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Preliminary Ecological Appraisal

7-10 Wordland Cross, Cheriton Fitzpaine, Devon

November 2021

A report by

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Report details

Site address:	7-10 Wordland Cross, Cheriton Fitzpane, Devon EX17 4JR
Grid reference:	SS 872057
Survey date:	17th November 2022
Report date:	14th February 2023
Report author:	Yolande Knight BSc (Hons) PhD MRSB (Natural England licence: 2020-47431-CLS-CLS
Report review:	Colin Hicks BSc (Hons) MCIEEM
Report reference:	WOR-2185

Declaration of compliance

BS 42020:2013

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

Code of Professional Conduct

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

Validity of survey data and report

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

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Non-technical summary

Western Ecology has been commissioned to complete a Preliminary Ecological Appraisal of 7-10 Wordland Cross, Cheriton Fitzpane, Devon. Demolishing of current buildings, and replacement with 2 sets of 3 terraced houses.

The Site comprises 4 residential semi-detached dwellings, with associated vegetated gardens including gravelled/paved areas, amenity grassland lawn, introduced shrub planting, and occasional outbuildings. Boundaries are provided by a mix of fencing, concrete walls, ornamental hedging and a section of vegetated bank to the north.

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

Bats

Further bat survey effort should be completed to allow an assessment of the impacts of development on roosting bats with respect to the dwellings.

Mitigation in relation to light spill will be recommended once further survey effort has been undertaken.

Nesting birds

Mitigation for loss of Sparrow nesting habitat is required. It is likely that occasional common bird species nest in habitats within and bounding the Site. If any of these habitats are to be cleared or disturbed during the accepted bird nesting season (March to August inclusive), the habitat should be thoroughly inspected, by a suitably qualified person, prior to disturbance. If nesting birds are found, all activities likely to damage the immediate area should be delayed until chicks have fledged. Mitigation for loss of nesting sites for Swallows is recommended.

Hedgehog

Any new garden boundaries should be designed to allow Hedgehogs free movement. Mitigation during construction is recommended.

Invasive Non-native Species

Montbretia and horizontal cotoneaster are present within the Site. Control is recommended to prevent spread, and may best be achieved using a suitable herbicide applied in line with the manufacturer's recommendations. All arisings, including any associated soil and corm material will be disposed of in licenced landfill, or retained onsite.

Further surveys

Information within this report is sufficient to allow a robust assessment of the potential effects on the majority of ecological features associated, or potentially associated, with this site. However, it is recommended that the following species/group specific surveys are completed to ensure compliance with wildlife legislation and relevant planning policy:

Bats- roosting

Two emergence/re-entry surveys using four trained surveyors are recommended.

These surveys can only be completed in the optimal bat survey period, May to September inclusive (with at least one survey between May and August inclusive).

Biodiversity enhancements

Simple biodiversity enhancements are suggested within Section 7 of the report.

Devon Wildlife Checklist

A.1 Protected and priority species

Location: 7-10 Wordland Cross, Cheriton Fitzpaine, Devon Grid reference for centre of site (6 digit): SS 872057 Planning Application reference:
Name of surveyor and consultancy: Yolande Knight and Michael Sanders, Western Ecology Date that surveys carried out: 17th November 2022 Sent to DBRC: N

Species - terrestrial, intertidal, marine	Walkover shows that suitable habitat present and reasonably likely that the species will be found?	Detailed survey needed to clarify impacts and mitigation requirements?	Detailed survey carried out and included?	Species Present or Assumed to be present on site	Impact on species?	Detailed Conservation Action Statement included?	EPS offence committed? Three tests met?	Grid reference for specific location of species (if required for large sites)
Bats (roost)	Y	Yes	TBC	Assumed				
Bats (flight line / foraging habitat)	Y	No	NA	Assumed	Potential impact on light-averse bats using hedgerow boundaries and adjacent habitats.	Yes. See section 5.1.	NA	
Dormice	x							
Otters	x							
Great crested newts	x							
Cirl buntings	x							
Barn owls	x							
Other Schedule 1 birds	x							
Breeding birds	Y	No	NA	Present	Potential impact during site clearance, loss of nesting habitat.	Yes. See Section 5.1.	NA	
Reptiles	x							
Native crayfish	x							
Water voles	x							
Badgers	x							
Other protected species	x							
UK BAP priority species	x							
Devon BAP key species	Y (Hedgehog)	No	NA	Assumed	Potential impact in terms of accessing site post-	Yes. See Section 5.1.	NA	

					development and during construction.			
Invasive species	x	No	NA	Present	Possible spread across Site and wider area. Potential for an offence.	Yes. See Section 5.2.	NA	

