Preliminary Ecological Appraisal (PEA) Survey Report	
For:	Yorkshire Land
Site:	Land Adjoining Smithy House, Bower Hill Road, Oxspring, Sheffield, S36 8WZ
Report Date:	23rd of May 2025
Report Reference:	SQ-3283

Surveying Ecologists:

John Davies BSc (Hons)
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Client:	Yorkshire Land
Site Name:	Land Adjoining Smithy House
Grid Reference:	SE 27216 02011
Report:	Preliminary Ecological Appraisal
Date of Survey:	13th of May 2025
Surveying Ecologists:	John Davies BSc (Hons), Marie McAvan BSc (Hons) MSc

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1	1	FINAL	23/05/2025	Marie McAvan BSc (Hons) MSc – Estrada Ecology Ltd.	Natasha Estrada MRes, MCIEEM- Estrada Ecology Ltd
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The contents of this report have been produced with consideration of the 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 examined area, spanning 0.33 hectares, is situated to the east of Oxspring village, with its immediate surroundings comprising houses to the south, a road to the west, a crop field to the east, and a picnic area alongside the River Don to the north. This positioning places the site within a region of notable connectivity, bordered by the eastward-flowing River Don through the village, surrounded by woodlands, hedgerows, cropland, and scattered villages, all contributing to its ecological context. The primary habitat within this site is classified as modified grassland and short ephemeral vegetation, both habitats are described as being in poor condition from being managed through the application of weed killer and from annual flailing.

Secondary habitat types identified within the site include individual trees and native hedgerow. Some individual trees have been recently removed and in line with current guidelines, have been considered retrospectively and scored as 'good'. The native hedgerow was also noted to be in poor condition due to the intense management of adjacent ground.

Findings

Suitable habitats for breeding birds were recorded within the site. Recommendations in respect of breeding birds are given in the conclusion of this report.

The site was deemed to hold potential suitability for European Hedgehog *(Erinaceus europaeus)* habitats. Recommendations in regard to European hedgehogs are given in the conclusion of this report.

No suitable habitats for bats were recorded within the site, all trees on site were individually surveyed and found to have **negligible** bat roost suitability. No further survey effort is recommended.

The site was deemed to hold potential suitability for European Badger *(Meles meles)* habitats. Recommendations in regard to European Badgers are given in the conclusion of this report.

The site was deemed to hold some suitability for reptile and amphibian habitats. Recommendations in regard to reptiles and amphibians are given in the conclusion of this report.

The site was deemed to hold negligible suitability for riparian mammal habitats. No further studies are recommended at this stage.

A Construction Environment Management Plan (CEMP) is recommended to mitigate potential impacts of runoff pollutants of the site during works.

No species listed on Schedule 8 of the Wildlife and Countryside Act 1981 were recorded within the site. No species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) were recorded within the site.

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

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Appendices and References

Whilst every effort has been made 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.

1 Introduction and Background to the Site

1.1 Estrada Ecology Ltd was commissioned to conduct a Preliminary Ecological Appraisal (PEA) of the Land Adjoining Smithy House, Bower Hill Road, Oxspring, Sheffield, S36 8WZ.

1.2 The site consists of:

- Modified grassland
- Scattered trees
- Native hedgerow
- Short ephemeral vegetation

1.3 It is understood that the current development proposal is redevelopment, subject to the necessary consents.

1.4 Report Objectives

- Present the findings of the ecological survey.
- Assess the potential of existing on-site 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).

1.5 Site Location and Wider Area

1.5.1 The surrounding site is comprised of houses to the immediate south and southwest. Bower Hill Road immediately to the west with further residential buildings beyond. A crop field is to the east. A picnic area alongside the river Don is beyond the hedgerow to the north.

1.5.2 The survey site's central OS grid reference is SE 27216 02011.

1.5.3 The site is located to the east of Oxspring village, 3.3 km north of the town of Stocksbridge and 2 km east of the town of Penistone. The River Don runs eastwards through the village and 50 m north of the site boundary. Further pockets of woodland and hedgerows add to the connectivity of this site to the wider landscape. Beyond the immediate village is surrounding cropland, woodland and scattered villages.

