Preliminary Ecological Appraisal (PEA) Survey Report	
For:	RBS Development Group
Site:	The Croft, 150 Denby Lane, Denby, HD8 8UN
Report Date:	4th December 2024
Report Reference:	SQ-2003

Lead Ecologist:

Fern Harrison BSc (hons), MSc

The Croft
150 Denby Lane
Denby
HD8 8UN

Client:	RBS Development Group
Site Name:	The Croft, 150 Denby Lane, Denby, HD8 8UN
Grid Reference:	SE 22706 07176
Report:	Preliminary Ecological Appraisal
Date of Survey:	26th November 2024
Surveying Ecologists:	Fern Harrison BSc (hons), MSc

Issue:	Revision:	Stage:	Date:	Prepared by:	Approved by:
-	1	Draft	26th November 2024	Fern Harrison 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 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 0.17 hectares in size and is situated to the north of Denby Lane. The site is bounded by residential buildings and gardens to the east and south, while St John the Evangelist Church, Denby lies to the west and Denby Cricket Club is located to the north. In the wider area lies agricultural land located to the north and south, with additional residential areas positioned to the northeast and southwest of the site. The primary habitat identified within this site is vegetated garden, comprising a mix of creeping bent (*Agrostis stolonifera*), cocksfoot (*Dactylis glomerata*), couch (*Elymus repens*), and crested dog's tail (*Cynosurus cristatus*) grasses forming a medium-height sward. This habitat also contains numerous native flowering species alongside ornamental species.

Additionally, the site hosts various secondary habitats, all within its boundary. These include individual trees - a total of twenty, including semi-mature and mature trees of both native and non-native species. A notable built feature is a centrally located, uninhabited, two-story brick building, with architectural details such as stone-built walls and pitched stone slate roof. The premises also accommodate lines of trees, with two ornamental lines on the southern and northwestern parts, and a third comprising silver birch (*Betula pendula*) and holly (*Ilex aquifolium*) species to the northeast. Another significant habitat is a vegetated garden to the south of the central building, featuring cotoneaster species (*Cotoneaster spp*) and Montbretia (*Crocosmia x crocosmiiflora*) amongst other ornamental plants. This rich variety of habitats highlights the site's biodiversity and the interplay between natural and urban elements.

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 habitats were deemed to hold low suitability to support sheltering and foraging European hedgehog *(Erinaceus europaeus)*. Recommendations in regard to European hedgehogs are given in the conclusion of this report.

A single building is present on site, the building was assessed to provide high suitability to support roosting bats. A total of five trees present on site were assessed to provide low suitability to support roosting bats and a single tree on site was assessed to provide moderate suitability to support roosting bats. Recommendations regarding bats are given in the conclusion of this report.

The site habitats were deemed to hold sub-optimal suitability to support sheltering and foraging European *(Meles meles)*. Recommendations regarding are given in the conclusion of this report.

The site was deemed to hold low suitability to support sheltering reptiles. Recommendations in regard to reptiles are given in the conclusion of this report.

No suitable aquatic habitats to support breeding amphibians were present within the site or within 250 meters of the site at the time of survey. The terrestrial habitats on site were deemed to provide low suitability to support foraging or commuting amphibians. Recommendations in regard to amphibians are given within the conclusion of this report.

No suitable aquatic or terrestrial habitats for riparian mammals were present within the site at the time of survey. No further survey effort is recommended.

Species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) were recorded within the site, Montbretia (*Crocosmia x crocosmiiflora*). No species listed on Schedule 8 of the Wildlife and Countryside Act 1981 were recorded within the site.

The site was recorded to lack significant floral diversity and is unlikely to 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 at The Croft, 150 Denby Lane, HD8 8UN.

1.2 The site habitats consist of:

- Individual trees
- Buildings
- Line of trees
- Vegetated garden
- Ornamental Hedgerow

1.3 It is understood that the current development proposals include the demolition of the existing building on site, and the construction of two new residential buildings with associated access and parking, 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 bounded by residential buildings and gardens to the eastern and southern elevations. To the west of site lies St John the Evangelist Church Denby and to the north of site lies the grounds of Denby Cricket Club.

1.5.2 The survey site's central OS grid reference is SE 22706 07176.

1.5.3 In the wider area to the north and south lies agricultural land with more residential areas to the northeast of the site and southwest of the site.

