



# Land Between Gravel Hill & Brinsh

## Ecological Appraisal Report

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## Table of Contents

<b>Basis of Report .....</b>	<b>i</b>
<b>Table of Contents.....</b>	<b>ii</b>
<b>1.0 Introduction .....</b>	<b>1</b>
1.1 Background.....	1
1.2 Site Description .....	1
1.3 Details of the Proposed Development .....	1
1.4 Historical Ecological Reports.....	1
1.5 Purpose of this Report.....	2
1.6 Evidence of Technical Competence and Experience.....	2
1.7 Relevant Legislation and Policy.....	2
1.7.1 Local Planning Policy .....	2
<b>2.0 Methods .....</b>	<b>4</b>
2.1 Baseline Data Collection .....	4
2.1.1 Desk Study.....	4
2.1.2 Field Survey(s) .....	5
2.1.3 Protected Species Assessment.....	5
2.1.4 Ground Level Tree Assessment (GLTA).....	6
2.1.5 Longevity of Baseline Data .....	6
2.1.6 Limitations.....	7
2.2 Evaluation Approach .....	7
2.2.1 Important Ecological Features .....	7
<b>3.0 Results .....</b>	<b>8</b>
3.1 Designated Sites .....	8
3.1.1 Statutory Designated Sites .....	8
3.1.2 SSSI Impact Risk Zone .....	9
3.1.3 Non-Statutory Designated Sites .....	9
3.2 Priority Habitats.....	10
3.3 Habitats.....	10
3.3.1 Other Neutral Grassland, g3c .....	12
3.3.2 Species-rich Native Hedgerows h2a5 and (33 line of trees) .....	12
3.3.3 Other Lowland Mixed Deciduous Woodland w1f7 (217, woodland open space), (507, nutrient-enriched substrate).....	13
3.3.4 Wet Woodland w1d (217 woodland open space) (507nutrient-enriched) .....	13
3.3.5 Other rivers and streams r2b, (47, freshwater natural).....	13
3.3.6 Developed land sealed surface u1b.....	13



3.3.7 Veteran Ash Tree .....	13
3.4 Species .....	14
3.4.1 Plants .....	14
3.4.2 Invertebrates .....	15
3.4.3 Amphibians .....	15
3.4.4 Reptiles .....	16
3.4.5 Birds.....	17
3.4.6 Mammals.....	18
<b>4.0 Summary of Ecological Features .....</b>	<b>39</b>
<b>5.0 Comments from LPA ecologists on previous submissions.....</b>	<b>42</b>
5.1 Comments from LPA ecologists .....	42
<b>6.0 Planning Application.....</b>	<b>55</b>
6.1 Assessment of Effects and Mitigation Measures.....	55
6.2 Non-Statutory Designated Sites .....	55
6.3 Habitats.....	56
6.4 Veteran Tree .....	57
6.5 Plants.....	57
6.6 Reptiles .....	57
6.7 Breeding Birds.....	57
6.8 Otter .....	58
6.9 Water Vole .....	58
6.10 Badger .....	58
6.11 Bats.....	59
6.12 Potential Opportunities for Biodiversity Enhancements.....	59
<b>7.0 Conclusions and Recommendations.....</b>	<b>60</b>

## Tables in Text

Table 2-1 Desk Study Data Sources .....	4
Table 2-2 Tree Suitability for Roosting Bats from GLTA .....	6
Table 2-3 Tree Suitability Based on Potential Suitability of PRF.....	6
Table 3-1 Statutory Designated Sites.....	8
Table 3-2 Non-statutory Designated Sites within 2km of the Application Site .....	9
Table 3-3: Habitats of Principal Importance within 1km of the Site .....	10
Table 3-4: Site Habitats Identified from The UKHAB Survey .....	11
Table 3-5: EPSL for GCN within 4km of the Site .....	15
Table 3-6: Rapid Risk Assessment Results.....	16



Table 3-7 Birds records within 2km of Site .....	17
Table 3-8: Bat Records of EPSL within 4 km.....	18
Table 3-9: GLTA Results.....	20
Table 4-1: Ecological Features Scoping.....	39
Table 5-5-1 Summary of Ecology Consultee Comments .....	42

## Figures in Text

Figure 1: UKHab Map.....	48
Figure 2: Statutory Designated Sites.....	49
Figure 3-1 Veteran Ash Tree at TN1 (Tree Tag 205).....	14
Figure 3-2: Mammal Burrow on the Bank of Ladden Brook .....	22

## Appendices

- Appendix A**     **Relevant Legislation and Planning Policy**
- Appendix B**     **Non-Statutory Designated Sites**



## 1.0 Introduction

SLR Consulting was commissioned by Heidelberg Materials Limited (HML), formally Hanson Aggregates, to undertake an updated Ecological Appraisal (EcA) on an area of land, which is situated between Gravel Hill Road and Brinsham Lane, Chipping Sodbury, South Gloucestershire, Wiltshire, BS37 7BT, hereafter referred to as the 'Site'. This report describes the main findings of the desk study and updated ecological walkover survey which records habitat classification, protected species scoping, and implications of the proposed development to inform the planning application. The Preliminary Ecological Appraisal (PEA) has been carried out to assess the potential ecological impacts of the Site from the proposed development for the proposed temporary Haul Road.

### 1.1 Background

A planning application to South Gloucestershire Council (SGC) was initially submitted by Tetra Tech and was submitted and validated in April 2022. This application currently remains undetermined by SGC. A substantial amount of ecology work has already been historically undertaken by Tetra Tech for the Site and the wider quarry area.

### 1.2 Site Description

The Site is an area of land is situated north of Chipping Sodbury, Bristol, BS37 7BT (at Ordnance survey (OS) National Grid Reference (NGR) ST 72300 84652). The Site comprises grassland, hedgerows, river, scrub and woodland which connects to woodland north and south of the Site. Approximately 50m to the east of the Site, there is a built-up area. Active quarries are present to the east and south of the Site. There is a waterbody approximately 50m south and built-up areas approximately 250m south.

### 1.3 Details of the Proposed Development

HML have submitted a planning application to SGC under reference number P22/02019/F in relation to the proposed construction of a temporary haul road (for a period of 15 years) to link Southfields and Brinsham West Quarries. The aim of the proposed temporary Haul Road is to reduce the distance travelled by haul trucks.

The proposed access route comprises a single carriageway (9.2m wide) with two 20m long passing bays interspersed along the route (total width of passing bays 17.2m wide, including the width of the carriageway) and a concrete culvert portal unit spanning the Ladden Brook.

### 1.4 Historical Ecological Reports

Numerous ecological assessment and reports have been produced for this scheme and the wider Chipping Sodbury Quarry Complex (CSQC).

- Chipping Sodbury Quarry Romp Review; Environmental Impact Assessment, Volume 1 Environmental Statement (January 2011).
- Monitoring Report for Great Crested Newts at Tip East of Hampstead Farm, Chipping Sodbury Quarries 2015- 2017 [Natural England Licence EPSM 2013-6816B/ 2014-4468-EPS-MIT] (October 2017). A report for Hanson Aggregates by Stephanie Greshon Ecological Services;
- Chipping Sodbury Quarries Details Pursuant to ROMP Condition 46; Habitat Management Plan for the period 2015- 2025 (November 2014). A report for Hanson Aggregates by Stephanie Greshon Ecological Services. Updated in 2021 by Alexandra Hemming, Hanson UK.



- Appendix 1A. Part 1. Ecological Appraisal. Brinsham West Quarry Access Road, Chipping Sodbury. Tetra Tech March 2023.
- Appendix 1A. Part 2. Ecological Appraisal. Brinsham West Quarry Access Road, Chipping Sodbury. Tetra Tech March 2023.
- Appendix 2A. Part 1. Protected Species Report. Brinsham West Quarry Access Road, Chipping Sodbury. Tetra Tech March 2023.
- Appendix 2A. Part 2. Protected Species Report. Brinsham West Quarry Access Road, Chipping Sodbury. Tetra Tech March 2023.

## 1.5 Purpose of this Report

This report presents the findings of the Ecological Appraisal. The report seeks to:

- Establish baseline conditions and determine the importance of ecological features present (or those that could be present), as far as is possible;
- Identify potential ecological constraints to the proposed development and make initial recommendations to avoid potentially significant effects on important ecological features, where possible;
- Identify potential requirements for mitigation, where possible, including mitigation measures that will be required and those that may be required (depending on results of further surveys or final scheme design);
- Establish any requirements for more detailed surveys; and
- Identify opportunities for biodiversity enhancements as part of the project.

## 1.6 Evidence of Technical Competence and Experience

Field work and aspects of reporting has been undertaken by SLR Principal Ecologist Stephanie Attwood MSc DIC BSc (Hons) MCIEEM with 17 years of experience as a working professional ecologist. Steph is a licensed bat worker and experienced botanist.

SLR Project Ecologist Leah Cutts is a Qualifying member for CIEEM and has a years' experience working in ecology. Leah has undertaken a variety of ecological surveys including UK Habitat Classification (UKHab), and protected species surveys. Additionally, Leah has completed the River Condition Assessment (RCA) accreditation for the Biodiversity Metric through Modular River Survey. Technical Review was completed by SLR Associate Ecologists Dale Broadbent BSc (Hons) MCIEEM and Russell Goodchild BSc (Hons) MCIEEM who both have over 14 years' experience within ecological consultancy.

## 1.7 Relevant Legislation and Policy

The key wildlife legislation underpinning the conservation of habitats and species and National planning policies are presented in **Appendix A**. The Local planning policy is presented below.

### 1.7.1 Local Planning Policy

The following local policies are also relevant to the proposed development.

The new South Gloucestershire Local Plan 2020 is currently in preparation and will be a development plan document (DPD) covering the whole administrative area of South Gloucestershire. It will review and eventually replace existing local planning documents, including the:

- South Gloucestershire Local Plan: Core Strategy – 2006-2027 (2013)
- South Gloucestershire Local Plan: Policies, Sites and Places Plan



Part of the Local Plan's purpose will be to allocate sites for strategic development at locations identified in the Joint Spatial Plan (JSP), as well as to allocate new sites for non-strategic development.

Relevant core policies from the current South Gloucestershire Local Plan: Core Strategy – 2006-2027 (2013) are summarised below:

Policy CS2- Green Infrastructure details how the Council will ensure that existing and new Green Infrastructure is planned, delivered and managed and provides space for nature, offers opportunities for community interaction with nature, encourages presence and diversity of species, and provides opportunities to link habitats and spaces together.

Policy CS9- Managing the Environment and Heritage provides the general approach to environmental resource assets in South Gloucestershire, and states new development will be expected to 'conserve and enhance the natural environment, avoiding or minimising impacts on biodiversity and geodiversity'.

The Policies Sites and Places Plan (PSP Plan) was adopted on 8 November 2017 and forms part of the South Gloucestershire Development Plan. The PSP Plan contains detailed planning policies to manage new development, allocate and safeguard sites for various types of development and should be read alongside the above Core Strategy. Relevant policies are summarised below:

Policy PSP19 states for wider biodiversity:

"Development proposals resulting in the loss or deterioration of irreplaceable habitats, including unimproved grassland (lowland hay meadows), ancient woodland, and ancient trees will be refused unless the need for, and benefits of, the development in that location clearly outweigh the loss.

Where appropriate, biodiversity gain will be sought from development proposals. The gain will be proportionate to the size of the scheme and be secured through an appropriate planning condition or legal undertaking. This will include sites of low nature conservation interest (for example, intensive agricultural land) where new semi-natural habitat (green infrastructure) would provide opportunities and gains for local wildlife.

Development proposals, where they would result in significant harm to sites of value for local biodiversity, which cannot be avoided by locating it on an alternative site with less harmful impacts, adequately mitigated or, as a last resort, compensated for, will be refused. Sites of value for local biodiversity include (but are not limited to):

- Local sites (Sites of Nature Conservation Interest or Regionally Important Geological Sites);
- Sites supporting species of fauna or flora protected under the Wildlife and Countryside Act 1981 (as amended), Countryside and Rights of Way Act 2000 or Habitat Regulations 2010;
- Sites supporting species and habitats listed on the South Gloucestershire Biodiversity Action Plan (BAP);
- Sites supporting species and habitats listed by the Government as being of Principle Importance for Biological Diversity in Britain under Section 41 of the Natural Environment and Rural Communities Act 2006 (Priority Species and Habitats);
- Sites supporting birds listed on the Red, Amber or Green Lists of Species of Conservation Concern;
- Wildlife corridors or new green infrastructure, which enable the dispersal and favourable status of flora and fauna species; and
- Brownfield sites supporting notable assemblages of invertebrates."





## 2.0 Methods

### 2.1 Baseline Data Collection

#### 2.1.1 Desk Study

The desk study involved the collation and review of contextual information such as designated sites and past records of protected along with priority species occurring within the potential zone of influence.

An ecological data search was requested in March 2024 from the Bristol Regional Environmental Records Centre (BRERC). An internet-based desk study was also undertaken, using Multi-Agency Geographic Information for the Countryside (MAGIC)<sup>1</sup> websites.

The Joint Nature Conservation Committee website<sup>2</sup> has provided information on habitats and species of principal importance for conservation in England.

A summary of the information obtained is outline in Table 2-1.

**Table 2-1 Desk Study Data Sources**

Data	Search Area	Source
<b>Species</b>		
Protected and notable species	2km	BRERC
Extended search for bats	4km	BRERC
European protected species licence applications (EPSL)	4km	MAGIC
S42 species	1km	MAGIC
Invasive Non-Native Species listed on Schedule 9 Wildlife and Countryside Act 1981 (as amended)	1km	BRERC
<b>Habitats</b>		
S41 Habitats	1km	MAGIC
Ancient Woodland	1km	MAGIC
<b>Sites</b>		
Statutory protected sites (Sites of Special Scientific Interest – impact zones)	Within the site	MAGIC
Non-statutory protected sites (e.g. LWS, SINC, SINC)	2km	BRERC
National statutory protected sites	5km	MAGIC
International statutory protected sites	10km	MAGIC

In the light of the scope of the project, the search areas are sufficient to cover the potential zone of influence of the project in relation to designated sites, habitats and species. Biological records that are older than 10 years have been excluded.

A desk-based scoping exercise was undertaken using OS maps and aerial imagery to locate any ponds within 500m of the Site that could potentially support Great Crested Newts (GCN) *Triturus cristatus*. The parameter is based on the guidelines (English Nature, 2001)<sup>3</sup>, which

<sup>1</sup> MAGIC Multi-Agency Geographic Information Centre Website (<http://www.magic.gov.uk>) accessed December 2023.

