Preliminary Ecological Appraisal (PEA) Survey Report	
For:	Yorkshire Land
Site:	Land off Millstones, Oxspring, Sheffield, S36 8WZ
Report Date:	2nd of June 2025
Report Reference:	SQ-3269a

Surveying Ecologists:

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Client:	Yorkshire Land
Site Name:	Land off Millstones, Oxspring, Sheffield, S36 8WZ
Grid Reference:	SE 27039 02187
Report:	Preliminary Ecological Appraisal
Date of Survey:	13th of May 2025
Lead Ecologist:	John Davies BSc (hons) *Natural England GCN Licence: 2024-12094-CL08-GCN*

Issue:	Revision:	Stage:	Date:	Prepared by:	Approved by:
1	Draft	Submission for Review	2nd of June 2025	Marie Brown BSc MSc (hons) – Estrada Ecology Ltd	Samuel Toon BSc (hons) – Estrada Ecology Ltd
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The contents of this report have been produced with consideration of current best practice guidance, and in accordance with the Chartered Institute of Ecology and Environmental Management's (CIEEM) Code of Professional Conduct.

This report should not be submitted as part of a planning application without any accompanying species-specific reports which may have been recommended herein.

Data within this report is valid for a maximum of eighteen months from the date of the survey. After this period, an updated site visit will be required to determine a new ecological baseline.

Site Summary

The development area has an approximate area of 0.29 hectares and is comprised dominantly by a short-sward managed grassland. In the north of the site is a partly overgrown aggregate pathway and a small curb of developed land, as well as a strip of ruderal / ephemeral vegetation separating the site for adjacent woodland to the north. The wider property comprises a similar composition of grassland with further ruderal / ephemeral vegetation (including non-native invasive species) along the banks of the river Don immediately south of the property. Along the riverbanks is a line of mature native trees.

Findings

The trees within the wider property, as well as those overhanging into the site from adjacent woodland habitats are deemed to provide suitability for use by nesting birds. One tree in the south of the wider property was recorded being used by Nuthatches (*Sitta carolinensis*). Further historic bird nests were recorded outside the site in adjacent woodland. Impacts towards breeding birds are considered to be a residual potential during any clearance or maintenance of these habitats. Further recommendations have been provided in the conclusion of this report, if required.

No habitats with any suitability for use by roosting bat are present on the site. Multiple trees in the wider property have been assessed as offering suitability for roosting bats. These trees are understood to be retained, but potentially subject to future management. Recommendations regarding potential impacts towards roosting bats have been included within the conclusion of this report.

The woodland surrounding the site as well as the river corridor to the south of the site are considered to provide good suitability for use by local bat populations for foraging / commuting activities. If additional artificial lighting is proposed, a lighting scheme is recommended to mitigate for light splay affecting these habitats.

The site is deemed to offer limited suitability for use by hedgehog (*Erinaceus europaeus*). The woodlands surrounding the site is deemed to provide suitability for this species Impacts towards hedgehogs are considered to be a residual possibility during the development of the site. A precautionary method statement is recommended to mitigate for any potential impacts towards hedgehog. No further survey effort for this species has been recommended at this stage.

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The site is deemed to offer limited suitability for use by Eurasian badger (*Meles meles*). The woodlands surrounding the site are deemed to provide suitability for this species. Impacts towards badgers are considered to be a residual possibility during the development of the site. A precautionary method statement is recommended to mitigate for any potential impacts towards badger. No further survey effort for this species has been recommended at this stage.

The site is deemed to provide limited suitability for use by amphibian and reptile species given the short-sward open grassland dominating the site. Within the wider property and in habitats adjacent to the site, some vegetation providing refugia is recorded. The River Don is present immediately south of the wider property's boundary which is deemed to provide suitability for herptiles. Impacts towards common amphibians and reptiles are considered to be a residual potential. A precautionary method statement is recommended to mitigate for any potential impacts towards herptiles. No impacts towards great crested newts (*Triturus cristatus*) are anticipated. No further survey effort for herptiles has been recommended at this stage.

The site is deemed to provide very limited opportunities for use by European water vole (*Arvicola amphibius*) or Eurasian otter (*Lutra lutra*) given the dominance of grassland comprising the site. The river Don along the wider property's southern boundary is deemed to provide suitability for use by otter and water vole for transient purposes. Previous survey effort (2024) has recorded field sign evidence of otter using the Don within close proximity to the site. Indirect impacts towards otter are considered a low potential, while impacts towards water vole are considered a residual possibility.

Indirect impacts towards protected species including herptiles, aquatic / riparian species, white-clawed crayfish (*Austropotamobius pallipes*), kingfisher (*Alcedo atthis*), and commuting / foraging bats are considered a residual potential via impacts towards the River Don and any aquatically linked receptors. Furthermore, Priority Habitat Deciduous Woodland and Ancient Woodland are present adjacent to the development site. A Construction Environmental Management Plan (CEMP) has been recommended to mitigate any potential indirect impact towards the habitats surrounding the site as well as any species using the river or aquatically linked receptors. The CEMP may be secured via condition.

No confirmed protected or notable flora listed on Schedule 8 of the Wildlife and Countryside Act 1981 (as amended) were recorded on site.

No non-native / invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) were recorded on site. However, Himalayan balsam (*Impatiens glandulifera*) and Japanese knotweed (*Reynoutria japonica*) were recorded along the river corridor in the wider property boundaries as well as outside the site in adjacent land. It is believed these stands may be disturbed given proposals to manage the grassland in the wider site. Precautionary measures are recommended to mitigate the spread of the species.

The site was recorded to lack significant floral diversity and is unlikely to support important assemblages of invertebrates.

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Contents:

Whilst every effort has been taken to ensure the accuracy of this report and its contents in view of potential ecological constraints to development or the likely presence or absence of species it must only be viewed as a snapshot in time and not be viewed as definitive. Due to external factors, such as seasonality, weather etc having the potential to affect survey results, no liability can be assumed for omissions or changes that may or may not occur after the date this report was produced.

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1 Introduction and Background to the Site

1.1 Estrada Ecology Ltd was commissioned to conduct a Preliminary Ecological Appraisal (PEA) of the land off Millstones, Oxspring, Sheffield, S36 8WZ to assess any ecological restrictions at the site.

1.2 Habitats recorded within the site during the site survey include the following:

- Modified Grassland
- Ruderal / Ephemeral
- Artificial Unvegetated, Unsealed Surface
- Developed Land Sealed Surface

1.3 Other habitats outside the provided redline boundary, but within the wider property area or adjacent to the site have been included in this report for discussion.

