

Preliminary Ecological Appraisal update
Land and garage at Higher Yellowford, Thorverton, Devon
March 2023

A report by

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(Natural England licence: 2020-47431-CLS-CLS)

Report details

Site address: Higher Yellowford, Thorverton, Devon EX5 5JR
Grid reference: SS 923001
Survey date: 6th March 2023
Report date: 31st March 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-3613

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 24 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 update of land and garage at Higher Yellowford, Thorverton, Devon. The garage will be demolished and a new garage with residential and workspace above built.

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

Devon hedgerow

Mitigation against damage during construction is recommended through the use of a protection zone.

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

Badger

There is potential that Badgers occasionally use the Site. As such, it is possible that Badgers may become trapped within the construction site during the construction phase. Simple mitigation is recommended within the report.

Bats

Hedgerow habitats associated with the Sites boundaries may be used by occasional foraging and commuting bats, which may include light-averse species such as Long-eared, Horseshoes and Myotis. To prevent any light spill reducing the quality of the habitat associated with the hedgerow habitats, precautionary mitigation in relation to lighting should be adopted.

Nesting birds

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 Wren is recommended.

Hedgehog

Mitigation should be undertaken to prevent direct harm or injury during construction, and it is recommended that any new boundaries are designed to allow Hedgehogs free movement within the finished development.

Reptiles

Reasonable Avoidance Measures are recommended during vegetation clearance.

To ensure compliance with nature conservation legislation and planning policy, the following recommendations are made with regards to Invasive Non-native Species:

Variegated Yellow Archangel is growing within this 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 associated soil and root 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.

No other survey work is recommended for this Site.

Biodiversity Enhancements

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

Devon Wildlife Checklist

A.1 Protected and priority species

Location: Higher Yellowford, Thorverton, Devon Grid reference for centre of site (6 digit): SS 923001 Planning Application reference:

Name of surveyor and consultancy: Michael Sanders, Western Ecology Date that surveys carried out: 6th March 2023 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)	x							
Bats (flight line / foraging habitat)	Y	No	NA	Assumed	Potential impact on light-averse bats using hedgerow boundaries.	Yes. See section 5.2.	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	Assumed	Potential impact during site clearance.	Yes. See Section 5.2	NA	
Reptiles	Y	No	NA	Assumed	Potential impact during site clearance.	Yes. See Section 5.2.	NA	
Native crayfish	x							
Water voles	x							
Badgers	Y	No	NA	Assumed	Potential impact during construction phase.	Yes. See Section 5.2.	NA	
Other protected species	x							
UK BAP priority species	Y (Hedgehog)	No	NA	Assumed	Potential impact post-development.	Yes. See Section 5.2	NA	
Devon BAP key species	x							

Invasive species	Y	No	NA	Present.	Potential spread beyond site.	Yes. See Section 5.3.	NA	
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A.2 Designations / important habitats / sites of geological importance

Designation	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?
Terrestrial, intertidal, marine					
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	Y	Devon hedgerow	Yes. See Section 5.1.	NA	
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 update of land and a garage at Higher Yellowford, Thorverton, Devon.

1.1 Proposed development

The garage will be demolished and a new garage with residential and workspace above built.

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 land surveyed is situated 670m to the south of the village of Thorverton, and 9.5km to the north of Exeter in South Devon. The site is approximately 0.04 Ha in size.

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 Michael Sanders BSc (Hons) (Natural England licence no: 2016-24281-CLS-CLS)

The survey was completed on 6th March 2023 from 13:45 with an air temperature of 9°C, moderate westerly breeze and with 100% 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 the building 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 two years, after which time it will need updating. This report is valid until 6th March 2025.

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 a single storey block garage, with adjacent scrub and vegetated gravel, and vegetated garden to the south. Devon hedgebank provides boundaries to the east and south.

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 in Table 1. Plant species that characterise each of these habitats are identified, although this is for descriptive purposes, and comprehensive inventory is not provided.

