li></ul>
<b>Enhancement Measures</b>	Not required

## 5.3 Species

This section includes details concerning the species recorded on site during the Extended Phase 1 Habitat Survey, as well as legally protected and/or notable species recorded within a 2km radius of the development site. The potential for the presence of legally protected and/or notable species on site has also been included, based on the habitats recorded on site and adjacent land.

Where there is no potential for a species or species group to be present within the site, they have been scoped out at this stage.

#### **Bats**

The use of any buildings/structures on site by bats has been included in section 5.2 Habitats above, in the Buildings section.

#### Onsite

#### Bats - Trees

The trees onsite have been assessed as offering bat roosting potential of Category 3. Category descriptions are outlined below:

- 1\* High Suitability: Trees with obviously suitable PRFs which are considered capable of supporting larger, established roosts of high conservation significance.
- 1 Moderate Suitability: Trees with potentially suitable PRFs but which are not likely to support roosts of high conservation status.
- 2 Low Suitability: Trees of sufficient size/age to exhibit PRFs but nonvisible from ground-level or features seen appear to offer limited potential.
- 3 Negligible Suitability: Trees with no /negligible potential to support bats.

## **Bats – Foraging and Commuting Habitat**

An assessment was made of the suitability of the surveyed area and the surrounding landscape to support foraging and/or commuting bats. The assessment was based on the presence of key habitat features such as woodland, scrub, hedgerows, grassland and open water, which are highly attractive to bat species.

Of importance, is the presence of unlit semi-natural vegetation and habitat linkage between the site and the surrounding landscape such that the site may form an integral part of landscape-scale habitat for bats.

The site has a diverse mix of habitats including grassland, mixed scrub and hedgerows. In addition, the habitats along the access track are un-lit. The habitats onsite have been assessed as offering moderate potential to commuting and foraging bats.

European Protected Species Licences within a 2km radius of the site listed the presence of the following species: brown long-eared (*Plecotus auritus*), common pipistrelle (*Pipistrellus pipistrellus*), lesser horseshoe (*Rhinolophus hipposideros*) and greater horseshoe (*Rhinolophus ferrumequinum*). Whiskered (*Myotis mystacinus*), Daubenton's (*Myotis daubentonii*) and Natterer's (*Myotis natterei*) have also been recorded within 2km of the site since 2000 (www.magic.gov.uk).

Legal Constraints	The habitat has been assessed as capable of supporting protected bat species: - legal constraints apply: legal protection under The Conservation of Habitats and Species Regulations 2010, the Wildlife and Countryside Act 1981 (as amended) and the NERC Act 2006.
Important Ecological Feature	Yes (commuting and foraging)
Further Survey Work	Not required
Avoidance Measures	The hedgerow boundaries are to be retained, except where access is required
Mitigation Measures	<ul><li>Permanent buffers</li><li>Artificial Lighting Strategy</li></ul>
<b>Enhancement Measures</b>	<ul> <li>Hedgerow augmentation/gapping-up</li> <li>Orchard creation</li> <li>1 x in-built bat roosting provision in half of new units.</li> </ul>

#### **Hazel Dormouse**

#### Onsite

An assessment was made of the suitability of habitat within the site to support hazel dormice (*Muscardinus avellenarius*). Key habitats are woodland, scrub and hedgerows, particularly where dense vegetation within which to nest/hibernate is offered along with key resources such as hazel nuts, fruiting/nectar-rich plants (e.g. hawthorn, bramble) and honeysuckle (for nesting material). Of importance is the presence of landscape-scale habitat linkages such as hedgerows, and where the site is linked to such habitat this will raise the potential for the species to occur.

The mixed scrub has been assessed as offering low value to dormice, due to poor habitat connectivity and low growth height. Removal of the scrub to create a garden and new access is part of the proposal.

access is part of the proposal.	
Offsite	There are hedgerows and scrub within the vicinity of the site with the potential to support hazel dormouse.
	Hazel dormouse has not been recorded within a 2km radius of the site since the year 2000.
Legal Constraints	The habitat has been assessed as capable of supporting hazel dormice: - legal constraints apply: legal protection under The Conservation of Habitats and Species Regulations 2010, the Wildlife and Countryside Act 1981 (as amended) and the NERC Act 2006.
Important Ecological Feature	Yes
Further Survey Work	Phase 2 survey not required

Avoidance Measures	None required
Mitigation Measures	Not required - Follow the Dormouse Mitigation Strategy with Ecological Supervision - Artificial Lighting Strategy - Augmentation / gapping-up of hedgerows
<b>Enhancement Measures</b>	- Hedgerow management

## **West European Hedgehog**

#### Onsite

No evidence of west European hedgehog (*Erinaceus europaeus*) was recorded on site during the field survey. The habitats onsite have been assessed as having low capacity to support west European hedgehog.

This species may utilise the grassland, hedgerow and mixed scrub on site for foraging.

Offsite	The area immediately surrounding the site has the potential to support West European hedgehog. This species has not been recorded within a 2km radius of the site since 2000.
Legal Constraints	The habitat has been assessed as capable of supporting protected mammal species: - legal constraints apply: legal protection under the Wildlife and Countryside Act 1981 (as amended) and the NERC Act 2006.
Important Ecological Feature	Yes
Further Survey Work	Phase 2 survey not required
<b>Avoidance Measures</b>	None required.
Mitigation Measures	<ul> <li>Permanent buffers</li> <li>Artificial Lighting Strategy</li> <li>Covered trenching / suitably positioned plank to permit escape and capped pipework at night</li> <li>Augmentation/gapping up hedgerows</li> </ul>
Enhancement Measures	<ul> <li>Hedgerow management</li> <li>Orchard creation</li> <li>Access for mammals across developed site</li> </ul>

#### Birds

#### Onsite

The mixed scrub and ornamental hedgerow at this site are likely to support common and widespread birds, including nesting birds. The habitats are of negligible value to protected and/or notable bird species.