1.4 It is understood that the current development proposal pertains to the creation of multiple residential homes including garden space, subject to the necessary consents.

1.5 Report Objectives

- Present the findings of the ecological survey,
- Assess the potential of existing onsite habitats to support protected or notable species,
- Evaluate any likely ecological impacts on protected and notable species or habitats because of the proposed development,
- Provide recommendations for any further species-specific survey and mitigation measures that may be required, and
- Provide habitat enhancement recommendations in line with the National Planning Policy Framework (NPPF, 2024).

1.6 Site Location and Wider Area

1.6.1 The site is located to the north of Oxspring village, 3.3 km north of the town of Stocksbridge and approximately 2 km east of the town of Penistone.

1.6.2 The survey site's central OS grid reference is recorded to be SE 27039 02187.

1.6.3 The immediate surroundings of the survey site are dominated by woodland comprising the river corridor of the Don which flows within five meters at closest of the southeastern corner of the site. Residential developments are present to the southeastern elevation, as well as the urban setting of Oxspring further south beyond the river. Surrounding Oxspring, the landscape is dominated by arable fields and improved grasslands with some scattered trees and boundary hedgerows.

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Figure 1: The survey site within its wider setting

Google Maps (2025)

2 Protected Species Legislation

2.1 Relevant legislation includes the Conservation of Natural Habitats and Species Amendment (EU Exit) Regulations which came into force on 31 December 2020.

2.2 The Natural Environment and Rural Communities (NERC) Act came into force on 1 Oct 2006. Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The list has been drawn up in consultation with Natural England, as required by the Act. The S41 list is used to guide decision makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the Natural Environment and Rural Communities Act 2006, to have regard to the conservation of biodiversity in England, when conducting their normal functions.

2.3 The UK Post-2010 Biodiversity Framework was developed in response to the Convention on Biological Diversity's Strategic Plan for Biodiversity 2011 - 2020. Its five strategic goals and twenty biodiversity targets supersede the UK Biodiversity Action Plan.

2.4 Environment and Biodiversity

2.4.1 Under the National Planning Policy Framework (NPPF, 2024), local planning authorities should aim to conserve and enhance the natural environment when determining planning applications. Local planning authorities also have an obligation to seek opportunities to enhance the conservation status of Species and Principal Habitats.

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2.4.2 Species and Habitats of Principal Importance for the conservation of biodiversity in England (JNCC, 2009) are covered under section 41 of the Natural Environmental and Rural Communities (NERC) Act (2006). Species and habitats listed within Section 41 need to be taken into consideration by a public body when performing any of its functions, such as assessing planning applications.

2.4.3 Development proposals submitted after 12th of February 2024, with some exceptions, will be expected to achieve a minimum of 10% net gain in site biodiversity value under The Environment Act 2021 (Commencement No. 8 and Transitional Provisions) Regulations 2024.

2.5 Wildlife

2.5.1 European Protected Species are afforded protection under the Conservation of Habitats and Species Regulations 2017, and the Wildlife and Countryside Act 1981 (as amended) and the Countryside Rights of Way Act 2000. It is an offence to:

- Deliberately or recklessly capture, injure, or kill any wild animal of a European protected species,
- Deliberately or recklessly disturb any such animal,
- Damage or destroy their breeding site or resting place, and
- Keep, transport, or offer for sale / exchange any live or dead animal, or any part of, or anything from these species.

2.5.2 Disturbance of European Protected Species constitutes any activity which is likely to:

- To impair their ability to survive, to breed or reproduce, or to rear or nurture their young; or, in the case of animals of a hibernating or migratory species, to hibernate or migrate, and
- To significantly affect the local distribution or abundance of the species to which they belong.

2.6 UK Legislation

2.6.1 **Breeding birds** (all species) are protected under the Wildlife and Countryside Act 1981 (as amended). It is an offence to intentionally kill, injure or take any wild bird and to take, damage or destroy the nest (whilst being built or in use) or eggs. Schedule 1 species are afforded protection from disturbance at or near nest sites, including reckless disturbance under the Countryside Rights of Way (CRoW) Act 2000.

2.6.2 **Bats** (all native species) and their breeding sites or resting places (roosts) are fully protected under The Conservation of Habitats and Species Regulations 2010 (as amended). Bats are also protected under the Wildlife and Countryside Act 1981 (as amended) through their inclusion in Schedule 5. Under the Act, they are protected from: intentional or reckless disturbance (at any level); obstruction of access to any place of shelter, breeding, or rest; selling, bartering or exchange of these species, or parts of.

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2.6.3 **Eurasian Badgers** are protected by the Protection of Badgers Act 1992 and under the Wildlife and Countryside Act 1981 (as amended). It is an offence: to wilfully, or attempt, to kill, capture, ill-treat or injure any badger; to obstruct, destroy or damage a badger sett or to disturb a badger whilst within its sett; to sell or offer for sale a live badger, or have possession or control of a live badger; and marking a badger or attaching any ring, tag, or other marking device to a badger.

2.6.4 **Eurasian Otters** are a European Protected Species (EPS) and are also fully protected under Schedule 5 of the Wildlife and Countryside Act 1981. It is against the law to capture, kill, disturb or injure otters (on purpose or by not taking enough care); damage or destroy a breeding or resting place (deliberately or by not taking enough care); obstruct access to their resting or sheltering places (deliberately or by not taking enough care); and possess, sell, control, or transport live / dead otters.

2.6.5 **European Water Voles** are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 and is a priority conservation species. It is against the law to: Intentionally capture, kill, or injure water voles, damage, destroy or block access to their places of shelter or protection (on purpose or by not taking enough care), disturb them in a place of shelter or protection (on purpose or by not taking enough care), and possess, sell, control or transport live or dead water voles or parts of them (not water voles bred in captivity).

2.6.6 **Amphibians** (all native species) are protected by the Wildlife and Countryside Act 1981 (as amended). The sale, barter, exchange, transportation for sale, and advertising to sell or to buy are an offence.

2.6.7 **Reptiles** (all native species) are protected under the Wildlife and Countryside Act 1981 (as amended). It is an offence to intentionally kill, injure and trade these animals.

3 Survey Methodology

3.1 Desktop Survey

3.1.1 A biological data records search was commissioned from the Sheffield Biological Records Centre (SBRC) for a 2 km search radius from central grid reference.

3.1.2 Further inspection, using colour 1:25,000 OS base maps (www.ordnancesurvey.co.uk), MAGIC (www.magic.defra.gov.uk), aerial photographs from Google Earth (www.maps.google.co.uk), was also undertaken to provide additional context and identify any features of potential importance for nature conservation in the wider countryside.