Habitat type	Description	Biodiversity value
Building	<p>A single storey concrete garage (Images 1 and 2) is present towards the north of the Site. It has a corrugated fibre cement flat roof, metal garage doors and windows to the south resulting in a dimly-lit interior during the day.</p> <p>To the interior there are metal beams and no gaps suitable for crevice-dwelling bats. To the exterior, there are no gaps suitable for crevice-dwelling bats associated with the wooden fascia. The eastern, western and southern walls are heavily vegetated.</p> <p>No bats were found associated with the building, and no evidence of bats, such as droppings or feeding remains, were visible on surfaces around the inside or outside of the building. The garage has no suitability for roosting bats.</p> <p>An old Wren's nest is present within the garage.</p> <p>A small greenhouse is present to the western boundary, with no potential for bats.</p>	Site
Dense scrub	Bramble scrub, with frequent Common Nettle, is present adjacent to the east, south and west of the garage.	Site
Vegetated garden	<p>The majority of the land to the south comprises a vegetated garden, with a mix of managed amenity grassland (including Perennial Rye-grass, Common Bent and Fescue), and scattered trees and shrubs (including Pedunculate Oak, Beech, Field Maple and Common Lilac).</p> <p>A mammal hole (not identified as badger) was present adjacent to the western boundary of the Site outline.</p>	Site
Vegetated gravel	Areas of gravel vegetated with a mix of common grasses (including Cock's-foot and Yorkshire Fog), ruderals (such as Broad-leaved Dock and Dandelion) and other forbs (including Silverweed and White Clover).	Site
Other: compost heap; pile of bricks	An area of brash and an old compost heap fenced by corrugated metal sheeting are present towards the southern Site boundary. A pile of bricks vegetated with Bramble and ruderals is present west of the garage.	Site

Devon hedgerow	<p>The southern boundary is provided by a low species-poor Devon hedgerow. The hedgebank is vegetated with dominant Ivy, and occasional Common Nettle, ferns such as Hart's-tongue Fern, and sparse herbs including Hedge Bedstraw.</p> <p>The supported hedgerow comprises dominant Hawthorn.</p>	<p>Local Biodiversity Action Plan priority habitat.</p> <p>Habitat of Principal Importance (JNCC & Defra, 2012)</p> <p>Local value</p>
Hedgebank; defunct hedgerow	<p>A hedgebank vegetated with frequent Ivy and Bramble, with occasional Common Nettle, ferns including Black Spleenwort, and herbs including Shining Crane's-bill. Variegated Yellow Archangel is present within this habitat.</p> <p>The defunct hedgerow includes native and non-native species including Hawthorn and Common Lilac.</p>	Site



Image 1; Exterior of garage.



Image 2: Interior of garage.

3.3. Desktop survey

Statutory nature conservation sites (SCNS)

One SNCS is present within 2km of the centre of the Site: Brampford Speke Site of Special Scientific Interest (SSSI) is situated 1.9km to the south and is of geological interest.

Non-statutory nature conservation sites (NNCS)

