

Ecological Impact Assessment

Land to the East of the Green,
Great Cheverell

April 2024

Ecology | Green Space | Community | GIS

Unit 1, Brassmill Lane Enterprise Centre | Bath | BA1 3JN

01225444114 | info@ethosep.co.uk

www.ethosep.co.uk



Report Produced for Solution Property Limited

Written by: Ellie Shearn, Ecologist

Checked by: Sarah Forsyth, Principal Ecologist

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SUMMARY

Purpose of the Report	This Report has been produced by Ethos Environmental Planning on behalf of Solution Property Limited. It provides an assessment of the likely ecological effects associated with the proposed residential development of an area of land known as 'Land to the East of the Green, Great Cheverell.
Description of the scheme	The development proposals for the site include plans for 1 self-build residential dwelling with associated access and green space.
Methodology	A desk study and UK Habitat Classification survey were undertaken for the site in July 2022 and updated in September 2023. Detailed surveys for bats were undertaken in 2023 on the tree present on site. A Preliminary Ecological Appraisal (PEA) was completed for the site in September 2022.
Baseline Ecological Conditions	The development area is comprised of 0.16 parcel of modified grassland within a larger sheep grazed field; with existing access off The Grn. Bording the site is a defunct hedgerow and mature ash border to the east; a residential property with mature walnut tree to south, and pasture to the north. In the wider site area linear features include a railway (north) and stream (east). The mature walnut tree, offsite, on the south boundary support features with high suitability for roosting bats.
Key impacts and mitigation	The development layout has been designed to retain, protect and enhance the nearby offsite valuable ecological features, namely the wider field boundary hedgerows and mature trees adjacent to the site. Mitigation measures are described to ensure compliance with protected species legislation for hedgehog, riparian mammals, and bats, all of which are provided in Appendix 1.
Conclusion	Assuming the implementation of effective mitigation measures, as set out in this report, no significant adverse ecological effects are predicted. The proposed development is therefore in accordance with relevant national and local planning policies in relation to nature conservation and relevant wildlife legislation.

1 INTRODUCTION

- 1.1 This Ecological Impact Assessment (EclA) report has been prepared by Ethos Environmental Planning (Ethos) on behalf of Solution Property Limited. The EclA was written by Ellie Shearn BSc (Hons), Ecologist, and reviewed by Sarah Forsyth MSc BSc (Hons), Principal Ecologist at Ethos. details and experience of the authors and field survey team are provided in Section 3.16.
- 1.2 The report provides the results of an EclA in relation to the proposed development of Land to the East of the Green, Great Cheverell, Wiltshire (Central Grid Reference ST 98446 54624), hereafter referred to as 'the site' and shown in Figure 1. The site is located in the village of Great Cheverell, Wiltshire and is located within the Salisbury Plain Special Area of Conservation.
- 1.3 The site comprises 0.16 hectares and includes sheep grazed modified grassland with a small area of hedgerow and scrub along the western boundary. A blue line boundary has also been included around the wider field, but only for the purposes of ecological enhancements that the Client wants to create; this area is not to be considered for development purposes and is not a requirement of the planning application.



Figure 1 Site location

- 1.4 The site is proposed for development of 1 self-build residential dwelling with associated access and green space.

1.5 The aims of this EclA report are to:

- provide an assessment of the likely effects of the proposed development on ecological features on site;
- provide an assessment of the likely effects of the proposed development on nearby designated sites.
- identify the measures required to mitigate impacts on site biodiversity;
- identify opportunities to deliver ecological enhancements and measurable gains for biodiversity as part of the development proposals; and
- to enable the Local Planning Authority to assess whether the proposals comply with relevant planning policy or legislation.

1.6 This report has been produced following the approach set out in CIEEM's 'Guidelines for Ecological Report Writing' (CIEEM, 2017).

2 POLICY AND LEGISLATION

2.1 National Policy

- 2.1.1 The **National Planning Policy Framework (NPPF)** sets out national planning policy, including policies of relevance to conserving and enhancing the natural environment. Policies of relevance to the proposed development (parts of paragraphs 180 and 185) have been summarised below:

Para 186: When determining planning applications, local planning authorities should apply the following principles:

a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

Para 185: c) limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.

2.2 Local Policy

2.2.1 Wiltshire Core Policy 50

Biodiversity and geodiversity

Development proposals must demonstrate how they protect features of nature conservation and geological value as part of the design rationale. There is an expectation that such features shall be retained, buffered, and managed favourably in order to maintain their ecological value, connectivity and functionality in the long-term. Where it has been demonstrated that such features cannot be retained, removal or damage shall only be acceptable in circumstances where the anticipated ecological impacts have been mitigated as far as possible and appropriate compensatory measures can be secured to ensure no net loss of the local biodiversity resource, and secure the integrity of local ecological networks and provision of ecosystem services. All development proposals shall incorporate appropriate measures to avoid and reduce disturbance of sensitive wildlife species and habitats throughout the lifetime of the development. Any development potentially affecting a Natura 2000 site must provide avoidance measures in accordance with the strategic plans or guidance set out in paragraphs 6.75-6.77 above where possible, otherwise bespoke measures must be

provided to demonstrate that the proposals would have no adverse effect upon the Natura 2000 network. Any development that would have an adverse effect on the integrity of a European nature conservation site will not be in accordance with the Core Strategy.

Biodiversity enhancement

All development should seek opportunities to enhance biodiversity. Major development in particular must include measures to deliver biodiversity gains through opportunities to restore, enhance and create valuable habitats, ecological networks and ecosystem services. Such enhancement measures will contribute to the objectives and targets of the Biodiversity Action Plan (BAP) or River Basin/ Catchment Management Plan, particularly through landscape scale projects, and be relevant to the local landscape character. Local sites Sustainable development will avoid direct and indirect impacts upon local sites through sensitive site location and layout, and by maintaining sufficient buffers and ecological connectivity with the wider environment. Damage or disturbance to local sites will generally be unacceptable, other than in exceptional circumstances where it has been demonstrated that such impacts:

1. Cannot reasonably be avoided
2. Are reduced as far as possible
3. Are outweighed by other planning considerations in the public interest, and
4. Where appropriate compensation measures can be secured through planning obligations or agreements.

Development proposals affecting local sites must make a reasonable contribution to their favourable management in the long-term.

