Preliminary Ecological Appraisal (PEA) Survey Report	
For:	Building Link Design
Site:	Church Street, Brierley, Barnsley, S72 9HT
Report Date:	10th July 2024
Report Reference:	SQ 1996

Lead Ecologist:

John Davies BSc (hons)
- Natural England GCN License (2024-12094-CL08-GCN)

Client:	Building Link Design
Site Name:	Land off Church Street
Grid Reference:	SE 40902 11236
Report:	Preliminary Ecological Appraisal
Date of Survey:	20th June 2024
Surveying Ecologists:	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	9/07/2024	John Davies BSc (hons) – Estrada Ecology	Natasha Estrada BSc (hons), MRes, MCIEEM – Estrada Ecology
2	V1	Final	10/07/2024	John Davies BSc (hons) – Estrada Ecology	Natasha Estrada BSc (hons), MRes, MCIEEM – Estrada Ecology
3	V2	Amendment	15/07/24	John Davies BSc (hons) – Estrada Ecology	Natasha Estrada BSc (hons), MRes, MCIEEM – Estrada Ecology

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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 site is approximately 0.5 hectares and is comprised of three dwellings and associated garden space in the southwest of the site. Hedgerows are present on the northeastern, northwestern, and southwestern boundaries. Scattered trees are present among the residential portion of the site ranging from semi-mature to mature.

Findings

Trees and hedgerows within the site are assessed to function as suitable habitat for use by breeding birds. Active nesting birds were recorded within the boundary hedge in the southwest of the site. Impacts towards breeding birds are considered a possibility without appropriate mitigation. Recommendations regarding mitigation potential impacts towards breeding birds are provided in the conclusion of this report.

Three buildings are recorded within the southwestern corner of the site. Two of these buildings, a two-storey home and a storage building complex are assessed to offer a low roost suitability for use by bats given the features present on the buildings. Consequently, phase-two bat activity surveys are recommended for these two buildings to assess presence / likely absence of roosting bats. The site is not considered to constitute a major foraging / commuting grounds for local bat populations.

The site is deemed to offer very limited suitability for use by European hedgehogs (*Erinaceus europaeus*) and Eurasian badger (*Meles meles*). With consideration to the wider landscape, impacts towards these species are considered a residual potential. Recommendations regarding mitigating potential impacts towards these species are provided in the conclusion of this report. No further surveys have been recommended

The site is considered to provide very limited suitability for amphibian and reptile species given the habitats on site. No suitable aquatic habitats are present on or adjacent to the site. Given the wider landscape, impacts towards common amphibians are considered a residual possibility during the construction phase of development. Recommendations regarding mitigating potential impacts towards these species are provided in the conclusion of this report. No impacts towards reptile species are considered for this development. No further surveys have been recommended for amphibian or reptile species.

The site is considered to provide negligible suitability for Eurasian otter (*Lutra lutra*) or western European water vole (*Arvicola amphibius*). No suitable aquatic habitats are present on or adjacent to the site. No impacts towards aquatic / riparian species are anticipated for this development.

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

Two instances of non-native invasive species listed on the Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) were recorded in the site, these being rockspray cotoneaster (*Cotoneaster horizontalis*) and rhododendron (*Rhododendron ponticum*) in the southwest of the site. Recommendations regarding these species are provide in this report.

The site was recorded to lack significant floral diversity which would support important assemblages of invertebrates.

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.

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 Church Street, Brierley, Barnsley, S72 9HT.

1.2 The site consists of:

- Buildings
- Vegetated Garden
- Modified Grassland
- Scattered Trees
- Native Hedgerows
- Ornamental Hedgerows
- Developed Land, Sealed Surface
- Artificial Unvegetated, Unsealed Surface

1.3 It is understood that the current development proposal includes the demolition of the existing buildings and the redevelopment of the remainder of the site, subject to the necessary conditions.

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, 2023).

1.5 Site Location and Wider Area

1.5.1 The site is surrounded on the northwest, southwest, and southeast by residential developments and associated gardens. The northeastern aspect of the site is open to adjacent fields. Church Street forms the site's southwestern boundary.

1.5.2 The survey site's central OS grid reference is SE 40902 11236.

1.5.3 The site is located at the northeastern side of the village of Brierley, South Yorkshire, and is approximately 7.8 km northeast from Barnsley town centre.