A.2 Designations / important habitats / sites of geological importance

Designation Terrestrial, intertidal, marine	Within site or potential impact.	Name of site / habitat	Detailed Conservation Action Statement included in report?	Habitat balance sheet included (showing area of habitats lost, gained and overall net gain)	Relevant organisation consulted & response included in the application?
Statutory designations					
European designations - Special Area of Conservation (SAC), Special Protection Area (SPA) and RAMSAR site or within Greater Horseshoe consultation zone	x				
Site of Special Scientific Interest (SSSIs)	x				
Marine Conservation Zone (MCZ)	x				
Local Nature Reserve (LNR)	x				
Non-statutory wildlife designations					
County Wildlife Site (CWS)	x				
Ancient woodland	x				
Special Verge	x				
UK BAP Priority habitat	x				
Local Biodiversity Network (mapped by Devon Wildlife Trust / through Green Infrastructure work)	x				
Non statutory geological designation					
County Geological Site (CGS or RIGS)	x				

1. Introduction

Western Ecology has been commissioned to complete a Preliminary Ecological Appraisal of 7-10 Wordland Cross, Cheriton Fitzpane, Devon.

1.1 Proposed development

Demolishing of current buildings, and replacement with 2 sets of 3 terraced houses.

1.2. 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, 2017).

1.3. Site location

The site surveyed is in a semi-rural landscape situated 400m to the south-east of the village of Cheriton Fitzpaine in Mid Devon.

2. Survey methodology

2.1. Desktop survey

A full search of the biological records was not considered appropriate due to the small size of the site, and the lack of semi-natural habitats with the potential for notable species.

The desktop survey identified any statutory nature conservation sites that may be affected by the proposals. This comprises an important part of the assessment process, providing information on ecological issues that may not be apparent during the site survey. Consultees for the data search included:

- Natural England - GIS datasets of Statutory Nature Conservation Sites.
- Devon County Council - Interactive Map, Environment

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

2.2. Field survey

A Preliminary Ecological Appraisal of the site was completed by Yolande Knight BSc (Hons) PhD MRSB (Natural England bat survey licence: 2020-47431-CLS-CLS) and Mike Sanders BSc (Hons) (Natural England bat survey licence: 2016-24281-CLS-CLS).

The survey was completed on 17th November 2021 between 10:30 and 11:45 with an air temperature of 8°C, light breeze, with 20% cloud.

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

All areas of buildings were carefully examined internally and externally for signs of use by bats, with the aid of torches, by a suitable qualified and licenced ecologist. This included a search for bat droppings, feeding remains, urine stains and polished/scratched woodwork. A search was also made for individual bats, as well as potential access points and cavities capable of providing a roosting space for bats.

This survey method complies with guidelines produced by the Bat Conservation Trust (Collins, 2016).

2.3. Method for valuation of habitats

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

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

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

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

2.4. Survey constraints

All areas of the site were readily accessible. Although some plant species would have not been visible during the survey period, within such a small, simple site comprising common and widespread habitat types, the timing of this survey is not a significant constraint to a robust initial site assessment.

It should be noted that habitats, and the species they may support, change over time due to natural processes and because of human influence. In line with current guidelines, the survey on which this report is based is valid for one year, after which time it will need updating. This report is valid until 17th November 2023.

2.5. Study area

The study area for the desktop survey is within 2km for statutory conservation sites and 1km for non-statutory conservation sites. The study area for the Preliminary Ecological Appraisal was the footprint of the proposed development, hereafter referred to as the ‘Site’, and its immediate boundaries. This is the area included within the line described as “Survey area” within the legend of Map 1.

3. Results

3.1. Site description

The Site comprises 4 residential semi-detached dwellings, with associated vegetated gardens including gravelled/paved areas, amenity grassland lawn, introduced shrub planting, and occasional outbuildings. Boundaries are provided by a mix of fencing, concrete walls, ornamental hedging and a section of vegetated bank to the north.