Bat Special Area of Conservation (SAC) planning guidance for Wiltshire

The internationally designated sites of the Bath and Bradford-on-Avon Bats Special Area of Conservation (SAC), Chilmark Quarries SAC and Mottisfont SAC are some of our greatest environmental assets. The populations of bats supported by these sites are afforded very high levels of legal protection, placing significant duties on decision-makers to prevent damage to bat roosts, feeding areas and the routes used by bats to travel between these locations.

2.3 Relevant Legislation

- 2.3.1 The following pieces of legislation have been considered within this assessment with an explanation of their relevance provided.

Table 1 Relevant legislation

Legislation	Relevance
The Habitats Directive (together with the Birds Directive) forms the cornerstone of Europe's nature conservation policy. It is built around two pillars: the Natura 2000 network of protected sites and the strict system of species protection. All in all, the Directive protects over 1,000 animals and plant species and over 200 "habitat types" (e.g. special types of forests, meadows, wetlands, etc.), which are of European importance. The Habitats Directive and parts of the Birds Directive are transposed into legislation by The Conservation of Species and Habitat Regulations 2017 (as amended) .	Potential presence of roosting, commuting or foraging bats (offsite / adjacent)
Wildlife and Countryside Act 1981 (as amended, including by the Countryside and Rights of Way Act 2000), which provides legislative protection for certain species. The Act also prohibits the spread of invasive plant species, as well as providing the mechanism for the designation and protection of Sites of Special Scientific Interest;	Potential presence of breeding birds (offsite / adjacent)
The Natural Environment and Rural Communities Act 2006 (the NERC act) places a duty on all public authorities, including local planning authorities, to consider biodiversity in their work. Local planning authorities are to ensure that there is no net loss of biodiversity on a site, no net loss in habitat connectivity and aims to enhance biodiversity.	Potential presence of hedgehog and brown hare (offsite/adjacent). Potential presence of nesting NERC birds on site (offsite/adjacent)

3 METHODOLOGY

3.1 Scope of Assessment

3.1.1 This assessment has been undertaken following the approach set out in the '*Guidelines for Ecological Impact Assessment in the UK and Ireland*' (CIEEM, 2018) (Version 1.2 updated April 2022). The assessment has considered 'Important Ecological Features' that are present within the 'Zone of Influence' of the project. Important Ecological Features for this project comprise¹:

- Designated nature conservation sites;
- Habitats and Species of Principal Importance for the Conservation of Biodiversity in England;
- Legally protected species; and
- Red Listed or rare species (based on Red Data Book lists, Birds of Conservation Concern and species considered to be nationally rare / scarce).

3.1.2 The Zone of Influence (Zoi) is the area over which the project could have an influence on ecological features. The Zoi is likely to vary for different features. However, in general terms the Zoi for this development proposal is considered to comprise the land within the red line boundary as well as immediate adjacent habitat features. It also includes designated nature conservation sites in the surrounding area.

3.1.3 The scope of the assessment was informed by an 'ecological walkover and desktop assessment' undertaken in July 2022. The purpose of this was to identify the habitats on site, their potential for protected species and to establish the scope of surveys that would be required to inform a future planning application at the site.

3.1.4 The overall assessment has been informed by guidelines provided in CIEEM (2017) Guidelines for Ecological Report Writing.

3.2 Background Data Search

3.2.1 A background data search was received from Wiltshire and Swindon Biological Records Centre in July 2022. The search area included records of non-statutory designated sites and protected and notable species within 1km of the proposed development site.

3.2.2 An additional search for statutory designated sites within 2km of the development site and granted European Protected Species (EPS) licences within 2km of the site boundary was undertaken using publicly available information (DEFRA Magic map).

¹ Box 14 in CIEEM's ECiA Guidelines (2018)

3.3 UK Habitat Classification Survey

- 3.3.1 A UKHab survey was undertaken on 19th July 2022. The survey incorporated detailed assessment of the land within the development boundary, including a description and mapping of all key features and habitat types. The survey was carried out to identify the range of habitats within the site and the predominant and notable species of flora. This survey was informed by the UKHab classification Version 2 (UKHab Ltd., 2023).

3.4 Quadrat methodology

- 3.4.1 Grasslands were surveyed using professional judgement using 1x1m² quadrats sample. A minimum of three quadrats were undertaken of each grassland section.
- 3.4.2 Information collected within each quadrat included aspect, slope, average ground cover, sward variation, species, and their percentage cover.
- 3.4.3 Where the grassland differed to a certain extent or was divided by field boundary such as hedgerows it was considered that the grassland was a different habitat parcel, and another assessment was undertaken.

3.5 NERC S. 41 Mammals

- 3.5.1 The survey included an assessment of the habitats on site for their potential to support NERC Section 41 species such as hedgehog (*Erinaceus europaeus*), polecat (*Mustela putorius*), harvest mouse (*Micromys minutus*) and brown hare (*Lepus europaeus*). This included a search for nests, runs, latrines, paw prints, and live specimens.

3.6 Badger

- 3.6.1 The survey for badger (*Meles meles*) included a search of the development site and surrounding habitats (up to 30 metres where feasible) for any evidence including setts, foraging signs (snuffle holes), runs and latrines.

3.7 Hazel Dormouse

- 3.7.1 The survey included an assessment of the potential of the site for hazel dormouse (*Muscardinus avellanarius*), focusing on the connectivity and suitability of the habitat on site.

3.8 Riparian Mammals

- 3.8.1 The survey included an assessment of the site to support riparian mammals such as otter (*Lutra lutra*) and water vole (*Arvicola amphibius*). This included an assessment of the riparian habitats on site or within the wider environment to support these species.

3.9 Bats

- 3.9.1 The methodology for the bat survey has been informed by the *Bat Surveys for Professional Ecologists Good Practice Guidelines 4th Edition* (Collins, 2023).
- 3.9.2 The habitats on site were assessed for their suitability to support foraging and commuting bats. This assessment was also contextualized through examination of suitable habitat and features in the wider landscape and possible flight-lines across the proposed site following natural linear features such as hedgerows.