1.5.4 There was a single residential building on the survey site that is known to be unoccupied.

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 **Reptiles** (common species of adder *(Vipera berus)*, grass snake *(Natrix helvetica)*, common lizard *(Zootoca vivipara)*, and slow worm *(Anguis fragilis)*) 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 *(Lissotriton vulgaris)*, palmate newt *(Lissotriton helveticus)*, common frog *(Rana temporaria)*, and common toad *(Bufo bufo)* 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 are protected by the Protection of 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 ; to obstruct, destroy or damage a or to disturb a whilst within its ; to sell or offer for sale a live , or have possession or control of a live ; and marking a or attaching any ring, tag, or other marking device to a .

2.6.5 **Otters *(Lutrinae)*** 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 *(Arvicola)*** 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 Biological Record Centre for a 1 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 1 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; Fern Harrison 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.
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 26th November 2024.

3.3.2 Weather conditions at the time of the site visit were sunny and dry with a light breeze and temperatures of 8°C.

3.4 Personnel

3.4.1 The survey was undertaken by Ecologist Fern Harrison 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 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**

5.2 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
Individual trees	**-**	32
Buildings	**u1b5**	-
Line of trees	**-**	33
Vegetated garden	**u1**	828
Ornamental Hedgerow	**h2b**	-

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

5.3.1 **Individual trees**

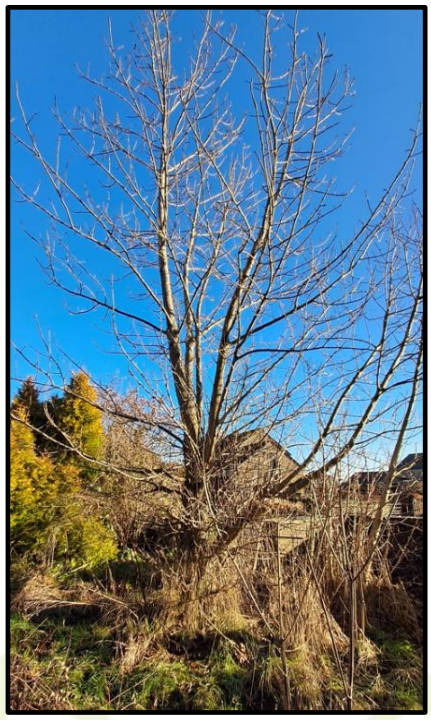
5.3.1.1 A total of 20 individual trees are present on site, all remaining trees were part of tree groups and have been classified separately as lines of trees habitat. The individual trees pertain to semi mature and mature trees that are of native and non-native species composition.

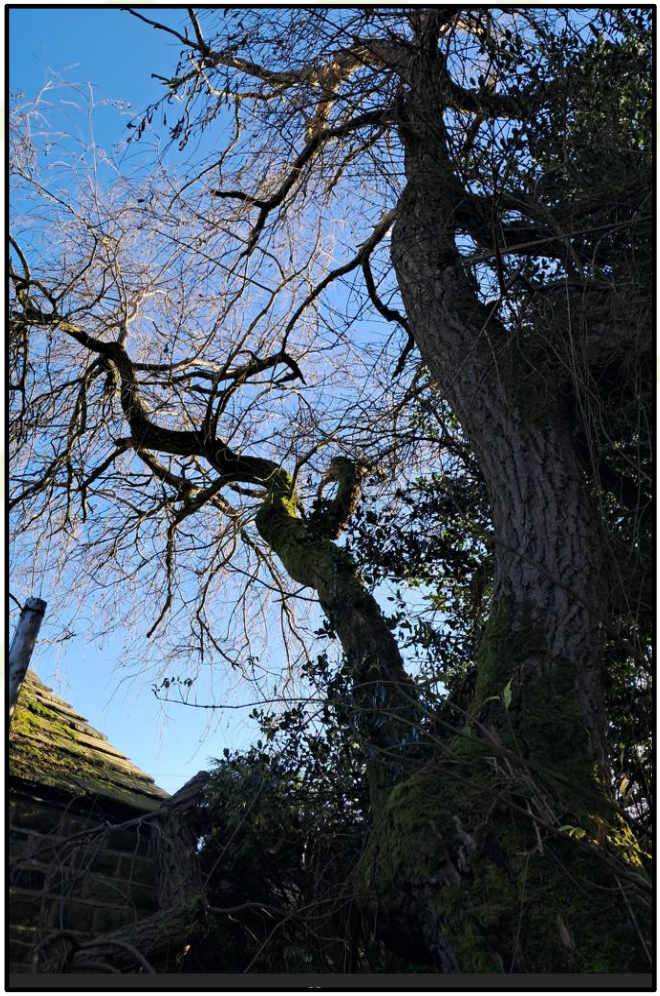
5.3.1.2 Species recorded within this habitat include cherry species *(Prunus spp)*, silver birch *(Betula pendula)*, cypress species *(Cupressus sp)*, holly *(Ilex aquifolium)*, spruce *(Picea spp)*, sycamore *(Acer psuedoplatanus)*, willow species *(Salix spp) and* poplar *species (Populus spp)*.