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 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 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, 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 **Reptiles** (common species of adder, grass snake, common lizard, and slow worm) are protected under the Wildlife and Countryside Act 1981 (as amended). It is an offence to intentionally kill, injure and trade these animals.

2.6.3 **Amphibians** (smooth newt, palmate newt, common frog, and common toad) are protected by the Wildlife and Countryside Act 1981 (as amended). The sale, barter, exchange, transporting for sale and advertising to sell or to buy are an offence.

2.6.4 **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.

2.6.5 **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.

2.6.6 **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).

3 Survey Methodology

3.1 Desktop Survey

3.1.1 A biological data records search was commissioned from Barnsley Ecological Records Centre (BERC) 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 (*Triturus cristatus*) (GCN) was analysed for any records within a 2 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.

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 2.0 (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 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 afternoon of 20th June 2024.

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

3.4 Personnel

3.4.1 The survey was undertaken by ecologist John Davies BSc (hons) of Estrada Ecology Ltd, Natural England GCN Licence: 2024-12094-CL08-GCN, experienced with ecological surveying including phase one habitat surveys and Biodiversity Net Gain assessments. John is formally enrolled in a Level One bat licence training programme.

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 is 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***
Buildings (Built Linear Features)	**u1b5**	818
Vegetated Garden	g4	**827**, 107, 524
Modified Grassland	**g4**	107, 524
Individual Trees	g4	**32**
Native hedgerow	**h2a**	-
Ornamental Hedgerow	**h2b**	522
Developed Land, Sealed Surface	**u1b**	-
Artificial Unvegetated, Unsealed Surface	**u1c**	-

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

5.1.2 **Buildings**

5.1.2.1 Three buildings are present in the southwestern portion of the site. These include a bungalow (B1), a two-storey house (B2), and a farm building complex (B3). It is understood that these buildings are proposed to be demolished to facilitate the redevelopment of the site.

5.1.2.2 The bungalow (B1) is noted to be in excellent condition with no significant degradation recorded. The walls are red brick recorded to be in good condition with the southern elevation clad with stone brick facade. Windows and doors are uPVC-framed, and no gaps are recorded between surrounding brickwork. On the northwestern elevation, a uPVC conservatory is recorded which is well sealed to the adjacent brick wall. The roof comprises concrete tiles with no displacement or lifting of tiles recorded. The flashing, eaves, and the gable caping are all recorded to be intact and in good condition.

5.1.2.3 Due to this structure not demonstrating features suitable for use by roosting bats, this building has been appraised as offering negligible roost suitability, as assessed by a licensed bat ecologist (2015-12213-CLS-CLS).

Figure 2: Bungalow (B1)

5.1.2.4 The two-storey house (B2) is largely comprised of stone blockwork which is recorded to be in good condition overall. A chimney of redbrick is recorded on the southeastern elevation. No features assessed to have suitability for use by bats were identified within the brickwork. The northwest and some of the northeastern elevations are recorded to be rendered and intact. The windows and doors are uPVC-framed and recorded to be in good condition and suitably sealed to the surrounding brickwork. A uPVC conservatory and porch are also recorded which are intact and well-sealed.

5.1.2.5 The roof is comprised of concrete tiles which are largely intact and in place, excluding one broken tile on the northwestern elevation. The feature is considered not to demonstrate any gaps or fissures suitable for use by bats, however, it may provide access to the roof internals by bat which could host suitable bat roosting provisions.

5.1.2.6 Because of this feature, this building has been appraised as offering Low roost suitability, as assessed by a licensed bat ecologist (2015-12213-CLS-CLS). Further survey effort to assess the use of this feature by bats has been recommended.