3.1.3 Furthermore, consultation with MAGIC was undertaken to ascertain any European Protected Species Mitigation Licences granted within the search radius from grid.

3.1.4 Natural England's Geoportal: England wide data for great crested newts (*Triturus cristatus*) (GCN) was analysed for any records within a 1 km radius from grid. The dataset contains eDNA pond surveys for district level licensing (England). When available for the location, the Risk Zones for GCN are considered for the site.

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3.2 Field Survey

3.2.1 The survey area was investigated on foot to ascertain habitats on site and the potential of those habitats to support ecological diversity. The vegetation types present within the site were assessed by ecologist; John Davies BSc (hons) using methodology based on that described in the UK Habitat Classification User Manual Version 2.1 (2023) and CIEEM's Guidelines for Ecological Impact Assessment (2024).

3.2.2 Habitats and features with potential to support protected and / or conservation priority faunal species, together with any field signs of such species were recorded on the field map using target notes. A search was undertaken for the following key habitats and field signs for protected or conservation priority species highlighted in Table 1.

Table 1: Key habitats and field signs of protected and priority species.

Taxon	Indicative Habitats	Field Signs
Bats	Roosts - Trees, buildings, bridges caves etc. Foraging areas - e.g., parkland, water bodies and streams, wetlands, woodland edge, hedgerow Commuting routes - linear features (e.g., hedgerows).	In or on potential roost sites: Droppings stuck to walls; urine spotting in roof spaces; oil from fur staining around roost entrances; feeding remains (e.g., moth wings).
Great Crested Newts	Ponds within 500m of suitable habitat within the site boundary. Suitable (terrestrial) habitat includes rough grassland, scrub and woodland, log and rubble piles and other debris, animal burrows.	Eggs, Individuals of all life stages. Egg rolled plants.
Reptiles	Rough grass and compost heaps, log, and rubble piles.	Sloughed skins; eggs, individuals.
Birds	Trees, scrub, hedgerow, field margins, grassland.	Nests; droppings below nest sites (especially in buildings of trees); tree holes.
Badgers	Found in most rural and many urban habitats.	Excavations and tracks: sett entrances, latrines, hairs, well-worn paths; prints; snuffle holes.
Otter	Water bodies / water courses.	Holt entrances; prints; latrine / spraint sites; anal jelly / smears.
Water Vole	Water bodies / water courses.	Burrow entrances; prints; latrine areas; faeces; feeding stations.
BAP Invertebrates	Each butterfly species has its own habitat requirements determined by the food plant of the caterpillar, the nectar source for the adult and the conditions needed for the caterpillar to survive and then pupate successfully.	Eggs, larva, Pupa, adult butterfly. Habitat type and presence of food plants.

3.3 Timing and Weather Conditions

3.3.1 The survey was conducted on the 13th of May 2025.

3.3.2 Weather conditions at the time of the site visit were clear, with a light breeze and temperatures of 21°C. Visibility was good at the time of survey.

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3.4 Personnel

3.4.1 The survey was undertaken by ecologist John Davies BSc (hons) (Natural England GCN Licence: 2024-12094-CL08-GCN) who is formally enrolled in a bat licence programme and is experienced with ecological surveying including phase one habitat surveys and Biodiversity Net Gain assessments. Accompanying John was junior ecologist Marie Brown BSc (hons) MSc, to aid with survey effort.

3.4.2 The surveying ecologist works under the supervision and guidance of experienced ecologist Natasha Estrada BSc (hons), MRes, MCIEEM, who is a licensed bat ecologist (2015-12213-CLS- CLS) and the named ecologist on several Natural England European Protected Species Mitigation Licenses.

3.5 Preliminary Roost Assessment

3.5.1 Where present and access could be gained, trees and buildings were subject to an external inspection to determine their suitability to support roosting bats. The external inspections were conducted in accordance with current best practice guidance (Collins, 2023).

3.5.2 Potential bat roost features and field sign evidence of use of the site by bats include the presence of droppings, stain, or grease marks, feeding remains, or the observations of the bats themselves.

3.5.3 Where present, trees, buildings, and the quality of onsite habitats were then categorised based on the classification criteria in 'Bat Surveys for Professional Ecologists' (Collins, 2023). Classification criteria are presented below:

- **Negligible:** 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.
- **Low:** A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. 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.
- **Moderate:** 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.
- **High:** 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. These structures have the potential to support high conservation status roosts (e.g., maternity, or classic cool / stable hibernation site).

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4 Ecological Constraints

4.1 It should be noted that this ecological appraisal provides baseline ecological data at the time of survey only and does not include flora or fauna which may be present at different times of the year.

4.2 An absence of species records from within a search radius does not provide confirmation that a species is absent from within the search area.

5 Survey Results

5.1 Field Survey Results

5.1.1 Habitat Overview

5.1.1.1 A summary of the habitats recorded during the site inspection are listed in the table below. The Phase One map of the site is provided in Appendix One.

Table 2: Recorded habitats within the site boundaries.

Habitat	UK HABS Codes	
	Primary	Secondary
Modified Grassland	**g4**	-
Ruderal / Ephemeral	g, w	**81**
Artificial Unvegetated, Unsealed Surface	**u1c**	800
Developed Land, Sealed Surface	**u1b**	800

5.1.1.2 A list of species recorded on the site during the survey can be found in Appendix Two.

5.1.2 Modified Grassland

5.1.2.1 Comprising the majority of the site is modified grassland habitat which is recorded to be of a short sward height and recently managed. This habitat is recorded to demonstrate a moderate level of species diversity, comprising scattered ruderals. This grassland has previously been identified as being 'other neutral grassland' (ECOLOGICAL APPRAISAL AND BIODIVERSITY NET GAIN ASSESSMENT, Smeeden Forman, SF2263/2289, 2023); however, the current composition of the habitat does not fit this habitat's description at the time of survey.

