

**Ledgard Bridge Mills,
Mirfield**

Ecological Impact Assessment

November 2023

Report reference	1776c
Revision	3
Prepared by	Toby Fisher CEnv MCIEEM
Approved by	Andrew Westgarth CEnv MCIEEM
Issue date	Rev 1. 8 th November 2023 Rev 2. 14 th November 2023 Rev 3. 28 th November 2023

This report is valid for a period of 12 months from the issue date.

Contents

1	Introduction	4
2	Methodology.....	6
2.1	Desk Study	6
2.2	Personnel	6
2.3	Update PEA Survey (including Bat Roost Potential Survey)	6
2.4	Habitat Condition Survey to inform BNG Calculations.....	6
2.5	River Condition Assessment to inform BNG Calculations	7
2.6	BNG Calculations	7
2.7	Ecological Impact Assessment	7
2.8	Comments / Limitations.....	8
3	Results	9
3.1	Desk Study	9
3.1.2	Internationally and Nationally Designated Sites.....	9
3.1.3	Locally Designated Sites.....	9
3.1.4	Species Records	9
3.2	Habitats and Habitat Condition	10
3.2.2	Urban - Developed Land, Sealed Surface – Condition N/A.....	10
3.2.3	Urban – Sparsely Vegetated Land - Ruderal/Ephemeral – Condition MODERATE.....	11
3.2.4	Urban – Introduced Shrub – Condition N/A	11
3.2.5	Grassland – Other Neutral Grassland – Condition POOR.....	12
3.2.6	Grassland – Modified Grassland – Condition MODERATE	13
3.2.7	Woodland and Forest - Other Woodland; Broadleaved – Condition POOR.....	13
3.2.8	Heathland and Shrub – Mixed Scrub – Condition MODERATE	16
3.2.9	Urban – Urban Trees – Condition MODERATE.....	17
3.2.10	Invasive Weeds.....	18
3.3	Watercourses	18
3.3.1	River Condition Assessments	18
3.3.2	Watercourse Encroachment.....	19
3.3.3	Riparian Zone Encroachment	19
3.4	Birds	20

3.5	Bats	20
3.6	Great Crested Newt	20
3.7	Water Vole and Otter	20
3.8	Reptiles	21
3.9	Badger and Other Fauna	21
4	Evaluation and Potential for Impacts	22
5	Likely Significant Effects.....	24
5.2	Construction Phase	24
5.2.2	Direct Removal of Habitats	24
5.2.3	Disturbance from Lighting, Noise and Human Activities	24
5.3	Operational Phase	24
5.3.2	Disturbance from Lighting, Noise and Human Activities	24
5.4	Mitigation Measures	25
5.4.1	Biodiversity Protection Zones.....	25
5.4.2	Invasive Weeds Management Plan	25
5.4.3	Protection of Nesting Birds (Legal Compliance)	25
5.4.4	Bats (Legal Compliance).....	25
5.4.5	Provision of Bat Boxes and Bird Nest Boxes	25
5.4.6	Artificial Lighting Design.....	26
5.4.7	Hedgehog	26
5.4.8	Ecological Watching Brief	26
5.4.9	Construction Environmental Management Plan (CEMP).....	26
5.5	Residual Effects	26
6	Net Gain for Biodiversity	27
6.1	Methodology.....	27
6.2	Habitat Retention / Creation.....	27
6.3	Watercourse.....	27
6.4	BNG Results	27
	Appendix 1. Baseline and Proposed Habitat Maps.....	29
	Appendix 2. Photographs	31
	Appendix 3. Information Provided by WYES.....	40

1 Introduction

- 1.1.1.1 This report presents the results of an Ecological Impact Assessment (EclA) in relation to a proposed residential development at Ledgard Bridge, Mirfield, WF14 8LZ (Ordnance Survey grid reference SE20191942) as shown on the following drawing:
- Ledgard Bridge Mills. Landscape Softworks Proposals. Smeeden Foreman. Drawing ref. SF3463-LL01, Rev A. 13.11.2023.
- 1.1.1.2 A Preliminary Ecological Appraisal (PEA) survey was conducted on 26th August 2020 and an Update PEA survey was undertaken on 3rd January 2023. A dusk emergence bat survey of the building on the site was undertaken on 3rd September 2020 and an update dusk emergence bat survey of the building was undertaken on 16th August 2023.
- 1.1.1.3 To inform the BNG calculations, the habitat and river types and condition of the habitats and rivers at the site were assessed on 3rd January 2023 with a full update survey of the condition of the habitats and rivers conducted on 21st September 2023 in accordance with the standard methodology.
- 1.1.1.4 This report should be read in conjunction with the following report, although all key information has been reproduced in this EclA along with the results of the update PEA:
- *Quants Environmental Ltd. (2023). Ledgard Bridge Mills, Mirfield. Dusk Emergence Bat Survey, August 2023. Rev 1776b.*
- 1.1.1.5 In accordance with current guidelines¹, the aims of this EclA were to identify and evaluate all relevant ecological receptors, identify likely ecological impacts, identify mitigation / compensation measures and identify any residual effects. This report also presents Biodiversity Net Gain (BNG) information for the proposed development.

Figure 1. Site Location (aerial imagery dated 2020)



¹ CIEEM (2016) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.

Figure 2. Site Location



© Crown copyright and database rights (2023) OS licence no. 100022861.

2 Methodology

2.1 Desk Study

- 2.1.1.1 West Yorkshire Ecology Service (WYES) was contacted for searches of protected sites and records of protected species within a 2 km radius of the site centre.
- 2.1.1.2 In addition, the following data sources were searched for statutorily protected sites and additional ecological data of relevance to the assessment such as off-site waterbodies:
- Multi Agency Geographic Information for the Countryside (MAGIC).
 - Ordnance Survey 1:10,000 mapping.
 - Aerial imagery (dated 2020).

2.2 Personnel

- 2.2.1.1 The Update PEA, BNG and EclA were undertaken by Toby Fisher CEnv MCIEEM^{2, 3} with assistance from Morgane Accault ACIEEM.
- 2.2.1.2 The River Condition Assessment was undertaken by Toby Fisher CEnv MCIEEM (professionally trained and accredited in the use of the Modular River Survey) with assistance from Morgane Accault ACIEEM.

2.3 Update PEA Survey (including Bat Roost Potential Survey)

- 2.3.1.1 An Update PEA Survey of the site was conducted on 3rd January 2023 in accordance with the standard survey methodology⁴.
- 2.3.1.2 The habitats on the site were assessed and categorised in order to provide baseline information and subsequent interpretation of the ecological value of the site. In addition, the site was searched for evidence of protected / notable species and assessed in terms of its potential to support protected / notable species such as Badger, Great Crested Newt, Water Vole, reptiles and bat species.
- 2.3.1.3 The trees were inspected from ground level for evidence of bats and for potential bat roost features, using close-focussing binoculars. The building was inspected externally and internally to search for evidence of bats and for potential bat roost features on 3rd January 2023. The loft space within the building was fully inspected and searched. On 3rd January 2023 and 21st September 2023, the banks of the unnamed watercourse on the site's eastern boundary were searched for evidence of Water Vole and Otter. Due to the health and safety considerations, it was not possible to closely inspect the banks of the River Calder for signs of Otter or Water Vole.

2.4 Habitat Condition Survey to inform BNG Calculations

- 2.4.1.1 To inform the BNG Calculations, the habitat types and condition of the habitats within the site were assessed on 3rd January 2023 and 21st September 2023 in accordance with the standard methodology^{5 6}.

² Natural England Class Licence Registration No. 2015-10756-CLS-CLS - CL18 Level 2 (Bats).

³ Natural England Class Licence Registration No. WML- CL08:2015-16681-CLS-CLS (Great Crested Newts).

⁴ Chartered Institute of Ecology and Environmental Management (CIEEM). (2017). Guidelines for Preliminary Ecological Appraisal, Second Edition. December 2017. CIEEM, Winchester.

⁵ STEPHEN PANKS, NICK WHITE, AMANDA NEWSOME, MUNGO NASH, JACK POTTER, MATT HEYDON, EDWARD MAYHEW, MARIA ALVAREZ, TRUDY RUSSELL, CLARE CASHON, FINN GODDARD, SARAH J. SCOTT, MAX HEAVER, SARAH H. SCOTT, JO TREWEEK, BILL BUTCHER AND DAVE STONE 2022. Biodiversity metric 3.1: Auditing and accounting for biodiversity – User Guide. Natural England.

⁶ UKHab Ltd (2023). UK Habitat Classification Version 2.0 (at <https://www.ukhab.org>)

2.5 River Condition Assessment to inform BNG Calculations

- 2.5.1.1 To inform the BNG Calculations, River Condition Assessment (RCA) surveys of the River Calder along the site's western boundary and the unnamed minor watercourse along the site's eastern boundary was undertaken on 3rd January 2023 and 21st September 2023 in accordance with the standard methodology^{5 7 8 9 10}. In accordance with the guidelines, based on the width of the watercourses and the size of the proposed development site, one MoRPh 5 survey was undertaken for the River Calder and one MoRPh 5 survey was undertaken for the unnamed minor watercourse along the site's eastern boundary.
- 2.5.1.2 In accordance with the guidelines⁵, the RCA captured at least 20% of the watercourses assessed and points of impact were surveyed.

2.6 BNG Calculations

- 2.6.1.1 In accordance with DEFRA guidelines⁵, the DEFRA Biodiversity Metric 3.1¹¹ has been used to calculate the baseline values for the on-site habitats and watercourses (before development) and the post-development value in order to calculate the Total Net Unit Change.

2.7 Ecological Impact Assessment

- 2.7.1.1 The Ecological Impact Assessment (EclA) has been undertaken in accordance with the standard guidelines¹. The EclA guidelines identify various characteristics that can be used to identify ecological resources or features likely to be important in terms of biodiversity. These include:
- naturalness;
 - animal or plant species, sub-species or varieties that are rare or uncommon, either internationally, nationally or more locally, including those that may be seasonally transient;
 - ecosystems and their component parts, which provide the habitats required by important species, populations and/or assemblages;
 - endemic species or locally distinct sub-populations of a species;
 - habitats that are rare or uncommon;
 - habitats that are effectively irreplaceable;
 - habitat diversity;
 - size of habitat or species population;
 - habitat connectivity and/or synergistic associations;
 - habitats and species in decline;
 - rich assemblages of plants and animals;
 - large populations of species or concentrations of species considered uncommon or threatened in a wider context;
 - plant communities (and their associated animals) that are considered to be typical of valued natural / semi-natural vegetation types, including examples of naturally species-poor communities; and
 - species on the edge of their range, particularly where their distribution is changing as a result of global trends and climate change.

⁷ A.M.Gurnell, J. England, S.J.Scott, L.J. Shuker. (2021). A GUIDE TO ASSESSING RIVER CONDITION. Part of the Rivers and Streams Component of the BioDiversity Net Gain Metric. BM3.0 version: August 2021.

⁸ <https://modularriversurvey.org/>

⁹ A.M. Gurnell. (2021). APPLICATION AND TESTING OF THE RIVER CONDITION ASSESSMENT USING A CALIBRATION DATA SET. August 2021.

¹⁰ Angela Gurnell and Lucy Shuker. (2022). The MoRPh Survey. Technical Reference Manual. 2022 version.

¹¹ <http://publications.naturalengland.org.uk/publication/6049804846366720>

2.7.1.2 As per the EclA guidelines, the following frame of reference has been used to define geographic context:

- International and European;
- National;
- Regional;
- Metropolitan, County, vice-county or other local authority-wide area;
- Local; and
- Within Site only.

2.8 ***Comments / Limitations***

2.8.1.1 The update survey was undertaken within the optimal time of year for assessing habitat types and condition (September 2023). The update Dusk Emergence Bat Survey was undertaken within the optimal survey season (August 2023). Due to the health and safety considerations, it was not possible to closely inspect the banks of the River Calder for signs of Otter or Water Vole. There were no other access restrictions. Overall, there were no significant limitations.

3 Results

3.1 Desk Study

3.1.1.1 Information provided by WYES is reproduced at Appendix 3.

3.1.2 *Internationally and Nationally Designated Sites*

3.1.2.1 WYES confirmed that there are no internationally or nationally designated sites within 2 km of the site. No internationally or nationally designated sites have been identified within 10 km of the site.

3.1.3 *Locally Designated Sites*

3.1.3.1 WYES confirmed the presence of seven Local Wildlife Sites (LWS) and seven Kirklees Sites of Wildlife Significance (KSWS) within the search area. Of these, the following designated sites are located within 1 km of the site:

- **Briery Bank Wood LWS and KSWS** located approximately 450 metres south-east of the site.
- **Covey Clough Wood and Hepworth Wood LWS** located approximately 925 metres south of the site.

3.1.3.2 WYES confirmed that the Kirklees Wildlife Habitat Network (KWHN) includes the River Calder immediately adjacent to the site's western and south-western boundaries along with the minor watercourse along the site's eastern boundary.

3.1.4 *Species Records*

3.1.4.1 WYES provided a large number of protected and notable species records within the search area (see Appendix 3). The key information of relevance to this assessment is summarised below.

Amphibians

3.1.4.2 WYES provided three records of Common Frog, one record of Common Toad, six records of Smooth Newt and two records of Palmate Newt within 2 km of the site but none within 250 metres of the site. WYES provided two records of Great Crested Newt within 2 km of the site, but none within 1km of the site.

3.1.4.3 A search on the MAGIC website revealed no granted EPSM licences for Great Crested Newts within 1 km of the site.

Reptiles

3.1.4.4 WYES provided no records of reptiles within 2 km of the site.

Birds

3.1.4.5 WYES provided ten records of birds within 2 km of the site but none from the site itself.

Crustaceans

3.1.4.6 WYES provided no records of crustaceans within 2 km of the site.

Water Vole

3.1.4.7 WYES provided no records of Water Vole within 2 km of the site.

Otter

3.1.4.8 WYES provided no records of Otters within 2 km of the site.

Hedgehog

- 3.1.4.9 WYES provided one record of Hedgehogs within 2 km of the site, approximately 861 metres north of the site and dated 12/07/2017.

Brown Hare

- 3.1.4.10 WYES provided one record of Brown Hare within 2 km of the site but none within 1 km of the site.

Harvest Mouse

- 3.1.4.11 WYES provided no records of Harvest Mouse within 2 km of the site.

Bats

- 3.1.4.12 WYES provided 119 records of bats comprising of the following species: Common Pipistrelle, Soprano Pipistrelle, Pipistrelle bat species, Pipistrelle, Lesser Noctule, Noctule bat, Brown Long-eared Bat, Natterer's Bat, Myotis bat species and bats. The majority of the records are over 250 metres north of the site. However, the following records are from within 100 metres of the site:

- A roost of Common Pipistrelle (droppings present) from the main mill building at Ledgard Bridge Mill immediately adjacent to the site at grid references SE2020219515 and SE2018319492, dated January 2005 and January 2013.