Figure 3: Two-storey House (B2) with Potential Roost Feature Highlighted

5.1.2.7 A building complex (B3) is also recorded on site comprising multiple conjoined single-storey structures. The building is recorded to be comprised of redbrick and stone brick walls, which are largely worn and demonstrating some deterioration and weathering. The southeastern wing is rendered, with the rendering being deteriorated in places. The brickwork on the northwestern end of the building is recorded to feature multiple instances of missing mortar and deteriorated brickwork which are deemed to constitute a potential roosting feature for use by bats. The doors and windows are wooden-framed and recorded to be weathered by intact and sealed to the adjacent walls. Gaps are recorded around a wooden lintel above a wooden door on the southeastern elevation south of the rendered section of the building which are deemed to have a sufficient depth to be used by bats for roosting. On the northernmost lean-to portion of the complex, wooden barge boards are recorded which demonstrate separation from the walls enough to constitute a potential bat roosting feature. Other barge boards are recorded to be suitably sealed to the adjacent walls.

5.1.2.8 The building roofs are largely comprised of corrugated metal and asbestos which are deemed not to offer suitable roosting potential. These corrugated roof sections are recorded to be broken in multiple places on the northwest and southeastern elevations on the southern portion of the building which may provide access into the interior of the building. The northern rendered portion of the building is recorded to feature a slate tile roof which is noted to demonstrate minor lifting of tiles and multiple instances of missing or broken tiles which likely provide access to the interior of the building. The ridge tiles on this portion of the building are recorded to be intact and suitably sealed.

5.1.2.9 Due to the potential roosting features present on this building complex, this building has been appraised as offering Low roost suitability, as assessed by a licensed bat ecologist (2015-12213-CLS-CLS). Further survey effort to assess the use of this feature by bats has been recommended.

Figure 4: Building Complex (B3) with Potential Roost Features Highlighted

5.1.3 **Vegetated Garden**

5.1.3.1 The three buildings share an open garden space to the northeast and have separate garden spaces to the southwest. These garden areas are recorded to be largely comprised of mown grass with small areas of introduced shrubs and scattered trees. The rear garden space of the bungalow property was recorded to as being largely unmown. At the northeastern aspect of the rear garden space, a small, paved section hosting an allotment is present. In the norther corner of the garden space, piled refuse and materials are present which are surrounded by tall ruderals.

5.1.3.2 Species recorded within this habitat include perennial rye grass, common daisy (*Belis perennis*), common dandelion (Taraxacum officinale), silver birch (*Betula pendula*), rhododendron, rose (*Rosa sp.*), strawberry (*Fragaria x ananassa*), Yorkshire fog (*Holcus lanatus*), creeping buttercup (*Ranuculus repens*), common chickweed (*Stellaria media*), white clover (*Trifolium repens*), common bent (*Agrostis sp.*), spear thistle (*Cirsium vulgare*), cow parsley (*Anthriscus sylvestris*), common nettle (*Urtica dioica*), broad-leaved dock, hawkbit (*Scorzoneroides autumnalis*), ragwort, creeping Jenny (*Lysimachia nummularia*), daisy bush (*Brachyglottis greyi*), mock orange (*Philadelphus sp.*), sycamore (*Acer pseudoplatanus*), rosebay willowherb (*Chamaenerion angustifolium*), and crane's bill (*Geranium ibericum*), among others.

5.1.3.3 Rhododendron was recorded on site within a small patch of introduced shrubs between B1 and B2. Rhododendron is a non-native invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). Recommendations regarding this species are provided in the conclusion of this report.

5.1.3.4 The mown, short-sward area of garden and grassland are considered to offer very limited suitability for use by amphibians or reptiles given the increased risk of predation and lack of refugia.

Figure 5: Lawn Gardens

5.1.4 **Modified Grassland**

5.1.4.1 Outside of the garden areas in the southwestern corner of the site is an area of mown grassland along the northwestern and southwestern elevations of the building complex B3. Stands of unmodified ruderal ephemeral vegetation are also recorded in this habitat.

5.1.4.2 Species recorded within this habitat include common daisy, common dandelion, ribwort plantain (*Plantago lanceolata*), creeping buttercup, broad-leaved dock, bramble (*Rubus fruticosus*), cleavers (*Galium aparine*), sycamore, European ash (*Fraxinus excelsior*), elder, common nettle, perennial rye grass, Yorkshire fog, Comon bent, cow parsley, rosebay willowherb, apple, sow-thistle (*Sonchus arvensis*), hedge woundwort (*Stachys sylvatica*), and rockspray cotoneaster.

5.1.4.3 Rockspray cotoneaster was recorded on site at the southwestern gable end of building complex B3. Rockspray cotoneaster is a non-native invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). Recommendations regarding this species are provided in the conclusion of this report.