Ground level assessment of trees

- 3.9.3 The methodology draws upon guidance within Collins (2023) and the Bat Tree Habitat Key (2018). The surveys were undertaken using binoculars and a high-powered torch to view features from the ground. Details on the potential roosting features were recorded as well as information to identify the specific trees.
- 3.9.4 Potential roosting features on trees were identified as any feature within a tree that could provide shelter for a roosting bat. These features result from the following three mechanisms:
- Disease and Decay;
 - Damage; and,
 - Associations.
- 3.9.5 Tree with no potential roost features were assessed as having 'negligible' potential for roosting bats and no further surveys were carried out. Trees with features suitable for roosting bats were assessed as having 'low', 'moderate' or 'high' potential for bats.
- 3.9.6 Trees assessed as moderate or high potential and considered likely to be impacted by the development (e.g., directly through removal or indirectly from light spill) were subject to further Potential Roost Features (PRF) inspections.
- 3.9.7 The definitions of 'negligible, low, moderate and high' used in this assessment are in accordance with those in *Bat Surveys for Professional Ecologists Good Practice Guidelines 4th Edition* (2023):
- **Negligible:** Negligible habitat features on site likely to be used by roosting bats.
 - **Low:** A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential
 - **Moderate:** A structure or tree 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 (with respect to roost type only)
 - **High:** 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.

Potential roost features (PRF) close inspection surveys

- 3.9.8 The aim of this survey is to reclassify PRFs and determine the presence/absence of bats at the time of the survey and the need for further survey and/or mitigation. Features identified as having bat roost potential were inspected with an endoscope to identify any bats or evidence of bats such as droppings, staining or odour within the feature.

3.10 Birds

- 3.10.1 The bird survey included an assessment of the habitats on site for their potential to support protected and notable species of bird as well as their potential to support breeding birds.

3.11 Reptiles

- 3.11.1 The potential presence of reptiles on site was assessed considering the habitats present (availability of refugia and basking areas) and suitability of surrounding environment. The assessment of habitats was informed by the *Herpetofauna Workers Manual* (Gent and Gibson, 2003). Where possible, attempts to confirm reptile presence on site were made following *Froglife Advice Sheet 10 – Surveying for Reptiles* through direct observation in reptile “hotspots” and checking of any existing refugia.

3.12 Amphibians

- 3.12.1 Surveys for GCN were informed by the *Great Crested Newt Conservation Handbook*, Froglife 2001.
- 3.12.2 The site was examined for suitable waterbodies and for breeding terrestrial habitat. Terrestrial habitats providing sufficiently structured vegetation in which amphibians may forage or hibernate over winter were also surveyed for.
- 3.12.3 In addition to the on-site assessment, *Great Crested Newt Mitigation Guidelines* (English Nature, 2001) recommend that a desktop analysis of ponds within 500m of the site be undertaken, to identify any potential breeding ponds which may require further survey. Ponds within 500m of the site were mapped on GIS with an OS OpenData base map at 1:10,000 resolution.

3.13 Invertebrates

- 3.13.1 Due to the many invertebrate taxonomic groups that exist, the often-large differences in invertebrate diversity between habitats and the many survey techniques available, invertebrate surveys are highly specific to individual sites. Therefore, an assessment of the site’s potential for invertebrates was undertaken, including the need for targeted

surveys, as recommended in *Considering Invertebrates in Preliminary Ecological Appraisals* (Jukes, 2021).

3.14 Limitations

3.14.1 The 2022 background data search received from the Wiltshire and Swindon Biological Records Centre has been used to inform this updated EcIA, of a reduced scheme on the site.

3.15 Evaluation of Ecological Features

3.15.1 In line with CIEEMs guidelines on EcIA, this assessment has focused on relevant Important Ecological Features. The scale of importance of these features has been determined based on available contextual information, which for this project are considered only to include:

- **International** – of internationally and protected through international legislation;
- **National** – of importance in England and protected through national legislation;
- **County** – of importance to the county (Wiltshire) but not sufficiently important to warrant 'National' scale of importance; and
- **Local** – of importance to the local area (Great Cheverell), but not sufficiently important to warrant County scale of importance.

3.15.2 Potential impacts on Important Ecological Features are identified and assessed; likely significant effects are those likely to result in a change to the conservation status of a habitat or species population or undermine/support nature conservation policy. Mitigation measures have been devised following the mitigation hierarchy; appropriate mechanisms for securing mitigation measures have been identified.

3.16 Personnel

3.16.1 The surveyors on site have been detailed below in Table 2.

Table 2 Site surveyors

Ecologist	Position	Qualifications/ Licences	Experience	Role in assessment
Sarah Forsyth	Principal Ecologist	MSc DIC BSc (Hons), ACIEEM Class 1 GCN Licence Tree Climbing and Rescue, City and Guilds NPTC Level 2 Award (206 and 306)	Sarah has over 15 years' experience in ecological management and assessment, both in consultancy and the public sector. Sarah is responsible for leading on ecological assessments and overseeing projects through various stages of planning and implementation.	UKhab surveyor, Bat surveyor, report checker
Becky Morris	Ecologist	PhD, DIC, MSc, BSc, MCIEEM	Becky has 16 years' experience working as an Ecological	Bat surveyor, UKhab surveyor

Ecologist	Position	Qualifications/ Licences	Experience	Role in assessment
		Class 1 GCN Licence	Consultant, specialising in botanical surveys. She holds a great crested newt survey licence.	
Ellie Shearn	Ecologist	BSc (Hons), Qualifying CIEEM	Ellie is an ecologist at Ethos with three years' relevant experience in ecological field survey. Ellie undertakes a range of protected species surveys including bat surveys and assessment. Ellie managed the bat call data analysis within Ethos.	Report author
Katie Munday	Ecologist	MSc, BSc (Hons), Qualifying CIEEM	Katie has two years' experience in ecological consultancy. She undertakes a variety of surveys, including protected species surveys and habitat assessments, and she assists with bat call data analysis.	Bat surveyor

4 BASELINE ECOLOGICAL CONDITIONS

4.1 Designated Sites

Statutory and Non-statutory Sites

- 4.1.1 The site is located within the consultation zone of the Salisbury Plain Special Area of Conservation (SAC), as shown in Figure 2. Given the size and scale of the proposed development, it has been determined that no significant impacts are predicted, and the site is not considered further within the assessment.
- 4.1.2 The site is located within 2km of the Great Cheverell Hill SSSI. Given the size and scale of the proposed development, it has been determined that no significant impacts are predicted, and the site is not considered further within the assessment.
- 4.1.3 Two Local Wildlife Site (LWS) are present within 1km of the site. The first Shovel Wood, was located within 700m southeast of the site, as shown in Figure 3. Shovel Woods is designated as a broadleaved woodland. The second site is Church Road Copse, LWS which is located within 900m southwest of the site. This site is designated as a small area of broadleaved woodland with natural springs. Given the size and scale of the proposed development, it has been determined that no significant impacts are predicted, and the site is not considered further within the assessment.

