

A1 Birtley to Coal House

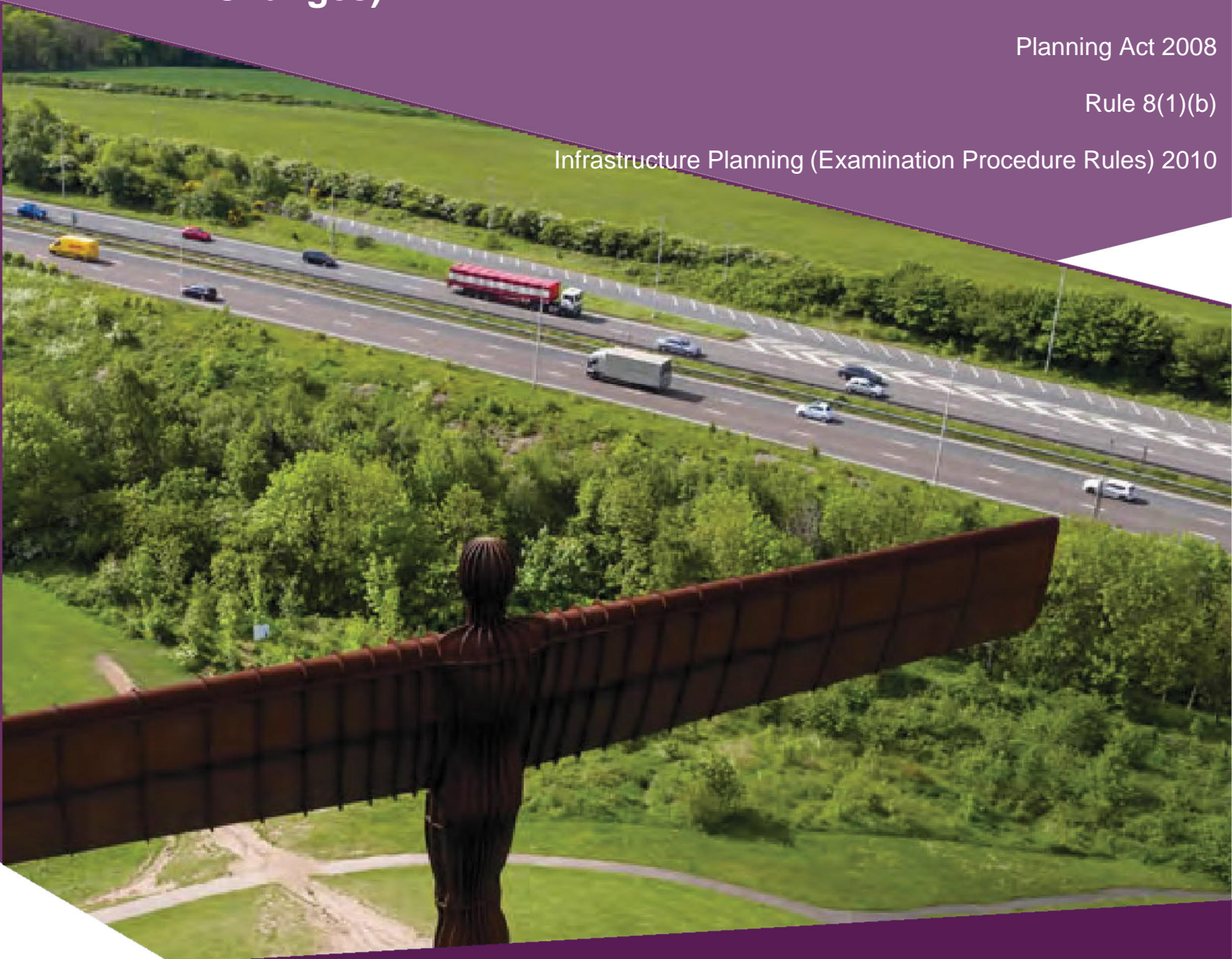
Scheme Number: TR010031

**ES Addendum: Additional Land – Appendix C Update
Preliminary Ecological Appraisal: Updated to
Incorporate Preliminary Bat Roost Assessment (Tracked
Changes)**

Planning Act 2008

Rule 8(1)(b)

Infrastructure Planning (Examination Procedure Rules) 2010



Infrastructure Planning

Planning Act 2008

**The Infrastructure Planning
(Examination Procedure Rules)
2010**

A1 Birtley to Coal House
Development Consent Order 20[xx]

**ES Addendum: Additional Land -
Appendix C Update (Tracked
Changes)**

Rule number:	Rule 8(1)(b)
Planning Inspectorate Scheme Reference	TR010031
Application Document Reference	N/A
Author:	A1 Birtley to Coal House Project Team, Highways England

Version	Date	Status of Version
Rev 1	20 May 2020	Application Issue

CONTENTS

1.	INTRODUCTION	2
1.1.	PROJECT BACKGROUND	2
1.2.	ECOLOGICAL BACKGROUND	2
1.3.	SCOPE OF REPORT	2
1.4.	RELEVANT LEGISLATION AND POLICY	2
2.	METHODS	4
2.1.	OVERVIEW	4
2.2.	DESK STUDY	4
2.3.	HABITAT SURVEY	5
2.4.	SPECIES ASSESSMENT	6
2.5.	NOTES AND LIMITATIONS	67
3.	RESULTS	89
3.1.	DESIGNATED SITES AND HABITATS	89
3.2.	HABITAT SURVEY	11
3.3.	PROTECTED AND NOTABLE SPECIES ASSESSMENT	13
4.	DISCUSSION AND RECOMMENDATIONS	16
4.1.	NON-STATUTORY DESIGNATED SITES	16
4.2.	HABITATS	16
4.3.	PROTECTED AND NOTABLE SPECIES	16
5.	CONCLUSIONS	21
6.	REFERENCES	22
	FIGURES	23

TABLES

Table 2-1 - Roost Potential Categorisation	7
Table 3-1 – Non-Statutory Sites within 2km	89
Table 3-2 – Phase 1 Habitat Types	11
Table 4-1 - Key Ecological Constraints and Further Survey Requirements	1920

FIGURES

Figure 1 - Phase 1 Habitat Survey	23
Figure 2 – Non-statutory sites within 2km	24

APPENDICES

APPENDIX [AC-1](#)

RELEVANT LEGISLATION AND PLANNING POLICY

APPENDIX [BC-2](#)

SUMMARY OF ECOLOGICAL DESK STUDY DATA

APPENDIX [C-3](#)

PLANT SPECIES RECORDED

APPENDIX [DC-4](#)

TARGET NOTES

APPENDIX [EC-5](#)

PHOTOGRAPHS

APPENDIX [FC-6](#)

HSI CALCULATIONS

.....

EXECUTIVE SUMMARY

~~WSP Ltd. (WSP) was commissioned by Highways England to undertake a Preliminary Ecological Appraisal in support of the proposed widening scheme of the A1 between Birtley and Coal House. The A1 Birtley to Coal House improvement scheme consists of the widening and upgrading of the existing road to provide a four-lane carriageway on the southbound and three lanes on the northbound and replacement of Allerdene Railway Bridge. This is hereby referred to as the "Scheme".~~

An extended Phase 1 assessment of the ~~former~~ Scheme Footprint ~~(as designed in the ES)~~ was completed in 2018 (**Appendix 8.1: Preliminary Ecological Appraisal, Volume 3** of the ES [APP-123]). This Preliminary Ecological Appraisal report ~~is provided as an addendum to the existing~~ supplements this assessment, ~~so as in order~~ to ~~include assessment of an area of land incorporated into~~ assess the additional land that was proposed to be included in the Scheme Footprint in January 2020 [refer to AS-009] and was subsequently accepted into the Examination of the Scheme in May 2020. The additional land (the "Site") is directly adjacent to previously surveyed land in Lamesley, Gateshead.

This report comprises a desk study, a field survey, a preliminary bat roost assessment (PBRA) and appraisal/recommendations. The desk study reviewed and collated publicly available data and requested biological records to gather existing information regarding the presence of protected sites, habitats, and important or protected/notable species on or within proximity to the Site. The field survey and PBRA was undertaken in February 2020 ~~and~~. The survey comprised a walkover of the Site to document the habitats present and their suitability to support protected/notable species, as well as an external inspection of all buildings and structures present on Site and within 50m, to assess their potential suitability for roosting bats.

The desk study identified two non-statutory designated sites within 200m of the Site. ~~These were:~~ Lamesley Meadows Local Wildlife Site (LWS) and the River Team Extension LWS.

A number of habitats were recorded on the Site, including poor semi-improved grassland (grazed pasture), scattered scrub, scattered trees, tall ruderal and boundary features such as hedgerows, fences and walls. The habitats present both within and bordering the Site were suitable to support bats, and wintering and breeding birds.

To ensure compliance with legislation and planning policy, further survey effort is recommended, with several of these surveys already underway or completed. The recommended further surveys are outlined within this report, with the findings to be presented in separate reports).

1.1.1. The impacts during construction and operation of the Scheme in relation to the Site ~~will~~ has ~~been~~ fully assessed and presented within ~~an addendum~~ the ES Addendum: Additional Land (HE551462-WSP-EGN-ZZ-RP-LE-00024) impact assessment report, which ~~shall support~~ supports the ecological impact assessment presented in **Chapter 8: Biodiversity, Volume 1** of the Environmental Statement [APP-029]. The ~~ES Addendum will~~ addendum impact assessment report

[AN8]:
What is this?

[PS9]:
Updated

also ~~contain~~ details ~~of~~ additional proposed avoidance, mitigation and compensation measures to those detailed in **Chapter 8: Biodiversity**, if required to address additional predicted impacts. [Following these surveys, the impact assessment within the ES Addendum: Additional Land \(HE551462-WSP-EGN-ZZ-RP-LE-00024\) is considered to remain valid.](#)

2. 1. INTRODUCTION

2.1. 1.1. PROJECT BACKGROUND

~~2.1.1. 1.1.1. WSP Ltd. (WSP) was commissioned by In January 2020~~ Highways England ~~to undertake a Preliminary Ecological Appraisal (PEA) of an area of land in relation to the submitted a~~ proposed ~~widening scheme of change~~ to the A1 between Birtley and to Coal House Scheme (the “Scheme”). ~~The to include an area of additional land (for the “Site”) was incorporated purpose of stockpiling materials. This change was subsequently accepted into the Scheme- Footprint Examination in January May 2020 and. A Preliminary Ecological Appraisal (PEA) of additional land which~~ is situated to the north-east of the village of Lamesley, Gateshead, Tyne and Wear (central national grid reference NZ 25334 58123). ~~This report is provided as an addendum (refer to Figure 1.1 of the Environmental Statement (ES) ES Addendum: Additional Land Appendix E) has been carried out.]~~

~~2.1.2. 1.1.2. Under current proposals, a temporary construction compound is to be created within the Site. The temporary compound.]~~ would be used ~~as a base for plant storage material stockpiling~~ during ~~the~~ construction of the Scheme. A full description of the Scheme is ~~detailed provided~~ in **Chapter 2: The Scheme, Volume 1** of the ES [APP-0293] ~~with additional information provided within Chapter 2: The Scheme of the ES Addendum: Additional Land [APP-023].~~

2.2. 1.2. ECOLOGICAL BACKGROUND

~~2.2.1. 1.2.1. An ecological appraisal was completed for the former Scheme Footprint Order limits, including (land directly north of the Site) in 2018 (Appendix 8.1: Preliminary Ecological Appraisal Volume 3 of the ES [APP-123]. This was used to inform the ecological impact assessment within Chapter 8: Biodiversity of the ES.~~

~~2.2.2. 1.2.2. Habitats recorded on the land directly to the north of the Site additional land included poor semi-improved grassland, scattered trees, scattered scrub, buildings and hard standing. From an initial review of aerial imagery, the habitats within the Site additional land appear to be of similar types.~~

2.3. 1.3. SCOPE OF REPORT

~~1.3.1. Highways England commissioned WSP to complete a PEA of the Site in February 2020. The brief was:~~

~~2.3.1. The scope of this report is to:~~

- ~~■ To provide~~ Provide baseline ecological information about the ~~Site additional land (including a PBRA)~~ and a surrounding study area with particular reference to whether legally protected and/or notable sites, species or habitats are present or likely to be present;
- ~~■ To provide~~ Provide recommendations to enable compliance with relevant nature conservation legislation and planning policy; and
- ~~■ Where necessary, to identify the need for avoidance, mitigation, compensation or enhancement measures and/or further ecological surveys.~~

2.4. 1.4. RELEVANT LEGISLATION AND POLICY

2.4.1. 1.4.1. The ~~appraisal~~ **PEA** has been compiled with reference to the following relevant nature conservation legislation, planning policy and the UK Biodiversity Framework from which the protection of sites, habitats and species is derived in England. The context and applicability of each item is explained as appropriate in the relevant sections of the report and additional details are presented in **Appendix AC.1**.