- 3.1.4.13 A search on the MAGIC website revealed two granted EPSM licences for bats within 1 km of the site:

- Licence ref. 2016-27006-EPS-MIT for Common Pipistrelle at approximate grid reference SE20401950 approximately 120 metres west of the site. Licence Start Date: 19/12/2016; Licence End Date: 19/12/2016.
- Licence ref. 2016-25281-EPS-MIT for Common Pipistrelle at approximate grid reference SE20401950 approximately 150 metres east of the site. Licence Start Date: 07/09/2016; Licence End Date: 29/08/2021.

Badger

- 3.1.4.14 WYES confirmed the nearest record of Badger is located approximately 533 metres of the site centre. The site falls within the area of increased probability of badger activity, as defined by WYES.

Other species

- 3.1.4.15 WYES provided one record of European Eel within 2 km of the site, approximately 513 metres north-west of the site and dated 01/09/2002.

- 3.1.4.16 WYES provided 10 records of beetles, two records of butterflies and 12 records of moths within 2 km of the site, but none within the site.

3.2 Habitats and Habitat Condition

- 3.2.1.1 The Baseline Habitat Map and Proposed Habitat Map are shown in Appendix 1. The completed Habitat Condition Sheets are presented below.

3.2.2 Urban - Developed Land, Sealed Surface – Condition N/A

- 3.2.2.1 The building at the site is largely devoid of vegetation except for some ivy *Hedera helix* on the walls. The hard standing is largely devoid of vegetation except for sparse Procrumbent Pearlwort *Sagina procumbens*, Groundsel *Senecio vulgaris* and Dandelion *Taraxacum officinale* agg.

DEFRA Condition Assessment: No assessment required – automatically assigned score of 0.

3.2.3 Urban – Sparsely Vegetated Land - Ruderal/Ephemeral – Condition MODERATE

- 3.2.3.1 An area of derelict land in the northern part of the site supports colonising vegetation comprising Canadian Fleabane *Conyza canadensis*, Hare's-Foot Clover *Trifolium arvense*, Charlock *Sinapis arvensis*, Dandelion, Butterfly Bush *Buddleja davidii*, Mugwort *Artemisia vulgaris*, Smooth Sow-Thistle *Sonchus oleraceus*, Rat's-Tail Fescue *Vulpia myuros*, Procumbent Pearlwort, Field Forget-Me-Not *Myosotis arvensis*, Red Fescue, Black Medick *Medicago lupulina*, Hoary Willowherb *Epilobium parviflorum*, Common Bent, Red Dead-Nettle *Lamium purpureum*, Daisy *Bellis perennis*, American Willowherb *Epilobium ciliatum*, Fox-and-Cubs *Pilosella aurantiaca*, Blue Fleabane *Erigeron acris*, Cock's-Foot *Dactylis glomerata*, Nasturtium *Tropaeolum majus* and Common Mouse-Ear *Cerastium fontanum*.

Table 1. DEFRA Condition Assessment: MODERATE (passes 2 of 3 criteria)

Condition Assessment Criteria – URBAN habitat type		Meets criteria?
1	Vegetation structure is varied, providing opportunities for insects, birds and bats to live and breed. A single structural habitat component / vegetation type should not account for more than 80% of the total habitat area.	No
2	There is a diverse range of flowering plant species, providing nectar sources for insects. These species may be either native, or non-native but beneficial to wildlife. NB - To achieve GOOD condition, criterion 2 must be satisfied by native species only (rather than non-natives beneficial to wildlife). Note that Biodiverse green roofs are exempt from this requirement, and can include non-native sedums, as set out in footnote 1.	Yes
3	Invasive non-native species (Schedule 9 of WCA) cover less than 5% of total vegetated area. NB - To achieve GOOD condition, criterion 3 must be satisfied by a complete absence of invasive non-native species (rather than <5% cover).	Yes
Condition Assessment Result		Condition Assessment Score
If 3 criteria assessed:		
Passes 3 of 3 core criteria; AND • Meets the requirements for good condition within criteria 2 and 3		Good (3)
Passes 2 of 3 core criteria; OR • Passes 3 of 3 core criteria but does not meet the requirements for good condition within criteria 2 and 3		Moderate (2)
Passes 0 or 1 of 3 core criteria		Poor (1)
Footnote 1: For Biodiverse green roofs only - experience has shown that a range of sedums species (native, naturalised, and non-native) support wildflowers during hot periods. Therefore, for Criteria 2 a Biodiverse green roof can have non-native sedums and still achieve Good condition.		
Footnote 2: For Criteria 3 – For green roof habitat types only - <i>Buddleja davidii</i> should be assessed alongside Schedule 9 species. This species impairs the health of the local ecosystem and reduces the biodiversity potential of the roof. It is also a sign that a roof has not been planted and seeded correctly in subsequent years.		

3.2.4 Urban – Introduced Shrub – Condition N/A

- 3.2.4.1 Introduced shrubs at the site comprise a typical suite of non-native species including Dogwood *Cornus* sp., *Hebe* sp., *Brachyglottis* sp., *Euonymus* sp. and *Viburnum davidii*, *Ceanothus thyrsiflorus*.

DEFRA Condition Assessment: No assessment required – automatically assigned score of 1.

3.2.5 Grassland – Other Neutral Grassland – Condition POOR

- 3.2.5.1 An area of grassland in the southern part of the site appears to have originated from seeding on previously disturbed ground around 15-20 years ago. This area appears to have been unmanaged for several years. Species present include Perennial Rye-Grass *Lolium perenne*, Common Bent *Agrostis capillaris*, Red Fescue *Festuca rubra*, Yorkshire Fog *Holcus lanatus*, False Oat-Grass *Arrhenatherum elatius*, Rosebay Willowherb *Chamerion angustifolium*, Broad-Leaved Dock *Rumex obtusifolius*, Dandelion, Tufted Vetch *Vicia cracca*, Perforate St John's Wort *Hypericum perforatum*, Creeping Thistle *Cirsium arvense*, Common Ragwort *Senecio jacobaea*, Red Clover *Trifolium pratense* and Hop Trefoil *Trifolium campestre*.

Table 2. DEFRA Condition Assessment: POOR (passes 2 of 6 criteria)

Condition Assessment Criteria – OTHER NEUTRAL GRASSLAND habitat type		Meets criteria?
1	The appearance and composition of the vegetation closely matches characteristics of the specific grassland habitat type (see UKHab definition). Wildflowers, sedges and indicator species for the specific grassland habitat type are very clearly and easily visible throughout the sward. NB - This criterion is essential for achieving moderate condition for non-acid grassland types only.	No
2	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	No
3	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens.	No
4	Cover of bracken is less than 20% and cover of scrub (including bramble) is less than 5%.	Yes
5	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981). Combined cover of species indicative of sub-optimal condition ¹ and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area.	Yes
Additional Group (Non-acid types only)		
6	There are greater than 9 species per metre squared. NB - This criterion is essential for achieving good condition (non-acid grassland types only)	No
Condition Assessment Result		Condition Assessment Score
Passes 5 of 6 criteria, including essential criterion 1 and 6.		Good (3)
Passes 3 or 4 of 6 criteria, including essential criterion 1.		Moderate (2)
Passes 0, 1, 2 criteria of 6 criteria; OR Passes 3 or 4 criteria excluding criterion 1 and 6.		Poor (1)

3.2.6 Grassland – Modified Grassland – Condition MODERATE

- 3.2.6.1 Modified grassland at the site is regularly mown. Species present include Perennial Rye-Grass, Red Fescue, Common Bent, Yorkshire Fog, Ribwort plantain and White Clover *Trifolium repens*.

Table 3. DEFRA Condition Assessment: MODERATE (passes 4 of 7 criteria)

Condition Assessment Criteria – MODIFIED GRASSLAND habitat type		Meets criteria?
1	There must be 6-8 species per m2. If a grassland has 9 or more species per m2 it should be classified as a medium distinctiveness grassland habitat type. NB - this criterion is essential for achieving moderate condition.	No
2	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	No
3	Some scattered scrub (including bramble) may be present, but scrub accounts for less than 20% of total grassland area. Note - patches of shrubs with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Yes
4	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	Yes
5	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).	No
6	Cover of bracken is less than 20%.	Yes
7	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981).	Yes
Condition Assessment Result		Condition Assessment Score
Passes 6 or 7 of 7 criteria including passing essential criterion 1		Good (3)
Passes 4 or 5 of 7 criteria; OR Passes 4 or 5 of 7 criteria including passing essential criterion 1		Moderate (2)
Passes 0, 1, 2 or 3 of 7 criteria; OR 4, 5 or 6 of criteria but failing criterion 1		Poor (1)

3.2.7 Woodland and Forest - Other Woodland; Broadleaved – Condition POOR

- 3.2.7.1 Woodland at the site comprises a belt of predominantly Sycamore *Acer pseudoplatanus* along the site's eastern and western boundaries. Additional tree species present include Ash *Fraxinus excelsior*, Silver Birch *Betula pendula*, Norway Maple *Acer platanoides*, Pedunculate Oak *Quercus robur*. There are no over-mature or veteran trees at the site. Shrubs and ground flora appears to be limited to common species including Bramble *Rubus fruticosus* agg., Hazel *Corylus avellana*, Ivy *Hedera helix*, Cherry Laurel *Prunus laurocerasus* and Himalayan Balsam *Impatiens glandulifera*.

Table 4. DEFRA Condition Assessment: POOR (scores 24 out of 39)

Condition Assessment Criteria – WOODLAND habitat type					
No	Indicator	Good (3 points)	Moderate (2 points)	Poor (1 points)	Score per indicator
1	Age distribution of trees ¹	Three age classes present	Two age classes present	One age class present	2
2	Wild, domestic and feral herbivore damage	No significant browsing damage evident in woodland ²	Evidence of significant browsing pressure is present in 40% or less of whole woodland	Evidence of significant browsing pressure is present in 40% or more of whole woodland	3
3	Invasive plant species ³	No invasive species present in woodland	Rhododendron or laurel not present, other invasive species < 10% cover	Rhododendron or laurel present, or other invasive species > 10% cover	1
4	Number of native tree species	Five or more native tree or shrub species found across woodland parcel	Three to four native tree or shrub species found across woodland parcel	None to two native tree or shrub species across woodland parcel	2
5	Cover of native tree and shrub species	> 80% of canopy trees and >80% of understory shrubs are native	50-80% of canopy trees and 50-80% of understory shrubs are native	< 50% of canopy trees and <50% of understory shrubs are native	1
6	Open space within woodland ⁴	10 – 20% of woodland has areas of temporary open space, unless woodland is <10ha in which case lower threshold of 10% does not apply	21- 40% of woodland has areas of temporary open space	More than 40% of woodland has areas of temporary open space	3
7	Woodland regeneration ⁵	All three classes present in woodland; trees 4-7cm dbh, saplings and seedlings or advanced coppice regrowth	One or two classes only present in woodland	No classes or coppice regrowth present in woodland	2

Condition Assessment Criteria – WOODLAND habitat type					
No	Indicator	Good (3 points)	Moderate (2 points)	Poor (1 points)	Score per indicator
8	Tree health	Tree mortality less than 10%, no pests or diseases and no crown dieback	11% to 25% mortality and/or crown dieback or low risk pest or disease present ⁶	Greater than 25% tree mortality and or any high risk pest or disease present	2
9	Vegetation and ground flora	Ancient woodland flora indicators present	Recognisable NVC plant community present	No recognisable NVC community	1
10	Woodland vertical structure ⁷	Three or more storeys across all survey plots or a complex woodland	Two storeys across all survey plots	One or less storey across all survey plots	2
11	Veteran trees ⁸	Two or more veteran trees per hectare	One veteran tree per hectare	No veteran trees present in woodland	1
12	Amount of deadwood	50% of all survey plots within the woodland parcel have standing deadwood, large dead branches/ stems and stumps	Between 25% and 50% of all survey plots within the woodland parcel have standing deadwood, large dead branches/ stems and stumps	Less than 25% of all survey plots within the woodland parcel have standing deadwood, large dead branches/ stems and stumps	1
13	Woodland disturbance ⁹	No nutrient enrichment or damaged ground evident	Less than 1 hectare in total of nutrient enrichment across woodland area and/or less than 20% of woodland area has damaged ground	More than 1 hectare of nutrient enrichment and/or more than 20% of woodland area has damaged ground	3
Total score (out of 39)				24	
Condition Assessment Result				Condition Assessment Score	
Total score >32 (33 to 39)				Good (3)	
Total score 26 to 32				Moderate (2)	
Total score <26 (13 to 25)				Poor (1)	
Footnote 1 - See EWBG method INDICATOR 1 for more information. If tree species is not a birch, cherry or Sorbus: 0 – 20 years (Young); 21 - 150 years (Intermediate); and >150 years (Old). A recognisable age class should be a consistent recognisable layer across the woodland or stand being assessed. Presence of a few saplings would not indicate that the woodland has an ‘age class’ of young trees.					

Condition Assessment Criteria – WOODLAND habitat type					
No	Indicator	Good (3 points)	Moderate (2 points)	Poor (1 points)	Score per indicator
Footnote 2 - See EWBG method INDICATOR 2 for more information. Browsing pressure is considered to be significant where >20% of vegetation visible within each survey plot shows damage from any type of browsing pressure listed. Footnote 3 - See EWBG method INDICATOR 3 for more information. Check for presence of the following invasive non-native species: American skunk cabbage <i>Lysichiton americanus</i>; Himalayan balsam <i>Impatiens glandulifera</i>; Japanese knotweed <i>Fallopia japonica</i>; Cherry Laurel <i>Prunus laurocerasus</i>; Shallow <i>Gaultheria shallon</i>; Snowberry <i>Symphoricarpos albus</i>; Variegated yellow archangel <i>Lamium galeobdolon</i> subsp. <i>argenteum</i>; and <i>Rhododendron ponticum</i>. Footnote 4 - See EWBG method INDICATOR 6 for more information. Open space within woodland in this context is temporary open space in which trees can be expected to regenerate (e.g. glades, rides, footpaths, areas of clear-fell). This differs from permanent open space where tree regeneration is not possible or desirable (e.g. tarmac, buildings, rivers). Area is at least 10m wide with less than 20% covered by shrubs or trees. Footnote 5 - See EWBG method INDICATOR 8 for more information. This indicator measures regeneration potential of the woodland by considering three classes: seedlings; saplings; and young trees of 4-7 cm DBH. All three classes would fall in the 'young' category of the 'age distribution of trees' indicator, the regeneration indicator is gathers additional information by considering regeneration potential i.e. if seedlings, saplings and young trees are all present that means natural regeneration processes are happening. Footnote 6 - See EWBG method INDICATOR 9 for more information and Table 3 for a list of diseases and pests and their risk level. Footnote 7 - This indicator is looking at structural diversity and is useful to understand in conjunction with the age of trees in a woodland. Vertical structure is defined as the number of canopy storeys present. Possible storey values are: 1) Upper; 2) Complex: recorded when the stand is composed of multiple tree heights that cannot easily be stratified into broad height bands (such as upper, middle or lower); 3) Middle; 4) Lower; and 5) Shrub layer. Footnote 8 - See EWBG method INDICATOR 12 for more information. All ancient trees are veteran trees, but not all veteran trees are ancient. A veteran tree may not be very old, but it has decay features, such as branch death and hollowing. These features contribute to its biodiversity, cultural and heritage value. Veteran trees can be classified if they have four out of the five following features: 1. Rot sites associated with wounds which are decaying >400 cm²; 2. Holes and water pockets in the trunk and mature crown >5 cm diameter; 3. Dead branches or stems >15 cm diameter; 4. Any hollowing in the trunk or major limbs; 5. Fruit bodies of fungi known to cause wood decay. Footnote 9 - See EWBG method INDICATOR 15 for more information. Examples of disturbance are: significant nutrient enrichment; soil compaction from trampling, machinery or animal poaching; litter.					