Figure 6: Modified Grassland


5.1.5 **Scattered Trees**

5.1.5.1 Scattered within the garden areas around the buildings in the southwest of the site are multiple mature and semi-mature trees. In addition, some veteran trees are recorded outside the southeastern boundary of the site which partly overhang into the development boundary.

5.1.5.2 Species recorded within this habitat include sycamore, silver birch, apple (*Malus domestica*), holly (*Ilex aquifolium*), elder (*Sambucus nigra*), common lime (*Tillia x europaea*), Scot's pine (*Pinus sylvestris*), and arborvitae (*Thuja occidentalis*).

5.1.5.3 All trees were assessed for features suitable to support roosting bats. No trees within the site were recorded as demonstrating features deemed able to provide potential roosting provisions for bats, as assessed by a licenced bat ecologist (2015-12213-CLS-CLS). Two veteran trees are recorded at the eastern corner of the site which were assessed as offering Low roost suitability. These trees and the suitability of the potential roost features identified have the potential to be affected by the development via light encroachment. Recommendations regarding mitigating potential impacts towards these trees are provide in the conclusion of this report.

5.1.5.4 All trees are considered to be suitable habitat for use by breeding birds. No active or historic field sign evidence suggesting the use of any trees within the site was recorded at the time of survey. Recommendations regarding potential impacts towards nesting birds are provided in the conclusion of this report.

Figure 7: Scattered Trees

5.1.6 **Hedgerows**

5.1.6.1 Native hedgerows are recorded forming much of the site's northeastern boundary as a small portion of the site's northwestern boundary in the north corner of the site. Ornamental hedgerows are recorded forming much of the site's southwestern boundary as well as elsewhere in the south of the site.

5.1.6.2 Species recorded comprising the native hedgerows include hawthorn (Crataegus monogyna) and bramble dominantly. Species recorded comprising the ornamental hedgerows include holly and hawthorn.

5.1.6.3 The field margin hedgerows, such as those in the north of the site are deemed to offer some suitability for commuting hedgehogs. All present hedgerows are considered to offer a low suitability for use by nesting birds. An active bird's nest was recorded within the ornamental hedging forming the site's southwestern boundary belonging to a blackbird (*Turdus merula*). Recommendations regarding potential impacts towards nesting birds are provided in the conclusion of this report. Precautionary working methods have been recommended to mitigate any potential impacts towards hedgehogs during the redevelopment of the site.

5.1.6.4 Hedgerows within the site are considered to offer very little for commuting / foraging local bat populations. The site is not considered to be able to function as a major commuting / foraging grounds for bats.

Figure 8: Hedgerows

5.1.7 **Developed Land**

5.1.7.1 Within the residential portion of the site in the southwest, small sections of developed land are recorded. These include areas of sealed surface hardstanding such as forming the footpaths and pavements within the garden areas, as well as artificial unvegetated unsealed surface such as the compacted aggregate driveway of the building complex B3.

5.1.7.2 Developed land surfaces such as these examples are considered to have negligible intrinsic ecological value.

Figure 9: Examples of Developed Land

5.2 Desktop Survey Results

5.2.1 Over fifteen-hundred records were returned from Barnsley Ecological Records Centre for 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:

- 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.
- No records for European hedgehog were returned.
- Six records which pertain to bats were returned, all dated 2018. These include three for common pipistrelle (*Pipistrellus pipistrellus*), one unspecified *Pipistrellus* species, and three for brown long-eared bat (*Plecotus auritus*).
- No records for Eurasian otter were returned.
- No records for European water vole were returned.
- No records for amphibian species were returned.
- No records pertaining to any reptile species were returned.
- The remaining records pertain to flowing plant, bird, crustation, mollusc, moss, and invertebrate records.

5.2.2 Consultation with MAGIC returned one European Protected Species Mitigation Licence within a 2 km radius from grid (Table 3).

Table 3: Granted EPSM Licences within the Search Radius

Licence Number	Date	Distance from Site	Species	Purpose
EPSM2012-4323	2012-2014	1163 meters southeast	Common Pipistrelle (*Pipistrellus Pipistrellus*)	Destruction of a Resting Place

5.2.3 Given the date of this licence, as well as the separating distance from the site, no impacts from recently displaced bats are considered for this development based on the above.

