

Preliminary Ecological Appraisal

Butt's Batch Wroughton



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Ecology | Green Space | Arboiculture | GIS

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EXECUTIVE SUMMARY

<p>Introduction</p>	<ul style="list-style-type: none"> • The site was located at Butts Batch, Wrington, North Somerset (Central Grid Reference ST 46638 62408). • The initial development proposals include the construction of approximately 71 dwellings with associated access, residential gardens and garages. • This Preliminary Ecological Assessment has been undertaken to identify any ecological constraints to the development.
<p>Surveys undertaken</p>	<ul style="list-style-type: none"> • An extended phase 1 habitat survey was undertaken on 19th November 2019. • A preliminary biodiversity net gain (BNG) assessment has been undertaken.
<p>Ecological constraints</p>	<ul style="list-style-type: none"> • The site is located within the North Somerset and Mendips Bat SAC consultation zone B. • Records of hazel dormouse were returned within the data search and the habitat on site provides moderate potential for dormouse. • The site is located approximately 50m north of the Congresbury Yeo River and associated rhynes SNCI which may be an important feature for bats and riparian mammals such as otter and water vole. • The current BNG assessment indicates a 30% decrease in biodiversity as a result of the development.
<p>Recommendations</p>	<ul style="list-style-type: none"> • Further surveys for hazel dormouse and great crested newt are recommended. • A lighting plan will be required to ensure the hedgerows are not subject to increased light levels as a result of the development. • Further surveys for bats are recommended in-line with guidance within <i>North Somerset and Mendip Bats SAC Guidance on Development</i>. Surveys should comprise a full season (April to October inclusive) of activity transect surveys (ten surveys with at least one survey in each month) and 50 days automated static detector surveys to determine bat presence on site. • The retention and restoration of sections of grassland on site is recommended. • The loss of biodiversity on site should be offset by creating suitable habitat within the field south of the site. This has the potential to provide multiple benefits for biodiversity and green infrastructure.

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1 INTRODUCTION

Ethos Environmental Planning (Ethos) have undertaken this Preliminary Ecological Assessment (PEA) at Butts Batch, Wrington, North Somerset (Central Grid Reference ST 46638 62408), hereafter referred to as the “site” and shown in Figure 1. The total area surveyed was 3.1 hectares and included hedgerows and agriculturally improved grassland. This report was commissioned to inform the client of the potential ecological constraints to the project and provides recommendations for further targeted ecological surveys that may be required.

1.1 Aims and Objectives

The overall assessment has been informed by guidelines provided in the ‘*CIEEM guidelines for ecological report writing 2nd Edition, 2017*’. Further guidance in relation to surveys for protected species is detailed in the relevant sections within this report. The primary aims of the PEA are to provide a robust evaluation of the potential impacts of the proposed scheme on ecological features that may be affected, with due regard to relevant local planning policy and legislation.

The PEA has the following objectives:

- to identify the existing habitats on site;
- to identify the potential for protected species;
- to establish baseline ecological conditions and determine the importance of ecological features present within the specified area;
- to identify if any further surveys are required with regards to protected habitats or species;
- to identify key ecological constraints to the project and make recommendations for design options to avoid significant effects on important ecological features/resources;
- to identify the mitigation and compensation measures to ensure there is no negative impact on habitats and protected species during construction and in operation;
- to establish any requirements for EPS licensing; and
- to identify ecological enhancement opportunities to seek a net gain in biodiversity.

1.2 Site Location

The site was located to the south-west of the village of Wrington within North Somerset (Central Grid Reference ST 46638 62408), as shown in Figure 1. The site was set within a semi-rural landscape dominated by pastoral land and associated hedgerows and was located approximately 80m north of the Congresbury Yeo River. The site is within Consultation Zone B of the North Somerset and Mendips Special Area of Conservation (SAC).

Figure 1 Site Location



1.3 Development Proposals

The development proposals (shown in Figure 2) include the construction of approximately 71 dwellings with associated residential gardens, access and garages. The proposals include the creation of a pond in the south-east of the site and open space with LEAP (Local Equipped Area for Play). Access to the site will be created off Half Yard Road, which is located along the south east boundary of the site.

The proposals will necessitate the removal of internal habitats but will include the retention and buffering of hedgerows currently on site, as well as the creation of a hedgerow along the western boundary of the site.

Figure 2 Current development proposals



1.4 Structure of the Report

The following sections are included within this report:

- Legislative and planning context;
- Methodology;
- Background data review;
- Phase 1 habitat survey;
- Protected species assessment;
- Biodiversity Net Gain assessment;
- Discussion;
- Recommendations; and
- Conclusions.

2 LEGISLATIVE AND POLICY CONTEXT

This section provides a summary of the legislative and planning context which has been used to inform the ecological assessment and subsequent recommendations made in this report. Appendix 1 sets out further details in relation to the most relevant legislation and policy.

2.1 Summary of Legislation

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 Habitat and Species Regulations 2017**. Further detail on legislation and designated sites is provided in appendix A1.2; with reference to the protection of Special Areas of Conservation (SAC) and Special Protection Areas (SPA).

The Wildlife and Countryside Act 1981 (as amended) is a key piece of national legislation which implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and implements the species protection obligations of Council Directive 2009/147/EC (formerly 79/409/EEC) on the Conservation of Wild Birds (EC Birds Directive) in Great Britain.

Badgers and their setts are protected under the **Protection of Badgers Act 1992** as amended by the Hunting Act 2004.

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.

The **Hedgerows Regulations 1997** protect 'important hedgerows' from being removed (uprooted or destroyed). Hedgerows are protected if they are at least 30 years old and meet at least one of the criteria listed in part II of schedule 1.

Specific legislation related to different species such as bats, birds and reptiles is outlined in Appendix 1, A1.1.

2.2 Policy

The **National Planning Policy Framework (NPPF)** aims to minimise impacts on biodiversity and provide net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including the establishment of coherent ecological networks more resilient to current and future pressures.

The UK Biodiversity Action Plan (UKBAP) was organised to fulfil the Rio Convention on Biological Diversity in 1992, to which the UK is a signatory.

There is no longer a UK Biodiversity Action Plan; this has been replaced by the **UK Post-2010 Biodiversity Framework (2012)**. The England Biodiversity Strategy has been replaced by **Biodiversity 2020: A strategy for England's wildlife and ecosystem services (2011)**. As a result, the BAP process has been devolved to local level with each county deciding its own way forward.

2.2.1 Biodiversity in the Planning System

The approach to dealing with biodiversity in the context of planning applications is set out at Paragraph 175 (NPPF):

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

- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*
- c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and*
- d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.*

The above approach encapsulates the 'mitigation hierarchy' described in British Standard BS 42020:2013, which involves the following stepwise process:

- **Avoidance** – avoiding *adverse* effects through good design;
- **Mitigation** – where it is *unavoidable*, mitigation measures should be employed to minimise adverse effects;
- **Compensation** – where residual effects remain after mitigation it may be necessary to provide *compensation* to offset any harm; and
- **Enhancement** – planning decisions often present the opportunity to deliver benefits for *biodiversity*, which can also be explored alongside the above measures to resolve potential adverse effects.

The measures for avoidance, mitigation, compensation and enhancement should be

proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development (BS 42020:2013, section 5.5)

2.2.2 Local Policy

Relevant policy taken from the adopted **North Somerset Council Core Strategy 2017**

Policy CS4: Nature conservation North Somerset contains outstanding wildlife habitats and species. These include limestone grasslands, traditional orchards, wetlands, rhynes, commons, hedgerows, ancient woodlands and the Severn Estuary. Key species include rare horseshoe bats, otters, wildfowl and wading birds, slow-worms and water voles. The biodiversity of North Somerset will be maintained and enhanced by:

- 1) Seeking to meet local and national Biodiversity Action Plan targets taking account of climate change and the need for habitats and species to adapt to it;
- 2) Seeking to ensure that new development is designed to maximise benefits to biodiversity, incorporating, safeguarding and enhancing natural habitats and features and adding to them where possible, particularly networks of habitats. A net loss of biodiversity interest should be avoided, and a net gain achieved where possible;
- 3) Seeking to protect, connect and enhance important habitats, particularly designated sites, ancient woodlands and veteran trees;
- 4) Promoting the enhancement of existing and provision of new green infrastructure of value to wildlife;
- 5) Promoting native tree planting and well targeted woodland creation, and encouraging retention of trees, with a view to enhancing biodiversity.

The Core Strategy Approach

Policy 3.65 The policy reflects the importance of meeting regional biodiversity targets. It also emphasises the need to design development to maximise benefits to biodiversity, incorporating and enhancing natural habitats and features, particularly networks of habitats, which are very important as wildlife corridors. It stresses that development should not result in net loss of biodiversity interest and promotes achievement of a net gain where possible.

Policy 3.66 The policy sets out the requirement to protect and enhance biodiversity in broad terms, although more detailed guidance will be provided within the Sites and Policies Development Plan Document.

Policy 3.67 The policy reflects the importance of strategies very relevant to biodiversity, including the emerging Green Infrastructure Strategy. Green infrastructure includes linear green space which can provide valuable wildlife corridors.

