

Bungalow and Land at Coads Green, Cornwall

Ecological Impact Assessment

A report on behalf of

Adams Planning & Project Services Ltd

Type of document (Version)	3
Revisions	Assessment amended in relation to new proposals, new constraints plan added
Report reference	21-012-EcIA-CT
Issue date	16 March 2022
Document prepared by	Chris Turner BSc MCIEEM
Quality control/ checked by	Mark Witherall MCIEEM
Information Valid for:	Two years from the date of the report

Site Details

Site name	Bungalow and Land at Coads Green
Site location	Cornwall
Central OS grid reference	SX 29611 76910
Client	Adams Planning & Project Services Ltd
Report title	Ecological Impact Assessment



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1 INTRODUCTION

This document has been produced by Chris Turner BSc MCIEEM of Lakeway Ecological Consultancy Ltd. It presents an Ecological Impact Assessment for the Bungalow and Land at Coads Green, Cornwall (central OS grid reference: SX 29611 76910). The works were commissioned by Adams Planning & Project Services Ltd and this report is intended to be submitted with a full planning application.

The area within the application boundary is hereafter referred to as the 'Site'. A Site location plan is provided in **Figure 1**.

1.1 Description of Proposed Development

Proposals include the construction of two dwellings in the eastern portion of the garden of a bungalow (Sorrento). The plans are reproduced in **Figure 2**.

The design will result in the loss of outbuildings, amenity grassland and unmanaged shrubs. Soft landscaping includes lawns, native hedgerow planting and tree planting.

1.2 Aims and Objectives

1.2.1 Field Survey Aims

The survey information contained within this report aims to:

- Establish whether the development will impact protected species or habitats.
- Identify and provide context for protected species or habitats which may be impacted by the proposals.

1.2.2 Report Objectives

The objectives of this report are to:

- Provide the client with sufficient information to fully inform them of their obligations.
- Present an assessment of the likely (significant) effects of the proposed development on ecological features.
- Allow the Local Planning Authority (LPA) to ascertain whether the proposal accords with relevant planning policy and legislation; and,
- Allow the LPA to write planning conditions (where necessary) to secure mitigation, compensation and enhancement measures.

Recommendations have been detailed following the biodiversity mitigation hierarchy in accordance with NPPF paragraph 175 (a) which states:

"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."

The mitigation hierarchy is a stepwise tool which aims to achieve no overall negative impact on biodiversity as follows:

1. Avoidance – measures undertaken to avoid creating impacts at the outset.



2. Mitigation – measures undertaken to reduce the impact to an acceptable (negligible) level.
3. Compensation – measures to replace/ restore ecological features if an impact is unavoidable.
And finally,
4. Offsetting – measures to avert biodiversity loss by compensating for any residual effects when the above steps have been taken.

This report sets out additional measures which provide enhancements on the Site with the aim of providing a net-gain for biodiversity, which are in line with National and Local planning policy.

Relevant legislation is provided in **Appendix 1**.

1.3 Personnel

All written and survey work was carried out by Principal Ecologist Chris Turner. Chris has been an ecological consultant for ten years. Chris is a full member of the Chartered Institute of Ecology and Environmental Management (MCIEEM) and is bound by their professional Code of Conduct. Chris is registered to use a Level 2 class licence to survey for bats since 2013 (Natural England ref: 2015-12878-CLS-CLS), is a registered consultant on Natural England's Bat Mitigation Class Licence (WML-CL21 – ref: RC150) and is a Natural England Voluntary Bat Roost Visitor.

This report has been peer reviewed by Mark Witherall BSc MCIEEM. Mark has 20 years' experience as an ecological consultant and is a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM). Mark has held a level 2 class licence to survey for bats since 2007 (Natural England Ref: 2015-12404-CLS-CLS) and is a registered consultant on Natural England's Bat Mitigation Class Licence (WML-CL21 – ref: RC154).

2 METHODS

2.1 Ecological Scoping and Baseline Data Collection

A desk study, extended Phase-1 habitat survey and buildings inspection for bats and nesting birds were undertaken in April 2021 and an update was undertaken in March 2022. Two evening emergence surveys were carried out of the bungalow in May 2021. Surveys were undertaken based upon the potential impacts of the development. Full details of methods and results are provided in **Appendix 2-3**.

2.2 Baseline Evaluation and Impact Assessment

Determining the geographical importance of bat roosts, other protected species and habitats was undertaken in accordance with CIEEM's Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2018). Where uncertainty exists, a precautionary approach has been adopted. In addition to the geographic frames of reference recommended in the CIEEM guidelines, an additional category of 'Site Importance' has been included to account for features that are of some value in the context of the Site but are not considered to be of sufficient value to be categorised as 'Local Importance'.

3 LIMITATIONS

Care has been taken to ensure that balanced advice is provided on the information available and collected during the study periods, and within the resources available for the project. However, the possibility of important ecological features being missed due to survey timings, absence during surveys or the year of survey cannot be ruled out. In addition, the lack of evidence or records of protected species on Site does not preclude their presence from Site.



All areas of the Site were accessible to survey and all surveys were undertaken during suitable weather conditions.

4 BASELINE CONDITION AND ASSESSMENT

4.1 Designated Sites

The Site lies 5.2km to the north-east of Phoenix United Mine and Crow's Nest Special Area of Conservation (SAC). This site is designated for its Calaminarian grasslands and the rare plant species it supports. This site is of **international** importance for nature conservation.

Haldwell Woods County Wildlife Site (CWS) lies approximately 600m to the north-east of the Site. This site is designated for the presence of ancient woodland and is of **County** importance.

4.2 Habitats and Flora

The distribution of habitats is shown on **Figure 1** and full descriptions and photographs are included in **Appendix 2**.