5.3.1.3 All on site trees were surveyed for their suitability to support roosting bats. A total of five trees (T2, T3, T4, T6, T21) were identified to contain PRF-I features and were deemed to hold **low suitability** to support roosting bats, a single mature willow tree (T22) was determined to hold PRF-M features and was deemed to hold **moderate suitability** to support roosting bats. All remaining on site trees were assessed as providing negligible suitability to support roosting bats.

5.3.1.4 Under current works proposals, this habitat will be impacted as it is anticipated that a minimum of eight individual trees will be felled to facilitate the proposed development (T6, T17, T19, T20, T21, T22). Recommendations regarding this habitat and any species within it are given in the conclusion of this report.

Figure 2. Individual Trees




5.3.2 **Buildings**

5.3.2.1 A single two storey brick-built building is present centrally on site. The building pertains to an uninhabited residential property. The walls are stone built on all elevations with two bay windows present to the southern elevation. The roof is pitched and consists of stone slates. Two chimneys are present on the main roof. Two single storey extensions are present to the eastern and western elevations respectively. The extensions are single storey with flat felt roofs. The extension to the northeastern elevation also has a brick-built chimney to the north elevation.

5.3.2.2 Gaps were present under multiple main roof slates at the southern and northern elevations of the building. A void is present where a hanging tile has broken on the southern elevation wall of the northeastern extension. The void appears to lead into the roof space of the extension. A gap is present between two stones at the apex of the chimney to the southwestern elevation of the main building. Gaps were present under multiple stone slates at the western gable end of the main building where mortar was missing from under the stone slates. The roof of the building is lined with roofing felt.

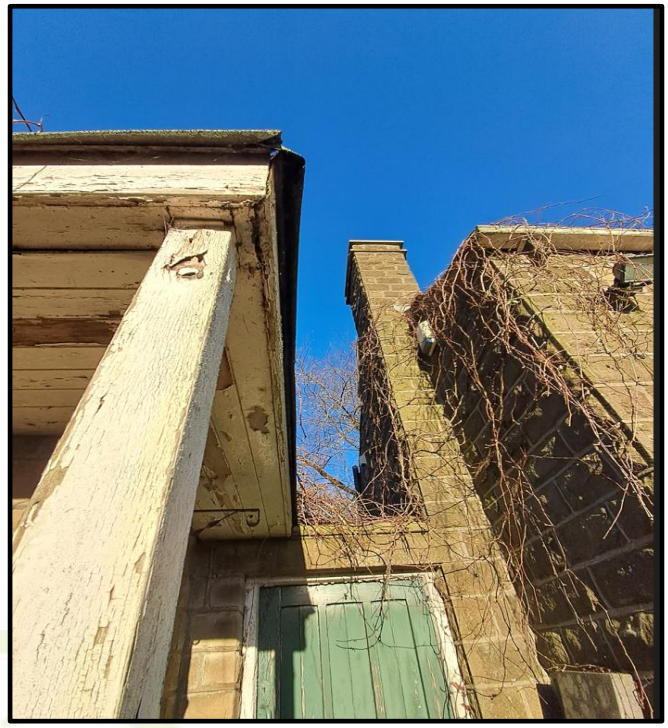
5.3.2.3 It is deemed that multiple PRF-M features are present under the main roof slates at both the south and north elevation of the building. A single PRF-I feature is present at the southwest elevation chimney on the main roof. PRF-M features were present under roof slates at the west gable end. A single PRF-I feature was present at the wall of the northeast single storey extension.