Offsite	Not known
Legal Constraints	All bird species are protected whilst nesting, breeding and rearing young
Important Ecological Feature	Yes (nesting birds)
Further Survey Work	Phase 2 survey not required
<b>Avoidance Measures</b>	None required
Mitigation Measures	<ul> <li>Where birds are actively nesting/fledgling in a habitat – works to the habitat are prohibited</li> <li>Appropriate timing for woody species removal</li> <li>Augmentation / gapping-up of hedgerows</li> <li>Built in bird provision</li> </ul>
<b>Enhancement Measures</b>	<ul> <li>Management of existing hedgerows for wildlife</li> <li>Built-in bat provision</li> </ul>

## **Further Species Considerations**

#### Onsite

Habitats were assessed for the presence of the following species, or group of species:

- European badger
- Eurasian otter
- European water vole
- Brown hare
- Harvest mouse
- Reptiles
- Amphibians
- Rare/notable invertebrates
- Rare/notable vascular plants

Major habitat components that would sustain these species are absent and it is highly unlikely they are on site.

Legal Constraints	None
Important Ecological Feature	No
Further Survey Work	Phase 2 survey not required
<b>Avoidance Measures</b>	None required

Mitigation Measures	- Impact avoidance during the construction phases
<b>Enhancement Measures</b>	- Not required

## **Invasive Non-native Species**

Onsite	
No invasive, non-native species were recorded during the walkover survey.	
Offsite	Not known
Legal Constraints	None
Important Ecological Feature	No
Further Survey Work	Not required
<b>Avoidance Measures</b>	None
Mitigation Measures	Not required
<b>Enhancement Measures</b>	Not required

## 6. Biodiversity Mitigation and Enhancement Details

The ecological mitigation measures and biodiversity enhancements required for the development have been listed in Section 5 above, against the particular habitat, species and species group for which they are required. This section provides the specific details for each of the mitigation measures and enhancements mentioned. These are mapped in the Ecological Constraints and Opportunities Plan (ECOP) at the end of this report after the Conclusions.

Enhancement (measures that improve the biodiversity/ecological condition) of all sites post development is a planning requirement. The law, central government planning policy and local planning policy point towards the enhancement of a site's biodiversity as part of the development process.

Ecological enhancement measures must be over and above any avoidance, mitigation and compensation measures required to neutralise the impacts of the development on wildlife. An increased need for effective Enhancement has been reinforced by recent research conducted by a United Nations-backed panel called the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) stating up to million plant and animal species face extinction. Whilst we in the UK are not directly responsible for all of this loss, we can try to protect the threatened species within the UK.

Consequently, enhancement requirements within this report should be seen as the minimum expectations and we would urge all clients to carefully consider how they are able to make positive contributions to protecting and enhancing our natural environment within their planning submissions.

The implementation of the mitigation and biodiversity enhancement measures should be overseen by an Ecological Clerk of Works or a suitably experienced ecologist.

## 6.1 Further Phase 2 Surveys

This section provides recommendations for further ecological survey effort. The surveys/monitoring are considered justified in order to provide an up-to-date and robust baseline for a fully detailed assessment of potential impacts.

The building on site offered low opportunity for roosting bats – however, further assessment through a bat emergence survey undertaken August 21<sup>st</sup>, 2023, concluded bats were not present. A report pertaining to the Emergence Survey has been produced in association with this PEA.

A Mitigation Statement for Dormice has been provided, which requires Ecological Supervision.

## **6.2 Mitigation and Enhancements**

This section provides general recommendations for mitigation and enhancement measures. The Ecological Constraints and Opportunities map (ECOPS) should be consulted for locations and area.

## **Dormouse Mitigation Strategy: Ecological Supervision of Scrub Removal**

This Mitigation Statement applies to the mixed scrub areas and is required for the protection of dormice and nesting birds.

<u>An acting licenced ecologist must be engaged for this procedure</u>. Fingertip searches followed by ecological supervision of cutting back of scrub habitat must be carried out. The process is outlined below.

Stage 1. Initial vegetation removal. Time constraint: November – May inclusive	Removal of tops of vegetation are to be carried out by hand during the winter months.  Remove height of vegetation to 1ft.  One week later remove growth to ground level, leaving the ground vegetation intact in case of hibernating dormice.  Roots must be left untouched for at least 2 weeks following this period.
Stage 2. Removal of roots. Time constraint: May.	After the two-week delay period, (and not before May) the roots can be removed subject to a fingertip search by a licenced ecologist with no evidence of dormice found.

Once vegetation and roots have been removed as per the mitigation schedule given above, the proposed hedgerow section can be declared free of dormice. However, if dormice are found, all development must cease and a European Protected Species Licence (EPSL) for dormice will be required.

## **Covered Trenching and Capped Pipework**

Trenches or large excavations should be covered overnight to prevent wildlife such as badgers or hedgehogs falling in and failing to escape. If this is not possible then a strategically placed plank may provide a means of escape.

Any large bore pipes should be capped at the end of the day to reduce the potential for badgers and other wildlife entering and becoming trapped.

## **Artificial Lighting Strategy**

No external artificial lighting will be introduced to the site during the groundworks and construction phases of the development. External artificial lighting during the operational phase will comprise lights above external doors and safety lighting only.

- > Light ONLY when and where it is needed for health and safety.
- Prevent light-spill and spread: eliminate bare bulbs, upward pointing lights, keep light near to or below the horizontal. E.g. flat cut-off lanterns. Such light should be positioned to only illuminate the required areas, limiting light spill, both horizontally

- and vertically. Additionally, hoods, cowls, louvers and/or shields may be utilised to further direct any lighting.
- > Decrease light intensity, avoid the UV spectrum: attracting insects is NOT an aim.
- > Reduce height of lighting columns. Or allow for lower main beam angles to reduce glare.
- ➤ When external lighting is needed for safety reasons, dynamic lighting schemes that are switched on only when needed should be considered. Dynamic lighting schemes are usually triggered via motion sensors by a pedestrian or car.
- > Timer switch on any proposed outdoor lighting to facilitate dark periods.

It is becoming increasingly common for LPA's to request an independent site lighting strategy and expect it to be submitted as early as the reserved matter stage. Consideration should be given to this prior to submission particularly on larger sites or those with important bat / dormouse habitat / corridors, rather than wait to be compelled to do so.