- ~~☐~~ The Conservation of Habitats and Species Regulations 2017 (as amended) (the Habitats Regulations);
- ~~☐~~ Wildlife and Countryside Act (WCA) 1981 (as amended);
- ~~☐~~ Countryside Rights of Way Act 2000;
- ~~☐~~ Natural Environment and Rural Communities (NERC) Act 2006 (England);
- ~~☐~~ Protection of Badgers Act 1992;
- ~~☐~~ The Hedgerow Regulations 1997;
- ~~☐~~ Wild Mammals (Protection) Act 1996;
- ~~☐~~ The UK Post-2010 Biodiversity Framework (2011-2020) (JNCC and DEFRA, 2012);
- ~~☐~~ Biodiversity 2020: A strategy for England's wildlife and ecosystem services (DEFRA, 2011);
- ~~☐~~ UK Biodiversity Action Plan (UKBAP)¹;
- ~~☐~~ National Planning Policy Framework (NPPF) 2019 (Ministry of Housing Communities & Local Government, February 2019);
- ~~☐~~ Planning for the Future – Core Strategy and Urban Core Plan for Gateshead and Newcastle-upon-Tyne 2010-2020 (hereby referred to as the 'Local Plan')
- ~~☐~~ Action for Wildlife: The Durham Biodiversity Action Plan (applicable for Gateshead)
- ~~☐~~ Highways England Biodiversity Plan, June 2015

¹ The UK BAP has now been replaced by the UK Post-2010 Biodiversity Framework, however, it contains useful information on how to characterise important species assemblages and habitats which is still relevant.

3. ~~2.~~ METHODS

3.1. ~~2.1.~~ OVERVIEW

3.1.1. ~~2.1.1.~~ This ~~appraisal~~ [PEA](#) has been prepared with reference to current good practice guidance published by the Chartered Institute for Ecology and Environmental Management (CIEEM) (~~CIEEM~~, 2017a) and Joint Nature Conservation Committee (JNCC) (~~JNCC~~, 2010); and guidance contained in the British Standard - Code of Practice for Biodiversity and Development BS42020:2013 (British Standards Institution (~~BSI~~), 2013).

3.1.2. ~~2.1.2.~~ This PEA is based on the following data sources:

- ~~An ecological desk study;~~
- ~~A habitat survey; and~~
- ~~A protected/notable species assessment-~~
- [A preliminary bat roost assessment \(PBRA\)](#)

3.2. ~~2.2.~~ DESK STUDY

3.2.1. ~~2.2.1.~~ A desk study was undertaken in February 2020 to review existing ecological baseline information available in the public domain and to obtain information held by relevant third parties. For the purpose of the desk study ~~exercise~~, records obtained from the Environmental Records Information Centre (ERIC) North East in 2018 (protected/notable species) and 2019 (non-statutory sites) were consulted. Records were obtained within various distances around the ~~former Scheme Footprint~~ [Order limits](#) [Order limits](#). The search areas are consistent with current good practice guidance published by the CIEEM (2017b and 2018). Records within the following distances were obtained:

- ~~Legally protected and notable species within 2km of the former Scheme Footprint~~ [Order limits](#);
- ~~Bat records within 5km of the former Scheme Footprint~~ [Order limits](#); and
- ~~Records of non-statutory sites designated for nature conservation value within 2km of the former Scheme Footprint~~ [Order limits](#).

3.2.2. ~~2.2.2.~~ The findings of the 2018 desk study records have been incorporated within Section 3 and **Appendix ~~BC-2~~** of this report. It should be noted that the records were obtained within proximity to the entirety of the ~~former Scheme Footprint~~ [Order limits](#) (at the time of the data search, 2018/19) and therefore may occur at greater distances from the Site than the search distances stated above. This has been considered within this report and only records within 2km of the Site have been considered relevant.

3.2.3. ~~2.2.3.~~ Freely downloadable datasets (available from Natural England) were consulted for information regarding the presence of statutory designated habitats² within 2km of the Site. This search was extended to 10km for Natura 2000 sites (Special Areas of Conservation (SAC) and Special Protection Areas (SPA)) of European importance and internationally designated Ramsar sites).

² Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR) and Local Nature Reserves (LNR).

~~3.2.4. 2.2.4.~~ Records of Habitats of Principal Importance (HPI)³ within 2km of the [Siteadditional land](#) were provided by ERIC North East, although these were used for reference only. Freely downloadable datasets (available from Natural England) were consulted for information regarding woodland listed on the Ancient Woodland Inventory⁴ within 2km of the [Siteadditional land](#).

~~3.2.5. 2.2.5.~~ In addition, open source 1:25,000 Ordnance Survey mapping was used to identify any mapped water bodies and watercourses within 500m of the Site.

~~2.2.6. The ecological desk study was carried out by an Assistant Ecologist, who has completed numerous ecological desk studies.~~

~~3.3. 2.3.~~ HABITAT SURVEY

~~3.3.1. 2.3.1.~~ A Phase 1 habitat survey of the [Siteadditional land](#) was carried out on 05 February 2020 in clear, dry conditions. The survey covered the entire Site including boundary features. The Phase 1 habitat survey was carried out by a Consultant and Assistant Ecologist, both of whom have extensive experience of completing similar assessments. t
e

~~3.3.2. 2.3.2.~~ Habitats were described and mapped following the standard Phase 1 habitat survey methodology (JNCC, 2010). Phase 1 habitat survey is a standard technique for classifying and mapping British habitats. The dominant plant species were recorded and habitats are classified according to their vegetation types. Where appropriate consideration was given to whether habitats qualify, or could qualify, as a HPI following habitat descriptions published by the JNCC (JNCC, 2008).

~~3.3.3. 2.3.3.~~ A list of plant species was compiled (**Appendix C-3**), with relative plant species abundance estimated using the DAFOR scale⁵. The scientific names for plant species follow those in the New Flora of the British Isles (Stace, 2019) and are also listed in **Appendix C-3**.

~~3.3.4. 2.3.4.~~ Habitats were marked on a paper base map and were subsequently digitised using a Geographical Information System (GIS).

~~3.3.5. 2.3.5.~~ Target notes were made to provide information on specific features of ecological interest (e.g. the location of a bat box) or habitat features too small to be mapped. These are included in **Appendix DC-4**.

~~3.3.6. 2.3.6.~~ Invasive plant species listed on Schedule 9 of the WCA 1981 (as amended) which were evident during the Phase 1 habitat survey were also recorded in target notes. Detailed mapping of such species; or a full survey of the [Siteadditional land](#) for all invasive plant species is beyond the scope of this ~~commission~~ [PEA because \[why?\]](#) —
—

³ Mapped locations of HPI are usually not available, but HPI aligns in the most part with UKBAP habitats. Inventories of UKBAP habitat have been prepared by a variety of organisations and at a national (Natural England priority habitat inventory) and local scale (e.g. by local records centres). In some instances these are primarily based on aerial photograph analysis rather than field survey.

⁴ The ancient woodland inventory in England lists areas over two hectares in size which have been continuously wooded since at least 1600.

⁵ The DAFOR scale has been used to estimate the frequency and cover of the different plant species as follows: Dominant (D) - >75% cover, Abundant (A) – 51-75% cover, Frequent (F) – 26-50% cover, Occasional (O) – 11-25% cover, Rare (R) – 1-10% cover., The term 'Locally' (L) is also used where the frequency and distribution of a species are patchy and 'Edge' (E) is also used where a species only occurs on the edge of a habitat type.

3.4. 2.4. SPECIES ASSESSMENT

3.4.1. 2.4.1. The potential for the ~~Site~~[additional land](#) to support legally protected and notable species was assessed using the desk study results combined with field observations during the Phase 1 habitat survey. The assessment of habitat suitability for protected and notable species was based on professional experience and judgement. This was supplemented by standard sources of guidance on habitat suitability assessment for key faunal groups including: birds (Gilbert et al, 1998 and Bibby et al, 2000), great crested newt *Triturus cristatus* (Gent and Gibson, 2003 and English Nature, 2001); reptiles (Froglife, 1999 and Gent and Gibson, 2003); bats (Collins, 2016 and Mitchell-Jones, 2004); and badger *Meles meles* (Harris et al, 1991 and Roper, 2010).

3.4.2. 2.4.2. In addition, all water bodies within the ~~Site boundary~~[additional land](#) were assessed for their suitability to support great crested newts, using the standard HSI assessment method (ARG UK, 2010, based on Oldham et al. (2000)).

3.4.3. 2.4.3. Water bodies were assessed and scored on ten key variables which are known to influence breeding populations of great crested newts, in accordance with standard methods (ARG UK, 2010). These variables are:

- ~~Geographic location;~~
- ~~Water body area;~~
- ~~Water body permanence;~~
- ~~Water quality;~~
- ~~Water body shading;~~
- ~~Impact of waterfowl;~~
- ~~Fish stocks;~~
- ~~Number of water bodies within 1km;~~
- ~~Terrestrial habitat around the water body; and~~
- ~~Macrophyte cover of the water body.~~

3.4.4. 2.4.4. Scores for each of the above variables were used to calculate an overall HSI value for each water body. This was then cross referenced with the guidelines (ARG, 2010) to assign the pond to one of five categories, poor, below average, average, good or excellent. Index calculation is not a failsafe method of identifying whether a water body supports great crested newts or not; therefore, professional judgement and availability of records of great crested newt in the locality has also been used to inform the requirement for further survey.

3.4.5. 2.4.5. Results of HSI assessments and raw data can be found in **Appendix FC-6**.

PRELIMINARY BAT ROOST ASSESSMENT

3.4.6. A building and tree bat roost assessment of the additional, plus a buffer of 50m around its boundary (the "PBRA Survey Area"), was conducted to enable an assessment of their potential to support bat roosts, and to search for evidence indicating the current or historic use of the building by roosting bats.

3.4.7. A visual inspection of the exterior of buildings using binoculars was completed to search for features which may provide potential roosting opportunities for bats. Where suitable features were noted, their location and a brief description of their character was recorded. Additionally, each feature was visually inspected for evidence indicating use by roosting bats such as droppings, urine

staining, and scratch marks / characteristic staining (from fur oils). Where it was safe to do so, an internal inspection was also completed to search for similar features and evidence inside buildings; particular attention was paid to loft spaces and cellars.

3.4.8. Buildings and trees were categorised in line with the descriptions in Table 2-1. Based on the features present and the location of the buildings, the potential for different types of bat roost was also considered. For the purpose of this preliminary roost assessment potential roost types were grouped as follows (from Collins, 2016):

- Maternity (breeding roost);
- Summer / transitional (to include transitional, satellite, night and day roosts); and
- Hibernation.

Table 2-1 - Roost Potential Categorisation

<u>Category</u>	<u>Description</u>
<u>Confirmed</u>	<u>Buildings and trees with features confirmed to be used by roosting bats either by historic records (verified appropriately), or evidence recorded during survey.</u>
<u>High</u>	<u>Buildings and trees with highly suitable features capable of supporting larger roosts, and/or multiple roost locations. Generally, these buildings are located in proximity to highly suitable foraging/commuting habitat such that the presence of a roost is considered highly probable.</u>
<u>Moderate</u>	<u>Buildings and trees exhibiting features with definite bat roost potential, but with only one or two suitable features suitable for larger roosts, or multiple features with the potential to be used by individual/small numbers of bats. Surrounding area includes good quality foraging habitat for bats e.g. broadleaved woodland, tree-lined watercourses and grazed parkland such that the presence of a roost is considered probable.</u>
<u>Low</u>	<u>Building with single, or few features capable of supporting individual/small numbers of bats e.g. external roosting features such as fascia or soffit boards, in which bats are considered less likely to be present. Or, a greater number or variety of features located in sub-optimal habitat such that bats would be less likely to use it e.g. isolated from foraging or commuting habitats.</u> <u>Trees with no obvious potential, although the tree is of a size and age that elevated surveys may result in cracks or crevices being found; or the tree supports some features which may have limited potential to support bats.</u>
<u>Negligible</u>	<u>Buildings and trees with no potential opportunities for roosting bats, or very few or minor features in an isolated/unsuitable location such that the presence of a roost is considered highly improbable. e.g. isolated from suitable foraging or commuting habitats.</u>

3.5. ~~2.5.~~ NOTES AND LIMITATIONS

3.5.1. ~~2.5.1.~~ The following limitations apply to this assessment:

- ~~Ecological~~ Ecological survey data is typically valid for two years unless otherwise specified, for example if conditions are likely to change more quickly due to ecological processes or anticipated changes in management.

- ~~Records held by local biological record centres and local recording groups are generally collected on a voluntary basis. Therefore, the absence of records does not demonstrate the absence of species, it may simply indicate a gap in recording coverage.~~
- ~~The survey was not completed during the optimal survey season for Phase 1 habitat survey, generally ~~accepted~~ considered to be from April-September (inclusive). Botanical surveys are seasonally limited, and throughout the spring and summer period certain species will be more, or less, evident at different times (i.e. depending on the flowering season). However, ~~it is considered that~~ sufficient information was gathered to enable an assessment of the habitat types present, in line with standard Phase 1 habitat categories and the potential for these to support protected or notable species.~~
- ~~The Phase 1 Habitat survey was carried out over the period of a single day, as such only a selection of all species that occur within the ~~Site~~ additional land will have been recorded. However, through use of desk study information to supplement site survey data, it is considered that an accurate assessment of the potential for the ~~Site~~ additional land to support protected species or those of conservation concern was possible.~~
- ~~The extended Phase 1 habitat map (**Figure 1**) has been reproduced from field notes and plans. Whilst this provides a sufficient level of detail to fulfil the requirements of a PEA, the maps are not intended to provide exact locations of key habitats. □~~

-
- Access to trees and buildings for the PBRA was limited. The tree line assessed in the railway corridor immediately east of the additional land was located behind a tall steel fence. Therefore, it was not possible to complete a full assessment. Access was not granted to access the two residential and one commercial complex within 50m of the additional land.

4. ~~3.~~ RESULTS

4.1. ~~3.1.~~ DESIGNATED SITES AND HABITATS

STATUTORY SITES

4.1.1. ~~3.1.1.~~ No statutory sites (local, national or international) were identified within the search areas.

