

BEN BANK ROAD, SILKSTONE COMMON

PRELIMINARY ECOLOGICAL APPRAISAL (PEA)

March 2025

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TABLE OF CONTENTS

1	SUMMARY	3
2	INTRODUCTION.....	5
2.1	Background.....	5
2.2	Site Description.....	5
2.3	The Proposals.....	7
2.4	Planning Status.....	8
2.5	Report Validity	8
3	METHODOLOGY	9
3.1	Desk Study.....	9
3.2	Field Surveys	9
3.3	Limitations.....	14
4	BASELINE ECOLOGICAL CONDITION.....	15
4.1	Designations	15
4.2	Habitats and Flora	17
4.3	Field Survey	18
4.4	Biodiversity Net Gain – Baseline Assessment	24
4.5	Fauna.....	25
5	ECOLOGICAL CONSTRAINTS AND OPPORTUNITIES.....	31
5.1	Ecological Constraints	31
5.2	Summary of Recommendations	35
5.3	Ecological Enhancement Opportunities	36
5.4	Mechanism to secure Mitigation and Enhancement	36
6	CONCLUSION	37
	APPENDIX A – Species List.....	38
	APPENDIX B – Key Species Legislation	39
	APPENDIX C – Magic Map	41
	APPENDIX D – LWS Sites	42
	APPENDIX E – UKHabs Baseline Map	43

1 SUMMARY

This Preliminary Ecological Appraisal (PEA) included a desk study of designated sites and ecological data, and a detailed walkover survey of the site considering habitats and species.

This report is considered sufficient to draw robust and reliable conclusions to give the local authority confidence that all ecological constraints are to be avoided, mitigated and compensated for, and ecological enhancements are proposed (see Section 5.3). No ecological constraints were identified requiring further Phase 2 Protected Species Surveys and all constraints can be discharged via a condition of planning.

This PEA should be submitted alongside a Biodiversity Net Gain Biodiversity (BNG) Biodiversity Impact Assessment (BIA) Report to ensure an adequate habitat compensation strategy is produced which allows for 10% net gain as per the Environmental Act 2021.

An executive summary of recommendations is provided within Table 1, overleaf.

Ecological Receptor / Constraint	Timescales
Biodiversity Net Gain Biodiversity Net Gain (BNG) Summary Report should be submitted to support the planning application	Submitted prior to planning approval.
Breeding Birds Pre-commencement check and Reasonable Avoidance Methods (RAMs) to be undertaken. Enclosed within CEMP. Mitigation and enhancements to be secured within LEMP.	Prior to and during construction Secured through appropriately worded condition of planning.
Badgers Pre-commencement check and Reasonable Avoidance Methods (RAMs) to be undertaken. Enclosed within CEMP.	Prior to construction. Secured through appropriately worded condition of planning.
Invertebrates Elm trees protected (in line with BS5837:2012) and secured in the long-term. No insecticides or herbicides to be used.	Prior to and during construction Secured through appropriately worded condition of planning and/or TPO.
Trees A Tree Constraints Plan should be provided. The northern woodland boundary trees and onsite trees should be protected in line with BS5837:2012.	Prior to and during construction
Foraging and Commuting Bats Soft-lighting strategy to be implemented during the construction phase and post-development use. Soft-lighting plan to be prepared by a competent lighting professional	Prior to and during construction Secured through appropriately worded condition of planning.
Other Terrestrial Mammals Reasonable Avoidance Methods (RAMs) to be undertaken. Enclosed within CEMP. Enhancements to be secured within LEMP.	Prior to construction Secured through appropriately worded condition of planning.
Reptiles Pre-commencement check and Reasonable Avoidance Methods (RAMs) to be undertaken. Enclosed within CEMP.	Prior to construction. Secured through appropriately worded condition of planning.

Table 1: Summary of Ecological recommendations

2 INTRODUCTION

2.1 Background

Weddles were commissioned by Penistone Developments Ltd to undertake a Preliminary Ecological Appraisal for the site at Ben Bank Road, Silkstone Common, South Yorkshire.

This Preliminary Ecological Appraisal aims to:

- Identify any likely ecological constraints;
- Propose any necessary design changes;
- Identify any further ecological surveys required to enable an Ecological Impact Assessment (EclA) to be carried out;
- Propose any ecological enhancements.

This report has been prepared in line with BS 42020:2013 Biodiversity: Code of practice for planning and development and the CIEEM Guidance for Preliminary Ecological Appraisal (2017), Ecological Report Writing (2017) and Ecological Impact Assessment (2022).

2.2 Site Description

The redline application site is approximately in extent 0.15ha. The site had been cleared as of January 2025.

The site, at the time of survey, was largely loamy/clayey earth mounds on a north to south downwards sloping gradient. Mounds of earth, rubble, human-made detritus and vegetation were noted. Within the piles of vegetation left onsite, Broom (*Cytisus scoparius*), Bramble (*Rubus fruticosus*) and Ivy (*Hedera helix*) were occasional within the mound. It is likely that the site comprised a high percentage of nutrient-tolerant, hardy scrub species at the time of clearance. A detailed habitat evaluation and vascular plant species descriptions are provided in Section 4.3.

A curtilage of native trees and neglected hedgerows was present along the eastern and southern boundaries. West of the site, a tarmac drive led south to Ben Bank Road; detached and attached housing is present along this semi-rural road. Agricultural grazing fields extend from the eastern boundary of the site for approximately 1.7km before reaching the next village of Dodworth. Land use to the north and south of the site is predominantly woodland and/or Ancient Woodland. The village of Silkstone Common lies west, and a similar pattern of agricultural fields and woodland continues beyond.



Figure 1: Ordnance Survey Map showing site location (Crown Copyright, Bing 2025).



Figure 2: Redline - development site boundary.

2.3 The Proposals

A full planning application is being prepared for the construction of two properties and associated vehicular access, infrastructure and gardens (see Fig.3, overleaf).

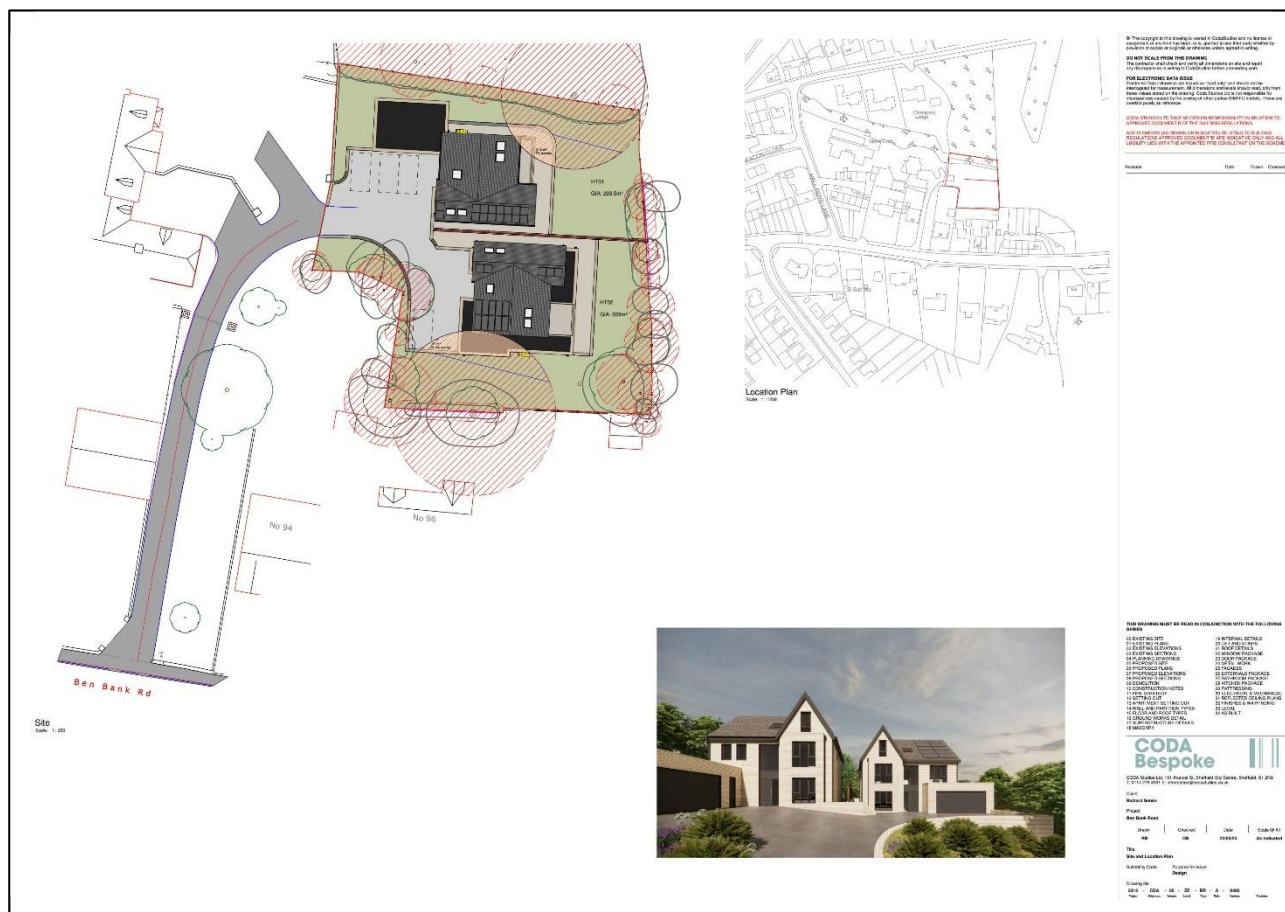


Figure 3: CODA Bespoke, Ben Bank Road (3313_CDA_00_ZZ_DR_A_0400) Received 28/02/2025.