## **Impact Avoidance During the Construction Phase - Overview**

All activities on site should bear in mind the potential for wildlife or the environment being harmed through the process of development from inception to end, with a proactive approach occurring for lawful protection of wildlife and the environment regarding use of materials, machines, chemicals, and human activity on site.

- Contractors must ensure that no harm can come to wildlife by maintaining the site efficiently, clearing away any material such as wire in which animals can become entangled and preventing access to toxic substances.
- Trenches or large excavations should be covered overnight to prevent wildlife such as badgers or hedgehogs falling in and failing to escape. If this is not possible then a strategically placed plank may provide a means of escape.
- Any large bore pipes should be capped at the end of the day to reduce the potential for badgers and other wildlife entering and becoming trapped.
- If there is a substantial delay before development commences, the site should be maintained in a way that would prevent wildlife colonising it and causing constraints in the future. Such management should include mowing grassland at least twice a year and preventing scrub encroachment.
- Piles of brush wood and or log piles should be carefully inspected for signs of wildlife prior to their removal. This is especially crucial during the period March September (inclusive) as some species of bird choose such sites to construct their nests. Ideally removal of such features should be done outside of the nesting season. If this is not possible, it is recommended that these features are covered in such a way as to exclude / prevent birds and / or reptiles taking up residence. If nesting birds or reptiles are discovered, work must cease immediately with ecological advice sought.

#### **Hedgerow Management**

All hedgerows are to be retained. If hedgerows need to be altered to permit the development, advice from an ecologist must be sought in relation to dormice and nesting birds. Hedgerows should be trimmed only every three years (or less frequently if possible) and maintained at a height of at least three, and preferably four, metres. It is important not

to cut all hedgerows in an area at the same time, so that some heavily fruiting hedgerows are always present. As a guide, it is suggested that cutting only 10 to 30 per cent in any one year is advisable. Gaps in any of the hedgerows should be infilled with native species. Hedgerow management for dormice is given below.

	Hadranan Managanat
	Hedgerow Management Good Practice, for the Benefit of Dormice and Hedgerow Biodiversity Ref: <i>The Dormouse Conservation Handbook Second Edition</i> .
1	Except where road safety or access, preclude it, hedgerows should be trimmed only every three years (or less frequently if possible) and maintained at a height of at least three, and preferably four metres.
2	Ideally, about one third of hedgerows should be left to grow for 7 to 10 years.
3	It is important not to cut all hedgerows in an area at once, so that some heavily fruiting hedgerows are always present. As a guide, we suggest cutting only 10 to 30 per cent in any one year.
4	In some places, it may be feasible to cut only one side of the hedge, cutting the other a year or two later, thus not removing all the food sources at once and allowing some regrowth before further cutting takes place. If possible, flails should not be used to manage hedgerows.
5	Coppicing or, even better, laying should be used to manage hedgerows that become gappy or lack dense branches at their base. Fencing may be needed to prevent stock from causing damage before new growth has become established.
6	If hedgerow size needs to be reduced, it is better to avoid cutting the top and to cut one side only.
7	When creating new hedgerows, or plugging gaps in existing ones, at least five and preferably seven different shrub/tree species should be planted. The best species to plant are hawthorn (for its flowers and berries) and hazel (nuts and insects); with a diversity of other species to offer flowers insects and fruits at different times Bramble would make a valuable addition but may arrive naturally.
8	Where new roads or other developments cut across hedges, the 'loose ends' should be linked up by suitable plantings. Mixtures of hawthorn and hazel are the preferred species where early results are needed.

## **Orchard Planting**

There are two apple trees on site and space to plant more within the grassland area to the north-west of the current dwelling. This will help compensate for the loss of the scrub habitat. Appropriate management of the retained and enhanced area of Traditional orchard (including new tree planting) will maximise its ecological value and provide a biodiversity net gain on this site. A number of Natural England Technical Information Notes have been created regarding planting and managing Traditional orchards which should be followed: <a href="https://publications.naturalengland.org.uk/publication/19007">https://publications.naturalengland.org.uk/publication/19007</a>

Grassland areas within this habitat should be allowed to grow tussocky, with some areas of long grass being left where possible. Grass cuttings should be left in a pile on site, in an appropriate location, and not left where they fall. Having areas of different length grass produces a mosaic of different habitats within the site, thus benefiting invertebrates, birds and small mammals. No artificial inputs, such as artificial pesticides and fertilisers, should be applied on site. This helps to maintain and improve the floristic diversity.

#### **Permanent Buffers and Grassland Creation**

Permanent buffers of one metre depth will be maintained along the native hedgerows, as set out in the ECOP. This seed mixture (EH1) and management can also be used in the proposed meadow area and in the orchard.

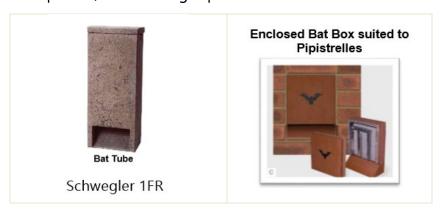
This grassland will be managed to retain the connectivity between the habitats on and offsite for wildlife. The grass will be allowed to grow and seed throughout Spring and Summer, being reduced in height during late Autumn and Winter. This allows thatch to accrue at the base of the grass and provides valuable refuge for wildlife – and for seasonal foraging, enhancing the site overall.

- No artificial inputs, such as artificial pesticides and fertilisers, should be applied on site. This helps to maintain and improve the floristic diversity.

#### **Bat Roosting Provision**

Enhancement: One built in bat provision of a type similar to that illustrated is required.

- Bat tubes/boxes erected on properties offer potential bat roosts and augment the natural roosting opportunities. These tubes/boxes should be erected not less than 3m high and ideally 4m plus.
- Bat tubes must be built into the fabric of the building, ideally on the southern and western aspects, and not bolted on to the outside and are therefore only suited to structures, not trees. A choice of styles is sometimes available, and the most suitable style can be agreed with the LPA.
- Where bat-tubes are unsuited owing to the type of construction of the proposed structures, other bat boxes or specifically designed bat habitation of an equally durable condition may be substituted for bat-tubes (subject to LPA approval.)
- Where enhancement recommends bat tubes or bat boxes on structures, aspects of the Artificial Lighting Strategy must be followed to ensure artificial lighting does not shine on the access points /boxes or flight paths.