NON-STATUTORY SITES

4.1.2. ~~3.1.2.~~ The desk study identified 13 non-statutory nature conservation sites within 2km of the Site additional land. A description of these sites is detailed in **Table 3-1** below and shown on **Figure 2**.

Table 3-1 – Non-Statutory Sites within 2km

Site Name	Designation	Size (ha)	Distance and orientation from Site	Description
Lamesley Meadows	Gateshead LWS	20	0.08km southwest	A site containing permanent pasture, riverbank, ponds and reed beds. The site supports breeding waders such as lapwing <i>Vanellus vanellus</i> , redshank <i>Tringa tetanus</i> and snipe <i>Gallinago gallinago</i> . Otter <i>Lutra lutra</i> have also occasionally been recorded in the River Team.
River Team Extension	Multiple Ownership LWS (Gateshead, Sunderland & Durham Councils)	11.8	0.16km west	The river has several bankside habitats listed under the BAP. The river has two main bankside habitats, which often alternate. In open, grazed land, the river usually has a good selection of aquatic habitat and small stands of branched bur-reed <i>Sparganium erectum</i> . In the wooded sections, the aquatic flora is considerably reduced by shade. The river is interrupted by several bridges and small weirs.
Long Acre Wood	Gateshead LWS	12	0.25km east	A substantial area of semi-natural deciduous woodland in an otherwise industrial and urban setting. The site is considered an important reservoir of local wildlife, with the presence of common spotted <i>Dactylorhiza fuchsia</i> and northern marsh <i>Dactylorhiza purpurella</i> orchids. This site also represents a wildlife corridor crossed by the Scheme.
Lamesley Reedbeds	Gateshead	8	0.87km southwest	The main habitat is a large

Site Name	Designation	Size (ha)	Distance and orientation from Site	Description
	LWS			reedbed, the largest <i>Phragmites</i> bed in Gateshead. There are also pools and tree planted areas. The wildlife assemblage includes, of particular importance, otter and kingfisher <i>Alcedo atthis</i> (Schedule 1 species, WCA 1981).
Hagg Wood / Gill and Mitcheson's Gill	Gateshead LWS	5	0.9km southwest	The site supports semi-natural woodland and scrub, supporting breeding birds that include spotted flycatcher <i>Muscicapa striata</i> , hedge sparrow and song thrush. Badger are also regularly present.
Bowes Railway	Gateshead LWS	5	1km south east	A six-kilometre linear 6km length of recolonised, disused railway line with patches of heathland and acid grassland. There are small areas of linear woodland and a small pond. This site also represents a wildlife corridor crossed by the Scheme.
Birtley Union Brickworks	Gateshead LWS	7.5	1km south	A disused brickwork with a mosaic of wetland and grassland habitats (including marsh). The site also includes several ponds, which are known to support breeding great crested newt. Much of the southern part of the site has been damaged by infill activities from the adjacent active brickworks, however, the central areas retain considerable wildlife value.
Team Colliery	Gateshead LWS	7	1km east	Supports a particularly good example of species-rich early successional open mosaic habitats. Particularly notable for their orchid population.
Long Acre Dene	Gateshead LWS	2	1.1km south east	An area of ancient semi-natural woodland in the valley of the River Team. The site is noted for its bird assemblage, including breeding hedge sparrow and song thrush, and frequent presence of hedgehog.
Bowes Valley Nature Reserve	Gateshead LWS	31	1.2km southwest	Most of the site consists of grasslands, sown with wild-flower mixes, which

Site Name	Designation	Size (ha)	Distance and orientation from Site	Description
				have established quite successfully and support butterfly populations of importance (grayling <i>Hipparchia Semele</i> and dingy skipper <i>Erynnis tages</i>). The site contains two ponds that support populations of common amphibians. The breeding bird assemblage contains a variety of birds with little ringed plover <i>Charadrius dubius</i> of particular interest (Schedule 1 species, WCA 1981 (as amended)).
Ravensworth Ponds and Wood	Gateshead LWS	148	1.5km north west	This is one of the largest wildlife sites in Gateshead, conferring added importance as a refuge for wildlife, including badger and red squirrel <i>Sciurus vulgaris</i> . The site includes ancient replanted woodland, broadleaved and coniferous woodland in addition to several ponds. Great crested newts <i>Triturus cristatus</i> have been reported within the ponds. The site is considered ecologically diverse and supports a wide range of wildlife.
River Team Woodlands	Durham LWS	20	1.6km south	An ancient woodland site of mixed deciduous and coniferous woodland, with a diverse ground layer. The rare climbing corydalis <i>Corydalis claviculata</i> occurs within the northeast of the site, which is considered to be of ornithological value.
Dunkirk Farm West	Gateshead LWS	1	1.8km south east	The site includes grazed paddock and a disused wagon way (an extension of the Bowes Railway Line LWS). The site is noted for its breeding hedge sparrow and song thrush, and frequent presence of hedgehog. This site also represents a wildlife corridor crossed by the Scheme.

ANCIENT WOODLAND

[4.1.3.](#) ~~3.1.3.~~ There is no ancient woodland within the [Site additional land](#). The closest area of ancient woodland is approximately 1.4km to the north-west at Hill Head Wood

4.2. 3.2. HABITAT SURVEY

OVERVIEW

4.2.1. 3.2.1. The following account summarises the findings of the Phase 1 habitat survey. Nine Phase 1 habitat types were identified in the [Siteadditional land](#). The habitats are mapped on **Figure 1** and are listed in **Table 3-2**, along with areas in hectares (or length in metres for linear features). A description of the dominant and notable species and the composition and management of each habitat is provided below. An indicative species list is provided in **Appendix C-3**. Target notes are provided in **Appendix DC-4** and photographs in **Appendix EC-5**. Alpha-numeric codes used in this section cross-refer to the JNCC Phase 1 habitat survey classification (JNCC, 2010). The order of the habitat descriptions below reflects their ordering in the Phase 1 habitat survey manual and does not ~~reflect habitat~~[indicate](#) importance.

Table 3-2 – Phase 1 Habitat Types

Phase 1 Habitat	Area (ha)	Length (m)	% of Site Area
A2.2: Scattered Scrub	0.06		1
A3.1: Scattered Broadleaf Trees	0.2		3
B6: Poor Semi-Improved Grassland	5.2		87
C3.1: Tall Ruderal	0.3		6
G1.3: Standing Water - Oligotrophic	0.2		3
J2.1.2: Intact Hedge – Species Poor		160	
J2.4: Fence		1200	
J2.5: Wall		165	
J3.6: Buildings	0.003		0
TOTAL	5.963	1525	100

A2.2: SCATTERED SCRUB

4.2.2. 3.2.2. Small patches of hawthorn *Crataegus monogyna* were present on the northern and southern boundaries of the [Siteadditional land](#), with frequent bramble *Rubus fruticosus*, frequent dog rose *Rosa canina* and rare common broom *Cytisus scoparius* also present along the southern boundary.

A3.1 SCATTERED BROADLEAVED TREES

[4.2.3](#) ~~3.2.3~~ Scattered broadleaved trees were present on the eastern and southern boundary of the [Siteadditional land](#). Trees included dominant poplar *Populus* spp. (**Photo 4; Appendix EC-5**), which was coated heavily with lichen species, and frequent silver birch *Betula pendula*.

B6: POOR SEMI-IMPROVED GRASSLAND

[4.2.4](#) ~~3.2.4~~ The majority of the [Siteadditional land](#) was comprised of two poor-semi improved grassland fields used to graze horses. There was clear evidence of persistent horse grazing and horses were present during the survey. The field undulated resulting in depressions where water gathered. Species included dominant perennial ryegrass *Lolium perenne*, abundant cock's foot *Dactylis glomerata* and frequent creeping bent *Agrostis stolonifera* and creeping buttercup *Ranunculus repens*. Rare occurrences of soft rush *Juncus effusus* were also present (**TN7, Figure 1**).

C3.1: TALL RUDERAL

[4.2.5](#) ~~3.2.5~~ A large linear patch of tall ruderal existed on a steep verge along the southern boundary of the [Siteadditional land](#). This patch included frequent willowherb *Epilobium* sp. and male fern *Dryopteris filix-mas* and rare occurrences of common knapweed *Centaurea nigra*.

G1.3: STANDING WATER – OLIGOTROPHIC

[4.2.6](#) ~~3.2.6~~ Six ephemeral water bodies were identified during the survey. Vegetation present was identical to that identified within the poor semi-improved grassland on the [Siteadditional land](#) (**Photo 2; Appendix EC-5**). This included occasional common dock *Rumex obtusifolius* and occasional creeping buttercup and perennial ryegrass.

[4.2.7](#) ~~3.2.7~~ The largest areas of water, located at the northern and western boundary of the [Siteadditional land](#), appeared to have persisted for some time as they were found to be deeper than the rest of the waterbodies found on Site. Additionally, there was a drainage pipe that connected these two waterbodies (**TN3 & 4, Figure 1**). Further, a culvert going under Lamesley Road was present at the most westerly area of water, which connects the two largest waterbodies on [Siteadditional land](#) to land connected with the River Team Extension LWS (**TN2; Figure 1. Photo 1; Appendix EC-5**).

J2.1.2: INTACT HEDGE – SPECIES POOR

[4.2.8](#) ~~3.2.8~~ A hedgerow consisting entirely of hawthorn separated the two poor semi-improved grassland fields. The hedgerow connected to the northern boundary of the Site along the fence line and to the southern boundary of the [Siteadditional land](#) along the verge (**Photo 3; Appendix EC-5**).

J2.4: FENCE

[4.2.9](#) ~~3.2.9~~ Boundary fencing existed around all boundaries of the [Siteadditional land](#), comprised of barbed wire fencing and tall steel fencing separating the [Siteadditional land](#) from the railway line to the east.

J2.5: WALL

~~4.2.10. 3.2.10.~~ Stone walls exist along the western boundary of the [Site additional land](#) to ~~isolate the Site~~ [separate it](#) from the road and residential housing directly adjacent.

J3.6 BUILDINGS

~~4.2.11. 3.2.11.~~ Three buildings were identified within the [Site additional land](#); two small timber stables with pitched roofs (TN1, **Figure 1**) and a large metal container with a flat roof (TN6, **Figure 1**), currently serving as a third shelter for horses that reside on [Site additional land](#).

4.3. ~~3.3.~~ PROTECTED AND NOTABLE SPECIES ASSESSMENT

~~4.3.1. 3.3.1.~~ The potential for the [Site additional land](#) to support legally protected species and notable species has been assessed using the results of the desk study and observations made during the site survey of habitats within and immediately surrounding the [Site additional land](#). A summary of desk study information is included within **Appendix B**, extracted from **Appendix 8.1: Preliminary Ecological Appraisal, Volume 3** of the ES (~~Application Document Reference: TR10031/[APP/6.-123]~~). Desk study records have only been considered below if they were recent (from the last 10 years) and/or if they relate to species that may be supported by habitats at the [Site additional land](#). Habitats present within the [Site additional land](#) are suitable for the following species; further consideration is given below to the likelihood for these species to be present within the [Site additional land](#):

- ~~■~~ Amphibians
- ~~■~~ Bats
- ~~■~~ Badger
- ~~■~~ Birds
- ~~■~~ Reptiles
- ~~■~~ Brown Hare
- ~~■~~ Hedgehog

~~4.3.2. 3.3.2.~~ The Site does not provide suitable habitat for other protected or notable species. As such, other species, beyond those listed above, will not be considered further in this PEA.

AMPHIBIANS

~~4.3.3. 3.3.3.~~ The biological records obtained from ERIC North East included records for common toad *Bufo bufo*, palmate newt *Lissotriton helveticus*, common frog *Rana temporaria* and great crested newt within 2km of the Site. The great crested newt records were all over 600m distance from the Scheme Footprint and therefore, not considered to reflect populations likely to be impacted by the Scheme. As potential impacts to populations are only considered up to 500m from any give Site (English Nature, 2001). Additionally, there is no hydrological connection of the Site to ponds with great crested newt suitability.

~~4.3.4. 3.3.4.~~ The six ephemeral waterbodies identified on Site were subject to HSI assessments, all of which indicated Poor suitability for great crested newts (**Appendix F**). This was generally due to the ephemeral nature of the waterbodies, their lack of connectivity to waterbodies in the surrounding area and the lack of appropriate vegetation. There were no other waterbodies suitable for great crested newts within 500m of the Site.

4.3.5. ~~3.3.5.~~ Suitable terrestrial habitat for amphibians was recorded, including areas of scrub, grassland and linear features such as hedgerows. However, due to the absence of suitable aquatic habitat, amphibians are considered likely to be absent.

BATS

4.3.6. ~~3.3.6.~~ The biological records included the presence of common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, noctule *Nyctalus noctula*, unconfirmed *Pipistrellus* species and unconfirmed bat species. Of the thirty-two bat records returned, only a single roost record was present; a small common pipistrelle roost that was destroyed under licence in 2013 (over 1.5km from the Site).

~~3.3.7. The Site contained two wooden stables, one of which was found to have a bat box installed at the northern gable end (TN1, Figure 1). There were also two residential buildings directly adjacent to the west of the Site. All structures were considered to offer potential suitability for roosting bats.~~

4.3.7. ~~3.3.8.~~

4.3.8. The Site was considered to offer foraging and commuting value for bats in relation to the boundary features (scattered broadleaved trees) and hedgerow within the Site. These linear habitats provided connectivity to suitable habitats within the wider area that offer higher suitability for bat activity.