The Site comprises a bungalow, shed and greenhouse surrounded by hardstanding and set in lawned gardens with introduced shrub borders. The Site is triangular and is bound by Cornish hedges with little connected woody vegetation. Two small lined man-made ponds occur within the area of hardstanding immediately to the east and south of the bungalow. A number of trees are present on the hedge banks.

The area within the development footprint is of **negligible** importance for nature conservation although the Cornish hedge garden boundaries are of **local** importance and are a Cornwall BAP habitat.

4.3 Fauna

4.3.1 Badgers

Twenty-six records of badger were returned by ERCCIS within 1km.

No evidence of badgers, including setts, dung pits, latrines, paths or fur, was identified on site. The habitats within the Site provided some limited foraging habitat in the form of open grassland likely to contain earthworms, a favoured food of badgers. Badgers' home ranges vary between 30ha and 300ha¹ and therefore, with an abundance of higher quality foraging habitat, such as woodland and pasture, in the wider area, it is unlikely that the Site provides an important foraging resource for local badger populations. The Site is therefore of **negligible** importance to badger. It is possible, however, that badgers may commute and forage on Site from time to time.

4.3.2 Bats

Twelve records of bats were returned by ERCCIS comprising field records (no roosts) of common pipistrelle *Pipistrellus pipistrellus*, noctule *Nyctalus noctula* and a single record of the Annex II greater horseshoe bat *Rhinolophus ferrumequinum*. It is highly likely that a greater range of species is found in the area and bats are under-recorded.

¹ www.badgerland.co.uk



Roosting Bats

A transitional roost for an individual brown long-eared bat was found in the loft of the bungalow. This roost is of low conservation status. There is an abundance of potential alternative roosting features off-Site in patches of woodland and nearby buildings and farm complexes and therefore, the bungalow is considered to be of no more than **site** importance for roosting bats.

Foraging bats

The Site's boundaries and patches of woodland in the wider landscape (off-Site) provide strong linear features which local bat populations are likely to use for foraging and commuting. Common pipistrelles were seen foraging and commuting along the northern and southern boundaries during the surveys. However, owing to the small size of the Site and its location on the edge of a small village, it is unlikely to provide an important commuting route for bats, including horseshoe bats, above the **site** level.

4.3.3 Dormice

No records of dormice were returned in the data search within 1km of the Site. However, dormice are known to use a range of habitats, such as those found in the wider landscape, including scrub, hedgerows, woodland and residential gardens, all of which provide a variety of food sources throughout the year (Bright et al., 2006). None of the habitats within the development footprint provide optimal foraging habitat for dormice and the Site is limited in extent, such that it is extremely unlikely to support a breeding population. The hedgerows and woodland in the wider area (off-Site) comprise a range of species which are likely to be exploited by dormice at different times of year. None of the Cornish hedge boundaries provide connected canopies, which dormice use to travel within and therefore the Site is considered to be of **negligible** importance to hazel dormouse and they are not considered further in this report.

4.3.4 Nesting Birds

Over 950 records of birds were returned by ERCCIS from within 1km of the Site. Of these records 252 comprise birds on the amber or red list of birds of conservation concern². The shrubs and trees on the hedge banks provided some nesting habitat for common and urban fringe species and a rookery was found within the beech tree at the southern corner of the Site. An active birds' nest, thought to be house sparrow *Passer domesticus* was recorded near the base of the chimney in the loft of the bungalow. However, the habitats are limited in extent, common and widespread in the local area and therefore are of no more than **site** importance for nesting birds.

4.3.5 Reptiles and Amphibians

Twenty-two records of the SPI³ common toad *Bufo bufo* were returned by ERCCIS along with four records of common lizard *Zootoca vivipara*.

The bases of the Cornish hedge boundaries provide some sheltering, basking and foraging habitat for common reptiles such as slow worm *Anguis fragilis* and the man-made ponds provide some breeding habitat for amphibians (including common toad). However, there is little suitable habitat within the remainder of the garden to support a significant population of amphibians and reptiles and there is a range of habitats in the wider landscape, more suited to these species groups. Any populations of amphibians and reptiles are considered to be of no more than **site** importance.

² Birds of Conservation Concern (Eaton et al., 2015)

³ Species of Principal Importance under the NERC Act 2006



4.3.6 Other Protected/ Notable Species

Eight records of European hedgehog *Erinaceus europaeus* were returned by ERCCIS and it is possible that hedgehog cross the Site from time to time. Additionally, invertebrates are likely to exploit seasonal nectar sources from flowering plants but owing to the general paucity of suitable habitat within the application boundary, the Site is considered to be of **negligible** importance for other protected/ notable species.

5 FURTHER SURVEY WORK

It is considered that the survey effort reported above is sufficient to provide an assessment of the likely significant effects of the development proposals on ecological features and to inform the mitigation strategy detailed below. No further ecological survey work is considered necessary in order to determine the current planning application and the results are considered valid for two years.

If there are any changes to the proposals, or if any significant amount of time has passed since the date of this report, a re-appraisal may be required.

6 IMPACT ASSESSMENT AND MITIGATION

6.1 Designated Sites

Phoenix United Mine and Crow's Nest SAC is sensitive to changes in habitat management and air pollution/nitrogen deposition.

Owing to the distance of the Site from the Phoenix United Mine and Crow's Nest SAC (5.2km), adverse effects from airborne pollution are considered extremely unlikely. Best construction practices will be adhered to, to avoid direct and indirect impacts on the much closer Halwell Wood CWS (600m) such that no adverse impacts are predicted.

6.2 Habitats and Flora

As the vast majority of the Site comprises amenity grassland and introduced shrubs, it is considered to be of low ecological value. However, in the absence of mitigation, the loss of vegetation would be minor adverse at the site level. This loss is unavoidable.