## **Bird Nesting Provision**

Mitigation for loss of scrub nesting habitats: Two built-in bird nesting provision of a type similar to that illustrated is required.

In-built bird bricks provide a long-lasting solution. Fixing to trees or external wall mountings will only last as long as the nail / screw or branch lasts. Often this is less than ten years. Built in features are likely to last as long as the structure they are built into which might be hundreds of years. Obviously, there may be occasions where built in solutions are not applicable. LPA approval of external mounted boxes is generally required.

- Only boxes of robust or permanent construction are suitable. Some account must be taken of the potential need to maintain and replace boxes after a number of years in use.
- Boxes/bricks should be positioned with orientation preferably between north and east with external positions of not less than 3m high to avoid cat predation and vandalism.
- Site nest boxes in locations that are accessible for maintenance, but away from bird feeders. Ideally boxes should be a discrete distance away from other nest boxes, except for house sparrows, as they like to nest in colonies.



## **Solitary Bee Provision**

One solitary bee brick is to be built into the new property. Solitary bee bricks can be built into buildings, walls and other structures. Each bee brick provides multiple cavities for solitary bees to lay their eggs. The bricks should ideally be built into south-facing, sunny walls, at between one and two metres above ground level and with nectar sources nearby.



Solitary bee bricks

## Inter-property fences allowing wildlife access

Any fences onsite post-construction, including those between residential properties, will allow the movement of animals beneath them by being raised at least 150mm above ground level or having gaps 150mm x 150mm cut up from the base every 20 metres to allow animals through.

## Landscaping for the Benefit of Wildlife

Landscaping in sympathy with the needs of native wildlife is relevant to all important wildlife species. It helps to support birds by providing plant species which carry seeds, fruits, nuts, and/or support insects (nectar and pollen) upon which birds feed and supports bats by attracting insects to the garden.

The list below is not exhaustive, neither is it prescriptive, and recommendations in italics can be applied with discretion. The implementation of a combination of recommendations here fulfils the obligation of the client/agent to leave the site in an enhanced state.

- The landscape architect/or appointed person should plant a variety of flowering plants, biased towards native and near-native species. Exotics are not required; however, a selection of exotics to extend the flowering season and potentially provide resources for specialist groups now and in the future, is becoming increasingly important owing to climatic changes, and should be given serious consideration by any with a view to protecting and sustaining present and future biodiversity. Plant holistically for biodiversity value: nectar rich plants/shrubs which yield fruits /nuts of benefit to a multitude of species.
- Where grass is planted, use a grass mix other than low amenity lawn grass. Plant mixes with diverse grass species support a wealth of insects when allowed to seed and flower before being cut back.
- Provide green corridors (hedges/trees/water features/lawns or mixed diversity species and beds) with attention to other neighbouring green spaces. The garden itself, when taken as one of many within the neighbourhood, will become part of a wider green corridor.
- Select a variety of plants that will produce foods in different seasons. For winter residents as well as migrants that return early in spring, plants that hold their fruits throughout the winter ("winter-persistent" plants) are a vital food source.
- Leave rough areas of vegetation and native trees and shrubs around the vicinity of any replacement building will also maintain nesting opportunities.
- Avoid pesticide and insecticide use.
- For garden areas: improve the area of green habitat within the garden wherever feasible and where paved spaces and balconies must be used also consider:
- Planters and raised beds
  - Courtyard trees, low level shrubs, hedges
  - Planting climbers and creepers.
- Provide shelter using low shrubs, thickets or hedges where birds can nest, perch, and escape from predators.
- Leave tree stumps, dead wood (where safe to do so) tree limbs, leaf piles and compost to encourage insects and worms for birds to feed on.
- Appropriate aftercare and management should ensure that these areas are maintained to give optimum benefit to wildlife.

### 7. Biodiversity Impact Assessment: Losses and Gains

The proposed development is classed as a minor development and therefore, at the present time, there is no requirement for the Department for Environment, Food and Rural Affairs (Defra)/Natural England Biodiversity Metric 4.0 to be used to calculate the biodiversity losses and gains associated with the development – a 10% biodiversity net gain (BNG) is not required. However, in line with the *National Planning Policy Framework 2021*, which requires that all development must provide BNG throughout the development process, Table 7.1 shows the losses and gains for the habitats on site if the proposed development goes ahead.

Table 7.1. Habitat losses and gains for the proposed development at this site

Habitat	Area (ha) / length (km) lost	Area (ha) / length (km) gained	Overall biodiversity gain
Amenity and shrubs	0.038ha	0	Loss of 0.038ha (0.018ha to be converted to orchard)
Dense scrub	0.025ha	0	Loss of 0.025ha
Sealed surface	0	0.027ha	N/A (0.037 retained)
Poor semi-improved grassland	0	0	N/A 0.02ha retained)
Building	0.1ha	0.1ha	N/A
Traditional orchard	0	0.018ha	
Ornamental, non- native hedgerow	0	0	N/A (0.215ha retained)
Native species poor hedgerow	0	0	N/A 0.093 retained)

#### 8. Conclusions

The Extended Phase 1 Habitat Survey undertaken along with the desktop survey are considered to have collected enough information about the ecological condition of the site to have been able to adequately assess the impact of the proposed development. Further survey work is therefore not required.

A baseline calculation has been made of the habitat value currently on site using the DEFRA Biodiversity Net Gain Metric 3.0. Results can be seen in the non-technical summary at the start of this report, or in the accompanying document:

BaselineBNG\_SeaLodge\_Abbott\_May\_2022.

A strategy of 'Avoidance' must be employed to significant harm to wildlife species and habitats is avoided through the design of the site. Where significant harm cannot be wholly or partially avoided, Mitigation measures have been set out to avoid and reduce the effects/impacts of the development on the important ecological features and the local environment as a whole. All measures should be included as a planning condition for the proposed development.

Ecological enhancement measures are required to improve the ecological condition of the development site (or an alternative site) after the development is complete. Ecological enhancement measures must, therefore, be over and above any avoidance, mitigation and compensation measures required to neutralise the impacts of the development on wildlife. These enhancements should result in a net ecological gain for the site and should be included as a planning condition for the proposed development.