5.2.4 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 the 2 km search radius from grid.

5.3.2 The site falls within the Impact Zone for the Dearne Valley Wetlands Special Site of Scientific Interest (SSSI) which is situated approximately 2,210 meters west from site. Given the listed impacts of concern and the separating distance between the site and this SSSI, no impacts are predicted.

5.3.3 Consultation with MAGIC map returned no Non-Statutory Designated Site within the 2 km search radius from grid.

5.4 Priority Habitats and Priority Species

5.4.1 No priority habitats were recorded within the redline boundary, other than hedgerows which may constitute 'Important Hedgerows' and be protected under the Hedgerows Regulations (1997).

5.4.2 Priority habitats recorded outside the redline site boundary but within the search radius are outlined in Table 4 below.

Table 4: Priority Habitats outside the Site Boundary but within the Search Radius

Habitat Type	Closest Compartment Distance
Deciduous Woodland	453 meters southeast
Traditional Orchard	997 meters northwest

5.4.3 The site is recorded as falling within a Countryside Stewardship priority area targeting lapwing (*Vanellus vanellus*) habitat issues.

5.5 Protected Species

5.5.1 Breeding Birds

5.5.1.1 The trees and hedgerows within the site boundaries are considered to constitute suitable habitat for nesting / breeding birds. Active nesting birds were recorded within an ornamental hedgerow on the southwestern site boundary at the time of the survey.

5.5.1.2 Without suitable precaution, impacts towards breeding birds are considered a possibility with the development of the site. Recommendations to mitigate possible impacts towards breeding birds are provided in the conclusion of this report.

5.5.2 Bats

5.5.2.1 The two-storey house (B2) and the building complex (B3) within the site were recorded to demonstrate features with the potential to function as a roost or place or rest for bats, as assessed by a licenced bat ecologist (2015-12213-CLS-CLS). Consequently, further bat activity surveys have been recommended to assess the use of these buildings by bats prior to removal.

5.5.3 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 limited suitability for use by badger given the habitats onsite. There is considered to be a residual potential for badgers to be found within the site given suitable habitats within the wider landscape.

5.5.3.3 Precautionary recommendations regarding badger are given within the conclusion of this report. No further survey effort is proposed for this species.

5.5.4 **European Hedgehog**

5.5.4.1 No presence of European 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 hedgerows forming the field boundaries in the north of the site are deemed to offer some level of suitability for use by hedgehog. The site and the wider landscape are deemed to offer some level of suitable habitat for hedgehog. There is considered to be a potential for hedgehogs to be found within the site during site development.

5.5.4.3 Precautionary recommendations regarding hedgehogs are given within the conclusion of this report. No further survey effort is proposed for this species.

5.5.5 **Riparian / Aquatic Mammals**

5.5.5.1 No aquatic habitat deemed suitable for usage by aquatic mammals was recorded within the curtilage of the site or in the immediate environment. No terrestrial habitat deemed suitable for use by aquatic mammals was recorded within the curtilage of the site or in the immediate environment.

5.5.5.2 No impacts towards riparian / aquatic mammals are anticipated. No further survey effort is proposed for these species are recommended.

5.5.6 **Amphibians**

5.5.6.1 No amphibians or field sign evidence suggesting the presence of amphibians were recorded on site during the survey.

5.5.6.2 The majority of the site is comprised grass and garden lawn habitats which are considered to offer very limited suitability given the majority is cut to a low-sward height which increases the risk of predation. No aquatic habitats are recorded within the site or within the proximity of the site. The nearest waterbody is an unnamed drainage ditch approximately 450 meters southeast from the site and opposite a housing estate which would prevent any direct commuting or dispersal.

5.5.6.3 Impacts towards amphibian species are considered to be an unlikely but residual possibility. A precautionary methods statement is recommended to mitigate any residual potential of amphibian species being impacts during the development of the site. No further survey effort is proposed for amphibian species.