3.2.8 Heathland and Shrub – Mixed Scrub – Condition MODERATE

- 3.2.8.1 Scrub at the site comprises areas of dense Bramble along with Goat Willow *Salix caprea*, Silver Birch, Italian Alder *Alnus cordata*, Sycamore, Crack Willow *Salix fragilis*, Hawthorn *Crataegus monogyna* and Grey Poplar *Populus x canescens*. Ground vegetation within the scrub includes Common Nettle *Urtica dioica*, Hedge Bindweed *Calystegia sepium*, Bramble, Mugwort *Artemisia vulgaris*, Teasel *Dipsacus fullonum*, Himalayan Balsam *Impatiens glandulifera* and Ivy.

Table 5. DEFRA Condition Assessment: MODERATE (passes 4 of 5 criteria)

Condition Assessment Criteria – SCRUB habitat type		Meets criteria?
1	Habitat is representative of UKHab description (where in its natural range). There are at least three woody species, with no one species comprising more than 75% of the cover (except common juniper, sea buckthorn or box, which can be up to 100% cover).	Yes
2	There is a good age range – all of the following are present: seedlings, young shrubs and mature shrubs.	Yes
3	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981) and species indicative of sub-optimal condition ¹ make up less than 5% of ground cover.	No
4	The scrub has a well-developed edge with scattered scrub and tall grassland and/or herbs present between the scrub and adjacent habitat(s).	Yes
5	There are clearings, glades or rides present within the scrub, providing sheltered edges.	Yes
Condition Assessment Result		Condition Assessment Score
Passes 5 of 5 criteria		Good (3)
Passes 3 or 4 of 5 criteria		Moderate (2)
Passes 0, 1 or 2 of 5 criteria		Poor (1)
Footnote 1 - Species indicative of sub-optimal condition for this habitat type include: tree-of-heaven <i>Alnus altissima</i> , holm oak <i>Quercus ilex</i> , turkey oak <i>Quercus cerris</i> , creeping thistle <i>Cirsium arvense</i> , common nettle <i>Urtica dioica</i> , cherry laurel <i>Prunus laurocerasus</i> , snowberry <i>Symphoricarpos</i> spp., buddleia <i>Buddleja</i> spp., cotoneaster <i>Cotoneaster</i> spp., Spanish bluebell <i>Hyacinthoides hispanica</i> (or hybrids).		

3.2.9 Urban – Urban Trees – Condition MODERATE

- 3.2.9.1 Urban trees at the site comprise Himalayan Birch *Betula utilis*, Silver Birch *Betula pendula* and Field Maple *Acer campestre*.

Table 6. DEFRA Condition Assessment: MODERATE (passes 3 of 6 criteria)

Condition Assessment Criteria – URBAN TREES habitat type		Meets criteria?
1	The tree is a native species (or more than 70% within the block are native species).	No
2	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).	No
3	The tree is mature ² or veteran ³ (or more than 50% within the block are mature ² or veteran ³).	Yes
4	There is little or no evidence of an adverse impact on tree health by anthropogenic activities such as vandalism or herbicide use. There is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.	Yes

5	Micro-habitats for birds, mammals and insects are present e.g. presence of deadwood, cavities, ivy or loose bark.	No
6	More than 20% of the tree canopy area is oversailing vegetation beneath.	Yes
Condition Assessment Result		Condition Assessment Score
Passes 5 or 6 of 6 criteria		Good (3)
Passes 3 or 4 of 6 criteria		Moderate (2)
Passes 0, 1 or 2 of 6 criteria		Poor (1)
Footnote 1 - This covers all trees in artificial urban habitats such as private gardens, private land, institutional land and land used for transport functions; roads, streets, canals, rail, footpaths etc. Trees in urban areas can under the right conditions provide a large range of habitat opportunities, supporting lichens, invertebrates and birds. Tree planting in urban areas has for over two hundred years also introduced non-native species into towns and cities. In the context of biodiversity native species are the preferred option. However, non-native tree species can contribute positively to biodiversity richness particularly in relation to providing a seasonal food source for nectar feeders and other invertebrates as well as supporting vertebrates that feed on species that are hosted by non-native trees. Examples are early and late flowering species of Prunus and aphids on varieties of Acer providing food for species higher up the food chain. The species of trees (native or non-native) together with the intensity and type of management they are subject to will determine the biodiversity value of the trees in question. Trees in urban areas provide opportunistic sites for biodiversity to colonise and re-colonise, increasing connectivity and contributing to biodiversity critical mass between already established patches or sites. This is especially so where transport corridors are populated with mixed native species Footnote 2 - A mature tree in this context is one that is at least 2/3 expected fully mature height for the species. Footnote 3 - All ancient trees are veteran trees, but not all veteran trees are ancient. A veteran tree may not be very old, but it has decay features, such as branch death and hollowing. These features contribute to its biodiversity, cultural and heritage value. Veteran trees can be classified if they have four out of the five following features: 1. Rot sites associated with wounds which are decaying >400cm²; 2. Holes and water pockets in the trunk and mature crown >5 cm diameter; 3. Dead branches or stems >15 cm diameter; 4. Any hollowing in the trunk or major limbs; 5. Fruit bodies of fungi known to cause wood decay.		

3.2.10 Invasive Weeds

- 3.2.10.1 As shown on Figure 3 below, two invasive weed species were recorded within the site; Japanese Knotweed *Fallopia japonica* and Himalayan Balsam *Impatiens glanduifera*. At the time of the update survey on 21st September 2023, the Japanese Knotweed at the site exhibited significantly reduced vigour; indicating that chemical herbicide treatment of this species was ongoing at the site.

3.3 Watercourses

3.3.1 River Condition Assessments

- 3.3.1.1 The results of the RCA are presented in the DEFRA Biodiversity Metric 3.1 (provided separately).
- 3.3.1.2 The surveyed section of the River Calder adjacent to the site's western boundary was assessed as a non-priority 'Other Rivers and Streams'; River Type 'Large' with 'Fairly Poor' condition (mean preliminary condition score: -0.053; mean river shape score: 8.32). The River Calder is within a Catchment Plan; the Aire Rivers Trust.

3.3.1.3 The surveyed section of the unnamed watercourse adjacent to the site's eastern boundary was assessed as River Type 'H' with 'Poor' condition (mean preliminary condition score: -0.032; mean river shape score: 2.16). Based on the river shape score of <4 and professional judgement, the channel is assessed as being 'overdeep'; therefore the condition score has been adjusted down by one class from 'Fairly Poor' to 'Poor'. This watercourse is not identified within any plan.

3.3.1.4 A section of culvert is also present along the site's eastern boundary in the north-eastern corner of the site.

3.3.2 Watercourse Encroachment

3.3.2.1 For both the River Calder adjacent to the site's western boundary and the unnamed watercourse adjacent to the site's eastern boundary, the baseline level of Watercourse Encroachment is 'No Encroachment' for the full length of both watercourses at the site.

3.3.3 Riparian Zone Encroachment

3.3.3.1 In accordance with the guidelines⁵, the Riparian Zone for both watercourses extends 10 metres from the top of each bank.

3.3.3.2 For the River Calder adjacent to the site's western boundary, the baseline level of Riparian Zone Encroachment is 'Major Encroachment'.

3.3.3.3 For the unnamed watercourse adjacent to the site's eastern boundary, the baseline level of Riparian Zone Encroachment is 'Major Encroachment'.

3.3.3.4 For the culvert adjacent to the site's eastern boundary, the baseline level of Riparian Zone Encroachment is 'Major Encroachment'.

Figure 3. Invasive Weeds (aerial imagery dated 2020)



3.4 Birds

- 3.4.1.1 During the surveys on 26th August 2020, 3rd January 2023 and 21st September 2023, a limited range of birds was observed. Species observed within and adjacent to the site included Bullfinch, Dunnock, Blackbird, Robin, Goldfinch, Magpie, Blue Tit, Carrion Crow, Mallard and Chaffinch. Two Species of Principal Importance for the conservation of biodiversity in England¹² were recorded at the site: Bullfinch and Dunnock.
- 3.4.1.2 The site and immediately adjacent areas are likely to support a typical assemblage of birds during the breeding season, potentially including Species of Principal Importance for the Conservation of Biodiversity in England such as Bullfinch, Dunnock and Song Thrush. Kingfisher (specially protected via Schedule 1 of the Wildlife and Countryside Act 1981 as amended) could potentially occur on the River Calder and the unnamed watercourse adjacent to the site.
- 3.4.1.3 Based on the nature of the habitats present within and adjacent to the site, it is unlikely that the site will support notable assemblages of birds outside the breeding season. A range of birds are likely to nest in woodland, scrub, shrubs, trees, watercourses and possibly in the building at the site.

3.5 Bats

- 3.5.1.1 During the initial survey on 26th August 2020 and during the update survey on 3rd January 2023 (which included an internal inspection of the building on the site), no evidence of bats was identified at the site. All of the trees were assessed as having negligible or zero bat roost potential due to the absence of suitable roost features such as cracks and splits.
- 3.5.1.2 The building was assessed as having 'low' bat roost potential due to the presence of a linear gap between the soffit and wall on the southern, eastern and northern elevations. No other feature capable of supporting bat roosts were identified; the walls, window surrounds, roof and ridges were found to be well-sealed and offered extremely limited suitability for roosting bats.
- 3.5.1.3 In terms of foraging and commuting habitats, the trees and scrub at the site margins and the corridor of the River Calder could provide habitat of moderate value for bats.
- 3.5.1.4 As detailed in the previous report¹³, during the dusk emergence bat surveys in September 2020 and August 2023, no evidence of a bat roost was observed within the surveyed building and it is concluded that bats are not likely to roost at the site. Low levels of bat foraging / commuting activity were recorded during the dusk survey with two species recorded in flight: Common Pipistrelle and Noctule.

3.6 Great Crested Newt

- 3.6.1.1 No waterbodies potentially suitable for breeding Great Crested Newts are present within the site and none have been identified within 500 metres of the site. It is therefore considered very unlikely that Great Crested Newts will occur at the site.

3.7 Water Vole and Otter

- 3.7.1.1 Based on the nature of the habitat, relatively low disturbance levels and presence of abundant dense vegetative cover, it is considered that the River Calder and unnamed watercourse at the site's western and eastern boundaries provide potentially suitable habitat for both Otter and Water Vole. Despite specific searches on 3rd January 2023 and 21st September 2023, no evidence of Water Vole or Otter has been observed at the site. Due to the health and safety considerations, it was not possible to closely inspect the banks of the River Calder for signs of Otter or Water Vole.

¹² Species and Habitats listed on Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 as Species of Principal Importance for the conservation of biodiversity in England.

¹³ Quants Environmental Ltd. (2023). Ledgard Bridge Mills, Mirfield. Dusk Emergence Bat Survey, August 2023. Rev 1776b.

3.8 *Reptiles*

- 3.8.1.1 WYES did not provide any records of reptiles within the search area. Based on the location of the site on the edge of Mirfield and surrounded by habitats unsuitable for reptiles (such as hard standing, houses, large buildings and roads), the potential for reptiles to occur at the site is significantly limited. The habitats at the site offer limited suitability for reptiles and it is considered that there is very low potential for a small numbers of reptiles to occur near the banks of the River Calder at the site.

3.9 *Badger and Other Fauna*

- 3.9.1.1 No evidence of Badger was observed at the site.
- 3.9.1.2 Hedgehog (a Species of Principal Importance in England) could potentially occur within the site.

4 Evaluation and Potential for Impacts

4.1.1.1 The valuation of the nature conservation interest of the ecological features present on the site and whether or not they are subject to detailed impact assessment is summarised in Table 7 below.

Table 7. Summary of Evaluation of Nature Conservation Interest and Potential for Impacts

Receptor	Evaluation Rationale	Value of receptor or Value of site to receptor	Potential for Impact	Subject to detailed assessment
Designated sites:				
Briery Bank Wood LWS and KSWs	Designated for its local value.	District	No – distance and lack of connectivity (approximately 450 metres south-east of the site).	No
Covey Clough Wood and Hepworth Wood LWS	Designated for its local value.	District	No – distance and lack of connectivity (approximately 925 metres south of the site).	No
Habitats:				
Urban - Developed Land, Sealed Surface	Common, widespread and easily recreated.	Less than local	Yes – direct habitat loss	No, due to low value
Urban - Sparsely Vegetated Land - Ruderal/ Ephemeral	Common, widespread and easily recreated.	Less than local	Yes – direct habitat loss	No, due to low value
Urban – Introduced Shrub	Common, widespread and easily recreated.	Less than local	Yes – direct habitat loss	No, due to low value
Grassland – Other Neutral Grassland	Common, widespread and easily recreated.	Less than local	Yes – direct habitat loss	No, due to low value
Grassland – Modified Grassland	Common, widespread and easily recreated.	Less than local	Yes – direct habitat loss	No, due to low value
Woodland and Forest - Other Woodland; Broadleaved	Common, widespread and easily recreated.	Less than local	Yes – direct habitat loss	No, due to low value
Heathland and Shrub – Mixed Scrub	Common, widespread and easily recreated.	Less than local	Yes – direct habitat loss	No, due to low value
Urban – Urban Trees	Common, widespread and easily recreated.	Less than local	Yes – direct habitat loss	No, due to low value
River Calder	Main watercourse with high value as wildlife corridor and habitat for riverine species.	District	Yes – disturbance via noise, lighting and human activities	Yes

Receptor	Evaluation Rationale	Value of receptor or Value of site to receptor	Potential for Impact	Subject to detailed assessment
Unnamed minor watercourse	Minor watercourse with low value as wildlife corridor and habitat for riverine species, high connectivity to River Calder.	Local	Yes – disturbance via noise, lighting and human activities.	Yes
Fauna:				
Birds	Two Section 41 species recorded on the site: Bullfinch and Dunnock; potential to other S41 species to breed on site; and potential for Kingfisher (Sch. 1 WCA).	Less than local	Yes – direct habitat loss.	Yes
Bats	No roosts present on site. Habitats at site margins (river corridor, trees, scrub and woodland) potentially of moderate value for foraging and commuting bats.	Up to local	Yes – direct habitat loss and disturbance via noise and lighting.	Yes
Great Crested Newt	Absent	n/a	No	No
Water Vole	Potentially present on River Calder and unnamed watercourse	Potentially Local	No – no works proposed within 5 metres of banks.	No
Otter	Potentially present	Potentially Local	Yes – potential disturbance via lighting and noise.	Yes
Reptiles	Likely absent	n/a	No	No
Badger	Absent	n/a	No	No
Hedgehog	Could occur within the site (Section 41 NERC Act species).	Less than local	Yes – direct habitat loss	Yes

4.1.1.2 Therefore, the following ecological receptors are taken forward for further assessment:

- River Calder.
- Unnamed minor watercourse.
- Birds.
- Bats.
- Otter.
- Hedgehog.