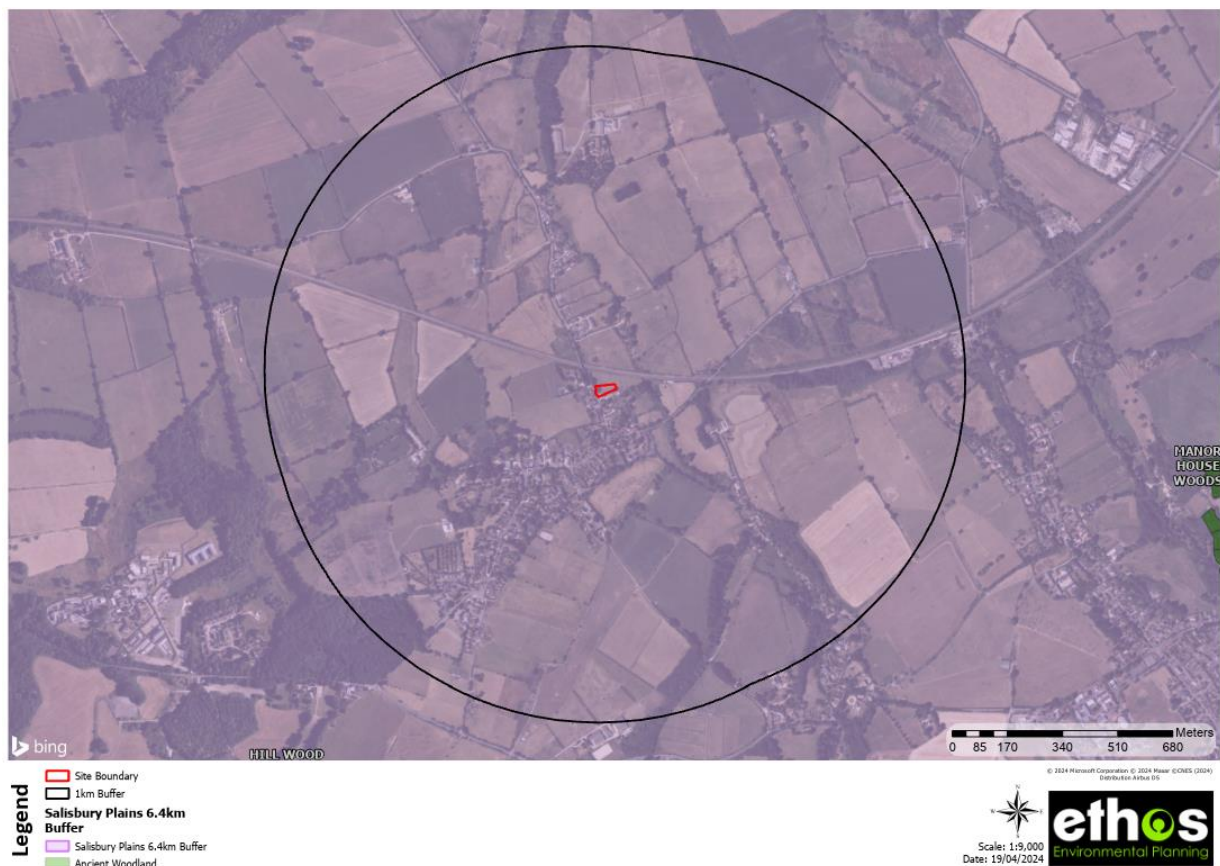
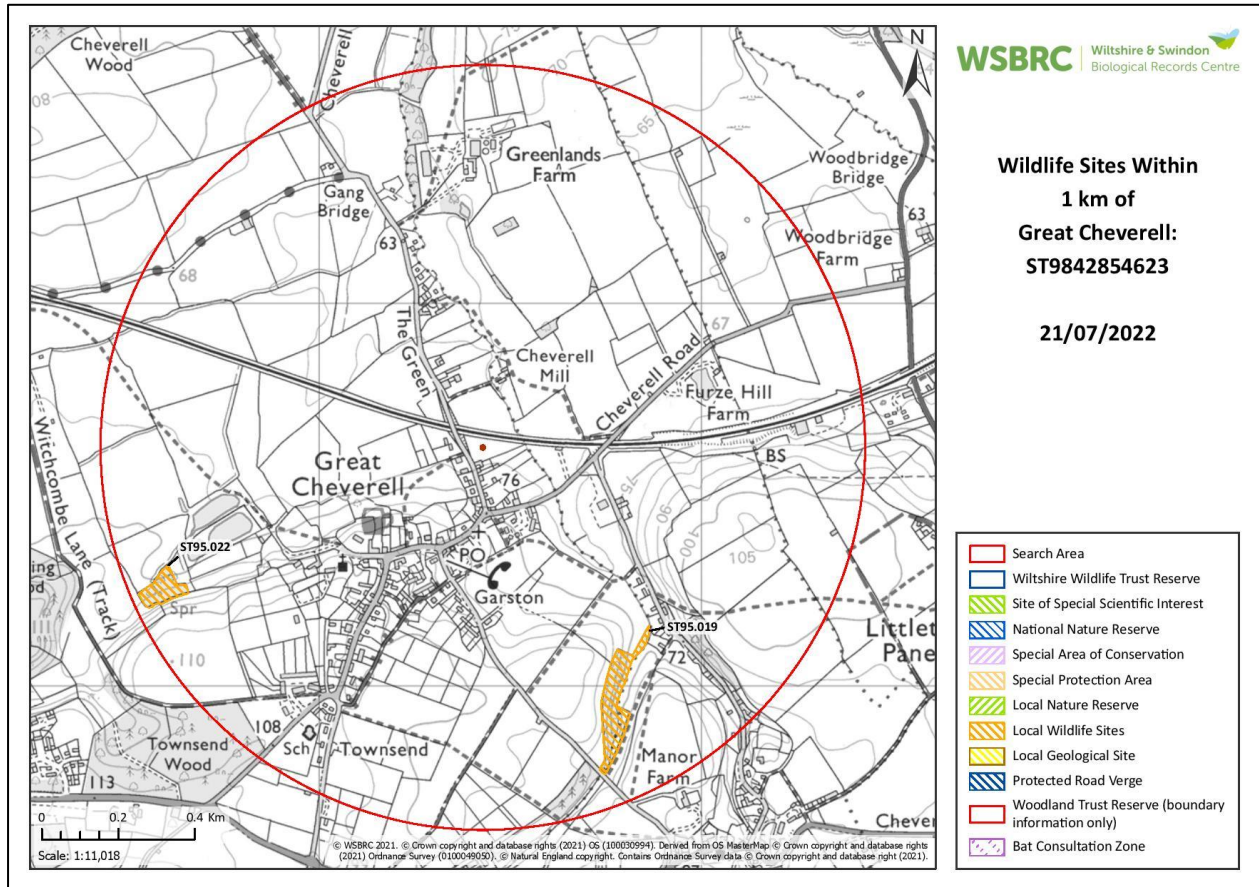