1.5.4 There were no buildings on the survey site.

Figure 1: The survey site within its wider setting.



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, 2023), 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 further enhance the conservation status of Species and Principal Habitats.

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 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, such as bats (all species) and great crested newt (*Triturus cristatus*), are afforded protection under the Conservation of Habitats and Species Regulations 2017, as well as under 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.
- 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.

2.6.3 **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.

2.6.4 **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.

2.6.5 **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.

2.6.6 **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 or dead otters, or parts of otters.

2.6.7 **European Water voles** are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 and are 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).

3 Survey Methodology

3.1 Desktop Survey

3.1.1 A biological data records search was commissioned from Barnsley Biological Records Centre for a 2 km radius from the 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 a 2 km radius from grid.

3.1.4 Natural England's Geoportal: England-wide data for great crested newts (GCN) was analysed for any records within a 1km 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.

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 experienced ecologist; John Davies BSc (Hons) and Junior Ecologist Marie Brown BSc (Hons) MSc using methodology based on that described in the UK Habitat Classification User Manual Version 2.0 (2023) and CIEEM's Guidelines for Ecological Impact Assessment (2018).

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 grassland, log and rubble piles, compost heaps.	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 afternoon of 13th of May 2025.

3.3.2 Weather conditions at the time of the site visit were sunny with a light breeze and temperatures of 22°C.

3.4 Personnel

3.4.1 The survey was undertaken by John Davies BSc (Hons) and Marie McAvan BSc (Hons) MSc.

3.4.2 All surveying ecologists worked 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 on-site 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).

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.

4.3 The site was considered fully surveyed during the site visit.

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 as follows:

Table 2: Recorded Habitats Within the Site Boundaries.

Habitat	UK HABS Codes	
	Primary	Secondary
Modified Grassland	**g4**	-
Individual Trees	g	**32**
Native Hedgerow	**h2a6**	-
Short Ephemeral Vegetation	g	**81**

5.1.1.2 A map of all habitats can be seen in appendix one. A list of all species recorded on the site during the survey can be found in appendix two.

5.1.2 Modified Grassland

5.1.2.1 One parcel of modified grassland can be found along the western site border between the edge of Bower Hill Road and an old stone wall; this has been scorched by recent dry weather. The remaining grassland is found to the east of the site. This grassland is sparse with low species diversity due to management of this land with herbicides and annual flailing. Modified grassland has been assigned to this habitat as there is no current evidence of species diversity associated with other forms of grassland. Analysis of historic imagery from Google Maps, Google Eartha and Google Street View indicate a more diverse grassland on site previously, however, an accurate habitat identification cannot be completed from the image quality available.

5.1.2.2 Species recorded within this habitat include predominantly perennial rye grass *(Lolium perenne)* with occasional common vetch *(Vicia sativa)*, Yorkshire fog *(Holcus lanatus)*, gorse *(Ulex europaeus)*, spear thistle *(Cirsium vulgare)*, broad leaved dock *(Rumex obtusifolius)*, bramble *(Rubus fruticosus)* and weld *(Reseda luteola)*.

5.1.2.3 Under current works proposals, this habitat will be impacted. Recommendations regarding this habitat and any species within it are given in the conclusion of this report.

Figure 2: Modified Grassland



5.1.3 Short Ephemeral Vegetation

5.1.3.1 The majority of this site is short ephemeral vegetation with some ruderal species. This area has also been previously managed with herbicides as well as annual flailing. There are two areas of rubble with taller sward ephemeral growth that has residual potential to be utilised by hedgehogs or herptiles are a place of refugia. The remainder of this habitat has sparse vegetation growth with only limited peripheral areas that offer dense enough vegetation to be utilised as effectual cover for commuting and foraging hedgehogs and herptiles.

5.1.3.2 Species recorded within this habitat include Bethlehem lungwort *(Pulmonaria saccharata)*, Welsh poppy *(Meconopsis cambrica)*, perennial rye grass, spear thistle, common nettle *(Urtica dioica)*, broad leaved dock, forget me not *(Myosotis sp.)*, wood spurge *(Euphorbia amygdaloides)*, cow parsley *(Anthriscus sylvestris)*, rosebay willowherb *(Chamerion angustifolium)*, hairy willowherb *(Epilobium hirstum)*, white goosefoot *(Chenopodium album)*, common hogweed *(Heracleum sphondylium)*, creeping buttercup *(Ranunculus repens)*, lesser hawkbit *(Leontodon saxatilis)*, wood sage *(Teucrium Scorodonia)*, cleavers *(Galium aparine)* and sweet pea *(Lathyrus odoratus)*.