<sup>2</sup> <http://jncc.defra.gov.uk/page-5717>

<sup>3</sup> English Nature (August 2001). Great Crested Newt Mitigation Guidelines.



advise that ponds up to 500m away from a development centred on those ponds could be affected by changes to a site.

### 2.1.2 Field Survey(s)

- A UK Habitat Classification (UKHab) survey was undertaken by Stephanie Attwood and Leah Cutts on the 9th of April 2024. The land within the Site together with a 30m buffer, the 'Survey Area' was surveyed (where access was possible).
- Habitats were mapped and features of interest were recorded. The habitats were mapped using the information gathered from the ecological walkover and followed the UKHab methodology<sup>4</sup> and the results are provided in **Figure 1**. Field evidence indicating the presence or potential presence of species that could constitute a material consideration in planning terms, such as protected or notable plant or faunal species were also recorded.
- The UKHab is a comprehensive classification system for the UK that has been developed to benefit from changes in habitat categorisation, recording analysis in recent decades. The system comprises a principal hierarchy (the Primary Habitats) which include broad habitats and priority habitats and non-hierarchical secondary codes.
- Searches were also made for Invasive Non-Native Species (INNS) listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) (WCA), such as Japanese knotweed (*Reynoutria japonica*) and Himalayan balsam (*Impatiens glandulifera*).

### 2.1.3 Protected Species Assessment

- As part of the appraisal the Site was assessed for its potential to contain protected or notable species. Further information on the legal protection of these is presented in **Appendix A**. Protected species assessed for, but not limited to, were:
  - Badger (*Meles meles*);
  - Bats;
  - Dormouse (*Muscardinus avellanarius*);
  - Birds (nesting, wintering and arable);
  - Otter (*Lutra lutra*);
  - Water vole (*Arvicola amphibius*)
  - Amphibians (inc. GCN);
  - Reptiles; and
  - Invertebrates.
- Whilst not a full protected species survey, this method of survey enables experienced ecologists to obtain an understanding of the ecology of a site such that it is possible either:
  - o to confirm the conservation significance of a site and assess the potential for impacts on species likely to represent a material consideration in planning terms, or;

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<sup>4</sup> The UK Habitat Classification Working Group (May 2023) The UK Habitat Classification User Manual Version 2.0.



- o to establish the scope and extent of any additional specialist ecological surveys that will be required before such confirmation can be made.

### 2.1.4 Ground Level Tree Assessment (GLTA)

- A GLTA of trees was undertaken in conjunction with the UKHab survey on 9th of April 2024, by Stephanie Attwood (licensed bat worker) and Leah Cutts.
- The GLTA involved a detail inspection of the exterior of the trees from the ground level looking for features that bats could use for roosting Potential Roosting Features (PRFs). The aim of the survey was to determine the available roosting resources and the need for further survey and/or mitigation. This involved all trees within the Site and those within 30m being inspected with binoculars and searched for PRFs or the lack of.
- This consisted of a ground based visual inspection of the tree to determine its potential to provide opportunities for roosting by bats and signs of bat presence. The inspection involved using binoculars and torches to identify potential roost features (PRF), such as lifted bark, woodpecker hole and/or other cavities. All surveyed trees were numbered and marked on a Site map, grid reference and tree species are also noted.
- The following categorisation of trees was used as outlined in **Table 2-2** Tree Suitability for Roosting Bats from GLTA based on Collins 2023<sup>5</sup>

**Table 2-2 Tree Suitability for Roosting Bats from GLTA**

Suitability	Description
NONE	Either no PRFs in the tree or highly unlikely to be any
FAR	Further Assessment required to establish if PRFs are present in the tree
PRF	A tree with at least one PRF present

- Where possible trees were further categorised using the following criteria as outline in Table 2-3 Tree Suitability Based on Potential Suitability of PRF. This was only undertaken when obvious PRFs were identified.

**Table 2-3 Tree Suitability Based on Potential Suitability of PRF**

Suitability	Description
PRF-I	PRF is only suitable for individual bats or very small numbers of bats either due to size of lack of suitable surrounding habitats.
PRF-M	PRF is suitable for multiple bats and may therefore be used by a maternity colony

### 2.1.5 Longevity of Baseline Data

The evidence set out in this report describes the characteristics of the Site at the time at which the survey was undertaken. Many species of wildlife are highly mobile by nature and will routinely take advantage of new opportunities which arise within their home ranges (CIEEM, 2019)<sup>6</sup>. Over time this will alter the baseline conditions present at the Site. Should there be

<sup>5</sup> Collins J (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4<sup>th</sup> Edition). The Bat Conservation Trust, London

<sup>6</sup> CIEEM (2019). Advice note. On the lifespan of ecological reports and surveys. Chartered



delays in the delivery of this project, it is possible that the baseline ecology will change. In the event of a significant delay (24 months) between the baseline survey and commencement of works at the Site, advice on the implications of potential changes at the Site should be sought from a suitably experienced ecologist.

## **2.1.6 Limitations**

### **2.1.6.1 Desk Study**

Desk study data is unlikely to be exhaustive, especially in respect of species, and is intended mainly to set a context for the study. It is therefore possible that important habitats or protected species not identified during the data search do in fact occur within the vicinity of the Site. Interpretation of maps and aerial photography has been conducted in good faith, using recent imagery, but it has not been possible to verify the accuracy of any statements relating to land use and habitat context outside of the field study area.

### **2.1.6.2 Field Survey(s)**

The UKHab survey was conducted in April which is sub-optimal time of year for undertaking this kind of survey, with the optimal time of year being between May to September. However, enough floristic diversity was identifiable at the Site, and this is not considered a major limitation.

The Site was surveyed in a single day and as such seasonal variation could not be observed, and it is likely that only a selection of all species that occur within the Site will have been recorded. However, the combination of historic records from the desk study and survey provides an accurate representation of the various habitat types present on Site and its potential to support protected species. Therefore, it is considered suitable for submission with a planning application.

The GLTA was undertaken in April when trees were starting to leaf. However, as they were not in full leaf a visual inspection of the tree was not considered significantly compromised.

## **2.2 Evaluation Approach**

The ecological evaluation approach used in this report is based on Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland (“CIEEM guidelines”) (CIEEM, 2018).

### **2.2.1 Important Ecological Features**

Ecological features can be important for a variety of reasons and the rationale used to identify them is explained in the text. Importance may relate, for example, to the quality or extent of a site or habitats therein; habitat and/or species rarity; the extent to which such habitats and/or species are threatened throughout their range, or to their rate of decline.

#### **2.2.1.1 Determining Importance**

The importance of an ecological feature should be considered within a defined geographical context. The following frame of reference has been used in this case, relying on known/published accounts of distribution and rarity where available, and professional experience:

- International;



- National (i.e. England);
- Regional (i.e. West of England);
- County (i.e. Bristol); and
- Local (i.e. within circa 5km).

The above frame of reference is applied to the ecological features identified during the desk study and surveys to inform this report.

The value of habitats has been measured against published selection criteria where available. Examples of relevant criteria include descriptions of habitats listed on Annex 1 of the Habitats Directive; descriptions of habitats of principal importance for biodiversity under Section 41 of Natural Environment and Rural Communities (NERC) Act 2006; Local Wildlife Site Selection Criteria; and Habitat Action Plans (HAPs) contained within Local Biodiversity Action Plans.

In assigning a level of value to a species, it is necessary to consider its distribution and status, including a consideration of trends based on available historical records. Reference has therefore been made to published lists and criteria where available. Examples of relevant lists and criteria include species of European conservation importance (as listed on Annexes II, IV and V of the Habitats Directive or Annex 1 of the Birds Directive); species of principal importance for biodiversity under Section 41 of the NERC Act 2006 and Birds of Conservation Concern<sup>1</sup>.

For the purposes of this report, ecological features of Local importance or greater and/or subject to legal protection have been subject to detailed assessment. Effects on other ecological features are considered unlikely to be significant in legal or policy terms.

### 3.0 Results

The results of the desk and field surveys are reported below and describe the baseline conditions at the Site and within the surrounding area.

#### 3.1 Designated Sites

##### 3.1.1 Statutory Designated Sites

The site is not covered by any such designations. There are no international statutory designated sites within 10km of the Site, and five national statutory designated sites within 5km. The location of the Statutory sites in relationship to the Site are presented in **Figure 2**. The details of the sites are summarised below in Table 3-1.

**Table 3-1 Statutory Designated Sites**

Name of Site and National Grid Reference	Designation	Description	Distance to Site Centre from Project Area (km)
Bishop's Hill Wood ST 7335 8736	Special Site of Scientific Interest (SSSI)	Ancient and semi-ancient deciduous woodland boarded by lowland meadows and good quality semi-improved grassland.	2.28km north-east of the Site.
Hawkesbury Meadow ST 7541 8735	SSSI	Lowland wetland and lowland neutral grassland.	4.02km north-east of the Site.



Name of Site and National Grid Reference	Designation	Description	Distance to Site Centre from Project Area (km)
Wapley Bushes ST 7108 8052	Local Nature Reserves (LNR)	Ancient and semi-ancient deciduous woodland; traditional orchards.	4.29km south of the Site.
Lower Woods ST 7423 8728	SSSI	Ancient and semi ancient lowland mixed woodland; neutral grassland; wet woodland.	5.17km north-east of the Site.

### 3.1.2 SSSI Impact Risk Zone

A SSSI Impact Risk Zone is a defined zone around each SSSI in England that reflects the sensitivities of the features which are notified and indicate the types of development proposal that could potentially have adverse impacts. Developments of a certain size and nature that fall within SSSI Impact Risk Zones require the Local Planning Authority (LPA) to consult with Natural England (NE) to determine whether the proposed development is likely to have an impact upon the SSSI.

The Site is within the Bishop's Hill SSSI Impact Risk Zone, the proposed development therefore requires the LPA to consult with Natural England on potential impacts on the SSSI.

### 3.1.3 Non-Statutory Designated Sites

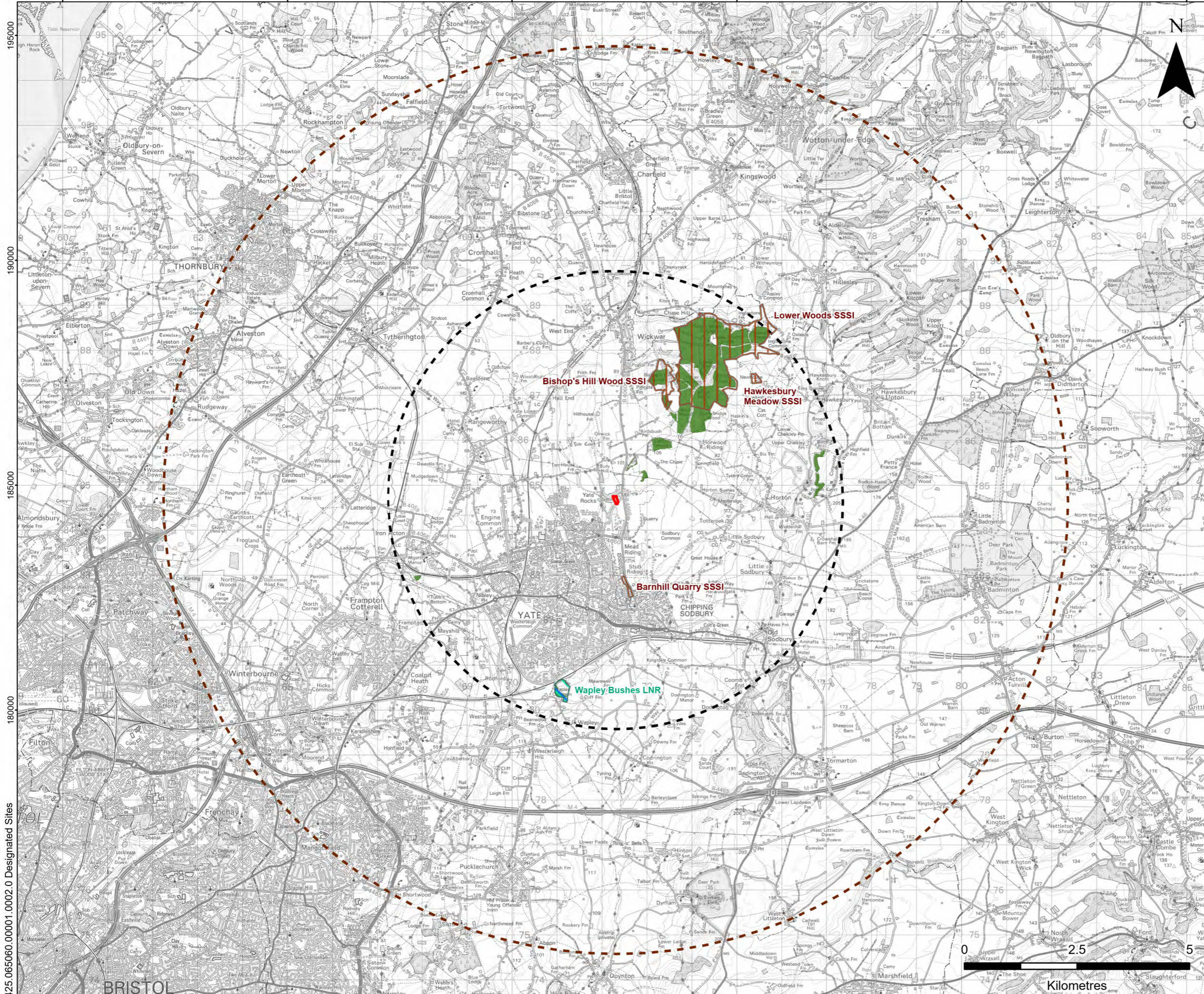
There are eleven non-statutory designated sites within 2km. Ladden Brook and Brinsham Bridge SNCI falls within the northern section of the Site. The details of the non-statutory designated sites are listed below in **Table 3-2** and the locations can be found in **Table 3-2**.