5.3.2.4 Under current works proposals, this habitat will be impacted as the building is to be demolished to facilitate the works. Recommendations regarding this habitat and any species within it are given in the conclusion of this report.

Figure 3. Buildings





5.3.3 **Line of trees**

5.3.3.1 Two separate ornamental lines of trees are present on site in addition to a single native line of trees. Tree line one is a native line of trees and is located at the northeast of site, tree line two is located to the northwest corner of site and tree line three is located to the southwestern site boundary. The majority of species present in tree lines two and three are ornamental species. All three tree lines appear to be mature.

5.3.3.2 Species recorded within tree line one includes holly and silver birch.

5.3.3.3 Species recorded within tree line two included New Zealand holly *(Olearia macrodonta)* and common ivy (*Hedera helix*).

5.3.3.4 Species recorded within tree line three included cypress species.

5.3.3.5 All on site trees within the line of tree habitat were assessed for their potential to support roosting bats. All trees within this habitat were deemed to display **negligible** suitability to support roosting bats due to a lack of suitable roosting features present.

5.3.3.6 The current planned works are not set to impact this habitat as all tree lines are to be retained as part of the proposed development. As such, no further recommendations are required in respect of this habitat.

Figure 4a. Native line of trees

Figure 4b. Ornamental line of trees

5.3.4 **Vegetated garden**

5.3.4.1 To the south of the site immediately adjacent to the residential building on site lies an area of ornamental planting which pertains to a vegetated garden. Montbretia has been identified in this area in addition to ornamental species and non-schedule 9 cotoneaster species. A mixture of creeping bent *(Agrostis stolonifera)*, cocks- foot grass *(Dactylis glomerata)*, couch grass (*Elymus repens*), and crested dogs tail (*Cynosaurus cristatus*) were present in a medium height sward to the west of the site. Native flowering species were also present in addition to ornamental species.

5.3.4.2 Species recorded within this habitat include creeping bent, common couch, cock's-foot grass, crested dog's-tail, creeping buttercup *(Ranunculus repens)*, buck's-horn plantain *(Plantago coronopus)*, bramble species (*Rubus spp*), common nettle *(Urtica dioica)*, hearts-tongue fern *(Asplenium scolopendrium)*, cow parsley *(Anthriscus sylvestris)*, Montbretia, Franchets cotoneaster *(Cotoneaster franchetii Bois)*, box *(Buxus sempervirens)*, daisy bush *(Brachyglottis greyi spp)*, foxglove *(Digitalis purpurea)* and golden ragwort *(Senecio doria L.)*.

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

Figure 5. Vegetated Garden

5.3.5 **Ornamental Hedgerow**

5.3.5.1 A single ornamental hedgerow is present to the southeastern site boundary. The hedge contains a single cypress species and appears to be subject to historical management.

5.3.5.2 It is not yet known if this habitat will be impacted by the proposed works on site.

5.3.5.3 Recommendations regarding this habitat are given within the conclusion of this report.

Figure 6. Ornamental Hedgerow

5.4 Desktop Survey Results

5.4.1 A total of 414 records were returned from West Yorkshire Ecology Service, Barnsley Biological Record Centre and West Yorkshire Bat Group 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:

- A total of two records were returned within the 2 km search area. One record pertains to common frog and the second record pertains to great crested newt. The closest record to site is the record of common frog, which is located approximately 1.3 km northwest of site, the record was made in 2003. The great crested newt record is located 1.7 km northeast of site, the record was made in 2000.
- A total of 44 records were returned within the search area in relation to bats. Species pertained to pipistrelle species (*Pipistrellus spp*), common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), noctule (*Nyctalus noctula*), whiskered bat (*Myotis mystacinus*) and brown long eared bat (*Plecotus auritus*). A total of 17 records pertain to roosting bats. The closest bat roost record to site is located 1.3 km northwest of the site and pertains to two counts of soprano pipistrelle and a single count of whiskered bat. The

closest non roost record to site is located approximately 920 meters west of site and pertains to a field record of a single pipistrelle species, the record was made in 2011.