2.4 Planning Status

The site is in South Yorkshire under the development control of Barnsley Metropolitan Borough Council (BMBC).

2.5 Report Validity

The information provided within this PEA report is considered to be valid for a period of 24 months from the date the survey was undertaken.

3 METHODOLOGY

3.1 Desk Study

A desk study was undertaken to collate any existing ecological data for the site and its surroundings. As part of the desk study process, the following sources of record have been considered:

- Natural England Magic website for geographic information on key environmental schemes and designations. www.magic.gov.uk, February 2025 (see Appendix C).
- Sheffield Biological Records Centre's data at OS grid reference SE 2950504601. Received January 2025 (see Appendix D – full data set available on request).
- Land off Ben Bank Road – Phase 1 Desk Study & Coal Mining Risk Assessment (C4752_24_E_7268) received 29th January 2025.

3.2 Field Surveys

3.2.1 Habitat Survey

Habitat surveys were carried out in accordance with the UK Habitat Classification¹ (Professional Edition) at a minimum of Level 4 and at a Minimum Mapping Unit of 25m²/5 linear m. The survey was undertaken outside of the optimum period for Habitat Field Surveys (March – October), and this limitation is described in further detail within Section 3.3 of this report.

Information regarding the assessment is provided in the table below:

Survey date / time	Surveyors present	Temperature (°C)	Humidity (%RH)	Windspeed (Beaufort)	Cloud cover (Okta)
29th January 2025 / 10:00am	Amy Wardle	6	80	1	0

Table 2: Survey Details

This appraisal includes a:

- Description of each habitat including a general list of species and assessment of general management. The relative abundance of each plant species in the total species composition is notated using the **DAFOR** scale: Dominant, Abundant, Frequent, Occasional or Rare².
- Condition assessment for each habitat, carried out following the condition criteria of The Statutory Biodiversity Metric Condition Sheets³.
- Identification of UK BAP Priority Habitats under S41 of NERC Act and Habitats Directive Annex I habitat types.

A UKHabs Plan of the site showing the various identified habitats is provided in Appendix E.

3.2.2 Biodiversity Net Gain – Baseline Assessment

A study of the baseline BNG score was carried out using the Statutory DEFRA Biodiversity Metric providing a summary of the onsite habitat types their relevant Distinctiveness, Condition and Strategic

¹ UKHabs (2023) The UK Habitat Classification User Manual, Version 2.01

² Botanical Society of Britain and Ireland (2011). BSBI Recording the British and Irish flora 2010-2020 Annex 1: Guidance on sampling approaches. https://bsbi.org/wp-content/uploads/dlm_uploads/Sampling_Guidance_-_Annex_1_v4_April_2011.pdf

³ DEFRA (2024). The Statutory Biodiversity Metric– Metric Condition Assessments.

https://assets.publishing.service.gov.uk/media/65c60f00cc433b000ca90b33/Statutory_Biodiversity_Metric_Condition_Assessments_-_Feb24.xlsx

Significance. These are multiplied along with other factors to produce an Ecological Baseline Score, presented in Biodiversity Units (BU). The Baseline Score can then be used by the applicant to inform an appropriate mitigation strategy to reach 10% Biodiversity Net Gain in accordance with the Environment Act, 2021.

3.2.3 Badger Surveys

The site and immediate surroundings (where access was possible), was searched for any evidence of Badger (*Meles meles*) in accordance with Surveying Badgers⁴ as part of the walkover survey. During the walkover the site was searched for evidence of badger including setts, paths and prints, latrines, dung pits, snuffle holes, foraging signs, and hairs caught on wire fencing.

3.2.4 Ground Level Tree Assessment (GLTA)

Trees within the site were inspected from ground level using binoculars and elevated survey by ladder if safe to search for any field signs of bats or potential roost features (PRF's). The survey was undertaken as part of the walkover survey for all accessible trees.

Each tree was searched for features including; hollows, woodpecker holes, occlusions. 'Damage' features including; lightning strikes, hazard beams, subsidence cracks, shearing cracks, transverse snaps and splits, welds, lifting bark, desiccation features and frost cracks. 'Association' bat roosting features including fluting and ivy.

Each tree was then assigned a suitability, as detailed in the table below:

Suitability	Description
None	No PRFs identified and no further action required.
PRF-I	PRF is only suitable for individual bats or very small numbers of bats due to size of lack of suitable surrounding habitats.
PRF-M	PRF is suitable for multiple bats and may therefore be used by a maternity colony.

Table 3: Categorisation of trees with PRFs for bats

3.2.5 Bat Preliminary Roost Assessment of Buildings

A thorough internal and external inspection of the building to look for evidence of bats and assess bat roosting potential was undertaken as part of the walkover survey. Evidence of bats may take the form of droppings, urine stains, feeding remains, live bats, dead bats, grease mark stains, fur and claw marks made by bats regularly roosting in the same location.

During the external survey any roof and walls were inspected from ground level (using binoculars to aid visibility where required) and elevated survey by ladder if safe to search for gaps and voids that would allow bats access to suitable roost sites.

Each building was assigned a roost suitability as defined BCT Good Practice Guidelines, as detailed in the table below:

⁴ Cresswell, Harris & Jefferies (1989) *Surveying Badgers*, The Mammal Society.

Potential Suitability	Description of Roosting Habitats
High suitability	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.
Moderate suitability	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
Low suitability	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).
Negligible suitability	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion
None	No habitat features on site likely to be used by any roosting bats at any time of year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels

Table 4: Classification of building suitability for bats

3.2.6 Day Bat Walking (DBW)

Habitat features on site are assessed for their suitability to support foraging and commuting bat activity. This assessment is independent from the suitability of the site to support roosting bats and provides information on the likeliness of bat foraging activity within the local environment, and the dependence of individuals on these features for commuting to alternative roosting sites, foraging and migration.

The site was assigned a habitat suitability as defined BCT Good Practice Guidelines, as detailed in the table below:

Potential Suitability	Description of Habitat
High suitability	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge High-quality habitat that is well connected to the wider landscape that is likely to be used foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site that is close to and connected to known roosts.
Moderate suitability	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as treelines and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
Low suitability	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Negligible suitability	No obvious habitat features on site likely to be used as flight-paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour

None	No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provoke continuous lines of shade/protection for flight-lines, or generate /shelter insect populations)
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Table 5: Suitability Assessment Criteria for foraging and commuting bats

3.2.7 Birds

An assessment of the suitability of the site to support birds was undertaken. Relevant considerations include (but are not limited to) the vegetation and/or habitats onsite and their composition; the location of the site in its wider context; and, any association and/or connectivity with designated sites (for example, Sites of Special Scientific Importance).

Due to the nature of both preliminary ecological appraisals (time of day, length of survey) and bird species/population evidence (for example: birds are generally active and mobile, nests are generally inconspicuous and below 1m above ground), assessment of suitability is frequently indicative at the PEA stage. Where habitats are suitable to support, for example, breeding individuals or populations of protected and/or notable birds, further bird surveys may be required to understand the impact of a proposed scheme and to mitigate accordingly.

Survey guidance includes, but is not limited to, *Bird Survey Guidelines*, and species-specific data produced by the British Trust for Ornithology (BTO), Royal Society for the Protection of Birds (RSPB) and Joint Nature Conservation Committee (JNCC).

3.2.8 Pond Scoping Assessment

A pond scoping exercise was undertaken to identify any ponds or watercourses located within 500m of the site using ordnance survey maps and aerial photography. The zone of influence may be amended based upon the scale of impact at the discretion of the ecologist.

3.2.9 Great Crested Newt Habitat Suitability Index Assessment

Habitat Suitability Index (HSI) assessment was carried out on accessible ponds. The survey was undertaken on as part of the walkover survey. The survey was undertaken in accordance with the methodology described in ARG UK Advice Note 5⁵.

The Habitat Suitability Index (HSI) was developed by Oldham et al (2000) in order to provide an index allowing a direct comparison to be made between different water bodies. This index assesses ponds against different criteria, each of which have a bearing on the likelihood of great crested newts (*Triturus cristatus*) being present in the pond under consideration.

The criterion are Geographic Location; Pond Area; Permanence; Water Quality; Perimeter Shading; Wildfowl presence; Fish Presence; Pond Count (within a 1.0 km radius); Terrestrial Habitat (within 250 m); and Macrophyte Cover.