**Table 3-2 Non-statutory Designated Sites within 2km of the Application Site**







Sites	Designation	Distance (m)	Features
Ladden Brook, and Brinsham Bridge	SNCI	Within the Site Approximately 3,816m <sup>2</sup>	Calcareous grassland with notable species.
Sodbury Common	SNCI	463m east	Neutral grassland and marshy grassland.
Brinsham Wood	SNCI	672m north-east.	Ancient woodland
Discussed quarry and fields, Bury Hill	SNCI	788m north	Calcareous grassland, open standing water
The Leach Pool	SNCI	812m north-west	Standing water, brook, and broadleaved woodland.
Ladden Brook and Mill Pond, Yate Court	SNCI	800m north-west	Flowing open water and bankside vegetation, marshy grassland, and ponds.
Ridgewoods	SNCI	1,238m south	Mature woodland including semi-natural semi-ancient, community value.
Lady's Wood	SNCI	1,343m north-east	Ancient woodland.
River Frome (South Gloucestershire)	SNCI	1,818m west	Flowing open water and bankside vegetation.
Engine Common Lane	SNCI	1,945m west	Neutral grassland



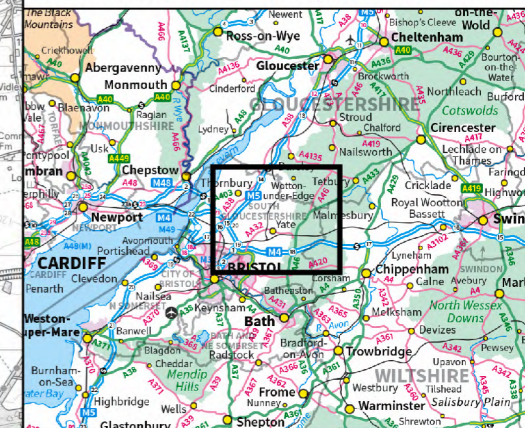
360000 365000 370000 375000 380000 385000



**LEGEND**

-  Site Boundary
-  Site Boundary 5km Buffer
-  Site Boundary 10 km Buffer
-  Site of Special Scientific Interest (SSSI)
-  Local Nature Reserve (LNR)
-  Ancient Woodland

**Note:** National Designations show out to 5km. There are no International Designations present within 10km.



APPEAL LAND BETWEEN GRAVEL HILL & BRINSH  
 PRELIMINARY ECOLOGICAL APPRAISAL  
 DESIGNATED SITES

**FIGURE 2**

Scale 1:80,000 @ A3 Date JUNE 2024

Sites	Designation	Distance (m)	Features
Bishop's Hill Wood	SSSI SNCI	1,992m north-east	Calcareous grassland, Broadleaved Woodland. Species (1982): Lily of the Valley; Herb Paris; Greater Butterfly Orchid; Birdsnest Orchid; (1991) – Dyers Greenwood; Milkwort; Fairy Flax; White Admiral; Oak; Ash; Elm; Field Maple; Hazel

### 3.2 Priority Habitats

The MAGIC website<sup>1</sup> returned a number of priority habitats within 1km, as per **Table 3-3**. Deciduous woodland is present within the northern section of the Site. No ancient woodland was present within 1 km.

**Table 3-3: Habitats of Principal Importance within 1km of the Site**

Habitat	Feature	Distance from site of nearest feature	Number of areas of habitat
Deciduous woodland	Semi-natural deciduous woodland	Adjacent to Site boundary north	18
Lowland calcareous grassland	Calcareous grassland	841m north	1
Open mosaic habitat	Disused mineral working (limestone)	95m to the South-east	2

### 3.3 Habitats

The results of the UKHab Survey are illustrated in map form in **Figure 1** and photographs are presented in **Table 3-4** below. The unique UK Habitat Classification survey code (e.g., u1b6) habitat is attributed to is included in brackets within the text below. For the purposes of this report the habitats present within the Site have been mapped using the fine scale minimum mapping unit MMU (25m<sup>2</sup>, 5m length), in accordance with the UK Habitat Classification User Manual<sup>7</sup>. The relevant secondary codes are presented after the primary codes.

The following habitats were recorded within the Site;

- Other neutral grassland g3c, (106, mown), (107, mown and collected), (516 active management);
- Other neutral grassland g3c, (128, tussocky), (10, scattered scrub) (205 Ancient tree).
- Species-rich Native Hedgerows h2a5 (33 line of trees);
- Other lowland mixed deciduous woodland w1f7 (217 woodland open space), (507, nutrient-enriched substrate) and (29, plantation);
- Wet woodland w1d (217 woodland open space) (507nutrient-enriched);
- Other rivers and streams r2b, (47, freshwater natural); and,
- Developed land; sealed surface u1b

<sup>7</sup> The UK Habitat Classification Working Group (2023) The UK Habitat Classification User Manual Version 2.0







**Table 3-4: Site Habitats Identified from The UKHAB Survey**

UKHAB Classification and Description with Photograph	
	
<p>Other neutral grassland (g3c)                      10 scattered scrub, 128 tall/tussocky sward.</p>	<p>Other neutral grassland (g3c)                      107 mown and collected, 516 active management.</p>
	
<p>Species-rich native hedgerow h2a5                      507 nutrient-enriched substrate, 522 native.</p>	<p>Species-rich native hedgerow h2a5                      33 line of trees 521 unmanaged</p>
	
<p>Species-rich native hedgerow h2a5 and developed land                      sealed surface u1b                      33 line of trees. 521 unmanaged</p>	<p>Other lowland mixed deciduous woodland w1f7                      217 woodland open space, 507 nutrient-enriched                      substrate. 29 plantation</p>



UKHAB Classification and Description with Photograph	
	
<p>Wet woodland w1d 217 woodland open space, 507 nutrient-enriched substrate, 510 bare ground.</p>	<p>Other rivers and streams r2b 47 freshwater natural.</p>

### 3.3.1 Other Neutral Grassland, g3c

The majority of the Site is covered by other neutral grassland, g3c. Two distinct grassland types were present within this field is a species poor mown section, and a longer, species rich tussocky sward.

Grass species present in the short sward area included: Yorkshire fog (*Holcus lanatus*), red fescue (*Festuca rubra*), perennial rye-grass (*Lolium perenne*), cocks-foot (*Dactylis glomerata*), Sweet vernal-grass (*Anthoxanthum odoratum*), meadow foxtail (*Alopecurus pratensis*). Forb species present were bulbous buttercup (*Ranunculus bulbosus*), cleavers (*Galium aparine*), dandelion (*Taraxacum officinale* agg.), and common nettle (*Urtica dioica*).

Along the banks within the Site is another area of other neutral grassland g3c which has a longer more tussocky sward with scattered scrub in the form of blackthorn sapling (*Prunus spinosa*), this grassland didn't meet the description for calcareous grassland under UKHab but did contain calcareous indicators such as salad burnet (*Sanguisorba minor*) and lady's bedstraw (*G. verum*). It did not meet the three criteria defined in the UKHAB habitat descriptions<sup>8</sup> to be considered "other calcareous grassland".

Grass species present included: Yorkshire fog, red fescue, perennial rye-grass, cocks foot, sweet vernal-grass, meadow foxtail, false-oat grass (*Arrhenatherum elatius*), and contained field wood-rush (*Luzula campestris*).

Forb species present included: Stinging nettle, salad burnet, greater stitchwort (*Stellaria holostea*), spear thistle (*Cirsium vulgare*), common ragwort (*Jacobaea vulgaris*), bulbous buttercup, cleavers, ribwort plantain (*Plantago lanceolata*), greater plantain (*P. major*), sorrel (*Rumex acetosa*), lesser celandine (*Ficaria verna*), ground ivy (*Glechoma hederacea*), blackthorn, cuckoo flower (*Cardamine pratensis*), primrose (*Primula vulgaris*), wild carrot (*Daucus carota*), yarrow (*Achillea millefolium*) and wavy bittercress (*Cardamine flexuosa*).

### 3.3.2 Species-rich Native Hedgerows h2a5 and (33 line of trees)

The Site contained hedgerows and two lines of trees. Along the edge of Gravel Hill Road was a species rich native hedgerow (h2a5) which was managed and species rich. Species present where common hawthorn (*Crataegus monogyna*), elder (*Sambucus nigra*), blackthorn,

<sup>8</sup> UKHab (2023) UKHab.org.uk. Page 33.



bramble (*Rubus fruticosus agg*), dog rose (*Rosa canina*) and English elm (*Ulmus procera*). The understorey comprised ivy (*Hedera helix*), hogweed (*Heracleum sphondylium*), dog's mercury (*Mercurialis perennis*), lords and ladies (*Arum maculatum*), common nettle, lesser celandine, white dead nettle (*Lamium album*) and cleavers. On the opposite side of Gravel Hill Road was another field boundary comprised of another hedgerow and a stone wall.

On either side of Brinsham Lane are two lines of trees, which are outgrown hedgerows, these were situated on small banks. Species present included ash (*Fraxinus excelsior*), common hawthorn, field maple (*Acer campestre*), elder and spindle (*Euonymus europaeus*). The understorey contained common ivy, common hogweed, dog rose and native blue bells (*Hyacinthoides non-scripta*) although some exhibited hybridisation characteristics.

### **3.3.3 Other Lowland Mixed Deciduous Woodland w1f7 (217, woodland open space), (507, nutrient-enriched substrate).**

North of Ladden Brook is an area other lowland mixed deciduous woodland w1f7. There are also self-seeded areas of w1f7 within the central field.

The woodland within the field contained self-seeded blackthorn, common hawthorn, elder, ash, and spindle. Whilst the area of woodland north of Ladden Brook contained more mature examples of the above species and English oak (*Quercus robur*).

The understorey species included common nettle, bluebell, cleaver, ivy, Herb-Robert (*Geranium robertianum*), lesser celandine, lords and ladies, and wood speedwell (*Veronica montana*).

A strip of other lowland mixed deciduous woodland (w1f7) is a plantation (29) on the southern side of Gravel Hill Road and the quarry edge. This contained similar species but also included hazel (*Corylus avellana*) and sycamore (*Acer pseudoplatanus*).

### **3.3.4 Wet Woodland w1d (217 woodland open space) (507 nutrient-enriched)**

The section of woodland between Brinsham Lane and Ladden Brook had wet ground with scrub species present and was considered to be wet woodland. All tree species were relatively short around 5m in height species present were: blackthorn, goat willow (*Salix caprea*), spindle, elder, and common hawthorn. The wet woodland area was associated with the ground levels and the Ladden Brook and is likely to form minor flood plain area for the Brook.

The understorey species included: common nettle, wild garlic (*Allium ursinum*), meadow sweet (*Filipendula ulmaria*), wood aven (*Geum urbanum*), curled dock (*Rumex crispus*), bulbous buttercup, water mint (*Mentha aquatica*) and bramble.

### **3.3.5 Other rivers and streams r2b, (47, freshwater natural)**

Ladden Brook runs across the northern section of the Site and is classified as other rivers and streams r2b (47 freshwater). The water was relatively clear and fairly deep in the section within the Site. Some aquatic and marginal vegetation was present such as water mint.

### **3.3.6 Developed land sealed surface u1b**

Two roads Brinsham Lane and Gravel Hill Road are present within the Site which are tarmacked.

### **3.3.7 Veteran Ash Tree**

A veteran ash tree is present within the northeastern end of the site pictured in **Figure 3-1**. Veteran trees are considered irreplaceable habitats.



372200

372250

372300

372350

372400

184750

184700

184650

425.065060.00001.0001.0 UK Habitat Baseline



**LEGEND**

- Site Boundary
- Target Note

**Primary Habitat Classification**

*Heathland and Shrub - Hedgerows*

- h2a5 - Species-rich Native Hedgerow

*Woodland and Forest*

- w1 - Broadleaved Mixed and Yew Woodland

*Rivers and Lakes - Rivers and Streams*

- r2b - Other Rivers and Streams

*Grassland - Neutral Grassland*

- g3c - Other Neutral Grassland

*Urban - Built-up Areas and Gardens*

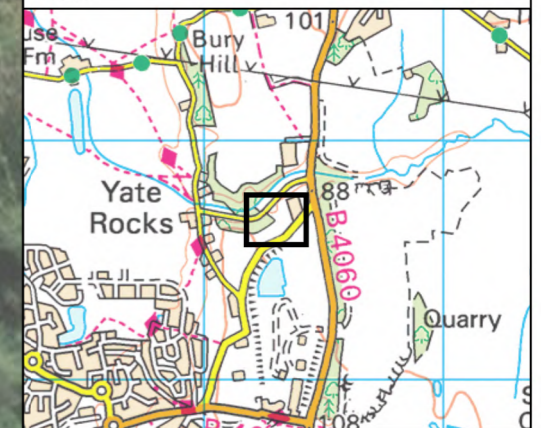
- u1b - Developed Land; Sealed Surface

*Woodland and Forest - Broadleaved Mixed and Yew Woodland*

- w1d - Wet Woodland
- w17 - Other Lowland Mixed Deciduous Woodland

**Secondary Codes:**

10 - Scattered Scrub	205 - Ancient Tree
12 - Scattered Bracken	217 - Woodland Open Space
29 - Plantation	507 - Nutrient Enriched Substrate
33 - Line of Trees	516 - Active Management
47 - Freshwater - Natural	800 - Road
106 - Mown	
128 - Tall or Tussocky Sward	



APPEAL LAND BETWEEN GRAVEL HILL & BRINSH  
 PRELIMINARY ECOLOGICAL APPRAISAL  
 UK HABITAT BASELINE

**FIGURE 1**

Scale 1:750 @ A3 Date AUGUST 2024



**Figure 3-1 Veteran Ash Tree at TN1 (Tree Tag 205)**



## 3.4 Species

### 3.4.1 Plants

#### Protected Plants

Schedule 8 of the Wildlife and Countryside Act 1981 lists endangered plant species which are protected by law from being picked, uprooted or destroyed.

The data search returned the following records for protected plant species:

Two records of bee orchid (*Ophrys apifera*), a CITES II species were recorded in 2019 and 2015, the closest located 950m south of the Site.

Nine records of bluebell (*Hyacinthoides non-scripta*) a Schedule 8 species in the W&CA 1981 (as amended). The closest record is located 637m from the Site.

The majority of the Site was not suitable for protected plant species but the woodland, hedge banks and lines of trees did contain native bluebells.

Protected plant species were identified during the UKHab survey and rare plants will be considered for further survey in Section 4.

#### Invasive Non-native Species (INNS)

Schedule 9 of the Wildlife and Countryside Act 1981 lists non-native species that are already established in the wild, which continue to pose a conservation threat to native biodiversity and habitats, such that further spread or release should be regulated.

The data search returned the following records for non-native invasive plant species listed under Schedule 9 of the Wildlife and Countryside Act 1981 within 2km of Site:

- Three-cornered garlic (*Allium triquetrum*) in 2016, located 2.6km south of Site (OS NGR ST 72 82).
- 2 records of Montbretia (*Crocasmia pottsii x aurea*), both located 2.6km south of the Site (OS NGR ST 72 82).
- Himalayan cotoneaster (*Cotoneaster simonsii*) in 2019, located 1km south of Site (OS NGR ST 72285 83576).



- Three records of wall cotoneaster (*C. horizontalis*), the closest located 1km south of the Site (OS NGR ST 72285 83576).

No invasive non-native plant species (INNS) were recorded during the survey, therefore INNS are considered absent from the Site.

### 3.4.2 Invertebrates

Schedule 5 of the WCA lists endangered species which are protected from killing, injury, taking, possession, and disturbance or obstruction/destruction of place they use for shelter.