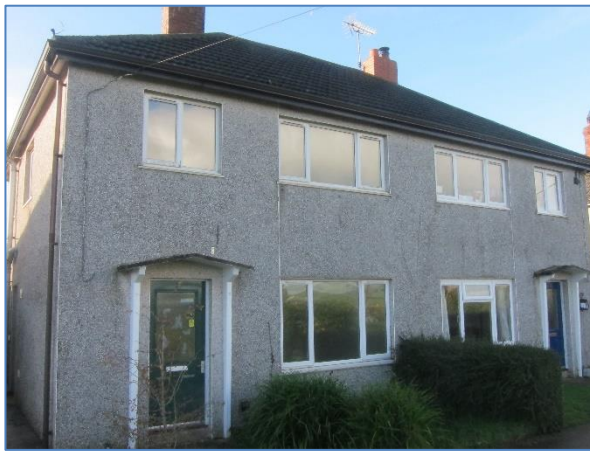
3.2. Phase 1 habitats

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

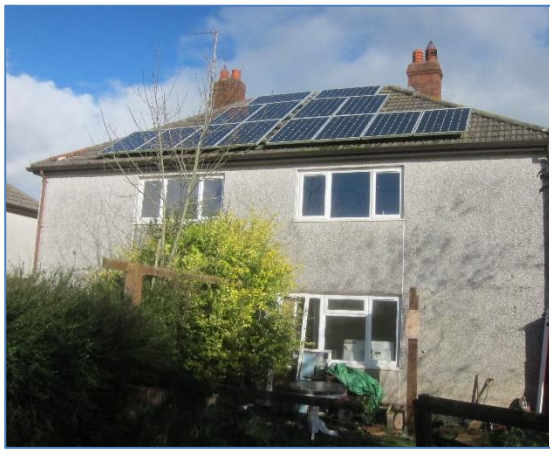
Table 1. Habitat descriptions

Habitat type	Description	Biodiversity value
Building	The site consists of two semi-detached buildings (numbers 7 & 8 and 9 & 10) with hipped roofs. Walls are rendered block. Roofs are covered in concrete interlocking tiles, with a bitumen felt membrane to the underside. Roof voids are approximately 2.5 metres high at the ridge, with fibreglass insulation on the floor. Occasional gaps are visible in roof, ridge and hip tiles. Boxed eaves appear to have few gaps. Solar panels are present on the southern roof pitches. Buildings have moderate suitability for crevice-dwelling bats.	
	No. 7 had ~40 bat droppings visible on the floor of the roof void.	TBC
	Nos. 8, 9 and 10 all had ~5-10 bat droppings visible on the floor of the roof void.	TBC
	No. 7 has an adjacent single storey, single pitch out-building with tightly lapped bitumen felt roof, which has occasional small gaps at the wall tops: these gaps were inspected and found to have no bats, or evidence of bats, associated with them, or within the building, and the building has negligible potential for roosting bats.	Negligible
	Nos. 8, 9 and 10 have adjacent single storey pitch out-buildings with a corrugated fibre cement roof with no membrane to the underside. No bats, or evidence of bats, were found associated with the interior or exterior of these buildings, and they had negligible potential for roosting bats.	Negligible
	No. 8 had a small wooden garden shed with a plastic roof and glass greenhouse. Neither had bats, or evidence of bats, associated with them, and had negligible potential for roosting bats.	Negligible
	No. 10 has the remains of several small, dilapidated sheds at the southern boundary, with negligible potential for roosting bats.	Negligible
Vegetated garden; amenity	All four houses have associated gardens to the north and south, comprising of a mix of amenity grassland, scattered introduced	Site

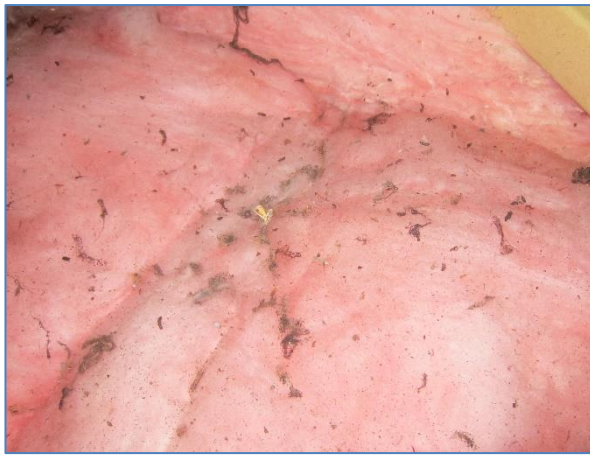
grassland, Introduced shrubs, scattered trees	shrubs and trees, and areas of hardstanding (paving and/or gravel). The amenity grassland varies between being close-managed and slightly overgrown, with common grass species and forbs including a mix of creeping bent, cock's-foot, fescue spp, and false oat-grass, dandelion and mouse-ear. Occasional patches of common nettle and broad-leaved dock and more tussocky areas of cock's-foot and false oat-grass are also present associated with nos. 9 and 10. Occasional introduced shrub and garden planting includes cultivated roses, hydrangea, buddleia and bay. Ground flora comprises a mix of garden planting (such as tutsan, verbena spp. and geranium) and common grass and ruderal species such as false oat-grass, broad-leaved dock and ribwort plantain. Occasional saplings of willow spp. and hazel are present associated with nos. 9 and 10. No. 10 has horizontal cotoneaster and montbretia present. No. 9 has rubbish lying in the northern garden and areas of the southern garden. A small number of immature apple and hazel trees are present in the back garden of no. 9.	
Ornamental hedge	Close-managed ornamental hedge (*Lonicera spp.)* provides sections of boundary to the north of the houses.	Site
Vegetated bank	A section of managed vegetated bank is present along the north-eastern boundary. Vegetation comprises common grasses, ruderals and other forbs including occasional false brome, cock's-foot, hogweed, ragwort, ivy and primrose.	Site
Hardstanding	Areas of hardstanding, patios, concrete paths etc., are present throughout the wider Site.	Negligible
Concrete wall	Short sections of low concrete wall are present at the northern boundary of the Site.	Negligible
Fencing	Occasional fencing provides sections of internal and external boundaries.	Negligible