Figure 2 Statutory designated sites within 1km

Figure 3 Non-statutory designated sites within 1km.



4.2 Habitats

General Site Description

- 4.2.1 The site comprised sheep grazed modified grassland. The wider blue line enhancement area includes a small section of scrub and a small section of mature hedgerow. The wider site was bordered by a railway track immediately north of the blue line with residential development to the south, all surrounded by a large network of arable fields and hedgerows.

UKHab Survey

- 4.2.2 Figure 4 displays the key habitats using the UK Habitat classifications. Descriptions of the habitats are provided in the following section.



Figure 4 UKHab survey

Red Line Area

Modified grassland

- 4.2.3 The majority of the site comprised tightly sheep-grazed modified grassland, in poor condition. The fields were dominated by grasses mostly perennial ryegrass (*Lolium perenne*), creeping bent (*Agrostis stolonifera*) and red fescue (*Festuca rubra*), with creeping buttercup (*Ranunculus repens*), creeping thistle (*Cirsium arvense*) white clover (*Trifolium repens*) with some silverweed (*Potentilla anserina*), common mouse-ear (*Cerastium fontanum*), Yorkshire fog (*Holcus lanatus*) and dove's foot crane's bill (*Geranium molle*) also present at low levels. There were patches of nettles (*Urtica dioica*) present under trees and around feeding station.
- 4.2.4 The grassland does not meet the criteria as a habitat of principal importance and is not considered to be of particular nature conservation importance. It is therefore only considered further in this assessment in relation to its potential to support protected species.
- 4.2.5 This grassland is also present across the wider, blue line enhancement area in ownership by the Client.



Photo 1 Sheep grazed field



Photo 2 Species and short length of sward

Blue Line Area

- 4.2.6 The following habitats are not to be considered in terms of development and will be considered for informing enhancements only.

Mixed scrub

- 4.2.7 A small patch of mixed scrub was present on the western boundary of the blue line, alongside the railway bridge embankment. This area contained willow (*Salix* spp.), ivy (*Hedera helix*), ash (*Fraxinus excelsior*) and hawthorn (*Crataegus monogyna*), of varying ages. The scrub has a well trampled understory and no variation in age structure this area.

Hedgerows

- 4.2.8 There was a single short hedgerow in the northwest of the site which comprised hawthorn, ivy and nettle understorey.

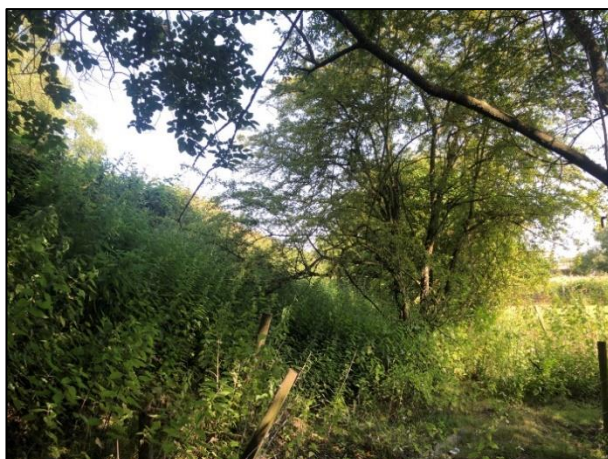


Photo 3 Scrub area



Photo 4 Hedgerow

4.3 NERC S. 41 Mammals

- 4.3.1 Three hedgehog (*Erinaceus europaeus*) records were identified by the desk study all from 2021 with a maximum count of three individuals from approximately 50m south of the site within residential gardens and eight records of hedgehog were returned from the 1970's – 1980's. No further records of NERC mammals were present.
- 4.3.2 The site mainly comprised large areas of short sward grassland, which would contain limited suitability to support hedgehog. The hedgerow and areas of scrub would provide limited nesting and foraging habitat for hedgehog. Due to the proximity of the site to residential gardens to the east and south, it is considered likely that hedgehog may be present in the wider site area using the nearby hedgerows and scrub for commuting and foraging.
- 4.3.3 The site was considered to be unsuitable for brown hare, polecat and harvest mouse and no further assessment in relation to these species is required.
- 4.3.2 Hedgehog are likely absent from site and are only considered further in relation to precautionary working during construction due to the proximity of suitable habitat to the site.

4.4 Badger

- 4.4.1 Nine records of badger (*Meles meles*) were returned within the data search 1966 - 1993.
- 4.4.2 The majority of the site comprised short sward grassland which can be favourable for foraging badgers at certain times of the year, but the small area was considered unlikely to be important to any local badger population.
- 4.4.3 No badger setts were identified on or adjacent to the development site. Therefore, it was considered that badgers are likely absent from the site and are not considered further in this assessment.

4.5 Hazel Dormouse

- 4.5.1 No records of dormouse were returned in the data search. No EPS licences for hazel dormouse were returned within the search radius.
- 4.5.2 Suitable habitat for dormouse on site was limited to the sections of scrub and hedgerows. The hedgerows were species-poor and contained limited species which are known to be important food sources for dormice, such as oak and hazel. Therefore, the hedgerows were assessed to be unlikely to support dormouse throughout the entire active season, and therefore dormouse are not considered further in this assessment.