5.1.2.2 Species recorded within this habitat include common vetch *(Vicia sativa)*, perennial rye grass *(Lolium perenne)*, Yorkshire fog *(Holcus lanatus)*, spear thistle *(Cirsium vulgare)*, broad leaved dock *(Rumex obtusifolius)*, bramble *(Rubus fruticosus)*, yarrow (*Achillea millefolium*), dandelion (*Taraxacum officinale*), creeping buttercup (*Ranunculus repens*), forget-me-not (*Myosotis sp.*), elderberry (*Sambucus nigra*), clover (*Trifolium sp.*), sycamore (*Acer pseudoplatanus*), birds foot trefoil (*Lotus corniculatus*), common nettle (*Urtica dioica*), hairy willowherb (*Epilobium hirsutum*), soft rush (*Juncus effusus*), common hogweed (*Heracleum sphondylium*), wood avens (*Geum urbanum*), butterbur (*Petasites hybridus*), horsetail (*Equisetum arvense*), herb Robert (*Geranium*

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robertianum), greater plantain (*Plantago major*), lesser hawkbit (*Leontodon saxatilis*), fescue grass (*Festuca sp.*) cocksfoot (*Dactylis glomerata*), and ragwort (*Jacobaea vulgaris*), among others.

5.1.2.3 In the west of the site, a mammal path was recorded leading into the woodland outside of the site. This field sign evidence could not be attributed to any particular species. Further commuting paths were recorded along the southern boundary of the wider site which were confirmed to be created by human activity, as witnessed during the site visit. Droppings believed to pertain to fox (*Vulpes vulpes*) were also recorded.

5.1.2.4 This habitat within the redline boundary is deemed to provide limited opportunities for use by protected species given the composition and openness of the area. In the south-eastern corner of the wider site, a pile of discarded grass clippings is recorded which is considered to provide suitability for use by herptiles as refugia. Areas of taller ephemeral vegetation along the edge of the River Don are also deemed to provide some suitability for herptiles.

5.1.2.5 Recommendations regarding potential impacts towards herptiles, as well as other small mammals such as hedgehog have been included within the conclusion of this report.

Figure 2: Modified grassland within the site

Figure 3: Modified grassland (outside the redline boundary - south)

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5.1.3 Ruderal / Ephemeral Vegetation

5.1.3.1 Along the northern site boundary is a thin strip of ruderal / ephemeral vegetation acting as a transition habitat between the grassland on site and the adjacent woodland off site. This habitat is recorded to comprise bracken (*Pteridium sp.*) and bramble, as well as general ruderal vegetation, but does not demonstrate the required coverage or density to be assessed as scrub / bracken habitats separately. No trees of a significant size are present.

5.1.3.2 Other species recorded within this habitat include cleavers (*Galium aparine*), common nettle, sycamore, common hogweed, ivy (*Hedera helix*), hairy willowherb, rosebay willowherb (*Chamaenerion angustifolium*), creeping thistle, and common dock, amongst others.

5.1.3.3 The scrub vegetation is considered to provide some suitability for use by hedgehogs or herptiles as refugia. Recommendations have been provided to mitigate residual impacts considered.

Figure 4: Ruderal / ephemeral inside the site

5.1.4 Artificial Unvegetated, Unsealed Surface and Developed Land Sealed Surface

5.1.4.1 Along the north of the site is a developed pathway comprised of aggregates which are sparsely encroached on by the adjacent grassland grasses. Some of this path, particularly in the west of its extent is recorded to be vegetated more than 10% and therefore has been assessed as part of the grassland.

5.1.4.2 In addition to this artificial path surface, a small corner of the existing footpath is featured within the redline boundary, comprised of a sealed tarmacadam surface.

5.1.4.3 These habitats in the condition recorded are considered to have no intrinsic ecological value.

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Figure 5: Example artificial surface

5.1.5 **Line of Trees (Within wider property boundary)**

5.1.5.1 In the south of the wider property boundary along the edge of the River Don is a line of trees ranging from semi-mature to mature. It is understood that these trees will be retained throughout the development of the site, subject to the installation of multiple bird and bat box provisions and potential management. Instances of fell / broken limbs are present on the mature specimens in the southwestern corner of the wider site. Most trees recorded are situated directly on the bank profile of the river.

5.1.5.2 Species recorded comprising this feature include alder (*Alnus glutinosa*), sycamore, and willow (*Salix sp.*).

5.1.5.3 These trees are all considered to provide suitability for use by breeding birds. One mature alder tree within this linear feature was recorded as being used by a pair of nuthatches (*Sitta europaea*) nesting within a hollow on the north aspect of the tree. No other active or historic evidence of nesting birds was recorded within the wider property boundaries.

5.1.5.4 Three of the mature trees of this feature were recorded as demonstrating IPRF, limited to occasional knot holes or damaged limbs which were deemed to be able to provide potential roost suitability for bats. Two trees were assessed as offering Low bat roost potential with one mature alder being assessed as offering Moderate potential. The locations of these trees are marked on the Phase one Map in Appendix One.

5.1.5.5 Impacts towards nesting birds and roosting bats are considered a potential if works to manage these trees are proposed during the development of the site. It is understood that these trees are proposed for retention; however, removal of the broken limbs may be anticipated. Further recommendations have been made in the conclusion of this report.

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Figure 6: Line of trees outside of development site but within wider property. Example bat features highlighted in Red, Nesting birds highlighted in Blue.

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5.1.6 River Don (outside wider property southern boundary)

5.1.6.1 Directly adjacent to the wider property's southern boundary outside the site is the River Don which flows west to east. The banks of the river along this section are steep or vertical and comprised of gravel or earth which is vegetated by short ephemeral vegetation, scattered scrub, and bryophytes. The bed of the channel is comprised dominantly of gravel and boulders, some of which are emergent from the watercourse. The flow of the river is relatively fast.

5.1.6.2 This watercourse is considered to provide some suitability for amphibians, largely as a commuting corridor. The bankside vegetation is deemed to provide some refugia for herptiles. The river is also considered to provide a low level of suitability for use by white-clawed crayfish given the composition of the bed and the features such as tree roots and boulders providing protection.

5.1.6.3 The suitability of the river for use by water vole is considered to be limited to a residual potential for transient use only, given the profile of the banks and the dominant vegetation are not suitable for use for burrowing. The watercourse is considered to provide suitability for use by otters, again limited to transient commuting use. While some exposed tree roots and boulders are recorded along the surveyed section of the river, no features suitable for use be used by an otter were recorded. Boulders emerging from the river may be used as sprainting posts for otters, however, at the time of survey, no evidence of this was recorded.

5.1.6.4 Furthermore, the River Don is deemed to provide suitable habitat for use by kingfisher (*Alcedo atthis*) The previous ecological survey of the site recorded two instances of the species using this habitat corridor (ECOLOGICAL APPRAISAL AND BIODIVERSITY NET GAIN ASSESSMENT, Smeeden Forman, SF2263/2289, 2023). A grey heron (*Ardea cinerea*) was recorded using the river corridor at the time of survey. Further recommendations have been provided in the conclusion of this report.