5.1.3.3 Under current works proposals, this habitat will be impacted. Recommendations regarding this habitat and any species within it are given in the conclusion of this report.

Figure 3: Ephemeral Vegetation




5.1.4 Individual Trees

5.1.4.1 Four trees are currently found on site including a medium sycamore *(Acer pseudoplatanus)* to the west of the site and three further trees in the northwestern corner of the site boundary. These trees were all assessed individually and found to have no features that can be used by roosting bats. All trees are assessed as having **negligible** bat roost suitability.

5.1.4.2 Nine other trees had been recently felled on site.

5.1.4.3 Species recorded within this habitat include sycamore, Turkey oak *(Quercus cerris)*, apple *(Malus sp.)*, rowan *(Sorbus aucuparia)* and elderberry *(Sambucus nigra)*.

5.1.4.4 Under current works proposals, this habitat will be impacted. Recommendations regarding this habitat and any species within it are given in the conclusion of this report.

Figure 4: Individual Trees







5.1.5 Native Hedgerow

5.1.5.1 Along the northwest border is a length of native hedgerow which separates this site from a picnic area and the River Don to the north of the site. This habitat is suitable for use by breeding birds as well as a foraging and commuting route for bats. This hedgerow may also be used as refugia and foraging areas for hedgehogs and herptiles particularly due to its proximity with the River Don 50 m north of site.

5.1.5.2 Species recorded within this habitat include elderberry, hawthorn *(Crataegus monogyna)*, bramble, rock buckthorn *(Rhamnus saxatilis)* and European ash *(Fraxinus excelsior)*.

5.1.5.3 Under current works proposals, this habitat will be impacted. Recommendations regarding this habitat and any species within it are given in the conclusion of this report.

Figure 5: Native Hedgerow




5.2 Desktop Survey Results

5.2.1 Barnsley Biological Records Centre 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:

Table 3: Records found within the search radius.

Species	Number of Records	Closest Record	Notes
Bats	21	91 m	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.
Badgers	-	-	Records pertaining to Eurasian badger are omitted from this report due to the sensitivity of the data. Full consideration has been given to any records for the conclusions of this report.
Hedgehogs	7	306 m	Seven records of hedgehogs were returned within the search area between 1983 and 2021.
Brown Hare	5	357 m	Five records of brown hare were returned by the data search between 2012 and 2021.
Amphibians	5	417 m	Teo 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 reptile records were returned by the data search.
Water Vole	4	637 m	Four records of water vole (*Arvicola terrestris*) were returned between 1988 and 1997.

5.2.2 Consultation with Barnsley Biological Records Centre returned one European Protected Species Mitigation Licence within a 2 km radius from grid.

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

Licence Number	Date	Location from Site	Species	Purpose
2020-46131-EPS-MIT	2020-2023	294 meters southwest	Common Pipistrelle	Disturbance of a Breeding Site