4.6 Riparian Mammals

- 4.6.1 One record of otter (*Lutra lutra*) was returned from 2009 located 640m south of the site and 14 records of water vole (*Arvicola amphibius*) were returned within 1983 – 2003. No records of beaver (*Castor fiber*) were returned within the data search.
- 4.6.2 The site is located approximately 96m from the watercourse that runs near to the northeast corner of the wider area of the field. As otter are known to travel large stretches of watercourse in search of suitable foraging habitat, they may be present in the wider area, but it is considered unlikely to disperse across the development site.
- 4.6.3 The watercourse could provide suitable habitat for water vole, with a diversity of aquatic vegetation species being present. However, it was assessed that water vole are unlikely to utilise the habitats on site, therefore considered absent from the site.
- 4.6.4 Overall, it was considered that riparian mammals are likely absent from the site and are not considered further in this assessment.

4.7 Bats

Data search

- 4.7.1 Thirteen bat records were returned from between 1978 and 2019, including 8 bat roost records. Most records were only noted to a four-figure grid reference, however the closest of any record was located over 600m from the site.
- 4.7.2 Two EPS licences were returned within the search radius, one for 2015 and one from 2017, both recorded in the same location 1.9km south-east of the site (reference numbers: (2014-5333-EPS-MIT and 2017-30871-EPS-MIT).

Habitats

- 4.7.3 The habitat on site is dominated by short sward, sheep grazed grassland which whilst it offers suitable foraging habitat bats it is unlikely to be an important resource given the context of the site. Furthermore, the majority of the field is being retained and the proposals include habitat enhancements.
- 4.7.4 The linear features (railway and stream) in the wider site area are considered likely to provide commuting and foraging opportunities for bats.
- 4.7.5 The mature walnut, with limbs overhanging the site, had high suitability for roosting bats, with presence of 5 potential roosting features for bats (see photos 6 to 10 and table 3).

Roosting (Trees)

- 4.7.6 A search for potential roosting features on the trees on site was undertaken. It was shown that two mature trees adjacent to the site, an ash (*Fraxinus excelsior*) on the west boundary, and a walnut (*Juglans regia*) on the south boundary, were determined to have potential roost features present, as shown in Figure 5.
- 4.7.7 The ash tree was assessed to have low bat roost potential and the walnut tree located immediately offsite was assessed to be of high roost potential.



Figure 5 Location of trees assessed at ground level

Table 3 Ground level assessment of tree results

Tree	Diameter at Breast Height (DBH) (cm)	Height (m)	PRF's	Comments	Assessed? Evidence of bats?	Bat Roost Potential
Ash	70	25	1	Mature ivy, lifted in places on lower portion trunk. Tight to trunk above 6m. Low suitability, where lifted exposed. Ash dieback present.	Assessed. No evidence.	Low
Walnut	90	10	5	1) Knot hole extending over 20cm into limb. Entrance is a decent size, approximately 7 x 7cm and the interior is dark and sheltered. Suitable size for multiple bats.	All PRF's assessed for bats with ladder and endoscope. No evidence	High

				2) Small knot hole extending a short way into the limb. Suitable for an individual bat. 3) Large knot hole extending into limb of tree. Suitable for multiple bats. There were cobwebs over the entrance of the hole. 4) Offsite side of tree. Homeowner allowed access to assess. Suitable for multiple bats. 5) Crack in bark on trunk of tree on offsite side. Crack only extends a small way under the bark so sheltered area likely only suitable size for an individual bat.	of bats recorded.	
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Photo 5 Ash tree with ivy PRF



Photo 6 Walnut PRF 1



Photo 7 Walnut PRF 2

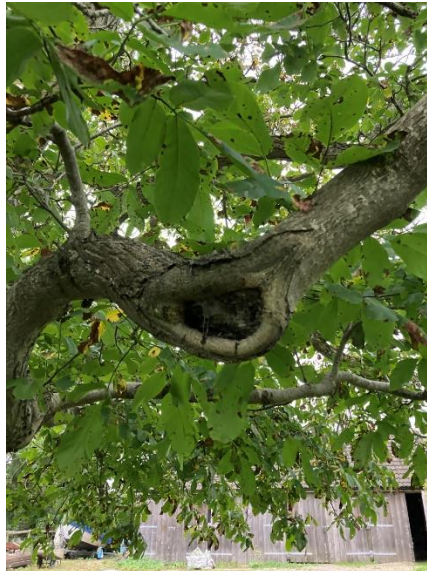


Photo 8 Walnut PRF 3



Photo 9 Walnut PRF 4



Photo 10 Walnut PRF 5

- 4.7.8 The wider site linear features likely to be used by foraging and commuting bats are scoped out of the impact assessment, but will be considered further in terms of enhancement.
- 4.7.9 No evidence of bat roosts was confirmed on the walnut tree but given the high potential for roosting bats immediately adjacent to the site, precautionary measures to avoid any indirect impacts on potential roosts will be considered in this assessment.

4.8 Birds

- 4.8.1 The desk study identified forty-seven bird records, including 19 species within 1km of the site, the majority of species were on the BoCC Red list, as detailed below. The exact locations of the recordings were unknown as the records were accurate to 4-figure grid reference except for lapwings (*Vanellus vanellus*) which were recorded more than 500m directly south of the site and mistle thrush (*Turdus viscivorus*) which were recorded 600m southeast of the site.
- 4.8.2 The BoCC red list species recorded were swift (*Apus apus*), lapwing, cuckoo (*Cuculus canorus*), skylark (*Alauda arvensis*), corn bunting (*Emberiza calandra*), yellowhammer (*Emberiza citrinella*), greenfinch (*Chloris chloris*), linnet (*Linaria cannabina*), house martin (*Delichon urbicum*), house sparrow (*Passer domesticus*), starling (*Sturnus vulgaris*), fieldfare (*Turdus pilaris*) and mistle thrush. Red kite (*Milvus milvus*), barn owl (*Tyto alba*) and peregrine (*Falco peregrinus*) along with fieldfare and red wing (*Turdus iliacus*) are listed under Schedule 1 of the wildlife and countryside Act.
- 4.8.3 The habitat on site was dominated by short sward grassland which provides negligible opportunities for ground nesting birds. The offsite hedgerows and scrub adjacent to the site could provide potential breeding habitats for common and widespread species of birds.
- 4.8.4 During the 2023 site visit raven (*Corvus corax*), red kite and house martin were recorded flying across the site.
- 4.8.5 There is presence of suitable habitat present adjacent to the site and the species sightings during the site visit, birds are only considered further within this assessment with regard to enhancement opportunities.