To compensate for the loss of amenity grassland, new grassland planting, as part of the soft landscaping scheme will include species-rich flowering lawns. Emorsgate's EL1 'Flowering Lawn Mixture' or similar contains a range of flowering species along with hard-wearing grasses and can tolerate regular mowing to a height of 25-40mm once established. This will be sown as per manufacturer's instructions.

As the current areas of introduced shrubs are of negligible ecological value, no specific compensation is required. It is recommended that the gardens are planted with a range of shrubs, suitable for the local conditions but of benefit to wildlife. Ideally native species will be selected over purely ornamental plants. A range of plants will be selected from the RHS Plants for pollinators list, downloadable from the RHS website⁴.

⁴ <https://www.rhs.org.uk/science/conservation-biodiversity/wildlife/plants-for-pollinators>



6.3 Fauna

6.3.1 Bats

Roosting Bats

One transitional roost for an individual male or non-breeding female brown long-eared bat is present within the bungalow on Site. As the current proposals relate to the construction of two dwellings, some distance away from the bat roost and **proposals will not impact the bungalow, no adverse effects are predicted and no EPS derogation licence is required.**

However, if works are needed in future, an EPS derogation licence will be required, if works impact the roof structure and/ or roof space. The ecologist must be contacted for advice.

Foraging/ Commuting Bats

It is probable that local bat populations (including the extremely light-averse greater horseshoe bat) forage and commute along the site boundaries, particularly along the southern and northern boundaries. Therefore, inappropriate exterior lighting risks causing a barrier to foraging bats.

As a public footpath runs along the northern boundary, inside the Site, a 1.8m high close board fence is to be installed, to separate the Site from the PRoW. This will have an added benefit of keeping the northern boundary dark, thus ensuring the persistence of the northern boundary as a navigational feature.

The planting of native species-rich hedgerow along the southern boundary (see **Section 7**), will strengthen this linear feature, which will bolster commuting corridors for bats.

Exterior lighting (if required) must be carefully placed to avoid illuminating boundary vegetation. Best practice guidance detailed in Guidance Note 08/18 - Bats and Artificial Lighting in the UK (BCT, ILP, 2018) should be followed when siting lights both on and within buildings. Furthermore, security lighting will point downwards and be set on motion sensor with short duration (30s or less). This will ensure that no light barriers are introduced to foraging and commuting bats and no adverse effects are predicted.

6.3.2 Nesting Birds

An active sparrow nest was recorded within the bungalow (not to be affected by current proposals) and a rookery is present within a tree on the southern boundary. As the Site boundaries and their vegetation are to be largely retained, the loss of vegetation within the Site (limited to herbaceous borders) is not considered to be significant. The rookery will remain unaffected.

In order to avoid impacting nesting birds, vegetation clearance will be timed to avoid the bird breeding season (**no work between March and August inclusive**). Alternatively, if this cannot be achieved, a check for active birds' nests must be undertaken immediately prior to commencement of works. Any active nests will need to be retained and buffered (under guidance from an ecologist) until all chicks have fledged.

New landscaping including boundary planting will adequately compensate for the loss of nesting opportunities caused during works such that no adverse effects are predicted.

6.3.3 Reptiles and Amphibians

There is a minor risk of killing/ injuring individual reptiles during Site clearance and removal of vegetation in the absence of mitigation. It is recommended that regular management of the garden continues, through strimming/ mowing to a height of less than 100mm. This will minimise the chance that reptiles will colonise the Site prior to commencement of works. No adverse impacts are predicted.



The ponds should be checked for the presence of amphibians immediately prior to commencement of works. In the extremely unlikely event that any are found, they should be moved by gloved hand out of the working area. Works to the pond should avoid late winter/ early spring to minimise the chance that frogs and toads will be present. This is very much a precautionary approach as the ponds are isolated from optimal habitat and the presence of amphibians is extremely unlikely. No compensation is required for the loss of the ponds.

6.3.4 Other Protected/ Notable Species

The presence of other protected/ notable species is extremely unlikely owing to the lack of semi-natural habitats on Site. However, wildlife including hedgehogs may cross the site from time to time and some of the flowering plants within the shrub borders provide seasonal nectar sources for invertebrates. Best practice measures must be employed to avoid harm to wildlife during enabling/ construction and any pipe work should be capped overnight and any pits/ trenches covered or means of escape provided. The layout provides continuity around the Site such that wildlife will be able to traverse the Site during operation and the soft landscaping scheme includes wildlife friendly planting.

'Hedgehog Holes' - 13cm x 13cm gaps should be cut at the base of solid fences to allow hedgehogs access to all gardens on Site. Recommended locations are shown on **Figure 2**. No adverse impacts are predicted.

7 ENHANCEMENTS

In line with Cornwall Council's 'Planning for Biodiversity Guide' (2018), the following enhancements will be included in the development. The location of features is shown on an Ecological Constraints and Opportunities Plan in **Figure 2**:

- Species-rich hedgerow will be planted along the southern boundary to provide screening from the road. An indicative species list is provided in **Appendix 4**.
- Self-contained, self-cleaning bat boxes will be installed within the fabric of the buildings or retro-fitted at a rate of one per two dwellings. These should be installed close to wall-tops, away from areas of high traffic and should not be placed directly above windows or doors where droppings could cause a nuisance to residents.
- General purpose bird boxes will be installed within the fabric of the buildings or retro-fitted at a rate of one per two dwellings. These should be sited at least 2m high, facing east or north away from areas of high traffic and should not be placed directly above windows or doors, where droppings could cause a nuisance to residents.
- Bee/ bug bricks will be installed at a rate of one per unit. These should be built into the fabric of buildings (garages ideally) approximately 1m high and no more than 2m from the nearest vegetation.