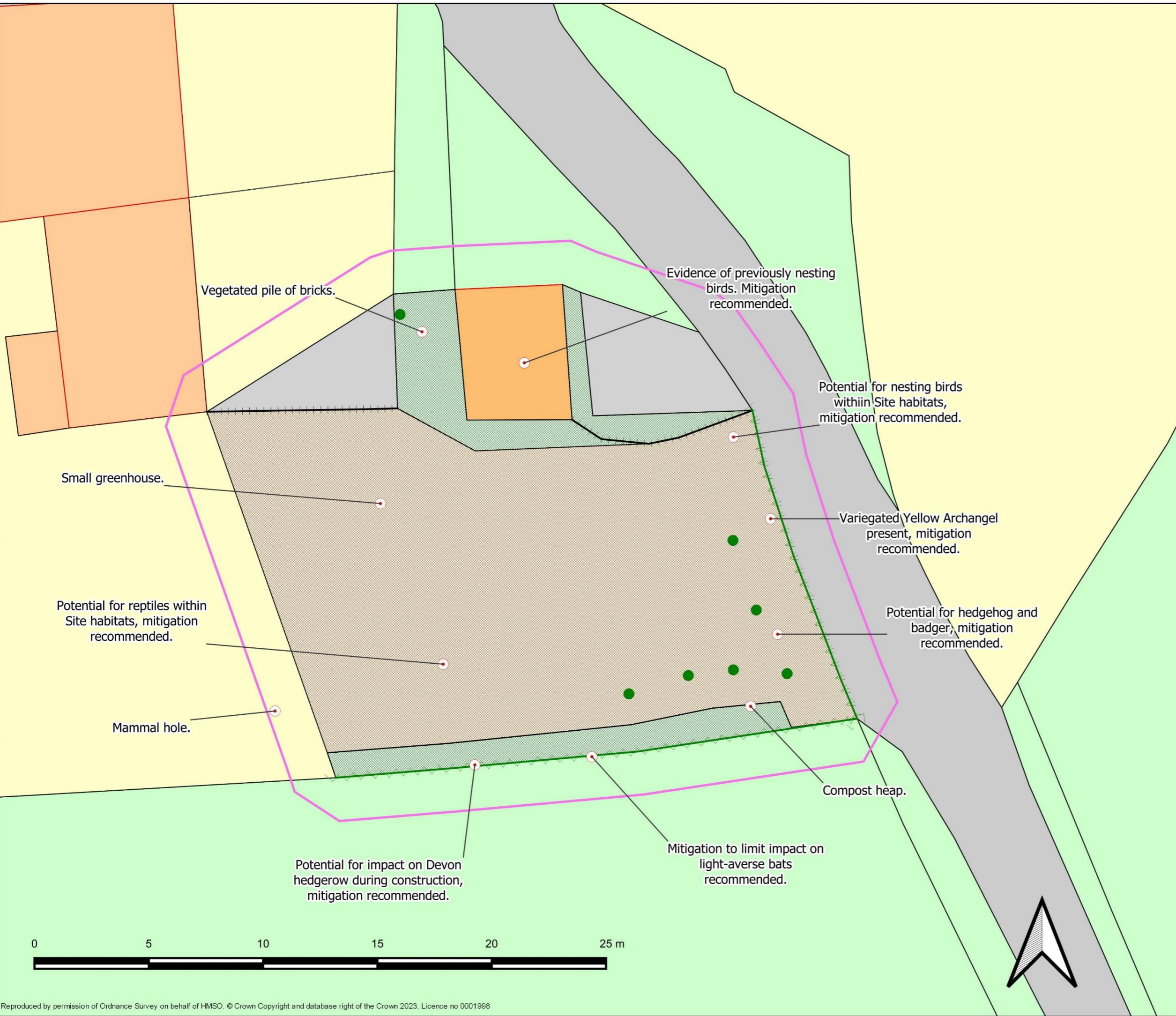
No NNCS are present within 1km of the centre of the Site.

SSSI Impact Risk Zones

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

Legend

- Target note
- Scattered trees
- Hedgebank with defunct hedgerow
- Devon hedgerow
- Fence
- Survey area (Approximate)
- Scrub
- Building
- Vegetated garden
- Vegetated gravel



Title: Map 1. Phase 1 Habitat Survey

Project: Higher Yellowford, Thorverton, Devon.

Checked by: CDH Version: 01
Date: 31/03/2023

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.

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.

Badgers

Although there is no evidence of Badgers within the Site, there is currently potential for them to access the Site.

Bats

The garage had negligible potential for roosting bats.

Trees present within the Site footprint were investigated from the ground by binoculars for potential for roosting bats, such as rot holes in suitable orientations, longitudinal splits, or torsion features. No potential roosting features (PRFs) were found.

The semi-natural habitat found within the Site provides low potential for foraging bats, with linkage out to the wider unlit landscape via the hedgerow boundaries, including areas of woodland to the north and west, and to the south associated with tributaries of the River Exe.