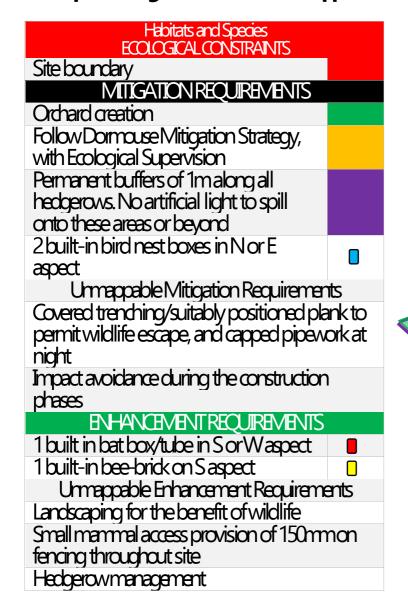
Providing the recommendations within this report are adhered to, with the mitigation measures and enhancements agreed, there would appear to be no ecological constraints to prevent this development.

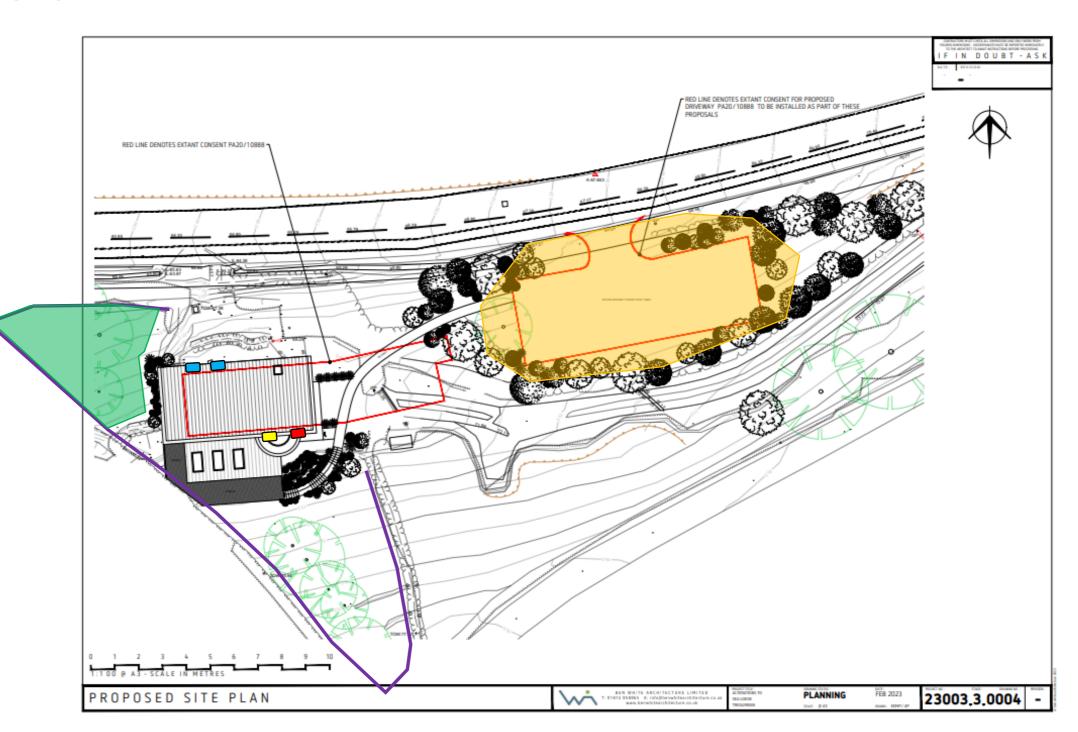
The local planning authority (LPA) should ensure that the mitigation measures, together with enhancement recommendations, are either 'conditioned' where appropriate, or that full permission is withheld pending the agreement of mitigation, compensation (where necessary) and enhancement measures.

An Ecological Clerk of Works or a suitably experienced ecologist should oversee the implementation of the ecological mitigation measures and the enhancements for biodiversity.

It is the responsibility of all those involved with the proposed development works at this site to ensure that wildlife protection and nature conservation legislation is complied with throughout the lifespan of the development, at every stage. Although no current evidence of protected species was found on site it cannot be assumed that they are not present when the development work commences. Care should therefore be taken during all stages of the development and if any protected are discovered they must not be handled; works must stop immediately, and advice sought from a licensed ecologist.

## 9. Map of Ecological Constraints and Opportunities (ECOP)





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#### **Data Search Websites**

#### Cornwall

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- Cornwall Biodiversity Action Plan: www.cornwallwildlifetrust.org.uk/bap
- Cornwall Council Interactive Map: https://map.cornwall.gov.uk/
- Cornwall Planning for Biodiversity Guide (2018):
   <a href="https://www.cornwall.gov.uk/media/35514048/biodiversity-spd-v7.pdf">https://www.cornwall.gov.uk/media/35514048/biodiversity-spd-v7.pdf</a>
- Cornwall Wildlife Trust: www.cornwallwildlifetrust.org.uk
- Multi Agency Geographical Information for the Countryside: <a href="www.magic.defra.gov.uk">www.magic.defra.gov.uk</a>
- National Biodiversity Network Atlas: <u>www.nbnatlas.org</u>
- UK Biodiversity Action Plan: <a href="https://www.ukbap.org.uk/NewPriorityList.aspx">www.ukbap.org.uk/NewPriorityList.aspx</a>

### 11.Appendices

## Appendix A. Flora Species Recorded Onsite are contained in the body of the text During Extended Phase 1 Habitat Survey

## Appendix B. Summary of the Legislation and Policy relating to Habitats and 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. It is the means by which the Bern Convention and the Birds Directive and Habitats Directive are implemented in Britain. Protected birds, animals and plants are listed in Schedules 1, 5 and 8 respectively of the Wildlife and Countryside Act.

**Schedule 1 Part 1** – Birds which are protected by special penalties at all times from being intentionally killed, injured, or taken and whose eggs, nests or dependent young are also

protected from being disturbed.

**Schedule 5 Section 9 Part 1 (killing/injuring)** – Animals which are protected from being intentionally killed or injured.