These enhancements will also achieve a net gain for biodiversity in accordance with the aims of the NPPF and local policy. As the development concerns fewer than ten dwellings, a formal Biodiversity Net-Gain (BNG) assessment using the Defra Metric is not required.

8 SUMMARY AND CONCLUSIONS

Table 1 overleaf provides a summary of impacts, avoidance, mitigation and compensation measures required to prevent significant impacts to ecological features and details net-loss/ net-gain in habitats. **Figure 2** shows where these measures will be applied. As the proposals are for fewer than ten dwellings, a formal BNG assessment is not considered necessary.



Provided the avoidance, timing of works and mitigation measures are carried out, the proposal is considered unlikely to have significant adverse effects on ecological features.

Enhancement measures have been recommended with the aim of providing a net biodiversity gain, in accordance with National Planning Policy Framework and local policy. Overall, the development will provide a net-gain in biodiversity.



Table 1: Summary of Impact Assessment, Mitigation and Residual Effects/Loss/ Gain

Ecological Feature	Value	Impacts (before mitigation)	Avoidance and Mitigation Measures	Compensation	Residual Effects
Designated Sites	County	<ul style="list-style-type: none"> Air and waterborne pollution entering the Halwell Woods CWS 	<ul style="list-style-type: none"> Best construction practices followed to avoid air and waterborne pollution 	<ul style="list-style-type: none"> n/a 	<ul style="list-style-type: none"> Neutral
Habitats	Negligible to local	<ul style="list-style-type: none"> Loss of introduced shrubs Loss of amenity grassland 	<ul style="list-style-type: none"> n/a 	<ul style="list-style-type: none"> soft landscaping includes areas of species-rich flowering lawns and shrubs and trees of benefit to wildlife Southern boundary hedge will be infill planted to provide continuous vegetation cover 	<ul style="list-style-type: none"> Positive 100m hedgerow will be enhanced/ planted
Bats	Site	<ul style="list-style-type: none"> Increased light levels at boundaries 	<ul style="list-style-type: none"> Avoid light spill on boundaries during construction and operation 	<ul style="list-style-type: none"> Areas of species-rich habitat across the Site and planting of species to encourage invertebrate prey Hedgerow planting along boundaries will benefit foraging/ commuting bats 	<ul style="list-style-type: none"> Gain of four bat roosting sites (2 x tree-mounted, 2 x built-in) Soft landscaping will benefit invertebrates (prey for bats)
Birds	Negligible	<ul style="list-style-type: none"> Risk of damaging/ destroying active birds' nests during vegetation removal Loss of nesting habitat 	<ul style="list-style-type: none"> Vegetation removal to take place outside of nesting bird season or with a pre-works check by an ecologist 	<ul style="list-style-type: none"> Areas of species-rich habitat across the Site 	<ul style="list-style-type: none"> Gain of two nest boxes Gain in species-rich hedgerow for nesting
Reptiles	Negligible	<ul style="list-style-type: none"> Killing/ injuring individuals if they stray onto site 	<ul style="list-style-type: none"> Keep vegetation short prior to and during construction 	<ul style="list-style-type: none"> Soft landscaping will benefit reptiles 	<ul style="list-style-type: none"> Positive
Other Species (badger, dormice, hedgehogs and invertebrates)	Negligible to Site	<ul style="list-style-type: none"> Temporary loss of habitat Risk of trapping individuals crossing the Site 	<ul style="list-style-type: none"> Holes/ pits/ trenches covered overnight 	<ul style="list-style-type: none"> Soft landscaping will benefit invertebrates 	<ul style="list-style-type: none"> Gain in flowering species for invertebrates. Gain in species-rich hedgerows will benefit dormice.



9 REFERENCES

Bat Conservation Trust/ Institute of Lighting Professional (2018) *Guidance Note 08/18 - Bats and Artificial Lighting in the UK*. Bats and the Built Environment Series.

BSI (2013) BS42020: 2013 *Biodiversity. Code of practice for planning and development*. British Standards Institution, London, UK.

CIEEM (2018) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal (3rd Edition)*. Chartered Institute of Ecology and Environmental Management, Winchester.

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DEFRA (2011) *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*.

Eaton M., Aebischer N., Brown A., Hearn R., Lock L., Musgrove A., Noble D., Stroud D. and Gregory R. (2015) *Birds of Conservation Concern 4: the population status of birds in the UK, Channel Islands and Isle of Man*. British Birds 108: 708-746.

Joint Nature Conservation Committee (2010) *Handbook for Phase 1 Habitat Survey - a Technique for Environmental Audit*. Reprinted by JNCC, Peterborough.

Stace, C. (2019) *New Flora of the British Isles (4th Edition)*. C&M Floristics, Middlewood Green.



B2 - Shed. No bat roost potential







B3 - Greenhouse. No bat roost potential

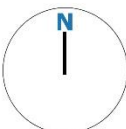
B1 - Transitional roost for an individual brown long-eared bat

Pond choked with vegetation
No open water

Rookery

Key

-  Site Boundary
-  Cornish Bank, Sparse Woody Vegetation
-  Scattered Broadleaved Trees
-  Introduced Shrubs
-  Buildings
-  Amenity grassland



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Figure 1:
Phase 1 Habitats Plan

Project:
Bungalow and Land at Coad's Green

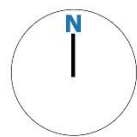
Client:
Adams Planning and Project Services

Date: 08/06/2021	Drawn by: RT
Ref: 21-012-PEA	Revision: -



Native species-rich hedge to provide a strong linear feature for bats – no light spill from dwellings

- Key**
- ★ Tree-mounted bat box (x2)
 - Bat Box (x2)
 - ◆ Bird Box (x2)
 - 13cm x 13cm hole cut in base of fence (hedgehog hole)
 - Bee/bug brick in wall c.1m above ground (x2)



Taken from Drawing 22-0209/SP1

Do not scale

Figure 2:
Ecological Constraints and Opportunities Plan

Project:
Bungalow and Land at Coad's Green, Cornwall

Client:
Adams Planning & Project Services

Date: 07/06/2021 **Drawn by:** CT

Ref: 21-012-ECOP **Revision:** -





Appendix 1 – Legislation

Habitat and Species Legislation

Species and habitats receive legal protection in the UK under various legislation, including:

- The Wildlife and Countryside Act (WCA) 1981 (as amended);
- The Conservation of Habitat and Species Regulations 2017 (as amended)
- The Countryside Rights of Way (CRoW) Act 2000;
- The Hedgerows Regulations 1997;
- The Protection of Badgers Act 1992; and
- The Natural Environment and Rural Communities (NERC) Act 2006.