4.9 Reptiles

- 4.9.1 The background data search included records for grass snake (*Natrix helvetica*), slow worm (*Anguis fragilis*), common lizard (*Zootoca vivipara*) and adder (*Vipera berus*). All records returned were historic and from the 1930's to the 1980's.
- 4.9.2 The site was dominated by short sward grassland, and therefore did not provide suitable cover habitat for reptiles. The watercourse to the northeast has some limited suitability for use by grass snake.

- 4.9.3 Given the lack of suitable habitat on the site, and distance from the watercourse, reptiles are considered likely to be absent from the site and are not considered further in this assessment.

4.10 Amphibians

- 4.10.1 The data search included records of common frog (*Rana temporaria*) and common toad (*Bufo bufo*). All records returned were historic and from the 1930's to the 1990's.
- 4.10.2 There were no waterbodies present on site that were considered suitable for great crested newt (*Triturus cristatus*) (GCN) and other amphibians. The terrestrial habitat was assessed as being of low value for GCN as the grassland was grazed short. The hedgerows, and vegetation along the railway would provide some potential habitat to support amphibians dispersing through the wider landscape. The stream contained running water and was therefore assessed to be unsuitable for GCN.
- 4.10.3 A search for ponds within 500m (Figure 6) of the site identified a pond approximately 350m west of the site and 500m east of the site immediately adjacent to the site. The lake was assessed as unlikely to support GCN due to the presence of fish. No other waterbodies were identified.

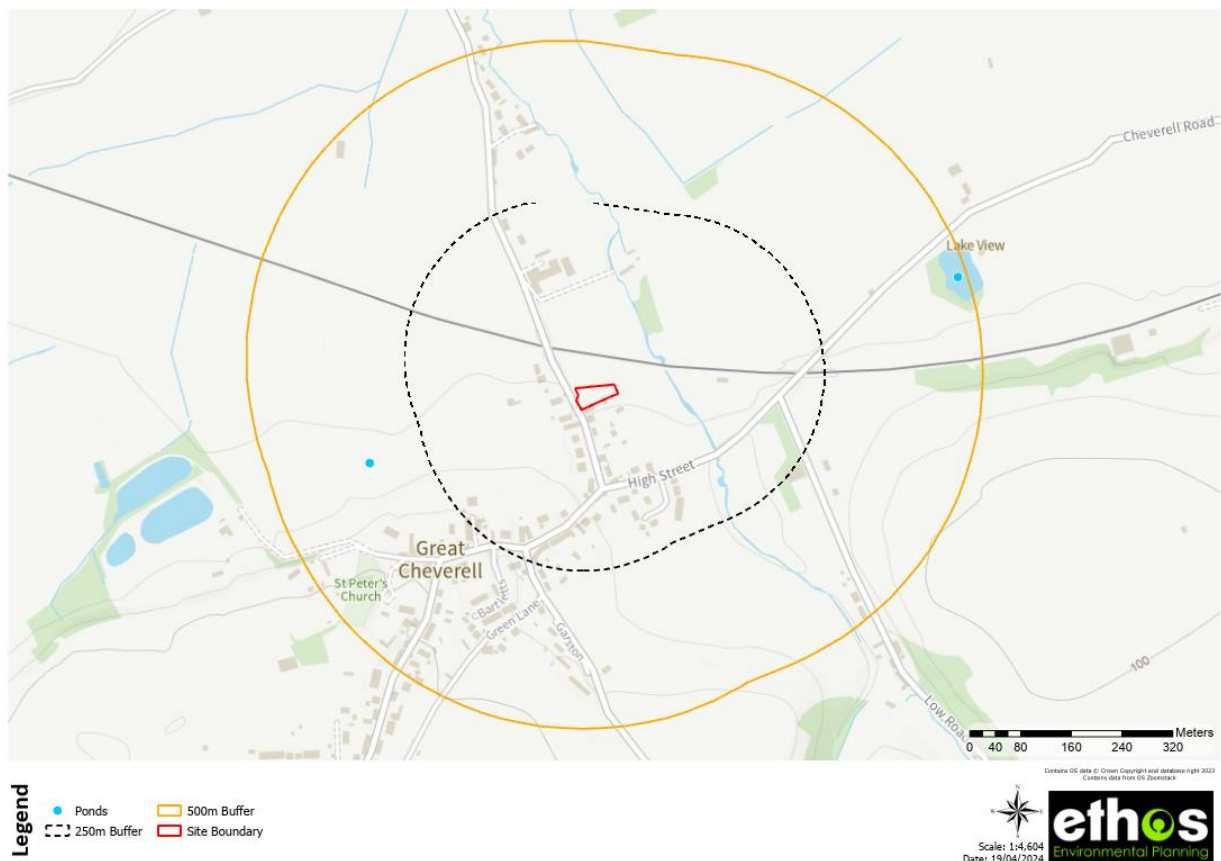


Figure 6 Ponds within 500m of the site

- 4.10.4 Overall, due to a lack of suitable waterbodies within proximity to the site, it has been assessed that GCN are unlikely to be present on site and are not considered further within this assessment.

4.11 Invertebrates

- 4.11.1 There were fifteen records returned of invertebrates identified by the data search. These were small heath butterfly (*Coenonympha pamphilus pamphilus*) recorded in 2018 which uses grass species as hosts and the painted nomad-bee (*Nomada fucata*) recorded in 2020 which requires *Andrena flavipes*. As a host species which is a solitary bee associated with gardens, banks and verges. The other records were historic and included white admiral (*Limenitis camilla*), small blue (*Cupido minimus*), ghost moth (*Hepialus humuli*), dotted Ermel (*Ethmia dodecea*), blood-vein (*Timandra comae*), white ermine (*Spilosoma lubricipeda*), buff ermine (*Spilosoma lutea*), shoulder-striped wainscot (*Leucania comma*), dusky Brocade (*Apamea remissa*) and rustic (*Hoplodrina blanda*).

- 4.12.2 The site contained common and widespread habitats (modified grassland). The boundary hedgerows, scrub and adjacent habitats within the blue line area along the railway and watercourse were assessed as the most valuable habitat for invertebrates, as there was potential to support aquatic invertebrates. The grassland was considered to hold low ecological value and was assessed as unlikely to support rare or notable invertebrate species.