Policy 3.68 The policy reflects the importance of trees for biodiversity, and regard must be had to the Biodiversity and Trees SPD, which includes guidance for developers on planning for biodiversity; e.g. screening for the presence of biodiversity, undertaking tree and ecological surveys and planning to protect, retain and manage existing trees, habitats and species.

North Somerset and Mendips Bat SAC

The North Somerset and Mendip Bats SAC is designated under the Habitats Directive 92/43/EEC, which is transposed into UK law under the Conservation of Habitats and Species Regulations 2010 (as amended) ('Habitat Regulations'). This means that the populations of bats supported by this site are of international importance and therefore afforded high levels of protection, placing significant legal duties on decision-makers to prevent damage to bat roosts, feeding areas and the routes used by bats to travel between these locations.

The primary reason for designation of the bat SAC are two Annex II species:

- the Greater Horseshoe bat *Rhinolophus ferrumequinum*; and
- the Lesser Horseshoe bats *Rhinolophus hipposideros*

Where a proposal within Bands A or B of the Consultation Zone has the potential to affect the features identified below, early discussions with the local planning authority (who will consult Natural England as necessary) are also essential.

- Known bat roost;
- On or adjacent to a Site of Special Scientific Interest (SSSI);
- Linear features: hedgerows, tree lines, watercourses, stone walls, railway cuttings;
- Pasture, hay meadow, streamline, woodland, parkland, woodland edge; or
- Wetland habitat: ponds, marsh, reedbed, rivers, streams, rhynes.

3 METHODOLOGY

3.1 Background Data Search

A background data search was received from Bristol Environmental Records Centre on 11th December 2019. The search included records of designated sites and protected and notable species within 1km of the site. The search was extended to a 5km search radius for bat records, to take account of the location of the site in relation to the SAC.

A search for granted European Protected Species (EPS) licences was also undertaken using publicly available information (DEFRA MAGIC map).

3.2 UKHab

The Site was surveyed and mapped using UKHab habitat classifications (UK Habitat Classification Working Group, 2018) on 19th November 2019. The survey methodology follows a similar procedure to the succeeded phase 1 habitat surveys and includes a 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.

3.3 Biodiversity Net Gain

A preliminary Biodiversity Net Gain survey was requested by the client. This survey is based on initial proposals that may change following protected species surveys. The methodology and assessment has drawn on guidance provided within *Biodiversity Net Gain, Good Practice principles for development* (CIEEM, CIRIA, IEMA, 2016).

The metric for calculating the biodiversity units has used 'Defra Biodiversity Metric 2.0' – this has been put into our own bespoke tool which uses the exact measures in the DEFRA metric for the calculations. The data gathered from the Phase 1 UKHab surveys as part of the PEA have been used to calculate baseline biodiversity units on the site, which was also used to help follow the mitigation hierarchy (avoid, mitigate, restore, offset) and inform the post development proposals.

The toolkit is then used to calculate the biodiversity units present in the post-development proposals. If the number of biodiversity units on the site is higher after the development, it will achieve net gain for biodiversity. This step clarifies whether loss, no net loss or net gain of biodiversity is likely to be achieved on the development site following the construction period.

3.4 Protected Species Surveys

3.4.1 NERC S. 41 Mammals

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*).

3.4.2 Badger

The survey for badger (*Meles meles*) included a search of the development site for any evidence of badgers, including setts, foraging signs (snuffle holes), runs and latrines.

3.4.3 Hazel Dormouse

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.

3.4.4 Riparian Mammals

The survey included an assessment of the potential of the site to support riparian mammals such as otter (*Lutra lutra*) and water vole (*Arvicola amphibius*). The principal survey technique employed was a search for field signs including holts/burrows, couches, feeding sites, spraints/latrines and tracks.

3.4.5 Bats

The methodology for the bat survey has been informed by the Bat Conservation Trust *Bat Surveys Good Practice Guidelines 2016*. The habitats on site were assessed for their suitability for foraging and commuting bats, focusing on the availability of suitable habitat and connectivity features in the wider landscape. The assessment also looked at the potential for any trees with features suitable for roosting bats.

3.4.6 Birds

The bird survey included an assessment of the habitats on site for their potential to support breeding birds. Surveyors were equipped with Barr and Stroud 8 x 42 binoculars and any bird species observed during all site visits were recorded.

3.4.7 Reptiles

The potential presence of reptiles on site was assessed considering the habitats present (availability of refugia and basking areas) and suitability of surrounding environment. 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.

3.4.8 Amphibians

The habitats on site were assessed for their potential to support amphibian species, including great crested newt (*Triturus cristatus*) (GCN). Surveys for GCN were informed by the *Great Crested Newt Conservation Handbook*, Froglife 2001. 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.

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 ordnance survey data at 1:10,000 resolution.

3.4.9 Invertebrates

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 potential site for invertebrates was undertaken, including the need for targeted surveys.

3.5 Personnel

The survey was undertaken by Martin Smith Grad CIEEM. Martin has over three years' experience in ecological field survey and consultancy and is responsible for undertaking comprehensive habitat assessments, protected species surveys. Martin holds protected species licences from Natural England for dormouse and bats.

3.6 Limitations

The phase 1 UKHab survey was undertaken in November, which is outside of the recommended survey period for identifying botanical species (March to October inclusive). Therefore, some species of plant are likely to have been missed and a full species list for the site may not have been gained from the single site visit.

The site was fully accessible and it was assessed that there are no other significant limitations to the assessment.

4 BACKGROUND DATA REVIEW

4.1 Notable Sites

The desk study identified two non-statutory sites within 1km of the site; two Sites of Nature Conservation Importance (SNCI), one of which was also designated as Ancient Semi-Natural Woodland (ASNW). The site is also located within Zone B of the North Somerset and Mendips SAC consultation area; this is discussed further within Section 8 and 9 of this report. The non-statutory designated sites are described in Table 1 and shown in Figure 3.

Figure 3 Designated Sites

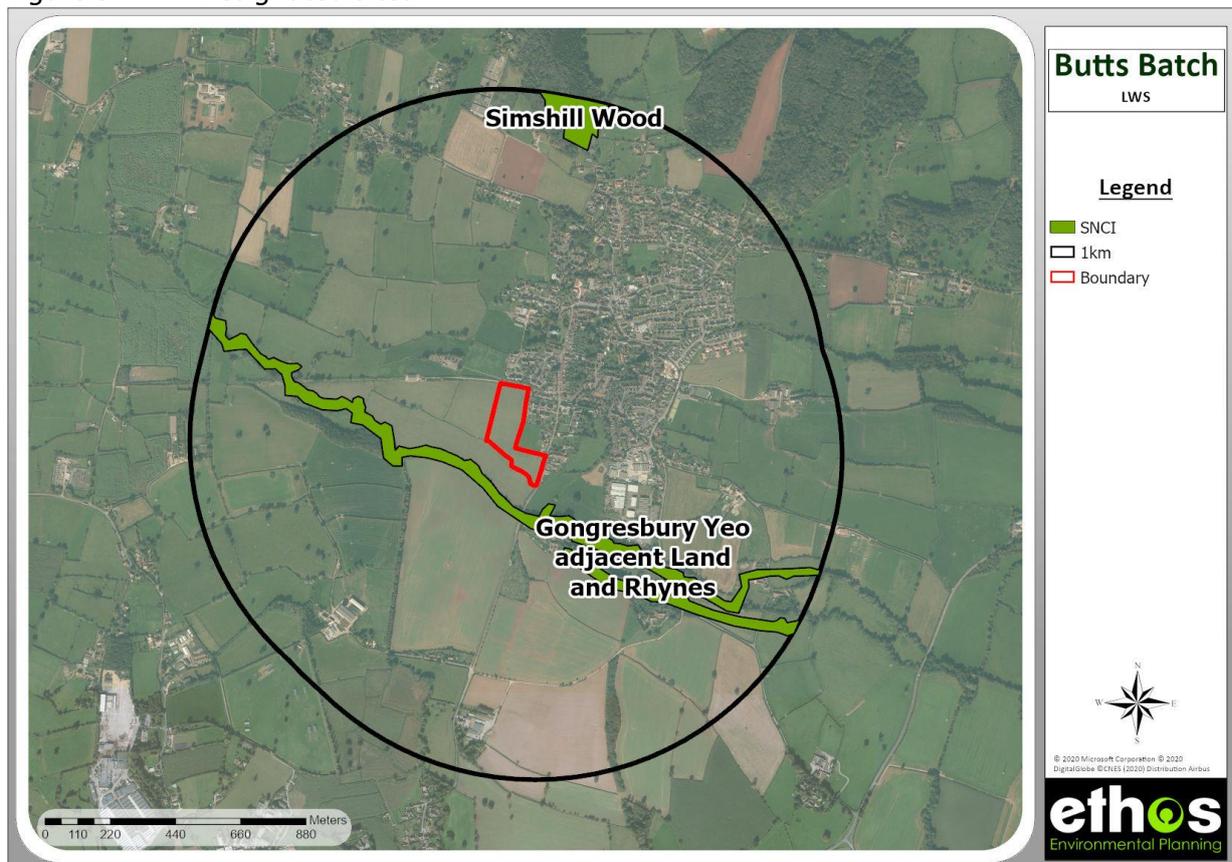


Table 1 Information of non-statutory sites provided by BRERC

Site Name	Designation	Description	Important Elements
Congresbury Yeo Adjacent Land and Rhynes	SNCI	Running and standing water with associated marginal habitats, unimproved and semi-improved neutral grassland, unimproved calcareous grassland and semi-natural broadleaved woodland.	Running and standing water with associated marginal habitats, unimproved and semi-improved neutral grassland, unimproved calcareous grassland and semi-natural broadleaved woodland. Includes areas of Priority Habitat Coastal and Floodplain Grazing Marsh.
Simshill Woods	SNCI and ASNW	Ancient semi-natural broad-leaved woodland.	Ancient semi-natural broadleaved woodland with diverse understory and ground flora, most of which is on Ancient Woodland Inventory Possibly Priority Habitat Lowland Mixed Deciduous Woodland

4.2 Notable Species

4.2.1 Invertebrates

Two records of pine hawk moth (*Sphinx pinastri*) were identified by the desk study, located approximately 350m north of the site in 2012. The moth is classified as rare by BRERC and is listed under the local BAP.