The data search returned a total of 7 invertebrate records, one of which, the cinnabar moth (*Tyria jacobaeae*) is protected under Section 41 of the NERC Act 2006, located 2.6km south of the Site.

The woodland had potential for stag beetle (*Lucanus cervus*) associated with dead wood and Ladden Brook has potential for aquatic invertebrate communities although these are considered to be common species.

The amount of woodland being lost for the proposed scheme is minimal and the proposed scheme involves impacting a small section of Ladden Brook by installing precast concrete portal culvert unit which is U-shaped.

Invertebrates will be considered further in Section 4.

### 3.4.3 Amphibians

Great crested newt (GCN) is listed on Schedule 2 of The Conservation of Habitats and Species Regulations 2017 (as amended), on Schedule 5 of the WCA 1981 (as amended) and under Section 41 of the NERC Act 2006 as a species of principle importance for the conservation of biodiversity in England. The data search returned 91 records (2014-2021) of GCN within 2km, the closest being 355m north of the Site (OS NGR ST 719 852).

The 2km BRERC data search (2014-2024) also returned:

- One record of common toad (*Bufo bufo*) in 2019, 1.84km south of the Site (OS NGR ST 73128 82928).
- Severn records of smooth newt (*Lissotriton vulgaris*); four in 2017 (OS NGR ST 722 851) and three in 2021 (OS NGR ST 7297 8296), the closest record being 350m north of the Site.

Two GCN licence returns have been identified within 500m using MAGIC, both of which recorded GCN present. The closest is located approximately 350m north and the second, approximately just over 500m east of the Site boundary. Tetra Tech undertook eDNA of this waterbody north of the Site in 2021 which was negative.

Nine EPS Licences have been issues within 4km of the Site for GCN. Details are provided in **Table 3-5**.

**Table 3-5: EPSL for GCN within 4km of the Site**

Licence Type	Distance from the Site	Year of Expiry
Damage to a resting place; destruction to a resting place.	552m east.	2016
Damage to a resting place; destruction to a resting place.	1.37km west.	2022
Damage to a resting place; destruction to a resting place.	1.6km west.	2019



Licence Type	Distance from the Site	Year of Expiry
Damage to a resting place; destruction to a resting place.	1.93km south-east.	2022
Damage of a resting place.	2.8km north.	2004
Damage to a resting place; destruction to a resting place.	3.42km south-east.	2018
Destruction of a resting place.	3.5km south-east.	2014
Damage to a resting place; destruction to a resting place.	3.75km south-east.	2020
Damage to a resting place; destruction to a resting place.	3.89km south-east.	2017

There are no waterbodies within the Site boundary. There is one waterbody within the 500m of the Site to the north. Normal GCN home ranges extend up to a c. 250m radius around a breeding pond or other waterbody, although individuals can occasionally move further distances to c. 500m during exploratory or dispersal behaviour<sup>9</sup>. The nearest waterbody is c. 350m to the north. The majority of the Site is separated from the waterbody by Ladden Brook which is flowing and therefore creates a barrier for GCN dispersal into the majority of the Site, the woodland to north of the Site does have connectivity to this waterbody.

In addition to the site-specific data collected, Natural England’s Risk Assessment Tool<sup>10</sup> was also run for the Site; due to only a 0.038ha amount of potential terrestrial habitat being removed in >250m range, this gave the result ‘Green – Offence Highly Unlikely’ see **Table 3-6**.

**Table 3-6: Rapid Risk Assessment Results**

Component	Likely effect (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)	Notional offence probability score
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	No effect	0
Land 100-250m from any breeding pond(s)	No effect	0
Land >250m from any breeding pond(s)	0.01 - 0.1 ha lost or damaged	0.001
Individual great crested newts	No effect	0
	Maximum:	0.001
Rapid risk assessment result:		<b>GREEN: OFFENCE HIGHLY UNLIKELY</b>

Therefore, GCN are considered likely absent from the Site and are not considered further.

### 3.4.4 Reptiles

All species of common reptiles receive limited protection from harm under Section 9(1) of the WCA. Smooth snake (*Coronella austriaca*) and sand lizard (*Lacerta agilis*) are also EPS listed in Annex IV of the Habitats Directive.

The 2km BRERC data search (2014-2022) returned:

<sup>9</sup> Langton et al (2001). Great Crested Newt Conservation Handbook, Froglife, Halesworth.

<sup>10</sup> Natural England (2020) Great Crested Newt Risk Assessment Tool; in Method Statement Form WML-A-14-2, available online at: <https://www.gov.uk/government/publications/great-crested-newts-apply-for-a-mitigation-licence>



- Three records of slow worm (*Anguis fragilis*), the closest being 1.23km from Site.
- One record of grass snake (*Natrix helvetica*) in 2022 (OS NGR ST 735 836), located 1.53km south-east of the Site.

The grassland, hedgerows, and woodland provide suitable habitats for common reptile species. The fields are considered to contain scattered scrub and tall tussocky swards, which are optimal habitat for commonly occurring reptile species. Common reptile species could be present within the Site and therefore further consideration is required.

### 3.4.5 Birds

All naturally occurring wild birds in the UK are afforded protection. It is illegal to harm any wild bird, damage their eggs and destroy their nests whilst in use or being built. Bird species listed on Schedule 1 of the WCA are afforded extra legal protection concerning the disturbance of their young and interference whilst nesting.

The 2km BRERC data search identified 4,208 records of bird species (2014-2022). Including 79 species of birds listed under Schedule 1 of the WCA 1981 (as amended), as shown in **Table 3-7**:

**Table 3-7 Birds records within 2km of Site**

Common Name	Latin Name	Closest Record to the Site (km)	Designation
Redwing	<i>Turdus iliacus</i>	1.37	Schedule 1
Barn Owl	<i>Tyto alba</i>	1.25	Schedule 1
Fieldfare	<i>Turdus pilaris</i>	1.8	Schedule 1
Brambling	<i>Fringilla montifringilla</i>	1.99	Schedule 1
Cetti's warbler	<i>Cettia cetti</i>	1.65	Schedule 1
Greylag goose	<i>Anser anser</i>	1.54	Schedule 1
Quail	<i>Coturnix coturnix</i>	1.76	Schedule 1
Whimbrel	<i>Numenius phaeopus</i>	1.59	Schedule 1
Peregrine	<i>Falco peregrinus</i>	1.18	Schedule 1
Bullfinch	<i>Pyrrhula pyrrhula</i>	1.93	Section 41
Cuckoo	<i>Cuculus canorus</i>	0.93	Section 41
Dunnock	<i>Prunella modularis</i>	1.87	Section 41
Grasshopper warbler	<i>Locustella naevia</i>	0.75	Section 41
House sparrow	<i>Passer domesticus</i>	1.99	Section 41
Hawfinch	<i>Coccothraustes coccothraustes</i>	1.37	Section 41
Herring gull	<i>Larus argentatus</i>	1.37	Section 41
Lesser redpoll	<i>Acanthis cabaret</i>	1.73	Section 41
Linnet	<i>Linaria cannabina</i>	0.9	Section 41
Marsh tit	<i>Poecile palustris</i>	1.72	Section 41





Common Name	Latin Name	Closest Record to the Site (km)	Designation
Reed bunting	<i>Emberiza schoeniclus</i>	0.71	Section 41
Ring ouzel	<i>Turdus torquatus</i>	0.9	Section 41
Skylark	<i>Alauda arvensis</i>	1.72	Section 41
Song thrush	<i>Turdus philomelos</i>	0.71	Section 41
Spotted flycatcher	<i>Muscicapa striata</i>	0.71	Section 41
Starling	<i>Sturnus vulgaris</i>	0.89	Section 41
Tree pipit	<i>Anthus trivialis</i>	0.9	Section 41
Wood warbler	<i>Phylloscopus sibilatrix</i>	1.99	Section 41
Yellow wagtail	<i>Motacilla flava</i>	0.94	Section 41
Yellowhammer	<i>Emberiza citrinella</i>	0.94	Section 41

The Site contained suitable habitat for ground nesting birds such as skylark (*Alauda arvensis*). In addition, the hedgerows and woodland also provided suitable habitat for nesting birds. The Site could support nesting birds and therefore further consideration is required.

The Site was not considered suitable for wintering birds due to the lack of wet areas.

### 3.4.6 Mammals

#### 3.4.6.1 Bats

Bats are protected from killing and injury, and also damage or destruction or obstruction of a resting place, and disturbance while occupying a structure or place which it uses for shelter or protection' under the Wildlife & Countryside Act (1981) and Conservation of Habitats and Species Regulations (2017).

The 4km BRERC data search returned 39 records of nine bat species, the closest record being a Natterer's bat (*Myotis nattereri*), located 635m south-west of the Site. Three further bat roosts were also identified within 4km of the Site, including two lesser horseshoe (*Rhinolophus hipposideros*) roosts (2014 and 2022) and one *Myotis* (unidentified) roost (2015), the closest roost being a lesser horseshoe located 1.42km south-west of the Site.

Eleven EPS Licences have been issued within 4km of the Site for bats. Details are provided in Table 3-8.

**Table 3-8: Bat Records of EPSL within 4 km**

Species	Licence Type	Distance (km) from Site	Year of Expiry
Brown long eared ( <i>Plecotus auritus</i> ); Common pipistrelle ( <i>Pipistrellus pipistrellus</i> ); greater horseshoe ( <i>R. ferrumequinum</i> ); lesser horseshoe.	Impact on a breeding site; destruction of a breeding site; destruction of a resting place.	0.44km south-west.	2028



Species	Licence Type	Distance (km) from Site	Year of Expiry
Common pipistrelle	Destruction of a resting place	1.07km west.	2024
Brown long eared; common pipistrelle; greater horseshoe; lesser horseshoe.	Destruction of a resting place.	1.69km south-east.	2017
Brown long eared; common pipistrelle	Destruction of a resting place.	2.27km south.	2020
Common pipistrelle; soprano pipistrelle ( <i>Pipistrellus pygmaeus</i> ); lesser horseshoe	Destruction of a resting place.	2.41km south.	2017
Brown long eared; Whiskered bat ( <i>M. mystacinus</i> ).	Damage of a resting place; destruction of a resting place.	2.63km north.	2017
Common pipistrelle; Daubentons bat	Destruction of a resting place.	3.24km east.	2017
Common pipistrelle; Natterers' bat	Impact on a breeding site; damage of a breeding site; destruction of a resting place.	3.5km north-west.	2024
Brown long eared; common pipistrelle; greater horseshoe; lesser horseshoe; serotine ( <i>Eptesicus serotinus</i> ).	Destruction of a resting place.	3.68km south-east.	2024
Common pipistrelle; Daubenton's bat; Lesser horseshoe; Whiskered bat	Impact on a breeding site; destruction of a breeding site; destruction of a resting place.	3.92km north-east.	2020
Common pipistrelle	Damage to a resting place; destruction of a resting place.	3.96 south-west.	2020
Common pipistrelle; serotine; soprano pipistrelle.	Impact on a breeding site; damage of a breeding site; damage of a resting site.	3.9km south-east.	2025

The Site contains open fields, woodland edge, and hedgerows which are habitats that offer commuting and foraging habitat. Therefore, foraging, and commuting bats may utilise the Site, and further consideration is required.



### 3.4.6.2 Foraging and Commuting Bats

The Site contains open grassland, woodland and hedgerows which are habitats that offer commuting and foraging habitat. Therefore, foraging, and commuting bats may utilise the Site, and further consideration is required.


### 3.4.6.3 Roosting Bats

The trees within the Site boundary were assessed for their potential for roosting bats as per Section 2. The majority of the trees within the Site had negligible potential for roosting bats. Table 3-9 presents the results of trees identified with potential for roosting bats. Tree classification was taken to PRF-I, PRF-M or FAR where possible (refer to Section 2.1.4). A few of the trees within the woodland had minor sub-optimal PRF-I features. Therefore, roosting bats could be utilising the Site, and further consideration is required.

**Table 3-9: GLTA Results**

Tree	Photograph
<p>Ash (205) TN 1 (on Figure 1)</p> <p>The tree contained a large cavity at the base (butt rot) and numerous other roosting features such as callous rolls, tear outs, knot holes, splits and loose bark</p> <p>PRF-M</p>	



Tree	Photograph
<p>Ash (ST 72261 84702)</p> <p>Small knot holes and minor plate (thick stemmed) ivy</p> <p>PRF-I</p>	

#### 3.4.6.4 Badger

Badgers and their setts are protected under the Protection of Badgers Act 1992. This makes it an offence to kill or take a badger, to cruelly ill-treat a badger, or to interfere with a badger sett, including disturbing a badger while it is occupying a sett.

The 2km BRERC data search (2014-2024) returned one record of badger (2016). No setts were observed during the survey within the Site or within 30m and no evidence of badgers were observed. The woodland and grassland habitats offer suitable habitat for foraging badgers. Although badger setts are not present, badgers could still be utilising the Site for foraging and therefore further consideration is required.

#### 3.4.6.5 Otter

Otters are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), as well as under Schedule 2 of the Conservation of Habitats and Species Regulations 2017. They are listed as threatened species in Section 41 of the NERC Act.

The 2km BRERC data search (2014-2024) returned one record of otter (2015) (OS NGR ST 725 831 and ST 722 844), the closest record is 400m south of the Site.

Ladden Brook, a slow-flowing stream within the northern section of the Site, could provide suitable habitat for Otters. However, no signs were recorded during the survey and no holts were recorded 50m up or downstream. Otters could be using Ladden Brook and therefore otters require further consideration.

#### 3.4.6.6 Water Vole

Water voles are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). They are listed as threatened species in Section 41 of the NERC Act.

No records of water vole were returned in the 2km BRERC data search.



The habitats within the Site are suitable for water voles including Ladden Brook, a slow-flowing stream within the northern section of the Site. Alongside the banks, there is scrub and herb vegetation, which offers habitat for water voles. The water levels are suitable for cover from predators, and the dense bramble scrub which is an important source of cover and protection for this species<sup>11</sup> offers shelter.

Additionally, a mammal burrow was recorded along the bank face of the brook (ST 72275 84778), below the bramble scrub (see Figure 3-2). Therefore, it is not possible to rule out the presence of water voles in this area. No other evidence of water voles was observed along Ladden Brook such as footprints, feeding signs etc. Therefore, it is considered that this burrow is likely to belong to another small mammal species.

As their presence could not be ruled out during the ecological walkover survey due to encountering a potential burrow entrance, further consideration of water voles is required.

**Figure 3-2: Mammal Burrow on the Bank of Ladden Brook**



#### **3.4.6.7 Hazel dormouse**

The Hazel dormouse is fully protected through its inclusion in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and in Schedule 2 of the Conservation of Habitats and Species Regulations 2017, it is also listed as a threatened species in Section 41 of the NERC Act.