5.1.6.5 Indirect impacts towards the above listed species are considered to be a potential without appropriate mitigation. Due to the sensitivity of this habitat, a Construction Environmental Management Plan has been recommended to mitigate indirect impacts during the construction phase of development. The CEMP will also address residual impacts towards protected species such as herptiles, white-clawed crayfish, otter, water vole, and kingfisher which may be using the River Don or aquatically linked receptors downstream.

5.1.6.6 In addition, along the banks of the river within the property boundaries and beyond the site boundaries are scattered examples of Himalayan balsam, as well as one recorded instance of Japanese knotweed on the bank top to the southwest of the site. Recommendations regarding the spread of this species have been provided.

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Figure 7: River Don outside of wider property

Figure 8: Example non-native invasive species recorded along river corridor.

5.1.7 **Deciduous Woodland (Outside north and western development boundaries)**

5.1.7.1 Outside the development site's northern and western boundaries, as well as beyond the river Don south of the site, is Priority Habitat Deciduous Woodland. The compartment north of the site is also recorded to partly comprise Ancient Semi-Natural Woodland. The ground cover within the woodland is recorded to be largely comprised of short ephemeral vegetation, where not covered by scrub / immature self-set trees.

5.1.7.2 It is understood that these habitats will be retained. Some small immature growth of the western woodland encroaches slightly into the site which is understood to be cut back to facilitate the development.

5.1.7.3 The woodland is deemed to provide suitability for badger, hedgehog, nesting birds, and bats for foraging / commuting and potentially for roosting. One mature tree outside the wider property's southwestern corner was previously assessed as offering Moderate roost potential (ECOLOGICAL APPRAISAL AND BIODIVERSITY NET GAIN ASSESSMENT, Smeeden Forman, SF2263/2289, 2023). An adjacent tree which does overhang into the property was recorded to feature a disused bird nest of an unidentified passerine species. The ground cover is deemed to provide minimal potential for use by herptiles for refugia.

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5.1.7.4 The woodland adjacent to the site was subject to a preliminary inspection for the presence of badger. No setts or field sign evidence was recorded within 50 meters from the site development boundaries. No further evidence of any other protected species was recorded.

5.1.7.5 Impacts towards badger, hedgehogs, breeding birds are considered a potential during the development of the site. Indirect impacts towards the functionality of the woodland as foraging grounds for local populations of bats is considered a potential if additional external lighting is proposed for the scheme. Further recommendations have been provided in the conclusion of this report.

5.1.7.6 Due to the sensitivity of this habitat, a Construction Environmental Management Plan has been recommended to mitigate indirect impacts during the construction phase of development.

Figure 8: Priority deciduous woodland outside of site

5.2 Desktop Survey Results

5.2.1 SBRC returned 1798 records from a 2 km radius from the central grid reference. The list of protected and notable species data records is available upon request. In summary, the following records were returned:

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Table 3: Protected species returned by data search.

Species	Records	Notes
Bats	21	Between 1991 and 2019, two soprano pipistrelles (Pipistrellus pygmaeus), eight common pipistrelles (Pipistrellus pipistrellus), three noctule (Nyctalus noctula), one Daubenton's bat (Myotis daubentonii) were returned by the data search. In addition, two unknown bats and four bats of Myotis genus were returned from the data search.
Badger	~	Any records pertaining to Eurasian badger have been omitted from this report due to the sensitivity of the data. Full consideration has been given to any information returned.
Hedgehog	7	Dated between 1983 to 2021.
Otter	0	No records for otter were returned.
Water vole	4	Dated between 1988 and 1997; the nearest being approximately 671 meter and not pertaining to the Don.
Amphibians	5	Two records of common frog (*Rana temporaria*), two records of great crested newt and one record of smooth newt (*Triturus vulgaris*) were returned between 1995 and 2015.
Reptiles	0	No records for any reptilian species were returned.
Other	~	Four records for American mink (*Mustela vison*) dated 1998 to 2012 have been returned for the River Don. Five records for kingfisher dated 1990 to 2021 were returned for the River Don: approximately 500 meters northwest and 800 meters southwest at nearest from site. The remaining records pertain largely to flowering plant, bird, other mammals, and invertebrate records.

5.2.2 Consultation with MAGIC returned one European Protected Species Mitigation Licences within a 1 km radius from grid.

Table 4: Granted European Protected Species Licences within the search radius.

Licence	Date	Species	Purpose	Distance from Site
2020-46131-EPS-MIT	2020-2023	Common pipistrelle	Disturbance of a Breeding Site	291 meters southwest

5.2.3 No records for great crested newt presence were recorded within a 1 km radius from grid via consultation with Natural England's eDNA pond surveys for District Level Licensing (England). The site is recorded as falling within a Green Risk Zone for GCN.

5.3 Designated Sites

5.3.1 Consultation with MAGIC map returned no Statutory Designated Sites within a 1 km search radius from grid.

5.3.2 Consultation with SBRC returned eight Non-Statutory Designated Site within a 1 km search radius from grid.

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5.4 Priority Habitats

5.4.1 Priority habitats were recorded within the redline site boundary, namely a small segment in the northeastern corner of the site which has been labelled as Priority Habitat Deciduous Woodland (Appendix One).

5.4.2 This area of priority woodland which falls within the redline boundary is comprised artificial unvegetated unsealed surface and is separate from the adjacent woodland outside the site by a stone brick wall. This area therefore is no longer a priority habitat; however, its designation persists.

5.4.3 Priority habitats recorded outside the redline site boundary but within the 2 km search radius are outlined below.

Table 5: Priority Habitats outside the Site Boundary but within the Search Radius

Habitat Type	Closest Compartment Distance from Site
Deciduous Woodland	0 meters – Immediately outside the development site's northern and western boundary, including the River Don corridor
Ancient Semi-natural Woodland	1.5 meters north of site boundary

5.5 Protected Species

5.5.1 Breeding Birds

5.5.1.1 No presence of breeding birds was recorded at the time of survey. No field sign evidence suggesting the use of the site by nesting birds was recorded at the time of survey. A defunct passerine nest was recorded immediately outside the site's western boundary in the woodland area.

5.5.1.2 The trees in the wider site were assessed as offering a good level of suitability for use by nesting birds. These trees are understood to be retained. Some trees from the woodland to the north and west of the site overhang into the site.

5.5.1.3 Impacts towards breeding birds are considered to be a potential for this development. Recommendations regarding potential impacts towards breeding birds have been provided in the conclusion of this report.

5.5.2 Bats

5.5.2.1 No presence of bats was recorded at the time of survey. No field sign evidence suggesting the use of the site by bats was recorded at the time of survey.