4.2.2 Mammals (excluding bats)

- There was a single record of brown hare submitted in 2015, located approximately 780m north west of the site.
- There were nine records of otter (spraints) submitted between 2010 and 2012 from two similar location along the Congresbury Yeo, approximately 600m south east of the site.
- A single hazel dormouse record was identified by the desk study, which was related to an area adjacent to the Congresbury Yeo, approximately 350m south east of the site, and dated 2016.

Records of mammal records are shown in Figure 4.

4.2.3 Bats

- Bat records identified within 1km of the site boundary included brown long-eared bat (*Plecotus auritus*), serotine (*Eptesicus serotinus*), whiskered bat (*Myotis mystacinus*), natterer's bat (*Myotis nattereri*), noctule bat (*Nyctalus noctula*), Leisler's bat (*Nyctalus*

- leisleri*), Nathusius' pipistrelle (*Pipistrellus nathusii*), common pipistrelle (*Pipistrellus pipistrellus*) and soprano pipistrelle (*Pipistrellus pygmaeus*).
- The search also returned three Annex 2 species, namely Bechstein's bat (*Myotis bechsteinii*), lesser horseshoe bat (*Rhinolophus hipposideros*) and greater horseshoe bat (*Rhinolophus ferrumequinum*).
 - The bat results detailed above were related to an area approximately 500m south east of the site and dated 2017.
 - The extended 5km search returned records of Brandt's bat (*Myotis brandtii*), Daubenton's bat (*Myotis daubentonii*) and barbastelle (*Barbastella barbastellus*).
 - Records of bat roosts within 1km of the site boundary included a record of an unidentified bat from School Road, which was dated 2010. A second roost for common pipistrelle (max count 14 individuals) was identified approximately 500m south east of the site and dated 2017.

Records of bat roost records are shown in Figure 4.

Figure 4 Records of mammals and bat roosts within 1km of the site boundary



4.2.4 Reptiles

There was a record of slow worm (*Anguis fragilis*) and grass snake (*Natrix natrix*) related to an area approximately 300m north of the site which was dated 2016.

4.2.5 Birds

54 species of bird were identified by the data search. Records submitted within the past ten years and are listed within local BAPs are detailed within Table 2 below.

Table 2 Birds within the data search listed with local BAP

Common Name	Scientific Name	Birds of Conservation Concern (BoCC)
Grey Heron	<i>Ardea cinerea</i>	N/A
Kingfisher	<i>Alcedo atthis</i>	Amber list
Peregrine	<i>Falco peregrinus</i>	Amber list
Kestrel	<i>Falco tinnunculus</i>	Amber list
Swallow	<i>Hirundo rustica</i>	Amber list
Linnet	<i>Linaria cannabina</i>	Red list
Spotted Flycatcher	<i>Muscicapa striata</i>	Red list
Golden Plover	<i>Pluvialis apricaria</i>	Amber list
Sand Martin	<i>Riparia riparia</i>	Amber list
Lapwing	<i>Vanellus vanellus</i>	Red list
Barn Owl	<i>Tyto alba</i>	Amber list
Wood Warbler	<i>Phylloscopus sibilatrix</i>	Red list
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber list

4.3 EPS Licences

The desk study identified three granted EPS licences within 1km of the proposed development site; two licences related to hazel dormouse and one related to greater horseshoe bat and lesser horseshoe bat.

The dormouse licences were dated 2017 and related to an area approximately 800m north east of the site, on the opposite side of Wrington to the development site. The area where the EPS licence was located was not connected to the development site through suitable habitat.

The bat EPS licence was dated 2017 and was related to an area within Wrington approximately 300m north of the site. The licence was granted for damage of a greater and lesser horseshoe resting place. The area where the EPS licence was located had some limited connectivity to the proposed development site through hedgerows and treelines.

5 PHASE 1 HABITAT SURVEY

5.1 General Site Description

The site was dominated by agriculturally improved grassland and was bordered by hedgerows to the north, south and south east. There was a farm track to the north of the site and permanent pasture beyond the track. There were residential dwellings to the north-east of the site, paddocks to the east, Half Yard Road to the east and pasture to the south and west.

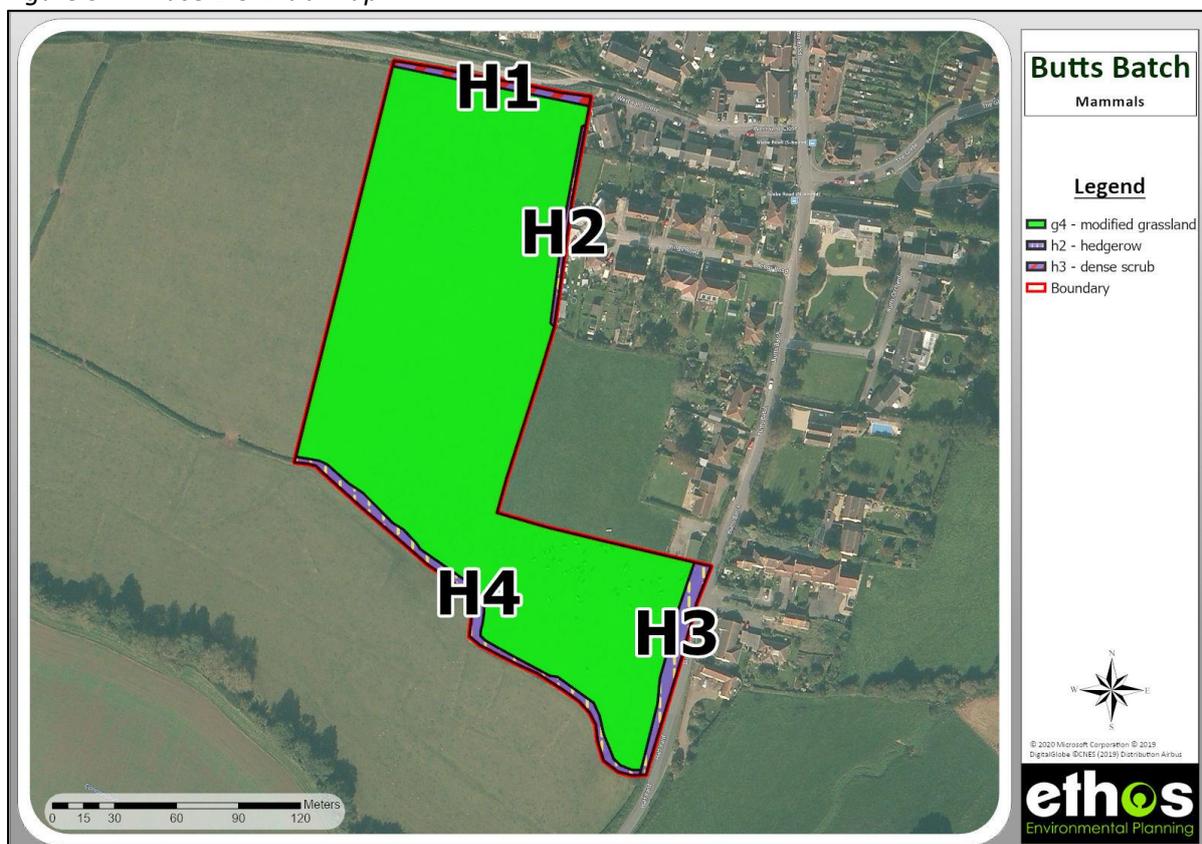
The site was set in a predominately rural setting comprising arable and pasture fields intersected by hedgerows, woodland copses and woodland. The Congresbury Yeo ran west-west approximately 110m south of the site and there was a block of woodland 180m south west of the site. the M5 motorway was located 8.4km west of the site.

5.2 Habitat Description

Figure 5 shows the key habitats using the UK HAB classifications. The key features described within this section are:

- Modified Grassland (G4)
- Hedgerow (H2)

Figure 5 Phase 1 UKHab Map



5.2.1 Modified Grassland (G4)

The Site was dominated by agriculturally modified grassland, as shown in Photo 1 and Photo 2. The grassland had been recently grazed by cattle resulted in a relatively short sward. It was assessed that the grassland was botanically poor and was analogous across the site.

The grassland was dominated by perennial rye-grass (*Lolium perenne*). Other species present included common sorrel (*Rumex acetosa*), creeping buttercup (*Ranunculus repens*), broad-leaved dock (*Rumex obtusifolius*), common dandelion (*Taraxacum officinale*) and clover (*Trifolium spp.*).