5.5.7 **Reptiles**

5.5.7.1 No reptiles or field sign evidence suggesting the presence of reptiles were recorded on site during the survey.

5.5.7.2 The majority of the site is comprised grass and garden lawn habitats which are considered to offer very limited suitability given the majority is cut to a low-sward height which increases the risk of predation. The site is recorded to lack significant refugia suitable for use by reptiles. No aquatic habitats are recorded within the site or within the proximity of the site. The nearest waterbody is an unnamed drainage ditch approximately 450 meters southeast from the site and opposite a housing estate which would prevent any direct commuting or dispersal.

5.5.7.3 Impacts towards reptile species are not anticipated for this development. No further survey effort is proposed for reptile species.

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, dormouse, brown hare, or white-clawed crayfish. 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 No Non-Statutory Designated Site were recorded within the 2 km search radius.

6.1.3 No direct or indirect impacts towards any designated site is anticipated, given the scale of the proposed development and the separating distances.

6.2 Habitats and Vegetation

6.2.1 No priority habitats were recorded within the redline boundary or immediately adjacent to the site. Hedgerows forming site boundaries may be categorised as 'important' and thus protected under the Hedgerows Regulations (1997). Permission may be required prior to its removal.

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

6.2.3 No protected species listed on Schedule 8 of the Wildlife and Countryside Act 1981 (as amended) were recorded within the site boundary at the time of the survey.

6.2.4 Two non-native / invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) were recorded within the site boundary at the time of the survey. These are rhododendron and rockspray cotoneaster. Recommendations regarding the control and removal of these species are provide in the conclusion of this report.

Figure 10: Non-native / Invasive Species recorded within the Site

6.3 Recommendations for Further Surveys / Mitigation

6.3.1 Birds

6.3.1.1 It is recommended that the removal or maintenance of any tree, if required, and any removal of hedgerow is undertaken outside 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 should be conducted in advance of the impactful works to ensure there is no breeding bird activity before the removal or disturbance.

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 Two buildings, the two-storey home (B2) and the building complex (B3) are assessed as offering low roost suitability. A single dusk bat activity survey is recommended for each of these buildings to assess for the presence / likely absence of roosting bats using these building prior to demolition. If roosting bats are recorded, further activity surveys will be required.

6.3.2.2 Bat activity surveys are seasonally dependent and should only be conducted in the recognised survey season of between May to August (inclusive). The surveys must also take place during optimal weather conditions at a minimum three-week interval between surveys, if multiple surveys are required.

6.3.3 European Hedgehog

6.3.3.1 Due to the presence of habitats with some suitability on site, it is recommended that a precautionary method statement is adopted within the scheme to ensure hedgehogs are not impacted during the development of the site.

6.3.4 Badgers

6.3.4.1 Due to the suitability of habitats within the surrounding area, it is recommended that a precautionary method statement is adopted within the scheme to ensure badgers are not impacted during the development of the site.

6.3.5 Amphibians

6.3.5.1 Due to the habitats on site and within the surrounding area, there is considered an unlikely but residual potential for common amphibian species to be present on site. It is recommended that a precautionary method statement is adopted within the scheme to ensure amphibian are not impacted during the development of the site.

6.3.6 Non-native / Invasive Species

6.3.6.1 Small stands of rockspray Cotoneaster and Rhododendron were recorded within the site which are both a Schedule 9 non-native invasive species. It is not an offence to have these species on site, however, it is the property owner's responsibility to ensure it does not spread beyond the current extent, as noted within the Environmental Protection Act (Duty of Care) Regulations.

6.3.6.2 The recorded stands of the species are small and manageable. It is recommended that this stand is removed prior to the works on site in conjunction with the proposal to prevent the future spread of the community and risks to biosecurity. The locations of the recorded Schedule 9 species are shown as Target Notes in Appendix One.

6.3.6.3 For its removal, it is recommended that precautions are taken to prevent the spread of the species and reduce the risk to local biosecurity. The removal will require the entire root systems to be removed to prevent the species regrowing and any berries collected. All plant material of each genus must be kept within itself when removed from its rooted location.

6.3.6.4 The removed material can be burnt or buried on-site (subject to conditions), or otherwise disposed of at a registered landfill. Further guidance on invasive species management and control is provided in the Government Regulatory Position Statement 178 (Environment Agency, 2023).

7 Biodiversity Enhancement

7.1 In line with National planning Policy Framework (2023) 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 hedgehog.