5.5.2.2 No habitats were recorded within the site which are able to provide opportunities for use by roosting bats. Within the linear feature along the southern boundary of the wider property, one tree was assessed as offering Moderate bat roost potential, and two offering Low bat roost potential, when assessed by a licenced bat ecologist (2015-12213-CLS-CLS).

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5.5.2.3 The River Don corridor and the adjacent woodland surrounding the site are considered to offer good suitability to function as a commuting / foraging ground for local bat populations.

5.5.2.4 A single bat transect survey including a four-night static deployment was conducted June 2020 as detailed in the previous PEA report (ECOLOGICAL APPRAISAL AND BIODIVERSITY NET GAIN ASSESSMENT, Smeeden Forman, SF2263/2289, 2023). The conclusion of the survey effort recorded no roosting bats within the vicinity of the site, but occasional use of the river corridor and adjacent woodland for commuting / foraging bats of a low species diversity.

5.5.2.5 Impacts towards the functionality of these habitats for commuting / foraging bats are considered if artificial lighting is proposed for the development of the site which would splay onto these habitats. It is recommended that any works on the trees along the River Don in the south of the wider site, if required, are conducted under precautionary methods to avoid impacts towards bats potentially using these features. Further recommendations are outlined in the conclusion of this report.

5.5.3 **Eurasian Badger**

5.5.3.1 No presence of Eurasian badger was recorded within the site. No field sign evidence suggesting the use of the site by badger was recorded at the time of the survey.

5.5.3.2 The site is deemed to offer a low level of suitability for use by badger. The woodland surrounding the site has also been surveyed for badger and no field sign evidence has been recorded. The woodland outside the site is considered to provide good habitat for use by badger. Impacts towards badgers are considered to be an unlikely but residual potential.

5.5.3.3 Any potential impacts towards badger are considered able to be mitigated for with the implementation of general precautionary methods during the development of the site. No further survey effort is proposed for this species.

5.5.4 **European Hedgehog**

5.5.4.1 No presence of hedgehog was recorded within the site. No field sign evidence suggesting the use of the site by hedgehog was recorded at the time of the survey.

5.5.4.2 The site is deemed to offer a low level of suitability for use by hedgehog. The woodland outside the site is considered to provide good habitat for use by hedgehog. Impacts towards hedgehogs are considered to be a residual potential.

5.5.4.3 Any potential impacts towards hedgehogs are considered able to be mitigated for with the implementation of general precautionary methods during the development of the site. No further survey effort is proposed for this species.

5.5.5 **Aquatic / Riparian Mammals**

5.5.5.1 No presence of Eurasian otter or European water vole was recorded within the site. No field sign evidence suggesting the use of the site by these species was recorded at the time of the survey.

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5.5.5.2 The river Don outside the property's southern boundary is considered to provide suitability for use by water voles and otter for transient use. The riverbanks are deemed to provide no suitability for use by otter or water vole for burrows / holts.

5.5.5.3 Records returned by BBRC suggest the presence of American mink using the Don in the vicinity of Oxspring which would reduce the suitability of the watercourse for them due to an increased risk of predation.

5.5.5.4 Recent prior survey effort along the Don for otters have been conducted (Results of Otter Survey on 7th June 2024, SLR Consulting Ltd, SLR Project No.: 424.065129.00001, 2024). No holts were recorded, though many instances of field sign evidence suggesting presence, namely footprints and spraints were recorded within the vicinity of the site.

5.5.5.5 Any potential impacts towards otter are considered able to be mitigated for with the implementation of general precautionary methods during the development of the site. No direct impacts towards water vole are anticipated for this development.

5.5.5.6 Indirect impacts towards aquatic / riparian mammals, such as water, light and noise pollution during the construction phase of development, are recommended to be mitigated for with the implementation of a CEMP.

5.5.6 Amphibians and Reptiles

5.5.6.1 No amphibians or field sign evidence suggesting the presence of any such species was recorded on site during the survey. No reptiles or field sign evidence suggesting the presence of any such species was recorded on site during the survey.

5.5.6.2 The majority of the site is comprised of short-sward grassland which is deemed to provide little for herptiles given an increased risk of aerial predation. Habitats surrounding the site, such as ruderal / ephemeral, woodland, and the River Don are all considered to provide suitability for such species. The site and proximal habitats are not deemed to be functionally suitable for breeding great crested newt populations.

5.5.6.3 Direct impacts towards common amphibians and reptiles are considered to be a residual potential during the development of the site. Any potential impacts towards amphibians are considered able to be mitigated for with the implementation of general precautionary methods during the development of the site. No further survey effort is proposed for this species.

5.5.6.4 Indirect impacts towards herptiles are considered a potential via contamination of the River Don during the construction phase of development. A CEMP has been recommended to mitigate for any potential pollutants which may affect this watercourse as well as any aquatically linked receptors.

5.5.7 Other species

5.5.7.1 The River Don is deemed to provide a low level of suitability for use by white-clawed crayfish. No field sign evidence suggesting the presence of this species was recorded on site during the survey. Direct impacts are not anticipated given no encroachment into the Don is proposed. Indirect impacts affecting the Don, such as water runoff during site construction are deemed able to be mitigated for with the implementation

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of a CEMP.

5.5.7.2 Furthermore, the River Don corridor has been identified as being used by kingfisher during previous survey effort on the site (2023). Direct impacts are not anticipated given no encroachment into the Don is proposed. Indirect impacts affecting the Don, such as noise, light, and dust pollution during site construction are deemed able to be mitigated for with the implementation of a CEMP.

5.5.7.3 The site does not support suitable habitat for any other protected or significant fauna, such as barn owl (*Tyto alba*), brown hare (*Lepus europaeus*), or dormouse (*Muscardinus avellanarius*). No impacts towards these species are anticipated.

6 Conclusions

6.1 Designated Sites

6.1.1 No Statutory Designated Site were recorded within the search radius.

6.1.2 No Non-statutory Designated Sites were recorded within the search radius.

6.1.3 With consideration to the scale and scope of the proposed development at the site, no direct impacts towards any designated sites are anticipated.

6.1.4 Indirect impacts towards designated sites, namely the Romticle Viaduct and Thurgoland Tunnels Local Wildlife Site, located approximately 1.3 km southeast from the site are considered a potential as the River Don acts as a direct transmission pathway between the sites.

6.1.5 A Construction Environmental Management plan is considered required mitigation to address indirect impacts associated with the construction phase of development, namely dust and water runoff which may impact the Don and any aquatically linked designated sites.