5 Likely Significant Effects

5.1.1.1 Activities which could affect the identified ecological receptors comprise the following:

- Direct removal of habitats (grassland, scrub, woodland and urban habitats).
- Disturbance from lighting, noise and human activities.

5.1.1.2 The potential impacts on the identified ecological receptors resulting from these activities are assessed below. Mitigation is then considered before an assessment of residual impacts.

5.2 *Construction Phase*

5.2.1.1 Impacts during the construction phase comprise the following:

- Direct removal of habitats (grassland, scrub, trees, woodland and urban habitats).
- Disturbance from lighting, noise and human activities.

5.2.1.2 These impacts are assessed below.

5.2.2 *Direct Removal of Habitats*

5.2.2.1 The development will result in the loss of small areas of grassland, scrub, trees and woodland along with urban habitats including the building on the site.

5.2.2.2 The removal of the above habitats at the site will result in the loss of small areas of habitat for a number of bird species. In terms of species listed on Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 as Species of Principal Importance for the conservation of biodiversity in England, this habitat loss could potentially result in the loss of small areas of habitat for birds including Bullfinch, Dunnock and Song Thrush. Given the small scale of the areas affected, the impact on breeding birds is predicted to be non-significant at the site level.

5.2.2.3 The removal of habitats at the site will result in the loss of small areas of habitat which could be used by foraging/commuting bats. Given the small scale of the areas affected, the impact on bats is predicted to be non-significant at the site level.

5.2.2.4 The removal of vegetation at the site could result in the loss of habitat which could be used by Hedgehog; a species listed on Section 41 of the NERC Act 2006 as a Species of Principal Importance for the Conservation of Biodiversity in England. Given the small scale of the areas affected, the impact on Hedgehog is predicted to be non-significant at the site level.

5.2.3 *Disturbance from Lighting, Noise and Human Activities*

5.2.3.1 In the absence of mitigation, increased disturbance during the construction phase (lighting, noise and human activities) could adversely affect bats and Otter if present along the River Calder and the unnamed minor watercourse at the site margins.

5.3 *Operational Phase*

5.3.1.1 Impacts during the operational phase comprise the following:

- Disturbance from lighting, noise and human activities.

5.3.1.2 These impacts are assessed below.

5.3.2 *Disturbance from Lighting, Noise and Human Activities*

5.3.2.1 Increased disturbance from artificial lighting could affect nocturnal fauna including bats and Otters which could use the corridor of the River Calder and other habitats at the site margins for foraging, commuting and other purposes.

5.3.2.2 Guidelines on bats and artificial lighting¹⁴ state: "*Lighting can be particularly harmful if it illuminates important foraging habitats such as river corridors, woodland edges and hedgerows used by bats. Studies have shown that continuous lighting along roads creates barriers which some bat species cannot cross. It is also known that insects are attracted to lit areas from further afield. This could result in adjacent habitats supporting reduced numbers of insects, causing a further impact on the ability of light-avoiding bats to feed.*"

5.3.2.3 In the absence of mitigation, the impacts of increased disturbance during the operational phase (artificial lighting, noise and human activities) on bats and Otters could potentially be significant at the local level.

5.4 Mitigation Measures

5.4.1 Biodiversity Protection Zones

5.4.1.1 Fencing will be used to protect retained Biodiversity Protection Zones at the site margins, i.e. areas of retained woodland, watercourse and scrub habitats.

5.4.2 Invasive Weeds Management Plan

5.4.2.1 An Invasive Weeds Management Plan will be prepared and implemented in order to prevent the inadvertent spread of Japanese Knotweed and Himalayan Balsam within and beyond the site.

5.4.3 Protection of Nesting Birds (Legal Compliance)

5.4.3.1 Any works affecting potential bird nesting habitat will be undertaken outside the main bird nesting period of 1st March to 31st August where possible. If works affecting vegetation or built structures is unavoidable during this period, a nesting bird check must be undertaken by a suitably qualified ecologist no more than 48 hours prior to the start of such works. In the event that an 'in use' bird nest is present or likely to be present, it must be retained in situ undisturbed until the nest is no longer in active use. A nest is classed as 'in use' when it contains eggs or chicks and when it is being built.

5.4.3.2 Due to the potential presence of Kingfisher (specially protected from disturbance whilst nesting via Schedule 1 and Section 1 of the Wildlife and Countryside Act 1981 as amended), prior to any potentially disturbing construction activities during March to August inclusive, an update checking survey for Kingfisher will be undertaken. If necessary, an appropriate exclusion zone will be implemented in order to avoid disturbance of this species whilst nesting.

5.4.4 Bats (Legal Compliance)

5.4.4.1 Although no evidence of a bat roost has been identified at the site, there remains a possibility that bats may roost in the building at the site in the future. Therefore, the roof will be dismantled using hand-tools and under the direct supervision of a Natural England bat licence holder. In the unlikely event that a bat roost is found to be present, it may be necessary to obtain a licence from Natural England before proceeding.

5.4.5 Provision of Bat Boxes and Bird Nest Boxes

5.4.5.1 In order to provide permanent bat roosting and bird nesting opportunities at the site, integrated bat and bird boxes will be provided on new buildings at the site.

5.4.5.2 Bat boxes will be located away from artificial light-spill and close to retained habitats such as trees, woodland and watercourses.

¹⁴ Bat Conservation Trust (2014). Artificial lighting and wildlife Interim Guidance: Recommendations to help minimise the impact artificial lighting. BCT_Interim_Guidance_Artificial_Lighting_June_2014.pdf (bats.org.uk)

- 5.4.5.3 Bird boxes will be located on elevations between east, north and west (not south) to prevent overheating in mid-day sunlight.

5.4.6 *Artificial Lighting Design*

- 5.4.6.1 In accordance with current guidelines¹⁵, the following measures will be adopted as part of the detailed lighting design for the development:
- Security lighting for construction compound to be located away from key habitats (River Calder, unnamed watercourse, retained trees and woodland);
 - Avoid lighting on key habitats (River Calder, unnamed watercourse, retained trees and woodland);
 - Retain 'dark corridors' for bats and other wildlife;
 - Use 'red light' spectrum bulbs to minimise impacts on bats; and
 - Reduce light-spill so that light reaches only areas needing illumination. Shielding or cutting light can be achieved through the design of the luminaire or with accessories, such as hoods, cowls, louvers and shields to direct the light; and
 - Limit the times that lights are on to provide some dark periods for wildlife.

5.4.7 *Hedgehog*

- 5.4.7.1 In order to provide permanent habitat for Hedgehog, woody material felled during the initial site clearance will be used to create brash piles in areas of retained woodland / scrub at the site margins.

5.4.8 *Ecological Watching Brief*

- 5.4.8.1 To ensure legal compliance, an Ecological Watching Brief will include the following: A bat licence holder to supervise the roof strip of the existing building; Update checking surveys for Kingfisher and Otter as appropriate.

5.4.9 *Construction Environmental Management Plan (CEMP)*

- 5.4.9.1 In order to protect habitats and species, a Construction Environmental Management Plan (CEMP) will be prepared. The CEMP will provide detail on the above mitigation measures and will also include details for the site compound (to be located away from the River Calder and unnamed watercourse), security lighting for site compound and measures to minimise dust and noise impacts during the construction phase.

5.5 *Residual Effects*

- 5.5.1.1 Given the proposed mitigation measures, it is considered that there will be no significant adverse effects on the following ecological receptors: River Calder, Unnamed minor watercourse, Birds, Bats, Otter and Hedgehog.

¹⁵ Institution of Lighting Professionals. (2023). Guidance Note GN08/23. Bats and Artificial Lighting At Night

6 Net Gain for Biodiversity

6.1 Methodology

- 6.1.1.1 The DEFRA Biodiversity Metric (version 3.1) has been used to calculate the baseline value of the site (before development) and the post-development value in order to calculate the Total Net Unit Change.
- 6.1.1.2 As detailed above, the habitat types and condition of the habitats within the site have been assessed and a RCA of the River Calder and unnamed watercourse adjacent to the site boundaries has been undertaken in accordance with the standard methodologies.

6.2 Habitat Retention / Creation

- 6.2.1.1 Habitat creation is shown in the following plans:
- Baseline Habitats Plan (Appendix 1).
 - Proposed Habitats Plan (Appendix 1).
 - Ledgard Bridge Mills. Landscape Softworks Proposals. Smeeden Foreman. Drawing ref. SF3463-LL01, Rev A. 13.11.2023.

6.3 Watercourse

- 6.3.1.1 Both watercourses (River Calder and unnamed watercourse) will be Retained in full.
- 6.3.1.2 Post-Development, the River Calder will be as follows:
- River Type: 'Other Rivers and Streams' (unchanged from baseline).
 - Condition: 'Fairly Poor' (unchanged from baseline).
 - Watercourse Encroachment: 'No Encroachment' (unchanged from baseline).
 - Riparian Zone Encroachment: 'Major' (unchanged from baseline).
- 6.3.1.3 Post-Development, the unnamed watercourse will be as follows:
- River Type: 'Other Rivers and Streams' (unchanged from baseline).
 - Condition: 'Poor' (unchanged from baseline).
 - Watercourse Encroachment: 'No Encroachment' (unchanged from baseline).
 - Riparian Zone Encroachment: 'Major' (unchanged from baseline).
- 6.3.1.4 Post-Development, the culvert will be as follows:
- River Type: 'Culvert' (unchanged from baseline).
 - Condition: 'Poor' (unchanged from baseline).
 - Watercourse Encroachment: 'No Encroachment' (unchanged from baseline).
 - Riparian Zone Encroachment: 'Major' (unchanged from baseline).

6.4 BNG Results

- 6.4.1.1 The On-Site Baseline Units are as follows:
- Habitat Units: 6.43.
 - Hedgerow Units: 0.00.
 - Watercourse Units: 2.76.
- 6.4.1.2 The On-Site Post-Intervention Units are as follows:
- Habitat Units: 4.12.
 - Hedgerow Units: 0.70.
 - Watercourse Units: 2.76.
- 6.4.1.3 The development will result in the following changes:

- Habitat Units: Total Net Habitat Unit Change of -2.30 (negative; equivalent to a loss of 35.84%).
- Hedgerow Units: Total Net Habitat Unit Change of +0.70 (positive; equivalent to a gain of 100%).
- Watercourse Units: Total Net Habitat Unit Change of 0.00 (neutral; equivalent to a change of 0.00%).

Appendix 1. Baseline and Proposed Habitat Maps

Figure A1.1. Baseline Habitat Map

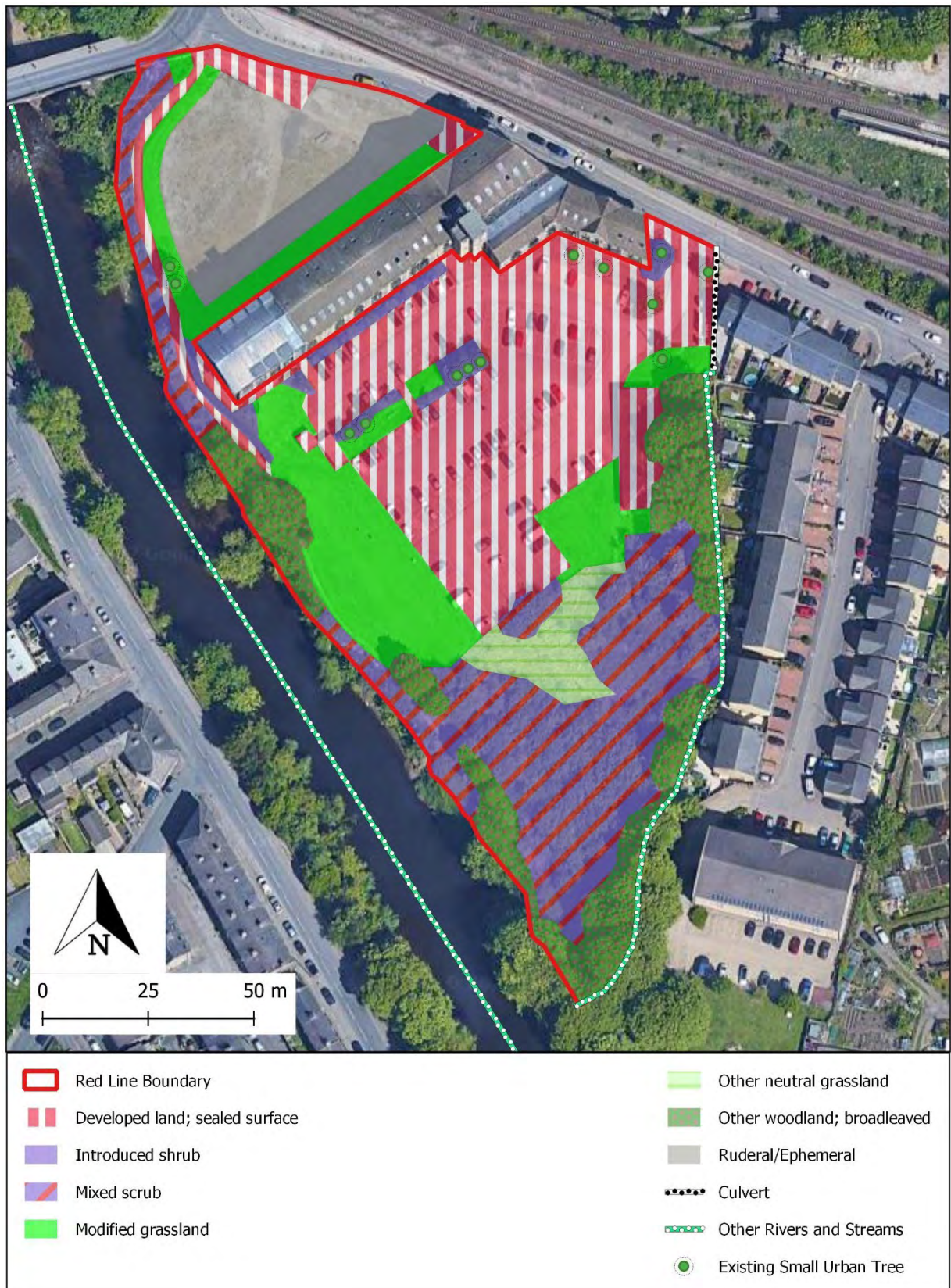


Figure A1.2. Proposed Habitat Map



Appendix 2. Photographs

Photo 1. Looking north-east across northern part of the site (Sep 2023)