The HSI score is used to demonstrate whether a pond is suitable for breeding GCN and therefore, if it requires detailed survey. Generally, ponds with a high HSI score are more likely to support GCN than those with lower scores. Pond suitability is categorised using the following scale as shown in the table below:

⁵ ARG UK (2010), ARG UK Advice Note 5: Great Crested Newt Habitat Suitability Index, Amphibian and Reptile Groups of the United Kingdom.

HSI Score	Pond Suitability
<0.5	Poor
0.5-0.59	Below Average
0.6-0.69	Average
0.7-0.79	Good
>0.8	Excellent

Table 6: HSI Suitability

Dr L Brady⁶ provides further advice on interpreting HSI suitability scores:

- GCN tend to avoid ponds with low HSI scores. Ponds with relatively low HSI scores (poor to below average) typically only support GCN when they are located close to another occupied pond. Low scoring ponds are therefore only likely to support GCN in areas of high pond density.
- GCN do not necessarily avoid ponds with average suitability, but nor do they actively seek them out. The presence of GCN in ponds with an 'average' HSI score appears to be simply down to chance.
- GCN appear to prefer ponds with high HSI scores. Ponds with relatively high HSI scores (good to excellent) frequently support GCN. Survey work undertaken in SE England indicates that great crested newt are present in more than 90% of ponds with an 'excellent' HSI score.

Therefore, any ponds that have an 'average' habitat suitability score or higher, or any low scoring ponds in areas of high pond density are likely to require further surveys to determine whether GCN are present, and if so, to establish population size.

3.2.10 Water Vole

A survey of any watercourses to look for evidence of water vole (*Arvicola amphibius*) was carried out as part of the walkover survey. This included a search up and downstream beyond the site boundaries where access would allow in accordance with The Water Vole Mitigation Handbook.⁷

Evidence of water vole includes burrows, lawns, runs, feeding stations, latrines and prints.

3.2.11 Otter

A survey of any watercourses to look for evidence of otter (*Lutra lutra*) was carried out as part of the walkover survey. This included a search up and downstream beyond the site boundaries where access would allow in accordance with Monitoring the Otter and Conserving Natura 2000 Rivers.⁸

Evidence of otter includes holts, couches, spraints and prints.

3.2.12 Reptiles

An assessment of the onsite habitats was undertaken in order to evaluate the suitability of the habitats to support either episodically occurring or resident populations of reptiles. Habitats such as grasslands, heathland, dunes, brownfields, golf courses are all considered suitable, as are sites featuring a mosaic of habitats with south facing slopes or decreased levels of disturbance. Reptiles can be highly dispersive, so an assessment is also made of the suitability of the connective habitat to additional optimal habitats.

⁶ Brady, L Habitat Suitability Index; Interpreting HSI Scores, Calluma Ecological Services. Available: <https://www.calluma.co.uk/services/15-information/40-habitat-suitability-index>

⁷ Matthews and Chanin (2011) *The Water Vole Mitigation Handbook*. 3rd Edition. The Mammal Society.

⁸ Chanin (2003) *Monitoring the Otter*. Conserving Natura 2000 Rivers. Monitoring Series No 10. English Nature.

3.2.13 Invasive Species

As part of the walkover survey the site and immediate surroundings were searched for any evidence of invasive non-native plant species (INNS) listed on Schedule 9 of the Wildlife and Countryside Act 1981.

The species which are often encountered are Japanese Knotweed (*Fallopia japonica*), Himalayan balsam (*Impatiens glandulifera*), Giant Hogweed (*Heracleum mantegazzianum*), *Cotoneaster* sp., *Rhododendron* sp., and Variegated Yellow Archangel (*Lamium galeobdolon* subsp. *argenteum*).

3.3 Limitations

The site survey was undertaken outside of the main botanical season; however, as well as this, extensive site clearance had taken place before the site walkover was undertaken. While the UKHabs Survey was carried out following a precautionary principle to reduce this limitation in assessment of onsite habitats, the presence/absence of species such as those listed in Natural Environment and Rural Communities (NERC) Section 41 (e.g., vascular plants and birds of principle importance) present onsite prior to this clearance cannot be recorded and therefore evaluated. Ecological judgement has been applied and a precautionary approach has been taken but cannot account for all variables.

4 BASELINE ECOLOGICAL CONDITION

4.1 Designations

Pye Flatts Meadows (SSSI) is approximately 2.1km west of the site redline boundary – 2.26ha predominantly comprising neutral hay meadow grassland on soils similar to those onsite (loamy brown earth in the bands of the Lower Coal Measures on a hilly location). The site lies within the Impact Risk Zone of the Dark Peak SSSI, however: the large (>268ha) main moorland area of the Peak District region.

There are several Regionally Important Geological Sites (RIGs), Local Wildlife Sites (LWSs) and Priority Habitat areas within the 2km search area (Appendix D). There is relatively good connectivity between these sites, which largely comprise woodland habitat. Table 7 provides an overview of the LWSs present in the locality; more information can be provided upon request.

Name	Distance	Description
North Wood	1.7km NW	13.13ha woodland site comprising Ancient Woodland Indicator species for South Yorkshire. Important plant species include Broadleaved Helleborine (<i>Epipactis helleborine</i>) and Greater Stitchwort (<i>Stellaria holostea</i>).
Royd-Vicar-Lindley and Coats Great Wood	1km W	48.15ha complex of woodland sites based around the Storrs Dike and its tributaries. Notable plant species include Remote Sedge (<i>Carex remota</i>), Dog's Mercury (<i>Mercurialis perennis</i>) and Yellow Archangel (<i>Lamium galeobdolon</i>).
Hugset Wood	1.8km NNE	53.7ha Replanted Ancient Woodland site. UKBAP bird species include Willow Tit (<i>Poecile montanus</i>), Dunnock (<i>Prunella modularis</i>), Bullfinch (<i>Pyrrhula pyrrhula</i>) and Song Thrush (<i>Turdus philomelos</i>). Largest colony of White-letter Hairstreak (<i>Satyrus w-album</i>) in Barnsley present.
Silkstone Fall Wood	350m N	62.36ha Replanted Ancient Woodland and plantation species. Small watercourses and a pond are also present. Range of woodland flora; UKBAP breeding birds include the species above as well as Lesser Spotted Woodpecker (<i>Dendrocopos minor</i>) and UKBAP Brown Hare (<i>Lepus europaeus</i>).
Falthwaite and Lowe Wood	1.8km SE	74.23ha diverse site – numerous habitat types are present. Important plant species listed include Bluebell (<i>Hyacinthoides non-scripta</i>); Great Crested Newt (<i>Triturus cristatus</i>) are present, as well as numerous nationally notable invertebrate species; UKBAP breeding birds include Bullfinch, Song Thrush and Dunnock.

Table 7: Summary of Local Wildlife Sites within 2km of the site boundary.

Two Ancient Woodland Priority areas are 230m north and 85m south of the redline boundary, respectively. The northern Ancient Woodland extends into a Priority Deciduous Woodland area, bisected by small parcel of urban infrastructure but otherwise forming an almost continuous canopy south to the Priority Deciduous Woodland area that shares a boundary with the site (immediately north of the site, see Figure 4 and 5).

The proposed development does not comprise infrastructure (specifically airports, helipads and other aviation proposals), minerals, oils and gas; air pollution (associated with livestock and poultry units); combustion or discharge that would necessitate a Natural England enquiry. Natural England do not need to be consulted regarding the potential risks/impacts from the proposals to SSSIs in the area.



Figure 4: Priority Habitat Deciduous Woodland north of the redline boundary indicated by the wooden fence.



Figure 5: View within the woodland parcel north of the site. Native flora can be seen in the understorey and native tree saplings are growing. There were numerous bird and bat boxes attached to the trees.

4.2 Habitats and Flora

Geological Context

Pertinent to understanding flora and faunal uses of the site prior to site clearance, the client provided the 'Land off Ben Bank Road – Phase 1 Desk Study & Coal Mining Report' report on 29th January 2025. This revealed that the soils of the site do comprise colliery spoil (1929 – 1930) which, in certain conditions, could support a diverse range of floral species and invertebrates; however, repeated years of destruction and disturbance within a short time period likely reduced the likelihood of supporting a diverse floral sword. This conclusion is supported by the dominance of scrub species that thrive in high-nutrient soils evident in piles onsite (see Section 4.3).

4.2.1 Flora Records

Sheffield Biological Records Centre (SBRC) have provided over 4,000 records of vascular plants (not including Invasive Non-native Species). Of these, several representatives of notable communities are present such as Dog's Mercury (*Mercurialis perennis*), an indicator of Ancient Woodland in South Yorkshire, and English Bluebell (*Hyacinthoides non-scripta*). No Section 41 vascular plants were recorded in the dataset.

All higher plant species present at the time of survey were recorded during the site walkover and are provided within the description of each habitat.

Three bulbs of Bluebell sp. (a *Hyacinthoides* sp.) were found within the mounds of earth present onsite.

4.2.2 Invasive Non-Native Species

SBRC provided 8 records of Invasive Non-Native Species across three species: Himalayan Balsam (*Impatiens glandulifera*), Giant Hogweed (*Heracleum mantegazzianum*) and Japanese Knotweed (*Fallopia japonica*). The most recent record relates to Giant Hogweed, in 2021, approximately 1km SE of the redline boundary. Other observations were recorded in woodlands approximately 1km north of the site, such as at Silkstone Fall Wood LWS.