**Schedule 5 Section 9 Part 1 (taking)** – Animals which are protected from being taken.

**Schedule 5 Section 9 Part 4a** – Animals which are protected from intentional damage to, destruction of, or obstruction of access to any structure or place used for shelter or protection.

**Schedule 5 Section 9 Part 4b** – Animals which are protected from intentional disturbance while occupying a structure or place used for shelter or protection.

**Schedule 5 Section 9 Part 4c** – Animals which are protected from their access to any structure or place which they use for shelter or protection being obstructed.

**Schedule 6** - Animals which are protected from being killed or taken by certain methods under Section 11(1). The methods listed are: self-locking snares, bows, crossbows, explosives (other than ammunition for a firearm), or live decoys.

**Schedule 8** – Plants and fungi which, subject to exceptions, are protected from: intentional picking, uprooting or destruction; selling, offering for sale, possessing or transporting for the purpose of sale; advertising for buying or selling.

**Schedule 9** – Plant and animal species that are prohibited from introducing into the wild as they may cause ecological or environmental harm or where they pose a threat to the native habitats and species. Under Schedule 9 of the Wildlife & Countryside Act 1981 (as amended) it is a criminal offence to cause any of 48 non-native plant species (6/4/2010) and (non-native animals) to spread into the wild where they cause damage to the environment/economy/health/lifestyle.

The site owner has a responsibility to:

- Prevent invasive, non-native plants on their land spreading into the wild and causing a nuisance.
- > Prevent harmful weeds on their land spreading onto a neighbour's property

The owner of the site must not plant in the wild or cause certain invasive and non-native plants to grow in the wild. This can include moving contaminated soil or plant cuttings. If this occurs there is a fine or prison term for up to 2 years. The site owner is not legally obliged to remove these plants or to control them on site. However, at the point of change: **development, mulching, earth moving operations**: it is important that they are identified, and their spread controlled in the most appropriate way.

#### **Environmental Protection Act 1990**

<u>Environmental Protection Act 1990</u> allows for the potential classification of soil and other waste containing viable propagules of invasive non-native plant species as controlled waste. This has been applied to Japanese Knotweed with the result that waste containing this species must be disposed of in accordance with the duty of care set out in section 34 of the Act. The Environment Agency have issued guidance which will be of use in complying with the duty of care.

#### In addition:

- Any Schedule 9 plant material, or soil containing root or rhizome fragments, may be classified as 'controlled waste' under the Environmental Protection Act 1990 (EPA).
- ➤ In addition to a criminal prosecution under the Wildlife & Countryside Act, infringement of the EPA can result in an *unlimited fine*.

> The owner may also be held liable for costs incurred from the spread into adjacent properties and for disposal of contaminated soil off site during development, which later leads to the spread on another site.

## **Protection of Badgers Act 1992**

Both badgers and their setts are protected, making it illegal to kill, injure or take, possess or cruelly ill-treat badgers or to interfere with a badger sett (including blocking tunnels or damaging the sett in any way).

#### **The Hedgerow Regulations 1997**

Any hedgerows classified as 'important' under the 1997 Hedgerows Regulations cannot be removed without a Hedgerow Removal Notice issued by the relevant Local Authority unless previously approved as part of a planning permission. The UK Biodiversity Action Plan (BAP) now classifies any native hedge over 20m in length as a priority habitat feature. Priority hedgerows should be those comprising 80% or more cover of any native tree/shrub species. The Local Authority is the arbiter as to classification of hedgerows.

### 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.

#### **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. The Act also makes provisions in respect of pesticides harmful to wildlife, the protection of birds, and in respect of invasive non-native species, and also alters enforcement powers in connection with wildlife protection, and extends time limits for prosecuting certain wildlife offences.

Section 41 of the Act requires that the Secretary of State publishes a list of species of flora and fauna considered to be of principal importance for the purpose of conserving biodiversity in England. The list is intended to be used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the NERC Act 2006 'to have regard' to the conservation of biodiversity in England, when carrying out their normal functions.

The UK BAP list of 1149 species, published in 2007, was used to draw up a list of 938 species, also known as the 'England Biodiversity List', comprising those species found in England which have been identified as requiring action under the UK BAP. In addition, the Hen Harrier has also been included on the list because without continued conservation action it is unlikely that the Hen Harrier population will increase from its current very low levels in England.

The list of species of principal importance was first published in 2002 by DEFRA under Section 74 of the Countryside and Rights of Way (CRoW) Act 2000, and was identical to the UK BAP list at that time. The CRoW Act Section 74 list has now been replaced by the Section 41 list.

Sixty-five (65) 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.

## The Anti-social Behaviour, Crime and Policing Act 2014

Anti-social Behaviour, Crime and Policing Act 2014 enables community protection notices to be served by local authorities or the Police against individuals who are acting unreasonably and who persistently or continually act in a way that has a detrimental effect on the quality of life of those in the locality. These powers are designed to be flexible and could be used to address specific problems caused by widespread species such as Japanese knotweed.

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

The Conservation of Habitats and Species Regulations 2017 (and as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019)) originally transposed 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. The objective of the Regulations is to protect biodiversity through the conservation of natural habitats and species of wild fauna and flora. The Regulations set out the rules for the protection, management and exploitation of such habitats and species. They place a duty on the Secretary of State to propose a list of sites which are important for either habitats or species. These sites are known generally as 'European sites' and in the UK form the national sites network (known in Europe as Natura 2000 sites). They include Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).

# 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.

#### **National Planning Policy Framework, 2021**

The National Planning Policy Framework (NPPF) 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". Under NPPF, local planning authorities have an obligation to promote the preservation, restoration and recreation of priority habitats, ecological networks and the protection and recovery of priority species as identified under the Natural Environment and Rural Communities Act (2006). Local Planning Authorities will seek to produce a net gain in biodiversity, by requiring developers to design wildlife into their plans and to ensure that any unavoidable impacts are appropriately mitigated for. The NPPF 2021 version replaces the first NPPF published in March 2012 and includes minor clarifications to the revised versions published in 2018 and 2019.