7.3 In line with national policy, developments submitted for planning after 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 within the appropriate season. The results of the BNG are outlined below.

Table 5: Results of Baseline BNG Assessment

Area Habitats	Distinctiveness	Condition Assessment & Strategic Significance	Baseline Units
Buildings (Built linear features)	Very Low	No condition assessment.	0.00
Vegetated Garden	Low	No condition assessment.	0.65
Modified Grassland	Low	Condition assessed as Poor: passing C, D, E, and F; failing A, B, G.	0.04
Individual Trees (Urban)	Medium	Condition assessed as group achieving Moderate condition: passing A, B, C, and F; failing D and E. Not formally identified but	0.75

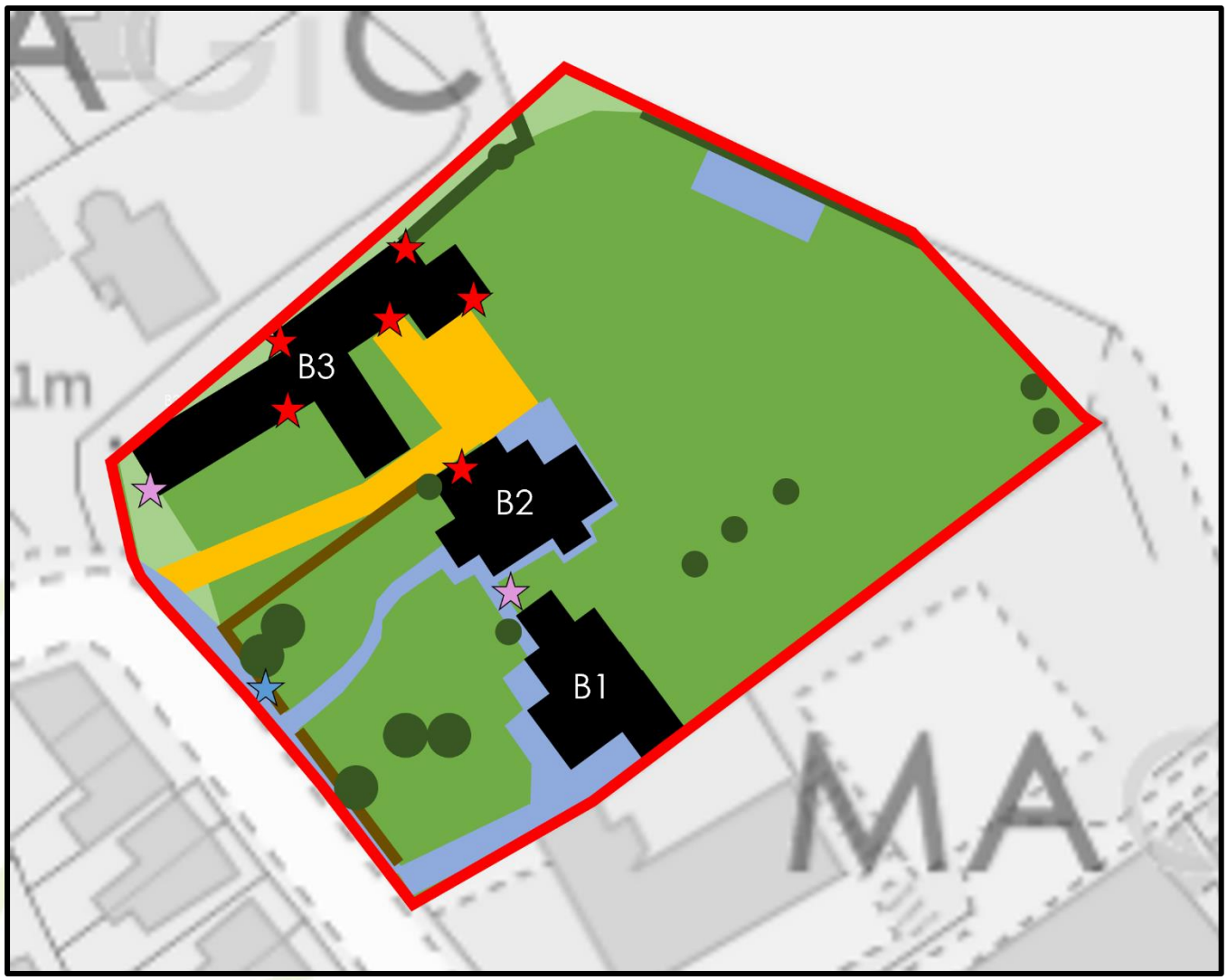
		deemed to constitute general biodiversity assets as per Policy GI1 'Green Infrastructure' of the Barnsley Local Plan (2019).	
Developed Land, Sealed Surface	Very Low	No condition assessment.	0.00
Artificial Unvegetated, Unsealed Surface	Very Low	No condition assessment.	0.00
Linear Habitats	**Distinctiveness**	**Condition Assessment & Strategic Significance**	**Baseline Units**
Native Hedgerow	Low	Condition assessed as Poor: passing B1 and D1, failing A1, A2, B2, C1, C2, and D2. These hedges are formally identified as being withing the local Green Belt and as a Nature Improvement Area.	0.07
	Low	Condition assessed as Good: passing A1, A2, B1, B2, C1, D1, and D2; failing C2. This hedge is formally identified as being withing the local Green Belt and as a Nature Improvement Area.	0.15
Non-native / Ornamental Hedgerow	Very low	Condition assessed as Poor by default.	0.06