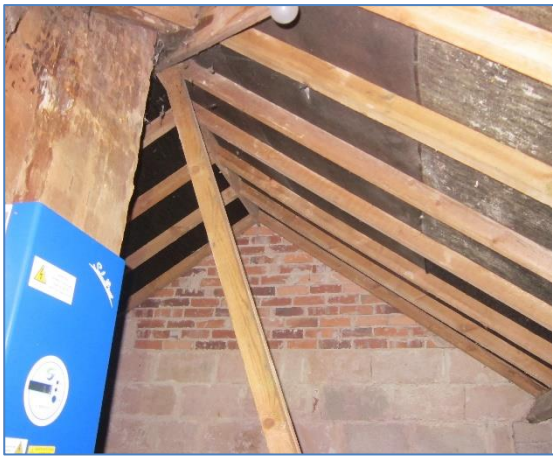
Nos. 7 and 8, northern aspect.



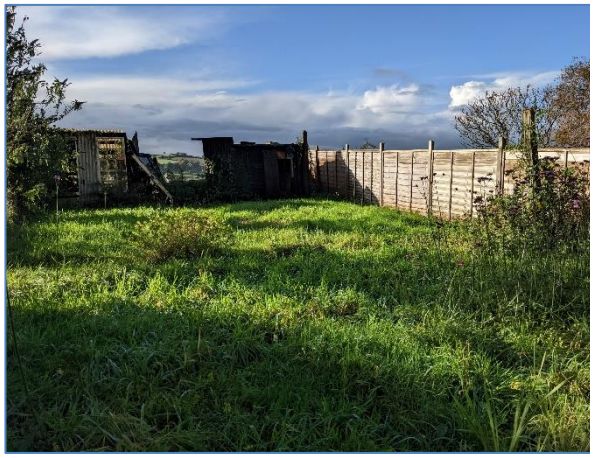
Nos. 9 and 10, southern aspect.



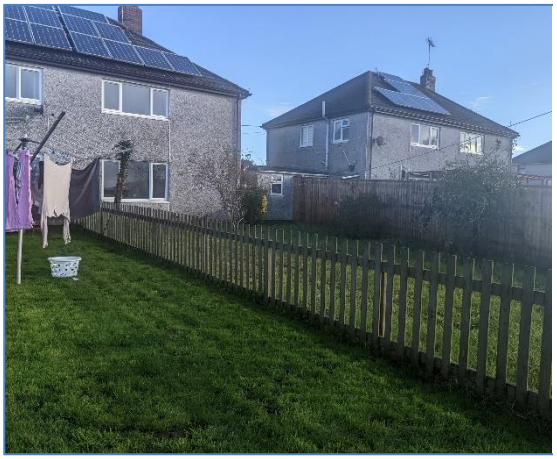
Scattered droppings within voids.



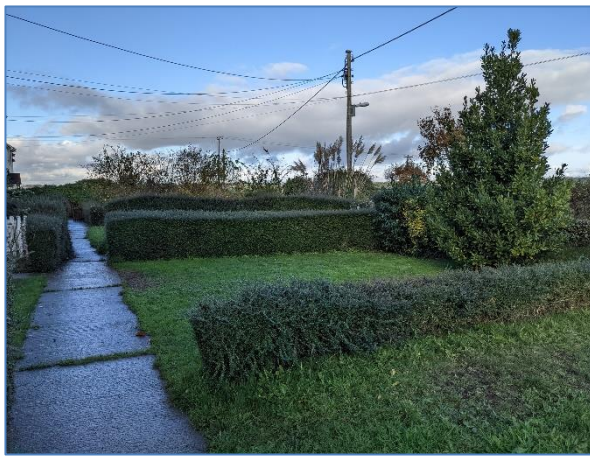
Example void interior, dividing wall between semi-detached houses.