Preliminary Bat Roost Assessment

4.3.9. The PBRA Survey Area contained two wooden stables (B1 & B2, Figure 1), one of which was found to have a bat box installed at the northern gable end (TN1, Figure 1). Each had a pitched roof and appeared to have been built recently, as minimal wear was present on the fascias. No potential roosting features (PRF) were recorded, with the exception of the bat box installed to the end of the northern gable. Therefore, these buildings were assessed as having low roost suitability.

4.3.10. A metal mobile home with a flat roof, utilised as a shelter for horses, was located at the eastern end of the first field (B3, Figure 1). This was assessed as being negligible roosting suitability due to its size, shape, access points and lack of internal cavities. There were also two residential properties and one commercial property directly adjacent to the west of the Site (TN7, TN8 & TN9, Figure 1), these could not be assessed due to access restrictions. Therefore, an assessment has not been made.

4.3.11. Trees which could contain potentially suitable features to support roosting bats were identified directly outside of the Site. These trees comprised a line of poplar trees at the eastern boundary of the site (TN6, Figure 1), which were separated from the Site by a large steel fence preventing access to the railway corridor. Additionally, a small group of trees within the residential properties could also hold potential for roosting bats (TN8, Figure 1), however due to access restrictions it was not possible to complete a full assessment.

BADGER

4.3.12. ~~3.3.9.~~ The biological records returned two badger records within 2km of the Site, both located over 500m.

~~4.3.13. 3.3.10.~~ The Site does not hold suitable habitat for badger sett creation, with the exception of the hedgerow and scattered trees to the east. However, no setts were recorded during the survey.

~~4.3.14. 3.3.11.~~ The Site provides suitable foraging habitat for badgers, in relation to the poor semi-improved grassland, although there were no signs of badger activity recorded during the survey; such as prints, latrines, guard hairs or feeding scrapes. The wall along the western boundary of the Site acts as a barrier to badger movement, although the post and wire fences along other boundaries are not considered barriers.

BIRDS

~~4.3.15. 3.3.12.~~ The biological records included a large number of bird records (7528 in total) within 2km of the Scheme Footprint⁶. The records included fourteen Schedule 1 (WCA 1981 (as amended)) species, although the habitats within the Site are not suitable to support these species. However, habitats within the Site do have suitability to support other notable species. Breeding waders such as ~~L~~lapwing *Vanellus vanellus*, ~~G~~curlew *Numenius arquata*, ~~S~~snipe *Gallinago gallinago* and ~~R~~edshank *Tringa totanus* are listed on the Lamesley Meadows LWS citation, which is located less than 100m to the south-west of the Site. The ephemeral waterbodies and grassland habitat of the Site are suitable to support these bird species.

~~4.3.16. 3.3.13.~~ Habitats identified within the Site; including trees, hedgerow and scrub; were suitable for supporting other breeding birds. There was also suitable habitat recorded for foraging wintering birds, such as the poor semi-improved grassland.

REPTILES

~~4.3.17. 3.3.14.~~ There were no records of reptiles within 2km of the Site. Scattered scrub and dense bramble were present at the Site boundaries, providing potential shelter for reptiles. However, no reptiles were recorded during a survey of land approximately 150m to the north in 2017 (**Appendix 8.8: Reptile Survey Report, Volume 3** of the ES [APP-130]). As such, reptiles are considered to be absent from the site.

BROWN HARE

~~4.3.18. 3.3.15.~~ There were nine records of brown hare *Lepus europaeus* within the data search, with the majority located over 1km to the southwest near Kibblesworth (closest records).

~~4.3.19. 3.3.16.~~ The poor semi-improved grassland fields, hedgerows and areas of scrub within the Site provide suitable foraging habitat for brown hare. However, the Site is open and does not provide shelter, likely decreasing the suitability for brown hare to be present. The roads to the west and south of the Site act as partial barriers, as do the boundary fences.

HEDGEHOG

~~4.3.20. 3.3.17.~~ The desk study returned thirty-six records of hedgehog *Erinaceus europaeus* within 2km of the Site. Of these records, only eight contained an accurate grid reference (above four digits). The data search confirmed the presence of hedgehog within 100m north east of the Site (at Junction 67 of the A1), with records largely obtained in or near urban areas.

~~4.3.21. 3.3.18.~~ The Site included grassland and scrub, suitable to support foraging and sheltering hedgehog.

⁶ Due to the large number of records, these have not been interrogated with respect to records within 2km of the Site.

5. ~~4.~~ DISCUSSION AND RECOMMENDATIONS

5.1.1. ~~4.1.1.~~ This section considers the potential for impacts to designated sites, legally protected species, notable species and notable habitats as a consequence of the Scheme construction and operation with respect to the Site.

5.1.2. ~~4.1.2.~~ Where further surveys or detailed assessment of potential impacts are required in order to design suitable mitigation, this is identified. A full impact assessment will be detailed within a separate addendum impact assessment report to verify the impact assessment and mitigation presented in **Chapter 8: Biodiversity** of the ES [\[APP-029\]](#).

5.1. ~~4.1.~~ NON-STATUTORY DESIGNATED SITES

5.1.1. ~~4.1.1.~~ Lamesley Meadows LWS is located within close proximity (less than 100m) to the Site. Also, the River Team Extension LWS is located less than 200m to the west of the Site and is connected via the culvert identified during the survey.

5.1.2. ~~4.1.2.~~ There will be no direct loss of habitat within either of the LWS designations. However, there is the potential for indirect effects by way of the hydrological connection.

5.2. ~~4.2.~~ HABITATS

5.2.1. ~~4.2.1.~~ None of the habitats recorded within the Site are afforded legal protection, although [they](#) are considered of ecological value. Hedgerows are identified as HPI in accordance with Section 41 of the NERC Act 2006. Under Section 40 of this legislation, every public body (including planning authorities) must, '*in exercising its functions, have regard so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity*'.

5.2.2. ~~4.2.2.~~ The Scheme may result in the loss and/or damage of ~~this~~[the hedgerow](#) habitat type. Whilst the hedgerow identified within the Site was species-poor and would not qualify as important under the Hedgerows Regulations, as a HPI, compensatory habitat should be provided.

5.3. ~~4.3.~~ PROTECTED AND NOTABLE SPECIES

5.3.1. ~~4.3.1.~~ The results of the desk study, Phase 1 habitat Survey and protected species assessment highlighted the potential presence of protected species or species of conservation concern within the Site, or within the immediate surroundings of the Site. These include amphibians, bats, birds, badger, reptiles, brown hare and hedgehog. The legal protection afforded to these species is outlined below and, where appropriate, the requirement for further survey is identified.

AMPHIBIANS

5.3.2. ~~4.3.2.~~ Great crested newts are protected from killing, injury and disturbance⁷ and their places of rest or shelter (occupied habitat) protected from damage or destruction under the Habitats Regulations. Protection is also afforded under the WCA 1981 (as amended) with respect to disturbance of individuals occupying places of rest or shelter and obstruction of access to these.

⁷ Disturbance is defined within the Habitats Regulations as that which is likely to impair a species ability to survive, breed or reproduce, hibernate or migrate or to significantly affect the local distribution or abundance of the species.

Activities that would otherwise constitute an offence under this legislation may be licensed by Natural England for certain purposes.

~~5.3.3. 4.3.3.~~ Great crested newt and common toad are also listed as SPI in accordance with Section 41 of the NERC Act 2006. Public bodies have an obligation under Section 40 to have regard for these species when carrying out their functions.

~~5.3.4. 4.3.4.~~ The waterbodies present on Site were considered unlikely to support amphibians due to their ephemeral nature. In addition, there were no suitable waterbodies within 500m of the Site. As such, no further survey is recommended.

BATS

~~5.3.5. 4.3.5.~~ All species of bats ~~recorded within~~native to the UK are protected from killing, injury and disturbance⁸ and their roosts protected from damage or destruction under the Habitats Regulations. Protection is also afforded under the WCA 1981 (as amended) with respect to disturbance of individuals occupying places of rest or shelter and obstruction of access to these. Activities that would otherwise constitute an offence under this legislation may be licensed by Natural England for certain purposes.

~~5.3.6. 4.3.6.~~ Certain species of bats, including ~~the~~ noctule, brown long-eared bat and soprano pipistrelle bat are also listed as SPI for the conservation of biodiversity in England in accordance with Section 41 of the NERC 2006. Section 40 obliges public bodies (including local planning authorities) to have regard for the conservation of biodiversity (including SPI) when discharging their duties (including determining planning applications).

~~4.3.7. The stables identified on the Site hold potential roosting value for bats and may be disturbed by construction activities. As such, it is recommended that the stables are subject to a Preliminary Bat Roost Assessment (PBRA), to determine their suitability for roosting bats. Further details are presented in Table 4-1.~~

5.3.7. The buildings assessed during the PBRA were found to have low or negligible roosting suitability. It was not possible to assess all buildings/trees within the PBRA Survey Area due to access restrictions. However, due to the scale of the proposed works and their distance from these buildings it is considered unlikely that the Scheme would impact bats that might be roosting there. Buildings assessed as having low roosting suitability (B1 & B2) are all located outside of the Scheme Footprint and will therefore be retained. The building assessed as having negligible roosting suitability (B3) will be lost, but this will not impact roosting bats.

5.3.8. Trees identified as having potential suitability for roosting bats within 50m of the Site were all outside the Scheme Footprint, and therefore all trees with potential suitability will be retained. As all the species recorded within the desk study are common and widespread throughout England, it is considered that any features identified, including the bat box, would support a roost of common and widespread species. Therefore, no further survey is required.

~~5.3.9. 4.3.8.~~ Loss of the hedgerow (approximately 150m in length) within the Site would ~~result in~~mean the loss of foraging/commuting habitat for bats. However, as the hedgerow is only connected to linear habitat features at its southern end and is separated from suitable foraging/commuting habitat along the eastern boundary of the Site by at least 40m, fragmentation of

⁸ Disturbance is defined within the Habitats Regulations as that which is likely to impair a species ability to survive, breed or reproduce, hibernate or migrate or to significantly affect the local distribution or abundance of the species.

[foraging or commuting routes](#) is not anticipated. As such, further survey in relation to bat foraging/commuting activity is not required.)

BADGER

[5.3.10](#) ~~4.3.9~~ The Protection of Badgers Act 1992 makes it illegal to wilfully kill, injure or take any badger, or attempt to do so. It also makes it an offence to intentionally or recklessly damage, destroy or obstruct access to any part of a badger sett. Activities that would otherwise constitute an offence under this legislation may be licensed by Natural England for certain purposes.

[5.3.11](#) ~~4.3.10~~ There were no signs of badger or their setts on Site during the walkover survey. In addition, badgers were not recorded within the wider Scheme Footprint during surveys in 2018, as detailed in **Chapter 8: Biodiversity**. Therefore, no further survey is required.

BIRDS

[5.3.12](#) ~~4.3.11~~ The Habitats Regulations Part 1 Regulation 10(2) & (3) state that local authorities 'must take such steps in the exercise of their functions as they consider appropriate to contribute to...the preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the UK including by means of the upkeep, management and creation of such habitat...'. The legislation continues to state that economic and recreation requirements must be taken into consideration in considering which measures are appropriate.

[5.3.13](#) ~~4.3.12~~ Under the WCA 1981 (as amended) all wild birds are protected from killing and injury, and their nests and eggs protected from taking, damage and destruction whilst in use. Additional protection is extended to species listed under Schedule 1 of the Act, meaning it is also an offence to disturb these species at or near the nest, or whilst they have dependent young.

[5.3.14](#) ~~4.3.13~~ The loss of habitat within the Site would result in the loss of foraging and nesting habitat for wintering and breeding bird populations within the wider area. Further survey is recommended to [\(identify the importance of the Site\)](#) with respect to breeding and wintering birds, as detailed in **Table 4-13**. The findings of these surveys will be used to verify the mitigation documented in **Chapter 8: Biodiversity** of the ES.

REPTILES

[5.3.15](#) ~~4.3.14~~ Native widespread reptile species (common or viviparous lizard *Zootoca vivipara*, adder *Vipera berus*, grass snake *Natrix ~~natrix~~ helvetica* and slow worm *Anguis fragilis*) are partially protected under Schedule 5 of the WCA 1981 (as amended). This includes protection from killing and injury.

[5.3.16](#) ~~4.3.15~~ All reptile species are also listed as SPI in accordance with Section 41 of the NERC Act 2006. Public bodies have an obligation under Section 40 to have regard for these species when carrying out their functions.

[5.3.17](#) ~~4.3.16~~ As reptiles are considered to be absent (based on the 2017 survey), no further survey is required.

BROWN HARE AND HEDGEHOG

[5.3.18](#) ~~4.3.17~~ Both brown hare and hedgehog are SPI in accordance with Section 41 of the NERC Act 2006. Public bodies have an obligation under Section 40 to have regard for these species when carrying out their functions.

[5.3.19](#) ~~4.3.18~~ Both species have undergone significant decline due to habitat loss and fragmentation. The Site has the potential to support both species (less so for brown hare). Targeted surveys are not considered necessary in order to inform ecological impact assessment.