- A total of 22 records were returned for Schedule 1 bird species. Species pertain to barn owl (*Tyto alba*), black tern (*Chlidonias niger*), brambling (*Fringilla montifringilla*), common scoter (*Melanitta nigra*), fieldfare (*Turdus pilaris*), goldeneye (*Bucephala clangula*), goshawk (*Accipiter gentilis*), little gull (*Hydrocoloeus minutus*), montagu's harrier (*Circus pygargus*), red kite (*Milvus milvus*), redwing (*Turdus iliacus*), scaup (*Aythya marila*), whimbrel (*Numenius phaeopus*) and whooper swan (*Cygnus cygnus*). The closest schedule 1 bird record to site pertains to a record of 50 redwing located approximately 1 km southwest of site, the record was made in 2011.
- No records were returned for reptile species within the search area.
- A total of 3 records were returned for otter (*Lutra lutra*) within the search area. All records were located approximately 2.4 km southwest of site at Ingbirchworth Reservoir, the records were dated 2004 and 2005.
- A total of 3 records were returned for water vole (*Arvicola amphibius*), within the search area. The closest record to site is located approximately 1.3 km northwest of site and pertains to a record of a single adult animal, the record was made in 2003.
- A single record of white-clawed crayfish (*Austropotamobius pallipes*) was returned within the search area. The record is located approximately 1.6 km southeast of site and was recorded in 2008.
- A total of 4 records were returned for brown hare (*Lepus europaeus*) within the search area. The closest record to site is located approximately 860 meters northeast of site, the record was made in 2015.
- The majority of the remaining records pertain to birds and plant species.

5.4.2 Consultation with MAGIC returned a single European Protected Species Mitigation Licence within a 1 km radius from grid.

Table 3: European Protected Species Licences granted within the search radius.

Licence Number	Date	Location from Site	Species	Purpose
2014-5044-EPS-MIT	2015-2020	1900 meters northwest	Common Pipistrelle	Destruction of a Resting Site

5.4.3 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).

5.5 Designated Sites

5.5.1 Consultation with MAGIC MAP returned no Statutory Designated Sites within the 1 km search radius from grid.

5.5.2 Consultation with the West Yorkshire Ecology Service returned a single Non-Statutory Designated Site within the 1 km search radius from grid.

Table 4. Non-Statutory Designated Sites within the 2km search area.

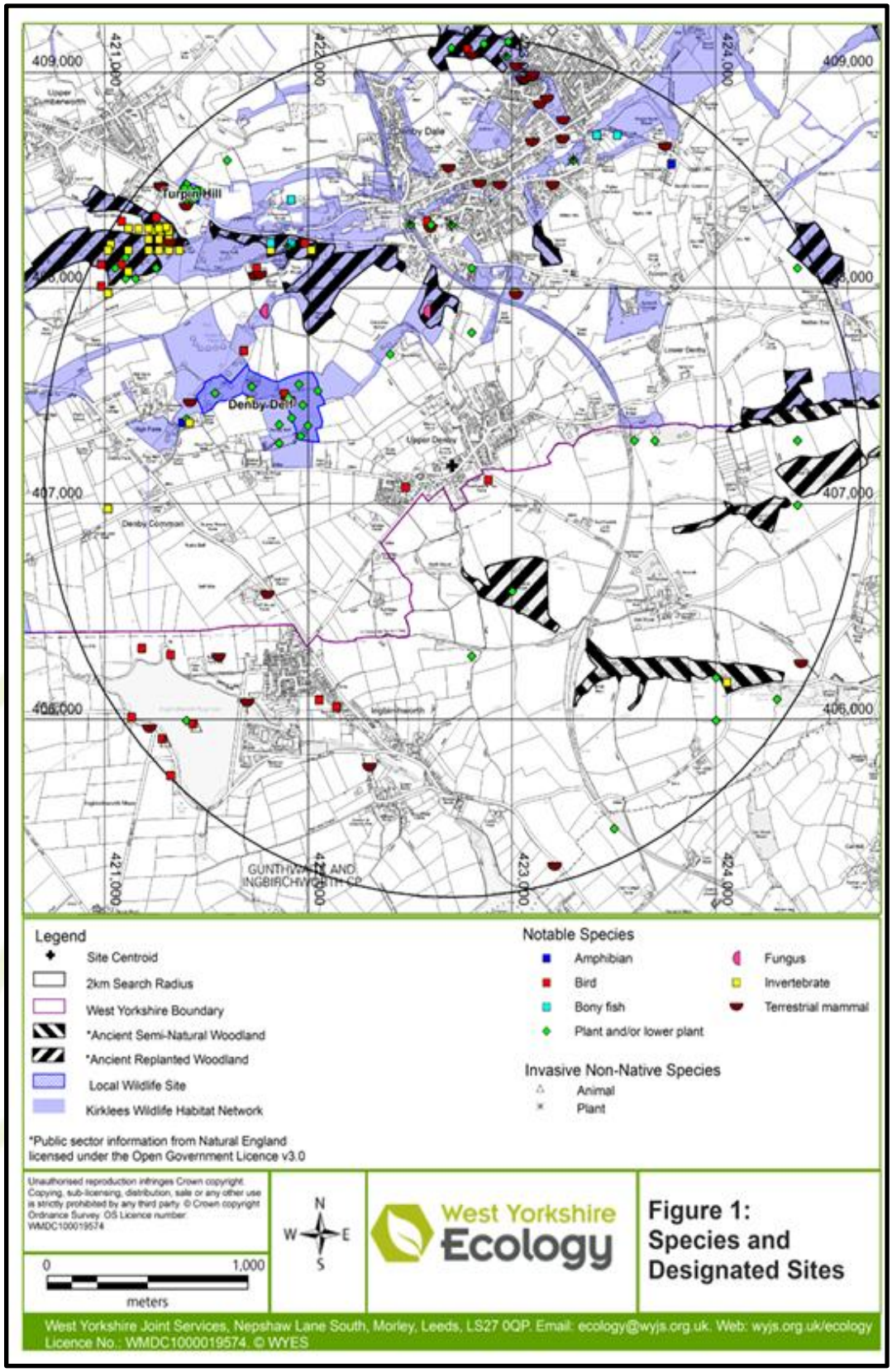
Site Name	Designation	Distance from Site	Works Impact Likelihood
Denby Delf	Local Wildlife Site	1.2 km northwest	Negligible