Birds

An old Wren's nest was previously present within the garage. It is likely that common bird species also nest within the hedgerow, scrub and tree habitat within the Site.

Common Dormice

Dormice are arboreal, and are found within species-rich woodland, hedgerow and woody fruiting scrub. The Site provides limited habitat, and with small areas of Bramble scrub, and species-poor hedgerow to the south. There is likely to be disturbance from adjacent residences. Although Dormice populations are known to be present in the wider landscape, it is highly unlikely that Dormice are present, and they do not need to be considered further.

Hedgehog

The Site provides potential for Hedgehogs.

Reptiles

The scrub and grassland habitat provides potential for foraging reptiles, with potential for hibernating reptiles in the hedgebank and vegetated brick piles.

Otter

Otter are normally associated with running water and larger water bodies containing fish. The Site itself has no potential for Otter and they do not need to be considered further.

Water Vole

There are no potential habitats on Site for Water Vole. Water Vole do not need to be considered further.

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.

This site is not of notable value for invertebrates and they do not need to be considered further.

Plants

Habitats within the Site provide little potential for notable or rare plants and they do not need to be considered further.

3.5. Invasive Non-native Species (INNS)

Variegated Yellow Archangel, a plant listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) as INNS with respect to England and Wales, was present within the Site.

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.

Devon hedgerow

The Devon hedgerow forming the southern boundary is a Local Biodiversity Action Plan Priority, with the supported hedgerow a Habitat of Principal Importance (JNCC & Defra, 2012). It does not qualify as Ecologically Important for the purposes of the Hedgerow Regulations 1997. Although no Devon hedgerow habitat is to be lost to the development, there is potential for impact during construction. Mitigation may be required.

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.

Badgers

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

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

Although there was no obvious evidence of Badgers within or near the Site, there is potential for Badgers to forage within the Site.

The loss of the habitats associated with the Site would not impact local Badger populations, and no Badger sett will be impacted by the proposed development. However, there is potential for Badgers to get trapped within the Site during the construction phase. Simple mitigation is recommended.

Bats

Bat species and their breeding or resting places (roosts) are protected under the Wildlife and Countryside Act 1981 (as amended), and The Conservation of Habitats and Species Regulations 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 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.

The garage had negligible potential for bats.

Trees present within the Site footprint were investigated from the ground by binoculars for potential for roosting bats, such as rot holes in suitable orientations, longitudinal splits, or torsion features. No potential roosting features (PRFs) were found.

The mosaic of habitats within the Site has moderate value for foraging and community bats, with good some connectivity out to adjacent unlit habitat. The Site is part of a wider unlit landscape, and usable by light-averse bats.

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”.

The barn owl is listed in Schedule 1 of the Wildlife and Countryside Act, 1981(as amended). Under the Act barn owl, their nests, eggs and young are fully protected at all times of the year and throughout the UK.

It is also an offence to intentionally or recklessly disturb barn owl at an active nest site with eggs or young or before eggs are laid, or to disturb the dependent young.

Evidence of nesting birds, with an old Wren's nest, was previously found in the garage.

It is likely that common birds also nest within the scrub, hedgerow and scattered trees on 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 and may not be trapped without a licence from Natural England. Hedgehogs are listed as a species "of principal importance for the purpose of conserving biodiversity".

There is potential that Hedgehogs are active within Site habitats. Mitigation should be adopted to ensure Hedgehog are not impacted during construction.

Reptiles

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

The four common species (Slow Worm, Adder, Grass Snake and Common (Viviparous) Lizard) are protected from deliberate killing, injury and trade.

The two rare species, Sand Lizard and Smooth Snake, are given more protection that includes protection from capture and deliberate or reckless killing, injury or disturbance. Their breeding or resting places are also protected from obstruction or damage, even if it were accidental.

All six native reptiles are listed as species "of principal importance for the purpose of conserving biodiversity".

The mix of grassland, scrub and earthbanks within the Site has potential for foraging and hibernating common species.