Table 4-1 - Key Ecological Constraints and Further Survey Requirements

Ecological Receptor	Potential Constraints	Further Survey Requirements	Seasonal Constraints
Bats	Disturbance to buildings that have potential roosting suitability for bats.	A PBRA to assess the suitability of the stables present on Site and residential housing immediately adjacent for roosting bats. The PBRA survey should be undertaken in accordance with good practice guidelines (Collins, 2016).	PBRA can be undertaken at any time of the year.
Birds	<p>Loss of bird nesting habitat and habitats (including trees and hedgerow).</p> <p>Disturbance to and loss of migratory and wintering bird habitat.</p>	<p>Breeding bird surveys (BBS) to establish bird populations within one section of the Site (the grassland field).</p> <p>Wintering bird surveys (currently ongoing) to establish presence and usage of the Site during these times and therefore potential impacts of the Scheme. The survey work followed a standard method based on the British Trust for Ornithology's (BTO's) Common Bird Census (CBC), as summarised by Bibby et al. (2000).</p>	<p>BBS can be conducted between the period March and August.</p> <p>Wintering bird surveys can be conducted between October and March.</p>

6. ~~5.~~ CONCLUSIONS

6.1.1. ~~5.1.1.~~ A range of habitats were recorded within the Site, including poor semi-improved grassland (grazed pasture), scattered trees, scattered scrub, standing water and boundary features (including hedgerows, fences and tree lines). The habitats present both within and adjacent to the Site were suitable to support roosting, foraging and commuting bats and breeding and wintering birds. Lamesley Meadows LWS and the River Team Extension LWS are located within 200m of the Site and hydrologically linked via a culvert beneath Lamesley Road.

6.1.2. ~~5.1.2.~~ To ensure compliance with legislation and planning policy and to inform an ecological impact assessment, further survey effort ~~is~~was recommended in relation to ~~roosting bats,~~ breeding birds and wintering birds, with the latter already ~~underway~~completed. These surveys are outlined in **Table 4-1** and the findings will be presented in separate reports.

6.1.3. ~~5.1.3.~~ The construction and operational impacts of the Scheme with respect to the Site ~~will~~ ~~be~~has been fully assessed and presented within ~~an addendum report to~~ the ES Addendum: Additional Land (HE551462-WSP-EGN-ZZ-RP-LE-00024), which ~~will~~ also ~~verify~~ies the suitability of proposed mitigation and compensation detailed in **Chapter 8: Biodiversity of the ES [APP-029]**.

6.1.4. Following these surveys, the impact assessment within the ES Addendum: Additional Land (HE551462-WSP-EGN-ZZ-RP-LE-00024) is considered to remain valid.

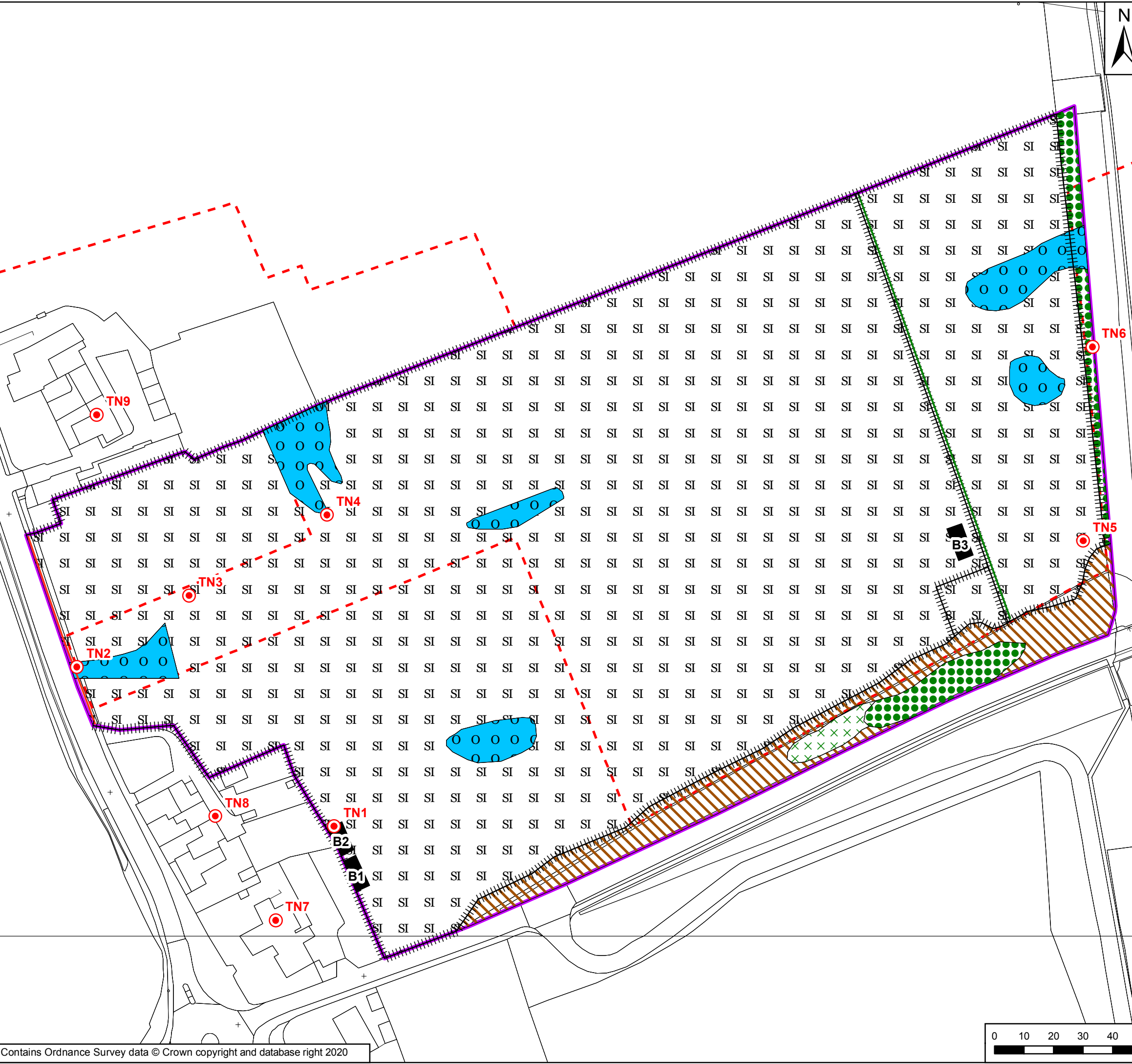
7. ~~6.~~ REFERENCES

- ~~+~~ Amphibian and Reptile Groups of the United Kingdom (2010) ARG UK Advice Note 5: Great Crested Newt Habitat Suitability Index. ARG UK, UK
- ~~+~~ Bibby C.J, Burgess N.D, Hill D.A, Mustoe S.H. (2000) Bird Census Techniques. Second Edition. Elsevier Ltd.
- ~~+~~ CIEEM (2017a). Guidelines for Preliminary Ecological Appraisal. CIEEM, Winchester.
- ~~+~~ CIEEM (2017b). Guidelines for Ecological Report Writing. CIEEM, Winchester.
- ~~+~~ CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.
- ~~+~~ Collins J. (ed.) (2016) Bat Surveys for Professional Ecologists, Good Practice Guidelines (3rd Edition). [The Bat Conservation Trust, London.](#)
- [Collins, J. \(ed.\) \(2016\) Bat Surveys for Professional Ecologists: Good Practice Guidelines \(3rd edn\).](#) The Bat Conservation Trust, London.
- ~~+~~ English Nature (2001). Great Crested Newt Mitigation Guidelines. English Nature, Peterborough.
- ~~+~~ Ministry of Housing, Communities & Local Government (2019). The National Planning Policy Framework. DCLG, London.
- ~~+~~ Gent, A. and Gibson, S. (2003). Herpetofauna Workers Manual. JNCC. Peterborough
- ~~+~~ Gilbert, G., Gibbons, D.W. and Evans, J. (1998). Bird Monitoring Methods: A Manual of Techniques for Key UK Species. RSPB
- ~~+~~ Harris S, Cresswell P and Jefferies D (1991) (Report) Surveying Badgers. The Mammal Society, Bristol.
- ~~+~~ HMSO (Her Majesty's Stationary Office) (1981). Wildlife and Countryside Act (as amended by the Countryside and Rights of Way Act 2000). HMSO, London.
- ~~+~~ HMSO (2006) Natural Environment and Rural Communities Act. HMSO, Norwich.
- ~~+~~ Joint Nature Conservation Committee (JNCC) Biodiversity Reporting and Information Group (2008). UK Biodiversity Action Plan.
- ~~+~~ JNCC (2010). Handbook for Phase 1 habitat survey – a technique for environmental audit. JNCC, Peterborough.
- ~~+~~ JNCC and DEFRA (2012) UK Post 2010 Biodiversity Framework. Available online: <http://jncc.defra.gov.uk/page-6189>~~http://jncc.defra.gov.uk/page-6189~~<http://jncc.defra.gov.uk/page-6189>. [Accessed February 2020].
- ~~+~~ Oldham R.S., Keeble J., Swan M.J.S., and Jeffcote M. (2000) Evaluating the suitability of habitat for the great crested newt. Herpetological Journal 10: 143-155
- ~~+~~ Roper, T.J. (2010). Badger. Harper Collins.
- ~~+~~ Stace, C (2019). New Flora of the British Isles. C&M Floristics. Suffolk.

FIGURES

Figure 1 - Phase 1 Habitat Survey

.....



Key

- Survey Area
- Scheme Footprint
- Broadleaved Parkland/Scattered Trees
- Buildings
- Other Tall Herb and Fern - Ruderal
- Poor Semi-Improved Grassland
- Scrub - Scattered
- Standing Water - Oligotrophic
- Fence
- Intact Hedge - Species-Poor
- Wall
- Target Note

	P01	Mar 2020	First Issue	GH	JF	NJA	
Rev	Date	Description			By	Chk'd	App'd
Suitability						Status	

PINS Reference Number: TR010031



Project Title: A1 Birtley to Coal House Scheme

Drawing Title: Figure 1 Phase 1 Habitat Survey

Scale: 1:1,250	Drawn: GH	Checked: JF	Approved: KS	Authorised: NJA
Original Size: A3	Date: Mar 2020	Date: Mar 2020	Date: Mar 2020	Date: Mar 2020

Drawing Number: HE551462	Originator: WSP	Volume: 6.2	Revision: P01
PW Stage Code			

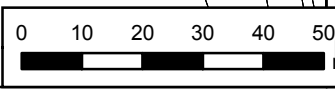
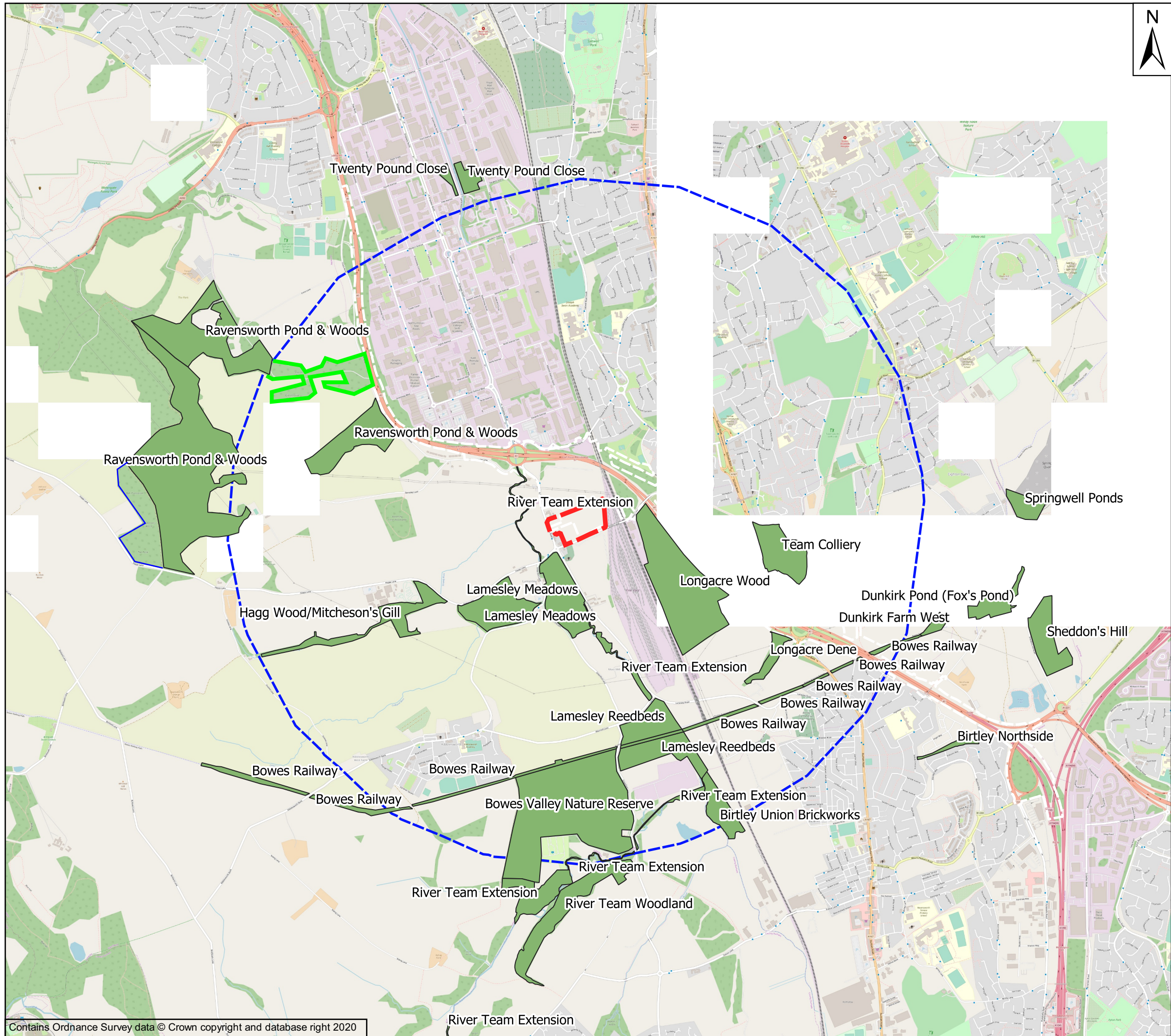


Figure 2 – Non-statutory sites within 2km



Key

- Site
- 2km Search Area
- Local Wildlife Sites

Client	Highways England	
Project	A1 Widening Project: Birtley to Coalhouse	
Title	Figure 2 - Non-Statutory Sites within 2km	
Drawing No:	Figure 2	Drawn: CG
Date:	20/02/20	Checked: JF
Scale @ A3:	1:40000	Approved: AB

~~Appendix A~~ Appendix C-1

RELEVANT LEGISLATION AND

PLANNING POLICY_

ENGLAND & WALES LEGISLATION AND POLICY CONTEXT

This report has been compiled with reference to relevant wildlife legislation, planning policy and the UK Biodiversity Framework. An overview and context of relevant legislation is provided, with species groups or species receives summarised in Table A:1.