The 2km BRERC data search (2014-2024) returned 10 records of hazel dormouse, the closest being 1.46km from Site. One dormouse Mitigation Licence, located 1.27km west of the site was granted within a 4km radius.

The woodland and hedgerows within the Site provide suitable habitat for dormouse.

Tetra Tech previously completed dormouse checks in 2021 and recorded no evidence of dormouse. It is highly unlikely that dormouse have populated the woodland within the last few years. Dormouse are therefore considered to be absent from the Site.

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<sup>11</sup> Neyland, P.J (2011) Habitat, home range, diet and demography of the water vole (*Arvicola amphibious*): Patch-use in complex wetland landscape.



### 3.4.6.8 Other Mammals

Hedgehog (*Erinaceus europaeus*) are listed under the Wild Mammals Protection Act (1996) which prohibits cruel treatment of hedgehogs and they are a Species of Principal Importance under Section 41 of the NERC Act 2006 (as amended).

There are 57 records of European hedgehog within 2km of the Site. The grassland, woodland, and hedgerows provide suitable habitat for this species, and further consideration is required.



## 4.0 Summary of Ecological Features

Table 4-1 shows the ecological features, their importance and which have been scoped in or out of requiring further assessment.

**Table 4-1: Ecological Features Scoping**

Ecological Feature	Importance	Rationale	Scope IN/OUT
Statutory Sites	International and National	Statutory designated sites often represent the most significant ecological receptors, being of recognised importance at an international and/or national level. National Site networks designations include Special Protection Areas (SPAs), Special Areas of Conservation (SACs), and Ramsar sites. Whilst national designations include Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs) and Local Nature Reserves (LNRs).  There are four statutory designated sites within the search radius of the Site, the nearest is Bishop's Hill Wood SSSI which is approximately 2.28km. Due to the distance, the nature of the development and lack of functional links, no impacts are anticipated on any statutory site as a result of the proposed works.	OUT
Ladden Brook and Brinsham Bridge SNCI	County	Ladden Brook and Brinsham Bridge SNCI falls within the northern section of the Site. The SNCI is designated for the presence of calcareous grassland and notable species. The section of the SNCI within the Site is woodland (including an area of deciduous woodland, wet woodland, Ladden Brook and lines of trees). An area of this SNCI will be lost by the construction of the Haul Road.	IN
Other non-statutory sites	County	Not including Ladden Brook and Brinsham Bridge SNCI, there are ten non-statutory designated sites within the 2km search radius of the Site, the nearest is 431m from the Site. Due to the distance, the nature of the development and lack of functional links, no impacts are anticipated on any statutory site as a result of the proposed works.	OUT
Habitats	County	The Site contains three notable habitats 'other lowland mixed deciduous woodland', 'wet woodland' and 'hedgerows' all of which are Habitats of Principal Importance. The construction of the Haul Road will result in the loss of some of these habitats.	IN
Veteran Tree	County	The original proposal was to remove the veteran tree, but the scheme has been redesigned to in order to retain this irreplaceable habitat. The tree should be protected from construction activities by implementing an appropriate root protection zone.	IN
Plants	Local	Native blue bells are present within the Site which would be destroyed by the construction of the Haul Road	IN
Invertebrate	Local	The woodland had potential for stag beetle associated with dead wood and Ladden Brook has potential for aquatic invertebrate communities although these are considered to be common species. The surrounding habitat contains a large amount of woodland and therefore the loss of the woodland for the Haul Road is not considered to be a significant impact on the local stag beetle population. Aquatic invertebrates associated with Ladden Brook are likely to be common and widespread and the proposed impact of the U-shaped Culvert is unlikely to have a significant negative effect on aquatic invertebrates. Pollution prevention measures will need to be place.	OUT



Ecological Feature	Importance	Rationale	Scope IN/OUT
Amphibians	County	Great crested newts are known to be present in a pond 350m north of the Site. Ladden Brook is situated between the pond and the majority of the Site. The woodland north of Ladden Brook does have connectivity to the pond. This pond was surveyed in 2021 for eDNA and was found to be negative, although this data is now out of date.  Natural England's Risk Assessment Tool <sup>12</sup> was also run for the Site; due to only a 0.038ha amount of potential terrestrial habitat being removed in >250m range, this gave the result 'Green – Offence Highly Unlikely'. Therefore no further assessment for GCN is required.	OUT
Reptiles	Local	The Site does have potential for common reptile species within the grassland. The construction of Haul Road without mitigation could potentially kill and injure reptiles and therefore reptiles will be considered in detail.	IN
Birds - breeding	Local	The Site contained suitable habitat for common birds species (within the woodland and hedgerows) and potential for ground nesting birds in the grassland. Construction of the Haul Road could disturb or impact nesting birds and therefore nesting birds are scoped in further mitigation measures.	IN
Birds - wintering	Local	The site was deemed unsuitable support important assemblages of wintering birds and these have been scoped out.	OUT
Otters	Local	Ladden Brook is suitable for otters and there are records of otters in the vicinity, no holts were present within the Site or within 50m. Otters could be travelling through the Site and therefore construction of the Haul Road could negatively impact them and therefore otters have been scoped in for further mitigation measures.	IN
Water voles	Local	A possible water vole burrow was found within Ladden Brook but no other evidence of water voles was observed. There is still a risk that water voles are present and therefore installation of the U-shaped culvert could impact water voles and further consideration is required.	IN
Badgers	Local	No setts are present within the Site or within 30m of the Site. Habitat is suitable for foraging badgers and construction activities could negatively impact badgers and therefore badgers have been scoped in.	IN
Bats – foraging	Local	Bats will be active within the Site and surrounding area and will be foraging along the woodland edge and within the woodland as well as grassland. The proposed scheme results in the removal of a small section of woodland which is not considered to impact the local bat population as the bats will still be able to follow the woodland edge. In addition, no lighting is proposed for the Haul Road. Therefore, no significant impact on foraging bats is considered.  It should be noted that any future application to extend the Haul Road through the woodland will require further survey and assessment.	IN

<sup>12</sup> Natural England (2020) Great Crested Newt Risk Assessment Tool; in Method Statement Form WML-A-14-2, available online at: <https://www.gov.uk/government/publications/great-crested-newts-apply-for-a-mitigation-licence>





Ecological Feature	Importance	Rationale	Scope IN/OUT
Bats – roosting	Local	<p>Two trees were identified as having potential for roosting bats within the Site. The veteran ash tree will be retained and buffered from the Haul Road and therefore no impact on roosting bats within this tree is considered and no further surveys works are deemed necessary. An ash tree with PRF-I was also recorded along Brinsham Lane which may need to be removed as part of the Haul Road. Current best practice (Collins 2023) for tree roost does not require additional survey works for trees with PRF-I but do require consideration to the overall roosting resources available for bats.</p> <p>The construction of the Haul Road will require the removal of trees and tree roosts can form and change over time relatively quickly, therefore the potential for tree roosting bats is considered further</p>	IN



## 5.0 Comments from LPA ecologists on previous submissions

### 5.1 Comments from LPA ecologists

Two rounds of comments have been received from the South Gloucestershire Ecologists these are summarised below in Table 5-1.

**Table 5-5-1 Summary of Ecology Consultee Comments**

Date of consultee response	<i>Additional Information Requested/Objection Raised (italics) – Responses by SLR (bold)</i>
June 2023	<p><i>Ecological Issues</i></p> <p><i>An Ecological Appraisal (Tetra Tech, March 2022) and Protected Species Report (Tetra Tech, March 2022) has been submitted.</i></p> <p><i>The original Phase 1 Habitat survey was carried out in June 2020 with a further assessment carried out in June 2021. Activity surveys were carried out in 2020 and 2021 and are therefore over 18 months old and no longer valid, as per CIEEM guidelines and the Tetra Tech Ecology report itself. Update surveys required.</i></p> <p><b>Updated UKHab survey and protected species scoping survey including ground level tree roost assessment has been undertaken in April 2024. Therefore, update to date information is available for the Site. Updated bat activity surveys have not been undertaken in this suite of surveys. Further comments are provided below in relation to bats.</b></p> <p><i>SNCI</i></p> <p><i>The proposals will directly impact upon Ladden Brook and Brinsham Bridge SNCI, which is designated for its calcareous grassland and notable species. The phase 1 habitat survey did not record any calcareous grassland, but instead recorded broadleaved woodland, dense scrub and running water within the SNCI boundary and suggested that due to lack of management, the site may have degraded since it's SNCI designation.</i></p> <p><i>Nevertheless, habitats recorded provide important resources and corridors for wildlife. A detailed botanical survey was not carried out to accurately assess the range of species present.</i></p> <p><i>0.2 ha of SNCI habitat will be removed to facilitate the proposals. PSP19, when referring to SNCIs, supporting BAP species and wildlife corridor, state that:</i></p> <p><i>“Development proposals, where they would result in significant harm to sites of value for local biodiversity, which cannot be avoided by locating it on an alternative site with less harmful impacts, adequately mitigated or, as a last resort, compensated for, will be refused”.</i></p>



Date of consultee response	<i>Additional Information Requested/Objection Raised (italics) – Responses by SLR (bold)</i>
	<p><i>As there is an existing route used to travel between the quarries, I do not see a justifiable reason to fragment the SNCI.</i></p> <p><b>The area impacted within the SNCI boundary contains broadleaved deciduous woodland, a small area of wet woodland and Ladden brook, which as stated above is not calcareous grassland which the SNCI is designated for. Mitigation is proposed for the loss of these habitats (see response to comments below on HPIs). In relationship to the justification for the proposed development is outlined below –</b></p> <p><b>As set out in the existing planning application submitted to SGCC, permission exists for the main principle of the development, which is for the extraction of 11 million tonnes of mineral from Brinsham West Quarry. Therefore, the principle of extraction and the need for the mineral are already established.</b></p> <p><b>Application P22/02019/F is simply to secure a more effective and efficient route for the material that will be worked in the permitted Brinsham West Quarry to be transported from its source to the processing plant within Southfields Quarry, thus reducing significantly the permanent environmental impacts that would otherwise be caused through implementing the existing tunnel/conveyor scheme.</b></p> <p><b>The temporary implementation of the proposed haul route will, when considered against what is currently permitted, realise significant environmental and economic advantages by removing the need to:</b></p> <ul style="list-style-type: none"> <li><b>• construct a tunnel from Brinsham West Quarry underneath Wickwar Road,</b></li> <li><b>• provide a reduction in the construction and operation of processing plant at the Quarry, and</b></li> <li><b>• provide the significant reduction of the distance of haulage required between the operational quarry and the processing plant.</b></li> </ul> <p><b>In this respect the current average travel distance for each tonne of the approximately 11 million tonnes to be extracted from Brinsham West will be reduced. This represents a reduction in the distance travelled by haul trucks of almost 150,000 km over the duration of the operational period of Brinsham West Quarry. In terms of the overall footprint, the proposed new scheme reduces operations significantly</b></p> <p><i>Habitats (including habitats of principle importance (Priority Habitats) Section 41 Natural Environment and Rural Communities (NERC) Act 2006:</i></p> <p><i>Broadleaved semi natural woodland</i></p> <p><i>Broadleaved plantation woodland</i></p> <p><i>Dense / continuous scrub</i></p> <p><i>Scattered scrub</i></p> <p><i>Scattered trees</i></p>



Date of consultee response	<i>Additional Information Requested/Objection Raised (italics) – Responses by SLR (bold)</i>
	<p><i>Unimproved neutral grassland</i>  <i>Semi-improved neutral grassland</i>  <i>Unimproved calcareous grassland</i>  <i>Semi-improved calcareous grassland</i>  <i>Improved grassland</i>  <i>Amenity grassland</i>  <i>Tall ruderal</i>  <i>Ephemeral</i>  <i>Hedgerow</i>  <i>Standing water</i>  <i>Buildings/hardstanding and gardens</i></p> <p><i>The site is not considered to be botanically diverse, however no detailed botanical surveys were undertaken. Wild service-tree, a South Gloucestershire BAP species, was recorded.</i></p> <p><i>Habitat Loss</i></p> <p><i>The proposed access road will result in the loss of broadleaved and plantation woodland, a single veteran ash tree, scrub, a section of species poor hedgerow along Gravel Hill Road, small sections of overgrown hedge either side of the gateways north and south of Brinsham Lane, improved and semi-improved calcareous grassland, amenity grassland and quarry/spoil habitat.</i></p> <p><i>The veteran ash tree, proposed for removal, is an irreplaceable habitat. The NPPF, paragraph 180 (c), states that:</i></p> <p><i>“Development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused”.</i></p> <p><i>Again, as there is an existing route used to travel between the quarries, I do not see a justifiable reason to remove important habitat. The removal of the veteran ash tree would be contravening national and local policy.</i></p> <p><i>The ecology report states that approximately 1.4 ha of land will be used to plant compensatory woodland habitat, comprising fast growing, native trees and shrubs of local provenance. The location of the proposed woodland habitat is approximately 0.6 km from the proposed access route and will therefore not provide a replacement link between the fragmented areas of woodland. Additionally, the woodland habitat will take up to 30 years to establish and will not compensate for the loss of an irreplaceable habitat. Defer to Landscape Officer’s comments.</i></p> <p><b>The scheme now to be adjusted to retain the Veteran tree.</b></p> <p><b>Proposed plantings will be undertaken to mitigate for the loss of the deciduous woodland, wet woodland and hedgerow habitats and the Haul Road is only temporary (albeit 15 years). Only a small area of deciduous woodland is being removed as part of the proposal 0.038ha and it is</b></p>