The Site surveyed is part of a larger area of grassland, scattered scrub and raised half bank. The loss of the habitats within the Site outline would be unlikely to adversely impact foraging and hibernating reptiles. However, construction activities could result in the killing or injury of individuals, which may be deemed an offence under the Wildlife and Countryside Act 1981 (as amended). 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 Variegated Yellow Archangel growing within the Site. Control of this plant 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.

The potential for adverse effects on statutory nature conservation sites does not need to be considered further.

5. Recommendations for mitigation and further surveys

Mitigation

Where there is potential that the proposed development will have a significant¹ 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 Habitats of nature conservation importance

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

Devon hedgerow

All Devon hedgerow habitat should be protected from accidental damage during the construction phase by suitable fencing providing a 2 metre protection zone. This protection zone should be maintained for the duration of the works, and there should be no access, storage of materials, ground disturbance, burning, or contamination within the fenced areas.

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).

5.2. 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:

Badger

There is potential that Badgers may become trapped within any construction site during the development phase. To prevent this, the following is recommended:

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

Bats

Although the Site has moderate potential for foraging and commuting bats, taking into account the limited footprint of development, and the good potential of adjacent habitat, it is considered that bat activity transects are not considered proportionate to the negligible level of risk to foraging and commuting bats posed by this development.

However, it is possible that light-averse bat species might occasionally be active along the eastern and southern hedgerow boundary.

Precautionary mitigation in relation to external lighting and light-averse bat species should be adopted to allow them to continue to use southern site boundaries. This should include:

- Security lighting activated by movement sensor with a time limit switch;
- Lighting designed to minimise light spill beyond the required target;
- Lighting directed into the site, away from boundary habitats;
- Use of narrow spectrum lights with no UV content;
- Use of low level bollard lighting along the margins of any parking/turning areas;
- Use of low pressure sodium or warm white LED lights.

There is also potential that night-time works during construction could impact light-averse bat species, and the following will be adopted:

- No external night time works will occur during the construction phase;

This mitigation is considered to be sufficient to meet the requirement of demonstrating minimal new external lighting, and avoidance of light spill onto habitats used by bats and other wildlife.

Birds

It is likely that occasional common bird species nest within 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.

Evidence of nesting birds, with an old Wren's nest, was present in the garage. To mitigate for the loss of wren nesting habitat, it is recommended that a Robin and Wren nest box (Figure 1), or similar, is provided. This box should be sited low down (less than 2m from the ground) in an area well-hidden with vegetation. It can be attached to a tree or wall using a nail or screw (taken from NHBS website).



Figure 1. Robin and Wren Nest Box

Hedgehog

There is potential for hedgehogs to be active within the Site: mitigation should be undertaken during construction to ensure that any trenches/holes left open at night have some means of escape for hedgehogs. It is recommended that any new boundaries are designed to allow Hedgehogs free movement within the finished development.

Reptiles

Although there is some potential for common reptiles to be present within the habitats on the Site, further survey work is not considered appropriate or proportionate, due to the limited footprint of the proposed development, and the high potential for RAMS to successfully ensure that no reptiles are killed or injured during development. By following simple mitigation, any adverse impact can be avoided.

Construction in period late March to October

If construction is to occur during the active reptile season (late March to October), areas to be affected by construction activities should be de-vegetated prior to any site activities under the supervision of a suitably qualified ecologist. Any grassland or scrub will initially be strimmed to a height of no more than 20 cm, having first used an ecologist to walk and beat the habitat. This will encourage reptiles to disperse naturally into the neighbouring uncut vegetation to the east. After at least 24 hours, a second cut will be made as close to

ground/bank level as possible. This should ensure that any reptiles, if present, are displaced from the construction site onto adjacent intact habitats, in particular to adjacent habitat to the west of the Site.

Construction in period November to early March

The Site has potential for hibernating reptiles in particular areas of low stone walls and earth banks within the Site. It is recommended that if there is to be any removal of these habitats, it should occur within the period late March to October. If removal of this habitat is unavoidable during the hibernation period, it should be completed under the direct guidance of a suitably qualified ecologist.