## 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.

### **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.

#### **Biodiversity 2020**

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

## **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.

<b>Appendix C. Optimum Protected Species Su</b>	rvey Tir	nes										
BATS	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Bat Scoping												
Bat Emergence												
Bat Activity												
Bat Hibernation												
BIRDS	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Birds Breeding												
Birds -Other												
	ı				I	1	1	T _	_	_	1	1
GREAT CRESTED NEWTS	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
GCN - Habitat Assessment							1					
GCN - Presence / Absence												
eDNA – Survey												
404										•		
AQUATIC ANIMALS	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Water Vole												
White Clawed Crayfish												
Otter												
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
DORMOUSE	Juli	165	IVIGI	Yhi	iviay	June	July	Aug	Зере	Oct	1101	Dec
	<u> </u>			_	T	T .	I	I .		_	T	T _
REPTILE	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
			1		1	1	1	ı	<u> </u>		T	
BADGER	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec

Phase 1 Ecological Survey	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Γ <del>-</del> .	I	I .			I	I	I .	I	I		I	<u> </u>
Botany	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Tree Survey BS5837 -2012	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec

Dark Green = Approximate Optimal Survey Period Light Green = Approximate Sub-Optimal Survey Period.

Owing to the vagaries of the English climate and the seasonal variation between different parts of the Country, the optimal Survey period might vary by several weeks from this calendar. This should be borne in mind when determining Planning Applications

# Appendix D. Assessing the Potential Value for Buildings for Roosting Bats Survey Method of Buildings.

Where appropriate, the building exteriors and interiors are searched visually, using binoculars, for field evidence of bats, with particular attention being paid to sheltered areas such as window ledges and pipes where bat droppings might lie undisturbed from the weather, insect prey remains, urine stains, oil stains from bats repeatedly moving over a small area and polishing the surface, and the potential presence of bats either dead or alive.

#### **Classification Criteria**

It should be noted that the grading system below only reports on the situation at the time of survey; should bat activity levels change after the initial survey, or should the buildings be modified (for example if roof tiles are removed or facia boards develop cracks), the category may need revision.

Category (Potential value)	Description
Please note: Intermedia	te categories (e.g. Low – Moderate value) may apply.
No/Negligible value	Buildings with no or very few features capable of supporting roosting bats. Often buildings are of 'sound' well- sealed structure or have a single skin and no roof void. They tend to have high interior light-levels, and little or no insulation. Buildings without any roofs may also fall into this category.
Low value	Buildings of largely unsuitable construction, but with a few features of potential value to bats (e.g. gaps above windows, apparently shallow crevices). No supporting evidence (e.g. droppings / staining) found. Buildings may be surrounded by poor or sub-optimal bat foraging habitat, as is often the case in urban-centre locations.
Moderate value	Buildings usually of brick or stone construction with a number of features of obvious potential value to roosting bats e.g. loose roof / ridge tiles, gaps in brickwork, gaps under fascia boards, and/or warm sealed roof-spaces with under-felt.
High value	Buildings with a large number of features of obvious potential value to bats (as above). Bats may be suspected to roost within the building (at least at certain times of year), but no supporting evidence found.
Confirmed roost	Bats discovered roosting within the building or recorded emerging from / entering the building at dusk and / or dawn. Building found to contain conclusive evidence of occupation by bats, such as bat droppings. A confirmed record (as supplied by an established source such as the local bat group) would also apply to this category.

#### **Appendix E. Bat Activity and Bat Emergence Survey Information**

#### **Survey Method of Buildings.**

Where appropriate, the building exteriors and interiors are searched visually, using binoculars, for field evidence of bats, with particular attention being paid to sheltered areas such as window ledges and pipes where bat droppings might lie undisturbed from the weather, insect prey remains, urine stains, oil stains from bats repeatedly moving over a small area and polishing the surface, and the potential presence of bats either dead or alive.

### **BCT Tree Categories 2016**

- 1\* Tree with multiple, highly suitable features capable of supporting larger roosts.
- 1 Tree with definite potential, supporting fewer suitable features than Category 1\* trees or capable of supporting roosts for single/low numbers of bats.
- 2 Tree with no obvious potential for roosting bats although due to its size and maturity the tree may support some features with limited potential to support bats.
- 3 Tree with no roosting potential.

## **Development and Planning Trigger for Bat Surveys Bat Emergence**

The Emergence Surveys are required to confirm the species, extent of use (in terms of numbers of bats), type of bat use (in terms of seasonality and functionality of use) and bat access points. These details are required to ascertain the requirement for a Natural England EPSL and to provide the information **required by Natural England should** an application prove necessary.

It is dependent upon the results of Emergence Surveys as to whether Natural England (NE) European Protected Species Licences (EPSL) will be required prior to any construction work commencing. Protected Species surveys, such as bat emergence surveys, cannot be conditioned by the LPA and must be completed prior to Planning Applications being determined. Bat Conservation Trust (BCT) guidelines recommend the level of Bat Emergence Surveys required for each circumstance.

Development and planning trigger list for bat surveys, which can be adapted to local circumstances, taken from the Association for Local Government Ecologists (ALGE) template for biodiversity and geological conservation validation checklists 2007, available from <a href="http://alge.org.uk/publications/index.php">http://alge.org.uk/publications/index.php</a>

- (1) Conversion, modification, demolition or removal of buildings (including hotels, schools, hospitals, churches, commercial premises and derelict buildings) which are:
  - Agricultural buildings (e.g. farmhouses, barns and outbuildings) of traditional brick or stone construction and/or with exposed wooden beams;
  - ➤ Buildings with weather boarding and/or hanging tiles that are within 200m of woodland and/or water;
  - Pre-1960 detached buildings and structures within 200m of woodland and/or water;
  - Pre-1914 buildings within 400m of woodland and/or water;
  - Pre-1914 buildings with gable ends or slate roofs, regardless of location;

- ➤ Located within, or immediately adjacent to woodland and/or immediately adjacent to water;
- ➤ Dutch barns or livestock buildings with a single skin roof and board-and-gap or Yorkshire boarding if, following a preliminary roost assessment, the site appears to be particularly suited to bats.

## (2) **Development affecting built structures:**

- > Tunnels, mines, kilns, ice-houses, adits, military fortifications, air-raid shelters, cellars and similar underground ducts and structures; unused industrial chimneys that are unlined and brick/stone construction;
- > Bridge structures, aqueducts and viaducts (especially over water and wet ground).