Photo 1: Internal Grassland



Photo 2: Internal Grassland

5.2.2 Hedgerows

There were four hedgerows on site which are detailed in Table 3 below.

Table 3 Hedgerows on site

Hedgerow Number	Description/Species	Photo
H1	H1 was located along the northern boundary of the site and was dominated by bramble (<i>Rubus fruticosus</i>) and scattered elder (<i>Sambucus nigra</i>). There were stands of blackthorn (<i>Prunus spinosa</i>) within the western section of the hedgerow (off-site). There was a ditch present to the north which was dry at the time of survey. There were stands of rosebay willowherb (<i>Chamerion angustifolium</i>) within the ditch.	 <p>Photo 3: H1 dominated by bramble</p>

Hedgerow Number	Description/Species	Photo
H2	<p>H2 bordered the residential gardens to the the north east of the site. Species present included blackthorn, hazel (<i>Corylus avellana</i>), elder, English elm (<i>Ulmus procera</i>), ash (<i>Fraxinus excelsior</i>), field maple (<i>Acer campestre</i>), dogwood (<i>Cornus sanguinea</i>) and hawthorn (<i>Crataegus monogyna</i>). The hedgerow was assessed to be species-rich but in a poor structural condition. The hedgerow was approximately two metres wide at the base and 1.8m in height. There were no mature trees present within the hedge. The hedgerow continued off-site to the east.</p>	 <p>Photo 4: Southern section of H2</p>
H3	<p>H3 formed a double hedgerow along Half Yard Road, in the south east corner of the site. The hedgerow had a good basal density and was well-connected to hedgerows to the north of the site and to H4 to the south. Species present included blackthorn, field maple, hawthorn, dogwood and hazel. There was a metal field gate to the north of the hedgerow.</p>	 <p>Photo 5: northern section of H3</p>
H4	<p>H4 was located along the southern boundary of the site. The hedgerow was located on a steep bank with a ditch with running water to the south. The hedge was assessed as species-poor defunct, with no mature trees and a poor structural condition. H4 was approximately 3 m wide and 3 m in height. The hedgerow had good ecological connectivity; it formed a node with H3 to the east and was connected to several hedgerows to the west. Species present included</p>	 <p>Photo 6: Hedgerow 4</p>

Hedgerow Number	Description/Species	Photo
	field maple, hawthorn, blackthorn, hazel and dogwood.	

5.3 Offsite Habitats

The north of the site was bordered by grassland which was assessed to be species poor. There was a hedgerow to the north of the farm track which bordered the site, which was species-poor defunct and was in a poor structural condition (Photo 7).

A paddock was located adjacent to the central eastern section of the Site. The paddock was assessed to be intensively grazed with a subsequent low sward height and low botanical diversity (Photo 8).

The site was bordered by pastoral land to the south and west. The southern section (Photo 9) bordered the Congresbury Yeo River to the south and is within flood zone 3 (Environment Agency, 2019). Satellite imagery indicates that the field may have been an engineered flood meadow. The pasture to the west of the site (Photo 10) was similar in species and condition to the grassland on site.



Photo 7: Offsite hedgerow



Photo 8: Paddock to the east



Photo 9: Field to the south



Photo 10 Land to the west of the site and the continuation of H4

6 PROTECTED SPECIES ASSESSMENT

6.1 NERC S. 41 Mammals

6.1.1 Harvest mouse

There was no suitable habitat for harvest mouse on site such as field margins, long grassland or reedbeds. The surrounding habitats were also assessed to contain negligible potential for harvest mouse. Harvest mouse were assessed to be absent from the site and are not considered further within this report.

6.1.2 Brown Hare

No evidence of brown hare such as couches or live specimens were identified during the site walkover. The habitats comprised species-poor grazed grassland which provides low potential for brown hare.

6.1.3 Polecat

The habitats on site were dominated by species-poor grassland which provides low/negligible potential for polecats. The hedgerows were assessed to be the key features on site for polecat.

6.1.4 Hedgehog

The site was dominated by intensively grazed agriculturally modified grassland which provide low/negligible potential for hedgehog. The hedgerows would provide some limited potential habitats and may provide linear features for hedgehogs to disperse within the wider environment. Hedgehog may be present to the north east of the site, where residential gardens border the site.

6.2 Badger

The walkover survey did not identify any badger setts or signs of badger such as latrines, hairs or footprints. The hedgerows and grassland habitats have the potential to support foraging and commuting badger.

6.3 Hazel Dormouse

The key features on site for dormouse were assessed to be the hedgerows, with the grassland being unsuitable for the species. An assessment of the hedgerow suitability for dormouse is given below.

- H1 – This hedgerow was dominated by bramble and had a poor vegetational structure. The hedgerow provided moderate connectivity for dormouse, but in isolation would be

unsuitable for dormouse due to the presence of a single species (bramble). It was assessed that H1 provided low potential for dormouse.

- H2 - The section of the hedgerow on site bordered residential gardens, was species-rich, and was connected to H3 to the west. H2 was assessed to hold moderate ecological connectivity for dormouse commuting and dispersal. However, the hedgerow had a poor vegetation structure with low basal density for dormouse. Overall, this hedgerow was assessed to provide low/moderate potential for dormouse.
- H3 – This hedgerow had a good structure and basal density for dormouse and was connected to other hedgerows to the north and south, providing good ecological connectivity. It was assessed that the hedgerow provides moderate potential for dormouse.
- H4 –species-poor and had a poor structure diversity for dormouse. H4 was well-connected to other hedgerows within the wider environment. Overall the hedgerow was assessed to provide low/moderate potential for dormouse.

There was low woodland cover within the wider environment with a single woodland copse within 1ha within 1km of the site boundary. However, it was assessed that the Congresbury Yeo River with associated arboreal habitats could provide potential foraging and nesting habitat for dormouse.

6.4 Riparian Mammals

6.4.1 Water vole

The site was dominated by grassland, provided negligible/low potential for water vole. The ditch to the south of H4 was running at the time of the survey but was bordered by agriculturally modified grassland which was heavily grazed. Subsequently, there was no riparian vegetation to provide cover or a food source for water vole and the area was considered.

The Congresbury Yeo River is located 100m to the south of the ditch on site. However, there is no link between the river and ditch habitats, and it was assessed that water vole would be restricted to the riparian habitats adjacent to the river if present. Water vole are therefore considered likely absent from the site and are not considered further in this report.

6.4.2 Otter

The ditch to the south of H4 was the only riparian habitat on site. It was running at the time of survey and was assessed to provide low potential for dispersing otters, which frequently travel large distances in search of suitable habitat.

The Congresbury Yeo River and associated habitats provide suitable habitats for otter. The site is connected to the River by two hedgerows which otters could use as a terrestrial link to the site. It is therefore assessed that otter may be present around the boundary of the site occasionally but are unlikely to use the grassland habitat on site.

6.5 Bats

There were no potential roosting features on site for bats, with no mature trees present within the hedgerows. The habitat on site was dominated by species-poor grassland which provides a poor abundance of invertebrates as a food source for bats. It was assessed that the key features on site were the hedgerows which would provide good commuting and foraging habitat for bats.

The wider environment was assessed to provide moderate potential for bats with abundant hedgerows and areas of grassland. The key features were assessed to be the Congresbury Yeo and associated woodland corridor to the south of the site.

6.6 Birds

The grassland on site was heavily grazed, species-poor and had a poor structure for ground nesting birds. The hedgerows were assessed to be the key feature on site for birds, providing nesting opportunities for woodland birds. It was assessed that the site was dominated by species-poor habitats which would provide habitat for common and widespread bird species.

6.7 Reptiles

The grassland on site provided negligible potential for reptiles due to a lack of suitable cover opportunities. Additionally, the hedgerows were species-poor and were grazed at the base; subsequently, there was limited cover for reptiles.

The wider area and offsite habitats provided low potential for reptiles within hedgerows and along the farm track to the north of the site. Reptiles are therefore considered to be likely absent from the site and are not considered further within this assessment.