No invasive species were noted during the site walk over.

4.3 Field Survey

The table below summarises the habitats present within and immediately adjacent to the site, and their relevant inclusion as a National Habitat of Principal Importance and / or within the Local Biodiversity Action Plan⁹.

Primary Habitat Code	Secondary Code (Where required)	UKHab	NHPI	LBAP (Barnsley)
g4		Modified Grassland		✓
h2a	518 (neglected)	Native Hedgerows	✓	✓
h3h		Mixed Scrub		✓
-	522 (native);	Individual Trees – Rural	✓	

Table 8: UKHabs Habitat Types and their relevant inclusion in NHPI or LBAP

4.3.1 g4 – Modified Grassland

The grassland comprised few diagnostic species, but was lacking in evidence of species that are characteristic of base-rich or acid-rich soils, respectively. The area comprised species-poor vegetation dominated by grasses including Rye-grass (*Lolium* spp.) Yorkshire Fog (*Holcus lanatus*), Cock's-foot (*Dactylis glomerata*), and Bent (*Agrostis* spp.). Budleja (*Budleja* sp.), Cleaver (*Galium aparine*) and Bramble (*Rubus fruticosus*) were occasional within the sward.

As per the Barnsley LBAP, Amenity Grasslands and Verges “promote biodiversity and are included in [the LBAP list] for that reason”. The grassland is of **Good** condition.

Grassland Condition Assessment Criteria		Criterion passed (Yes or No)
A	There are 6-8 vascular plant species per m ² present, including at least 2 forbs.	Yes
B	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 vertebrates and invertebrates to live and breed.	Yes
C	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble <i>Rubus fruticosus</i> agg. may be present).	Yes
D	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
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens) ² .	No
F	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	Yes
G	There is an absence of invasive non-native plant species ³ (as listed on Schedule 9 of WCA ⁴).	Yes

Table 9: Grassland Condition Assessment. Assumed passes due to winter survey conditions following Condition Assessment guidance/precautionary approach. Criterion E could be assessed accurately at the time of survey.

⁹ Barnsley Biodiversity Action Plan and Local Priority Habitats (LBAP); accessed at: <http://www.barnsleybiodiversity.org.uk>.



Figure 6: g4 in winter condition

4.3.2 h2a – Native Hedgerow

One overgrown, unmanaged hedgerow runs north to south along the eastern boundary of the site (Figure 7). H1 encompasses H16, G14, and G13 as per the Tree Survey (Weddles, 2025). The hedgerow species composition is predominantly Hawthorn (*Crataegus monogyna*), followed by Elder (*Sambucus nigra*), and Holly (*Ilex aquifolium*). The understorey comprised Nettle (*Urtica dioica*), Ivy (*Hedera helix*) (also present in the hedgerow) and bare earth at the time of survey. The hedgerow is of **Poor** condition.

Hedgerow Description				UKBAP Priority Habitat
ID	Length	Management	Species Composition	>20m Long and <5m wide. >80% of at least 1 UK native woody species
H1	22m	Unmanaged and grown out	Elder, Hawthorn, occasional Ivy and Bramble	Yes

Table 10: Hedgerow Descriptions

Hedgerow Condition Assessment			H1
A1	Height	>1.5m average along length	Pass
A2	Width	>1.5m average along length	Fail
B1	Gap – Hedge base	Gap between ground and base of canopy <0.5m for >90% length	Fail
B2	Gap - Hedge Canopy Continuity	Gaps make up <10% of total length and no canopy gaps >5m	Pass
C1	Undisturbed Ground and perennial vegetation	>1m width of undisturbed ground with perennial herbaceous vegetation for >90% of length and is present on at least one side of hedge at least	Fail
C2	Undesirable perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of area of undisturbed ground	Pass
D1	Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA3) and recently introduced species.	Pass

D2	Current Damage	>90% of hedgerow of undisturbed ground is free of damage caused by human activities	Fail
Condition Score			Poor

Table 11: Hedgerow Condition Assessment table



Figure 7: Overgrown native hedgerow, h2a

4.3.3 h3h – Mixed scrub

The site has been degraded (January 2025).

The MAGIC Map (Figure 6 and Appendix C), dataset presents the northernmost 0.0355ha as Priority Habitat Deciduous Woodland. Aerial imagery allows the prior onsite habitats to be understood across time, however; these images illustrate that this woodland was cleared and lost around a decade ago, though some ground flora remains present in the soil bank (Section 4.2.1).

In 2002, the extant Priority Habitat Deciduous Woodland parcel north of the site extended into the site area (Figure 9). This was cleared c.2015 (Figure 8). Woody and soft-stemmed vegetation then appears to have succeeded in the proceeding years. This again was cleared and the surfaced with an unknown composite in 2019 (Figure 9). The southern-most areas at this time remained vegetated. Succession continued and the site appears somewhat undisturbed until the present day. Boundary features along the south and eastern redline have persisted throughout the period from 2002.

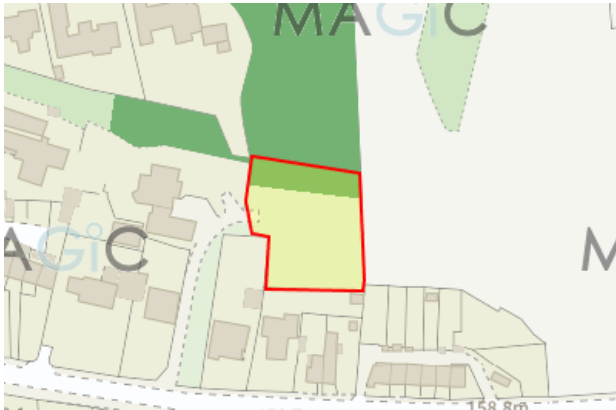


Figure 8: MAGIC Maps 2025 (DEFRA)



Figure 9: Satellite Imagery 2002 (Google Earth)



Figure 10: Satellite Imagery 2015 (Google Earth)



Figure 11: Satellite Imagery 2019 (Google Earth)



Figure 12: Satellite Imagery May 2023 – most recent (Google Earth)



Figure 13: The cleared site, January 2025

Scrub species included Broom (*Cytisus scoparius*), Bramble (*Rubus fruticosus*), Hawthorn saplings, Ivy and grasses present in g4. Bryophytes were also present, including *Brachythecium rutabulum*. Satellite imagery and extant species also indicate that the scrub likely contained a well-developed edge. The community species composition and form cannot be determined from extant evidence alone, however, and therefore a precautionary approach to assessment must be taken as per guidance (Table 12).

Satellite imagery evidence, however, can inform assessment of age class, and therefore criterion B has been assessed (Fail – lacking mature, ancient and veteran species due to the recent history of clearance). The scrub was assessed as of **Moderate** condition.



Figure 14: Mounds and extant vegetation

Scrub Condition Assessment	Pass / Fail
A. The scrub is a good representation of the habitat type it has been identified as, based on its UKHab description (where in its natural range). The appearance and composition of the vegetation closely matches the characteristics of the specific scrub type.	Pass
B. Seedlings, saplings, young shrubs and mature (or ancient or veteran) shrubs are all present.	Fail
C. There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA4) and species indicative of sub-optimal condition make up less than 5% of ground cover.	Pass
D. The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	Pass
E. There are clearings, glades or rides present within the scrub, providing sheltered edges.	Pass
Condition Score	Moderate

Table 12: Scrub Condition Assessment

4.3.4 Individual Trees (Rural)

Twelve trees were recorded extant within the application site boundary which were assessed individually. Species within the site assessment area included Silver Birch (*Betula pendula*), Oak (*Quercus robur*), Hawthorn (*Crataegus monogyna*), Elm (*Ulmus* sp.), and Holly (*Ilex aquifolium*).

In terms of BNG classifications, 10 trees were 'small', one was 'medium' (T6) and the final tree 'large' (T8). The trees displayed varying age but all were of **Good** condition.

Individual Tree Condition Assessment
A. The tree is a native species (or at least 70% within the block are native species).
B. 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).
C. The tree is mature (or more than 50% within the block are mature).
D. There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.
E. Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.
F. More than 20% of the tree canopy area is oversailing vegetation beneath.

Table 13: Individual Tree Condition Assessment

Species	Silver Birch	Oak	Silver Birch	Silver Birch	Silver Birch	Oak	Elm	Silver Birch	Elm	Holly	Hawthorn
Size	Small	Small	Small	Small	Medium	Large	Small	Small	Small	Small	Small
Condition	T1	T2	T3	T4	T6	T8	T10	T11	T12	T15	T18
A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
B	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
C	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
D	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
E	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
F	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Condition Score	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good

Table 14: Individual Tree (Rural) Schedule



Figure 15: Silver Birches (T3 – T6) and Elm (T12).

4.4 Biodiversity Net Gain – Baseline Assessment

The habitats recorded within the application site were calculated to provide a total of **2.70 Habitat Units**.