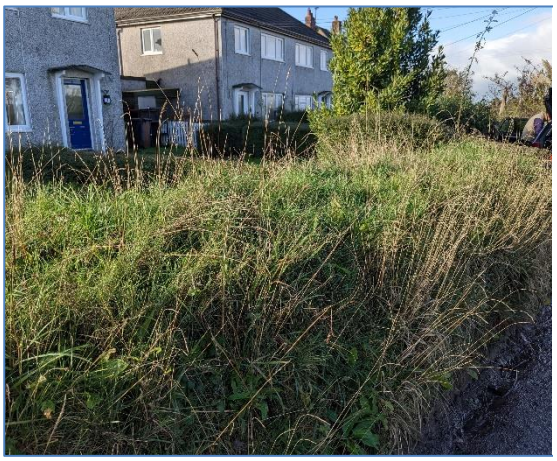
No. 10 back garden, looking south.



Nos. 7 and 8 back garden.



Front gardens to north.



Vegetated bank to north.

3.3. Desktop survey

Statutory nature conservation sites (SCNS)

No SCNS are present within 2km of the Site.

Non-statutory nature conservation sites (NNCS)

The Site is not within, or adjacent to, an NNCS.

SSSI Impact Risk Zones

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

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Legend

- Introduced shrubs
- Scattered trees
- Fence
- Wall
- Hedge bank
- Ornamental hedge
- Survey area (Approximate)
- Building
- Vegetated garden
- Hardstanding

0 5 10 15 20 25 m

Title: Map 1. Phase 1 Habitat Survey

Project: 7-10 Wordland Cross, Cheriton Fitzpaine, Devon.

Checked by: CDH Version: 01
Date: 11/01/2023

3.4. Potential for species of nature conservation importance

Habitats have been assessed from the results of the field survey for their potential to support the following protected species. Where there is no potential for a species or species group to be present within the site, or where habitats with the potential to support this species or species group will not be impacted by the proposals, they may be scoped out at this stage.

Table 2: potential for protected species.

Species	**Assessment**	**Potential for presence**
Amphibians	There is no aquatic habitat within or near the Site that has the potential to support breeding amphibians. Amphibians do not need to be considered further.	Negligible
Badgers	There is no evidence of badgers within the Site, and they do not need to be considered further.	Negligible
Bats	All four residential buildings had gaps providing moderate suitability for crevice-dwelling bats, and evidence of roosting bats within their roof voids. No trees within the Site had Potential Roosting Features (PRFs) such as knot holes or lifted bark. The mix of habitats within the Site itself has low seasonal potential for foraging and commuting bats, with potential for light-averse bats towards the southern Site boundary.	Moderate suitability Low
Birds	Evidence of nesting birds was found in the roof of no. 7 (dead sparrow). There is potential for nesting birds associated with ornamental hedgerow and small areas of shrub/scattered tree planting.	Present
Common Dormice	Dormice are arboreal and are found within areas of habitat with woodland and fruiting woody shrubs. The habitats within and bounding the Site have negligible potential for Dormice and they do not need to be considered further.	Negligible
Hedgehog	The Site has limited potential for hedgehogs.	Limited
Reptiles	The majority grassland habitat is heavily managed, or has been heavily managed until recently, and isolated within an intensely managed agricultural landscape: as such, there is negligible potential for foraging or hibernating reptiles, and they do not need to be considered further.	Negligible
Otter	There is no potential for otter to be present within the Site and they do not need to be considered further.	Negligible
Water Vole	There is no potential for water vole to be present within the Site and they do not need to be considered further.	Negligible
Notable invertebrates	Habitats at this site are likely to support common and widespread invertebrates, although priority invertebrate habitats such as flushes, suitable brown-field land and soft rock cliffs are absent from the site	Negligible
Notable plants	Habitats within the Site provide little potential for notable or rare plants and they do not need to be considered further.	Negligible
Invasive non-native plants	Montbretia and horizontal cotoneaster, both plants listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) as INNS with respect to England and Wales were present within the Site.	Present

4. Evaluation of ecological features and potential impacts

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

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

4.1. Habitats of nature conservation importance

Protected habitats

Habitats are protected under international and national legislation including The Conservation of Habitats and Species Regulations 2017, and Wildlife and Countryside Act 1981 (as amended). These have been formulated into policy measures, with many examples protected under formal site designations such as SSSIs and SACs.