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

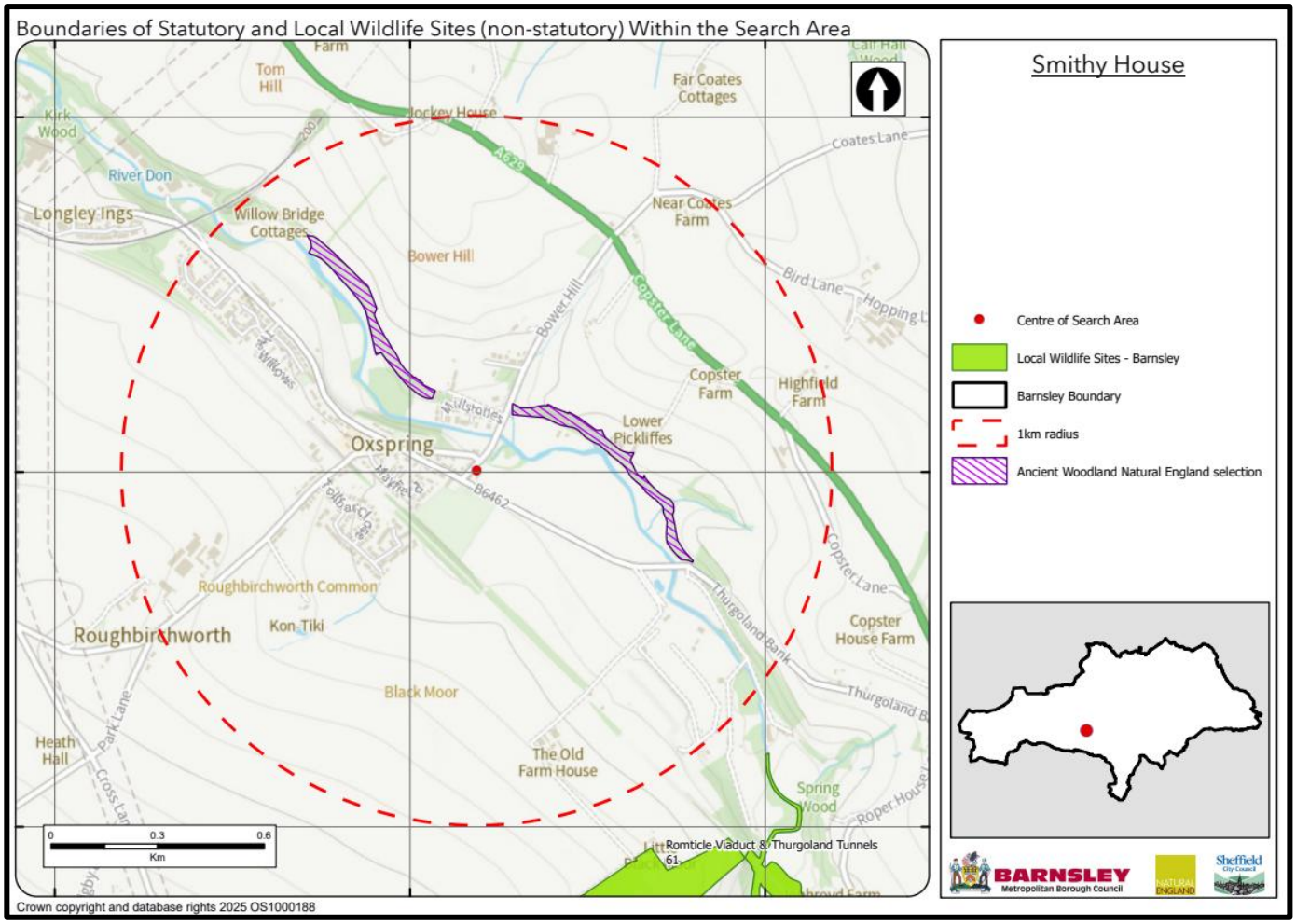
5.3.1 Consultation with Barnsley Biological Records Centre returned zero Statutory Designated Sites within the 2 km search radius from grid.

5.3.2 Consultation with Barnsley Biological Records Centre returned one Non-Statutory Designated Sites within the 2 km search radius from grid.

Table 5: Non-statutory designated sites within the search radius

Site Name	Designation	Location from Site	Risk of Impacts
Romticle Viaduct and Thurgoland Tunnels	Local Wildlife Site (LWS)	1222 meters southeast	Negligible

Figure 6: Non-statutory Designated Sites Within the Search Radius



5.4 Priority Habitats and Priority Species

5.4.1 No priority habitats were recorded within the redline site boundary.

5.4.2 Two priority habitats were recorded outside the redline site boundary but within the search radius as displayed in table 6 below.

Table 6: Priority Habitats outside the Site Boundary but within the Search Radius

Habitat Type	Habitat Description
Ancient and Semi-Natural Woodland	Ten compartments within search radius, the closest of which is 151 m northeast of site
Deciduous Woodland	Multiple compartments, the closest of which is 151 m northeast of site.