Where relevant, this report takes into account the legislative protection afforded to specific habitats and species.

National Planning Policy Framework 2019

The National Planning Policy Framework (NPPF) sets out the Governments planning policies for England and how local planning authorities should incorporate them into their own policies and plans. Chapter 15 of the NPPF contains several policies targeted at enhancing the natural environment and requires local authorities to consider how impacts on biodiversity can be minimised and provide net gains in biodiversity. Paragraph 170 states that:

“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.”*

Additional Planning Practice Guidance (PPGs) supports the NPPF and includes guidance on:

- Landscape;
- Biodiversity, ecosystems and green infrastructure; and
- Brownfield land, soils and agricultural land.



Cornwall Council Local Planning Policy

The Cornwall Local Plan Strategic Policies 2010 – 2030 provides the overarching planning policy framework for Cornwall for the period up to 2030. It contains several policies associated with nature conservation which were considered as part of this report, comprising:

- Policy 22 – European Protected Sites – mitigation of recreational impacts from development: this sets out a requirement for mitigation measures for developments that are within the zone of influence of selected European Sites, which will need to be agreed and secured prior to planning approval. A detailed Supplementary Planning Document (SPD) is due to be released with details of financial contributions;
- Policy 23 – Natural Environment: Relating to sustaining local distinctiveness and character and enhancing Cornwall's natural environment. It includes guidance on development in Cornish Landscapes, the conservation and enhancement of biodiversity and geodiversity and the need for avoidance, mitigation and compensation; and,
- Policy 25 – Green Infrastructure: Relating to the protection and enhancement of a diverse, connected and functional network of open spaces and waterscapes.

Cornwall Council have recently published a 'Planning for Biodiversity Guide' (2018) to supplement the above policies. It promotes good practice in the built and natural environment and is a material consideration in planning decisions.

Post-2010 Biodiversity Framework

The UK Biodiversity Action Plan (UK BAP) was succeeded in 2012 by the 'UK Post-2010 Biodiversity Framework' which demonstrates a whole-environment strategy on how the UK contributes to achieving the Convention on Biological Diversity's (CBD) 20 Aichi Biodiversity Targets. In England, 'Biodiversity 2020: A strategy for England's wildlife and ecosystem services' (DEFRA, 2011) sets out the strategic direction for biodiversity policy in the future. The former UK BAP was used to draw up lists of species and habitats of 'principal importance' which continue to be regarded as priorities under the Post-2010 Biodiversity Framework and are identified under Section 41 of the NERC Act 2006; these species have been considered throughout this report.

Cornwall BAP

Cornwall Biodiversity Action Plan (BAP) was produced by Cornwall Biodiversity Initiative (CBI) to prioritise biodiversity projects in the region. Volume 4 of the BAP 'Priority Projects' covers the period 2010- 2015 and is split into geographical projects with broad habitat-based approaches to prioritise conservation efforts. The document outlines the aims and targets for each project, key habitats and species and lead partners assigned. In addition, CBI produced a Cornish BAP habitat and species list containing 43 habitats and 360 species.



Appendix 2 – PEA – Methods and Results

Desk Study Methods

The Environmental Records Centre for Cornwall and the Isles of Scilly (ERCCIS) was consulted for records of protected and notable species from within 1km of the Site.

The following sources were searched on 27th May 2021 to provide geographical context and to assess whether the proposals have the potential to impact protected species, habitats or sites:

- The Government's mapping website MAGIC (<https://magic.defra.gov.uk/>) was used to search for internationally designated sites within 10km, priority habitats and statutory sites designated for nature conservation within 2km.
- MAGIC was also searched for European Protected Species licences issued by Natural England in the *surrounding area since 2008, over a 4km radius*.
- Aerial photography (<https://wtp2.appspot.com/wheresthepath.htm>) was reviewed to assess connectivity between the Site and areas in the local landscape which may be of importance for protected species (wildlife corridors).

Desk Study Results

The following designated Sites (**Table 2.1**) occur within 2km of the Site, extended to 10km for internationally designated sites.

Table 2.1: Information on Designated sites within the study area

Site	Distance and Direction	Description/ Qualifying features
Internationally Designated Sites within 10km		
Phoenix United Mine and Crow's Nest SAC	5.2km south-west	<p>Annex I habitats that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> • 6130 Calaminarian grasslands of the <i>Violetalia calaminariae</i> <p>This site on the south-eastern edge of Bodmin Moor supports internationally-important Calaminarian grassland metallophyte communities. The legacy of a long history of copper and tin extraction survives as mine spoil which has been colonised by a number of metallophytic bryophytes. In particular, the site supports the only known site in the world for the endangered Cornish path-moss <i>Ditrichum cornubicum</i>. Other notable metallophytes include the Red Data Book liverworts <i>Cephaloziella massalongi</i> and the endemic <i>C. nicholsonii</i>, both associated with copper-rich substrates, and the mosses <i>Pohlia andalusica</i> and <i>Scopelophila cataractae</i>, the latter possibly an introduction into this country on imported ore. Many other notable bryophytes have colonised the spoil, including the liverworts <i>Cephaloziella integerrima</i>, <i>C. stellulifera</i>, <i>Lophozia sudetica</i>, <i>Gymnomitrium obtusum</i> and <i>Marsupella funckii</i>, and the moss <i>Ditrichum lineare</i>. The vulnerable liverwort <i>Cephaloziella calyculata</i> grows on derelict mine buildings.</p>
Non-statutory Sites within 1km		
Halwell Wood CWS	600m north-west	Ancient woodland is present in the tributary valley and comprises sessile oak woodland (neglected coppice) on the steep north west-facing slope and wet alder woodland along the base of the slope and valley floor. The oak trees support a good growth of epiphytic mosses and lichens and