5.3. Invasive Non-native Species

Variegated Yellow Archangel is growing within this 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 associated soil and root material will be disposed of in licenced landfill, or retained onsite.

5.4. Summary of net gains and losses

Table 1 provides a summary of net gains and losses to biodiversity resulting from the proposed development with mitigation, but without biodiversity enhancement.

Table 1. Summary of net gains and losses to biodiversity

Nature conservation feature	Potential impact	Proposed mitigation	Outcome/Comments
Devon hedgerow	Accidental damage during construction.	Protection during construction through use of a protection zone using suitable fencing.	Impact avoided.
Badger	Becoming trapped within any construction site.	Access along boundaries; trenches with escape mechanisms; gaps at the corners of any security fences.	Impact avoided.
Bats (light averse)	Degraded commuting and foraging habitat due to light spill	Precautionary mitigation in relation to light-averse bats recommended.	Impact minimised.
Nesting Birds	Direct harm or injury during site clearance.	Any activities affecting boundary nesting habitats should be completed during the period September to February inclusive, outside the accepted bird nesting season.	Direct harm and injury avoided.
	Loss of nesting habitat.	New nesting and roosting habitat should be provided for Wrens.	Impact avoided.
	Increased food items during construction.		Temporary positive gain.
Hedgehog	Direct harm or injury during construction.	Mitigation should be undertaken during construction to ensure that any trenches/holes left open at night	Direct harm and injury avoided.

		<p>have some means of escape for hedgehogs.</p> <p>Any new boundaries should be designed to allow Hedgehogs free movement.</p>	
Reptiles	Loss of habitat, direct harm or injury	<p>If construction is to occur during the active reptile season (late March to October), areas to be affected by construction activities should be de-vegetated prior to any site activities under the supervision of a suitably qualified ecologist.</p> <p>If stone walls/earthbanks that have potential for hibernating reptiles are to be removed during the hibernation season, this should be done under the supervision of a suitably qualified ecologist.</p>	Direct harm and injury avoided.
Invasive, non-native species	Spread within the Site and in the wild	Control of Variegated Yellow Archangel by herbicide is recommended.	Impact minimised.

6. Further survey work

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

No other survey work is recommended for this Site.

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.

Bird Boxes

New nesting opportunities should be provided for birds on the Site, through the provision of bird nesting boxes: this could include a Sparrow Terrace (such as Schwegler 1SP Figure 2) fitted to the northern or eastern aspect of the new building. This terrace has been designed to help redress the balance of falling House Sparrow numbers. The current UK population of 6 million pairs is half what it was in 1980 and this is thought to be due to habitat destruction and lack of suitable nesting spaces. Sparrows are social birds and like to nest in company. Each terrace provides ideal nesting opportunities for three families. Made of wood-concrete mix, this terrace is durable, breathable and will last many decades.



Figure 2. Schwegler 1SP Sparrow Terrace

The terrace can be fixed on to the surface of a suitable wall or incorporated into the wall. It is suitable for all types of houses in built-up areas, and on industrial and agricultural buildings such as barns, sheds and factories. Due to its weight (15kg), it is not suitable for fences or garden sheds. Ideally place the terrace two metres or more above the ground. Either installed on the surface of the wall using the plugs and screws, or installed directly into the wall. Cleaning is advisable but not necessary. The front panel can be removed by turning the

screw hook. The Sparrow Terrace is available in either Stone or Brown (taken from NHBS website).

Bat Boxes

New roosting opportunities should be created within any new building for crevice roosting bats by adding two 1FR Schwegler bat tubes to the south or western aspect (Figure 3). These should be fitted under the guidance of a suitably qualified ecologist.



Figure 3. 1FR Schwegler bat tube

The 1FR Bat Tube is designed to be installed on the external walls of any new building, either flush or beneath a rendered surface. This makes it ideal for situations the box needs to be discrete, as only the entrance hole will be visible.

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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 protect 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.