No habitats of European Community Importance as defined within The Conservation of Habitats and Species Regulations 2017 were present within this site. Protected habitats of this type are not a consideration for this project.

Notable habitats

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

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

There are no notable habitats associated with the Site, and they are not a consideration for this project.

4.2. Species of nature conservation importance

Overview

Many native wild plants and animals are protected by law with the two main legal instruments being the Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017. The latter consolidates amendments to the Conservation (Natural Habitats, &c) Regulations 1994 which transposed into UK Law the EU Habitats Directive.

One thousand, one hundred and fifty species of fungi, plant or animal are listed as being of principal importance, in the Secretary of State's opinion, for the purposes of conserving biodiversity. Under section 41 (England) of the NERC Act (2006) there is a need for these

species to be taken into consideration by a public body when performing any of its functions with a view to conserving biodiversity. These species are the subject of National and Local Biodiversity Action Plans.

Bats

Bat species and their breeding or resting places (roosts) are protected under the Wildlife and Countryside Act 1981 (as amended), and The Conservation of Habitats and Species Regulations 2017. They are identified as European Protected Species. Under these laws it is an offence to:

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

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

As part of the PEA assessment, it is required that the buildings are valued for their suitability to support roosting bats, irrelevant of any signs of roosting. This is due to the highly cryptic nature of bats, in particular those species that roost in crevice habitat associated with roof coverings, fascia, soffit, bargeboards, flashing, feather boarding and stonework.

Buildings are valued as follows (Collins et al, 2016):

- Negligible suitability - Negligible habitat features on site likely to be used by roosting bats

- Low suitability - A structure 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).

- Moderate suitability – A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status.

- High suitability - A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.

Occasional droppings were found in all roof voids (~40 in no. 7, and ~5-10 in nos. 8-10), with occasional gaps visible in roof, ridge and hip tiles. These structures were assessed as having moderate suitability for bats for crevice-dwelling bats.

The shed and associated outbuildings were judged to have negligible suitability for roosting bats.

The habitats within and bounding the Site have low seasonal potential for foraging and commuting bats, with potential for light-averse bats towards the southern Site boundary. Mitigation for light-averse bats may be required.

Birds

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

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

Evidence of nesting Sparrows was found associated with the roof of no. 7.

It is likely that common birds nest within scattered tree and shrub habitat within the Site. Any activities which impact these habitats have potential to adversely impact nesting birds. Any site clearance is likely to require mitigation for nesting birds.

Any activities that expose invertebrates, such as earth worms and grubs, will provide an additional food resource for local birds and will have a positive temporary effect, particularly when adults are feeding nested chicks.

Hedgehog

Hedgehogs are partially protected under the Wildlife & Countryside Act 1981 (as amended) and may not be trapped without a licence from Natural England. Hedgehogs are listed as a species “of principal importance for the purpose of conserving biodiversity”.

There is limited potential that Hedgehog are active and forage within the Site. Mitigation may be required.

4.3. Invasive Non-native Species

Schedule 9 plant species

Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), relates to the introduction of plant and animal species that are not native to the UK. It is an offence to ‘cause to grow in the wild' and spread any plant that is listed under this Schedule. This includes the montbretia and horizontal cotoneaster growing within the Site. Control of these plants is recommended.

4.4. Statutory nature conservation sites

Natural England has assessed the potential for various development types to impact nearby statutory nature conservation sites when they created SSSI Impact Risk Zones. The proposed development type is not of a type that Natural England judges to be a risk to

statutory nature conservation sites. No mitigation is required and there is no requirement to consult Natural England on the potential impact on these sites.

5. Recommendations for mitigation and further surveys

Mitigation

Where there is potential that the proposed development will have a significant[1] effect on a valued ecological feature of nature conservation interest, recommendations for mitigation are made based on the mitigation hierarchy suggested in Paragraph 118 of the National Planning Policy Framework and detailed in Paragraph: 018 Reference ID: 8-018-20140306 of National Planning Practice Guidance;

- Avoidance –significant harm to wildlife species and habitats should be avoided through design.
- Mitigation – where significant harm cannot be wholly or partially avoided, it should be minimised by design, or by the use of effective mitigation measures that can be secured by, for example, conditions or planning obligations.
- Compensation – where, despite whatever mitigation would be effective, there would still be significant residual harm, as a last resort, this should be properly compensated for by measures to provide for an equivalent value of biodiversity.