5.4.3 No protected species listed on Schedule 8 of the Wildlife and Countryside Act 1981 (as amended) were recorded within the application boundary.

5.4.4 No non-native / invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) were recorded within the site boundary.

5.5 Protected Species

5.5.1 Breeding Birds

5.5.1.1 No current or historic evidence of breeding birds using the site was recorded within the surveyed area. It is predicted that birds will be affected by disturbance levels/proposed works.

5.5.1.2 Currently, the works on site require the removal of one or more trees.

5.5.1.3 Suitable habitats were recorded within the site in which, birds could potentially utilise for nesting and breeding purposes including scattered trees and native hedgerow. Further recommendations have been made within this report.

5.5.2 Bats

5.5.2.1 The trees within the site were deemed as offering **negligible** potential to be used by bats for roosting, as assessed by John Davies BSc (Hons) and Marie Brown BSc (Hons) MSc. No further survey effort is required for this site regarding bats.

5.5.2.2 There are no buildings within the site.

5.5.2.3 The site does not constitute as likely major foraging or commuting ground, based on the habitat composition. The site and/or nearby area has been deemed to provide suitability for use by local bat populations for foraging and commuting. It is predicted that bats will be affected by disturbance levels/proposed works.

5.5.2.4 A lighting scheme is considered for the development if additional lighting is proposed, with the aim of reducing light splay towards the woodland habitats adjacent to the site boundaries. The purpose of this scheme is to ensure a reduction in impacts towards the local bat population. Further recommendations regarding bats have been made within this report.

5.5.3 Badger

5.5.3.1 No field sign evidence of badgers was recorded within the site during the survey. Suitable habitats for foraging and commuting badgers are present on site where ephemeral

vegetation is dense on the site periphery.

5.5.3.2 The habitats on site are deemed to hold negligible suitability for badgers. Suitable adjacent habitat is present to the north of site with connectivity to woodlands along the River Don.

5.5.3.3 Recommendations regarding Eurasian Badgers are given within the conclusion of this report.

5.5.4 European Hedgehog

5.5.4.1 There is potential for hedgehogs to be found within the site. No field-sign evidence was recorded during the survey. Suitable habitat was recorded on site for foraging and commuting hedgehogs in the form of ephemeral vegetation and hedgerow. Hedgerows and piles of rubble on site are suitable for use as refugia for hedgehogs.

5.5.4.2 Recommendations regarding European Hedgehogs are given within the conclusion of this report.

5.5.5 Riparian/Aquatic Mammals

5.5.5.1 No field sign evidence for aquatic mammals was recorded within the site.

5.5.5.2 Aquatic habitat deemed suitable for use by aquatic mammals was recorded within in the immediate environment, but not within the curtilage of the site. The River Don is 50 m north of the site. No suitable aquatic habitat was recorded within the site.

5.5.5.3 No terrestrial habitat deemed suitable for usage by aquatic mammals was recorded within the curtilage of the site. Suitable terrestrial habitat is located 50 m north along the banks of the River Don.

5.5.5.4 Further recommendations regarding riparian mammals are included within this report.

5.5.6 Amphibians

5.5.6.1 The site is deemed to offer low suitability for amphibians. No presence of great crested newts was detected within the site during the survey; the great crested newt risk level is green.

5.5.6.2 Suitable habitats for amphibians were recorded within the site for amphibians in the form of rubble piles, hedgerows and stone walls that could act as refugia as well as ephemeral vegetation. No aquatic habitats are present on site. Both aquatic and terrestrial habitats suitable for amphibians were detected outside the site, within a 500m radius from the central grid reference in the form of the River Don, 50 m north of site. An eDNA will not be run on this site.

5.5.6.3 There is suitable connectivity between the site and the River Don in the form of hedgerows that run alongside the north of the site.

5.5.6.4 Recommendations regarding amphibians are given within the conclusion of this report.

5.5.7 Reptiles

5.5.7.1 The site holds low potential for reptiles to be present.

5.5.7.2 No aquatic habitat deemed suitable for use by reptiles was recorded within the curtilage of the site.

5.5.7.3 Ephemeral vegetation habitat deemed suitable for use by reptiles was recorded within the curtilage of the site as well as rubble piles that can be utilised as refugia.