#### (3) Floodlighting of

- ➤ Churches and list buildings, green space (e.g. sports pitches) within 50m of woodland, water, field hedgerows or lines of trees with connectivity to woodland or water;
- ➤ Any building meeting the criteria listed in (1) above.

## (4) Felling, removal or lopping of:

- ➤ Woodland:
- ➤ Field hedgerows and/or lines of trees with connectivity to woodland or water bodies;
- > Old and veteran trees that are more than 100 years old;
- ➤ Mature trees with obvious holes, cracks or cavities, or that are covered with mature ivy (including large dead trees).

## (5) **Proposals affecting water bodies:**

➤ In or within 200m of rivers, streams, canals, lakes, reed beds or other aquatic habitats.

## (6) Proposal located in or immediately adjacent to:

- Quarries or gravel pits;
- ➤ Natural cliff faces and rock outcrops with crevices or caves and swallets.

#### (7) **Proposals for wind farm developments**

➤ of multiple wind turbines and single wind turbines (depending on the size and location) (NE TIN 051 – undergoing updates at the time of writing)

## (8) All proposals in sites where bats are known to be present<sup>1</sup>

➤ This may include proposed development affecting any type of buildings, structures, features or location.

#### Notes:

1. Where sites are of international importance to bats, they may be designated as SACs. Developers of large sites 5-10km away from such SACs may be required to undertake a HRA.

## **BCT Emergence and Activity Guidelines**

Bat Emergence Survey Requirements				
Extracted from - Table 7.3 & 7.1 BCT Recommended Minimum Survey Effort				
Low Roost Suitability	Moderate Roost Suitability	High / Confirmed roost Suitability		

One Survey visit –	Two separate survey visits –	Three separate survey visits – at
One dusk or dawn re-	One dusk and one dawn re-	least one must be a dawn re-entry
entry survey	entry survey	and one a dusk emergence, the
		other can be either.

Structures that have been categorized as low potential can be problematic and the number of surveys required should be judged on a case by case basis. If there is a possibility that quiet calling, late emerging species are present then a dawn survey may be more appropriate, providing weather conditions are suitable. In some cases, more than one survey may be needed, particularly where there are several buildings in this category.

Multiple survey visits should be spread out to sample as much of the recommended survey period as possible, it is recommended that surveys are spaced at least two weeks apart, preferably more. A dawn survey immediately after a dusk one is considered only one visit.

EMERGENCE – RE-ENTRY Survey Dates				
May to August	May to September with at	May to September with at least		
(structures)	least one between May and	two, between May and August		
No further survey	August			
required (trees)				

September surveys are both weather and location dependent. Conditions may become unsuitable in these months, particularly in more northerly latitudes, which may reduce the length of the survey season. Multiple survey visits should be spread out as much as possible; it is recommended that surveys are spaced at least two weeks apart, preferably more, unless there are specific ecological reasons for the surveys to be closer together (for example a more accurate count of a maternity colony is required but it is likely that the colony will soon disperse) if there is potential for a maternity colony then consideration must be given to detectability. A survey on 31st august followed by a mid-September survey is unlikely to pick up a maternity colony. An ecologist should use their professional judgement to design the most appropriate survey regime.

#### **Bat Activity Survey Requirements**

Extracted from - Table 8.3. BCT Recommended Minimum Survey Effort.

Transe	ect/spot count/timed search sur	veys			
Low Habitat Value	Moderate Habitat Value	High / Confirmed Habitat Value			
(Spring- April/May, summer- June/July/August, autumn- September/October) in appropriate weather conditions for bats. Further	appropriate weather conditions for bats. At least one of the surveys should comprise dusk and pre-dawn (or dusk to dawn) within one	month (April to October) in appropriate weather conditions for bats. At least			
Automatic / static bat detector surveys					

One location per transect,				
data to be collected on five				
consecutive nights per				
season (spring- April/May;				
summer- June/July/August;				
autumn- September/				
October) in appropriate				
weather conditions for bats.				

Two locations per transect, data to be collected on five consecutive nights per month (April to October) in month (April to October) in appropriate weather conditions for bats.

Three locations per transect; data to be collected on five consecutive nights appropriate weather conditions for bats)

Refer to BCT guidelines document Table 8.3 for further details and dependent conditions where the survey effort is not straightforward.

### Appendix F. Wildlife Crime

http://www.nwcu.police.uk/what-is-wildlife-crime/

In general, wildlife crime is any action which contravenes current legislation governing the protection of the UK's wild animals and plants.

A wildlife crime may also be reported and recorded where advice has been given regarding the potential or actual presence of a protected species within a habitat with that habitat then removed/impacted causing actual disturbance/harm/death to that species. Examples in relation to this report may be seasonally pertinent but could include cutting back or removal of a hedgerow where birds and dormice are nesting; removing or doing works to trees where bats roost; cutting grass where reptiles such as slow-worms are inhabiting; filling in or blocking access to badger setts. Specific legislation should be referred to regarding the protection of any animal species or habitat.

### Appendix G. Habitats Regulation Assessment (HRA)

Appropriate assessment (or 'Habitats Regulation Assessment', HRA) is one of the most powerful tools currently available to control the environmental impacts of development. Whereas sustainability appraisal is a decision-informing tool, appropriate assessment is often described as a decision-making tool because has the potential to stop development.

Appropriate assessment tests whether a plan or a project is likely to have a significant negative impact on any:

- Special Protection Area (SPA) a European designation which protects birds
- Special Area of Conservation (SAC) a European designation which protects habitats
- RAMSAR site a European designation which protects wetlands.

Jointly, these are called 'European sites'. Appropriate assessment does not apply to other designations, like Sites of Special Scientific Interest (SSSI) or Areas of Outstanding Natural Beauty (AONB).

If the proposed development has the potential to impact up on any of the European sites, the LPA can request an HRA be conducted. The responsibility for conducting such an HRA lies with the LPA, but they can insist that all relevant information is provided to them by the developer.

Proximity to a site is not the defining factor, potential 'impact' is, and for large projects this could be up to 15km from the site. The closer to a protected site, the more likely it is that an HRA will be required, even for a very small site.