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

Further survey work

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

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

5.1. Protected species and species of nature conservation importance

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

Bats

The buildings 7-10 had evidence of bats within the roof voids, and moderate suitability for crevice-dwelling bats.

From this survey alone, it is not possible to be confident that bats will not be impacted by the proposed works. In line with guidelines (Collins, 2016), further surveys are required to characterise the use of the buildings by roosting bats, and determine the significance and scale of impacts associated with the proposed works.

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

The Site as a whole has low seasonal potential for foraging and commuting bats, and taking into account the limited footprint of the development, and the moderate potential of adjacent semi-natural habitat, it is considered that bat activity transects are not proportionate to the negligible level of risk to foraging and commuting bats posed by this development.

There may be a requirement for light mitigation for light-averse bats during both construction and operational phases: this mitigation will be determined once results from the emergence/re-entry surveys are known.

Birds

Mitigation for loss of Sparrow nesting habitat is required. New nesting opportunities should be provided for these birds on Site, through the provision of bird nesting boxes. This should include:

- a built-in double chamber Sparrow box (eg Vivarapro Build-in nest box Figure 1) fitted to the northern or eastern aspect of the new build. House sparrows (*Passer domesticus*) are sociable opportunists that survive in most UK habitats, from towns and cities to farmland and countryside. Substantial declines in both urban and rural populations (estimated 71% decrease between 1977 and 2008) have led to concerns for this species.

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

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

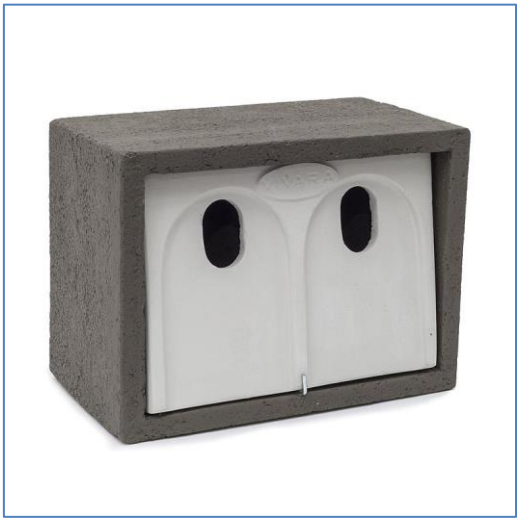

Figure 1. Vivarapro build-in box.

It is likely that occasional common bird species nest within scattered tree and hedgerow habitat within and bounding the Site. If any of these habitats are to be cleared or disturbed during the accepted bird nesting season (March to August inclusive), the habitat should be thoroughly inspected, by a suitably qualified person, prior to disturbance. If nesting birds are found, all activities likely to damage the immediate area should be delayed until chicks have fledged.

Hedgehogs

There is potential for hedgehogs to be active within the Site. It is recommended that any new garden boundaries are designed to allow hedgehogs free movement within the finished development, with gaps of 13x13cm set at ground level within any new fencing.

Simple mitigation measures during construction are recommended to stop Hedgehog getting trapped in any holes or ditches: any trenches, holes, pits, or other excavations which hedgehogs could fall in to must be covered overnight, or have sloped banks or ramps suitable for their escape.

5.2. Invasive Non-native Species

Montbretia and horizontal cotoneaster are present within the Site. Control is recommended to prevent spread, and may best be achieved using a suitable herbicide applied in line with the manufacturer's recommendations. All arisings, including any associated soil and corm material will be disposed of in licenced landfill, or retained onsite.

5.3. Summary of net gains and losses

Table 3 provides a summary of net gains and losses to biodiversity resulting from the proposed development with mitigation, but without biodiversity enhancement.

Table 3. Summary of net gains and losses to biodiversity

Nature conservation feature	**Potential impact**	**Proposed mitigation**	**Outcome/Comments**
Bats (roosting)	Loss of habitat, direct harm or injury during construction.	To be determined through further survey work.	To be confirmed by further surveys
Bats (foraging and commuting)	Degraded commuting habitat due to light spill.	Precautionary mitigation in relation to additional light spill and boundaries and adjacent semi-natural habitat may be required: to be determined following further survey work in relation to roosting bats.	To be confirmed by further surveys
Nesting Birds	Loss of nesting habitat. Direct harm or injury during site clearance.	Mitigation for loss of nesting habitat for Sparrows with respect to dwelling. Any activities affecting nesting habitats should be completed during the period September to February	Impact avoided. Direct harm and injury avoided.