5.5.7.4 Suitable connectivity for utilisation by reptiles was recorded during the survey, the details of which included hedgerows leading to the River Don.

5.5.7.5 Recommendations regarding reptiles are given within the conclusion of this report.

5.5.8 Other species

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

6 Conclusions

6.1 Designated Sites

6.1.1 No Statutory Designated Sites were recorded within the 2 km search radius.

6.1.2 One Non-Statutory Designated Sites were recorded within the 2 km search radius. The risk to Romticle Viaduct and Thurgoland Tunnels LWS is negligible.

6.1.3 The site is not recorded as being within any notable designated sites.

6.1.4 The site is within the very outer impact zone for Spring Meadows, Alderman's Head and Cow Croft Meadows SSSI – no consultation with Natural England is required regarding the proposed development on this site.

6.2 Habitats and Vegetation

6.2.1 No priority habitats were recorded within the redline boundary.

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

6.2.3 No protected or notable flora listed on Schedule 8 of the Wildlife and Countryside Act 1981 (as amended) was recorded during the survey.

6.2.4 No non-native invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) were recorded during the survey.

6.3 Recommendations for Further Surveys / Mitigation

6.3.1 Birds

6.3.1.1 Suitable habitats are recorded within the site in the form of scattered trees and hedgerows which birds could utilise. If vegetation is to be removed within the breeding bird season (typically March to September inclusive), a pre-works check is required prior to removal to ensure nests are not impacted. If this is not feasible, a pre-works check may be required prior to the on-set of works.

6.3.1.2 Should birds be recorded breeding, 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 No bats were recorded in situ. In addition, field signs of bats were not recorded on the site.

6.3.2.2 Trees were located within the site. All trees were surveyed individually. There were no features detected within the site that were assessed as having potential to provide suitability for roosting or serving as a place of rest.

6.3.2.3 Due to the lack of potential roosting features, no further surveys are recommended for roosting bats.

6.3.2.4 Suitable habitats for foraging and commuting are present on site in the form of hedgerows. The River Don is 50 m north of the site as well as further hedgerows and woodland. A lighting scheme is recommended for the development if additional lighting is proposed, with the aim of reducing light splay towards the habitats adjacent to the site boundaries. The purpose of this scheme is to ensure a reduction in impacts towards the local bat population.

6.3.3 European Hedgehog, Eurasian Badgers, Riparian Mammals, Amphibians and Reptiles

6.3.3.1 No field sign evidence was recorded within the site during the survey. However, due to the suitability of habitats within the site and the surrounding area, it is deemed necessary for a precautionary method statement to be adopted within the scheme to ensure European hedgehogs are not impacted. This will detail the requirement for an Ecological Clerk of Works to be present prior to works commencing.

6.3.4 Schedule 9 Species

6.3.4.1 No schedule 9 species have been identified within the site during the survey. Therefore, no further action is needed in regard to invasive species. Should any schedule 9 species be identified, a suitable ecologist should be notified.

6.3.5 Construction Environmental Management Plan (CEMP)

6.3.5.1 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 should be mitigated for via the implementation of a CEMP.

6.3.5.2 Sensitive receptors at this site include:

- The River Don 50 m north of site
- Ancient and Semi- Natural Woodland 151 m northeast of site
- Deciduous Woodland 151 m northeast of site

6.3.5.3 A CEMP is deemed sufficient to remove and mitigate any potential impacts on nearby receptors, given size and scope of the proposed developments. Such potential impacts include dust, light, noise, and runoff pollution resulting from works on the site. The CEMP will also ensure that important wildflower connectivity is not impacted by the site proposals. The CEMP should have input from a suitably qualified and experienced ecologist.

7 Biodiversity Enhancement and Biodiversity Net Gain Baseline

7.1 In line with the National planning Policy Framework (2024) the application should demonstrate biodiversity enhancements. Upon finalisation of plans, calculations can be compiled.

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

- Bat and bird boxes integrated into the scheme design to enhance roosting provision over the wider site.
- A planting scheme should be implemented within the scheme to create a greenspace within the site. Plantings should comprise native species of high biodiversity value.
- Boundary features should be kept open and allow passage for small mammals such as hedgehogs.