Ref	Existing area habitats				Distinctiveness		Condition		Strategic significance			Required Action to Meet Trading Rules	Ecological baseline
	Broad Habitat	Habitat Type	Irreplaceable habitat	Area (hectares)	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic significance multiplier		Total habitat units
1	Individual trees	Rural tree	No	0.0936	Medium	4	Good	3	Formally identified in local strategy	High strategic significance	1.15	Same broad habitat or a higher distinctiveness habitat required (≥)	1.29
2	Heathland and shrub	Mixed scrub	No	0.1481	Medium	4	Moderate	2	Formally identified in local strategy	High strategic significance	1.15	Same broad habitat or a higher distinctiveness habitat required (≥)	1.36
3	Grassland	Modified grassland	No	0.0062	Low	2	Good	3	Formally identified in local strategy	High strategic significance	1.15	Same distinctiveness or better habitat required ≥	0.04

Figure 16: Habitat Baseline Scores

The hedgerows recorded within the application site were calculated to provide a total of **0.05 Hedgerow Units**.

Ref	Existing hedgerow habitats			Distinctiveness		Condition		Strategic significance			Required Action to Meet Trading Rules	Ecological baseline
	Hedge number	Habitat type	Length (km)	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic significance multiplier		Total hedgerow units
1	H16	Native hedgerow	0.02103	Low	2	Poor	1	Formally identified in local strategy	High strategic significance	1.15	Same distinctiveness band or better	0.05

Figure 17: Hedgerows Baseline Scores.

4.5 Fauna

Species legislation is provided in Appendix B.

4.5.1 Amphibians

The MAGIC Maps search returned no records relating to Great Crested Newts (*Triturus cristatus*) (GCN) EPS Licences within the search area.

SBRC provided four records of amphibians within the last 25 years within the 2km search area, associated with land approximately 1km south of the site. These related to Common Frog, (*Rana temporaria*); grid references associated with the record are approximately 1km south of the site, beyond the suburban areas of Silkstone Common.

There are no ponds within 500m of the site, as indicated by MAGIC map and Ordnance Survey mapping (Bing, 2025). There are woodland streams present in Hill Top Wood approximately 360m northwest of the site. Due to the presence of various barriers to dispersal between this waterbody and the site, however, the likelihood of amphibians' presence onsite is negligible and this receptor is not considered further within the scope of this report.

4.5.2 Badger

SBRC provided 2 records for Badger (*Meles meles*), observed in 2021, within the 2km search area: they were mapped approximately 600m northwest and 1.8km southeast of the site.

No evidence of Badger was observed onsite or within proximity of the site; the adjacent woodland was searched, as well as accessible field boundaries (for evidence such as latrines, mammal paths and snuffle holes). Badger could occur onsite – commuting through, or foraging on – and should be considered within the scope of this report.

4.5.3 Bats

The MAGIC Maps search demonstrated that a Brown Long-Eared Bat (*Plecotus auritus*), Common Pipistrelle (*Pipistrellus pipistrellus*) and Natterer's Bat (*Myotis nattereri*) breeding site and resting place was present c.2016 approximately 780m northwest of the redline boundary. There is a series of connected deciduous woodlands between the site of this breeding/resting place (in Tanyard Wood) and the site.

SBRC returned 109 records of bats within 2km of the site; 21 of these (minimum) related to roosts – including both resting places and large maternity roosts. Records were across a minimum of 7 species: Brown Long-Eared Bat, Daubenton's Bat (*Myotis daubentonii*), Natterer's Bat (*Myotis nattereri*), Leisler's Bat (*Nyctalus leisleri*), Noctule Bat (*Nyctalus noctula*), Common Pipistrelle, and Soprano Pipistrelle (*Pipistrellus pygmaeus*). Records related also more generally to Chiroptera, *Myotis* sp. and *Pipistrellus* sp. (i.e., observation could not be accurately confirmed to species level). The most recent notable record related to a Brown Long-Eared maternity roost approximately 1km from the site redline boundary in 2021.

Ground Level Tree Assessment (GLTA)

No suitable potential roosting features were identified that could support roosting bats onsite. This receptor is not considered further within the scope of this report.



Figure 18: Wider geographical context: grassland with large, ecologically significant trees immediately east of the redline boundary.

Day Bat Walk

The majority of the site provides no foraging or commuting value due to the degradation that has taken place. While bare earth can and does support a range of notable and common invertebrates, the bare earth onsite has not been extant during periods when invertebrates are active (i.e. the land was cleared in winter). When the site comprised scrub, there was likely a good density of invertebrate forage available. Presently, only boundary features could support invertebrates that in turn could provide foraging value for bats.

There is good connectivity from the site to a range of commuting and foraging features, however; such as the large, mature trees in the adjacent field (east of the redline boundary, Figure 18) and deciduous woodland to the north and south. The woodland to the north does feature at least one bat box (Figure 19).

In conclusion, the site at present was assessed to provide '**Low**' value foraging and commuting features; the eastern hedgerow is the most valuable feature and in summer likely connects habitats in the wider landscape.



Figure 19: Bat box within woodland, adjacent to the north.

4.5.4 Birds

SBRC returned over 1,900 records relating to birds across approximately 103 species. Some species would not be found on site, however, such as Moorhen (*Gallinula chloropus*), due to a lack of aquatic features. Notable species which could be associated with onsite extant habitats (trees and hedgerows) includes – for example – Song Thrush (*Turdus philomelos*) (Birds of Conservation Concern 5 Amber-Listed, NERC S.41) and Yellowhammer (*Emberiza citrinella*) in the breeding season.

There are nesting opportunities for small passerines and arable birds within the extant eastern hedgerow and woodland fringe. Due to site degradation, however, the potential of the site to support breeding birds and the scale of further impact is minimal and does not require further survey effort.

Birds noted using onsite boundary features during the preliminary survey included one male Blackbird (*Turdus merula*), a small flock of Goldfinch (*Carduelis carduelis*), Chaffinch (*Fringilla coelebs*), Blue Tit (*Cyanistes caeruleus*), Great Tit (*Parus major*) and Robin (*Erithacus rubecula*). All birds were observed calling and travelling between the northern woodland, adjacent gardens, and all boundary trees and hedgerows. None of the birds observed during the walkover were of high densities or are a national priority species.

Protection of local populations of birds using onsite and adjacent habitats should be considered within the scope of this report.



Figure 20: An example of one of the bird boxes and bird feeders present in the woodland north of the site.

4.5.5 Invertebrates

SBRC provided over 3,000 records for invertebrates within the search area. Approximately 100 observations related to nationally notable species of Lepidoptera – across 24 species. Section 41 species such as White-letter Hairstreak butterfly (*Satyrrium w-album*) could inhabit the site: White-letter Hairstreak rely on Elm species (T10, T12) to breed. They are Vulnerable on the GB Red List (2022) and inhabit mixed scrub on the edges of woodland and sheltered hedgerows. There is a likelihood White-letter Hairstreak, therefore, are onsite. Other species listed that could occur onsite or rely on foodplants present onsite include Ghost Moth (*Hepialus humuli*) – also a national priority species.

Due to the time of year, no invertebrates were noted at the time of the walkover survey.

As previously noted, however, due to the degradation that has taken place onsite, large populations or diverse assemblages of invertebrates onsite within scrub habitats is largely unknown and lost.

This receptor should be considered further within the scope of this report.

4.5.6 Other Terrestrial Mammals

SBRC provided 150 records across for terrestrial mammals (not including those detailed in Section 4.5.2 or 4.5.3) within the 2km search area. Of these, 35 records are from the last 25 years and relate to mammal species that could be associated with extant habitats – Mole (*Talpa europaea*), Red Fox (*Vulpes vulpes*), Wood Mouse (*Apodemus sylvaticus*), Roe Deer (*Capreolus capreolus*), Hedgehog (*Erinaceus europaeus*), Brown Hare (*Lepus europaeus*), Field Vole (*Microtus agrestis*), Stoat (*Mustela erminea*), Weasel (*Mustela nivalis*) and Rabbit (*Oryctolagus cuniculus*).

During the site survey, a rabbit warren was observed within the southeastern parcel. Droppings outside the entrance indicated some recent use. This warren may have been more extensive prior to site works; it is not possible to conclude.



Figure 21: Rabbit warren onsite. Droppings can be seen at the entrance.

Moreover, there were several refugia/hibernacula present around the site, as well as the extant hedgerows. These habitats could support vulnerable notable mammals such as Hedgehog (international priority species, IUCN Red List).



Figure 22: An example of hibernacula within timbers left onsite



Figure 23: Hedgehog habitat on the northern boundary under a boundary Silver Birch (associated with the woodland)

All wild mammals are protected from harm by the Wild Mammals (Protection) Act 1996. As such, they should be considered further within the scope of this report.

4.5.7 Riparian Mammals

SBRC returned no records of riparian mammals within 2km of the redline boundary.

There are no waterbodies onsite and the site does not lie within a riparian zone, therefore, this receptor is not considered further within the scope of this report.