The Wildlife and Countryside Act 1981, (as amended) (WCA)

Protected birds, animals and plants are listed under Schedules 1, 5, 8 and 9 respectively of the WCA, a description of these Schedules and their meaning is provided below.

Under the WCA (England and Wales) all birds, their nests and eggs (with exception of species listed under Schedule 2) are protected by the WCA. It is an offence to:

- Intentionally kill, injure, or take any wild bird,
- Take or destroy an egg of any wild bird.
- Damage or destroy the nest of any wild bird (whilst being built, or in use). Under the WCA the clearance of vegetation within the Site boundary, or immediately adjacent to the Site during the bird breeding season could result in an offence occurring by the disruption or destruction of nest sites. The bird breeding season can be taken to occur between March - August inclusive, although is subject to variation due to geographical and seasonal factors.

Schedule 1

Birds listed under Schedule 1 of the WCA⁹ are afforded additional protection with regard to intentional or reckless disturbance whilst nest-building, or at a nest containing eggs or young, or disturbance of such a bird.

Schedule 5

Species listed in Schedule 5 can either be fully protected or be partially protected under Section 9, which makes it unlawful to intentionally:

- Part 1: kill, injure or take;
- Part 2: possess or control (live or dead animal, part or derivative);
- Part 4 (a): damage or destruct any structure used for shelter or protection;
- Part 4 (b): disturb them in a place of shelter or protection;
- Part 4 (c): obstruct access to place of shelter or protection;
- Part 5 (a): sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative);
- Part 5 (b): advertise for buying or selling.

Schedule 8

The Act makes it an offence (subject to exceptions) to pick, uproot, trade in, or possess (for the purposes of trade) any wild plant listed in Schedule 8, and prohibits the unauthorised intentional

Schedule 9

Invasive species listed under Schedule 9 are prohibited from release into the wild and the Act prohibits planting or “causing to grow” in the wild of any plant species listed in Schedule 9. It should be noted that species listed on Schedule 1 of the WCA are also listed on Schedule 9 to prevent release of non-native and captive individuals, this includes barn owl, red kite, goshawk and corncrake.

Countryside Rights of Way Act 2000 (CRoW Act)

It is an offence to wilfully take, kill, injure, possess or ill-treat a badger. Under the Act their setts are protected against intentional or reckless interference. Sett interference includes damaging or obstructing access to any part of the sett, or disturbance of a badger whilst it is occupying a sett. The Act defines a badger sett as 'any structure or place, which displays signs indicating the current or recent use by badgers'. Natural England (NE) takes this definition to include seasonally used setts that are not occupied but that show sign of recent use by badgers (Natural England, 2009¹⁰).

If impacts to badgers or their setts are unavoidable then authorised sett disturbance requires a licence.

The UK Post-2010 Biodiversity Framework (2011-2020) (JNCC and DEFRA, 2012)

This Framework lists the UK's most threatened species and habitats and sets out targets and objectives for their management and recovery. The UK Biodiversity Action Plan (BAP) process is central to this and locally and should be used as a guide for decision-makers to have regards for the targets set by the framework and the goals they aim to achieve. The UK BAP has now been replaced by the UK Post-2010 Biodiversity Framework, however, it contains useful information on how to characterise important species assemblages and habitats which is still relevant (UK Post-2010 Biodiversity Framework, 2012¹¹).

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

The Conservation of Habitats and Species Regulations 2017 (as amended) consolidate the Conservation of Habitats and Species Regulations 2010 with subsequent amendments. The Regulations transpose the EU Directive 92/43/EEC, on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive), into national law. They also transpose elements of the EU Wild Birds Directive into national law. The Regulations came into force on 30th November 2017, and extend to England and Wales (including the adjacent territorial sea) and to a limited extent in Scotland (reserved matters) and Northern Ireland. In Scotland, the Habitats Directive is transposed through a combination of the Habitats Regulations 2010 (in relation to reserved matters) and the Conservation (Natural Habitats &c.) Regulations 2010. In Northern Ireland, the Conservation (Natural Habitats, &c) Regulations (Northern Ireland) 1995 (as amended) transpose the Habitats Directive in relation to Northern Ireland.

All species listed under Annex IV of the Habitats Directive require strict protection and are known as European Protected Species (EPS). Under Regulation 42 of the Habitats Regulations it is unlawful to:

- Deliberately kill, capture or disturb;
- Deliberately take or destroy the eggs of; and
- Damage or destroy the breeding site/resting place of any species protected under this legislation.

If the Ecologist determines that impacts to an EPS are unavoidable then the works may need to be carried out under a site specific mitigation licence from Natural England (NE) or Natural Resources Wales (NRW). Impact Class licences are also available in both England and Wales for bats and great crested newts. This enables Registered Low Impact Consultants to undertake certain low impact activities with reduced paperwork and process length.

Certain EPS are also listed under Annex II of the Habitats Directive and are afforded protection by the establishment of core areas of habitat known as Special Areas of Conservation. This means that they require special relevant consideration in a Habitats Regulations Assessment (HRA).

The Birds Directive seeks to maintain populations of all wild bird species across their natural range (Article 2). All bird species listed under Annex I¹² of the Birds Directive are rare or vulnerable and are afforded special protection. In addition, Special Protection Areas (SPAs), these are also designated under all regularly occurring migratory species, with regard to the protection of wetlands of international importance. The presence of bird species and communities are a relevant consideration in HRA.

Table A:1: Key Species and National Wildlife Legislation, Policy and Biodiversity Framework Applicable in England & Wales

Species	Legislation, Planning Policy and UK Biodiversity Framework						
	Wildlife and Countryside Act 1981 (as amended), (WCA)				The Conservation of Habitats and Species Regulations 2017 (as amended) (Habitats Regulations) - Regulation 41	Natural Environment and Rural Communities (NERC) Act 2006	The Protection of Badgers Act 1992
	Schedule 1	Schedule 5	Schedule 8	Schedule 9	European Protected Species (Annex IV of the EC Habitats Directive),		
Badger							Y
Bats		Y ¹³ (part)			Y ¹⁴	Y ¹⁵	
Hazel Dormouse		Y 5(part)			Y	Y	
Otter		Y 5(part)			Y	Y	
Water vole		Y ¹⁷ (full)				Y	
Birds	Y			Y ¹⁸		Y ¹⁹	
Reptiles		Y ²¹ (part)		Y ⁹	Y ²²	Y ²³	
Amphibians		Y		Y	Y		

¹³ These species are partially protected under section 9(4)(b), (4)(c) and (5).

¹⁴ Only Barbastelle (*Barbastella barbastellus*), Bechstein's bat (*Myotis bechsteinii*), greater horseshoe bat (*Rhinolophus ferrumequinum*) and lesser horseshoe bat (*Rhinolophus hipposideros*) are listed on Annex II of the Habitats Directive.

¹⁵ Greater horseshoe bat, lesser horseshoe bat, Bechstein's bat, noctule (*Nyctalus noctula*), soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared bat (*Plecotus auritus*) and barbastelle are listed as Species of Principal Importance. The common pipistrelle (*Pipistrellus pipistrellus*) in Wales listed under II.

		²⁵ (part)		²⁶	²⁷ , ²⁸	^Y ²⁹	
White-clawed Crayfish		^Y ³⁰ (partial)			^Y ³¹	^Y	
Invertebrates		^Y ³² (full/part)		^Y	^Y ³³ , ³⁴	^Y ³⁵	
Fish		^Y ³⁷ (full/part)		^Y ⁹	^Y ³⁸ , ³⁹	^Y ⁴⁰	
Plants			^Y ⁴²	^Y ⁹	^Y ⁴³ , ⁴⁴	^Y ⁴⁵	

²⁵ The four common reptile species, Adder (*Vipera berus*), Grass snake (*Natrix natrix*), Common lizard (*Zootoca vivipara*) and Slow worm (*Anguis fragilis*) are offered partial protection under section 9(5). The rarer UK reptile species (Sand lizard (*Lacerta agilis*)) are partially protected under section 9(4)(b) and (c) and (5).

²⁶ Common frog (*Rana temporaria*), Common toad (*Bufo bufo*), Smooth newt (*Lissotriton vulgaris*) and Palmate newt (*Lissotriton helveticus*) are offered partial protection under section 9(5). Great crested newt (*Triturus cristatus*) and Natterjack toad (*Bombina orientalis*) are offered partial protection under section 9(4)(b) and (c) and (5). Pool frog (*Pelophylax lessonae*) is offered partial protection under section 9(4)(b) and (c)(1) only and with respect to England only.

²⁷ Great crested newt, Natterjack toad and Pool frog are the only amphibians to be designated European Protected Species.

²⁸ Great crested newt is the only amphibian listed on Annex II of the Habitats Directive.

²⁹ Great crested newt, Natterjack toad and Common toad are listed as Species of Principal Importance in England in Section 41 of the NERC Act 2006 <http://www.legislation.gov.uk/ukpga/2006/16/contents>.

³⁰ Under the Wildlife and Countryside Act it is illegal to take or sell white clawed crayfish under the WCA. A licence is required to survey (hand net or trap) for the species. To undertake work within WCC inhabited rivers a Class Licence is required from Natural England. Natural England state in their Class licence that due to declining numbers all efforts should be made to conserve the species.

³¹ White clawed crayfish are listed under Annex II and V of the Habitats Directive.

³² To view the current list of invertebrates that are protected under this Act either in part or full visit: <http://www.legislation.gov.uk/ukpga/1981/69/schedule/5> [Accessed 15/02/2020].

³³ The Large blue butterfly (*Maculinea arion*), Fisher's estuarine moth (*Gortyna borellii lunata*) and Lesser whirlpool ram's-horn snail (*Anisus vorticulus*) are the only invertebrates to be designated European Protected Species.

³⁴ There are currently twelve invertebrates listed in Annex II of the Habitats Directive; White-clawed crayfish (*Austroptamobius pallipes*), Southern damselfly (*Coenagrion mercuriale*), Marsh fritillary butterfly (*Eurodryas aurinia*), Violet orchard slug (*Deroceras reticulatum*), Stag beetle (*Lucanus cervus*), Freshwater pearl mussel (*Margaritifera margaritifera*), Narrow-mouthed whorl snail (*Vertigo angustior*), Round-mouthed whorl snail (*Vertigo genesii*), Geyer's whorl snail (*Vertigo geyeri*), Desmoulin's whorl snail (*Vertigo desmoulini*), Lesser whirlpool ram's-horn snail (*Anisus vorticulus*) and Fisher's estuarine moth (*Gortyna borellii lunata*).

³⁵ There are currently 379 invertebrate species (not including marine species) listed as Species of Principal Importance in England <http://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&ved=0ahUKEwivvu7J9trSAhXiCsAKHX4TBGcQFggvMAM&url=http%3A%2F%2Fpublications.naturalengland.org.uk%2Ffile%2F6518755878240256&usq=AFQ>

~~Appendix B~~ Appendix C-1

SUMMARY OF ECOLOGICAL DESK STUDY DATA

Table B.15 - Protected and notable species (excluding birds) for which records have been identified within 2 km of the Site

Species common name	Species Latin name	No. of records	Distance and orientation from Scheme Footprint	Legal / Conservation Status ⁴⁷
Common Toad	<i>Bufo bufo</i>	6	250m south	BAP 2007, Bern A3, England NERC S.41, WACA Sch5 Sect 9.5a
Palmate Newt	<i>Lissotriton helveticus</i>	4	500m north east	Bern A3, WACA Sch5 Sect 9.5a
Smooth Newt	<i>Lissotriton vulgaris</i>	6	500m north east	Bern A3, WACA Sch5 Sect 9.5a
Common Frog	<i>Rana temporaria</i>	6	250m south	Bern A3, HabDir A5, WACA Sch5 Sect 9.5a
Great Crested Newt	<i>Triturus cristatus</i>	14	1.1km south	BAP 2007, Bern A2, Durham BAP, England NERC S.41, FEP 007, HabDir A2, HabDir A4, HabReg Sch2, Northumberland BAP, WACA Sch5 Sect 9.4b, WACA Sch5 Sect 9.5a, WACA Sch5 Sect 9.4c,
Heather	<i>Calluna vulgaris</i>	1	700m north east	RedList GB post 2001 NT ⁴⁸
Harebell	<i>Campanula rotundifolia</i>	1	700m north east	RedList GB post 2001 NT
Scots Pine	<i>Pinus sylvestris</i>	1	800m west	IUCN Nationally Scarce but excluded from Red List
Japanese Knotweed	<i>Reynoutria japonica</i>	7	20m north	WCA 1981 (Sch 9 Sct 14 part 2), EPA 1990
Mat-Grass	<i>Nardus stricta</i>	1	600m north east	RedList GB post2001 NT
Tormentil	<i>Potentilla</i>	1	600m north	RedList GB post2001 NT

⁴⁷ HabReg = Conservation of Habitats and Species Regulations (2017), HabDir = Habitats Directive (Council Directive 92/43/EEC), WACA = Wildlife and Countryside Act (1981), NERC = Schedule 41 Natural Environment and Rural Communities Act (2006), FEP = Farm Environment Plan Guidance 001, LBAP = Local Biodiversity Action Plan, RD1 (UK) = UK Red Data Book listing based on IUCN guidelines, RD2 (UK) = UK Red Data Book listing not based on IUCN guidelines (Nationally Rare and Scarce).