6.2 Habitats and Vegetation

6.2.1.1 Land designated as 'Priority Habitat Deciduous Woodland' is recorded on the site, however, this small area is physically comprised of artificial unsealed surface and not woodland.

6.2.1.2 Priority habitat Deciduous Woodland and Ancient Semi-natural Woodland are present immediately adjacent to the site outside the north and western boundaries. A CEMP has been recommended to mitigate for any direct or indirect impacts which may affect this habitat during the construction phase of development.

6.2.2 No trees which are on the Ancient Tree Inventory were recorded on site.

6.2.3 No confirmed protected or notable flora listed on Schedule 8 of the Wildlife and Countryside Act 1981 (as amended) were recorded on site.

6.2.4 One non-native invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) were recorded during the survey in the south of the property, namely Himalayan balsam. Further examples of this species as well as sparce examples

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of Japanese knotweed were recorded outside the site in the woodland to the west. Recommendations regarding its appropriate removal are provided in the conclusion of this report, if required.

6.3 Recommendations for Further Surveys / Mitigation

6.3.1 Birds

6.3.1.1 It is recommended that any trees are subject to a breeding birds check prior to removal or further management, if required. It is recommended any clearance of the suitable vegetation is conducted outside of the breeding bird season which is typically recognised as March to September (inclusive).

6.3.1.2 Should these timings not be feasible, then a walkover survey / breeding bird check prior to the should be conducted in advance of the impactful works to ensure there is no breeding bird activity before the removal or disturbance. A breeding bird check will be valid for 48 hours given the highly mobile nature of birds; the impactful works should be fully completed within this period following a breeding bird check.

6.3.1.3 Should birds of any species be recorded nesting, breeding, or attempting to breed, then a suitable buffer should be erected as advised by a suitably qualified ecologist. The buffer should be retained until breeding has ceased and the young have fledged.

6.3.2 Bats

6.3.2.1 Three trees are recorded within the south of the property outside the development site which have been assessed as offering potential to be used by roosting bats. Previous survey effort (2023) has recorded no bats using these trees; however, the potential is still considered present.

6.3.2.2 It is understood that these trees will be retained, subject to the installation of bird / bat boxes on their trunks. The management of overhanging and dead / broken limbs are also considered a potential likelihood. It is recommended that any management of these trees, such as the removal of dead branches, is conducted under precautionary methods to ensure no bats are disturbed during the process. Soft-felling techniques are recommended.

6.3.2.3 No further survey effort is recommended.

6.3.3 Construction Environmental Management Plan (CEMP)

6.3.3.1 Due to the presence of sensitive receptors within close proximity of the site, a CEMP is deemed necessary. Any impacts during the demolition and construction phases of the proposed project on sensitive receptors, namely the River Don and the surrounding Priority Habitat Deciduous Woodland including Ancient Semi-natural Woodland, should be mitigated via the implementation of a CEMP.

6.3.3.2 A Construction Environmental Management plan is considered required mitigation to address indirect impacts associated with the construction phase of development, namely dust and water runoff. Such impacts may also impact designated sites downstream of the site, namely the Romticle Viaduct and Thurgoland Tunnels Local Wildlife Site.

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6.3.3.3 Impacts of noise and light are also recommended to be addressed in a CEMP to mitigate the use of the River Don and surrounding habitats for use by protected species, such as commuting / foraging local bat populations and for Kingfisher. Due to the proximity of the proposed development to the river corridor, hoarding is recommended to provide a physical barrier between the site and the river to mitigate the indirect impacts of noise, light, and dust during the construction phase of development.

6.3.3.4 In addition, the CEMP is considered to provide suitable mitigation to address any residual impact affecting any protected species which may be using the River Done or any aquatically connected receptors. This is relevant for water vole, otter, white-clawed crayfish, amphibians, and reptiles.

6.3.4 Precautionary Methods Statement

6.3.4.1 With respects to the site and its habitats, there is considered a residual potential for badger, otter, hedgehogs, reptiles, and amphibians to be impacted during the works on site.

6.3.4.2 A precautionary method statement is recommended to mitigate any potential impacts towards this protected species, during the construction phase of the site. The details of these precautions may be outlined within the required CEMP.

6.3.4.3 If such species is encountered during the construction phase of development, works on site should cease and a suitably qualified ecologist consulted.

6.3.5 Schedule 9 Non-native Invasive Species

6.3.5.1 Himalayan balsam is recorded within the wider property along the Don in multiple small stands along both banks (Appendix One). This is a species on the schedule 9 listed plants on the wildlife and countryside act 1981. It is an offence to knowingly and intentionally spread any plant listed on schedule 9. A single instance of Japanese knotweed was also recorded outside the site to the southwest also along the river corridor.

6.3.5.2 It is not an offence to have the species on land, as long as it is not spread. It is recommended to consider not to disturb the species during the development of the site to reduce the risk of breaching biosecurity.

6.3.5.3 If the removal of the species is desired, the removal will require the entire root systems to be removed to prevent the species regrowing. All plant material of each genus must be kept within itself when removed from its rooted location. Furthermore, care must be taken during removal to ensure no botanical matter is left on site which could subsequently germinate and grow.

6.3.5.4 Once all of the species' material has been removed, one option is to take it to a licensed landfill to be disposed of. Another option is to burn it on site; however, prior notice must first be given to the Environment Agency to make them aware of the burning of the material.

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7 Biodiversity Enhancement & Biodiversity Net Gain (BNG)

7.1 In line with National planning Policy Framework (2024) the application should demonstrate biodiversity enhancements.

7.2 Due to the size of the site and location, applicable specific habitat enhancements could include:

- A planting scheme should be implemented within the scheme to create greenspace within the site. Plantings should comprise native species of high biodiversity value.
- Bird and boxes are already proposed for this scheme which have been deemed to be suitable and locally appropriate.

7.3 In line with national policy, developments submitted for planning after the 12th of February 2024, with some exceptions, are expected to achieve a 10% net gain minimum increase in site biodiversity value from the existing baseline assessment.