Date of consultee response	<i>Additional Information Requested/Objection Raised (italics) – Responses by SLR (bold)</i>
	<p><b>acknowledged that the woodland would take longer to establish than this.</b></p> <p><b>Wet woodland can establish relatively quickly, and this is what has occurred in the interim between the original survey works and the current habitat survey works 2024. The offsite mitigation area is adjacent to the Ladden Brook and therefore provides a suitable place to establish this habitat. Following the temporary scheme the original wet woodland would be able to reestablish in its current position.</b></p> <p><i>Ladden Brook</i></p> <p><i>The Ladden Brook stream corridor includes areas of rank unimproved neutral grassland, dense scrub and broadleaved woodland associated with the running water.</i></p> <p><i>Ladden Brook will be directly impacted by the proposed access route however, “the proposed precast concrete portal culvert unit is a U-shaped spanning bridge which will help maintain channel and banking and therefore minimise the impact to the brook and the wildlife that use it”.</i></p> <p><b>No unimproved neutral grassland was present within the footprint of works. The culvert has been sensitively designed to minimise impacts of fauna species utilising Ladden Brook.</b></p> <p><i>Species protected under the Conservation of Habitats &amp; Species Regulations (‘European Protected Species) and Wildlife &amp; Countryside Act 1981 (as amended):</i></p> <p><i>Bats</i></p> <p><i>Subsequent bat surveys were carried out in August and September 2021, with no bats recorded emerging or re- entering the quarry face or high-mod trees. It has been recommended that a pre-felling dawn survey and subsequent aerial survey by a licenced bat ecologist is carried out on T1-T4 immediately prior to felling and on the rock face prior to construction. It has also been recommended that all trees with suitability for roosting bats should be felled using a precautionary ‘soft felling’ approach. Bat surveys are now over 12 months old and need updating.</i></p> <p><i>Transect surveys were carried out and static detectors were deployed. A total of nine species were recorded using the site and its surroundings. Species recorded included common pipistrelle, myotis sp., lesser horseshoe, serotine, noctule, Leisler’s, brown long-eared, soprano pipistrelle and a greater horseshoe bat. Surveys confirmed that the woodland, hedgerows, treelines and the Ladden Brook corridor were being utilised by at least eight bat species for commuting and foraging. These habitats will be lost, and foraging/commuting bats will therefore be directly impacted.</i></p>



Date of consultee response	<i>Additional Information Requested/Objection Raised (italics)</i> – Responses by SLR (bold)
	<p><b>The bat surveys historically undertaken surveyed a larger area. Although static bat detectors were deployed (A and B in Tetra Tech report) at the locations at either end of the Haul Road.</b></p> <p><b>The area along the woodland edge will only have a small section removed but bats will still be able to commute along the woodland edge. The additional distance is minimal and will therefore not cause bats to use excess of energy. The woodland edge will still be available for bats to utilise.</b></p> <p><b>The future amended application for the access road into the quarry through the woodland will require updated bat activities surveys. To ascertain the usage and potential impacts from this scheme.</b></p> <p><i>Lesser Horseshoe Bats</i></p> <p><i>A total of 642 lesser horseshoe passes were recorded on the static detectors. The results indicate that the broadleaved woodland south of Brinsham Lane (A), the plantation woodland at the north of the proposed route (B) and the hedgerow along Gravel Hill Road (C) are being utilised by commuting lesser horseshoe bats. Given the timing of the passes at location B, it was considered that there was a lesser horseshoe roost close to the area and that the woodland edge is being utilised for foraging.</i></p> <p><i>The proposed woodland loss would therefore have a direct impact on commuting and foraging lesser horseshoe bats, a rare, declining, South Glos BAP species. It is understood that horseshoe bats fly close to vegetation, follow linear landscape, and tend to avoid large gaps along linear routes. The fragmentation of the SNCI therefore alter the behaviour of this local population.</i></p> <p><b>For rationale outlined above no significant impact is anticipated commuting lesser horseshoe and no large gaps will be created preventing horseshoes navigating around the landscape.</b></p> <p><i>Great Crested Newts</i></p> <p><i>There were no ponds, and therefore no breeding habitat for amphibians, on the site. The report states that there was no suitable breeding habitat within 500m, however in contrary, the report also states that there was a pond, with a breeding GCN record, located approximately 0.3 km north of the site (TN27). An eDNA test was carried out on the pond located 0.3 km north in April 2021, which returned a negative result. This is now out of date, with 2 breeding seasons since.</i></p> <p><i>The site offers optimal foraging and commuting habitat for GCN within their terrestrial life phases including the Ladden Brook corridor, woodland and hedgerows. Given the suitable terrestrial habitat on site and the known records in the wider area, as a precaution, a ‘sensitive clearance’ method has been recommended for clearing vegetation.</i></p>



Date of consultee response	<i>Additional Information Requested/Objection Raised (italics) – Responses by SLR (bold)</i>
	<p><b>The nearest waterbody is c. 350m to the north. The majority of the Site is separated from the waterbody by Ladden Brook which is flowing and therefore creates a barrier for GCN dispersal into the majority of the Site, the woodland to north of the Site does have connectivity to this waterbody. The area within the Site which was accessible by GCN was then run through Natural England’s Risk Assessment Tool<sup>13</sup>; due to only a 0.038ha amount of potential terrestrial habitat being removed in &gt;250m range, this gave the result ‘Green – Offence Highly Unlikely’ see Table 3-4 (in Section3.4.3).</b></p> <p><b>The eDNA of the pond is now over 3 years old and is considered out of date as ecological survey information is valid between 12 and 24 months from date of its capture CIEEM<sup>1</sup>. However given an offence is highly unlikely, it is considered not necessary to update this information.</b></p> <p><b>A sensitive clearance method for vegetation is proposed for reptiles and therefore this can be used for amphibians as well.</b></p> <p><i>Dormice</i></p> <p><i>Dormice were recorded approximately 1 km NW of the site in 2015. The Ladden Brook stream corridor includes extensive areas of secondary woodland and scrub suitable for dormice providing a range of woody species present which are well-connected to the wider hedgerow and woodland network. Some of the older mixed plantation woodlands could also support dormice.</i></p> <p><i>No hazel dormouse or signs of hazel dormice were recorded during further surveys of nest tubes and boxes carried out by Tetra Tech in 2021. Wood mouse and wood mouse nests were recorded in several tubes/boxes during the surveys in August and October. Suitable mitigation has been provided.</i></p> <p><b>Refer to relevant sections within this report.</b></p> <p><i>Otter and Water Vole</i></p> <p><i>The Ladden Brook is considered to be of low potential for water vole with no signs recorded. No evidence of otter was recorded within 200 m upstream or downstream of the proposed access route however Ladden Brook is considered to offer suitable commuting habitat for otter with historic evidence of use. Any works undertaken within 5m of Ladden Brook will first require pre-works verification survey to search for water vole activity.</i></p> <p><i>The proposals include no artificial lighting, or night-time working, along the proposed access road when otters would be active. In addition, it is unlikely that the proposed U shaped spanning bridge will restrict otters from commuting along the brook as the channel will be maintained and the access</i></p>

<sup>13</sup> Natural England (2020) Great Crested Newt Risk Assessment Tool; in Method Statement Form WML-A-14-2, available online at: <https://www.gov.uk/government/publications/great-crested-newts-apply-for-a-mitigation-licence>



Date of consultee response	<i>Additional Information Requested/Objection Raised (italics)</i> – Responses by SLR ( <b>bold</b> )
	<p><i>road will not be a barrier to movement. A pre-commencement otter survey will be carried out no more than three months before works commencing. Additional mitigation has also been provided.</i></p> <p><b>Refer to relevant sections within this report.</b></p> <p><i>Species protected under the Wildlife and Countryside Act 1981 (as amended):</i></p> <p><i>Birds</i></p> <p><i>The scrub, woodland and hedgerows along the proposed access route provides suitable nesting and foraging habitat for a range of common farmland/ woodland birds. Barn Owl and Tawny Owl were recorded within the wider site during bat activity surveys.</i></p> <p><i>The report states that breeding bird surveys carried out in 2010 noted that the stream corridor habitats were likely to be of the most value to breeding birds. No breeding bird surveys have been carried out as part of the assessment for this application.</i></p> <p><b>Due to the amount of breeding bird habitat being removed (small area of woodland, scrub and sections of hedgerow) and the ample nesting habitat in the wider area namely woodland, updated nesting birds' surveys are not deemed necessary for this application. Mitigation planting is proposed, and it is recommended that bird boxes are erected within the SNCI to offer further nesting opportunities.</b></p> <p><b>The stream corridor is being retained with a box culvert being installed and therefore stream can be continued to be used by birds.</b></p> <p><i>Reptiles</i></p> <p><i>Suitable habitat for reptiles was recorded on the site. The wider SNCI site was used as a reptile receptor area in 2011, and therefore reptiles are known to be present in the area.</i></p> <p><i>The report states that seven reptile surveys were required “within the optimal survey window (April to June or September)”. Nine reptile surveys were carried out in September and October 2020 and June 2021. The majority of the surveys were carried out in October 2020, a sub-optimal month, in temperatures of 11 and 12 degrees, with cloud cover ranging from 30-70%. This is unsuitable and unsurprisingly returned very low counts of reptiles in comparison to those surveys carried out in the optimal month of June (2021). Consequently, I am not convinced that only a low population of grass snake is present. A good population of slow worm was recorded with a peak count of 16 adults and 25+ juveniles on one site visit carried out in June 2021. The surveys are now over 2 years old.</i></p> <p><i>Reptile surveys were not completed in Southfields Quarry for safety reasons, although this area provides suitable habitat for reptiles. Reptile presence has been assumed.</i></p> <p><i>The proposed access route is located within the woodland and scrub habitat which are relatively heavily shaded and less suitable for reptiles, with no</i></p>





Date of consultee response	<i>Additional Information Requested/Objection Raised (italics)</i> – Responses by SLR ( <b>bold</b> )
	<p><i>direct impacts on the unimproved grassland where the reptiles were recorded. However, the woodland areas offer potential hibernation habitat. Based on the limited impacts to suitable habitats a reptile translocation was not considered reasonable. It is recommended that areas of suitable reptile habitat that will not be impacted by the works will be protected through the use of suitable fencing. Additionally, the vegetation clearance work will be carried out using a ‘sensitive clearance’ method outside of the reptile hibernation period and supervised by an ECoW.</i></p> <p><b>Agreed and this is the current findings of the latest ecological survey works. A sensitive approach to habitat clearance with a two phased cut of the grassland within the Site and the woodland will be undertaken and this will be outlined within the CEMP. The works should be undertaken whilst reptiles are active (April to October, weather dependant).</b></p> <p><b>Due to the Size of the proposed scheme it is not deemed necessary to update the reptile surveys. The woodland area within the SNCI is highly shaded and therefore less optimal for reptiles, although the tree routes do provide suitable habitat for hibernating reptile, and these would need to be removed outside of the hibernation period for reptiles</b></p> <p><i>Badgers protected under the Badger Act 1992:</i></p> <p><i>Four inactive badger setts were recorded along the proposed access route (in the rifle range) and within 50 m of the proposed access route. In addition, the woodland, scrub and grassland offer suitable foraging habitat for badgers. It has been recommended that a pre-commencement survey is carried out two months prior to works commencing. Monitoring surveys might be necessary. Additional, general mitigation has also been provided.</i></p> <p><b>Agreed a check 3 month prior to works and immediately prior to works will be undertaken and this will be included within the CEMP.</b></p> <p><i>Species of principle importance (Priority Species) Section 41 Natural Environment and Rural Communities (NERC) Act and Local Biodiversity Action Plan Species:</i></p> <p><i>Invertebrates</i></p> <p><i>The open vegetation at Southfields Quarry, the Ladden Brook Valley and the semi-improved grassland north- west of Brinsham Farm all have potential to support invertebrate populations.</i></p> <p><i>A 2010 report concluded that the Brinsham Steam/ Ladden Brook was sub-optimal for white-clawed crayfish. This was due to the change in flow (a result of the inflow pumped from the quarries upstream) and the fact that sections of the stream dry out completely in the spring.</i></p> <p><i>Similarly to otter, the U-shaped spanning bridge will avoid the stream bed and banks, and white-clawed crayfish will not be impacted. Suitable mitigation has been provided.</i></p>



Date of consultee response	<i>Additional Information Requested/Objection Raised (italics) – Responses by SLR (bold)</i>
	<p><i>Hedgehog</i></p> <p><i>The habitat on site and surrounding habitats provides foraging and refuge opportunities for hedgehogs. Mitigation provided for badgers is suitable for hedgehog, and sensitive vegetation clearance carried out for reptiles and amphibians can also apply to hedgehog.</i></p> <p><b>Agreed this will be outlined within the CEMP.</b></p> <p><i>CEMP</i></p> <p><i>The CEMP will be informed by updated activity surveys; however, the following will likely be required for inclusion:</i></p> <ul style="list-style-type: none"> <li>• <i>Location of reptile fencing as mentioned in the ecology report to safeguard reptiles within the SNCI</i></li> <li>• <i>Details on how retained habitats will be mitigated against dust/noise/vibration</i></li> <li>• <i>Further details on vehicle movement to ensure retained habitats are safeguarded</i></li> <li>• <i>Materials should be stored on cleared ground or pallets to safeguard habitats and animals' underneath</i></li> <li>• <i>Specific mitigation details for Ladden Brook</i></li> </ul> <p><i>LEMP</i></p> <p><i>The following should be included:</i></p> <ul style="list-style-type: none"> <li>• <i>Plan showing the details of proposed locations for biodiversity enhancements.</i></li> <li>• <i>Details of compensatory planting for lesser horseshoe bats. This cannot be conditioned given the direct impact of the proposals on commuting and foraging lesser horseshoe bats.</i></li> </ul> <p><b>Conclusions and Recommendations</b></p> <p><i>I would suggest that the proposals are unacceptable given the fragmentation of an SNCI comprising important habitats that provide suitability to a range of protected species, including a local population of rare, lesser horseshoe bats. The removal of woodland and a veteran tree (an irreplaceable habitat) is unjustified. The three derogation tests (below) have not been met:</i></p> <ul style="list-style-type: none"> <li>• <i>The activity must be for imperative reasons of overriding public interest or for public health and safety; <b>refer to justification for requirement outline above</b></i></li> <li>• <i>There must be no satisfactory alternative; and - <b>refer to justification for requirement outline above</b></i></li> <li>• <i>Favourable conservation status of the species must be maintained. <b>It is considered the favourable conversation status will be maintained for all protected and notable species.</b></i></li> </ul> <p><b>Requirements prior to determination:</b></p> <p>As stated by the Project Ecologist, the details of the report remain valid for a period of 18 months. Therefore, Ecology surveys are now out of date and</p>