⁴⁸ NT = Near Threatened

	<i>erecta</i>		east	
Lesser Spearwort	<i>Ranunculus flammula</i>	1	600m north east	RedList GB post2001 VU ⁴⁹
Goldenrod	<i>Solidago virgaurea</i>	1	600m north east	RedList GB post2001 NT
Large-Leaved Lime	<i>Tilia platyphyllos</i>	1	1.5km east	FEP 001, IUCN Nationally Scarce but excluded from Red List
Cup Lichen	<i>Cladonia</i>	1	500m north	Habitat Directive – A5
Flat-topped Bog-moss	<i>Sphagnum fallax</i>	1	1.3km north	Habitat Directive – A5
European Water Vole	<i>Arvicola amphibius</i>	3	100m north	BAP-2007, Durham BAP
Roe Deer	<i>Capreolus capreolus</i>	11	700 south west	Bern-A3
West European Hedgehog	<i>Erinaceus europaeus</i>	36	150m south west	BAP-2007, Bern-A3, Durham BAP, England NERC S.41, Northumberland BAP
Brown Hare	<i>Lepus europaeus</i>	9	700m south west	BAP 2007, Durham BAP, England NERC S.41, FEP 007 tab2
European Otter	<i>Lutra lutra</i>	26	50m west	BAP-2007, Bern A2, Durham BAP, ECCITES A, England NERC S.41, FEP 007 tab2, HabDir A2, HabDir A4, HabReg Sch2, Northumberland BAP, RedList Global post 2001 NT, WACA Sch5 sect9.4b, WACA Sch5 sect9.5a, WACA Sch5Sect9.4c
Eurasian Badger	<i>Meles meles</i>	2	1.4km south west	Bern A3, Durham BAP, Protection of Badgers Act 1992
Stoat	<i>Mustela erminea</i>	5	10m north	Bern A3
Weasel	<i>Mustela nivalis</i>	5	900m south	Bern A3
Feral Ferret	<i>Mustela putorius subsp. furo</i>	1	1.7km south	BAP 2007, Bern A3, Durham BAP, England NERC S.41, HabDir A5, HabReg Sch4

⁴⁹ VU = Vulnerable

American Mink	<i>Mustela vison</i>	3	700m south west	WACA Sch 9 Part 1
Eurasian Water Shrew	<i>Neomys fodiens</i>	1	1km south	Bern A3, Durham BAP
Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	21	1km west	CMS ⁵⁰ A2, CMS EUROBATS-A1, HabReg Sch2, WACA Sch5 sect9.1(kill/injuring), WACA Sch5 sect9.4b, WACA Sch5 sect9.5a, WACA Sch5 Sect9.4c
Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	5	1km west	BAP 2007, Bern A2, CMS A2, CMS EUROBATS-A1, Durham BAP, England NERC S.41, HabDir A4, HabReg Sch2, Northumberland BAP, WACA Schsect9.1(kill/injuring), WACA Sch5 sect9.4b, WACA Sch5 sect9.5a, WACA Sch5Sect 9.4c
Noctule Bat	<i>Nyctalus noctula</i>	2	2.2km south	BAP 2007, Bern A2, CMS A2, CMS EUROBATS A1, Durham BAP, England NERC S.41, FEP 007 tab2, HabDir A4, HabReg Sch2, Northumberland BAP, WACA Sch5 sect9.1(kill/injuring), WACA Sch5 sect9.4b, WACA-Sch5 sect9.5a, WACA Sch5 Sect 9.4c
Eastern Grey Squirrel	<i>Sciurus carolinensis</i>	21	300m east	WACA Sch 9 Part 1
Eurasian Red Squirrel	<i>Sciurus vulgaris</i>	1	1.4km north	BAP 2007, Bern A3, Durham BAP, England NERC S.41, FEP 007 tab2, Northumberland BAP, WACA Sch5 sect9.2, WACA Sch5 sect9.4.a, WACA Sch5 sect9.4b, WACA Sch5 sect9.5a, WACA Sch5 Sect9.4c
Eurasian Common Shrew	<i>Sorex araneus</i>	3	400m north	Bern A3

Table B-26 - Protected and notable birds for which records have been identified within 2 km from the Site

⁵⁰ Secretariat of the Convention on Migratory Species

Species common name	Species Latin name	No. of records	Distance and orientation from Scheme Footprint	Legal / Conservation Status 51
Sparrowhawk	<i>Accipiter nisus</i>	70	1.3km south	CMS A2, ECCITES-A
Common Sandpiper	<i>Actitis hypoleucos</i>	6	1.3km south	CMS A2, CMS AEWA ⁵² A2
Skylark	<i>Alauda arvensis</i>	5	1.3km south	BirdsDir A2.2, Durham BAP, England NERC S.41, FEP 007 tab2, Northumberland BAP
King Fisher	<i>Alcedo atthis</i>	29	1.3km south	Bern A2, BirdsDir A1, FEP 007 tab2, WACA Sch1 part1
Teal	<i>Anas crecca</i>	201	1.3km south	Bird Amber, BirdsDir A2.1, CMS A2, CMS AEWA A2, ECCITES C, Northumberland BAP
Wigeon	<i>Anas Penelope</i>	79	1.3km south	Bird-Amber, BirdsDir-A2.1, CMS_A2, CMS_AEWA-A2, ECCITES-C, Northumberland BAP
Mallard	<i>Anas platyrhynchos</i>	228	1.3km south	Bird-Amber, BirdsDir-A2.1, CMS_A2, CMS_AEWA-A2
Gadwall	<i>Anas strepera</i>	23	1.3km south	Bird-Amber, BirdsDir-A2.1, CMS_A2, CMS_AEWA-A2
White Fronted Goose	<i>Anser albifrons</i>	2	1.3km south	Bird-Red, BirdsDir-A2.2, CMS_A2, CMS_AEWA-A2
Greylag Goose	<i>Anser anser</i>	200	1.3km south	Bird-Amber, BirdsDir-A2.1, CMS_A2, CMS_AEWA-A2, WACA-Sch1_part2
Pink Footed Goose	<i>Anser brachyrhynchus</i>	24	1.3km south	Bird-Amber, BirdsDir-A2.2, CMS_A2, CMS_AEWA-A2
Meadow Pipit	<i>Anthus pratensis</i>	41	1.3km south	Bern-A2, Bird-Amber
Swift	<i>Apus apus</i>	60	1.3km south	Bird-Amber, Northumberland BAP
Grey Heron	<i>Ardea cinerea</i>	121	1.3km south	CMS_AEWA-A2

⁵¹ HabReg = Conservation of Habitats and Species Regulations (2017), W&CA = Wildlife and Countryside Act (1981), NERC = Schedule 41 Natural Environment and Rural Communities Act (2006), LBAP = Local Biodiversity Action Plan, BoCC Red = Birds of Conservation Concern Red List, BoCC Amber = Birds of Conservation Amber List.

⁵² The Agreement on the Conservation of African-Eurasian Migratory Waterbirds

.....

Little Owl	<i>Athene noctua</i>	3	1.3km south	Bern-A2, ECCITES-A
Pochard	<i>Aythya farina</i>	3	1.3km south	Bird-Red, BirdsDir-A2.1, CMS_A2, CMS_AEWA-A2
Tufted Duck	<i>Aythya fuligula</i>	4	1.3km south	BirdsDir-A2.1, CMS_A2, CMS_AEWA-A2
Waxwing	<i>Bombycilla garrulous</i>	2	1.3km south	Bern-A2
Canada Goose	<i>Branta Canadensis</i>	46	1.3km south	BirdsDir-A2.1, CMS_A2, WACA Sch 9 Part 1
Goldeneye	<i>Bucephala clangula</i>	1	1.3km south	Bird-Amber, BirdsDir-A2.2, CMS_A2, CMS_AEWA-A2, WACA-Sch1_part2
Buzzard	<i>Buteo buteo</i>	136	1.3km south	CMS_A2, ECCITES-A
Dunlin	<i>Calidris alpine</i>	3	1.3km south	Bird-Amber, Bern-A2, CMS_A2, CMS_AEWA-A2, FEP-007_tab2
Goldfinch	<i>Carduelis carduelis</i>	151	1.3km south	Bern-A2, Northumberland BAP
Greenfinch	<i>Carduelis chloris</i>	56	1.3km south	Bern-A2, Northumberland BAP
Tree Creeper	<i>Certhia familiaris</i>	1	1.3km south	Bern-A2
Little Ringed Plover	<i>Charadrius dubius</i>	41	1.3km south	Bern-A2, CMS_A2, CMS_AEWA-A2, WACA-Sch1_part1
Ringed Plover	<i>Charadrius hiaticula</i>	13	1.3km south	Bern-A2, Bird-Red, CMS_A2, CMS_AEWA-A2, Northumberland BAP
Black Headed Gull	<i>Chroicocephalus ridibundus</i>	205	1.3km south	Bird-Amber, BirdsDir-A2.2, CMS_AEWA-A2,
Dipper	<i>Cinclus cinclus</i>	6	1.3km south	Bern-A2, Bird-Amber
Rock Dove	<i>Columba livia</i>	8	1.3km south	BirdsDir-A2.1, ECCITES-A
Stock Dove	<i>Columba oenas</i>	70	1.3km south	Bird-Amber, BirdsDir-A2.2, Northumberland BAP
Woodpigeon	<i>Columba palumbus</i>	270	1.3km south	BirdsDir-A2.1, Northumberland BAP
Carrion Crow	<i>Corvus corone</i>	240	1.3km south	BirdsDir-A2.2

.....

Rook	<i>Corvus frugilegus</i>	5	1.3km south	BirdsDir-A2.2, Northumberland BAP
Jackdaw	<i>Corvus monedula</i>	246	1.3km south	BirdsDir-A2.2, Northumberland BAP
Cuckoo	<i>Cuculus canorus</i>	1	1.3km south	BAP-2007, Bird-Red, England_NERC_S.41,
Blue Tit	<i>Cyanistes caeruleus</i>	214	1.3km south	Bern-A2
Bewick's Swan	<i>Cygnus columbianus subsp. bewickii</i>	1	1.3km south	BAP-2007, Bern-A2, Bird-Amber, BirdsDir-A1, CMS_A2, CMS_AEWA-A2, England_NERC_S.41
Whooper Swan	<i>Cygnus Cygnus</i>	13	1.3km south	Bern-A2, BirdsDir-A1, CMS_A2, CMS_AEWA-A2, FEP-007_tab2, WACA-Sch1_part1
Mute Swan	<i>Cygnus olor</i>	60	1.3km south	Bird-Amber, BirdsDir-A2.2, CMS_A2, CMS_AEWA-A2
House Martin	<i>Delichon urbicum</i>	67	1.3km south	Bern-A2, Bird-Amber
Great Spotted Woodpecker	<i>Dendrocopos major</i>	23	1.3km south	Bern-A2
Little Egret	<i>Egretta garzetta</i>	2	1.3km south	Bern-A2, BirdsDir-A1, CMS_AEWA-A2, ECCITES-A
Yellowhammer	<i>Emberiza citronella</i>	3	1.3km south	BAP-2007, Bern-A2, England_NERC_S.41, FEP-007_tab2, Northumberland BAP
Reed Bunting	<i>Emberiza schoeniclus</i>	40	1.3km south	BAP-2007, Bern-A2, England_NERC_S.41, FEP-007_tab2, Northumberland BAP
Robin	<i>Erithacus rubecula</i>	206	1.3km south	Bern-A2
Peregrine	<i>Falco peregrinus</i>	5	1.3km south	Bern-A2, BirdsDir-A1, CMS_A2, ECCITES-A, WACA-Sch1_part1
Hobby	<i>Falco Subbuteo</i>	1	1.3km south	Bern-A2, CMS_A2, ECCITES-A, WACA-Sch1_part1
Kestrel	<i>Falco tinnunculus</i>	186	1.3km south	Bern-A2, CMS_A2, ECCITES-A, FEP-007_tab2, Northumberland BAP

.....