4.5.8 Reptiles

NEYEDC provided two national priority reptile records within the 2km search area since 2000: Grass Snake (*Natrix helvetica*) and Adder (*Vipera berus*) in 2017 and 2009 respectively. Both observations were recorded in land associated with grid references in or at Silkstone Fall Wood LWS, approximately 700m NE of the site.

Several refugia are present onsite and the south-facing slope would be conducive to basking for reptiles – if present. Due to barriers to dispersal including a trainline followed by suburban infrastructure, the likelihood of reptiles onsite is negligible. Reptiles should be considered in the scope of this report on a precautionary basis.



Figure 24: Examples of refugia in the northern parcel.

5 ECOLOGICAL CONSTRAINTS AND OPPORTUNITIES

5.1 Ecological Constraints

Avoidance, mitigation and/or compensation measures are required for the following constraints:

5.1.1 Badger

While no Badger setts were identified on site, Badgers from the wider area may occasionally commute through and/or forage onsite. The following precautionary approach should, therefore, be implemented:

- Ensure excavations or trenches left overnight are covered or have an escape route such as a shallow gradient at one or both ends.
- Ensure excavations or trenches are inspected each morning and evening to ensure no badgers have become trapped.
- Open pipework with a diameter of more than 120mm should be properly covered or capped at the end of the working day to prevent badgers from entering and becoming trapped.
- During the work, the storage of any chemicals should be contained in such a way that they cannot be accessed or knocked over by any roaming badgers.
- The storage of topsoil or other “soft” building materials within the site should be given careful consideration. Badgers will readily adopt such mounds and dig setts which would then be afforded the same protection as established setts. To avoid the adoption of such mounds, they should be subject to daily inspections before work commences or alternative measures put in place, such as being fenced off (for higher-risk areas).
- Litter, tools and potentially dangerous materials on site should be cleared at the end of the working day. Care should be taken that there are no sharp metal objects or pointed protrusions on the ground which could seriously injure a badger due to their poor eyesight.

5.1.2 Bats

Day Bat Walking

The application site was considered to support ‘Low’ suitability to support foraging and commuting bats due to the onsite mature vegetation and surrounding environmental context. The development will see the retention of trees and hedgerows, therefore retaining the long-term suitability for the site to support foraging and commuting bats.

Artificial lighting during the construction phase of the development and in-use may result in short-term impacts to foraging and commuting individuals.

A sensitive low-level lighting scheme will be prepared by a lighting engineer to ensure no mature vegetation is impacted by the development. The lighting strategy should follow best practice as dictated by the Bat Conservation Trust¹⁰:

- Consider employing a competent lighting designer who will apply the principals of providing the right light, in the right place, at the right time and controlled by the right system.
- Minimise the spread of light to at, or near horizontal and ensure that only the task area is lit. Flat cut-off lanterns or accessories should be used to shield or direct light to where it is required.

¹⁰ Buglife (2011) A review of the impact of artificial light on invertebrates. Buglife.
Royal Commission on Environmental Pollution (2009) Artificial light in the environment. London, HMSO
CPRE (2014) Shedding Light: A survey of local authority approaches to lighting in England.

- Consider the height of lighting columns. It should be noted that a lower mounting height is not always better. A lower mounting height can create more light spill or require more columns.
- Column height should be carefully considered to balance task and mitigation measures.
- Use temporary close-boarded fencing to shield sensitive areas from lighting.
- Limit the times that lights are on to provide some dark periods. The task being lit often varies, for example roads are less used after 23.00hrs and car parks are empty. A lighting designer can vary the lighting levels as the use of the area changes reducing lighting levels or perhaps even switching installations off after certain times. This use of adaptive lighting can tailor the installation to suit human health and safety as well as wildlife needs.

In addition, apply technical specifications:

- Use narrow spectrum light sources to lower the range of species affected by lighting.
- Use light sources that emit minimal ultra-violet light
- Lights should peak higher than 550 nm
- Avoid white and blue wavelengths of the light spectrum to reduce insect attraction and where white light sources are required in order to manage the blue short wavelength content they should be of a warm / neutral colour temperature <4,200 kelvin.

5.1.3 Breeding Birds

The trees and hedgerows onsite, and the woodland immediately adjacent to the site, provides nesting opportunities for birds that could be directly injured or disturbed during the breeding season via nest abandonment. Due to the nature of the proposals and degradation activities that have already reduced the value of the site, further survey is not required to understand the scale of impact.

Onsite Reasonable Avoidance Methods (RAMs) should be followed by all onsite staff during the construction phase of the development and enclosed within a CEMP. The RAMs will include, but not limited to, the following safe working guidance, in order for the works to proceed in a legal and ecologically sensitive manner:

- Groundworks and vegetation removal should only be undertaken outside of the recognised breeding birds' season, which is typically late February – September inclusive for bird species likely to be resident onsite.
- If this is unachievable, Breeding Birds Checks should be carried out by a suitably qualified ecologist. The timing of these checks will be dependent upon the selected works commencement date; however, this would be at least two fair weather checks (commencing within half an hour either side of sunrise) within a month of works proceeding, *ideally* within the pre-breeding period (late winter/early Spring). The pre-breeding period provides the best opportunity to observe conspicuous breeding behaviours and to determine which features may support a potential nest in the weeks following. Further check(s) may be required closer to the onset of works at the discretion of the suitably qualified ecologist/ornithologist.
- If nesting birds are recorded within onsite habitats, the area and surrounding radius of the nest (varies per species, in line with NatureScot Guidelines) will be protected until the birds have fledged.
- If it is not possible to fully observe or inspect the groundworks and vegetation to be cleared, the aforementioned suitably qualified ecologist/ornithologist will be required to supervise the clearance.

Foraging and nesting opportunities should be designed into the development proposals through habitat creation and protected via appropriate management principles. These opportunities should be

proportionate and site-specific, with local polity and biodiversity aims in mind. See Section 5.3, Enhancements.

5.1.4 Trees

The site shares a boundary with a Priority Habitat Deciduous Woodland to the north. While onsite habitats have already been destroyed, negative impacts during the construction phase and in-use should be avoided. Mature trees of higher ecological value in particular (T10 and T12, Elms) should be retained as part of the development.

Trees onsite and adjacent, therefore, should be protected in line with BS5837:2012 '*Trees in relation to Design, Construction and Demolition -recommendations*'. A Tree Constraints Plan should be provided.

5.1.5 Invertebrates

There is a likelihood of nationally notable invertebrates are dependent upon habitats onsite, such as the White-letter Hairstreak which requires Elm trees to complete its breeding cycle. Elm should therefore be protected in the long term (see Section 5.1.4). Light pollution during construction and in-use should be avoided to protect notable moth species (as per BCT guidelines, Section 5.1.2).

Insecticides and herbicides should not be used onsite – during construction and in-use.

5.1.6 Reptiles

It cannot be discounted that reptile individuals may intermittently enter the site. To minimise the risk of killing or injury to reptiles a precautionary site clearance method will be implemented.

- Site clearance should be undertaken in a phased manner where grassland habitats are strimmed to a height of 15cm from the centre to the peripheries to allow individuals to disperse naturally. Grassland and vegetation may then be removed from the application with any arisings removed as soon as possible.
- Any suitable habitat such as brash, materials or log piles will be carefully searched by hand. Any individuals found during the search will be relocated to an area of retained habitat (northern woodland).
- Trenches or excavations left uncovered overnight will have a suitable means of escape (such as wooden plank).

5.1.7 Other Terrestrial Mammals

To minimise the risk of killing or injury to mammals including Hedgehog, a precautionary site clearance method will be implemented.

- Any suitable habitat such as log piles will be carefully searched by hand. Any small mammals found during the search will be relocated to an area of retained habitat (adjacent northern woodland).
- Trenches or excavations left uncovered overnight will have a suitable means of escape (such as wooden plank).
- Opportunities for hedgehogs should be included in the development design, including holes at least 13cm in size retained in the boundary walls or fencing allowing Hedgehogs (and other terrestrial mammals) continued passage around the site and suitable planting to provide foraging and shelter.

5.1.8 Biodiversity Net Gain

The application site baseline was assessed to provide **2.70 Habitat Units** and **0.05 Hedgerow Units**.

The development proposals have – and will – see widescale site clearance to allow for the development of the properties and their associated land, and has the potential to result in a biodiversity loss, or less than a 10% gain.

As such, a Biodiversity Net Gain Assessment should be prepared to support the planning application.

5.2 Summary of Recommendations

No further survey work is considered necessary to establish the ecological baseline of the site. The below information will be required, either to support the planning application or form part of a planning condition.

