

# PRELIMINARY ECOLOGICAL APPRAISAL REPORT

Client: Virtus Design & Build Ltd.

Site: Heath Barn Cottages, Send Marsh Road

09.08.2022

Version 001



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## 1. Summary

#### **Site Details**

- Site Address: Land adjoining 2 Heath Barn Cottages, Send Marsh Road, Woking GU23
   7DQ.
- OS grid reference: TQ 0295 5555.
- Approximate Area of Site: 0.191 ha.

#### **Scope of Works**

- aLyne Ecology Ltd. was commissioned by Virtus Design & Build Ltd. to undertake a
  Preliminary Ecological Appraisal (PEA), comprising a data search and field survey to
  assess the baseline ecological conditions of the site and its potential to support protected
  species and species of conservation concern.
- An indication of the number of baseline biodiversity units for the site has been calculated based on the Biodiversity Metric 3.1 (Defra, 2022), with the objective of achieving biodiversity net gain once the development proposals have been finalised (see Appendix 1 for further details).

#### **Development Proposals**

• The development proposals are for the construction of four dwelling plots, with associated access road, parking, and gardens. Hedge and tree planting is also proposed.

#### **Key Ecological Constraints and Opportunities**

- The habitats recorded on site are as follows: other neutral grassland, modified grassland, mixed scrub, developed land; sealed surface, and buildings (see Figure 1).
- Thames Basin Heaths Special Protection Area (SPA) is located approximately 4 km both to the north-east and south-west of the site. SPAs are European designated sites protected in the UK by Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.
- Papercourt Site of Special Scientific Interest (SSSI) is located approximately 750 m to the north-east of the site. SSSIs are protected through national and planning policy legislation.
- There are four types of Priority Habitats located within 1 km of the site, namely deciduous woodland, ponds, rivers/streams, and traditional orchards. Priority Habitats are listed on Section 41 of the Natural Environment and Rural Communities (NERC) Act, 2006. Under the NERC Act, 2006, Local Planning Authorities are required to give due regard to biodiversity.
- Cotoneaster was recorded on site (see target note 2 on Figure 1), some species of which, are listed under Schedule 9 of the Wildlife and Countryside Act, 1981 (as amended) as an invasive plant species.
- The brash/ piles (see target notes 1 and 3 on Figure 1) and boundary vegetation have potential to support stag beetles. The stag beetle is a Priority Species under the NERC Act, 2006.



- Ponds are absent from the site, but four ponds are located within 500 m of the site, the nearest being approximately 360 m to the east of the site (www.magic.gov.uk). The ponds could support the great crested newt. The great crested newt and its habitats are fully protected under the Wildlife and Countryside Act, 1981 (as amended), and the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. The ponds could also support the common toad, which is a Priority Species listed on Section 41 of the NERC Act, 2006.
- The brash/ piles (see target notes 1 and 3 on Figure 1) and boundary vegetation have the
  potential to support reptiles. Reptiles are protected against killing and injury under the
  Wildlife and Countryside Act, 1981, as amended. All reptile species are Priority Species as
  listed on Section 41 of the NERC Act, 2006.
- The scrub habitats could support nesting birds, including birds of conservation concern.
   Under the Wildlife and Countryside Act, 1981 (as amended), it is illegal to take, damage or destroy the nests of wild birds whilst being built or in use.
- The scrub habitats on site could support foraging, and commuting bats. Bats, their roosts, and their habitats are strictly protected under the Wildlife and Countryside Act (1981) as amended and the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.
- The buildings on site were assessed as having negligible suitability for roosting bats.
- The site has potential to support European hedgehogs. The European hedgehog is a Priority Species, listed on Section 41 of the NERC Act, 2006.
- The total number of baseline biodiversity units for the site is 0.78.

#### Recommendations for Avoidance, Mitigation and Enhancement

- The site is within 5 km of the Thames Basin Heaths SPA. Housing developments, where there is a net gain of one or more houses, within 5 km of the Thames Basin Heaths SPA are required to contribute towards avoidance measures (Suitable Alternative Natural Greenspace, SANG or Strategic Access Management and Monitoring, SAMM), to offset the likely significant effects on the SPA. For developments of fewer than 100 new dwellings, it should be possible to use Council-provided SANGs, subject to availability.
- Trees and scrub should be retained, protected, and enhanced.
- Cotoneaster should be removed from site and disposed of, in accordance with best practice guidelines.
- A fingertip search of the grassland habitats within the site should be carried out by a great
  crested newt licenced ecologist prior to works taking place. If any great crested newts are
  found, all works must cease immediately, and a European Protected Species Licence
  (EPSL) should be obtained from Natural England.
- The removal of the scrub and brash/log piles (see targets note 1 and 3 on Figure 1) should be carried out carefully by hand, to ensure that any stag beetles, common toads, reptiles, or European hedgehogs, which may be present, can escape unharmed.
- Any removal of vegetation should be undertaken outside of the bird breeding season (March to August inclusive) to avoid destruction/disturbance of nesting birds.



 A sensitive lighting plan should be adopted, to ensure that outside lighting does not adversely affect adjacent habitats and wildlife, particularly bats when foraging and commuting.

Below is a summary of measures, which should be implemented on site to achieve biodiversity net gain, i.e., following development, the site continues to support the same broad habitat types, or habitats of higher distinctiveness, totalling more than 0.78 biodiversity units:

- Native species-rich hedgerows should be planted along the site boundaries. The hedgerow should be at least 2 m in height and depth and managed to form an 'A' profile.
- Garden spaces should include a suitable wildflower seed mix.
- Construction of log piles for invertebrates and reptiles.
- The installation of appropriate bat and bird boxes.
- The installation of a hibernacula for invertebrates.
- The installation of a Royal Hedgehog House.

These recommendations, including measures to protect and enhance priority habitats on site, should be included in a Biodiversity Management and Maintenance Scheme.

#### **Further Survey Requirements**

None.



## 2. Introduction

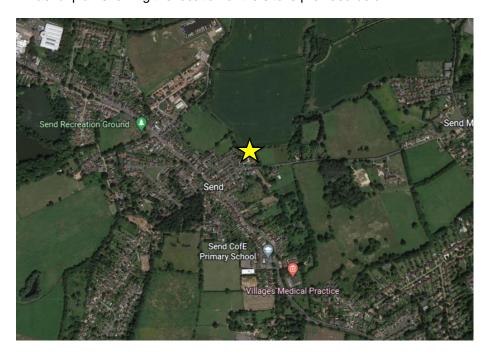
#### 2.1 Site Details

Table 1 provides details of the site, intended as a summary of key features, derived from the online data search using www.magic.gov.uk. The habitats recorded on site during the field survey are shown on Figure 1. Photographs of the site are provided in Appendix 2. A full species list, with target notes, is provided in Appendix 3.

**Table 1. Site Details** 

Site Name	Heath Barn Cottages, Send Marsh Road
Site Address	Land adjacent to 2 Heath Barn Cottages, Send Marsh Road, Send, GU23
	7DQ
OS Grid Reference	TQ 0295 5555
Total Area of Site	0.191 ha
Landowner and Local Authority	Not known, Guilford Borough Council
Geology and Soils	Freely draining slightly acid loamy soils
Hydrology	Freely draining
Nature Conservation Designations	None on site
Other Designations	None on site
The Woodland Trust Ancient and Notable	None on site
Tree Inventory	
Biodiversity Opportunity Area	None on site
National Habitat Network	None on site
Primary Habitats	Bramble scrub, buildings, modified grassland and developed land, sealed
	surface
Protected Species	Potential for stag beetles (Lucanus cervus), amphibians, reptiles, breeding
	birds, and European hedgehogs (Erinaceus europaeus)
Current Land Use	Mown field, not in use

An aerial plan showing the location of the site is provided below.



Site Location (© Google Earth Pro, accessed 24th July 2022).



#### 2.2 Site Context

Table 2 provides details on the context of the site in terms of habitats, land use and connectivity to the wider landscape.