Date of consultee response	<i>Additional Information Requested/Objection Raised (italics) – Responses by SLR (bold)</i>
	<p>invalid, and require update surveys prior to determination. A detailed botanical survey and breeding bird survey should also be carried out. A Biodiversity Net Gain assessment should be submitted using the most up to date DEFRA metric. should aim to achieve 10% Biodiversity Net Gain onsite.</p> <p><b>The planning application is a Section 73 application and is therefore exempt from BNG. Mitigation planting is proposed around the Haul Road as well as the additional Site as per plan illustrative on and off-site landscape planting proposals.</b></p>
April 2022	<p><b>All comments have been addressed above.</b></p> <p><i>An Ecological Appraisal (Tetra Tech, March 2022) and Protected Species Report (Tetra Tech, March 2022) has been submitted.</i></p> <p><i>Designated sites for Nature Conservation (European Sites, SSSI's and local sites (Sites of Nature Conservation Interest or Regionally Important Geological Sites)</i></p> <p><i>The site will impact on the SNCI Ladden Brook and Brinsham Bridge which is designated for its calcareous grassland. The report highlights ways of avoiding habitats associated with the SNCI and to confine (where possible) works to the improved grassland. Works to scrub and open glades will minimise the impact to trees however there will still be impacts to the ecological value that these habitats hold. It is not advised that an SNCI is impacted in any way due to its ecological value, however an SNCI holds less protection than statutory designated sites. A CEMP has been recommended, usually this would be conditioned, however based on the sensitivity of the site and the habitats it will be impacting this will be required prior to determination to assess the avoidance measures and mitigation is appropriate.</i></p> <p><i>Habitats (including habitats of principle importance (Priority Habitats) Section 41 Natural Environment and Rural Communities (NERC) Act 2006:</i></p> <p><i>Broadleaved semi natural woodland</i></p> <p><i>Broadleaved plantation woodland</i></p> <p><i>Dense / continuous</i></p> <p><i>Scattered scrub</i></p> <p><i>Scattered trees</i></p> <p><i>Unimproved neutral grassland</i></p> <p><i>Semi-improved neutral grassland</i></p> <p><i>Unimproved calcareous grassland</i></p> <p><i>Semi-improved calcareous grassland</i></p>



Date of consultee response	<i>Additional Information Requested/Objection Raised (italics) – Responses by SLR (bold)</i>
	<p><i>Species protected under the Conservation of Habitats &amp; Species Regulations 2017 ('European Protected Species) and Wildlife &amp; Countryside Act 1981 (as amended):</i></p> <p><i>Bats</i></p> <p><i>Emergence / re-entry surveys were undertaken on all trees and the quarry rock face that were deemed to have potential for roosting bats. No bats were recorded emerging or re-entering during these surveys and mitigation has been proposed which includes a dawn survey or aerial climbed survey prior to works commencing, a soft felling approach will also be undertaken. Please note that the emergence / re-entry bat surveys are only valid for 12 months and if works have not commenced within this time they will need to be repeated.</i></p> <p><i>Annex II bat species such as the greater horseshoe bat were recorded during the surveys.</i></p> <p><i>Great crested newt (GCN)</i></p> <p><i>Two waterbodies were identified in the search area of 500m, they were assessed as being poor for breeding GCN. As TN27 waterbody had previous records of GCN an eDNA survey was undertaken and a negative result was returned. As there are local records and there is suitable terrestrial habitat within an amber risk zone for GCN, reasonable avoidance measures are to be detailed within the CEMP as detailed below.</i></p> <p><i>Dormice</i></p> <p><i>Dormice surveys were undertaken due to local records in the area. No evidence of dormice was found, only presence of wood mice. Suitable measures have been recommended.</i></p> <p><i>Otter</i></p> <p><i>Historic use of the Ladden Brook was recorded in 2010, however no evidence was recorded during the updated surveys. A pre-commencement check is to be undertaken prior to works commencing to the brook or within close proximity of the brook, if further evidence is recorded at the time of the check, works can only proceed once suitable avoidance measures / mitigation has been submitted to the local authority. This is to be included within the CEMP.</i></p> <p><i>Species protected under the Wildlife and Countryside Act 1981 (as amended):</i></p> <p><i>Birds</i></p> <p><i>The report does not detail if any of the site where works are proposed will impact ground nesting birds. Some mitigation has been detailed within the report, however specific information such as buffer zones are to be included within the CEMP.</i></p> <p><i>Reptiles</i></p> <p><i>A good population of slow worms and one grass snake was recorded during the reptile surveys in the unimproved grassland. As the works will not impact on this area as per the report, a translocation exercise was not deemed suitable and mitigation has been recommended which is acceptable, in</i></p>



Date of consultee response	<b><i>Additional Information Requested/Objection Raised (italics) – Responses by SLR (bold)</i></b>
	<p><i>addition to this areas that are not to be impacted by the works are to be marked off by suitable fencing.</i></p> <p><b>Water Vole</b></p> <p><i>The brook was deemed to hold low potential for water voles and no evidence was recorded. As per the comments for otters, a pre-commencement check is to be undertaken to recorded any further evidence of water vole and if found, appropriate avoidance measures / mitigation is to be submitted to the local authority for review. This is to be included within the CEMP.</i></p> <p><b>Badgers protected under the Badger Act 1992:</b></p> <p><i>The report outlines that the site is suitable for badgers, however it does not detail if any evidence of badgers were recorded and a pre-commencement survey has been recommended three months prior to works commencing. A pre-commencement check is to be undertaken closer to the works commencing as badgers can excavate sett holes in a short period of time.</i></p> <p><b>Species of principle importance (Priority Species) Section 41 Natural Environment and Rural Communities (NERC) Act and Local Biodiversity Action Plan Species:</b></p> <p><b>Hedgehog</b></p> <p><i>Suitable habitat if present for hedgehogs. Suitable mitigation has been provided.</i></p> <p><b>Invertebrates</b></p> <p><i>The majority of the site’s footprint being managed improved grassland is unlikely to support a wide assemblage of invertebrates, though the habitat associated with the SNCI and woodland are likely to support more notable species.</i></p> <p><i>Previous surveys found that white clawed crayfish (WCC) were not present within the brook and was deemed to now be suboptimal for WCC due to the change in flow.</i></p> <p><b>National Planning Policy Framework (NPPF) and Local Plan Policy (South Gloucestershire Local Plan: Policies, Sites and Places Plan (PSP) (adopted November 2017)) Context</b></p> <p><i>NPPF Para 174 – 182 (Conserving and Enhancing the Natural Environment, Habitats and Biodiversity), National Planning Policy Framework</i></p> <p><i>PSP18 – (Statutory Wildlife Sites: European Sites and Sites of Special Scientific Interest (SSSIs)) - South Gloucestershire Local Plan (PSP Plan)</i></p> <p><i>PSP21 (Wider Biodiversity) - South Gloucestershire Local Plan (PSP Plan)</i></p> <p><i>CS9 (Managing the Environment and Heritage) - Core Strategy</i></p> <p><i>CS2 (Green Infrastructure) - Core Strategy</i></p> <p><i>PSP3 (Trees and Woodland) - South Gloucestershire Local Plan (PSP Plan)</i></p> <p><b>Conclusion and Recommendations</b></p> <p><b>Requirements prior to determination:</b></p>



Date of consultee response	<b><i>Additional Information Requested/Objection Raised (italics) – Responses by SLR (bold)</i></b>
	<p><i>A CEMP has been recommended, usually this would be conditioned, however based on the sensitivity of the site and the habitats it will be impacting this will be required prior to determination to assess the avoidance measures and mitigation is appropriate. The CEMP (Biodiversity) shall be written in accordance with BS42020, including mitigation details on bats, birds, great crested newt, reptiles, dormice and badger, as well as any pollution prevention measures. The approved CEMP shall be adhered to and implemented throughout the construction period strictly in accordance with the approved details, unless otherwise agreed in writing by the local planning authority. (PSP21)</i></p> <p><i>As above due to the sensitivity of the site a Landscape and Ecological Management Plan (LEMP) will be required prior to determination. The LEMP shall be written in accordance with BS42020. The LEMP shall also include details of the legal and funding mechanism(s) by which the long-term implementation of the plan will be secured by the developer with the management body(ies) responsible for its delivery. The minimum of the management should be for the length of the temporary road. The plan shall also set out (where the results from monitoring show that conservation aims and objectives of the LEMP are not being met) how contingencies and/or remedial action will be identified, agreed and implemented so that the development still delivers the fully functioning biodiversity objectives of the originally approved scheme. The approved plan will be implemented in accordance with the approved details. The LEMP is also to include ecological enhancement plan detailing location and specification of the ecological enhancements detailed within the Ecological Appraisal (Tetra Tech, March 2022) and Protected Species Report (Tetra Tech, March 2022) (PSP21)</i></p> <p><i>The report outlines that the site is suitable for badgers, however it does not detail if any evidence of badgers were recorded and a pre-commencement survey has been recommended three months prior to works commencing. A pre-commencement check is to be undertaken closer to the works commencing as badgers can excavate sett holes in a short period of time. Details of what if any evidence was found for badgers is to be confirmed.</i></p> <p><i>The following conditions should be attached if planning is permitted:</i></p> <p><i>The development shall proceed in strict accordance with the Mitigation Measures provided in the Ecological Appraisal (Tetra Tech, March 2022) and Protected Species Report (Tetra Tech, March 2022) (PSP21);</i></p> <p><i>If any lighting is proposed for the road. Prior to commencement, a “lighting design strategy for biodiversity” for the boundary features and any native planting shall be submitted to and approved in writing by the local planning authority. The strategy shall:</i></p> <p><i>Identify those areas/features on site that are particularly sensitive for bats and that are likely to cause disturbance in or around their breeding sites and resting places or along important routes used to access key areas of their territory, for example, for foraging; and</i></p>



<b>Date of consultee response</b>	<b><i>Additional Information Requested/Objection Raised (italics) – Responses by SLR (bold)</i></b>
	<p><i>Show how and where external lighting will be installed (through the provision of appropriate lighting contour plans and technical specifications) so that it can be clearly demonstrated that areas to be lit will not disturb or prevent the above species using their territory or having access to their breeding sites and resting places.</i></p> <p><b>All external lighting shall be installed in accordance with the specifications and locations set out in the strategy, and these shall be maintained thereafter in accordance with the strategy. Under no circumstances should any other external lighting be installed without prior consent from the local planning authority (PSP21).</b></p>

## 6.0 Planning Application

### 6.1 Assessment of Effects and Mitigation Measures

Potential impacts associated with the Planning Application for the proposed Haul Road are assessed below. These are:

- The construction of the Haul Road; and
- The operation of the Haul Road.

Sites, species and habitats which have been scoped out in Section 4 and are not considered further. Impacts primarily consider the construction and operation phases of development. Except where stated, no additional impacts or cumulative impacts from other proposed developments, are anticipated post-construction. Where required, avoidance and mitigation measures forming part of the development are incorporated into the assessments.

Taking the above into account, the principal potential impacts of the proposed development are outlined in the following sections.

### 6.2 Non-Statutory Designated Sites

Ladden Brook and Brinsham Bridge SNCI, fall within the northern section of the Site. The SNCI is designated for the presence of calcareous grassland and notable plant species. The section of the SNCI within the Site contains woodland (including an area of wet woodland, Ladden Brook and lines of trees. The SNCI has appeared to be subject to limited management and the site may have degraded since the SNCI notification.

#### 6.2.1.1 Construction of Haul Road

The total area of habitat within the SNCI to be lost temporarily (albeit a limited time of 15 years) will be 0.122ha. The habitats to be impacted within the SNCI area consist of broadleaved woodland, wet woodland with a scrub understorey. No calcareous grassland was recorded along the line of the proposed access route within the SNCI.

The proposed access road will result in fragmentation of the SNCI habitat. The PSP Plan Policy PSP19 states any development proposal that impacts a SNCI will require appropriate mitigation and/or compensation as part of the proposal.



To mitigate for the loss of SNCI habitat within the ROMP boundary, compensation planting is proposed approximately 0.6km west of the access road and adjacent to Ladden Brook, with appropriate native tree and shrub species that have been recorded within SNCI. Conservation management of the wider Ladden Brook and Brinsham Bridge SNCI is recommended to restore habitats to a higher conservation value. As part of the proposals, the Habitat Management Plan for the period 2015- 2025<sup>14</sup> agreed to as part of the ROMP Condition 46 will need to be reviewed and updated to reflect current conditions on the Site and any future development proposals.

It is also recommended that calcareous grassland is created within the soft landscaping of the haul road.

In addition, to reduce the potential for impacts during construction, a site-specific Construction and Environmental Management Plan (CEMP) will be produced detailing all measures to protect retained habitats and species on site. It is recommended that the CEMP includes general best practice construction methods and guidance for construction and pollution prevention measures and retention and protection of all trees in accordance with British Standards BS 5837 2012: Trees in Relation to Design, Demolition and Construction. Further site and species-based mitigation should be included in the CEMP as appropriate.

#### **6.2.1.2 Operation of Haul Road**

No impact anticipated.

### **6.3 Habitats**

The Site contains three notable habitats 'other lowland mixed deciduous woodland', 'wet woodland' and 'hedgerows' all of which are Habitats of Principal Importance under the NERC Act 2006 (as amended) and as listed in the UK BAP Priority Habitats 2007.

#### **6.3.1.1 Haul Road Construction**

The proposed scheme will result in the loss of 0.038ha of deciduous woodland, 0.084ha of wet woodland and 20m of hedgerow.

To mitigate for the loss of the deciduous woodland it is recommended that other areas of woodland surrounding the Site are enhanced by improving its current condition.

To mitigate for the loss of the wet woodland, it is recommended that an additional area adjacent to Ladden Brook is identified within the landholding of the quarry and enhanced into wet woodland or existing wet woodland is enhanced through appropriate management or additional planting.

To mitigate for the loss of the hedgerow it is recommended that new species rich hedgerow planting is provided within the Site.

All habitats created or enhanced will be assessed following the Biodiversity Net Gain Condition Assessment Criteria<sup>15</sup>.

It is also recommended that an arboricultural method statement is conditioned as part of the planning application which will make provision for root protection zones for the trees located close to the proposed haul road, that are due to be retained.

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<sup>14</sup> Stephanie Greshon Ecological Services (2014), updated in 2021 by Alexandra Hemming

<sup>15</sup> <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides>





### **6.3.1.2 Operation of Haul Road**

No impact anticipated.

## **6.4 Veteran Tree**

The original scheme involved the removal of the veteran ash tree, but following comments from the County ecologist the scheme was re-designed to retain the tree. The veteran tree will be retained as part of the proposed scheme although construction activities may impact the veteran tree. It should also be noted that the veteran ash tree has substantial decay and has ash die back.

### **6.4.1.1 Construction of Haul Road**

An arboricultural assessment is recommended as a planning condition and root protection zone (RPZ) implemented to prevent any impacts on the veteran tree.

### **6.4.1.2 Operation of Haul Road**

No impact anticipated.

## **6.5 Plants**

Native bluebells are present within the Site boundary and could be lost by development.

### **6.5.1.1 Construction of Haul Road**

It is recommended that the plants are relocated to the nearby woodland where the bulbs will be directly impacted by construction works.

### **6.5.1.2 Operation of Haul Road**

No impact anticipated.

## **6.6 Reptiles**

The grassland within the Site has potential for common reptile species. Due to small scale nature of the Haul Road, reptile surveys are not deemed necessary. There is ample habitat suitable for reptiles within the wider landscape.