- 4.12.13 The site's assemblage of invertebrates is not considered likely to be of particular nature conservation importance and no further assessment in relation to this species is required.

4.12 Invasive Species

- 4.12.1 No invasive species have been identified across the site or from the background data search.

4.13 Summary

- 4.13.1 Table 4 below details the key ecological features on site.

Table 4 Summary of key ecological features on site

Important Ecological Features	Scale of Importance
NERC S.41 - Hedgehog	Precautionary
Bats – Tree roosting	Precautionary

5 DESCRIPTION OF THE PROPOSED DEVELOPMENT

- 5.1 The development proposals comprise the construction of one self-build residential dwelling with associated access and green space.
- 5.2 The layout of the development has been developed to minimise impacts on site ecology as follows:
- All existing wider vegetation will be retained;
 - Native hedgerow planting will be implemented along the southern boundary of the site; and
 - The blue line area includes a landscape and ecological buffer for the railway to improve the ecological corridor.



Figure 7 Development proposals

6 ASSESSMENT OF IMPACTS AND MITIGATION MEASURES

- 6.1.1 The site does not contain any features of particular ecological importance therefore the proposals will have no significant impacts on any ecological features. This report therefore just provides details on precautionary working methods.

6.2 Precautionary Working

6.2.1 NERC S.41 – Hedgehog

- 6.2.1 The adjacent habitats of the site have the potential to support hedgehog. Good practice measures to avoid impacts on hedgehog comprise appropriate storage of materials to avoid creating refugia. These measures are set out in Appendix 1.

6.2.2 Bats – Tree roosting

- 6.2.1 As there are trees located immediately adjacent to the site that have the potential for roosting bats, precautionary measures are recommended. Any lighting required during construction or operation, should avoid any light spill onto the mature walnut tree.

6.3 Summary

- 6.3.1 A summary of the recommended precautionary working measures is outlined in Table 5.

Table 5 Summary of precautionary working measures

Ecological Feature	Mitigation	Mechanism for securing delivery
NERC S.41 - Hedgehog	Good practice working measures	Precautionary working method statement in Appendix 1.
Bats – Tree roosting	Sensitive lighting	Precautionary working method statement in Appendix 1.

6.4 Cumulative Effects

- 6.4.1 Given the scale of context of this development, together with a review of the Wiltshire Planning Portal, it is assessed that there are no cumulative effects to be considered.

7 ENHANCEMENTS

7.1 Habitats

- 7.1.1 The wider blue line area as shown in the development proposals (Figure 7) includes planned ecological enhancements to the northern field boundary to wider the ecological buffer located adjacent to the railway line; this will enhance valuable habitats, improve ecological networks and aid ecological connectivity in the wider area. This area of enhancement and its subsequent management is not a requirement of the planning application and as such management should be proportionate to the scale of development.
- 7.1.2 The details of the enhancement include wetland planting along the eastern end of the buffer to increase the riparian vegetation corridor and increasing species diversity and ecological interest in the buffer zone.

7.2 Protected Species

- 7.2.1 It is recommended that ecological provisions for protected species be included within the development proposals, as demonstrated below. It is advised that:
- Two open-fronted bird boxes be included within the trees in the wider blue line area;
 - One bat box suitable for crevice-dwelling species be included within the trees in the wider blue line area.



Photo 11 An example of an open-fronted bird box



Photo 12 An example of a bat box to be positioned on a tree

8 MONITORING

- 8.1.1 As there is no requirement for Biodiversity Net Gain (BNG) on this site and as the ecological enhancements are recommendations, it has been determined that no formal monitoring is required of this site.

9 CONCLUSIONS

- 9.1 It is concluded that this report has assessed the impacts of the proposed development on ecological features on the site, impacts on nearby designated sites and identified measures of ecological enhancement and measurable gains for biodiversity. It has been determined that the proposed development is in line with local and national planning policy and guidance.
- 9.2 The site is comprised of modified grassland and is set within a wider modified grassland, sheep-grazed field with native boundary hedgerows. The site provides some low-level habitat suitability for protected species with no features of ecological importance identified. Therefore, the proposals have no significant impacts on ecological habitat or protected species. Recommendations are provided for precautionary working during construction.
- 9.3 The blue line area shown in Figure 7 provides opportunities to provide wider ecological enhancements and species provisions to bolster habitat suitability and connectivity in the wider environment.

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APPENDIX 1 – CONSTRUCTION ENVIRONMENTAL MANAGEMENT MEASURES

General good working practices

The following section details general good practise measures which will be adopted during the construction process. It will be the responsibility of the site manager to ensure that all staff are inducted and made aware of these recommendations.

Dust generation

Generation of dust will be mitigated by wetting down and/or the use of screening if appropriate.

Excavations and trenches

All excavations and trenches will either be covered at night or include an escape ramp to prevent nocturnal species such as badger and hedgehog from becoming trapped. This could be in the form of a roughened plank of wood. The trenches/pits will be inspected each morning to ensure no badgers or other species have been trapped.

Open pipework

Open pipework larger than 150mm outside diameter will be blanked off at the end of each working day to avoid nocturnal mammals entering the pipes and potentially becoming trapped or injured.

Contractor materials and hazardous waste

All chemicals and hazardous materials and waste will be stored in-line with best practice guidelines, ensuring they are secure and cannot be accessed by roaming animals.

Sympathetic working practices:

- Avoid creating potential refuges. Amphibians will use stacked materials such as wood, stone, boards or metal sheets as refugia. Keep the site tidy and store materials off the ground, for example on pallets where possible.
- Store materials away from areas of retained vegetation which are considered suitable for amphibians (e.g. hedgerows).
- Should it be necessary to store materials such as topsoil on site then the stockpile should be smoothed to prevent access by faunal species into potential cavities.
- Staff should simply demonstrate awareness when working and moving materials. Should an animal be found, it should be gently moved, for example in a clean bucket, to a suitable location within habitat well away from the working area.

Protected species

Bats

No construction lighting will be used along the mature trees located immediately adjacent to the site or its edge throughout construction. Necessary security lighting will be directional to limit light spill and will be switched on for a limited period of time to provide dark periods, allowing bats to continue to forage and commute across the north of the site.