**Table 2. Site Context** 

Occurrence discontinuity of the first	Leasted on the salar of Ocad Allena d. P. J. J.
Surrounding Habitats and Land Use	Located on the edge of Send village, the surrounding landscape comprising residential buildings and amenity grassland and a mixture of arable and grazed fields, hedgerows, and woodland. Several waterbodies are also located within 1 km of the site, the closest being approximately 360 m east of the site. The wider
	landscape is characterised by scattered residential and light industrial buildings,
	farmland, and further areas of woodland.
Urban Context / Locality	The site is located off Send Marsh Lane on the outskirts of Send village
Connectivity to Wider Landscape	The site has reasonably good connectivity to the wider landscape via lines of trees and hedgerows
Priority Habitats within 1 km	<ul> <li>Deciduous woodland (approximately 18 parcels, the nearest being 40 m to the south).</li> </ul>
	• Ponds (11, the nearest being 360 m to the east).
	<ul> <li>Rivers/streams (River Wey and tributaries, the nearest being 80 m to the east).</li> </ul>
	• Traditional orchards (one parcel 675 m to the west).
Ancient Woodland within 1 km	None.
Non-Statutory Designated Sites	Broadmead Cut and Wey Navigation at Send SNCI.
within 1 km	Land Adjacent to Papercourt Marsh SNCI.
	River Wey - Woking SNCI.
	<ul> <li>Send Marsh, Polesdon Lane Conservation Verge.</li> </ul>
Statutory Designated Sites within 1	Papercourt SSSI, located approximately 750 m to the north-east of the site.
km	
Furancan Designated Sites within F	Thomas Daoin Heatha CDA located approximately 4 km hath to the north cost and
European Designated Sites within 5 km	Thames Basin Heaths SPA located approximately 4 km both to the north-east and south-west of the site.
European Protected Species	Four Great Crested Newt Class Survey Licence Returns approximately 780 m to
Licence (EPSLs) within 2 km	the north-east of the site (associated with Papercourt SSSI).
	Six granted EPSLs for roosting bats:
	• Destruction of a breeding site and a resting place for common pipistrelles ( <i>Pipistrellus pipistrellus</i> ), soprano pipistrelles ( <i>Pipistrellus pygmaeus</i> ) and brown long-eared bats ( <i>Plecotus auritus</i> ) located approximately 390 m to the west of the site.
	• Destruction of a breeding site and a resting place for common pipistrelles located approximately 430 m to the east of the site
	Destruction of resting place for brown long-eared bats located approximately 590 m to the east.
	• Destructions of a resting place for common pipistrelles located approximately 950 m to the south-east.
	Two destructions of a resting place for soprano pipistrelles located approximately     1.3 km to the west.

## 2.3 Proposed Development

The development proposals are for the construction of four dwelling plots, with associated access road, parking, and gardens. Hedge and tree planting is also proposed.

#### 2.4 Brief and Objectives

## 2.4.1 Preliminary Ecological Appraisal

 Map and identify the existing habitats within the survey area, using the UK Habitat Classification (UKHab) system.



- Check for evidence of protected species and assess the potential for protected species to be present on site.
- Check for evidence of invasive species.
- Identify potential ecological impacts and constraints relating to the proposed works.
- Make recommendations for further survey work, as appropriate.
- Propose mitigation measures to avoid, mitigate or compensate for ecological impacts, as appropriate.

#### 2.4.2 Biodiversity Net Gain

The objective is to achieve biodiversity net gain on site, as described in Appendix 1 of this report, through the delivery of habitat enhancements and creation, following the implementation of the mitigation hierarchy. The approach to Biodiversity Net Gain on site will be aligned with local, regional, and national planning policy and guidance, as detailed in Section 3.2 in this report.

Where possible, biodiversity net gain for the site will be based on the Biodiversity Metric 3.1 (Defra, 2022) and will take into account habitats and protected species relevant to the site. However, where a site is very small and is of negligible or low ecological value, the Small Sites Biodiversity Metric 3.1 (Defra, 2022) will be used.



## 3. Relevant Legislation and Planning Policy

This section provides a summary of legislation and planning policy for designated sites, Priority Habitats, ancient woodland, trees, and protected species, which are assessed to be present or potentially present on site, as detailed in Table 7, Section 6.

The legislation and planning policy detailed in this section is intended to be a summary only. The relevant pieces of legislation and planning policy should be referred to for full information. Legislation and planning policy pertaining to protected habitats and species can be found at the following websites:

- The Birds Directive 2009/147/EC: http://ec.europa.eu/environment/nature/legislation/birdsdirective/index\_en.htm
- The Habitats Directive 1992/43/EEC: http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index\_en.htm
- Water Directive Framework: <a href="https://ec.europa.eu/environment/water/water-framework/info/intro\_en.htm">https://ec.europa.eu/environment/water/water-framework/info/intro\_en.htm</a>
- Wildlife and Countryside Act, 1981 (as amended): <a href="http://www.legislation.gov.uk/ukpga/1981/69">http://www.legislation.gov.uk/ukpga/1981/69</a>
- Conservation of Habitats and Species (Amendment) (EU Exit) Regulations, 2019: <a href="http://www.legislation.gov.uk/uksi/2010/490/pdfs/uksi\_20100490\_en.pdf">http://www.legislation.gov.uk/uksi/2010/490/pdfs/uksi\_20100490\_en.pdf</a>
- Countryside Rights of Way Act, 2000: <a href="http://www.legislation.gov.uk/ukpga/2000/37/contents">http://www.legislation.gov.uk/ukpga/2000/37/contents</a>
- Natural Environment and Rural Communities Act, 2006: http://www.legislation.gov.uk/ukpga/2006/16/contents
- National Planning Policy Framework, 2021:
   <a href="https://www.gov.uk/government/uploads/system/uploads/attachment\_data/file/6077/2116950">https://www.gov.uk/government/uploads/system/uploads/attachment\_data/file/6077/2116950</a>.
- OPDM Circular 06/2005 Biodiversity and Geological Conservation Statutory Obligations and their Impact within the Planning System: <a href="https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/7692/147570.pdf">https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/7692/147570.pdf</a>
- Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services:
   <a href="https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/69446/pb13583-biodiversity-strategy-2020-111111.pdf">https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/69446/pb13583-biodiversity-strategy-2020-111111.pdf</a>
- Guilford Local Plan: <a href="https://www.guildford.gov.uk/localplan/2015-2034">https://www.guildford.gov.uk/localplan/2015-2034</a>
- Biodiversity & Planning in Surrey:
   <a href="https://surreynaturepartnership.files.wordpress.com/2019/10/biodiversity-planning-in-surrey-revised\_post-revision-nppf\_mar-2019.pdf">https://surreynaturepartnership.files.wordpress.com/2019/10/biodiversity-planning-in-surrey-revised\_post-revision-nppf\_mar-2019.pdf</a>

The valued ecological receptors, which could be impacted on by development are highlighted in blue in Table 3 and further details on relevant legislation and planning policy are provided in Appendix 4. A list of abbreviations is provided in Appendix 5.



# 3.1 Legislation and Planning Policy Relating to Valued Ecological Receptors

Table 3. Legislation and Planning Policy Relating to Valued Ecological Receptors

	Legislation and Planning Policy											
Key Ecological Receptor	Annex I (Habitats) Habitats Directive, EC Council Directive 92/43/EEC	Annex II (Species) Habitats Directive, EC Council Directive 92/43/EEC	Annex I of Birds Directive 2009/147/EC	Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019	The Wildlife and Countryside Act, 1981 (as amended), Schedules 1, 5, 9	Countryside and Rights of Way Act, 2000	The Protection of Badgers Act, 1996	NERC Act, 2006	NPPF	Relevant Regional Planning Policy	Relevant Local Planning Policy: Guilford Local Plan and 'Biodiversity and Planning in Surrey'	
Statutory Designated Sites – SACs and SPAs	<b>√</b>	<b>✓</b>		<b>√</b>					<b>✓</b>		<b>√</b> .	
Statutory Designated Sites – SSSIs					<b>√</b>	<b>√</b>			✓		<b>✓</b>	
Statutory Designated Sites – LNRs									✓		<b>✓</b>	
Non- Statutory Designated Sites – SINCs, LWSs								<b>✓</b>	<b>✓</b>		<b>✓</b>	
Priority Habitats								<b>✓</b>	<b>√</b>		✓	
Ancient Woodland									<b>√</b>		<b>✓</b>	
Trees Priority Species –								<b>√</b>			<b>✓</b>	
Plants Invasive					✓ (Schedule						✓	
Plant Species Priority Species – Invertebrates					9)			<b>✓</b>	<b>✓</b>		<b>✓</b>	



	Legislation and Planning Policy										
Key Ecological Receptor	Annex I (Habitats) Habitats Directive, EC Council Directive 92/43/EEC	Annex II (Species) Habitats Directive, EC Council Directive 92/43/EEC	Annex I of Birds Directive 2009/147/EC	Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019	The Wildlife and Countryside Act, 1981 (as amended), Schedules 1, 5, 9	Countryside and Rights of Way Act, 2000	The Protection of Badgers Act, 1996	NERC Act, 2006	NPPF	Relevant Regional Planning Policy	Relevant Local Planning Policy: Guilford Local Plan and 'Biodiversity and Planning in Surrey'
Great Crested Newts (Triturus cristatus)		<b>√</b>		<b>✓</b>	✓ (Schedule 5)			<b>✓</b>	<b>✓</b>		<b>✓</b>
Common Toads ( <i>Bufo</i> <i>bufo</i> )								✓	<b>✓</b>		<b>✓</b>
Reptiles					✓			✓	✓		✓
Breeding Birds					<b>✓</b>				<b>✓</b>		<b>✓</b>
Priority Species – Birds								<b>√</b>	<b>√</b>		<b>✓</b>
Protected Bird Species					✓ (Schedule 1)				<b>√</b>		✓
Roosting, Foraging and Commuting Bats		✓		<b>✓</b>	✓ (Schedule 5)			<b>✓</b>	<b>✓</b>		<b>✓</b>
Hazel Dormouse (Muscardinus avellanarius)		✓		<b>√</b>	✓ (Schedule 5)			<b>~</b>	✓		<b>*</b>
Badger (Meles meles)					<b>√</b>		<b>√</b>				<b>✓</b>
European Hedgehog (Erinaceus europaeus)								<b>✓</b>	<b>√</b>		<b>✓</b>



	Legislation ar	Legislation and Planning Policy										
Key Ecological Receptor	Annex I (Habitats) Habitats Directive, EC Council Directive 92/43/EEC	Annex II (Species) Habitats Directive, EC Council Directive 92/43/EEC	Annex I of Birds Directive 2009/147/EC	Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019	The Wildlife and Countryside Act, 1981 (as amended), Schedules 1, 5, 9	Countryside and Rights of Way Act, 2000	The Protection of Badgers Act, 1996	NERC Act, 2006	NPPF	Relevant Regional Planning Policy	Relevant Local Planning Policy: Guilford Local Plan and 'Biodiversity and Planning in Surrey'	
Brown hare (Lepus europaeus)	32/43/LEG	321431EEO		2013	3, 3			<b>√</b>			<b>√</b>	
European Otter ( <i>Lutra lutra</i> )		<b>✓</b>		<b>√</b>	✓ (Schedule 5)			✓	✓		<b>V</b>	
Water Vole (Arvicola amphibius)					✓ (Schedule 5)			<b>√</b>	✓		<b>✓</b>	



#### 3.2 Biodiversity Net Gain

The NPPF, 2021 sets out policies for, inter alia, biodiversity and geological conservation directing those schemes should seek to protect and enhance, where possible, designated, and non-designated nature conservation sites and features.