Ecological Receptor / Constraint	Timescales
Biodiversity Net Gain Biodiversity Net Gain (BNG) Summary Report should be submitted to support the planning application	Submitted prior to planning approval.
Breeding Birds Pre-commencement check and Reasonable Avoidance Methods (RAMs) to be undertaken. Enclosed within CEMP. Mitigation and enhancements to be secured within LEMP.	Prior to and during construction Secured through appropriately worded condition of planning.
Badgers Pre-commencement check and Reasonable Avoidance Methods (RAMs) to be undertaken. Enclosed within CEMP.	Prior to construction. Secured through appropriately worded condition of planning.
Invertebrates Elm trees protected (in line with BS5837:2012) and secured in the long-term. No insecticides or herbicides to be used.	Prior to and during construction Secured through appropriately worded condition of planning and/or TPO.
Trees A Tree Constraints Plan should be provided. The northern woodland boundary trees and onsite trees should be protected in line with BS5837:2012.	Prior to and during construction
Foraging and Commuting Bats Soft-lighting strategy to be implemented during the construction phase and post-development use. Soft-lighting plan to be prepared by a competent lighting professional	Prior to and during construction Secured through appropriately worded condition of planning.
Other Terrestrial Mammals Reasonable Avoidance Methods (RAMs) to be undertaken. Enclosed within CEMP. Enhancements to be secured within LEMP.	Prior to construction Secured through appropriately worded condition of planning.
Reptiles Pre-commencement check and Reasonable Avoidance Methods (RAMs) to be undertaken. Enclosed within CEMP.	Prior to construction. Secured through appropriately worded condition of planning.

Table 15: Summary of Ecological recommendations

5.3 Ecological Enhancement Opportunities

The following ecological enhancements should be incorporated into the proposed development:

Nest box type and specification	Species supported	Recommendation details
Starling box (45mm entrance hole) https://www.nhbs.com/vivara-pro-woodstone-starling-nest-box	Starlings (<i>Sturnus vulgaris</i>)	As above. Must be more than 1 box grouped together to encourage occupancy.
Non-specific boxes; Small nest box(es) with hole (28mm and 32mm). https://www.nhbs.com/vivara-pro-seville-28mm-woodstone-nest-box https://www.nhbs.com/vivara-pro-seville-32mm-oval-woodstone-nest-box	Small passerines such as tree sparrows (<i>Passer montanus</i>), house sparrows (<i>Passer domesticus</i>), great tits (<i>Parus major</i>), nuthatches (<i>Sitta europaea</i>), coal tits (<i>Periparus ater</i>) and pied flycatchers (<i>Ficedula hypoleuca</i>).	Can be installed on trees or buildings. Height from the ground should be about 3 metres — avoid sites where foliage obscures the entrance hole - a clear flight path is important. Shelter your box from the weather — the front of the nest box should be angled vertically or slightly downwards to prevent rain from entering the nest box. It should be sheltered from prevailing wind, rain and strong sunlight.
Swift box(es) or swift brick(s). https://www.vivarapro.co.uk/product-category/swifts/	Swifts (<i>Apus apus</i>)	Swifts nest at height, normally at least two stories, inside cavities in eaves or roof spaces. Must be more than 1 box grouped together to encourage occupancy.

- Woodpiles currently onsite can be moved and reused, providing shelter and hibernacula for overwintering reptiles and small mammals. This should be located within/adjacent to hedgerows.
- Bee sand planters and/or invertebrate posts from suppliers such as Niche Environmental (<https://niche-environmental.co.uk/environmental-products/>) installed on the grassland verge or adjacent to the woodland in the northeastern corner.

5.4 Mechanism to secure Mitigation and Enhancement

The mitigation measures and enhancement opportunities set out above can be secured through appropriately worded planning conditions as part of any planning consents granted.

6 CONCLUSION

This Preliminary Ecological Appraisal has identified a number of ecological constraints as defined within section 5 and specific avoidance, mitigation and compensation measures have been provided.

Avoidance is required for the following ecological constraints and will need to be included in the development of the site layout:

- Retention of trees along the site boundary.

No further survey work is considered to be necessary to establish the ecological baseline of the site.

Ecological enhancements have been proposed within Section 5.

This PEA report (PEA) is considered to be sufficient to support the planning application and no further impact assessment is required.

The mitigation and enhancement opportunities can either be incorporated into the site layout design or secured through appropriately worded planning conditions and/or legal agreement as part of any planning consents granted.

It is anticipated that planning conditions would be used to secure:

- A Construction Environmental Management Plan (CEMP) covering species and habitat reasonable avoidance measures, to be submitted and approved prior to construction commencing;
- Landscape and Ecological Management Plan (LEMP)
- Ecological Enhancements Plan.

APPENDIX A – SPECIES LIST

Common Name	Scientific Name
Rye-grass	<i>Lolium spp</i>
Yorkshire Fog	<i>Holcus lanatus</i>
Cock's-foot	<i>Dactylis glomerata</i>
Bent	<i>Agrostis sp.</i>
Buddleja	<i>Buddleja sp</i>
Cleaver	<i>Galium aparaine</i>
Bramble	<i>Rubus fruticosus</i>
Hawthorn	<i>Crataegus monogyna</i>
Elder	<i>Sambucus nigra</i>
Holly	<i>Ilex aquifolium</i>
Nettle	<i>Urtica dioica</i>
Ivy	<i>Hedera helix</i>
Broom	<i>Brachytecium rutabulum</i>
Silver Birch	<i>Betula pendula</i>
Oak	<i>Quercus robur</i>
Elm	<i>Ulmus sp.</i>

APPENDIX B – KEY SPECIES LEGISLATION

Bats

Bats are European Protected Species (EPS) listed on Annex IV of the Habitats Directive 1992 which is transposed into UK law by the Conservation (Natural Habitats &c) Regulations 1994 or “Habitats Regulations” and consolidated within The Conservation of Habitats and Species Regulations 2017. Bats are also protected through Schedules 5 and 6 of the Wildlife and Countryside Act (WCA) 1981 (as amended). Certain species are also listed in Section 41 of the NERC Act 2006, as species which are of principal importance for the conservation of biodiversity in England. A number of Bat species are listed as a Biodiversity Action Plan (BAP) priority species on the UK BAP.

European Otter (*Lutra lutra*)

Otters are an EPS listed on Annex IV of the Habitats Directive 1992 which is transposed into UK law by the Conservation (Natural Habitats &c) Regulations 1994 or “Habitats Regulations” and consolidated within The Conservation of Habitats and Species Regulations 2017. Otters are also a UK BAP priority species and listed as a species of principal importance for the conservation of biodiversity in England under Section 41 of the NERC Act 2006. Otters are also protected through Schedules 5 and 6 of the WCA 1981 (as amended).

European Water Vole (*Arvicola amphibious*)

Water Vole is protected under Schedule 5 of the WCA 1981 (as amended) and is listed as a species of principal importance for the conservation of biodiversity in England under Section 41 of the NERC Act 2006. Water Voles are also listed as a UK BAP priority species.

Eurasian Badger (*Meles meles*)

Badgers are protected in the UK under the Protection of Badgers Act 1992 which protects both the individual animals and their setts. However, habitats used for any other purpose are not afforded any form of protection under this or other legislation. This species is also listed on Schedule 6 of the Wildlife and Countryside Act 1981 (as amended) which outlaws certain methods of taking and killing when this is necessary.

Hazel Dormouse (*Muscardinus avellanarius*)

Hazel Dormouse is an EPS included on schedule 2 of the Habitats Regulations, and on Schedule 5 of the WCA 1981 (as amended). Dormouse is listed as a species of principal importance for the conservation of biodiversity in England under Section 41 of the NERC Act 2006 and is also listed as a UK BAP priority species.

Polecat (*Mustela putorius*)

Polecats are protected under Schedule 4 of the Habitats Regulations and Schedule 6 of the WCA 1981 (as amended). Polecat are also listed as a UK BAP priority species.

Harvest Mouse (*Micromys minutus*)

Harvest mouse is listed as a species of principal importance for the conservation of biodiversity in England under Section 41 of the NERC Act 2006 and is also listed as a UK BAP priority species.

European Hedgehog (*Erinaceus europaeus*)

Hedgehog are listed as a species of principal importance for the conservation of biodiversity in England under Section 41 of the NERC Act 2006 and is also listed as a UK BAP priority species.

Birds

All bird species including their eggs and nests, are protected from harm during the breeding season under the WCA 1981 to varying degrees. Some bird species are also included on Schedule 1 of the WCA 1981 (as amended) and inclusion on this schedule makes it an offence to intentionally or recklessly disturb these birds at, on or near an ‘active’ nest. A number of birds are listed as species of

principal importance for the conservation of biodiversity in England under Section 41 of the NERC Act 2006.

Reptiles

Widespread reptiles; Adder (*Vipera berus*), Grass snake (*Natrix natrix*), Common lizard (*Lacerta vivipara*) and Slow-worm (*Anguis fragilis*) are protected against killing, injuring and sale under UK legislation through their inclusion in Appendix III of the Bern Convention (1979), Schedule 5 of the WCA 1981 (as amended).

Sand Lizard (*Lacerta agilis*) and Smooth snake (*Coronella austriaca*) are also EPS listed on Annex IV of the Habitats Directive 1992 which is transposed into UK law by the Habitats Regulations, and on Schedule 5 of the WCA 1981 (as amended).

All reptiles are listed as UK BAP Priority species and are also listed as a species of principal importance for the conservation of biodiversity in England under Section 41 of the NERC Act 2006.

Amphibians

Widespread amphibians; Smooth newt (*Triturus vulgaris*), Palmate newt (*Triturus helveticus*), Common frog (*Rana temporaria*) and Common toad (*Bufo bufo*) are only protected from sale under Schedule 5 of the WCA 1981 (as amended). Common toad is also listed as a UK BAP Priority species.