7.5 The total value of the site at the baseline is calculated to be 1.44 area habitat units and 0.28 linear feature units. No watercourse units are recorded on the baseline. No irreplaceable habitats are recorded on the baseline.

7.6 To achieve the target 10% net gain, the site post-development (including any offsetting) will need to have a total value of 1.59 area units and 0.3 linear units, minimum. In addition, as units of a medium distinctiveness are recorded on the baseline, the post-development proposal will need to demonstrate no-net loss of 'Individual Tree' units.

7.7 Once a development / landscaping scheme is compiled, a full BNG assessment can be completed.

Appendix One: Phase One Habitats Map



Habitat Key			
	Redline Development Boundary		
	Modified Grassland		*Developed Land, Sealed Surface*
	Vegetated Garden		*Artificial Unvegetated, Unsealed Surface*
	Buildings		
	Native Hedgerow		*Target Note: Schedule 9 non-native / Invasive species*
	Ornamental Hedgerow		*Target Note: Active nesting birds*
	Individual Trees		*Target Note: Low bat roost suitable feature*

Appendix Two: Species list

Vernacular	Taxon
Flora	
Apple	*Malus x domestica*
Arborvitae	*Thuja occidentalis*
Bramble	*Rubus fruticosus*
Broad-leaved Dock	*Rumex obtusifolius*
Cleavers	*Galium aparine*
Common Bent	*Agrostis capillaris*
Common Chickweed	*Stellaria media*
Common Daisy	*Belis perennis*
Common Dandelion	*Taraxacum officinale*
Common Nettle	*Urtica dioica*
Common Lime	*Tillia x europaea*
Common Ragwort	*Jacobaea vulgaris*
Cow Parsley	*Anthriscus sylvestris*
Crane's Bill	*Geranium ibericum*
Creeping Buttercup	*Ranunculus repens*
Creeping Jenny	*Lysimachia nummularia*
Daisy Bush	*Brachyglottis greyi*
False oat	*Arrhenatherum elatius*
Hawkbit	*Scorzoneroides autumnalis*
Hawthorn	*Crataegus monogyna*
Hedge Woundwort	*Stachys sylvatica*
Holly	*Ilex aquifolium*
Mock Orange	*Philadelphus sp.*
Pedunculate Oak	*Quercus robur*
Perennial Ryegrass	*Lolium perenne*
Perennial Sow-thistle	*Sonchus arvensis*
Rhododendron	*Rhododendron ponticum*
Ribwort Plantain	*Plantago lanceolata*
Rockspray Cotoneaster	*Cotoneaster horizontalis*
Rose	*Rosa sp.*
Rosebay Willowherb	*Chamerion angustifolium*
Scot's Pine	*Pinus sylvestris*
Silver Birch	*Betula pendula*
Spear Thistle	*Cirsium vulgare*
Strawberry	*Fragaria x ananassa*
Sycamore	*Acer pseudoplatanus*
White Clover	*Trifolium repens*
Yorkshire fog	*Holcus lanatus*

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