Section 41 of the NERC Act, 2006 requires public bodies "to have regard to" the importance of conserving biodiversity in England when undertaking their functions. Local planning authorities should use the list of species and habitats of principal importance (section 41) to identify those that require special consideration when making decisions.

Circular 06/05 on Biodiversity and Geological Conservation - Statutory Obligations and Their Impact Within the Planning System provides administrative guidance on the application of the law relating to planning and nature conservation as it applies in England.

The following is a summary of relevant local planning policy and guidance, which relates to biodiversity enhancement and the achievement of biodiversity net gain on development sites.

#### 3.2.1 Guilford Local Plan 2003

Policy NE6 (Undesignated Features of Nature Conservation Interest) states that 'Where development is proposed on sites that include features of importance to wildlife, which include 'ponds, ditches, hedgerows, woods and groups of trees that may not contain rare species, but provide refuges and sometimes wildlife corridors' that 'the Council will seek to preserve and where possible enhance the features of most value, permitting development where the nature conservation interest is not harmed, or where by specific measures or by management any harm could be minimised'.

#### 3.2.2 Biodiversity and Planning in Surrey

4c (Biodiversity within developments) states that 'developments are being built to ever-increasing environmental standards, and biodiversity should not be forgotten here. There are very simple steps that can be taken to provide nesting and roosting opportunities for species such as bats and birds within buildings. Nest boxes can be mounted on the outside of buildings, special bat or Swift bricks can be incorporated into the structure, and entire roof spaces can be designed to provide opportunities for bats to roost. A step further is to provide a 'green', or vegetated, roof, which can provide foraging opportunities for birds, and support a range of native plants. Thought should be given to the impact of lighting on wildlife, especially bats; areas of no or low level lighting along bat foraging routes should be considered'.

It also states that 'appropriate landscaping within developments can help reduce fragmentation of habitats by allowing wildlife to live within and move through built areas to the wider countryside. Landscaping should aim to retain and enhance existing biodiversity features'.

It encourages the use of native species, and consideration of using ponds and hedgerows in landscaping to link up areas supporting biodiversity.



## 4. Methods

This report has been produced with reference to current guidelines for Preliminary Ecological Appraisals (CIEEM, 2017) and BS42020:2013: Biodiversity – Code of Practice for Planning and Development.

#### 4.1 Data Search

Surrey Biodiversity Information Centre (SBIC) was contacted to provide a data search report for the site and land within 1 km of the site boundary (comprising information on protected species, species of conservation concern and statutory and non-statutory designated sites). The following published materials were also consulted:

- The Multi-Agency Geographical Information for the Countryside (<u>www.magic.gov.uk</u>) (accessed 24<sup>th</sup> July 2022).
- Section 41: Priority Species in England (NERC Act, 2006) (<u>www.jncc.defra.uk</u>, accessed 24<sup>th</sup> July 2022).
- The Guilford Local Plan (accessed 24<sup>th</sup> July 2022).

#### 4.2 Field Survey

A field survey, using the UKHab system was undertaken of the site by Josh Brown BSc (Hons) on 21<sup>st</sup> July 2022. The weather conditions during the survey were 21°C, wind force 1, and 70% cloud and dry. The site boundary is shown in Figure 1.

The field survey technique used is detailed in the UK Habitat Classification User Manual, Version 1.0. The UK Habitat Classification Working Group, May 2018. The principle aim of the UK Habitat Classification (UKHab) system is to provide a rapid system for recording and classifying habitats, which can be used for both earth-based and field-based surveys. The system comprises a principal hierarchy (the Primary Habitats), which include ecosystems, broad habitats, Priority Habitats and Annex 1 habitats, and non-hierarchical Secondary Codes.

The UKHab 'Professional Edition' has been used, with the use of Level 5 Primary Habitats and Secondary Codes, as detailed in the UK Habitat Classification-V1 (May 2018) Excel workbook. Primary Habitats and Secondary Codes follow the UK Habitat Classification – Habitat Definitions – V1.0 (May 2018). The Secondary Codes selected are appropriate to the site and habitats recorded. The Minimum Mapping Unit used is 25 m² and 5 m in length.

Where possible, prior to carrying out the field survey, habitats on site were identified using <a href="www.magic.gov.uk">www.magic.gov.uk</a>, Google Earth Pro, 2020 and previous surveys reports, if available. Pre-survey maps were compiled using QGIS 3.16 Hannover. Evidence of habitat management was also noted.

During the field survey, habitat types were recorded using QField on a tablet (Samsung Galaxy Tab S6). GIS symbology used is as recommended in the UK Habitat Classification symbology files for QGIS, presented as Level 4 Primary Habitat, with Level 5 labelled as a code.

#### 4.3 Protected Species Assessment

As part of the PEA, the site was assessed for its potential to contain protected or notable species. The assessment was made based on the habitats present within the site and their suitability for protected species (information on the legislation of protected species can be found in Section 3 and Appendix 4). Protected species assessed for, but not limited to, were:



- Plants of conservation concern.
- Invertebrates of conservation concern.
- · Great crested newts.
- · Common toad.
- Reptiles.
- Breeding birds.
- Bats.
- Hazel dormice.
- · Badgers.
- European hedgehog.
- Brown hare.
- Otters.
- Water voles.

In addition, a search was undertaken for evidence of non-native, invasive species.

#### 4.4 Survey Limitations

The data search should not be taken as a definitive list of the protected species and species of conservation concern that occur within the search area.

The site was visited over the period of one day, as such seasonal variations cannot be observed and only a selection of all species that potentially occur within the site have been noted. Therefore, the survey provides a general assessment of potential nature conservation value.

The field survey was undertaken at the optimal time of year. There were no limitations to the survey in terms of the following:

- The site could be fully accessed.
- Weather conditions (dry and sunny).
- Personal competence (qualifications, training, skills, and experience).
- Time spent surveying.



# 5. Baseline Ecological Conditions

## 5.1 Data Search

#### 5.1.1 Designated Sites

The Thames Basin Heaths SPA is located approximately 4 km from the site and is designated for being regularly used by 1% or more of nightjar (*Caprimulgus europaeus*), woodlark (*Lullula arborea*) and Dartford warbler (*Sylvia undata*) populations.

Table 4 provides details on designated sites, which are present within 1 km of the site.

Table 4. Designated Sites within 1 km of the Site

Site Name and Designation	Central Grid Reference	Approximate Distance from Site (m)	Area (Ha) / Length (KM)	Description
Papercourt SSSI	TQ 043 565	750	70.03	Area of wetland habitats, including unimproved meadows, marshes, streams and flooded gravel pits.
Broadmead Cut and Wey Navigation at Send SNCI	TQ 030 564	750	8.1 km	Bankside vegetation tall and diverse. Between waterbodies, stands of willow carr and alder and oak woodland.
Land Adjacent to Papercourt Marsh SNCI	TQ 037 562	900	10.3	Rank grassland and woodland, important due to its proximity to Papercourt SSSI.
River Wey-Woking SNCI	TQ 008 532	900	15.7 km	Good quality river of County Importance, supporting a high diversity of invertebrates and water voles.
Send Marsh, Polesdon Lane Conservation Verge	TQ 038 561	950	413 m	Supports hoary cinquefoil ( <i>Potentilla</i> argentea), Nationally Near Threatened.

#### 5.1.2 Ancient Woodland

The site is not located within an area of ancient woodland or plantation on ancient woodland. There is no ancient woodland located within 1 km of the site.

#### 5.1.3 Priority Habitats

Four types of Priority Habitats are located within 1 km of the site, as detailed in Table 5.

Table 5. Priority Habitats within 1 km of the Site

Habitat Type	Approximate Number of Parcels	Land Nearest Land Parcel to Site (Approximate m)
River/stream	2	80
Deciduous woodland	18	40
Traditional orchards	1	675
Pond	11	360



#### 5.1.4 Protected Species and Species of Conservation Concern

Examples of protected species and species of conservation recorded in the data search from the previous 10 years, which could potentially occur on, or in the vicinity of the site are provided below. The data search report should be referred to for the full list of species, which occur within 1 km of the site.