Photo 2. Looking north across north-eastern part of the site (Sep 2023)



Photo 3. Looking south-east towards building in eastern part of the site (Jan 2023)



Photo 4. Looking west-north-west across the central part of the site (Jan 2023)



Photo 5. Looking south across south-eastern part of the site (Sep 2023)



Photo 6. Potential bat roost feature at gap behind soffit on west elevation of on-site building (Jan 2023)



Photo 7. Interior of loft space in on-site building (Jan 2023)



Photo 8. Looking south-west along south side of Ledgard Mill (Jan 2023)



Photo 9. Looking north along site's western edge (Jan 2023)



Photo 10. Looking south across grassland and scrub in southern part of the site (Sep 2023)



Photo 11. Looking east across grassland in southern part of the site (Jan 2023)



Photo 12. Japanese Knotweed (treated but not fully eradicated) and Himalayan Balsam in southern part of the site (Sep 2023)



Photo 13. Unnamed watercourse along site's eastern boundary (Jan 2023)



Photo 14. Looking south to confluence of unnamed watercourse and River Calder at southern corner of the site (Jan 2023)



Photo 15. Looking north-west to River Calder (from southern part of the site) (Jan 2023)



Photo 16. Looking south-east across the River Calder towards the site (Jan 2023)



Photo 17. Looking north-west across River Calder outside site's western boundary (August 2020)



Appendix 3. Information Provided by WYES



**West Yorkshire
Ecology
Service**

West Yorkshire Ecology Service
West Yorkshire Joint Services
Nepshaw Lane South
Morley
Leeds
LS27 0QP | LS27 7JQ (Sat Nav)
Tel: 0113 535 0158
Email: ecology@wyjs.org.uk

ECOLOGICAL RECORDS SEARCH

FOR

LEDGARD BRIDGE MILLS

Ref No:- 20221130 K1055 LM

Date: 30/11/2022

Prepared For Morgane Accault

Quants Environmental Ltd

Table of Contents

1	Introduction.....	1
2	Species.....	1
2.1	Sensitive Species Records.....	1
2.1.1	Badgers	1
3	Designated sites.....	1
3.1	Internationally/Nationally Designated Sites	1
3.2	Locally Designated Sites	1
4	Habitats	2
4.1	Wildlife Habitat Network	2
4.2	Ancient Woodland	2

List of Figures

Figure 1 – Species and Designated Sites.....	3
--	---

List of Appendices

Appendix A – Explanation of Species Designations	i
Appendix B – Explanation of Designated Sites	iv
Appendix C – Designated Site Citations	vi
Appendix D – Explanation to the supply of Badger Data	vii
Appendix E – Species Records	viii

1 Introduction

This report provides a summary of the protected and notable species, habitats and designated sites information held by West Yorkshire Ecology Service (WYES) within 2km of grid reference SE 20184 19476.

The information within this report is supplied subject to WYES's 'Terms and Conditions', which can be viewed on the WYES website [170426-terms-and-conditions-of-data-supply-and-usage-allowing-for-use-as-gis-format.pdf \(wyjs.org.uk\)](https://www.wyjs.org.uk/170426-terms-and-conditions-of-data-supply-and-usage-allowing-for-use-as-gis-format.pdf)

2 Species

Please see Appendix E for records held by WYES within your defined search area.

2.1 SENSITIVE SPECIES RECORDS

2.1.1 Badgers

West Yorkshire Ecology Service holds no badger information within 200m of your site. However please see separate excel spreadsheet for additional information such as closest sett records and increased probability of badger activity within your search area.

See Appendix D for an explanation to the supply of badger data.

3 Designated sites

3.1 INTERNATIONALLY/NATIONALLY DESIGNATED SITES

There are no internationally/nationally designated sites within your search area.

3.2 LOCALLY DESIGNATED SITES

The following Non-Statutory sites were found within the search area, and are shown on Fig 1.

Name of Site	Designation
Briery Bank Wood	Local Wildlife Site
Covey Clough Wood and Hepworth Wood	Local Wildlife Site
Gregory Spring	Local Wildlife Site
Jordan Wood and Oliver Wood	Local Wildlife Site
Laneside Quarry	Local Wildlife Site
Liley Wood	Local Wildlife Site
Whitley Wood	Local Wildlife Site

Explanations for designated sites are provided in Appendix B.
Citations for locally designated sites are provided in Appendix C.

There are no local Statutory designated sites within your search area.

4 Habitats

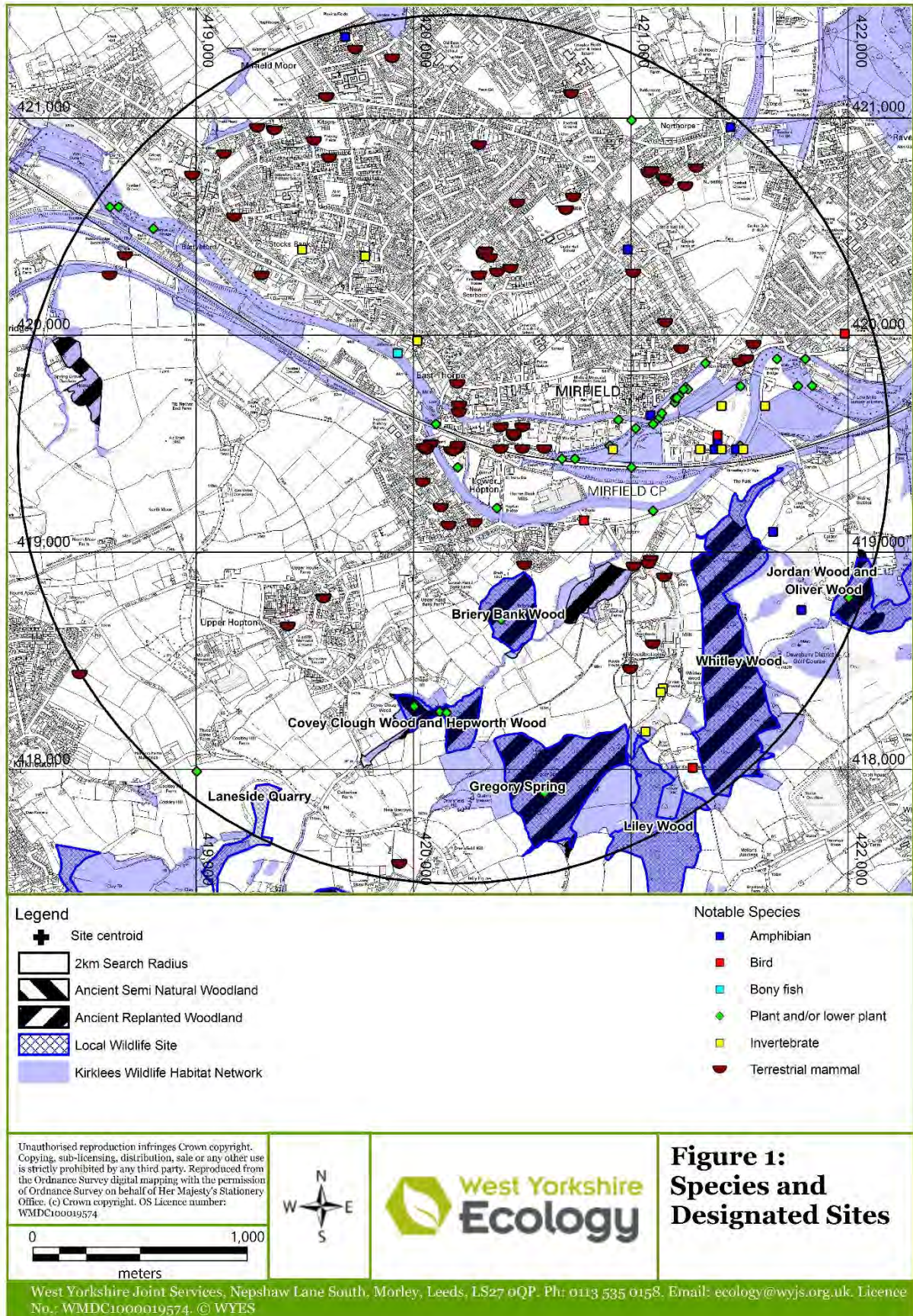
4.1 WILDLIFE HABITAT NETWORK

Your site centroid does not lie within the Kirklees Wildlife Habitat Network.
See Figure 1 for Wildlife Habitat Network data.

4.2 ANCIENT WOODLAND

There is no Ancient Semi-natural Woodland/Ancient Replanted Woodland within 100m of your site centroid.

Figure 1 – Species and Designated Sites



Appendix A. Explanation of Species Designations

Wildlife and Countryside Act 1981 – main designations cited

Abbreviation	Full Name	Description	Offences include, but not limited to
Sch1_part1	Schedule 1, Part 1	Birds which are protected by special penalties at all times	- disturb any specially protected bird while it is building its nest; - disturb any specially protected bird while it is near a nest containing eggs or young; or - disturb the young of any of these birds before they are wholly independent.
Sch1_part2	Schedule 1, Part 2	Birds which are protected by special penalties during the close season	
Sch5	Schedule 5	Animals which are protected	- intentional or reckless killing, injuring, taking; - damage to, destruction of, obstruction of access to any structure or place used by a scheduled animal for shelter or protection; and - disturbance of animal occupying such a structure or place.
Sch5_sect9.1	Schedule 5, Section 9(1)	Animals which are protected from killing and/or taking	intentional killing, injuring and/or taking NB: certain species are only partly protected by this section. Check primary legislation for details.
Sch5_sect9.5	Schedule 5, Section 9(5)	Animals which are protected from sale	- selling, offering for sale, possessing or transporting for the purpose of sale (live or dead animal, part or derivative); and - advertising for buying or selling such things
Sch8	Schedule 8	Plants which are fully protected	pick, uproot, trade in, or possess (for the purposes of trade).
Sch8_sect 13.2 (sale only)	Schedule 8, Sections 13(2a+2b)	Plants which are protected from sale only	selling, offering for sale, possessing or transporting for the purpose of sale, any plant (live or dead, part or derivative) + advertising for buying or selling such things
Sch9_part1	Schedule 9, Part 1	Animals which are established in the wild.	- the release of animals and planting of plants listed in Schedule 9. - the above offences can be made legal through the granting of licences by the appropriate authorities. NB: <i>Tyto alba</i> refers to captive bred only.
Sch9_part2	Schedule 9, Part 2	Plants which are established in the wild.	

Biodiversity Action Plans

Abbreviation

UKBAP
WYBAP
Bradford BAP
Calderdale BAP
Kirklees BAP
Leeds BAP
Wakefield BAP

Full Name

UK Biodiversity Action Plan
West Yorkshire Priority Species List
Bradford Biodiversity Action Plan
Calderdale Biodiversity Action Plan
Kirklees Biodiversity Action Plan
Leeds Biodiversity Action Plan
Wakefield Biodiversity Action Plan

Birds of Conservation Concern (BOCC) 2021

List

Red
Amber

Description

High conservation concern
Medium conservation concern

Red Data Book Categories (Based on IUCN Guidelines)

Abbreviation	Full Name
EX	Extinct
EW	Extinct in the Wild
CR	Critically Endangered
VU	Vulnerable
NT	Near Threatened
LC	Least Concern
DD	Data Deficient
NE	Not Evaluated

Nationally Notable Invertebrates:

Abbreviation	Full Name	Description
NR	Nationally Rare	found in 15 or fewer hectads
Notable or NS	Nationally Notable or Nationally Scarce	found in between 16 and 100 hectads
Notable A	Nationally Notable A	found in 16 to 30 hectads
Notable B	Nationally Notable B	found in between 31 and 100 hectads

Locally Notable Plants - Vice County 63 Local Red Data Book (VC63 LRDB):

The compilation of the Provisional Vascular Plant Red Data list for VC 63 has been undertaken utilising six separate selected categories to accommodate all taxa under consideration. These categories are: 1) Native Species; 2) Native Species Presumed Extinct in the VC; 3) Hybrids; 4) Archaeophytes; 5) Grey Area Species – Native or Introduced; and 6) Unconfirmed Species. The descriptions give VC 63 status of the species – (based on data collected during the past 40 years, and/or on observation/evidence). In all six categories, the checklist order follows (Stace, 2010).

Abbreviation:

VC63 LRDB:Archaeophyte

Description

Archaeophyte = species which became naturalised before 1500 AD.

VC63 LRDB:Casual only – Rare
 VC63 LRDB:Casual only – Scattered
 VC63 LRDB:Casual only – Very Rare
 VC63 LRDB:Introd. & Native – Occasional
 VC63 LRDB:Introduced – Rare
 VC63 LRDB:Introduced – Very Rare
 VC63 LRDB:Local
 VC63 LRDB:No Modern Records
 VC63 LRDB:Occasional
 VC63 LRDB:Planted – Very Rare
 VC63 LRDB:Presumed Extinct in VC63
 VC63 LRDB:Rare
 VC63 LRDB:Scarce
 VC63 LRDB:Scattered
 VC63 LRDB:Unconfirmed
 VC63 LRDB:Very Rare
 VC63 LRDB:Widespread

Casual = species unable to persist for more than c. 5 years, and therefore dependent on constant reintroduction.

Extinct in VC63 = species for which no records have been received for around 20 years and which may now be presumed to be extinct in VC 63.

Unconfirmed = species which have been reported as occurring, but have never been confirmed.