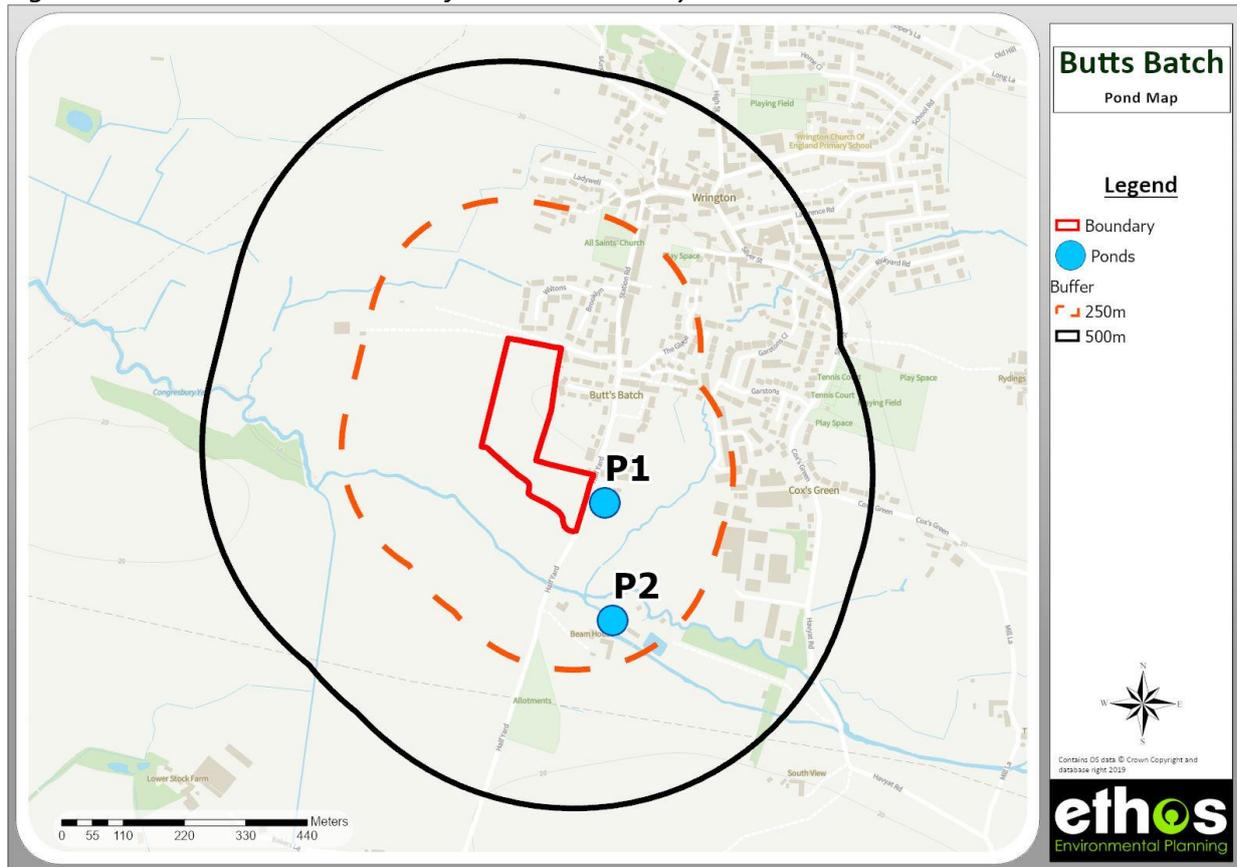
6.8 Amphibians

The site was dominated by agriculturally modified grassland which provides low/negligible potential for terrestrial amphibians and there was no breeding habitat on site such as standing water or ponds.

The ditch to the south of the site was bordered by heavily grazed pasture and contained limited marginal and in-channel vegetation suitable for supporting GCN. The ditch may support amphibians such as common frog and toad.

The desk-based assessment of ponds within 500m of the site identified two ponds. One pond was located 30m east of the site in a residential garden (Pond 1) and the second pond was located 130m south east of the site in Cox's Green (Pond 2), as shown in Figure 6.

Figure 6 Ponds within 500 of the site boundary



6.9 Invertebrates

The grassland on site were assessed to be species-poor and contained a poor structural diversity. The majority of the site was therefore considered low value habitat for invertebrates. The hedgerows were assessed as likely to provide habitat for common and widespread species of invertebrate. The key features on site for invertebrates were assessed to be H4 and the associated ditch. The Congresbury Yeo to the south of the site was likely to support a diverse assemblage of aquatic invertebrates.

7 BIODIVERSITY NET GAIN

A preliminary BNG assessment was undertaken using the initial development proposals.

Following the mitigation hierarchy, it was assessed the development would need to offset the impacts of the development to achieve a 10% gain in terms of biodiversity. It was assessed that creating 1 hectare of lowland meadow and orchard to the south of the site would provide a 13.76% increase in biodiversity within the offsite area.

Table 4 outlines the results of the preliminary BNG assessment. The amount of land required to offset the development is shown in Figure 7 and the post-construction habitats are shown in Figure 8.

Table 4 Net gain assessment

	Total Site Area/Length	Baseline Scores	Proposed Scores	Net Unit Difference	% Difference	% Net Gain
Habitats on site	2.52	8.42	3.51	-4.91	-58.34%	13.76%
Habitats off site	0.97	3.20	9.71	6.51	203.31%	
Hedgerows on site	456.00	2307.36	4062.26	1754.90	76.06%	76.06%

Figure 7 Area required for biodiversity offset

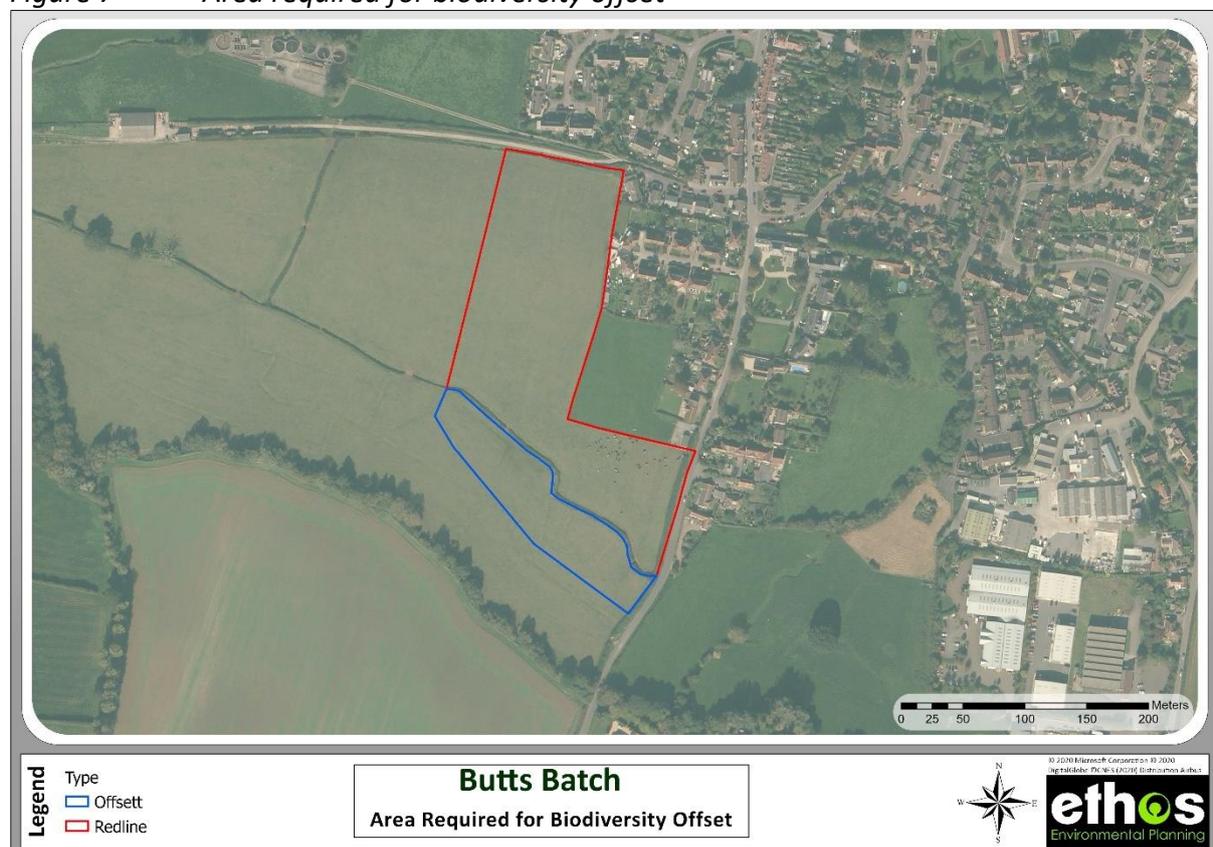


Figure 8 Post construction offset example



8 DISCUSSION

8.1 Habitats

The grassland present on site was species-poor with limited structural diversity and in a poor ecological condition. It is recommended to retain and restore sections of grassland on site such as grassland buffers adjacent to hedgerows, which would provide a food source for invertebrates and would provide a benefit regarding biodiversity net gain. In turn, the improvement of grassland habitat on site would be likely to benefit a variety of species including foraging bats, badger and hedgehog.

The hedgerows were assessed to be the key ecological features on the proposed development site. At the time of survey, the hedgerows were generally in a poor condition with limited basal diversity and structural diversity. It is recommended to plant a new hedgerow to the south of H1 and to the west of H2, with additional buffering of H3 and H4. This would improve the hedgerows for a variety of species including foraging and commuting bats, badger, hedgehog, reptiles, dormouse and invertebrates. A maintenance plan should be created to ensure the hedgerows remain in a good ecological condition post-construction.

The development proposals include the creation of a new hedgerow alongside the western boundary (as shown in Figure 2) adjacent to the offsite paddock. This will improve the ecological connectivity around the boundaries of the site and will improve the suitability of the habitat for a range of species including nesting birds. This would also provide a significant gain in terms of biodiversity, as detailed in Table 4 and shown in Figure 6.