- Common pipistrelle.
- · Common toad.
- Grass snake.
- Slow worm (Anguis fragilis).
- West European hedgehog.

There are records of invasive species within 1 km of the site, but none for the site itself.



## 5.2 Field Survey - Habitats

The results of the field survey undertaken on 21<sup>st</sup> July 2022 are presented in map form on Figure 1 and described in Table 6. Priority Habitats are in bold. Photographs of the site are provided in Appendix 2 and a full list of species, with scientific names, is provided in Appendix 3. The following habitats (Level 5 Primary Habitat labels and codes, where applicable) were recorded on site:

- Modified grassland g4.
- Mixed scrub h3h.
- Developed land, sealed surface u1b.
- Buildings u1b5.

Table 6. Results of Field Survey - Habitats

Primary Habitat Level 4 Label and Code	Primary Habitat Level 5 Label and Code	Approximate Area (ha) / Length (m)	Location in Site	Main Common Plant Species	Rare/Scarce or Protected Plant Species	Secondary Code - Habitat Mosaic	Secondary Code – Habitat Complex	Secondary Code – Origin	Secondary Code – Management	Secondary Code – Land Use	Secondary Code – Green Infrastructure	Signs of and Potential for Protected Species
Modified grassland – g4	N/A	0.148	Forms the majority of the site. The grassland is short mown with areas of scattered tall ruderal vegetation and introduced shrub.	Annual meadow-grass, broad-leaved dock, common dandelion, yarrow, Yorkshire-fog	None recorded	Scattered scrub (11)  Ruderal/ephemeral (17)	N/A	Non-native (48)	Frequently mown (66) Fence (69)	N/A	Introduced shrub (1060)	Potential for nesting birds, foraging/commuting bats, amphibians and European hedgehogs  Potential for common species of reptile within brash and log piles recorded at target notes 1 and 3 on Figure 1 respectively.  Cotoneaster was recorded at target note 2 on Figure 1.



Primary Habitat Level 4 Label and Code	Primary Habitat Level 5 Label and Code	Approximate Area (ha) / Length (m)	Location in Site	Main Common Plant Species	Rare/Scarce or Protected Plant Species	Secondary Code - Habitat Mosaic	Secondary Code – Habitat Complex	Secondary Code – Origin	Secondary Code – Management	Secondary Code – Land Use	Secondary Code – Green Infrastructure	Signs of and Potential for Protected Species
												A rabbit burrow was recorded at target note 4 on Figure 1.
Mixed scrub - h3h	N/A	0.024 ha	Forms the northern site boundary. Comprises a mixture of native and nonnative species but mainly introduced shrubs and trees.	Bramble, common hibiscus, cotoneaster, dogwood, laurel, hydrangea	None recorded	N/A	N/A	Non-native (48)	N/A	N/A	Introduced shrub (1060)	Potential for nesting birds, foraging/commuting bats, reptiles, amphibians and European hedgehogs
Developed land; sealed surface – u1b	N/A	0.014 ha	The southern site boundary comprises developed land, sealed surface in the form of a driveway.	N/A	None recorded	N/A	N/A	N/A	N/A	N/A	N/A	None recorded
Developed land; sealed surface – u1b	Buildings – u1b5	0.0048 ha	Two buildings on site. Both are situated adjacent to the western site boundary.	N/A	None recorded	N/A	N/A	N/A	N/A	N/A	N/A	None recorded



## 5.3 Field Survey - Species

The following fauna was recorded during the survey:

#### Invertebrates:

- Gatekeeper butterfly.
- Meadow brown butterfly.
- Red admiral butterfly.

#### Birds:

- Blackbird.
- Blue tit.
- Goldfinch.
- Jackdaw.
- Robin.
- Wood pigeon.



# **6. Ecological Constraints and Opportunities Assessment**

Table 7 sets out known and potential ecological constraints to development, derived from the data search and field survey, including designated sites, ancient woodland, Priority Habitats, and protected species/species of conservation concern. Where a potential ecological constraint has been identified, further survey work and/or appropriate avoidance, mitigation, and compensation (as appropriate) is likely to be required to address the issue. Further survey and/or mitigation measures are required for the valued ecological receptors highlighted in blue.

**Table 7. Ecological Constraints and Opportunities Assessment** 

Valued Ecological Receptor	Potentially Present / Known to be Present on Site	Assessment and Justification for Potential/Likely Impacts of Development on Value Ecological Receptor			
Designated Sites	Thames Basin Heaths SPA is located approximately 4 km from the site	The Thames Basin Heaths SPA is located approximately 4 km from the site. This is addressed in Section 7.1.  There are three SINCs and one Conservation Verge located within 1 km of the site. There is one SSSI located approximately 750 m from the site.  The development should not result in significant adverse impacts on nationally and locally designated sites for nature conservation for the following reasons:  • The proposed development site is separated from the nearest nationally/locally designated site by 750 m of existing fields, dwellings, gardens, and roads.  • The proposed development will be confined to the site impacts will be confined to habitats within the site.  • The proposed development will comply with legislation relevant to reducing the impacts of construction, namely the Control of Pollution Act, 1974, the Environmental Protection Act, 1990, The Clean Air Act, 1993, The Environment Act, 1995 and the Pollution Prevention and Control Act, 1999.  • The proposed development will conform to British Standards on noise and vibration (BS 5228-2009. Code of Practice for Noise and Vibration Control on Construction and Open Sites).  For the above reasons, nationally/locally designated sites for nature conservation should not be impacted upon by the development and further survey and avoidance/mitigation measures are not required in relation to the proposed development and non-statutory designated sites.			



Valued Ecological Receptor	Potentially Present / Known to be Present on Site	Assessment and Justification for Potential/Likely Impacts of Development on Value Ecological Receptor			
Priority Habitats	None on site	For the same reasons given for nationally/locally designated sites, the development should not be impacted upon by the development and further survey and avoidance/mitigation measures are not required in relation to the proposed development and Priority Habitats.			
Ancient woodland	None present	The site is not located within an area of ancient woodland or plantation on ancient woodland and there are no areas of ancient woodland located within 1 km of the site. Therefore, further survey and avoidance/mitigation measures are not required in relation to the proposed development and ancient woodland.			
Trees	Present on site	Mature native trees are located on site. In the absence of avoidance and mitigation measures, construction and development operation activities could result in significant adverse effects on trees. Recommendations for avoidance and mitigation measures relating to trees have, therefore, been provided (see Section 7.2).			
Plants of conservation concern	Negligible potential	No protected or notable rare plant species were noted during the survey. The areas of the site, which will be affected by the proposed works have negligible potential to support plants of conservation concern (scrub and other neutral grassland). Therefore, plants of conservation concern are considered to be absent from the site and further survey and avoidance/mitigation measures are not required in relation to the proposed development and plants of conservation concern.			
Invasive plant species such as rhododendron, Japanese knotweed ( <i>Reynoutria japonica</i> ) and giant hogweed ( <i>Heracleum mantegazzianum</i> )	Cotoneaster on site	Cotoneaster was recorded on site (see target note 2 on Figure 1), some species of which, are listed under Schedule 9 of the Wildlife and Countryside Act, 1981 (as amended). As it is an offence to cause invasive species to spread in the wild, recommendations to eradicate and dispose of cotoneaster have been provided in Section 7.3.			
Invertebrates of conservation concern	Potential for stag beetles	The brash and log piles (see target notes 1 and 3 on Figure 1) and the scrub habitats on site has the potential to support stag beetles, which is a Priority Species. Therefore, avoidance measures relating to stag beetles have been provided in Section 7.4.			
Great crested newts	Low potential	<ul> <li>For the following reasons, it is considered that there is a low possibility that great crested newts could be present on site:</li> <li>There are no ponds on site.</li> <li>The nearest pond to the site (as shown on <a href="www.magic.gov.uk">www.magic.gov.uk</a>) is approximately 360 m to the east of the site, separated from the site by woodland, open pasture, and a road.</li> <li>There are four granted EPSLs for great crested newts approximately 780 m from the site, but there are associated with Papercourt SSSI.</li> <li>The site comprises habitats which could support the great crested newt in its terrestrial phase.</li> </ul>			



Valued Ecological Receptor	Potentially Present / Known to be Present on Site	Assessment and Justification for Potential/Likely Impacts of Development on Value Ecological Receptor				
		Therefore, is considered appropriate to take a precautionary approach to ensure great crested newts are not harmed during the works, in the unlikely event that they are encountered (see recommendations in Section 7.5).				
Common toads	Low potential	For the same reasons given for great crested newts, it is considered possible that common toads are present within the survey area. Recommendations for avoidance and mitigation measures relating to common toads have, therefore, been provided (see Section 7.5).				
Reptiles (such as slow worms- Anguis fragilis, common lizards - Zootoca vivipara, and grass snakes- Natrix helvetica)	Low potential	There are brash and log piles on site (see target notes 1 and 3 on Figure 1), which could support common species of reptiles. As reptiles are protected against killing and injury, and could be impacted on by the development proposals, avoidance measures for reptiles have been recommended (see Section 7.4).				
Nesting birds	Potentially present	The site comprises woodland, trees, and scrub, which could support common species of nesting birds. As nesting birds are protected, recommendations to avoid disturbing nesting birds are provided in Section 7.6.				
Birds of conservation concern (such as barn owl – <i>Tyto alba</i> , peregrine falcon – <i>Falco peregrinus</i> and black redstart – <i>Phoenicurus ochruros</i> )	Potentially present	Birds of conservation concern could potentially breed on site. Avoidance measures for breeding birds are provided in Section 7.6, which also relate to birds of conservation concern.				
Bats	Sheds on site have negligible suitability for roosting bats.  Woodland habitats on site could support foraging/commuting bats	Sheds on site have been assessed as having negligible suitability for roosting bats. Therefore, further survey for roosting bats is not required.  As the development proposals could impact on suitable foraging/commuting habitats for bats, a sensitive lighting plan has been recommended in Section 7.7.				
Badger	Setts and signs found to be absent	Setts and signs of badgers were recorded to be absent during the survey. Therefore, badgers are considered to be absent from the site and further survey and avoidance/mitigation measures are not required in relation to the proposed development and badgers.				
Hazel dormouse	Negligible potential	The site lacks habitats, which could support the hazel dormice, i.e., well-connected woodland and hedgerows. Therefore, it is considered that hazel dormice are absent from the site, and further survey and avoidance/mitigation measures are not required in relation to the development and hazel dormice.				