References

Biodiversity Reporting and Information Group, (2007) *Report on the Species and Habitat Review*, UK Biodiversity Partnership. <http://www.ukbap.org.uk/>.

Bratton, J.H. (ed), (1991) *British Red Data Books: 3. Invertebrates other than insects*. JNCC, Peterborough.

BTO, et al (2021) *The Birds of Conservation Concern 5*. British Trust for Ornithology. <http://www.bto.org/psob/index.htm>.

Calderdale Biodiversity Action Plan Technical Group (2008) *Calderdale Local Biodiversity Plan: Review of Species and habitats*, Calderdale Biodiversity Action Plan Technical Group, Calderdale.

Cheffings, C. and Farrell, L. (Editors), (2005) *The Vascular Plant Red Data List for Great Britain*, ISSN 1473-0154.

City of Bradford MDC, (2003), *A Local Biodiversity Action Plan for the Bradford District (Draft)*, City of Bradford MDC, Bradford.

IUCN, (2004) *Guidelines for using the IUCN. Red List categories and criteria*. IUCN,. Gland and Cambridge

J. C. Lavin & G.T.D. Wilmore (1994) , *The West Yorkshire Plant Atlas*, City of Bradford Metropolitan Council, Bradford.

Kirklees Metropolitan Council (2008) *Kirklees Biodiversity Action Plan*, Kirklees Metropolitan Council, Kirklees.

Leeds BAP Steering Group, (2000) *Biodiversity Action Plan For Leeds*, Leeds City Council, Leeds.

Shirt, D. B. (Ed.), (1987) *British Red Data Books : 2 : Insects*. Peterborough: NCC.

Wakefield Biodiversity Group, (2001) *Wakefield District Local Biodiversity Report*, Wakefield MDC, Wakefield.

West Yorkshire Biodiversity Action Partnership (2009), *West Yorkshire Priority Species List*, West Yorkshire Ecology, Wakefield.

Wilmore, G.T.D. (2012), *A PROVISIONAL VASCULAR PLANT RED DATA LIST FOR VC 63 (S.W. YORKSHIRE) - An Evaluation of Current Status*.

Wilmore, G.T.D. (1997) *Rare and Scarce Plants Documentation in VC 63 (South-West Yorkshire)*, BSBI News 77 – 23-27.

Appendix B. Explanation of Designated Sites

Internationally Designated Sites

Special Protection Areas (SPA)

SPA are European designated sites. They are identified by JNCC/Natural England as being of interest for their bird populations. They are of international importance and have statutory protection.

Special Areas of Conservation (SAC)

SAC are European designated sites. They are identified by JNCC/Natural England as being of interest for their habitat type and species. They are of international importance and have statutory protection.

Nationally Designated Sites

Sites of Special Scientific Interest (SSSI)

SSSI are first-tier sites for conservation. They are areas identified by Natural England as being of interest by reason of their flora, fauna, geological or physiological features. They are of national importance and have statutory protection.

Locally Designated Sites

Local Wildlife Sites (LWS)

This is the *new* term for locally designated sites being adopted across West Yorkshire. Districts are currently going through a process of merging *old* designated nature conservation sites (Sites of Ecological or Geological Importance (SEGI), Sites of Scientific Interest (SSI), Bradford Wildlife Areas (BWA), Leeds Nature Areas (LNA), Kirklees Sites of Wildlife Significance (SWS) and Wakefield Nature Areas (WNA)) into a single Local Wildlife Site (LWS) designation. Sites should be given the same protection as SEGIs/SSIs as set out in UDPs/LDFs. Please refer to the link below for the West Yorkshire Local Wildlife Site Selection Criteria.

<https://www.wyjs.org.uk/media/69997/20190509-wy-local-sites-selection-criteria-09-may-2019-rm.docx>

Local Nature Reserves (LNR)

LNRs are statutory sites of district-wide importance for the enjoyment, study or conservation of wildlife, geological features and landforms, but there is seldom detailed ecological information on record for them. For more information on LNRs see <https://designatedsites.naturalengland.org.uk/SiteSearch.aspx>

Local Geological Sites (LGS)

LGS are areas identified as being important for their geological features. More details of this or other LGS sites can be obtained from the West Yorkshire Geology Trust (team@wyorksgeologytrust.org).

Wildlife Habitat Network

The Wildlife Habitat Network aims to meet the requirements of paragraph 114 of the National Planning Policy Framework for Conserving and enhancing the natural environment - Local planning authorities should: “set out a strategic approach in their Local Plans, planning positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure”.

Kirklees

Wildlife Habitat Network data for Kirklees can be found on the link below:

http://consult.kirklees.gov.uk/portal/dlp_pol?pointId=s1442851813908

NE5 development proposals involving land identified on the proposals map as part of a wildlife corridor should make provision for the retention of the corridor and the protection of the wildlife value of the land.

Great Crested Newt District Level Licensing (DLL)

Great crested newt DLL is currently available as an option for developers in Leeds and Wakefield Districts, but not in Bradford, Calderdale or Kirklees. This scheme provides applicants with a choice to either undertake the traditional methods of surveying and trapping-out development sites or to not undertake such work and to pay for standard mitigation within Strategic Opportunity Areas (SOA). This pays for habitat which has already been created for this purpose in advance of development by Natural England. Details for this scheme can be found at:

<https://www.gov.uk/government/publications/great-crested-newts-district-level-licensing-schemes>.

Appendix C. Designated Site Citations

Please see the accompanying folder for all of the site citations.

Appendix D. Explanation to the supply of badger data

WYES have recently changed the way we display badger records in data searches due to the sensitivity of the records. We have created a 'zone' showing the increased probability of badger activity in an area. We have done this by taking badger records and putting a buffer of 837m (the square root of the average badger territory from Badger (Michael Clark) Whittet Books – 70ha) around each record. This then shows a zone of the increased probability of badger activity across West Yorkshire. If there are badger records within 200m of the site centroid/boundary, a more detailed confidential badger report showing the badger records will be mapped and a spreadsheet with details of each record will be provided. If there are no sett records within 200m, we will supply the distance to the nearest known sett record if within the 2km. The records do not contain the grid reference, but do include a calculated distance from the site centroid/boundary.

This increased probability zone information is to be used to help ecological consultants justify the need for full badger surveys. We would expect them to:

- a) See if the site falls within the "likely probability of badger activity" zone.
- b) Assess the habitat as part of the Preliminary Ecological Assessment.
- c) Use the 200m buffer detailed record information to try to locate all known setts.
- d) Recommend a more detailed survey if required.
- e) Undertake a full badger survey if required, assess habitat resource within likely territory and potential impact on any setts.
- f) Recommend mitigation and habitat enhancement.

Appendix E. Species Records

Grid Ref	Common Name	Latin Name	Taxon Group	Date	Record Type	Abundance	Designation	Distance from site centroid (m)
SE2141519533	Common Toad	<i>Bufo bufo</i>	amphibian	01/05/2012	Torching		Sch5_sect9.5b; UKBAP; WYBAP; Kirklees BAP	1,229
SE21801876	Palmate Newt	<i>Lissotriton helveticus</i>	amphibian	June 2007	field record		Sch5_sect9.5b; WYBAP	1,763
SE21671912	Smooth Newt	<i>Lissotriton vulgaris</i>	amphibian	June 2007	field record		Sch5_sect9.5b; WYBAP	1,524
SE2147520983	Common Frog	<i>Rana temporaria</i>	amphibian	09/09/2019	None	1 Count	Sch5_sect9.5b; WYBAP	1,982
SE2147520983	Common Frog	<i>Rana temporaria</i>	amphibian	10/09/2019	None	2 Count	Sch5_sect9.5b; WYBAP	1,982
SE2147520983	Common Frog	<i>Rana temporaria</i>	amphibian	15/09/2019	None	2 Count	Sch5_sect9.5b; WYBAP	1,982
SE214195	Great Crested Newt	<i>Triturus cristatus</i>	amphibian	29/07/2005	field record		Sch5; UKBAP; WYBAP; Kirklees BAP	1,213
SE215195	Great Crested Newt	<i>Triturus cristatus</i>	amphibian	01/08/2005 - 16/08/2006	field record	2 Count of Adult	Sch5; UKBAP; WYBAP; Kirklees BAP	1,313
SE21002042	Palmate Newt	<i>Triturus helveticus</i>	amphibian	24/05/2008	Bottle trap	4 Count of Adult	Sch5_sect9.5b; WYBAP	1,246
SE197214	Smooth Newt	<i>Triturus vulgaris</i>	amphibian	21/03/2000	field record		Sch5_sect9.5b; WYBAP	1,983
SE21002042	Smooth Newt	<i>Triturus vulgaris</i>	amphibian	24/05/2008	Bottle trap	3 Count of Adult; 3 Count of Female	Sch5_sect9.5b; WYBAP	1,246
SE2110619657	Smooth Newt	<i>Triturus vulgaris</i>	amphibian	04/03/2020	field record	1 Count of Adult Male	Sch5_sect9.5b; WYBAP	937

Grid Ref	Common Name	Latin Name	Taxon Group	Date	Record Type	Abundance	Designation	Distance from site centroid (m)
SE2147520983	Smooth Newt	<i>Triturus vulgaris</i>	amphibian	09/09/2019	None	1 Count	Sch5_sect9.5b; WYBAP	1,982
SE215195	Smooth Newt	<i>Triturus vulgaris</i>	amphibian	01/08/2005 - 16/08/2006	field record		Sch5_sect9.5b; WYBAP	1,313
SE2220	Black-headed Gull	<i>Chroicocephalus ridibundus</i>	bird	02/03/2010	field record	100 Count	BoCC:Amber	1,885
SE213180	Woodpigeon	<i>Columba palumbus</i>	bird	1970 - 1988	field record		BoCC:Amber	1,848
SE20801914	Cuckoo	<i>Cuculus canorus</i>	bird	30/05/2015	field observation	1 Count	BoCC:Red; UKBAP; WYBAP	700
SE2141519533	Kestrel	<i>Falco tinnunculus</i>	bird	01/05/2012	field record	3 Count	BoCC:Amber; WYBAP; Kirklees BAP	1,229
SE213180	Brambling	<i>Fringilla montifringilla</i>	bird	1970 - 1988	field record		Sch1_part1	1,848
SE2220	Common Gull	<i>Larus canus</i>	bird	02/03/2010	field record	10 Count	BoCC:Amber	1,885
SE206179	Willow Warbler	<i>Phylloscopus trochilus</i>	bird	31/05/2013	field record		BoCC:Amber	1,629
SE206179	Wren	<i>Troglodytes troglodytes</i>	bird	31/05/2013	field record		BoCC:Amber	1,629
SE206179	Song Thrush	<i>Turdus philomelos</i>	bird	31/05/2013	field record		BoCC:Amber; UKBAP; WYBAP; Kirklees BAP	1,629
SE1991019910	European Eel	<i>Anguilla anguilla</i>	bony fish (Actinoptery gii)	01/09/2002	field record	1 Count	UKBAP; WYBAP; Kirklees BAP	513
SE21021958	Hollyberry Cotoneaster	<i>Cotoneaster bullatus</i>	flowering plant	04/03/2020	field record		Sch9_part2	840
SE209195	Wall Cotoneaster	<i>Cotoneaster horizontalis</i>	flowering plant	01/08/2005 - 16/08/2006	field record		Sch9_part2	714
SE1918	Montbretia	<i>Crocasmia x crocosmiiflora</i>	flowering plant	10/09/2019	field record		Sch9_part2	1,890

Grid Ref	Common Name	Latin Name	Taxon Group	Date	Record Type	Abundance	Designation	Distance from site centroid (m)
SE18642060	Nuttall's Waterweed	<i>Elodea nuttallii</i>	flowering plant	May 2014 - June 2014	field record		Sch9_part2	1,906
SE209195	Marsh Helleborine	<i>Epipactis palustris</i>	flowering plant	01/08/2005 - 16/08/2006	field record		VC63 LRDB:Very Rare	714
SE210194	Marsh Helleborine	<i>Epipactis palustris</i>	flowering plant	01/08/2005 - 16/08/2006	field record		VC63 LRDB:Very Rare	817
SE211196	Marsh Helleborine	<i>Epipactis palustris</i>	flowering plant	Unknown	field record		VC63 LRDB:Very Rare	922
SE186206	Japanese Knotweed	<i>Fallopia japonica</i>	flowering plant	07/06/2018	field observation	1 Count of Present	Sch9_part2	1,938
SE188205	Japanese Knotweed	<i>Fallopia japonica</i>	flowering plant	27/03/2012	field observation		Sch9_part2	1,718
SE201196	Japanese Knotweed	<i>Fallopia japonica</i>	flowering plant	14/09/1999	field observation		Sch9_part2	150
SE2038119213	Japanese Knotweed	<i>Fallopia japonica</i>	flowering plant	25/02/2017	field record	1 Count of Present	Sch9_part2	328
SE20681944	Japanese Knotweed	<i>Fallopia japonica</i>	flowering plant	04/03/2020	field record		Sch9_part2	496
SE20741944	Japanese Knotweed	<i>Fallopia japonica</i>	flowering plant	04/03/2020	field record		Sch9_part2	556
SE211192	Japanese Knotweed	<i>Fallopia japonica</i>	flowering plant	23/09/1997	field observation		Sch9_part2	954
SE215185	Japanese Knotweed	<i>Fallopia japonica</i>	flowering plant	26/04/2014	field record	r Count of DAFOR	Sch9_part2	1,635
SE215195	Japanese Knotweed	<i>Fallopia japonica</i>	flowering plant	23/09/1998	field observation		Sch9_part2	1,313
SE21671990	Japanese Knotweed	<i>Fallopia japonica</i>	flowering plant	14/10/2013	None		Sch9_part2	1,541
SE218199	Japanese Knotweed	<i>Fallopia japonica</i>	flowering plant	15/09/1999	field observation		Sch9_part2	1,666
SE2183219776	Japanese Knotweed	<i>Fallopia japonica</i>	flowering plant	25/02/2017	field record	1 Count of Present	Sch9_part2	1,671