Satellite imagery of the field to the south of the redline boundary and adjacent to the Congresbury Yeo shows that the field may have been historically engineered as a flood plain meadow. This field was identified as being located within Flood Zone 3 (EA, 2019). Subsequently, this field could be restored as flood plain meadow, which is a UK BAP priority habitat (JNCC, 2010). This would provide high quality green infrastructure in relation to water retention and flooding, providing an area to restore the habitat to offset the development, and potentially providing a habitat bank to offset future projects within the LPA for the future. The creation of the floodplain meadow could benefit species including invertebrates, foraging bats and otter.

8.2 Protected and Notable Species

8.2.1 NERC S41 Mammals

The site was considered likely to provide low value habitat for hedgehog and polecat, which was limited to the hedgerows around the boundaries of the site. As the hedgerows are being retained and buffered as part of the development proposals, there are considered to be no significant impacts on polecat or hedgehog as a result of the development. However, there is potential for S41 mammals to be disturbed, trapped, injured or killed during construction activities if precautionary methods are not used. These methods are detailed within Section 9.

8.2.2 Badger

No evidence of badger was identified during the ecological walkover survey and habitat suitable for badger was assessed to be limited to the hedgerows which bordered the site. Overall, the site in its current state was considered largely unsuitable for badger, and the development proposals were assessed as likely to improve the site for badger by creating new areas of suitable foraging habitat and high-quality commuting routes along the hedgerows.

There is the potential for badger to be disturbed, trapped, injured or killed during construction activities if precautionary methods are not used. These methods are detailed within Section 9.

8.2.3 Hazel dormouse

Suitable habitat for dormouse was limited to the hedgerows around the boundary of the site. The species-poor hedgerows contained a limited diversity of flora considered suitable for supporting dormouse, which require a diverse species mix to support foraging throughout the season. However, collectively the hedgerows would provide suitable habitat for dispersing dormouse.

The proposals include the creation of an access road through hedgerow H3 in the south east of the site. This will include the removal of a section of hedgerow for vehicular access and vision splay. It was considered proportionate to compensate for the loss of this hedgerow by planting up the gap in the hedgerow which currently contains the field gate, as well as creating hedgerow to the west.

As the section of hedgerow to be removed is small and the habitat was assessed as containing moderate potential for dormouse, it is considered proportionate to clear the hedgerow under a precautionary method statement without the need for further survey or EPS licence.

The creation of new hedgerows and buffering of retained hedgerows is likely to improve the site for dormouse. New hedgerows should contain species which are known important food sources for dormouse; these recommendations are detailed within Section 9.

8.2.4 Riparian mammals

There were nine records of otter spraint returned from the Congresbury Yeo 600m south east of the site. It was therefore assumed that otter will be present within the suitable riparian habitat south of the site.

Currently the site itself provides limited potential for otter, with suitable habitat restricted to hedgerow H4 and the associated ditch to the south of the site. The development proposals include restoring this hedgerow and the creation of new hedgerows, lowland meadow and a pond in the south east of the site. These features will improve the site for otter and would result in no detrimental effect on otters within the wider area.

8.2.5 Bats

The majority of the site comprised modified grassland which was considered poor quality commuting and foraging habitat for bats. The hedgerows were considered suitable for foraging and commuting bats but did not contain any mature trees with suitable roost features.

The development will improve habitat connectivity around the site by enhancing and creating new hedgerow links for foraging and commuting bats. The creation of new areas of lowland meadow will create additional foraging habitat for bats.

There is the potential for the development to result in increased light levels as part of the development. Lighting assessment surveys and a lighting plan should be devised to ensure the boundary habitats and pond are not subject to increased lighting levels as a result of the development and therefore remain suitable for bats.

The site is within Zone B of the North Somerset and Mendip Bat SAC consultation area. Therefore, a full season surveys will be required that will include automated bat detector and activity surveys. Survey results are crucial for understanding how bats use the site, and therefore how impacts on horseshoe bats can be avoided, minimised or mitigated. Where mitigation is needed the survey results will inform the metric for calculating the amount of habitat needed.

8.2.6 Birds

The modified grassland was considered poor quality habitat for birds, both in terms of foraging and ground nesting habitat. The hedgerows were the most valuable habitats for birds on site; these will be buffered as part of the development, with new areas of habitat being created.

8.2.7 Amphibians

There were no records of amphibians within the data search and the majority of the site comprised modified grassland with a short sward which was considered unsuitable for GCN and other amphibians. The hedgerow habitat would provide suitable terrestrial habitat for newts, both during the active and in-active seasons. Both ponds were assessed to be fragmented from the site with no obvious link such as ditches between the ponds and the Site.

The site was assessed to provide poor terrestrial habitat for amphibians including GCN it is recommended to undertake Habitat Suitability Index (HSI) surveys off the two ponds within 500m of the site. This is particularly important for P1 located 30m east of the site boundary.

Recommendations for further surveys and preliminary habitat/species are given below. More detailed habitat and species prescriptions will be given within the following ecological assessment.

8.2.8 Invertebrates

The majority of the site comprised modified grassland which was assessed as poor quality habitat for invertebrates. The hedgerows (particularly H4 and its associated ditch) were considered the most valuable habitat for invertebrates on the site.

The development proposals include the creation of hedgerows, woodland and a balancing pond with associated aquatic marginal vegetation. This will enhance the site for both aquatic and terrestrial species of invertebrates.

9 RECOMMENDATIONS

9.1 Habitats

The development proposals will include the creation of a new hedgerow along the western boundary and adjacent to hedgerows 1 and 3. Grassland will be retained and restored where possible and a pond with associated aquatic marginal vegetation will be created in the south-east corner of the site.

Hedgerow creation/restoration

- Native species could be used for the hedgerow creation including hazel, hawthorn, blackthorn (*Prunus spinosa*), guelder-rose (*Viburnum opulus*), bird cherry (*Prunus padus*), sweet cherry (*Prunus avium*), silver birch (*Betula pendula*), crab apple (*Malus sylvestris*), holly (*Ilex aquifolium*), pedunculate oak (*Quercus robur*), spindle (*Euonymus europaeus*) and field maple;
- All gaps within the existing hedgerows could be planted with whips of native woody species such as hazel, hawthorn, field maple, privet and holly.
- The hedgerows should be maintained with high basal density which would be achieved by allowing bramble and other scrub species to grow at the base of the hedgerows. 'Neat' hedgerows should be avoided. This would provide foraging and nesting habitat for birds, hedgehogs and invertebrates.
- Once established, this hedgerow would be cut no more than once annually during February or March, which would allow any berries and fruit to fall naturally through the autumn. If possible, the hedgerow should be allowed to develop into a more structured hedge.

Grassland Restoration

Grassland can be retained and restored in the open space and adjacent to the western hedgerows.

- The grassland would be scarified, resulting in 50% grass to soil.
- The grassland would then be sown with a species-rich seed mixture such as Emorsgate seeds *EM1 – Basic General Meadow Mix*. This would increase the botanical diversity of the grassland and increase invertebrate diversity on the site.
- The grass should be cut and removed outside of the flowering season (May to October).

General Habitat Recommendations

- Dead wood from tree removal on site could be retained within the woodland buffer to create refugia and dead wood habitat for a variety of species including amphibians, reptiles, invertebrates and hedgehog.
- Native shrub planting on site could include species such as common dogwood, hazel, spindle, holly, privet and guelder rose.

Pond Creation

The pond could be landscaped with gently sloping edges. Pond edges could be sown with an appropriate seed mix such as *Emorsgate EP1 Pond Edge Mixture* and aquatic vegetation allowed to colonise naturally.

9.2 Protected and Notable Species

Further surveys

- **Hazel dormouse** – Presence/absence surveys comprising the deployment of artificial nest tubes in suitable hedgerow habitat and subsequent checking of the tubes throughout the survey season (April to October) until a ‘survey score’ of 20 has been gained, in line with guidance within *The Dormouse Conservation Handbook* (English Nature, 2006). Surveys could be supported by the use of other survey methods such as footprint tunnels.
- **Bats** - A full season of bat surveys will be required to fully assess the use of the site by greater and lesser horseshoe bats. This will include automated acoustic surveys and activity surveys. Further detailed recommendations will be provided once the bats surveys are undertaken. Surveys should be undertaken as follows:
 - Automated acoustic surveys would include deploying two detectors for at least 50 days at fixed positions between April to October and would include at least one working week in each of the months of April, May, August, September.
 - Activity surveys should be undertaken from sunset for three hours and should be carried out on ten separate evenings; at least one survey should be undertaken in each month from April to October.
 - A LUX survey should be undertaken to assess the baseline light levels on site.
- **GCN** – A HSI assessment of ponds P1 and P2 should be undertaken to identify the potential presence of GCN within the area.

Precautionary clearance to avoid impacts on breeding birds

Mitigation will be required to avoid impacts on nesting birds during clearance of the section of H3 required for site access and vision splay:

- Vegetation clearance should be undertaken outside of the breeding bird season (March to September inclusive) or be subject to a pre-clearance check by a Suitable Qualified Ecologist (SQE).
- If any active bird nests are identified by the SQE during the check, an exclusion zone will be set up around the nest, with no clearance being undertaken inside of the exclusion zone until the chicks have fledged.

If further surveys identify the presence of hazel dormouse on the development site, additional mitigation will be required to avoid impacts on dormice during the clearance and an assessment will be made relating to the need for an EPS licence from Natural England.