Valued Ecological Receptor	Potentially Present / Known to be Present on Site	Assessment and Justification for Potential/Likely Impacts of Development on Value Ecological Receptor
Brown hare	Negligible potential	The site does not contain any habitats, which could support the brown hare, i.e., agricultural fields and open pasture. Therefore, the brown hare is considered to be absent from the site, and further survey and avoidance/mitigation measures are not required in relation to the proposed development and brown hares.
Water vole and European otter	Negligible potential	The site does not contain any habitats, which could support the water vole and European otter, i.e., rivers and streams. Therefore, the water vole and European otter are considered to be absent from the site, and further survey and avoidance/mitigation measures are not required in relation to the proposed development and water voles and European otters.
European hedgehog	Potentially potential	The brash/log piles (see target notes 1 and 3 on Figure 1) on site could support the European hedgehog, which is a Priority Species. As the European hedgehog could be present in areas of the site, which would be impacted on by the proposals, avoidance measures for European hedgehogs have been recommended in Section 7.4, in accordance with the duty placed on Local Planning Authorities to have due regard for biodiversity.



## 7. Recommendations for Avoidance and Mitigation

#### 7.1 Designated Sites

The site is within 5 km of the Thames Basin Heaths SPA. Housing developments, where there is a net gain of one or more houses, within 5 km of the Thames Basin Heaths SPA are required to contribute towards avoidance measures (Suitable Alternative Natural Greenspace, SANG or Strategic Access Management and Monitoring, SAMM), to offset the likely significant effects on the SPA. For developments of fewer than 100 new dwellings, it should be possible to use Council-provided SANGs, subject to availability.

#### 7.2 Trees

Native trees should be retained, and any trees lost as a result of the proposed development, should be replaced with equivalent numbers of native species.

To prevent damage to retained trees during development, a buffer zone should be put in place to protect the rooting area (Root Protection Area, which is calculated in accordance with British Standard 5837, 'Trees in Relation to Construction'), in which no construction activities should be permitted.

#### 7.3 Invasive Plants

Cotoneaster was recorded on site (see target note 2 on Figure 1). When this species escapes into the wild, it is detrimental to native habitats as it out-competes native plants that are beneficial for wildlife. Eradication of this species, prior to site clearance is required in order to avoid committing an offence. Further information on how to prevent cotoneaster from spreading and how to dispose of cotoneaster, can be found at <a href="https://www.gov.uk/guidance/prevent-the-spread-of-harmful-invasive-and-non-native-plants#types-of-invasive-non-native-plants">https://www.gov.uk/guidance/prevent-the-spread-of-harmful-invasive-and-non-native-plants#types-of-invasive-non-native-plants</a>.

#### 7.4 Stag Beetles, Reptiles, and European Hedgehogs

An Ecological Clerk of Works (ECoW) should be present on site during any site clearance activities, which are likely to involve the removal/disturbance of any vegetation, particularly the scrub and brash/log piles on site. Any stag beetles, reptiles, or European hedgehogs found, should be allowed to move away into adjacent habitats unharmed, of their own accord.

#### 7.5 Amphibians

As a precautionary approach to ensure great crested newts and common toads are not harmed during the proposed works, it is recommended that a fingertip search of the works area is carried out by a great crested newt licenced ecologist immediately prior to the commencement of the works, to search for great crested newts and other amphibians. An ECoW should be present on site during any site clearance activities, which are likely to involve the removal/disturbance of any vegetation, as well as the removal of the brash piles.

If a great crested newt is found during the search, works would need to cease immediately and an EPSL for great crested newts should be obtained from Natural England before works continue.

#### 7.6 Nesting Birds

If works which are likely to damage bird nests need to be carried out during the nesting period, there is potential that nesting birds could be harmed and disturbed. To ensure legal compliance, a check should be undertaken by an ecologist within 48 hours of works commencing, to confirm the presence/absence



of nest sites. If nests sites are identified, works to that feature should be delayed until the nest site becomes inactive (species specific, but approximately 4-6 weeks maximum).

#### **7.7** Bats

Recommendations to minimise the potential impacts of artificial external lighting on bat activity, are provided below (Institute of Ecology and Environmental Management, 2006: Institute of Lighting Engineers, 2007 and Bat Conservation Trust, 2018):

- Avoid prolonged use of outside lighting during the period dusk to dawn, particularly during the bat active season (April to September).
- Security lighting should be avoided on the southern and western boundaries of the site and be on a motion sensor and short duration timer (1 minute).
- Lighting that is required for security or safety reasons, should use a lamp of no greater than 2000 lumens (150 Watts) and should comprise sensor activated lamps.
- LED luminaires with a warm white spectrum (<2700 Kelvin) are the preferred option and should be used where possible. Luminaires should feature peak wavelengths higher than 550 nm to minimise disturbance to bats. All luminaires should lack UV elements, metal halide and fluorescent sources should not be used.
- Lighting should be directed to where it is needed with minimal light spillage. This can be achieved by limiting the height of the lighting columns and by using as steep a downward angle as possible and/or a specialist bollard that directs the light below the horizontal plane.
- Artificial lighting should not directly illuminate any potential bat roosting features or habitats of value to foraging bats, i.e., hedgerows.



# 8. Recommendations for Further Ecological Surveys

None required, providing all recommendations in Section 7 are adhered to.



# 9. Biodiversity Net Gain

Table 8 provides an indication of the baseline biodiversity units for the site, based on the field survey, calculated using the Biodiversity Metric 3.1 (Defra, 2022); see Appendix 1 for further details. Approximate areas have been calculated using QGIS 3.16 Hannover. The completed calculation tool can be supplied on request.

**Table 8. Baseline Biodiversity Units** 

Baseline Habitat Type	Approximate Area (ha) / Length (km)	Habitat Distinctiveness	Habitat Condition	Strategic Significance	Suggested Action to Address Habitat Losses	Baseline Biodiversity Units	Key Ecological Features	Development Impact
Site Habitat Baseline								
Grassland – modified grassland	0.148 ha	Low	Moderate	Low	Same distinctiveness or better habitat required	0.59	Margins could support reptiles and amphibians	Not known
Heathland and shrub  – mixed scrub	0.024 ha	Medium	Moderate	Low	Same broad habitat or a higher distinctiveness habitat required	0.19	Could support nesting birds, reptiles, amphibians	Not known
Urban – developed land; sealed surface	0.019 ha	Very low	N/A	Low	Compensation not required	0	None	Not known
Total		1		1		0.78 (Baseline Units)		<u>'</u>



Below are a set of measures, which should be implemented on site to achieve biodiversity net gain. These suggestions take into account current planning policy and guidance, as detailed in Section 3.2 of this report. These measures are in addition to avoidance measures for habitats, as detailed in Section 7.

- The planting of native species-rich hedgerows to increase habitat connectivity to the wider landscape. This should include native species of local provenance including, but not limited to, blackthorn, hawthorn, field maple and spindle. The hedgerows should be at least 2 m in height and depth and managed to form an 'A' profile. This will provide benefits to a range of wildlife including the provision of suitable nesting habitat for birds, increased connectivity of foraging/commuting routes for bats, and a winter food source for birds of conservation concern.
- The use of appropriate SUDS. For example, in addition to permeable surfaces, a rain garden could be included (see Rainwater Gardens, a Guide for Residents, Woking Borough Council, 2018).
- The inclusion of at least one biodiverse roof (where possible), which can help to enhance habitat linkage across the site, particularly for invertebrates and birds.
- Garden spaces should include a wildflower mix suitable for the geology of the site, is available from www.wildseed.co.uk.
- The installation of log piles along site boundaries, to provide habitat for invertebrates and reptiles.
- The installation of Schwegler 2F Boxes (or similar) on trees and buildings, would be beneficial
  to common and widespread bat species that are likely to be present on site
  (www.arkwildlife.co.uk).
- The installation of RSPB Robin and Wren Diamond Nest boxes and Apex Open-Front Nest boxes on buildings and trees would be beneficial to garden bird species. These nest boxes can be purchased from www.rspb.co.uk.
- The installation of 2GR Schwegler nest boxes on trees in adjacent hedgerows, would be beneficial to garden bird species. These nest boxes can be purchased from <a href="https://www.nhbs.com">www.nhbs.com</a>.
- The installation of swift bricks or house martin nests which can be purchased from www.arkwildlife.co.uk.
- The installation of bee bricks which can be purchased from https://www.nhbs.com/.
- The installation of a Royal Hedgehog House, which can be purchased from www.arkwildlife.co.uk.
- The installation of a hibernacula for invertebrates, such as the Bug Box 2000, which can be purchased from <a href="https://www.arkwildlife.co.uk">www.arkwildlife.co.uk</a>.
- The installation of a wildlife pond planted with native aquatic plant species.