		<p>dead wood is abundant, providing valuable invertebrate habitat. Associates within the wet woodland include ash and oak and the lush ground flora includes soft rush, meadowsweet, hemlock water-dropwort, bramble and ferns, together with some well-developed bryophyte communities near the stream. An area of fen at the extreme south of the site supports soft and jointed rush, meadowsweet and marsh thistle. Habitats along the slopes of the main valley include: large areas of bracken scrub which grades into semi-improved pasture in places; sycamore and beech woodland, locally dominated by oak and surrounding a disused quarry; and ash woodland on the steep slope to the north, with an understorey of hazel and ground flora dominated by bramble with abundant nettle, dog's mercury, scaly male fern and bluebell.</p>
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No Habitats of Principal Importance (HPI) are present within the Site boundary but the Site and garden is surrounded by Cornish hedge banks.

One European Protected Species (EPS) licence has been granted concerning impacts to resting places of common pipistrelle, brown long-eared, greater horseshoe and lesser horseshoe bats, 3km south-west of the Site.

Protected species records returned by ERCCIS have been referenced throughout the report. The full dataset can be provided upon request.

Extended Phase-1 Habitat Survey Methods

A site walkover was undertaken in accordance with the Joint Nature Conservation Committee's Phase 1 Habitat Survey methodology (JNCC 2010) on 8th April 2021 by Principal Ecologist Chris Turner BSc MCIEEM when weather conditions were dry and sunny with good visibility. This survey was updated on 14th March 2022. Conditions had not changed.

All habitats within the Site were identified, described and mapped during the field survey, and a non-exhaustive botanical species list compiled. Plant names follow Stace (2019). The survey was extended to highlight the potential presence of protected and priority species in accordance with CIEEM's Guidelines for Preliminary Ecological Appraisal (2017). This involved a search to identify the presence or potential presence of notable and protected species such as breeding birds, badger *Meles meles*, dormouse *Muscardinus avellanarius*, bats, reptiles and amphibians. Target Notes (TNs) were used to record any features or habitats of ecological interest.

Where access allowed, adjacent habitats were also considered in order to assess possible impacts of the proposal in a wider context. A digital map was produced as shown in **Figure 1**.

Extended Phase 1 Habitat Survey Results

The triangular Site comprises amenity grassland lawn with hardstanding and small areas of ornamental shrub planting. Boundaries comprise traditional Cornish banks with patchy native vegetation, semi-mature and mature trees and some native ground flora. Further descriptions are given overleaf in **Table 2.2**. An indicative species list is provided in **Table 2.3**.

The Site lies on the edge of a small village within a rural landscape, surrounded to the north and east by improved grassland fields. A lane runs beyond the southern boundary.

A detached bungalow occurs close to the northern boundary with a shed and greenhouse lying immediately east of the dwelling.



Table 2.2 Habitat Descriptions

Habitat Description	Photograph
<p>Garden</p> <p>The majority of the Site comprises amenity grassland. The lawn is regularly mown and is dominated by common grasses with occasional daisy, dandelion, lesser celandine and ribwort plantain. Garden escapes including daffodil and ornamental geraniums are also present within the sward. Small areas of more formal shrub planting occur to the east of the dwelling and extend along the northern portion of the Site and smaller herbaceous ornamental plants persist in unmanaged flowerbeds. A number of trees had been removed prior to the survey.</p> <p>Two small concrete lined ponds are present within an apron of hardstanding which extends from the eastern and southern elevations of the bungalow. The southern pond is devoid of vegetation and the eastern pond is choked with flag iris and ornamental buttercup (<i>Caltha</i>).</p>	
<p>Boundaries</p> <p>North - The northern boundary is an earth and stone bank with patchy woody vegetation. Native hawthorn, ivy and hazel are present to the central and eastern sections, with beech hedging along the western section. Individual hawthorn, beech and oak measuring up to 6m high are present at the western end of the boundary and a large ash is present in the eastern corner. Ground flora comprises common grasses, ivy, primula and a patch of native bluebells at the eastern corner of the Site. A public footpath runs the length of this boundary, inside the Site.</p> <p>South - The southern boundary (fronting the road) is similarly composed of an earth and stone bank but with no woody hedgerow vegetation. Individual trees present on this boundary comprise hazel, beech and oak. Ground flora on the Site side of the bank includes harts tongue fern, spleenwort, navelwort and common grasses (from the lawn) with daffodil along the top of the bank. The roadside of the bank has native bluebells, hedge bedstraw and montbretia (potentially invasive) in addition to the species found on the Site side.</p>	 <p>Northern boundary looking west</p>  <p>Southern boundary looking east</p>