Bats

Following guidance within *North Somerset and Mendip Bats SAC Guidance on Development* (April 2018), an Ecological Management Plan should be produced for the site, which sets out how the site will be managed for SAC bats in perpetuity.

Other Mammals

To avoid impacts on nocturnal mammals such as hedgehog and badger during the construction period, the following precautions are recommended:

- All excavations and trenches will be covered at night or include a ramp to allow nocturnal mammals to escape should they fall in.
- Night lighting (e.g. security lighting) will be limited to provide dark periods and will not focus on boundary hedgerows, woodland or treelines. This will ensure nocturnal mammals can continue to forage and commute through the site during construction.
- Materials will be stored off the ground (e.g. on pallets) to avoid creating potential refugia for hedgehog.
- Pipes over 600 mm diameter will be capped off at night to avoid nocturnal mammals entering them. CD shaped holes will be created in fences, so the site is permeable to hedgehogs.

10 CONCLUSION

The site was located at Butts Batch, Wrington, North Somerset (Central Grid Reference ST 46638 62408).

Development proposals include the construction of over 71 dwellings with associated gardens, driveways and garages. The proposals include the creation of a pond in the south-east of the site and open space with LEAP (Local Equipped Area for Play). Access to the site will be created from Half Yard Road along the south-eastern boundary of the site.

The proposals will necessitate the removal of internal habitats but will include the retention and buffering of hedgerows currently on site as well as the creation of a hedgerow along the western boundary of the site.

Overall, the habitats were assessed to be species-poor with the key features being the hedgerows, which are being retained and enhanced on site with new hedgerows also being created.

The proposals identified that the current proposals would provide a decrease in terms of biodiversity on site. The field to the south of the site could provide suitable offset opportunities and could provide additional benefits in terms of green infrastructure and flood prevention.

The site is located within the North Somerset and Mendips Bat SAC consultation area, which will require a full season of static and activity surveys. Further surveys for hazel dormouse and GCN are also recommended.

It was assessed that any other impacts of the development on protected species will be avoided if the recommendations within this report are adhered to.

REFERENCES

- Bright, P., Morris, P., and Mitchell-Jones, T. (2006) *The Dormouse Conservation Handbook (second edition)*. English Nature, Peterborough. ISBN 1-85716-219-6.
- CIEEM (2016) *UK Guidelines for Accessing and Using Biodiversity Data*. Chartered Institute of Ecology and Environmental Management (CIEEM), Winchester.
- CIEEM (2017^a) *Guidelines on Ecological Report Writing*. Chartered Institute of Ecology and Environmental Management (CIEEM), Winchester.
- CIEEM (2017^b) *Guidelines for Preliminary Ecological Appraisal, 2nd edition*. Chartered Institute of Ecology and Environmental Management (CIEEM), Winchester.
- Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good practice Guidelines (3rd edn)*. The Bat Conservation Trust, London. ISBN-13 978-1-872745-96-1.
- Creswell, W. and Whitworth, R. (2004) *An assessment of the efficiency of capture techniques and the value of different habitats for the great crested newt *Triturus cristatus**. English Nature Research Reports, Report Number 576. English Nature, Peterborough. ISSN 0967-876X.
- Defra (2007) *Hedgerow Survey Handbook. A Standard Procedure for Local Surveys in the UK*. Department for Environment, Food and Rural Affairs, London.
- Environment Agency (2019) *Flood map for planning*.
- Froglife (1999) *Reptile Survey: An Introduction to Planning, Conducting and Interpreting Surveys for Snake and Lizard Conservation*. Froglife Advice Sheet 10. Froglife, Halesworth.
- Harris, S., Cresswell, P. and Jefferies, D. J. (1989) *Surveying Badgers*. Issue 9 of *Occasional Publication of the Mammal Society*. ISBN- 978-0906282069.
- Herpetofauna Groups of Britain and Ireland (1998) *Evaluating Best Practise and Lawful Standards*. HGBI Advisory Notes for Amphibian and Reptile Groups (ARGs). HGBI, c/o Froglife, Halesworth. Unpubl.
- JNCC (2010) *Handbook for Phase 1 Habitat Survey. A Technique for Environmental Audit*. JNCC, Peterborough. ISBN-978-0-86139-636-8.
- JNCC (2010) *UK Biodiversity Action Plan Priority Habitat Descriptions*. JNCC
- Langton, T. E. S., Beckett, C. I., and Foster, J. P. (2001) *Great Crested Newt Conservation Handbook*, Froglife, Halesworth.

Mitchell-Jones, A. J. (ed.) (2004) Bat Mitigation Guidelines. English Nature, Peterborough. ISBN-1 85716-781-3.

Mitchell-Jones, A.J, & McLeish, A.P. Ed., (2004) 3rd Edition Bat Workers' Manual, 178 pages b/w photos, softback, ISBN-1 86107 558 8.

North Somerset Council (2017) Core Strategy. North Somerset Council.

North Somerset Council (2017) North Somerset and Mendips Special area of Conservation (SAC) – Guidance on Development. North Somerset

UK Habitat Classification Working Group (2018). UK Habitat Classification – Habitat Definitions V1.0 at <http://ecountability.co.uk/ukhabworkinggroup-ukhab> [Accessed 10th February 2020]

Wildlife and Countryside Act 1981. Available at:
<http://www.legislation.gov.uk/ukpga/1981/69>

APPENDIX 1 LEGISLATION AND POLICY DETAILS

A1.1 Legislation - Species

This section outlines the key legislation related to the habitats and species considered within this survey report.

A1.1.1 Bats

All British bats are fully protected under Section 9 Schedule 5 of the Wildlife and Countryside Act 1981 and amendments. Agreement, and are fully protected under The Conservation of Habitats and Species Regulations 2017. In addition, they are protected under the Berne Convention; they are given migratory species protection within the Bonn Convention. Regulation 43 (1) of The Conservation of Habitats and Species Regulation 2017 makes it an offence to:

- deliberately capture, injure or kill any species of bat;
- deliberately disturb any species of bat;
- damage or destroy a breeding site or resting place of any species of bat.

It is an offence to disturb any bat roosting site, whether the bats are there or not. Under Regulations 43 (2) disturbance includes in particular any disturbance which is likely:

- To impair their ability
 - to survive, to breed or reproduce, or to rear or nurture their young; or
 - in the case of a hibernating or migratory species, to hibernate or migrate; or
- To affect significantly the local distribution or abundance of the species to which they belong.

Presence of bats does not necessarily mean that development cannot go ahead, but that with suitable, approved mitigation, exemptions can be granted from the protection afforded to bats under regulation 43 by means of a licence. Natural England (NE) is the appropriate authority for determining licence applications for works associated with developments affecting bats, including demolition of their roost sites. In cases where licences are required, certain conditions have to be met to satisfy Natural England. Before the Statutory Nature Conservation Organisation (SNCO), in this case NE, can issue a licence to permit otherwise prohibited acts three tests have to be satisfied under the requirement of Regulation 55. These are:

1. Imperative Reasons of Overriding Public Interest [Reg 55(2)(e)];
2. No Satisfactory Alternative [Reg 55(9)(a)];
3. Maintenance of Favourable Conservation Status [Reg 55(9)(b)].

In order to meet the tests, SNCO usually expects the planning position to be fully resolved as this is necessary to satisfy tests 1 and 2. Full planning permission, if applicable, will need to have been granted and any conditions relating to bats fully discharged. ahead of any licence application to the SNCO. The LPA have a legal duty under The Conservation of Habitats and Species Regulations 2017, to assess whether the application is likely to meet the Three Tests

and therefore the requirements for Natural England licensing, prior to determination of an application The Licence application process may take two months before a licence is issued. Planning Permission and granting of a bat licence are separate legal functions. Therefore receiving planning permission from the Local Authority is no guarantee that the SNCO will issue a derogation licence.

A1.1.3 Badger

The Protection of Badgers Act 1992 is based primarily on the need to protect badgers from baiting and deliberate harm or injury. It also contains restrictions that apply more widely and it is important for developers to know how this may affect their work. All the following are criminal offences:

- to wilfully kill, injure, take, possess or cruelly ill-treat a badger;
- to attempt to do so; or
- to intentionally or recklessly interfere with a sett.

Sett interference includes damaging or destroying a sett, obstructing access to a sett, and disturbing a badger whilst it is occupying a sett. It is not illegal, and therefore a licence is not required, to carry out disturbing activities in the vicinity of a sett if no badger is disturbed and the sett is not damaged or obstructed.

Development should not be permitted unless it is possible to take steps to ensure the survival of the badgers in their existing range and at the same population status, with provision of adequate alternative habitats if setts and foraging areas are destroyed. Natural England will normally only issue a licence after detailed planning permission has been granted, where applicable, so that there is no conflict with the planning process.

Before the planning application is determined, the local planning authority should request a detailed ecological survey/report and developers should be prepared to provide the following information:

- The numbers and status of badger setts and foraging areas that are affected by the proposal;
- the impact that the proposal is likely to have on badgers and what can be done by way of mitigation;
- judgment on whether the impact is necessary or acceptable; and
- a recommendation on whether a licence will be required.

A badger survey usually requires assessment of the site and a 30-50m buffer area as tunnels can extend up to 20m from sett entrances. As badgers are not a European Protected species the Three Test do not need to be applied, however Planning Permission and badger licensing are separate legal functions. Thus receiving planning permission from the Local Authority is no guarantee that development operations will not breach the Protection of Badgers Act 1992. Similarly planning permission does not guarantee that a badger licence will be granted.