These recommendations, including measures to protect and enhance priority habitats, should be included in a Biodiversity Management and Maintenance Scheme.



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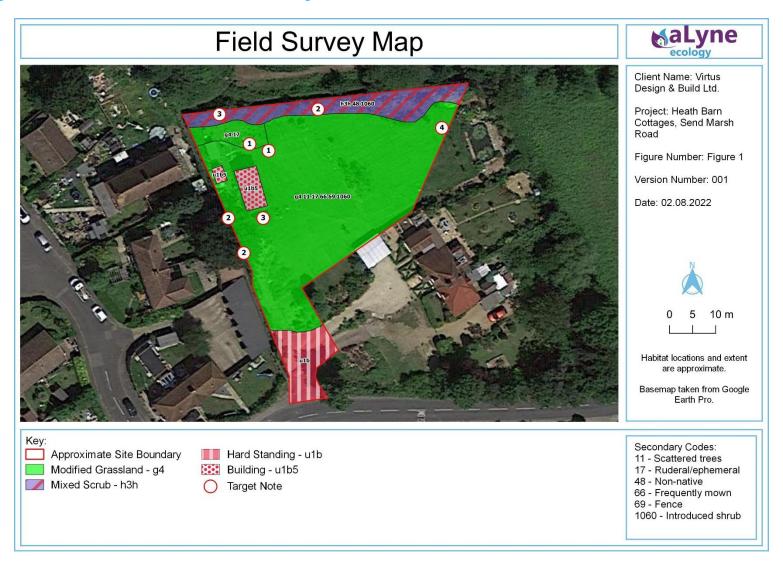
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# 11. Figure 1 – Results of Field Survey





# 12. Appendix 1 – Biodiversity Net Gain

#### 12.1 Introduction

#### 12.1.1 What is Biodiversity Net Gain?

Biodiversity Net Gain is defined as: "Development that leaves biodiversity in a better state than before, and an approach where developers work with local governments, wildlife groups, landowners and other stakeholders in order to support their priorities for nature conservation" (Baker, 2019). The UK's Good Practice Principles for Biodiversity Net Gain provides a framework for development projects to show that they are following good practice (see Baker, 2019).

Biodiversity Net Gain has been described as a measurable target for development projects, where impacts on biodiversity are outweighed by a clear mitigation hierarchy approach to first avoid and then minimise impacts, including through restoration and/or compensation. Adhering to these Biodiversity Net Gain principles will help in underpinning good practice for achieving and sustaining Biodiversity Net Gain. Biodiversity compensation should be planned for a sustained net gain over at least the lifetime of the development (often 25-30 years), with the objective of Biodiversity Net Gain management continuing in the future.

Biodiversity Net Gain should be proportionate to the scale of the development and scale of biodiversity impact, fit in with the project's lifespan and have the appropriate level of detail for the complexity of the Biodiversity Net Gain targets.

#### 12.1.2 Legislation and Policy Drivers

For some time, the requirement to include ecological enhancements in development projects has been supported by the National Planning Policy Framework (NPPF, 2021) and the Natural Environment and Rural Communities (NERC) Act, 2006. Both place a requirement on Local Planning Authorities to thread ecological enhancement requirements through regional and local planning policy.

The forthcoming Environment Bill will make the implementation of Biodiversity Net Gain mandatory for development projects. Part 3(1) of Schedule 15 of the Environment Bill makes it clear that planning authorities will only approve a Biodiversity Net Gain plan if they are satisfied with the following:

- 1. The existing pre-development biodiversity value of the site is identified.
- 2. The proposed post-development biodiversity value of the site is as specified in the Biodiversity Net Gain plan.
- 3. That any required off-site Biodiversity Net Gain is formally registered and allocated and delivers sufficient gain.
- 4. That any biodiversity credits specified in the plan have been purchased.
- 5. Overall, the Biodiversity Net Gain objective has been met.

Local Planning Authorities will be required to prepare Local Nature Recovery Strategies (LNRS), which will provide the local framework for the delivery of Biodiversity Net Gain and inform the development planning process. In the meantime, Biodiversity Net Gain plans should be aligned to existing local plan biodiversity targets and Supplementary Planning documents.

#### 12.2 Biodiversity Net Gain Principles

The following principles are taken from Biodiversity Net Gain. Good Practice Principles for Development (CIRIA, 2016).



### 12.2.1 Principle 1 – Applying the Mitigation Hierarchy

Do everything possible to first avoid and then minimise impacts on biodiversity. Only as a last resort, and in agreement with external decision-makers where possible, compensate for losses that cannot be avoided. If compensating for losses within the development footprint is not possible or does not generate the most benefits for nature conservation, then offset biodiversity losses by gains elsewhere.

### 12.2.2 Principle 2 – Avoid Losing Biodiversity that cannot be Offset by Gains Elsewhere

Avoid impacts on irreplaceable biodiversity - these impacts cannot be offset to achieve No Net Loss or Net Gain.

### 12.2.3 Principle 3 – Be Inclusive and Equitable

Engage stakeholders early, and involve them in designing, implementing, monitoring, and evaluating the approach to Net Gain. Achieve Net Gain in partnership with stakeholders where possible and share the benefits fairly among stakeholders.

### 12.2.4 Principle 4 - Address Risks

Mitigate difficulty, uncertainty, and other risks to achieving Net Gain. Apply well-accepted ways to add contingency when calculating biodiversity losses and gains in order to account for any remaining risks, as well as to compensate for the time between the losses occurring and the gains being fully realised.

### 12.2.5 Principle 5 – Make a Measurable Net Gain Contribution

Achieve a measurable, overall gain for biodiversity and the services ecosystems provide while directly contributing towards nature conservation priorities.

### 12.2.6 Principle 6 – Achieve the Best Outcomes for Biodiversity

Achieve the best outcomes for biodiversity by using robust, credible evidence and local knowledge to make clearly justified choices when:

- Delivering compensation that is ecologically equivalent in type, amount and condition, and that accounts for the location and timing of biodiversity losses.
- Compensating for losses of one type of biodiversity by providing a different type that delivers greater benefits for nature conservation.
- Achieving Net Gain locally to the development while also contributing towards nature conservation priorities at local, regional, and national levels.
- Enhancing existing or creating new habitat.
- Enhancing ecological connectivity by creating more bigger, better, and joined areas for biodiversity.

### 12.2.7 Principle 7 – Be Additional

Achieve nature conservation outcomes that demonstrably exceed existing obligations (i.e., do not deliver something that would occur anyway).

### 12.2.8 Principle 8 – Create a Net Gain Legacy

Ensure Net Gain generates long-term benefits by:

- Engaging stakeholders and jointly agreeing practical solutions that secure Net Gain in perpetuity.
- Planning for adaptive management and securing dedicated funding for long-term management.
- Designing Net Gain for biodiversity to be resilient to external factors, especially climate change
- Mitigating risks from other land uses.
- Avoiding displacing harmful activities from one location to another.



Supporting local-level management of Net Gain activities.

### 12.2.9 Principle 9 - Optimise Sustainability

Prioritise Biodiversity Net Gain and, where possible, optimise the wider environmental benefits for a sustainable society and economy.

### 12.2.10 Principle 10 - Be Transparent

Communicate all Net Gain activities in a transparent and timely manner, sharing the learning with all stakeholders.

### 12.3 Exclusions

Biodiversity Net Gain does not apply to statutory designated sites (i.e., Sites of Special Scientific Interest – SSSIs) or irreplaceable habitats (i.e., ancient woodlands).

### 12.4 Biodiversity Net Gain Processes and Pathways

The following is a summary of the process of designing a Biodiversity Net Gain plan, once the feasibility of the plan has been tested, the mitigation hierarchy has been applied to the project and the pre and post development baseline biodiversity of a sites' individual features have been measured.

- Consider and justify choices for delivering Biodiversity Net Gain, including whether to deliver
  the same or different type of habitat, locating either within or outside of the site, enhancing
  existing habitats, or creating new habitats, creating more, bigger and better linked habitats,
  improving the quality of local wildlife sites, optimising social and economic benefits and being
  additional.
- Deliver like-for-like or better (trading in kind, trading between low distinctiveness habitats, trading carefully between moderate distinctiveness habitats, trading up where possible and appropriate and not trading between high distinctiveness habitats).
- Designing enhancement measures to deliver local biodiversity objectives and achieve net gains
  in features affected by the development in ways which contribute towards strategic policies.
- Avoid or minimise time-lags between losses and delivery.
- Avoid or minimise risks to delivering Biodiversity Net Gain.
- Measure the predicted net gain for individual habitats using the same metrics throughout.
- Specify timescales for the long-term.
- Develop a Biodiversity Net Gain management and monitoring plan.