Grid Ref	Common Name	Latin Name	Taxon Group	Date	Record Type	Abundance	Designation	Distance from site centroid (m)
SE220188	Japanese Knotweed	<i>Fallopia japonica</i>	flowering plant	26/04/2013	field record	o Count of DAFOR	Sch9_part2	1,933
SE209195	Blue Fescue	<i>Festuca longifolia</i>	flowering plant	01/08/2005 - 16/08/2006	field record		VC63 LRDB:Casual only – Very Rare	714
SE214195	Giant-rhubarb	<i>Gunnera tinctoria</i>	flowering plant	01/08/2005 - 16/08/2006	field record		Sch9_part2	1,213
SE200183	Bluebell	<i>Hyacinthoides non-scripta</i>	flowering plant	14/05/2015	field observation	LA Count of DAFOR	Sch8_sect 13.2; Kirklees BAP	1,190
SE2015018270	Bluebell	<i>Hyacinthoides non-scripta</i>	flowering plant	14/05/2015	field observation	LA Count of DAFOR	Sch8_sect 13.2; Kirklees BAP	1,206
SE204187	Bluebell	<i>Hyacinthoides non-scripta</i>	flowering plant	15/05/2013	field record	A Count of DAFOR	Sch8_sect 13.2; Kirklees BAP	805
SE206179	Bluebell	<i>Hyacinthoides non-scripta</i>	flowering plant	31/05/2013	field record	a Range of DAFOR	Sch8_sect 13.2; Kirklees BAP	1,629
SE215185	Bluebell	<i>Hyacinthoides non-scripta</i>	flowering plant	26/04/2014	field record	f-a Count of DAFOR	Sch8_sect 13.2; Kirklees BAP	1,635
SE220188	Bluebell	<i>Hyacinthoides non-scripta</i>	flowering plant	26/04/2013	field record	a Count of DAFOR	Sch8_sect 13.2; Kirklees BAP	1,933
SE200183	Himalayan Balsam	<i>Impatiens glandulifera</i>	flowering plant	14/05/2015	field observation	O Count of DAFOR	Sch9_part2	1,190
SE2011818274	Himalayan Balsam	<i>Impatiens glandulifera</i>	flowering plant	14/05/2015	field observation	F Count of DAFOR	Sch9_part2	1,203
SE201196	Himalayan Balsam	<i>Impatiens glandulifera</i>	flowering plant	14/09/1999	field observation		Sch9_part2	150
SE202194	Himalayan Balsam	<i>Impatiens glandulifera</i>	flowering plant	10/10/2005	field record		Sch9_part2	78
SE206179	Himalayan Balsam	<i>Impatiens glandulifera</i>	flowering plant	31/05/2013	field record	f Range of DAFOR	Sch9_part2	1,629
SE211192	Himalayan Balsam	<i>Impatiens glandulifera</i>	flowering plant	23/09/1997	field observation		Sch9_part2	954
SE21131963	Himalayan Balsam	<i>Impatiens glandulifera</i>	flowering plant	04/03/2020	field record		Sch9_part2	956

Grid Ref	Common Name	Latin Name	Taxon Group	Date	Record Type	Abundance	Designation	Distance from site centroid (m)
SE21141965	Himalayan Balsam	<i>Impatiens glandulifera</i>	flowering plant	04/03/2020	field record		Sch9_part2	969
SE21201972	Himalayan Balsam	<i>Impatiens glandulifera</i>	flowering plant	04/03/2020	field record		Sch9_part2	1,042
SE2121	Himalayan Balsam	<i>Impatiens glandulifera</i>	flowering plant	16/11/2015	field record		Sch9_part2	1,727
SE21211972	Himalayan Balsam	<i>Impatiens glandulifera</i>	flowering plant	04/03/2020	field record		Sch9_part2	1,052
SE212197	Himalayan Balsam	<i>Impatiens glandulifera</i>	flowering plant	01/08/2005 - 16/08/2006	field record		Sch9_part2	1,038
SE21221973	Himalayan Balsam	<i>Impatiens glandulifera</i>	flowering plant	04/03/2020	field record		Sch9_part2	1,064
SE21241976	Himalayan Balsam	<i>Impatiens glandulifera</i>	flowering plant	04/03/2020	field record		Sch9_part2	1,091
SE21251977	Himalayan Balsam	<i>Impatiens glandulifera</i>	flowering plant	04/03/2020	field record		Sch9_part2	1,103
SE21261976	Himalayan Balsam	<i>Impatiens glandulifera</i>	flowering plant	04/03/2020	field record		Sch9_part2	1,110
SE21341988	Himalayan Balsam	<i>Impatiens glandulifera</i>	flowering plant	04/03/2020	field record		Sch9_part2	1,221
SE2150219774	Himalayan Balsam	<i>Impatiens glandulifera</i>	flowering plant	25/02/2017	field record	1 Count of Present	Sch9_part2	1,348
SE215195	Himalayan Balsam	<i>Impatiens glandulifera</i>	flowering plant	23/09/1998	field observation		Sch9_part2	1,313
SE21671990	Himalayan Balsam	<i>Impatiens glandulifera</i>	flowering plant	14/10/2013	None		Sch9_part2	1,541
SE2176619775	Himalayan Balsam	<i>Impatiens glandulifera</i>	flowering plant	25/02/2017	field record	1 Count of Present	Sch9_part2	1,606
SE218199	Himalayan Balsam	<i>Impatiens glandulifera</i>	flowering plant	15/09/1999	field observation		Sch9_part2	1,666
SE220188	Himalayan Balsam	<i>Impatiens glandulifera</i>	flowering plant	26/04/2013	field record	r Count of DAFOR	Sch9_part2	1,933

Grid Ref	Common Name	Latin Name	Taxon Group	Date	Record Type	Abundance	Designation	Distance from site centroid (m)
SE214195	Curly Waterweed	<i>Lagarosiphon major</i>	flowering plant	01/08/2005 - 16/08/2006	field record		Sch9_part2	1,213
SE18642060	Floating Water-plantain	<i>Luronium natans</i>	flowering plant	May 2014 - June 2014	field record		Sch8; UKBAP; WYBAP; VC63 LRDB:Rare	1,906
SE20941962	Hairlike Pondweed	<i>Potamogeton trichoides</i>	flowering plant	May 2014 - June 2014	field record		VC63 LRDB:Very Rare	768
SE206179	Rhododendron ponticum	<i>Rhododendron ponticum</i>	flowering plant	31/05/2013	field record	Id Range of DAFOR	Sch9_part2	1,629
SE215185	Rhododendron ponticum	<i>Rhododendron ponticum</i>	flowering plant	26/04/2014	field record	o Count of DAFOR	Sch9_part2	1,635
SE220188	Rhododendron ponticum	<i>Rhododendron ponticum</i>	flowering plant	26/04/2013	field record	lo Count of DAFOR	Sch9_part2	1,933
SE1918	Sea Mayweed	<i>Tripleurospermum maritimum</i>	flowering plant	10/09/2019	field record		VC63 LRDB:Casual only – Very Rare	1,890
SE209195	Sea Mayweed	<i>Tripleurospermum maritimum</i>	flowering plant	01/08/2005 - 16/08/2006	field record		VC63 LRDB:Casual only – Very Rare	714
SE214195	Horsetail Weevil	<i>Grypus equiseti</i>	insect - beetle (Coleoptera)	Unknown	field record		Notable:B	1,213
SE214197	Horsetail Weevil	<i>Grypus equiseti</i>	insect - beetle (Coleoptera)	27/06/2006 - 25/04/2007	field record		Notable:B	1,233
SE209195	Oedostethus quadripustulatus	<i>Oedostethus quadripustulatus</i>	insect - beetle (Coleoptera)	27/06/2006 - 25/04/2007	field record		Notable:A	714
SE214195	Oedostethus quadripustulatus	<i>Oedostethus quadripustulatus</i>	insect - beetle (Coleoptera)	Unknown	field record		Notable:A	1,213

Grid Ref	Common Name	Latin Name	Taxon Group	Date	Record Type	Abundance	Designation	Distance from site centroid (m)
SE214197	Oedostethus quadripustulatus	<i>Oedostethus quadripustulatus</i>	insect - beetle (Coleoptera)	27/06/2006 - 25/04/2007	field record		Notable:A	1,233
SE215195	Oedostethus quadripustulatus	<i>Oedostethus quadripustulatus</i>	insect - beetle (Coleoptera)	27/06/2006 - 25/04/2007	field record		Notable:A	1,313
SE216197	Oedostethus quadripustulatus	<i>Oedostethus quadripustulatus</i>	insect - beetle (Coleoptera)	27/06/2006 - 25/04/2007	field record		Notable:A	1,430
SE22	Philorhizus sigma	<i>Philorhizus sigma</i>	insect - beetle (Coleoptera)	1983	field record		Notable:A	555
SE214195	Tropiphorus obtusus	<i>Tropiphorus obtusus</i>	insect - beetle (Coleoptera)	Unknown	field record		Notable:A	1,213
SE215195	Tropiphorus obtusus	<i>Tropiphorus obtusus</i>	insect - beetle (Coleoptera)	27/06/2006 - 25/04/2007	field record		Notable:A	1,313
SE215195	Small Heath	<i>Coenonympha pamphilus</i>	insect - butterfly	27/06/2006 - 25/04/2007	field record		UKBAP	1,313
SE21051820	White-letter Hairstreak	<i>Satyrrium w-album</i>	insect - butterfly	15/07/2018	field observation	3 Count	Sch5_sect9.5b; UKBAP; WYBAP	1,540
SE19762039	Mouse Moth	<i>Amphipyra tragopoginis</i>	insect - moth	07/08/2018	field observation	1 Count	UKBAP	1,007
SE19762039	Mouse Moth	<i>Amphipyra tragopoginis</i>	insect - moth	19/08/2018	field observation	3 Count	UKBAP	1,007
SE19762039	Centre-barred Sallow	<i>Atethmia centrigo</i>	insect - moth	30/08/2018	field observation	1 Count	UKBAP	1,007
SE21121838	Ghost Moth	<i>Hepialus humuli</i>	insect - moth	12/08/2018	field observation	1 Count	UKBAP	1,439
SE19762039	Rustic	<i>Hoplodrina blanda</i>	insect - moth	30/06/2018	field observation	2 Count	UKBAP; WYBAP	1,007

Grid Ref	Common Name	Latin Name	Taxon Group	Date	Record Type	Abundance	Designation	Distance from site centroid (m)
SE19762039	Shoulder-striped Wainscot	<i>Mythimna comma</i>	insect - moth	02/07/2018	field observation	1 Count	UKBAP; WYBAP	1,007
SE21131840	Blood-vein	<i>Timandra comae</i>	insect - moth	12/08/2018	field observation	1 Count	UKBAP	1,431
SE19472042	Cinnabar	<i>Tyria jacobaeae</i>	insect - moth	24/07/2018	field observation	4 Count	UKBAP; WYBAP	1,182
SE209195	Cinnabar	<i>Tyria jacobaeae</i>	insect - moth	27/06/2006 - 25/04/2007	field record		UKBAP; WYBAP	714
SE213195	Cinnabar	<i>Tyria jacobaeae</i>	insect - moth	27/06/2006 - 25/04/2007	field record		UKBAP; WYBAP	1,113
SE214195	Cinnabar	<i>Tyria jacobaeae</i>	insect - moth	27/06/2006 - 25/04/2007	field record		UKBAP; WYBAP	1,213
SE215195	Cinnabar	<i>Tyria jacobaeae</i>	insect - moth	27/06/2006 - 25/04/2007	field record		UKBAP; WYBAP	1,313
SE2038420314	West European Hedgehog	<i>Erinaceus europaeus</i>	terrestrial mammal	12/07/2017	field record	1 Count	UKBAP; WYBAP; Kirklees BAP	861
SE193203	Brown Hare	<i>Lepus europaeus</i>	terrestrial mammal	12/05/1984	field record	1 Count of Adult	UKBAP; WYBAP; Kirklees BAP	1,207
SE2004719503	Myotis Bat species	<i>Myotis</i>	terrestrial mammal	01/07/2016	field record		Sch5	139
SE2004719503	Myotis Bat species	<i>Myotis</i>	terrestrial mammal	22/07/2014	field record		Sch5	139
SE2020919700	Myotis Bat species	<i>Myotis</i>	terrestrial mammal	01/07/2010	Roost	1 Count	Sch5	225
SE2115218909	Natterer's Bat	<i>Myotis nattereri</i>	terrestrial mammal	30/08/2013 - 22/09/2013	Roost	1 Count	Sch5; WYBAP; Kirklees BAP	1,119
SE1936020970	Lesser Noctule	<i>Nyctalus leisleri</i>	terrestrial mammal	27/07/2011	field record	1 Count	Sch5; WYBAP; Kirklees BAP	1,705
SE1941918683	Lesser Noctule	<i>Nyctalus leisleri</i>	terrestrial mammal	01/06/2013	Roost (possible)	1 Count	Sch5; WYBAP; Kirklees BAP	1,100
SE2004719503	Lesser Noctule	<i>Nyctalus leisleri</i>	terrestrial mammal	01/07/2016	Roost		Sch5; WYBAP; Kirklees BAP	139

Grid Ref	Common Name	Latin Name	Taxon Group	Date	Record Type	Abundance	Designation	Distance from site centroid (m)
SE2007919523	Lesser Noctule	<i>Nyctalus leisleri</i>	terrestrial mammal	01/07/2016	foraging	2 Count	Sch5; WYBAP; Kirklees BAP	115
SE20281916	Lesser Noctule	<i>Nyctalus leisleri</i>	terrestrial mammal	31/07/2003	Grounded	1 Count of Adult	Sch5; WYBAP; Kirklees BAP	330
SE207206	Lesser Noctule	<i>Nyctalus leisleri</i>	terrestrial mammal	31/05/2017	field record		Sch5; WYBAP; Kirklees BAP	1,236
SE2073420659	Lesser Noctule	<i>Nyctalus leisleri</i>	terrestrial mammal	31/05/2017	field record		Sch5; WYBAP; Kirklees BAP	1,304
SE1898120760	Noctule Bat	<i>Nyctalus noctula</i>	terrestrial mammal	01/05/2010	field record		Sch5; UKBAP; WYBAP; Kirklees BAP	1,757
SE1959821121	Noctule Bat	<i>Nyctalus noctula</i>	terrestrial mammal	01/04/2011	field record		Sch5; UKBAP; WYBAP; Kirklees BAP	1,745
SE2004719503	Noctule Bat	<i>Nyctalus noctula</i>	terrestrial mammal	01/07/2016	Roost		Sch5; UKBAP; WYBAP; Kirklees BAP	139
SE2004719503	Noctule Bat	<i>Nyctalus noctula</i>	terrestrial mammal	19/07/2016	field record	1 Count	Sch5; UKBAP; WYBAP; Kirklees BAP	139
SE2004719503	Noctule Bat	<i>Nyctalus noctula</i>	terrestrial mammal	21/05/2014	field record	2 Count	Sch5; UKBAP; WYBAP; Kirklees BAP	139
SE2004719503	Noctule Bat	<i>Nyctalus noctula</i>	terrestrial mammal	22/07/2014	field record	1 Count	Sch5; UKBAP; WYBAP; Kirklees BAP	139
SE2004719503	Noctule Bat	<i>Nyctalus noctula</i>	terrestrial mammal	24/07/2014	field record	2 Count	Sch5; UKBAP; WYBAP; Kirklees BAP	139
SE2004719505	Noctule Bat	<i>Nyctalus noctula</i>	terrestrial mammal	24/07/2014	field record	2 Count	Sch5; UKBAP; WYBAP; Kirklees BAP	140