Habitat Description	Photograph
<p>East – this boundary comprises an earth and stone bank covered with grass. Other herbs present on the bank include lesser celandine, ivy, Lords and Ladies, foxglove, greater stitchwort, common nettle, daffodil and bramble. A multi-stemmed beech tree occurs towards the southern end of the bank, occasional multi-stemmed hazel and holly occur in the central section and two oaks grown from the bank at the northern end.</p>	 <p>Eastern boundary looking north</p>
<p>Buildings</p> <p>A detached bungalow under a concrete tile roof occupies the western portion of the Site, near to the northern boundary. This is surrounded by hardstanding, which extends eastward along the northern boundary. A pitched roofed asbestos cement shed lies 10m to the east of the bungalow and a dilapidated greenhouse lies a further 15m east of the shed. Full building descriptions are provided in Table 2.5.</p>	 <p>Bungalow</p>

Table 2.3: Indicative Species list

Common name	Scientific name (Stace, 2019)
<i>Arum maculatum</i>	Lords and Ladies
<i>Asplenium</i> sp.	Spleenwort
<i>Asplenium scolopendrium</i>	Hart's tongue fern
<i>Bellis perennis</i>	Daisy
<i>Corylus avellana</i>	Hazel
<i>Crataegus monogyna</i>	Hawthorn
<i>Crocsmia</i> sp.	Montbretia
<i>Dactylis glomerata</i>	Cock's-foot
<i>Digitalis purpurea</i>	Foxglove
<i>Fagus sylvatica</i>	Beech
<i>Ficaria verna</i>	Lesser celandine
<i>Galium album</i>	Hedge bedstraw
<i>Galium aparine</i>	Cleavers
<i>Geranium robertianum</i>	Herb-Robert
<i>Hedera helix</i>	Ivy
<i>Holcus lanatus</i>	Yorkshire-fog
<i>Hyacinthoides non-scripta</i>	Native bluebell



<i>Ilex aquifolium</i>	Holly
<i>Lolium perenne</i>	Perennial rye-grass
<i>Plantago lanceolata</i>	Ribwort Plantain
<i>Primula vulgaris</i>	Primrose
<i>Prunus spinosa</i>	Blackthorn
<i>Pyrocantha</i>	Firethorn
<i>Quercus robor</i>	Pedunculate Oak
<i>Ranunculus repens</i>	Creeping Buttercup
<i>Rosa canina</i>	Dog Rose
<i>Rubus fruticosus agg.</i>	Bramble
<i>Stellaria holostea</i>	Greater stitchwort
<i>Taraxacum agg</i>	Dandelion
<i>Trifolium repens</i>	White Clover
<i>Umbilicus rupestris</i>	Navelwort
<i>Urtica dioica</i>	Common Nettle

Protected/ Notable Species

The Site comprised mainly amenity grassland, hardstanding and introduced shrubs. As a result, there was negligible potential for the Site to support notable mammals such as dormice and badgers and no evidence was found.

The boundaries and planting within the site provided some bird nesting habitat and a rookery was noted in the beech tree at the southern corner of the Site. An active bird nest was found between roof tiles and felt in a small hole at the base of the chimney of the bungalow.

It is possible that a small population of slow worms persists within the stone-faced banks, but habitats across the Site were generally unsuitable for sheltering and basking.

The ponds are in poor condition, either being empty or choked with vegetation and it is extremely unlikely that a significant amphibian population exists.

Preliminary Bat Roost Assessment Methods

All buildings were assessed for their potential to support roosting bats. The assessment was undertaken on 8th April 2021 by Principal Ecologist Chris Turner BSc MCIEEM. An update was undertaken on 14th March 2022. Chris is registered to use a Level 2 class licence to survey for bats (Natural England ref: 2015-12878-CLS-CLS).

The buildings were assessed externally for signs of bats and points where bats could gain access. Close focusing binoculars, a Rigid CA-300 endoscope and high-powered torch were used where appropriate. A search was made for features which could provide suitable roosting spaces for bats, such as gaps beneath tiles, around weatherboarding and door frames. Any direct signs (such as droppings stuck to walls) as well as features of potential value to bats were noted on hand drawn maps.

A systematic search was made of all accessible internal areas of the buildings for the presence of bats, potential roosting sites and evidence such as bat droppings, carcasses and feeding remains (insect fragments).

Trees were inspected from ground-level with the aid of binoculars for Potential Roost Features (PRFs) such as rot holes, hazard beams, cracks or splits, woodpecker holes, knot holes, man-made holes, cankers, gaps between overlapping stems/ branches, loose bark, dense ivy, epicormic growth and bat, bird or dormouse boxes. Signs indicating possible use by bats were also recorded such as bat droppings, odour, scratches, staining and



audible sounds. Information collected about PRF's included a description, the height of the feature above ground level and the orientation of the feature in relation to the trunk.

Depending upon the findings of the assessment, the need or otherwise for further survey work was established to provide additional information on an identified roost, or to provide a reasonable level of confidence that bats are not present.

In line with best practice guidance (Collins, 2016), the buildings and trees were prescribed a category based on their potential to support roosting bats as detailed in **Table 2.4** below. Building locations are shown in **Figure 1**.

Table 2.4: Bat Roost Potential (as detailed in Collins, 2016)

Suitability	Description of bat roosting potential	Description of bat roosting potential (trees)
Negligible	The building is not considered suitable for bats	Negligible habitat feature/s likely to be used by roosting bats
Low	A structure with one or more potential roost sites that could be used on a sporadic or occasional basis for feeding or solitary day roosting	A tree with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.
Moderate	A structure with one or more areas suitable for roosting due to the features size, shelter, protection, conditions and surrounding habitat that could be attractive to bats and potentially support maternity roosts	A tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat. Unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure with many areas suitable for roosting with a large number of potential access points obviously suitable for use by larger numbers of bats on a more regular basis. These are normally sheltered locations, subject to low variation in temperature	A tree with one or more potential roost sites that are obviously suitable for use by larger number of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.
Roost	Bats and/or evidence of bats found	Known or confirmed roost

Preliminary Roost Assessment Results



The bungalow is a rendered masonry building under a pitched concrete- tiled roof. The shed is a single-skinned block structure under a pitched asbestos-cement sheet roof and the greenhouse is aluminium framed. Further details and photographs are provided in **Table 2.5** overleaf.