### 12.5 Measuring Biodiversity Net Gain

Defra have produced a biodiversity metric 3.1 (Defra, 2022) to measure Biodiversity Net Gain. The metric is based on the following parameters. Full details can be found in Natural England Joint Publication JP029 – The Biodiversity Metric 3.1 Technical Supplement.

- · Habitat condition.
- Distinctiveness.

A summary of these parameters is provided in the following sections:

### 12.5.1 Habitat Condition

The 'condition' component of quality measures the biological 'working-order' of a habitat type judged against the perceived ecological optimum state for that particular habitat. It is – therefore – a means of measuring variation in quality of patches of the same habitat type (i.e., an 'intra-habitat' quality measure)



rather than a measure of quality between habitat types (i.e., an 'inter-habitat' quality measure) – which is assessed through the 'distinctiveness' of habitats. Full details of how habitat condition is assessed is provided in Natural England Joint Publication JP029.

### 12.5.2 Distinctiveness

In biodiversity metric 3.1 habitats have been assigned to distinctiveness bands based on the following criteria of distinguishing features:

- Total amount of remaining habitat in England (its rarity).
- Percentage of habitat protected in SSSI: where less is protected in SSSI's, it is considered of higher distinctiveness.
- UK Priority Habitat Status: Priority Habitats area classed as High or Very High.
- European Red List Categories for the habitat.

Distinctiveness categories are as follows:

Distinctiveness Band	Criterion Threshold	
Very High Distinctiveness	Small amount of remaining habitat with a lot of it unprotected by	
	designation.	
	Endangered or Critical European red List habitats.	
High Distinctiveness	Remaining Priority Habitats not in very high distinctiveness band &	
	other red list of habitats.	
Medium Distinctiveness	Non-Priority Habitats with significant wildlife benefit and 1	
	replaceable Priority Habitat (Arable field Margins).	
Low Distinctiveness	Agricultural and Urban land use of lower biodiversity value.	
Very Low Distinctiveness	Urban – with artificial structure which are un-vegetated, unsealed	
	surface or built linear features of very low biodiversity value.	

### 12.5.3 Strategic Significance

The following options are available in the Biodiversity Metric 3.0 for Strategic Significance:

- Within area formally identified in local strategy (high strategic significance).
- Local ecologically desirable, but not in local strategy (medium strategic significance).
- Area/compensation not in local strategy/no local strategy (low strategic significance).

### 12.6 Management and Monitoring

Costed management and monitoring plans are essential to the success of Biodiversity Net Gain. Plans should keep track of timing, extent, quality, and condition.

The purpose of monitoring is to determine success or failure, gives an early warning system when aspects of management are not working and provides an opportunity to plan for remedial measures (adaptive management). Monitoring needs to take into consideration frequency, duration, timing, and costs. The results of monitoring need to be clearly documented.

Management and monitoring plans should set out activities over at least 5 years, with objectives for the longer-term.

The responsibility for management can fall to the main contractor, a broker, a local stakeholder, or a third-party company.



## 13. Appendix 2 – Site Photographs



Photograph 1—Modified grassland and scrub.



Photograph 2—The largest building on site



Photograph 3—View from site entrance.



# 14. Appendix 3 – Full Species List and Target Notes

Habitats	Common Name	Species Name
Modified Grassland – g4	Annual meadow-grass	Poa annua
g.	Bear's breeches	Acanthus mollis
	Black horehound	Ballota nigra
	Bramble	Rubus fruticosus agg.
	Broadleaved dock	Rumex obtusifolius
	Butterfly-bush	Buddleja davidii
	China berry	Melia azedarach
	Common cat's-ear	Hypochaeris radicata
	Common daisy	Bellis perennis
	Common dandelion	Taraxacum officinale
	Common mallow	Malva neglecta
	Common mugwort	Artemisia vulgaris
	Common nettle	Urtica dioica
	Cotoneaster	Cotoneaster sp.
	Creeping thistle	Cirsium arvense
	Dog-rose	Rosa canina
	Dove's-foot crane's-bill	Geranium mole
	English oak	Quercus robur
	Fat hen	Chenopodium album
	Fig	Ficus carica
	Greater burdock	Arctium lappa
	Greater plantain	Plantago major
	Green alkanet	Pentaglottis sempervirens
	Guelder-rose	Viburnum opulus
	Hawthorn	Crataegus monogyna
	Herb-Robert	Geranium robertianum
	Holly	Illex aquifolium
	Honey locust	Gleditsia triacanthos
	Honeysuckle	Lonicera periclyenum
	Horseweed	Erigeron canadensis
		Hedera helix
	l l ambia cor	
	Lamb's-ear Laurel	Stachys byzantine Laurus nobilis
		Lonicera
	Lonicera Mullein	
		Verbascum Cortaderia selloana
	Pampas grass	
	Prickly sow-thistle	Sonchus asper
	Ragwort	Jacobaea vulgaris
	Red clover	Trifolium pratense
	Red valerian	Centranthus ruber
	Ribwort plantain	Plantago lanceolata
	Rose	Rosa sp.
	Rose campion	Silene coronaria
	Rough hawkbit	Leontodon hispidus
	Rowan	Sorbus aucuparia
	Russian sage	Perovskia atriplicifolia
	Smooth sow-thistle	Sonchus oleraceus
	Spear thistle	Cirsium vulgare
	Spurge	Euphorbia sp.
	Summer grape	Vitis aestivalis
	Sycamore (saplings)	Acer pseudoplatanus
	Teasel	Dipsacus fullonum
	Wall barley	Hordeum murinum
	Willow	Salix sp.
	Willowherb	Epilobium sp.
	Wood crane's-bill	Geranium sylvaticum
	Yarrow	Achillea millefolium
	Yorkshire-fog	Holcus lanatus
Mixed Scrub - h3h	Apple	Malus sp.
	Bramble	Rubus fruticosus agg.
	Brome	Bromus sp.
	Catalpa	Catalpa



Habitats	Common Name	Species Name
	Common hibiscus	Hibiscus sp.
	Common laburnum	Laburnum sp.
	Cotoneaster	Cotoneaster sp.
	Dog-rose	Rosa canina
	Dogwood	Cornus sp.
	English oak	Quercus robur
	Eucalyptus	Eucalyptus sp.
	Goat willow	Salix caprea
	Hawthorn	Crataegus monogyna
	Hazel	Corylus avellana
	Laurel	Laurus nobilis
	Leatherleaf viburnum	Viburnum rhytidophyllum
	Oakleaf hydrangea	Hydrangea quercifolia
	Princess tree	Paulownia tomentosa
	Rose	Rosa sp.
	Rowan	Sorbus aucuparia
	Silver birch	Betula pendula
	Wayfaring tree	Viburnum lantana
Birds	Blackbird	Turdus merula
	Blue tit	Cyanistes caeruleus
	Goldfinch	Carduelis carduelis
	Jackdaw	Corvus mondedula
	Robin	Erithacus rubecula
	Wood pigeon	Columba palumbus
Invertebrates	Meadow brown butterfly	Maniola jurtina
	Gatekeeper butterfly	Pyronia tithonus
	Red admiral butterfly	Vanessa atalanta

Target Note	Notes
1	Brash pile
2	Cotoneaster
3	Log pile
4	Rabbit burrow



### 15. Appendix 4 – Legislation and Planning Policy

### 15.1 Habitats Directive, EC Council Directive 92/43/EEC

The following information has been taken from ec.europa.eu.

Natura 2000 is a network of sites selected to ensure the long-term survival of Europe's most valuable and threatened species and habitats. How a site is chosen depends on what it aims to protect.

Under the Habitats Directive (Art. 3 and 4), Member States designate Special Areas of Conservation (SACs) to ensure the favourable conservation status of each habitat type and species throughout their range in the EU. Under the Birds Directive (Art. 4), the network must include Special Protection Areas (SPAs) designated for 194 particularly threatened species and all migratory bird species.

Member States designate Special Protection Areas (SPAs) according to scientific criteria such as '1% of the population of listed vulnerable species' or 'wetlands of international importance for migratory waterfowl'.

The choice of sites is based on scientific criteria specified in the directive, to ensure that the natural habitat types listed in the directive's Annex I and the habitats of the species listed in its Annex II are maintained or, where appropriate, restored to a favourable conservation status in their natural range.

### 15.2 The Birds Directive 2009/147/EC

The following information has been taken from ec.europa.eu.

The Birds Directive aims to protect all of the 500 wild bird species naturally occurring in the European Union. The 500 wild bird species naturally occurring in the European Union are protected in various ways:

- Annex 1: 194 species and sub-species are particularly threatened. Member States must designate Special Protection Areas (SPAs) for their survival and all migratory bird species.
- Annex 2: 82 bird species can be hunted. However, the hunting periods are limited, and hunting is forbidden when birds are at their most vulnerable: during their return migration to nesting areas, reproduction, and the raising of their chicks.
- Annex 3: overall, activities that directly threaten birds, such as their deliberate killing, capture
  or trade, or the destruction of their nests, are banned. With certain restrictions, Member States
  can allow some of these activities for 26 species listed here.
- Annex 4: the directive provides for the sustainable management of hunting, but Member States
  must outlaw all forms of non-selective and large scale killing of birds, especially the methods
  listed in this annex.
- Annex 5: the directive promotes research to underpin the protection, management, and use of all species of birds covered by the Directive, which are listed in this annex.