Coot	<i>Fulica atra</i>	49	1.3km south	BirdsDir-A2.1, CMS_AEWA-A2
Snipe	<i>Gallinago gallinag</i>	65	1.3km south	BirdsDir-A2.1, CMS_A2, CMS_AEWA-A2, Durham BAP, FEP-007_tab2, Northumberland BAP
Moorhen	<i>Gallinula chloropus</i>	252	1.3km south	BirdsDir-A2.2, CMS_A2, CMS_AEWA-A2
Jay	<i>Garrulus glandarius</i>	12	1.3km south	BirdsDir-A2.2
Oystercatcher	<i>Haematopus ostralegus</i>	68	1.3km south	Bird-Amber, BirdsDir-A2.2, CMS_AEWA-A2, Northumberland BAP
Swallow	<i>Hirundo rustica</i>	78	1.3km south	Bern-A2, Northumberland BAP
Great Grey Shrike	<i>Lanius excubitor</i>	1	1.3km south	Bird-Red, BirdsDir-A2.2, CMS_AEWA-A2
Herring Gull	<i>Larus argentatus</i>	198	1.3km south	Bird-Red, BirdsDir-A2.2, CMS_AEWA-A2
Common Gull	<i>Larus canus</i>	41	1.3km south	Bird-Amber, BirdsDir-A2.2, CMS_AEWA-A2
Lesser Black Headed Gull	<i>Larus fuscus</i>	84	1.3km south	Bird-Amber, BirdsDir-A2.2, CMS_AEWA-A2
Great Black Headed Gull	<i>Larus marinus</i>	18	1.3km south	Bird-Amber, BirdsDir-A2.2, CMS_AEWA-A2
Mediterranean Gull	<i>Larus melanocephalus</i>	1	1.3km south	Bern-A2, Bird-Amber, BirdsDir-A1, CMS_A2, CMS_AEWA-A2, WACA-Sch1_part1
Black-tailed Godwit	<i>Limosa limosa</i>	2	1.3km south	BirdsDir-A2.2, CMS_A2, CMS_AEWA-A2, FEP-007_tab2, RedList_Global_post2001_NT, WACA-Sch1_part1
Linnet	<i>Linaria cannabina</i>	39	1.3km south	Bern-A2, Durham BAP, FEP-007_tab2, Northumberland BAP
Grasshopper	<i>Locustella naevia</i>	2	1.3km south	BAP-2007, Bird-Red,

.....

Warbler				England_NERC_S.41
Goosander	<i>Mergus merganser</i>	2	1.3km south	BirdsDir-A2.2, CMS_A2, CMS_AEWA-A2
Red Kite	<i>Milvus milvus</i>	23	1.3km south	BirdsDir-A1, CMS_A2, ECCITES-A, FEP-007_tab2, RedList_Global_post2001_NT, WACA-Sch1_part1
Pied Wagtail	<i>Motacilla alba</i>	146	1.3km south	Bern-A2
White Wagtail	<i>Motacilla alba subsp. alba</i>	7	1.3km south	Bern-A2
Grey Wagtail	<i>Motacilla cinerea</i>	10	1.3km south	Bern-A2, Bird-Red
Yellow Wagtail	<i>Motacilla flava</i>	7	1.3km south	Bern-A2, Durham BAP, FEP-007_tab2, Northumberland BAP
Curlew	<i>Numenius arquata</i>	182	1.3km south	Bird-Red, BAP-2007, BirdsDir-A2.2, CMS_A2, CMS_AEWA-A2, Durham BAP, England_NERC_S.41, FEP-007_tab2, Northumberland BAP, RedList_Global_post2001_NT
Wheatear	<i>Oenanthe oenanthe</i>	1	1.3km south	Bern-A2
Osprey	<i>Pandion haliaetus</i>	1	1.3km south	Bird-Amber, BirdsDir-A1, CMS_A2, ECCITES-A, WACA-Sch1_part1
Great Tit	<i>Parus major</i>	213	1.3km south	Bern-A2
House Sparrow	<i>Passer domesticus</i>	240	1.3km south	BAP-2007, Bird-Red, Durham BAP, England_NERC_S.41
Tree Sparrow	<i>Passer montanus</i>	178	1.3km south	BAP-2007, Durham BAP, England_NERC_S.41, FEP-007_tab2, Northumberland BAP
Grey Partridge	<i>Perdix perdix</i>	3	1.3km south	BAP-2007, BirdsDir-A2.1, England_NERC_S.41, FEP-007_tab2, Northumberland BAP
Coal Tit	<i>Parus ater</i>	156	1.3km south	Bern-A2

.....

Cormorant	<i>Phalacrocorax carbo</i>	17	1.3km south	CMS_AEWA-A2
Pheasant	<i>Phasianus colchicus</i>	134	1.3km south	BirdsDir-A2.1
Redstart	<i>Phoenicurus phoenicurus</i>	1	1.3km south	Bern-A2, Bird-Amber
Willow Warbler	<i>Phylloscopus trochilus</i>	7	1.3km south	Bird-Amber
Magpie	<i>Pica pica</i>	246	1.3km south	BirdsDir-A2.2
Willow Tit	<i>Poecile montana</i>	43	1.3km south	Bern-A2, Bird-Red, FEP-007_tab2
Marsh Tit	<i>Poecile palustris</i>	1	1.3km south	Bern-A2, Bird-Red
Dunnock	<i>Prunella modularis</i>	208	1.3km south o	Bern-A2, Bird-Amber, Northumberland BAP
Bullfinch	<i>Pyrrhula pyrrhula</i>	20	1.3km south	FEP-007_tab2, Northumberland BAP
Goldcrest	<i>Regulus regulus</i>	7	1.3km south	Bern-A2, Northumberland BAP
Sand Martin	<i>Riparia riparia</i>	68	1.3km south	Bern-A2
Nuthatch	<i>Sitta europaea</i>	4	1.3km south	Bern-A2
Siskin	<i>Spinus spinus</i>	2	1.3km south	Bern-A2
Collared Dove	<i>Streptopelia decaocto</i>	89	1.3km south	BirdsDir-A2.2
Starling	<i>Sturnus vulgaris</i>	234	1.3km south	BirdsDir-A2.2, Durham BAP, FEP-007_tab2, Northumberland BAP
Little Grebe	<i>Tachybaptus ruficollis</i>	1	1.3km south	CMS_AEWA-A2
Shelduck	<i>Tadorna tadorna</i>	88	1.3km south	Bern-A2, Bird-Amber, CMS_A2, CMS_AEWA-A2
Wood Sandpiper	<i>Tringa glareola</i>	2	1.3km south	Bern-A2, Bird-Amber, BirdsDir-A1, CMS_A2, CMS_AEWA-A2, WACA-Sch1_part1
Green	<i>Tringa ochropus</i>	3	1.3km south	Bern-A2, Bird-Amber, CMS_A2,

.....

Sandpiper				CMS_AEWA-A2, WACA-Sch1_part1
Greenshank	<i>Tringa nebularia</i>	5	1.3km south	Bird-Amber, BirdsDir-A2.2, CMS_A2, CMS_AEWA-A2, WACA-Sch1_part1
Redshank	<i>Tringa totanus</i>	81	1.3km south	BirdsDir-A2.2, CMS_A2, CMS_AEWA-A2, Durham BAP, FEP-007_tab2, Northumberland BAP
Wren	<i>Troglodytes troglodytes</i>	91	1.3km south	Bern-A2
Redwing	<i>Turdus iliacus</i>	71	1.3km south	Bird-Red, BirdsDir-A2.2, WACA-Sch1_part1
Blackbird	<i>Turdus merula</i>	233	1.3km south	BirdsDir-A2.2
Song Thrush	<i>Turdus philomelos</i>	50	1.3km south	BirdsDir-A2.2, Durham BAP, FEP-007_tab2, Northumberland BAP
Fieldfare	<i>Turdus pilaris</i>	59	1.3km south	Bird-Red, BirdsDir-A2.2, WACA-Sch1_part1
Mistle Thrush	<i>Turdus viscivorus</i>	72	1.3km south	Bird-Red, BirdsDir-A2.2
Lapwing	<i>Vanellus vanellus</i>	191	1.3km south	BAP-2007, BirdsDir-A2.2, CMS_A2, CMS_AEWA-A2, Durham BAP, England_NERC_S.41, FEP-007_tab2, Northumberland BAP

.....

Appendix C-3

PLANT SPECIES RECORDED

Table C.17 - Plant species recorded

Common name	Latin name	Frequency (DAFOR)
B6: Poor Semi-Improved Grassland		
Perennial Ryegrass	<i>Lolium Perenne</i>	D
Cocksfoot	<i>Dactylis glomerate</i>	F
Creeping Bent	<i>Agrostis stolonifera</i>	F
Creeping Buttercup	<i>Ranunculus repens</i>	O
Soft Rush	<i>Juncus effusus</i>	R
Mousear	<i>Cerastium fontanum</i>	O
Common Daisy	<i>Bellis perennis</i>	O
Knapweed	<i>Centaurea nigra</i>	O
Common Nettle	<i>Urtica dioica</i>	O
A2.2: Scattered Scrub		
Hawthorn	<i>Crataegus monogyna</i>	F
Bramble	<i>Rubus fruticosus</i>	O
Dog Rose	<i>Rosa canina</i>	O
Common Broom	<i>Cytisus scoparius</i>	O
A3.1: Scattered Broadleaf Trees		
Poplar Sp.	<i>Populus sp.</i>	D
Silver Birch	<i>Betula pendula</i>	F
C3.1: Tall Ruderal		
Willowherb Sp.	<i>Epilobium sp.</i>	F
Male Fern	<i>Dryopteris filix-mas</i>	F
Knapweed	<i>Centaurea nigra</i>	R
Vetch Sp.	<i>Vicia sp.</i>	F
Common Dock	<i>Rumex obtusifolius</i>	F
Hogweed Sp.	<i>Heracleum sp.</i>	R

Common name	Latin name	Frequency (DAFOR)
Creeping Thistle	<i>Cirsium arvense</i>	O
Bramble	<i>Rubus fruticosus</i>	A
G3.1: Standing Water - Oligotrophic		
Perennial Ryegrass	<i>Lolium Perenne</i>	D
Cocksfoot	<i>Dactylis glomerate</i>	F
Creeping Bent	<i>Agrostis stolonifera</i>	F
Common Dock	<i>Rumex obtusifolius</i>	O
Creeping Buttercup	<i>Ranunculus repens</i>	O
J2.1.2: Intact Hedge – Species Poor		
Hawthorn	<i>Crataegus monogyna</i>	D

Appendix C-4

Appendix-D

TARGET NOTES

TN1 – Bat box fixed to gable end of a stable block – assessed as low suitability for roosting bats

TN2 – Culvert going under Lamesley Road draining from ephemeral water body present on Site

TN3 – Outflow of pipe connecting waterbodies together

TN4 – Intake of pipe draining from large ephemeral waterbody into another

TN5 – Soft rush present within ephemeral water body

~~**TN6** – Large metal container acting as shelter for horses~~

~~**TN7** – Soft rush present without standing water~~

TN6 – Poplar tree line – potential suitability to support roosting bats

TN7 – Church hall and additional commercial buildings present – potential suitability to support roosting bats.

TN8 – Residential complex containing trees, all of which have the potential to contain features suitable for supporting roosting bats.

TN9 – Residential complex, potential suitability to support roosting bats.

Appendix E

Appendix C-5

PHOTOGRAPHS

Table E-18 - Photographs



Photo 1: Culvert under Lamesley Road (TN2)



Photo 2: Overview of habitat with ephemeral water present



Photo 3: Hawthorn hedgerow within the Site.



Photo 4: Poplar tree line at the eastern boundary of the Site.

Appendix

C-6~~Appendix F~~

HSI CALCULATIONS

Table [F.47](#) - HSI Calculations

Pond Ref.	S1: Geographic location	S2: Water body area	S3: Water body permanence	S4: Water quality	S5: % Shade (1m from bank)	S6: Impact of waterfowl	S7: Fish stocks	S8: Number of water bodies <1km	S9: Terrestrial habitat	S10: Macrophyte cover (%cover)	HSI SCORE	HSI CATEGORY
P1	1	0.1	0.1	0.33	1	1	1	1	0.33	0.3	0.45	Poor
P2	1	0.1	0.1	0.33	1	1	1	1	0.33	0.3	0.45	Poor
P3	1	0.1	0.1	0.33	1	1	1	1	0.33	0.3	0.45	Poor
P4	1	0.1	0.1	0.33	1	1	1	1	0.33	0.3	0.45	Poor
P5	1	0.1	0.1	0.33	1	1	1	1	0.33	0.3	0.45	Poor
P6	1	0.1	0.1	0.33	1	1	1	1	0.33	0.3	0.45	Poor

If you need help accessing this or any other Highways England information, please call **0300 470 4580** and we will help you.

© Crown copyright 2020.

You may re-use this information (not including logos) free of charge in any format or medium, under the terms of the Open Government Licence. To view this licence:

visit www.nationalarchives.gov.uk/doc/open-government-licence/

write to the Information Policy Team, The National Archives,

Kew, London TW9 4DU, or email

psi@nationalarchives.gsi.gov.uk.

This document is also available on our website at www.gov.uk/highways

If you have any enquiries about this document A1BirtleytoCoalhouse@highwaysengland.co.uk or call 0300 470 4580*.

*Calls to 03 numbers cost no more than a national rate call to an 01 or 02 number and must count towards any inclusive minutes in the same way as 01 and 02 calls.

These rules apply to calls from any type of line including mobile, BT, other fixed line or payphone. Calls may be recorded or monitored.

Registered office Bridge House, 1 Walnut Tree Close, Guildford GU1 4LZ
Highways England Company Limited registered in England and Wales number 09346363