### **6.6.1.1 Construction of Haul Road**

To prevent killing and injury of reptiles during construction of the Haul Road, it is recommended that a 'two phased' cut of the grassland is undertaken when reptiles are active (April to mid-October) - the first cut to 100m then 24 hours later a cut to ground level. This will displace any reptiles out of the construction footprint and prevent the killing and injury to reptile species.

### **6.6.1.2 Operation of Haul Road**

No impact anticipated.

## **6.7 Breeding Birds**

The site contained suitable habitat for breeding birds and the removal of this habitat will impact upon nesting birds.



### **6.7.1.1 Construction of Haul Road**

Given the protection afforded to all breeding birds, their nests, eggs and young, it is recommended that the construction of the Haul Road and any vegetation clearance, should be undertaken outside of the breeding bird season (March to August inclusive). If this is not practicable, then works should be preceded by a nesting bird check by a suitably qualified ecologist within 48 hours of the commencement of works. If evidence of nesting is recorded, works within that particular area should not proceed until the chicks have fledged, with a buffer zone around the active nest of at least 5m. A greater buffer may be necessary for more sensitive species.

### **6.7.1.2 Operation of Haul Road**

No impact anticipated.

## **6.8 Otter**

Otters could be using Ladden Brook and therefore disturbance during construction and possible killing and injury during operation could occur. The U-shaped culvert has been designed specifically to allow otters to continue to use Ladden Brook.

### **6.8.1.1 Construction of Haul Road**

To prevent disturbance to otters no lighting during construction activities will be used.

In addition, any deep trenches will have escape ramps for mammals included into the design of the trench to allow the escape of any trapped mammals from the trench and specified within the CEMP for the Project.

### **6.8.1.2 Operation of Haul Road**

The haul road will run during the daytime only 8:00-18:00. However, in the winter months this will happen when otters could be active. The haul road has no associated lighting and a speed limit will be implemented which is 10mph which will minimise the risk of otters being killed by vehicle movements.

## **6.9 Water Vole**

A potential mammal burrow was observed within Ladden Brook this could be made by a water vole. No other evidence of water voles was recorded.

### **6.9.1.1 Construction of Haul Road**

The installation of the U-shaped culvert could potentially damage, destroy or obstruct a structure or place used for shelter or protection. Prior to construction an updated water vole survey should be undertaken which could include camera traps in order to confirm the presence of water vole. If the burrow is confirmed and will be impacted by the installation of the culvert then an mitigation licence from Natural England will be applied for and the water voles trapped and removed from the culvert footprint.

### **6.9.1.2 Operation of Haul Road**

No impact anticipated.

## **6.10 Badger**

No badgers setts are present but badgers are likely to be active within the Site.



### 6.10.1.1 Construction of Haul Road

To prevent disturbance to badgers no lighting during construction activities will be used.

In addition, any deep trenches will have escape ramps for mammals included into the design of the trench to allow the escape of any trapped mammals from the trench and specified within the CEMP for the Project.

### 6.10.1.2 Operation of Haul Road

The haul road will run during the daytime only 8:00-18:00. However, in the winter months this will happen when badgers could be active. The haul road has no associated lighting and a speed limit will be implemented which is 10mph and which will minimise the risk of badgers being killed by vehicle movements.

## 6.11 Bats

### 6.11.1.1 Roosting Bats

The Site contained two trees with some potential for roosting bats. Tree roost can form and change quickly over time, and therefore it is recommended that all trees are re-surveyed prior to felling. The veteran tree contained suitable roosting features for multiple bats (PRF-Ms) and another tree contained a suitable roosting feature for individual bats (PF-I). To mitigate for the loss of the PRF-I and the trees being removed for the Haul Road, it is recommended that the wider roosting resource is increased by the installation of 10 tree mounted bat boxes.

### 6.11.1.2 Foraging Bats

Bats will be active within the Site and surrounding area and will be foraging along the woodland edge and within the woodland as well as grassland. The proposed scheme results in the removal of a small section of woodland which is not considered to impact the local bat population as the bats will still be able to follow the woodland edge and no barrier to movement will be created as only a scoop of habitat will be removed. The additional distance is minimal in the amount of additional distance bats will have to travel and energy used.

In addition, no lighting is proposed for the Haul Road. Therefore, no significant impact on foraging bats is considered.

It should be noted that any future application to extend the Haul Road through the woodland will require further survey and assessment.

### 6.11.1.3 Construction of Haul Road

The Veteran tree is being retained and no lighting is required for the construction of the Haul Road and therefore no impacts are anticipated. Prior to felling, all trees should be reassessed for their roosting potential. If potential for multiple bats (PRF-M's) is found, then tree climbing surveys should be undertaken, or an inspection via a Mechanical Elevated Work Platform (MEWP) as many are of the trees along suffer from Brinsham Lane ash die back.

### 6.11.1.4 Operation of Haul Road

The haul road has no associated lighting and therefore no impacts are anticipated on bats.

## 6.12 Potential Opportunities for Biodiversity Enhancements

To ensure all proposed mitigation, compensation and enhancement measures are established, it is recommended that a Landscape Environmental Management Plan (LEMP)



be produced. The LEMP will also provide best practice guidance for the establishment of these measures.

## 7.0 Conclusions and Recommendations

SLR Consulting Limited was instructed by Heidelberg Materials Limited to undertake an Ecological Impact Assessment to provide further and updated technical input into the planning application for construction of a Haul Road.

A desk study, habitat survey and protected species assessment has been undertaken of the proposed Haul Road and the surrounding 30m. The Site supports locally and nationally common and protected habitats and is not considered critical for populations of any species of fauna or nature conservation importance.

This EclA has identified the Ladden Brook and Brinsham Bridge SNCI, deciduous woodland, wet woodland, hedgerows a veteran ash tree, bluebells, reptiles, nesting birds, otters, water vole, badgers and bats, as being important ecological features, with the potential to be indirectly impacted by the proposed development, therefore mitigation measures are proposed to minimise any potential impacts.

In summary, approved and recommended mitigations include the following:

- To mitigate for the loss of the deciduous woodland it is recommended that other areas of woodland surrounding the Site are enhanced by improving the condition of the woodland currently present this will be outlined within the LEMP and is also outlined within the illustrative on-site and off-site landscape planting proposals plan which is submitted with this application.
- To mitigate for the loss of the wet woodland an additional area adjacent to Ladden Brook has been identified within the landholding of the quarry and this will be enhanced into wet woodland or existing wet woodland is enhanced through appropriate management or additional planting.
- To mitigate for the loss of the hedgerow it is recommended that new species rich hedgerow planting is installed within the Site.
- To mitigate for the loss of SNCI habitat within the ROMP boundary, compensation planting is proposed approximately 0.6 km west of the access road and adjacent to Ladden Brook, with appropriate native tree and shrub species that have been recorded within SNCI. Conservation management of the wider Ladden Brook and Brinsham Bridge SNCI is recommended to restore habitats to a higher conservation value. As part of the proposals, the Habitat Management Plan for the period 2015- 2025<sup>16</sup> agreed to as part of the ROMP Condition 46 will need to be reviewed and updated to reflect current conditions on the Site and any future development proposals.
- An RPA should be established around the woodland boundary, retained trees and veteran ash tree, as per standard BS:8537. The RPAs should be free of large, heavy vehicle movements, particularly vehicles with tracks, and no excavation should be undertaken.
- Spill kits should be always present on Site, and any spillages of fuel or chemicals should be cleaned up immediately to prevent accidental discharge and subsequent pollution of the Ladden Brook. Ladden Brook should also be placed into the 10m buffer which excludes all vehicles and machinery to prevent oil and fuel being washed into the Ladden Brook.

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<sup>16</sup> Stephanie Greshon Ecological Services (2014), updated in 2021 by Alexandra Hemming



- Prior to construction, an updated water vole survey should be undertaken which could include camera traps in order to confirm the presence of water vole. If the burrow is confirmed and will be impacted by the installation of the culvert, then a mitigation licence from Natural England will be applied for and the water voles trapped and removed from the culvert footprint.
- The installation of the U-shaped culvert to allow the continued use of Ladden Brook by otters and water voles.
- Pre works check of trees for new roosting sites for bats. Installation on 10 tree mounted bat boxes.
- Vegetation removal should be undertaken outside of the bird nesting season (March-end August), or under the supervision of an ECoW. Buffer zones to be established around any nests found until birds have fledged.
- No lighting should be used for construction activities.
- The haul road will run during the daytime only 8:00-18:00. However, in the winter months this will happen when otters and badgers could be active. The haul road has no associated lighting and a speed limit will be implemented which is 10mph which will minimise the risk of otters, and badgers being killed by vehicle movements.
- Native blue bells plants will be translocated into the surrounding woodland if within the footprint of works.
- Two phased cut of the grassland in order to remove reptiles from the works footprint.
- Any deep trenches will have escape ramps for mammals included into the design of the trench to allow the escape of any trapped mammals from the trench and specified within the Construction and Environmental Management Plan (CEMP) for the Project.





# Appendix A    Relevant Legislation and Planning Policy

Land Between Gravel Hill & Brinsh

Ecological Appraisal Report

Heidelberg Materials UK Ltd

SLR Project No.: 425.065060.00001

9 October 2024

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## Relevant Legislation and Planning Policy

### Legislation

A summary of legislation relevant to (onshore) biodiversity in England and Wales is provided below. Note that the summary provided here is intended for general guidance only and the original legislation should be consulted for definitive information.

#### Environment Act (2021)

The Environment Act has wide ranging provisions including those around:

- Environmental governance;
- Environmental regulation;
- Waste and resource efficiency;
- Air quality and environmental recall;
- Water;
- Nature and biodiversity;
- Conservation covenants.

Of particular relevance is Part 6 of the Act which introduces “biodiversity gain in planning” and will apply in England to planning applications under the Town & Countryside Act and the Planning Act. Schedule 14 now requires that biodiversity gain be a condition of planning permission in England. These changes will be enacted through subsequent secondary legislation or regulations. This part of the Act also changes the responsibilities that Government or public bodies have by strengthening the existing NERC Act biodiversity duty. Public authorities are now required to seek to conserve and enhance biodiversity in the exercise of their functions.

#### Conservation of Habitats and Species Regulations 2017 (as amended)

The Conservation of Habitats and Species Regulations 2017 (as amended) (the Habitats Regulations) consolidate the Conservation of Habitats and Species Regulations 2010 with subsequent amendments. The Regulations transpose Council Directive 92/43/EEC, on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive), into national law. Under the Habitats Regulations it is an offence to deliberately capture, kill or disturb<sup>1</sup> wild animals listed under Schedule 2 of the Regulations as well as damage or destroy a breeding site or resting place of such an animal (even if the animal is not present at the time). European Sites, including Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), are also protected under the Habitat Regulations, and any proposal that could affect them will require an Habitats Regulations Assessment (HRA).

#### The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017

Part 3 of the regulations provide for the protection of areas of habitats or species where maintenance of the status of water is an important factor. Under the regulations additional consideration may need to be given to sites in the form of a Water Framework Directive (WFD) assessment where a project

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<sup>1</sup> Disturbance, as defined by the Conservation of Habitats and Species Regulations 2010, includes in particular any action which impairs the ability of animals to survive, breed, rear their young, hibernate or migrate (where relevant); or which affects significantly the local distribution or abundance of the species.



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lies in proximity to a water body or to linked water bodies which could be affected. This includes consideration of whether water bodies are WFD receptors in particular those of high status or have high status morphology.

### **Natural Environment & Rural Communities (NERC) Act 2006**

Section 40 of the NERC Act 2006 places a duty on public authorities to have regard to the purpose of conserving biodiversity in the exercise of their functions. Public authorities include government departments, local authorities and statutory undertakers.

Section 41 of the Act (Section 42 in Wales) requires the publication of a list of habitats and species publish which are of principal importance for the purpose of conserving biodiversity. The Section 41 list is used to guide authorities in implementing their duty to have regard to the conservation of biodiversity.

Note that Sections 40 and 42 were superseded in Wales by the Environment (Wales) Act 2016 (see below).

### **Protection of Badgers Act 1992**

The Protection of Badgers Act 1992 makes it illegal to kill, injure or take a badger or to intentionally or recklessly interfere with a badger sett. Sett interference includes disturbing badgers whilst they are occupying a sett or obstructing access to it.

### **Wildlife & Countryside Act 1981**

The Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way (CRoW) Act 2000 and the Natural Environment and Rural Communities (NERC) Act 2006, consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the Conservation of Wild Birds (Birds Directive), making it an offence to:

- Intentionally kill, injure or take any wild bird or their eggs or nests (with certain exceptions) and disturb any bird species listed under Schedule 1 to the Act, or its dependent young while it is nesting;
- Intentionally kill, injure or take any wild animal listed under Schedule 5 to the Act;
- intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any wild animal listed under Schedule 5 to the Act;
- intentionally or recklessly disturb certain Schedule 5 animal species while they occupy a place used for shelter or protection;
- Pick or uproot any wild plant listed under Schedule 8 of the Act; or
- Plant or cause to grow in the wild any plant species listed under Schedule 9 of the Act.

### **Planning Policy**

A summary of national planning policy relevant to (onshore) biodiversity in England and Wales is provided below. Note that the summary provided here is intended for general guidance only and the original policy documents should be consulted for definitive information. For local planning policy relevant to biodiversity the relevant local plans should be consulted.





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### 1.1.1 National Planning Policy (England)

The National Planning Policy Framework (NPPF)<sup>2</sup> sets out guidance for local planning authorities and decision-makers in how to apply planning policies when drawing up plans and making decisions about planning applications. Along with Government Circular 06/05<sup>2</sup>, the broad policy objectives in relation to the protection of biodiversity and geological conservation in England through the planning system are set out. Specific policies relating to habitats and biodiversity are set out in paragraphs 174 and 179-182 of the NPPF.

Paragraph 174 states that:

*“Planning policies and decisions should contribute to and enhance the natural and local environment by:*

- a) 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);*
- b) 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;*
- c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;*
- d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;*
- e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development f) should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and*
- F) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate”.*

Paragraph 179 states that:

*“To protect and enhance biodiversity and geodiversity, plans should:*

- a) 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*
- b) 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.”*

Paragraph 180 states that:

*“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*

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<sup>2</sup> Ministry of Housing, Communities & Local Government (2021). [National Planning Policy Framework](#).



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

Paragraphs 181-182 relate to European sites (referred to as habitats sites) and state:

*“The following should be given the same protection as habitats sites:*

*a) potential Special Protection Areas and possible Special Areas of Conservation;*

*b) listed or proposed Ramsar sites; and*

*c) 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.*

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





# Appendix B Non-Statutory Designated Sites

Land Between Gravel Hill & Brinsh

Ecological Appraisal Report

Heidelberg Materials UK Ltd

SLR Project No.: 425.065060.00001

9 October 2024