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 A baseline assessment of the site and condition assessment of the habitats present was conducted during the survey which was conducted inside the growing season. The results of the baseline BNG assessment are outlined below. Units are given to two decimal places.

Table 7: Statutory Metric Baseline

Area Habitat	**UK HABS codes**		**Condition Assessment/ Strategic Significance**	**Size / length**	**Baseline Units (2 d.p.)**
	Primary	*Secondary*			
Modified Grassland	**g4**	-	Poor / No strategic significance	0.1222 ha	0.24
Ephemeral Vegetation	g	**81**	Poor / No strategic significance	0.2140 ha	0.43
Scattered Trees	g	**32**	Moderate / Named in local strategy	0.0529	0.49
Scattered Trees (recently felled)	g	**32**	Good / Named in local strategy	0.1212	1.67
Native Hedgerow	h2a6	-	Poor / Named in local strategy	0.026 km	0.06

7.5 The total value of the site at the baseline is calculated to be 2.83 area habitat units and 0.06 linear (hedgerow) units. No watercourse units are recorded on the baseline. No irreplaceable habitats are recorded on the baseline.

Figure 7: Statutory Metric Baseline

Land adjoining Smithy House			
Headline Results	Return to results menu		
Scroll down for final results ⚠			
On-site baseline		*Habitat units*	2.83
		Hedgerow units	0.06
		Watercourse units	0.00
On-site post-intervention (Including habitat retention, creation & enhancement)		*Habitat units*	0.00
		Hedgerow units	0.00
		Watercourse units	0.00
On-site net change (units & percentage)		*Habitat units*	-2.83
		Hedgerow units	-0.06
		Watercourse units	0.00

7.6 To achieve the target 10% net gain, the site post-development will need to provide a total value of 3.11 area habitat units, and 0.07 linear habitats, minimum.

FINAL RESULTS			
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)		*Habitat units*	-2.83
		Hedgerow units	-0.06
		Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)		*Habitat units*	-100.00%
		Hedgerow units	-100.00%
		Watercourse units	0.00%
Trading rules satisfied?		No - Check Trading Summaries ▲	