7.4 The outcome of the BNG assessment is detailed in a separate report (Report ref: SQ-3269b, June 2025).

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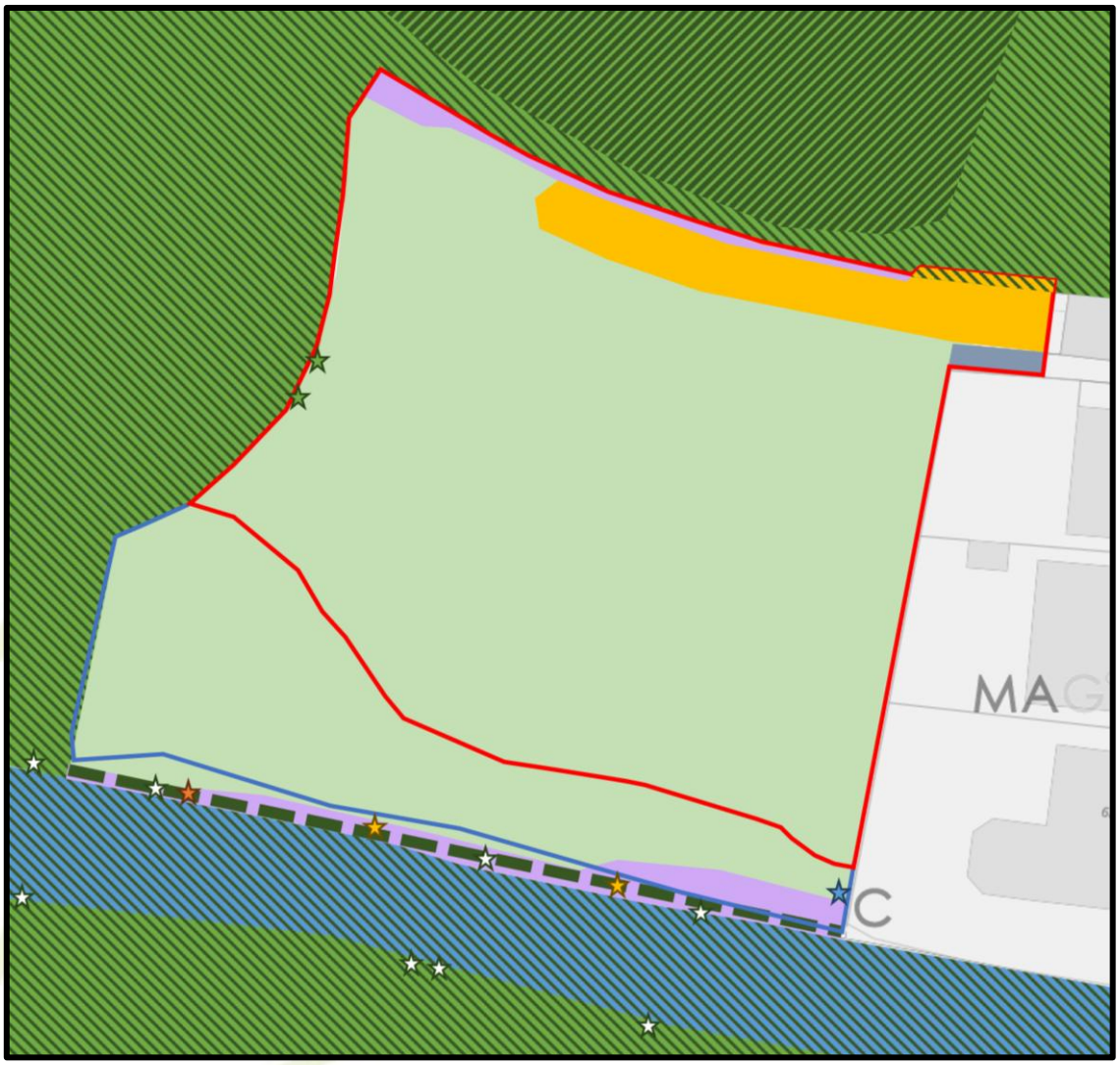
Appendix One: Phase One Habitats Map



Phase-One Habitat Key			
	Redline Boundary		Grass clippings pile refugia
	Blueline Wider Property Boundary		Trees overhanging into site (suitable breeding bird habitat)
	Modified Grassland		Tree with Low bat roost suitability
	Artificial Unvegetated Unsealed Surface		Tree with Moderate bat roost suitability & tree housing nuthatches & Tree with dead limbs
	Developed Land Sealed Surface		Non-native invasive Schedule 9 species
	Ruderal Ephemeral		
	Deciduous Woodland (Suitable badger, hedgehog, breeding bird habitat)		
	Priority Habitat Deciduous Woodland		
	Ancient Semi-natural Woodland		
	River Don (Suitable otter, bat, kingfisher habitat)		
	Line of Trees		

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Appendix Two: Species list (Redline and Blueline including River Don)

Vernacular	Taxon
Fauna	
Herron	*Ardea cinerea*
Nuthatch	*Sitta europaea*
Flora	
Bent grass	*Agrostis sp.*
Birds Foot Trefoil	*Lotus corniculatus*
Bluebell	*Hyacinthoides non-scripta*
Bracken	*Pteridium aquilinum*
Bramble	*Rubus fruticosus*
Bristly oxtongue	*Helminthotheca echioides*
Broadleaf plantain	*Plantago major*
Butterbur	*Petasites hybridus*
Cleavers	*Galium aparine*
Clover	*Trifolium sp.*
Cocksfoot	*Dactylis glomerata*
Common daisy	*Belis perennis*
Common dandelion	*Taraxacum officinale*
Common hogweed	*Heracleum sphondylium*
Common nettle	*Urtica dioica*
Common ragwort	*Senecio jacobaea*
Common reed	*Phragmites australis*
Common Vetch	*Vicia sativa*
Common Vetch	*Vicia sativa*
Creeping buttercup	*Ranunculus repens*
Creeping thistle	*Cirsium arvense*
Elderberry	*Sambucus nigra*
Fescue	*Festuca sp.*
Forget me not	*Myosotis sp.*
Great Wood Rush	*Luzula sylvatica*
Greater Plantain	*Plantago major*
Greater reedmace	*Typha Latifolia*
Hairy Willowherb	*Epilobium hirstum*
Hawthorn	*Crataegus monogyna*
Herb Robert	*Geranium robertianium*
Himalayan balsam	*Impatiens glandulifera*
Horsetail	*Equisetum arvense*
Ivy	*Hedera helix*
Lawn Leaf	*Dichondra micrantha*
Lesser Hawkbit	*Leontodon saxatilis*
Perennial rye grass	*Lolium perenne*
Red Campion	*Silene dioica*
Ribwort plantain	*Plantago lanceolata*
Rosebay willowherb	*Chamerion angustifolium*

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Soft Rush	*Juncus effusus*
Willow	*Salix sp.*
Wood Avens	*Geum urbanum*
Wood Spurge	*Euphorbia amygdaloides*
Yarrow	*Achillea millefolium*
Yorkshire Fog	*Holcus lanatus*

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