None of the trees on Site presented any bat roosting potential and were therefore all classified as negligible in accordance with best practice guidance (Collins, 2016).

Table 2.5: Building descriptions and bat roosting potential

Ref	Description	Photograph	Bat Roost potential (Collins, 2016)
B1	<p>Bungalow</p> <p>Exterior – the bungalow is rendered blockwork, rectangular in plan-view, with a pitched roof terminating in gable ends. A flat-roofed garage extension protrudes from the western elevation. Timber soffits and fascias occur throughout and appear to be in sound condition. Some mortar is missing beneath tiles at each gable end and the roof-line is sagging slightly, providing gaps beneath tiles, particularly at the western end of the building. Flashing around the chimney is lifted (bird access point).</p> <p>Interior – windows and doors are intact and the ground floor of the building is decorated throughout. A loft hatch in the hall leads to a large void, spanning the footprint of the house and measuring approximately 2.5m to the ridge. The open timber roof structure is clearly visible as are internal gable walls and chimney stack. The roof is lined with bituminous felt. A window allows much light into the eastern end of the loft.</p> <p>Approximately 200 bat droppings were found in a line beneath the ridge at the darker, western end of the building and a further scattering was found at the eastern end (c.200).</p> <p>A single brown long-eared bat was roosting at the ridge in the loft at the western end of the building during the initial survey on 8th April 2021, pictured right.</p> <p>Bat droppings were indicative of those deposited by a brown long-eared bat.</p>		Confirmed roost



Ref	Description	Photograph	Bat Roost potential (Collins, 2016)
B2	<p>Shed</p> <p>Exterior – Single skin blockwork shed with broken windows in north and south elevations. A timber door in the western elevation offered access. The building is covered with asbestos cement sheeting and a number of plastic skylights occur throughout the roof.</p> <p>Interior - The building has a concrete floor and was used for storage and as a potting shed/ workshop. The interior is light and draughty from the broken windows and holes in the roof.</p> <p>The building presented negligible day roosting potential as it lacked dark, sheltered conditions sought out by roosting bats. However, with direct fly-in access, the building offered some limited night roosting opportunities. A thorough search during the initial inspection and again prior to the emergence surveys described in Appendix 3 yielded no evidence of roosting bats and it is considered that no roost is present within the shed.</p>		Negligible
B3	<p>Greenhouse</p> <p>This aluminium framed, glass greenhouse presented negligible potential for roosting bats</p>		Negligible



Appendix 3 – Bat Emergence Survey – Methods and Results

As a roost was found in the bungalow, two evening emergence surveys were conducted to characterise the roost, following best practice guidelines (Collins 2016) on the dates detailed in **Table 3.1**.

Two surveyors were positioned at opposite corners of the building with a good view of any potential bat access points and roost features. Surveyors used Anabat Scout and Anabat SD2 recorders in conjunction with BatBox Duets. The dusk surveys commenced 15 minutes before sunset and continued for approximately one and a half hours after sunset, covering the usual emergence times of UK bat species. All surveys were completed during suitable weather conditions of at least 10°C temperature at the start of the survey, dry and with light winds.

Table 3.1: Emergence Survey Details

Date	Sunset time	Start time	Survey length (time)	Weather	Personnel
10/05/2021	20:52	20:35	1 hour 45 min	Dry, 12°C, 0% cloud cover (cc), wind (Beaufort) 0 – 1.	Chris Turner MCIEEM Ruth Testa
24/05/2021	21:11	20:55	1 hour 45 min	Dry, 11°C, 0% cloud cover (cc), wind (Beaufort) 1-2.	Chris Turner MCIEEM Ruth Testa

Prior to each evening emergence survey, an inspection was made of the loft void to check whether any bats were roosting.

Results

No bats were seen roosting during either of the pre-emergence inspections.

No bats emerged from the building during either of the emergence surveys conducted.

Visit 1 – 10th May 2021

Common pipistrelles were recorded foraging around the beech tree in the southern corner of the Site during the survey and regular passes (near constant for the duration of the survey) were noted from common pipistrelles commuting and foraging in the field beyond the northern boundary. Bats tended to enter the area from the village to the north of the Site.

No bats emerged from the building.

Visit 2 – 24th May 2021

A total of four bat passes were recorded by both surveyors during this visit. They were from common pipistrelles commuting east to west along the road outside the southern Site boundary.

No bats emerged from the building.

Conclusion

From the evidence found, it is considered that the bungalow contains an occasionally used transitional roost for an individual brown long-eared bat. This roost is of low conservation significance as brown long-eared bats are common and widespread in the county and the roost is not considered to be used for hibernation or as a maternity roost (where female bats raise their young during the summer months).



Appendix 4 – Hedgerow Planting

The proposed hedgerows will be a mix of the following key species with a recommended planting of 5 plants per metre.

Species Percentage

- Hawthorn (*Crataegus monogyna*) 10%
- Wild Privet (*Ligustrum vulgare*) 10%
- Blackthorn (*Prunus spinosa*) 15%
- Holly (*Ilex*) 20%
- Field Maple (*Acer campestre*) 5%
- Hazel (*Corylus avellana*) 15%
- Dog Rose (*Rosa canina*) 20%
- Wild Cherry (*Prunus avium*) 5%

New plants to be planted in a double-staggered rows with 450mm between plants and 450mm between rows. Planting size to be between 600 – 900mm.

Additional planting of a selection of the following will be undertaken to further enhance the hedgerows as appropriate:

- Honeysuckle (*Lonicera*)
- Dogwood (*Cornus sanguinea*)
- Guelder rose (*Viburnum opulus*)