Area created must match area lost for both onsite and offsite ▲

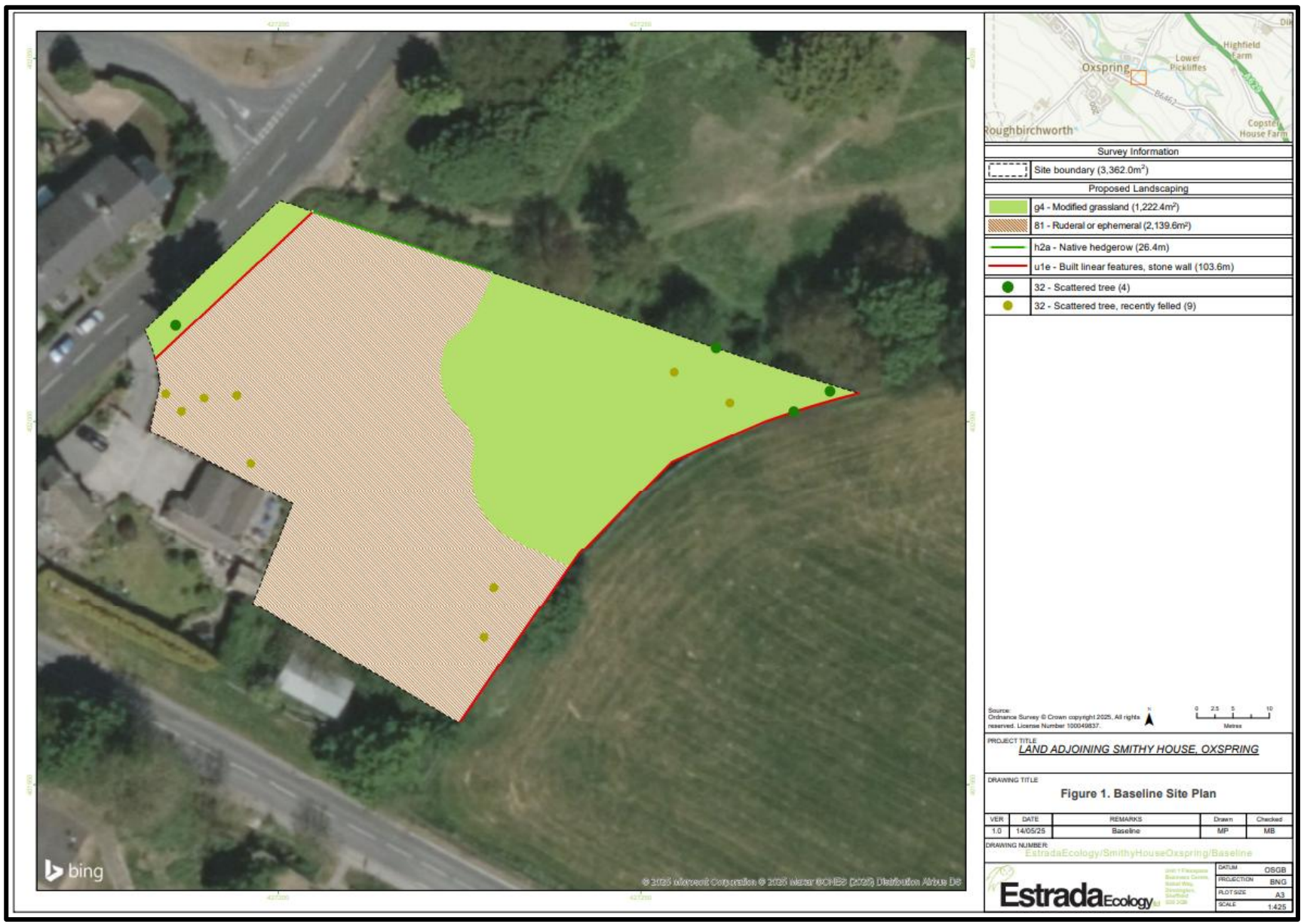
Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00%	2.83	3.11	3.11
Hedgerow units	10.00%	0.06	0.07	0.07
Watercourse units	10.00%	0.00	0.00	0.00

Figure 8: Statutory Metric Final Results

7.7 The current proposals for the site are believed to be redevelopment to create residential dwellings with associated vegetated gardens.

7.8 Once a development / landscaping scheme is compiled, a full BNG assessment can be completed. The development / landscaping scheme should consider how to achieve 10% net gain within the development boundaries and satisfy the Trading Summaries. If on-site 10% net gain cannot be achieved, offsetting units may be a requirement.

Appendix One: Map of habitats on site - measured



Appendix Two: Species list (on site)

Vernacular	Taxon
Flora	
Apple	*Malus sp.*
Bethlehem Lungwort	*Pulmonaria saccharata*
Bramble	*Rubus fruticosus*
Broad Leaved Dock	*Rumex obtusifolius*
Cleavers	*Galium aparine*
Common Hogweed	*Heracleum sphondylium*
Common Nettle	*Urtica dioica*
Common Vetch	*Vicia sativa*
Cow Parsley	*Anthriscus sylvestris*
Creeping Buttercup	*Ranunculus repens*
Elderberry	*Sambucus nigra*
European Ash	*Fraxinus excelsior*
Forget me not	*Myosotis sp.*
Gorse	*Ulex europaeus*
Hairy Willowherb	*Epilobium hirstum*
Hawthorn	*Crataegus monogyna*
Lesser Hawkbit	*Leontodon saxatilis*
Perennial Rye Grass	*Lolium perenne*
Rock buckthorn	*Rhamnus saxatilis*
Rosebay Willowherb	*Chamerion angustifolium*
Rowan	*Sorbus aucuparia*
Spear Thistle	*Cirsium vulgare*
Sweet pea	*Lathyrus odoratus*
Sycamore	*Acer pseudoplatanus*
Turkey Oak	*Quercus cerris*
Weld	*Reseda luteola*
Welsh Poppy	*Meconopsis cambrica*
White Goosefoot	*Chenopodium album*
Wood Sage	*Teucrium Scorodonia*
Wood Spurge	*Euphorbia amygdaloides*
Yorkshire Fog	*Holcus lanatus*

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