Great crested newt (*Triturus cristatus*) and Natterjack toad (*Bufo calamita*) are also EPS listed on Annex II and IV and Annex IV respectively of the Habitats Directive 1992 which is transposed into U.K law by the Habitats Regulations, and on Schedule 5 of the WCA 1981 (as amended). Both are also listed as a UK BAP Priority species and GCN are also listed as a species of principal importance for the conservation of biodiversity in England under Section 41 of the NERC Act 2006.

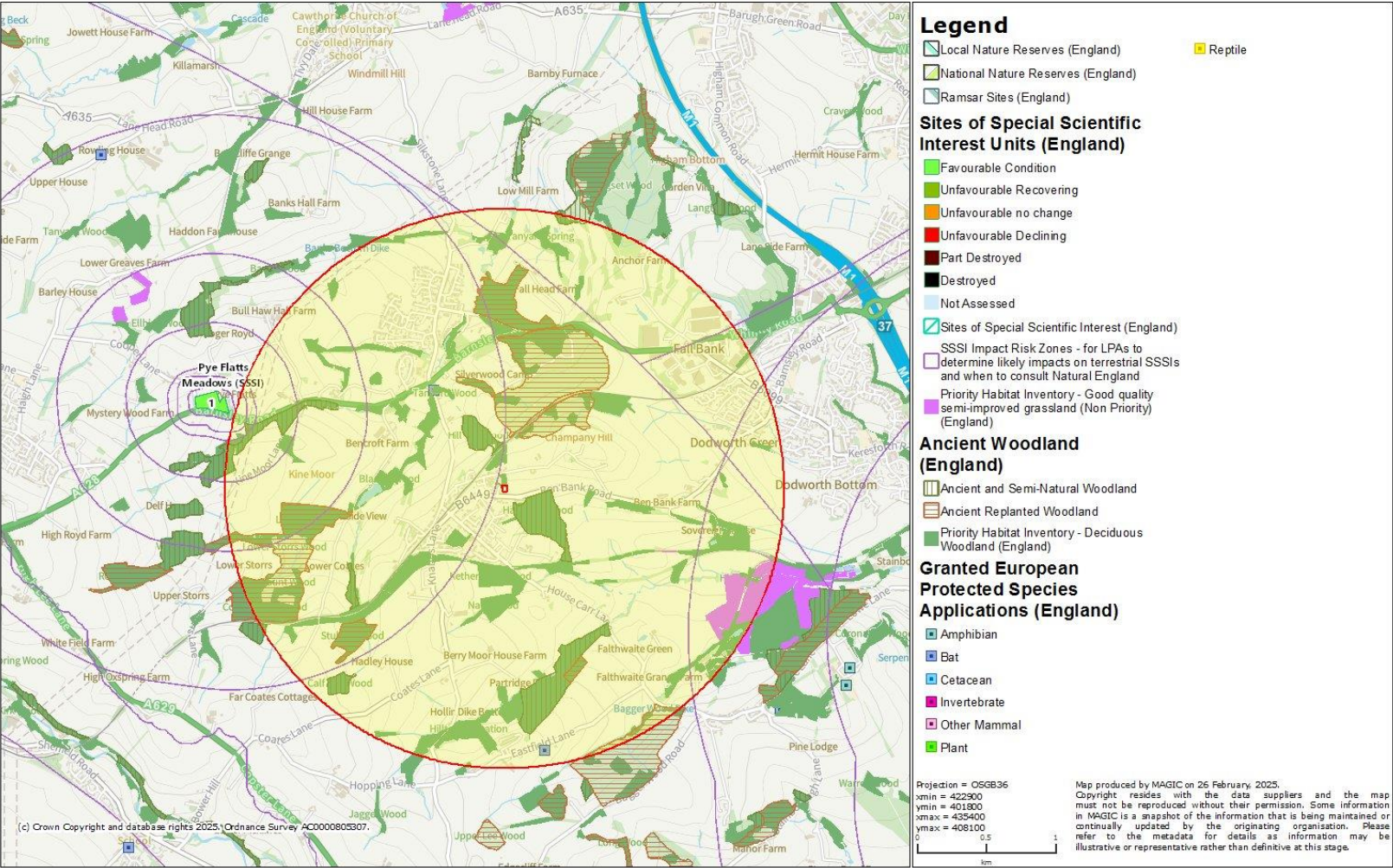
Invertebrates

A large number of British invertebrates are protected under Schedule 5 of the WCA 1981 (as amended). Different species are protected under one, some or all of the parts of Section 9. Hundreds of invertebrate species are of principal importance for the conservation of biodiversity in England under Section 41 of the NERC Act 2006. Similarly, several hundred are also listed as a UK BAP priority species.

APPENDIX C – MAGIC MAP

MAGiC

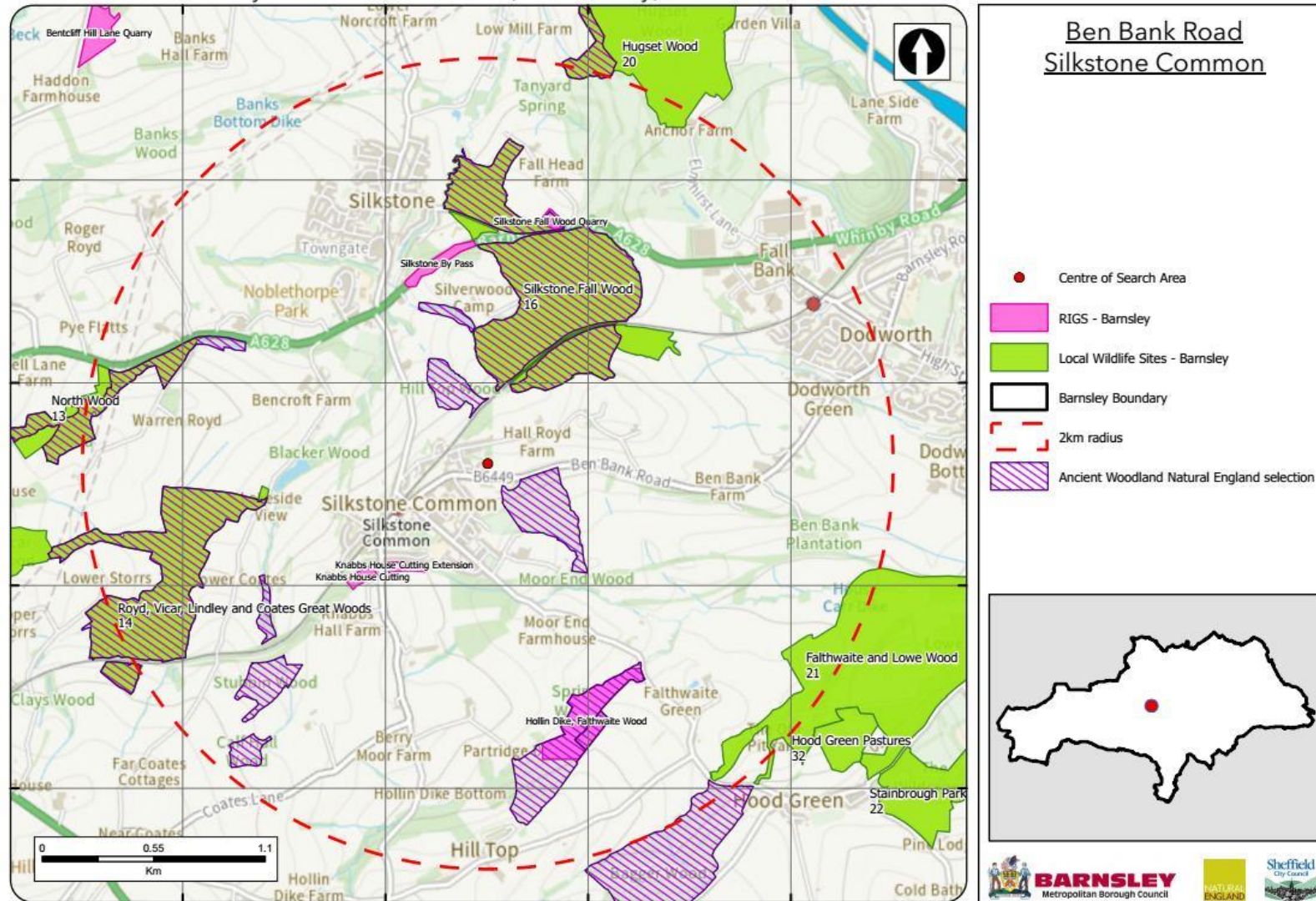
Ben Bank Road, Silkstone Common



WEDDLES

APPENDIX D – LWS SITES

Boundaries of Statutory and Local Wildlife Sites (non-statutory) Within the Search Area



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WEDDLES

Ben Bank Road, Silkstone Common
Preliminary Ecological Appraisal Report– March 2025

APPENDIX E – UKHABS BASELINE MAP



WEDDLES

Ben Bank Road, Silkstone Common
Preliminary Ecological Appraisal Report– March 2025