	Increased food items during construction.	inclusive, outside the accepted bird nesting season.	Temporary positive gain.
Hedgehog	Loss of habitat Direct harm or injury during construction.	Any new garden boundaries designed to allow Hedgehogs free movement. Mitigation during construction.	Impact avoided. Impact minimised.
INNS (Montbretia and horizontal cotoneaster)	Possible spread across Site and wider area. Potential for an offence.	Control of INNS either within Site, or ideally removal and appropriate disposal of material and associated soil.	Impact avoided.

6. Further survey work

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

However, it is recommended that the following species/group specific surveys are completed to ensure compliance with wildlife legislation and relevant planning policy:

Bats- roosting

At least two bat surveys are recommended for each building, comprising a dusk emergence survey and, dependent on the outcome of this, one dawn re-entry or a further dusk emergence survey. Two surveyors are required to cover each building (4 surveyors in total for the Site). These surveys can only be completed in the optimal bat survey period, May to September inclusive (with at least one survey between May and August inclusive).

7. Biodiversity enhancement

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

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

There is potential to maximise the value of the completed development for wildlife through careful plantings and good design, with, for example, opportunities to: increase biodiversity through the planting of native species-rich hedgerows; setting aside areas for wildlife; and using soft landscape design that endeavours to create new habitats suitable for native species.

Bats

Further surveys are required to fully characterise the Site for bats: as such, biodiversity enhancements in relation to this species will be recommended once these surveys have been undertaken.

Bird Boxes

New nesting opportunities should be provided for birds on the Site, through the provision of bird nesting boxes: this could include bird blocks (Figure 2) fitted to the northern or eastern aspect of every other new residence, taking into account close nature of terracing (nb,no new blocks should be put near the sparrow terrace provided for mitigation, see Section 5.1.). This block has been designed to encourage nesting for smaller garden birds, and can be built into the walls of new builds or fixed to the exterior. The block must be at least 2 metres from the ground, and positioned away from doors, windows and vents to prevent disturbance.

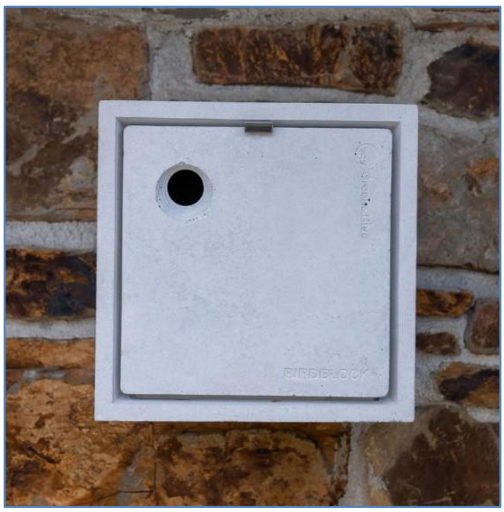

Figure 2. Green and Blue bird block.

Invertebrates

Three invertebrate bricks (Figure 3) will be fitted 1 to 2 metres above ground level on the southern side of the new extension. These attract solitary bees, wasps and other invertebrates.

Figure 3. A bee brick

Small mammals (hedgehogs)

Although assessment indicates little potential currently for Hedgehogs, it is recommended that a hole for small mammals (including Hedgehogs) be put in place in any new garden boundaries of 13x13cm to allow movement through the landscape.

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Appendix 1:

Legislation and Policy used to assess habitats and species

European Habitats and Species Directive (CEC, 1992)

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

European Red Data lists (IUCN, 2000)

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

European Council Birds Directive (CEC, 1979)

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

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

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

The Conservation of Habitats and Species Regulations 2017

The Conservation of Habitats and Species Regulations 2017 consolidate and update the Conservation of Habitats and Species Regulations 2010, and transpose 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 objectives of the Habitats Directive is to protect biodiversity through the conservation of natural habitats and species of wild fauna and flora. The Directive lays down rules for the protection, management and exploitation of such habitats and species.

The Regulations place a duty on the Secretary of State to propose a list of sites which are important for either habitats or species. These sites form a network termed Natura 2000 and include Special Areas of Conservation and Special Protection Areas.

Protection of Badgers Act 1992

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

The Hedgerow Regulations 1997

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

The Countryside and Rights of Way (CRoW) Act 2000

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

Circular 06/2005 Biodiversity and geological conservation – statutory obligations and their impact within the planning system

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

Natural Environment and Rural Communities Act 2006

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

UK Post-2010 Biodiversity Framework, 2012

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

National Planning Policy Framework, 2012

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

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

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

Biodiversity 2020

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