Grid Ref	Common Name	Latin Name	Taxon Group	Date	Record Type	Abundance	Designation	Distance from site centroid (m)
SE2046019559	Noctule Bat	<i>Nyctalus noctula</i>	terrestrial mammal	September 2013	field record		Sch5; UKBAP; WYBAP; Kirklees BAP	287
SE2046119569	Noctule Bat	<i>Nyctalus noctula</i>	terrestrial mammal	01/09/2013	field record		Sch5; UKBAP; WYBAP; Kirklees BAP	291
SE205196	Noctule Bat	<i>Nyctalus noctula</i>	terrestrial mammal	13/09/2013	field record	1 Count	Sch5; UKBAP; WYBAP; Kirklees BAP	339
SE2101218959	Noctule Bat	<i>Nyctalus noctula</i>	terrestrial mammal	01/05/2012	Roost		Sch5; UKBAP; WYBAP; Kirklees BAP	974
SE21081897	Noctule Bat	<i>Nyctalus noctula</i>	terrestrial mammal	01/05/2012	field record		Sch5; UKBAP; WYBAP; Kirklees BAP	1,027
SE2115218909	Noctule Bat	<i>Nyctalus noctula</i>	terrestrial mammal	30/08/2013 - 17/09/2013	foraging		Sch5; UKBAP; WYBAP; Kirklees BAP	1,119
SE2124920710	Noctule Bat	<i>Nyctalus noctula</i>	terrestrial mammal	15/09/2011	field record		Sch5; UKBAP; WYBAP; Kirklees BAP	1,628
SE204196	Pipistrelle Bat species	<i>Pipistrellus</i>	terrestrial mammal	13/09/2013	field record	1 Count	Sch5	249
SE2046119569	Pipistrelle Bat species	<i>Pipistrellus</i>	terrestrial mammal	01/09/2013	field record		Sch5	291
SE1846218462	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	August 2014	foraging		Sch5; WYBAP; Kirklees BAP	1,994
SE186203	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	2019	Roost	1 Count	Sch5; WYBAP; Kirklees BAP	1,781
SE18672039	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	2019	Roost	1 Count	Sch5; WYBAP; Kirklees BAP	1,765
SE1898120760	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	01/05/2010	Roost (transitional)	1 Count	Sch5; WYBAP; Kirklees BAP	1,757

Grid Ref	Common Name	Latin Name	Taxon Group	Date	Record Type	Abundance	Designation	Distance from site centroid (m)
SE1898120760	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	01/09/2013	field record		Sch5; WYBAP; Kirklees BAP	1,757
SE19282098	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	01/08/2011	field record	5 Count	Sch5; WYBAP; Kirklees BAP	1,753
SE19282098	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	10/08/2011	field record	2 Count	Sch5; WYBAP; Kirklees BAP	1,753
SE19282098	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	19/09/2013	field record	2 Count	Sch5; WYBAP; Kirklees BAP	1,753
SE1935720968	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	27/07/2011	Roost	1 Count	Sch5; WYBAP; Kirklees BAP	1,704
SE1936020970	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	27/07/2011	field record	4 Count	Sch5; WYBAP; Kirklees BAP	1,705
SE1936020970	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	27/07/2011	Roost (single adult)	1 Count	Sch5; WYBAP; Kirklees BAP	1,705
SE1941918683	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	01/06/2013	field record		Sch5; WYBAP; Kirklees BAP	1,100
SE1959821121	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	01/04/2011	field record		Sch5; WYBAP; Kirklees BAP	1,745
SE199213	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	2015	Injured		Sch5; WYBAP; Kirklees BAP	1,845
SE1993317588	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	22/09/2010	Feeding	2 Count	Sch5; WYBAP; Kirklees BAP	1,904
SE1993317588	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	22/09/2010	Feeding	1+ Count	Sch5; WYBAP; Kirklees BAP	1,904
SE2004119347	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	28/09/2011	field record		Sch5; WYBAP; Kirklees BAP	192
SE2004719503	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	01/07/2016	Roost	1 Count	Sch5; WYBAP; Kirklees BAP	139
SE2004719503	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	19/07/2016	Roost	1 Count	Sch5; WYBAP; Kirklees BAP	139
SE2004719503	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	21/05/2014	field record	3 Count	Sch5; WYBAP; Kirklees BAP	139

Grid Ref	Common Name	Latin Name	Taxon Group	Date	Record Type	Abundance	Designation	Distance from site centroid (m)
SE2004719503	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	22/07/2014	Roost	3 Count	Sch5; WYBAP; Kirklees BAP	139
SE2004719503	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	24/07/2014	Roost	1 Count	Sch5; WYBAP; Kirklees BAP	139
SE2004719505	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	July 2014	Roost	2 Count	Sch5; WYBAP; Kirklees BAP	140
SE2005019500	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	July 2014	foraging	1 Count	Sch5; WYBAP; Kirklees BAP	136
SE2005319497	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	01/07/2016	Roost	1 Count	Sch5; WYBAP; Kirklees BAP	132
SE2005819496	Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	19/07/2016	Roost	1 Count of Roost	Sch5; WYBAP; Kirklees BAP	127
SE2012419230	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	01/05/2010	field record		Sch5; WYBAP; Kirklees BAP	253
SE2016019147	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	June 2014	foraging		Sch5; WYBAP; Kirklees BAP	330
SE2020219515	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	07/01/2013	droppings	3 Count	Sch5; WYBAP; Kirklees BAP	43
SE202195	Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	January 2005	None	Present Count of Droppings	Sch5; WYBAP; Kirklees BAP	29
SE202198	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	2015	Roost		Sch5; WYBAP; Kirklees BAP	324
SE203203	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	03/06/2014	field record		Sch5; WYBAP; Kirklees BAP	832
SE203203	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	18/06/2014	field record		Sch5; WYBAP; Kirklees BAP	832
SE203209	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	19/07/2007	aural bat detector		Sch5; WYBAP; Kirklees BAP	1,428
SE2032320393	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	June 2014	foraging		Sch5; WYBAP; Kirklees BAP	927
SE204195	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	13/09/2013	field record	1 Count	Sch5; WYBAP; Kirklees BAP	217

Grid Ref	Common Name	Latin Name	Taxon Group	Date	Record Type	Abundance	Designation	Distance from site centroid (m)
SE204195	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	18/09/2013	field record	1 Count	Sch5; WYBAP; Kirklees BAP	217
SE2046019559	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	September 2013	foraging		Sch5; WYBAP; Kirklees BAP	287
SE2046119569	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	09/07/2008	field record		Sch5; WYBAP; Kirklees BAP	291
SE2050918965	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	April 2014	Roost	1 Count	Sch5; WYBAP; Kirklees BAP	605
SE205195	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	13/09/2013	field record	1 Count	Sch5; WYBAP; Kirklees BAP	316
SE206195	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	16/07/2008	aural bat detector		Sch5; WYBAP; Kirklees BAP	416
SE206195	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	Unknown	aural bat detector		Sch5; WYBAP; Kirklees BAP	416
SE207206	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	31/05/2017	field record		Sch5; WYBAP; Kirklees BAP	1,236
SE2072421136	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	June 2014 - September 2014	foraging		Sch5; WYBAP; Kirklees BAP	1,744
SE2073420659	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	31/05/2017	field record		Sch5; WYBAP; Kirklees BAP	1,304
SE21012031	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	05/09/2005	field record	1 Count	Sch5; WYBAP; Kirklees BAP	1,172
SE21081897	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	01/05/2012	field record		Sch5; WYBAP; Kirklees BAP	1,027
SE21082077	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	21/05/2014	Roost	58 Count	Sch5; WYBAP; Kirklees BAP	1,572
SE211186	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	14/08/2008	foraging	2 Count	Sch5; WYBAP; Kirklees BAP	1,265
SE21152075	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	15/07/2014	Roost		Sch5; WYBAP; Kirklees BAP	1,597
SE2115218909	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	30/08/2013 - 22/09/2013	Roost	1 Count	Sch5; WYBAP; Kirklees BAP	1,119

Grid Ref	Common Name	Latin Name	Taxon Group	Date	Record Type	Abundance	Designation	Distance from site centroid (m)
SE2115720082	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	August 2014	foraging		Sch5; WYBAP; Kirklees BAP	1,144
SE21231996	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	02/06/2008	Injured	1 Count of Adult Male	Sch5; WYBAP; Kirklees BAP	1,150
SE2124920710	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	15/09/2011	field record		Sch5; WYBAP; Kirklees BAP	1,628
SE215199	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	03/06/2014	field record		Sch5; WYBAP; Kirklees BAP	1,379
SE215199	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	11/06/2013	field record		Sch5; WYBAP; Kirklees BAP	1,379
SE215199	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	12/06/2014	field record		Sch5; WYBAP; Kirklees BAP	1,379
SE2153019914	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	June 2014	foraging		Sch5; WYBAP; Kirklees BAP	1,412
SE2156319981	Pipistrelle	<i>Pipistrellus pipistrellus</i>	terrestrial mammal	June 2014	foraging		Sch5; WYBAP; Kirklees BAP	1,465
SE2046019559	Soprano Pipistrelle	<i>Pipistrellus pipistrellus</i> 55kHz	terrestrial mammal	September 2013	foraging		Sch5; UKBAP; WYBAP; Kirklees BAP	287
SE1936020970	Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	terrestrial mammal	27/07/2011	field record	1 Count	Sch5; UKBAP; WYBAP; Kirklees BAP	1,705
SE205196	Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	terrestrial mammal	13/09/2013	field record	1 Count	Sch5; UKBAP; WYBAP; Kirklees BAP	339
SE2115218909	Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	terrestrial mammal	30/08/2013 - 17/09/2013	foraging		Sch5; UKBAP; WYBAP; Kirklees BAP	1,119
SE19542092	Pipistrelle Bat species	<i>Pipistrellus sp.</i>	terrestrial mammal	09/05/2007	Casualty	1 Count of Adult	Sch5	1,580
SE1958418813	Pipistrelle Bat species	<i>Pipistrellus sp.</i>	terrestrial mammal	10/08/2007	Roost		Sch5	893

Grid Ref	Common Name	Latin Name	Taxon Group	Date	Record Type	Abundance	Designation	Distance from site centroid (m)
SE2032320398	Pipistrelle Bat species	<i>Pipistrellus sp.</i>	terrestrial mammal	18/06/2007	Roost (maternity)		Sch5	932
SE2032320398	Pipistrelle Bat species	<i>Pipistrellus sp.</i>	terrestrial mammal	18/06/2007	Roost (maternity)	not recorded Range	Sch5	932
SE2033020410	Pipistrelle Bat species	<i>Pipistrellus sp.</i>	terrestrial mammal	30/06/2004	Roost (maternity)	1 Count of Adult	Sch5	945
SE2099618485	Pipistrelle Bat species	<i>Pipistrellus sp.</i>	terrestrial mammal	11/07/2005	Roost (possible)		Sch5	1,279
SE2109018990	Pipistrelle Bat species	<i>Pipistrellus sp.</i>	terrestrial mammal	06/08/2007	Grounded	1 Count of Adult	Sch5	1,026
SE1898120760	Brown Long-eared Bat	<i>Plecotus auritus</i>	terrestrial mammal	01/05/2010	field record		Sch5; UKBAP; WYBAP; Kirklees BAP	1,757
SE1936020970	Brown Long-eared Bat	<i>Plecotus auritus</i>	terrestrial mammal	27/07/2011	field record	1 Count	Sch5; UKBAP; WYBAP; Kirklees BAP	1,705
SE2020819667	Brown Long-eared Bat	<i>Plecotus auritus</i>	terrestrial mammal	01/07/2010	field record		Sch5; UKBAP; WYBAP; Kirklees BAP	192
SE2020819701	Brown Long-eared Bat	<i>Plecotus auritus</i>	terrestrial mammal	July 2010	aural bat detector	7 Count of Adult	Sch5; UKBAP; WYBAP; Kirklees BAP	226
SE2032920410	Brown Long-eared Bat	<i>Plecotus auritus</i>	terrestrial mammal	June 2014	Roost		Sch5; UKBAP; WYBAP; Kirklees BAP	945
SE2099618485	Brown Long-eared Bat	<i>Plecotus auritus</i>	terrestrial mammal	11/07/2005	Roost (maternity)	3 Count of Adult	Sch5; UKBAP; WYBAP; Kirklees BAP	1,279
SE1912720858	Bats	<i>Vespertilionidae</i>	terrestrial mammal	23/07/2003	Roost		Sch5	1,738
SE1917320568	Bats	<i>Vespertilionidae</i>	terrestrial mammal	19/01/2005	Roost (possible)		Sch5	1,486

Grid Ref	Common Name	Latin Name	Taxon Group	Date	Record Type	Abundance	Designation	Distance from site centroid (m)
SE1958418811	Bats	<i>Vespertilionidae</i>	terrestrial mammal	2007	Roost		Sch5	894
SE19612084	Bats	<i>Vespertilionidae</i>	terrestrial mammal	15/07/2003	field record		Sch5	1,479
SE19732134	Bats	<i>Vespertilionidae</i>	terrestrial mammal	27/09/2006	Casualty	1 Count of Adult	Sch5	1,917
SE2017319492	Bats	<i>Vespertilionidae</i>	terrestrial mammal	07/01/2005	Roost		Sch5	19
SE2018319492	Bats	<i>Vespertilionidae</i>	terrestrial mammal	07/01/2005	Roost		Sch5	16
SE2033020410	Bats	<i>Vespertilionidae</i>	terrestrial mammal	27/06/2005	Roost (maternity)	1 Count of Juvenile	Sch5	945
SE20352038	Bats	<i>Vespertilionidae</i>	terrestrial mammal	18/08/2003	Grounded	1 Count of Adult	Sch5	919
SE2044520332	Bats	<i>Vespertilionidae</i>	terrestrial mammal	1995	Roost (excluded)		Sch5	894
SE2047620632	Bats	<i>Vespertilionidae</i>	terrestrial mammal	24/07/2003	Roost		Sch5	1,192
SE2109320781	Bats	<i>Vespertilionidae</i>	terrestrial mammal	03/06/2003	Roost		Sch5	1,588
SE2116220730	Bats	<i>Vespertilionidae</i>	terrestrial mammal	1999	in building		Sch5	1,588
SE2129820794	Bats	<i>Vespertilionidae</i>	terrestrial mammal	1999	Roost		Sch5	1,723