# 15.3 Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

Under these Regulations, the UK Government and Devolved Administrations are required to establish a network of important high-quality conservation sites that will make a significant contribution to conserving the habitats and species identified in Annexes I and II, respectively, of European Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora, known as the Habitats Directive. The listed habitat types and species are those considered to be most in need of conservation at a European level (excluding birds). Of the Annex I habitat types, 78 are believed to



occur in the UK. Of the Annex II species, 43 are native to, and normally resident in, the UK (www.JNCC.gov.uk). Special Areas of Conservation (SACs), together with Special Protection Areas (SPAs), are the UK's contribution to the Bern Convention's Emerald Network of protected areas, known as Areas of Special Conservation Interest (ASCIs).

### 15.4 The 1949 National Parks and Access to the Countryside Act

Section 21 of the National Parks and Access to the Countryside Act, 1949 provides discretionary powers to enable local authorities to establish and manage Local Nature Reserves (LNRs). Under the Conservation of Habitats and Species (Amendment) (EU Exit) 2019 Regulations, these powers have been extended from preserving flora and fauna to include enabling or facilitating its recovery or increase.

### 15.5 The Wildlife and Countryside Act, 1981 (As Amended)

The following information was taken from <a href="www.jncc.gov.uk">www.ukwildlife.com</a>.

The Wildlife and Countryside Act, 1981 (as amended) is the primary national legislation, which protected animals, plants, and habitats in the UK. The act contains four parts and 17 schedules, which cover:

- Part 1: Wildlife (includes protection of birds, animals, and plants; and measures to prevent the establishment of non-native species which may be detrimental to native wildlife).
- Part 2: Nature conservation, the countryside, and National Parks (including the designation of protected areas).
- Part 3: Public rights of way.
- Part 4: Miscellaneous provisions of the act.

All naturally occurring wild birds in Great Britain are protected from persecution. It is illegal to kill, injure or 'take' any wild bird, take, or damage the nest of any wild bird whilst in use or being built. The eggs of all wild birds are also protected. If you have in your possession any live wild birds, egg(s), or any part of a wild bird you are committing an offence. The birds listed in Schedule 1 of the Wildlife and Countryside Act 1981 are further protected by Special Penalties all year round for those in Part 1 and during a specified closed season for those listed in Part 2.

Schedule 5 lists Animals Species that are protected under Section 9. Section 9 prohibits the intentional killing, injuring, or taking of the species listed in Schedule 5 and also prohibits their possession and the trade in the wild animals listed. The species listed are also further protected from disturbance by prohibiting actions that affect places they use for shelter.

Animals listed in Schedule 6 are protected from being killed or taken by certain methods under Section 11(1) of the Wildlife and Countryside Act 1981. The methods listed are self-locking snares, bows, crossbows, explosives (other than ammunition for a firearm), or live decoys. The species listed are also protected from the following activities: trap, snare or net, electrical device for killing or stunning, poisonous, poisoned, or stupefying substances or any other gas or smoke, automatic or semi-automatic weapon, device for illuminating a target or sighting device for night shooting, artificial light, mirror or other dazzling device, sound recording, and mechanically propelled vehicle in immediate pursuit.

Under the Wildlife and Countryside Act 1981 (as amended), the country nature conservation bodies have a duty to notify any area of land which in their opinion is 'of special interest by reason of any of its flora, fauna, or geological or physiographical features' – these areas are known as Sites of Special Scientific Interest (SSSIs).



### 15.6 Countryside & Rights of Way Act, 2000

The CRoW Act gives a public right of access to land mapped as 'open country' (mountain, moor, heath and down) or registered common land. The protection of Sites of Special Scientific Interest (SSSIs) is strengthened in this legislation. The CRoW Act also allows for the prosecution of third parties that damage or destroy a SSSI.

### 15.7 Hedgerow Regulations 1997

These regulations fall under the local authority and are intended to protect important hedgerows from removal. Owners and managers must request permission from their local authority before removing a hedgerow, and permission may not be granted if it supports a diverse range or protected species.

### 15.8 The Protection of Badgers Act, 1992

Badgers are fully protected in the UK by the Protection of Badgers Act, 1992 and by Schedule 6 of the Wildlife and Countryside Act, 1981 (as amended). This makes it an offence (amongst other things) to:

- Wilfully kill, injure, take, possess, or cruelly treat a badger.
- Intentionally or recklessly damage, destroy or obstruct access to a badger sett.
- Disturb a badger while it is occupying a sett.

### 15.9 Natural Environment and Rural Communities (NERC) Act, 2006

The site comprises deciduous woodland, which is a Priority Habitat. Priority Habitats are listed under Section 41 of the Natural Environment and Rural Communities (NERC) Act, 2006. Section 40 (1) of the NERC Act, 2006 imposes a duty to conserve biodiversity:

 "Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity."

Section 40(3) of the Act explains that:

 "Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat".

The duty applies to all local authorities and extends beyond just conserving what is already there to carrying out, supporting, and requiring actions that may also restore or enhance biodiversity.

### 15.10 National Planning Policy Framework (NPPF) 2021

The National Planning Policy Framework sets out the Government's planning policies for England and how these should be applied. It provides a framework within which locally prepared plans for housing and other development can be produced. So that sustainable development is pursued in a positive way, at the heart of the Framework is a presumption in favour of sustainable development.

Section 15 of the NPPF (paragraphs 174 to 182) considers the conservation and enhancement of the natural environment including habitats and biodiversity (paragraphs 179-182) Paragraph 174 states that planning and decisions should contribute to and enhance the natural and local environment by:

 "Protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);



- Recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland; and
- Minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures"

Paragraph 175 states that plans should distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.

Paragraph 179 states that in order to protect and enhance biodiversity and geodiversity, plans should:

- "Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and
- Promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity."

When determining planning applications, Paragraph 1780 states that local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:

- 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;
- 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;
- 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
- 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."

As stated in paragraph 181 the following should be given the same protection as habitats sites:

- Potential Special Protection Areas and possible Special Areas of Conservation;
- Listed or proposed Ramsar sites; and
- Sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites."



Paragraph 182 states that the presumption in favour of sustainable development does not apply where the planned project is likely to have a significant effect on a habitat site (alone or in combination with other plans or projects) unless an appropriate assessment has concluded the plan or project will not adversely affect the integrity of the habitats site.

### 15.11 Office of the Deputy Prime Minister (ODPM) Circular 06/2005

ODPM Circular 06/05 provides guidance on applying legislation in relation to nature conservation and planning in England. Part I considers the legal protection and conservation of internationally designated sites (namely candidate Special Areas of Conservation (cSACs), SACs, potential Special Protection Areas (pSPAs), SPAs and Ramsar sites) and Part II considers the legal protection and conservation of nationally designated sites, namely Sites of Special Scientific Interest (SSSIs).

Part III considers the protection of habitats and species outside of designated areas (particularly UK Biodiversity Action Plan species and habitats, which it states are capable of being a material consideration in the preparation of local development documents and the making of planning decisions.

Part IV considers species protected by law and states that the presence of a protected species is a material consideration in the consideration of a development proposal that, if carried out, would be likely to result in harm to the species or its habitat and that it is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted.

### 15.12 Water Framework Directive

The Water Framework Directive (Directive 2000/60/EC) became law in England and Wales in 2003 via the Water Environment (WFD) (England and Wales) Regulations. The Water Framework Directive has four main goals: (1) to prevent deterioration in water status, (2) all water bodies achieve good ecological status, good chemical status, and good groundwater status (or potential), (3) reduce and eliminate sources of pollution and (4) contribute to achieving objectives of sites protected by other EU legislation.

### 15.13 Bern Convention

The Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention) was ratified by the UK Government in 1982. The principal aims of the Convention are to ensure conservation and protection of wild plant and animal species and their natural habitats (listed in Appendices I and II of the Convention), to increase cooperation between contracting parties, and to regulate the exploitation of those species (including migratory species) listed in Appendix III. To this end, the Convention imposes legal obligations on contracting parties, protecting over 500 wild plant species and more than 1,000 wild animal species.

### 15.14 Wild Mammals (Protection) Act, 1996

The Wild Mammals (Protection) Act 1996, makes provision for the protection of wild mammals from certain cruel acts by stating that any person who mutilates, kicks, beats, nails or otherwise impales, stabs, burns, stones, crushes, drowns, drags or asphyxiates any wild mammal with intent to inflict unnecessary suffering shall be guilty of an offence.



# 16. Appendix 5 – List of Abbreviations

BAP	Biodiversity Action Plan
CSZ	Core Sustenance Zone
CWS	County Wildlife Site
EcIA	Ecological Impact Assessment
EPSL	European Protected Species Licence
GCN	Great Crested Newt
NERC	Natural Environment and Rural Communities Act
NPPF	National Planning Policy Framework
PEA	Preliminary Ecological Appraisal
SSSI	Site of Special Scientific Interest
SAC	Special Area of Conservation
SINC	Site of Importance for Nature Conservation
SNCI	Site of Nature Conservation Importance
SPA	Special Protection Area
UKHab	UK Habitat Classification System