A1.1.4 Birds

All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended) and cannot be killed or taken, their nests and eggs taken, damaged or destroyed while their nest is in use or being built. It also prohibits or controls certain methods of killing or taking except under licence. Other activities that are prohibited include possession and sale. Activities such as killing or taking birds (including relocating) which would otherwise be illegal can be carried out under licence where there is suitable justification and the issue cannot be resolved by alternative means.

Specially protected or Schedule 1 birds receive full protection under the Wildlife and Countryside Act 1981 (as amended). Part I birds are protected at all times, Part II during the close season only. In addition to the protection from killing or taking that all birds, their nests and eggs have under the Act, Schedule 1 birds and their young must not be disturbed at the nest.

A1.1.5 Hazel dormouse

They are protected under both the Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981 (as amended). Dormice and their breeding sites and resting places are fully protected. Without a licence it is an offence for anyone to deliberately disturb, capture, injure or kill them. It is also an offence to damage or destroy their breeding or resting places, to disturb or obstruct access to any place used by them for shelter. It is also an offence to possess or sell a wild dormouse.

If it is not possible to avoid harming dormice or damaging or blocking access to their habitats, a derogation licence will be required. Planning permission is required to be in place before a licence application.

Planning Permission and granting of a mitigation licence are separate legal functions. Therefore receiving planning permission from the Local Authority is no guarantee that the SNCO will issue a derogation licence.

A1.1.6 Great crested newt

Great crested newts are fully protected under UK and European legislation:

- Bern Convention 1979: Appendix III
- Wildlife & Countryside Act (as Amended) 1981: Schedule 5
- EC Habitats Directive 1992: Annex II and IV
- The Conservation of Habitats and Species Regulations 2017
- Countryside Rights of Way Act 2000 (CRoW 2000).

These pieces of legislation prohibit the following:

- Deliberately or intentionally killing and capturing (taking) or intentional injuring.
- Deliberately disturbing
- Deliberately taking or destroying eggs

- Damaging or destroying a breeding site or resting place or intentionally damaging a place used for shelter or protection.
- Intentionally obstructing access to a place used for shelter; and keeping, transporting, selling or exchanging; offering for sale or advertising.

Under Regulations 43 (2) (The Conservation of Habitats and Species Regulations 2017) disturbance includes in particular any disturbance which is likely:

- To impair their ability
 - to survive, to breed or reproduce, or to rear or nurture their young; or
 - in the case of a hibernating or migratory species, to hibernate or migrate; or

To affect significantly the local distribution or abundance of the species to which they belong. Paragraphs 43(1) and 43(2) ensure that protection applies to all stages of their life cycle.

GCN mitigation and licensing can be complex. Natural England have a rapid risk assessment tool which can be used for guidance to assist with determining whether a licence needs to be applied for, or if the development can proceed with Reasonable non-licensed Avoidance Measures (RAM). If a licence is required, the Favourable Conservation Test needs to be met.

A1.1.7 Otter

The European Otter is fully protected under UK and European law by the Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitat and Species Regulations 2017. Otters and their breeding sites and resting places are fully protected. It is an offence for anyone to deliberately disturb, capture, injure or kill them; to deliberately damage or destroy their breeding or resting places; to disturb or obstruct access to any place used by them for shelter. It is also an offence to possess or sell an otter.

Under Regulation 43(2) of The Conservation of Habitats and Species Regulations 2017 the disturbance of otter includes in particular any disturbance which is likely to impair their ability to survive, breed or reproduce, or to rear or nurture their young; or to affect significantly the local distribution or abundance of the species to which they belong.

If it is not possible to avoid harming otter or damaging or blocking access to their habitats, a derogation licence will be required. Planning permission is required to be in place before a licence application.

Planning Permission and granting of a mitigation licence are separate legal functions. Therefore receiving planning permission from the Local Authority is no guarantee that the SNCO will issue a derogation licence.

A1.2 Legislation – Habitats

A1.2.1 European Designated Sites: Special Area of Conservation / Special Protection Area

The legal requirements relating to the designation, protection and management of SACs and SPAs in England are set out in the Conservation of Habitats and Species Regulations 2017 (SI

No. 1012) , often referred to as ‘the Habitats Regulations’. The 2017 regulations encapsulate all the amendments since they were last consolidated in 2010. SACs are designated under the EC Habitats Directive and SPAs under the EC Birds Directive. Collectively this network of EU-wide nature conservation site is referred to as Natura 2000 sites.

All SACs and SPAs in England are also Sites of Special Scientific Interest (SSSIs). The additional SAC/SPA designation is recognition that some or all of the wildlife habitats and species within a SSSI are particularly valued in a European context and require additional protection.

The Habitats Regulations require that any plans, projects or activities that is likely to significantly affect a SAC/SPA, either alone or in combination with other plans or project, must be subject to an assessment. This is irrespective of whether planning permission or other consent is required. The plan or project can only be consented or proceed if strict conditions are met to ensure protection of the site / favourable conservation status of qualifying species is met with no net negative impacts. The assessment must include consideration of potential off-site impacts to populations for which the sites are designated (for example loss of key foraging habitat beyond the SAC/SPA boundary), and in-direct impacts such as recreational pressure to SAC/SPA habitats and species.

The process is known as a Habitat Regulations Assessment (HRA) and comprises four stages:

- i) Screening – Test of Likely Significant Effect (TOLSE)
- ii) Appropriate Assessment and the Integrity Stage
- iii) Alternative Solutions
- iv) Imperative Reasons of Overriding Public Interest and Compensatory Measures.

The first stage is for the Competent Authority, usually the Local Authority, to carry out a TOLSE, or to request that a shadow HRA is completed to be adopted by the Competent Authority. The screening stage can take the form of an iterative process, whereby potential Likely Significant Effects are designed out or mitigated for. Whilst not a legal requirement until Stage 2 of the HRA process, this stage of the assessment is usually carried out in consultation with Natural England. Mitigation measures must be sufficiently detailed to inform the screening assessment and then secured through condition if it is for a planning proposal. In some situations, this may mean that the Competent Authority may request details for the screening process that would not usually be presented or submitted until the later stages of a proposal.

The decision-making authority may only permit or undertake the proposals if the screening assessment concludes that there would no adverse effect on the integrity of the SAC. Where it cannot reach this conclusion, the project can then only proceed by undertaking an ‘Appropriate Assessment’ of the adverse effect(s) which could not be screened out. This must be detailed, objective, based on best available scientific evidence and carried out in on-going consultation with Natural England, a legal requirement under the Habitat Regulations. If, with additional assessment and additional mitigation measures, the Competent Authority can still not ascertain that an adverse effect on the SAC/SPA habitats or favourable conservation status of qualifying species cannot be protected/maintained, permission to proceed with the plan or project should not be granted – subject to the provisions of Regulations 64 and 68: i) Overriding Public Interest (in the absence of alternative solutions) and ii) Secure

Compensatory Measures (to ensure overall coherence of Natura 2000 is protected) respectively.

The HRA process allows those proposals which clearly will not impact upon the special European wildlife interest of a SAC to proceed. Natural England is able to provide advice to authorities on how proposed activities can avoid adverse impacts on a SAC/SPA.

Under the Habitats Regulations planning authorities must also require that any permitted development normally carried out under a general planning permission, but which may affect a SAC requires further approval before being undertaken.

As the statutory nature conservation body in England, Natural England is duty bound to ensure that SACs/SPAs are protected and managed favourably for conservation in line with the requirements of the Habitats Directive. Our experience is that it is usually possible to find mutually acceptable solutions where sustainable land use and wildlife can flourish.

A1.2.2 UK Designated Sites – National Nature Reserves (NNR), Sites of Special Scientific Interest (SSSI)

Nationally protected sites are designated under the Wildlife and Countryside Act 1981 (as amended), reinforcing protection provided by the National Parks and Access to the Countryside Act 1948. SSSIs may also form component units of SACs. Natural England have a statutory duty to protect NNRs and SSSIs and must be consulted for activities or applications where there is risk of damage to the SSSI. Consent from Natural England ('Request permission for works or activity on a SSSI') may be required for certain activities within or near to a SSSI.

A1.3 Policy considerations

The National Planning Policy Framework (NPPF) set out the Government's planning Policies for England, to provide the framework and planning requirements for local plans; to deliver strategic and sustainable development.

A1.3.1 National Planning Policy

NPPF 2018

The 2012 National Planning Policy Framework has been updated and replaced with NPPF 2018. This consolidates proposals from various Government consultation documents in recent years.

The NPPF 2018 sets out principles for conserving and enhancing the local environment. Key policies are that local plans should allocate land with least environmental or amenity value and take a strategic approach to maintaining and strengthening networks of habitats and green infrastructure.

Para 173 sets out nature conservation principles that LPAs should apply to the determination of planning applications:

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

- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*
- c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland) should be refused, unless there are wholly exceptional reasons and a suitable mitigation strategy exists. Where development would involve the loss of individual aged or veteran trees that lie outside ancient woodland, it should be refused unless the need for, and benefits of, development in that location would clearly outweigh the loss; and*
- d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for the environment.'*