5.6 Priority Habitats and Priority Species

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

5.6.2 A total of five priority habitats were recorded outside the redline site boundary but within the search radius as displayed in table 5 below.

Figure 7. Non-Statutory Designated Sites.



West Yorkshire Ecology

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

Habitat Type	Habitat Description
Ancient and Semi-Natural Woodland	Three large parcels of Ancient woodland priority habitat are located off site within 1km of the site boundary. The woodlands pertain to Margaret Wood to the southeast, Hagg Wood to the north and Toby Wood to the northwest of site.
Lowland Dry Acid Grassland	A single area of lowland dry acid grassland priority habitat is present off site to the northwest approximately 600 meters in size.
Lowland Heathland	An area of priority lowland heath habitat is present off site within 700 meters to the northwest of site.
Traditional Orchard	An area of priority tradition Orchard habitat is present off site to the northwest approximately 450 meters from site.
Deciduous Woodland	Numerous parcels of priority deciduous woodland habitat are present on all elevations surrounding site within 1 km. The closest parcel to site is located 480 meters south of site.

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

5.6.4 One non-native / invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) was recorded within the site boundary, that being Montbretia.

5.6.5 Recommendations regarding these species are included in the conclusion of this report.

5.7 Protected Species

5.7.1 **Breeding Birds**

5.7.1.1 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. Currently, the works on site require the removal of multiple trees.

5.7.1.2 Suitable habitats were recorded within the site in which, birds could potentially utilise for nesting and breeding purposes. Further recommendations have been made within this report.

5.7.1.3 Recommendations regarding breeding birds are given within the conclusion of this report.

5.7.2 **Bats**

5.7.2.1 The trees within the site were deemed as offering **low and moderate** potential to be used by bats for roosting.

5.7.2.2 There is one building within the site which was deemed as offering **high** potential to support roosting bats.

5.7.2.3 Multiple PRF-M features were recorded within the main roof of the building within the site boundary. PRF-I features were identified within five on site trees (T2, T3, T4, T6, T21).

5.7.2.4 The site does not constitute as likely major foraging or commuting ground, based on the habitat composition. No evidence of foraging or commuting suitability has been found within or adjacent to the site. It is predicted that bats will be affected by disturbance levels/proposed works.

5.7.2.5 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.

5.7.2.6 Recommendations regarding bats are given within the conclusion of this report.

5.7.3

5.7.3.1 No presence of or signs of were recorded within the site or within 30 meters of the site boundary at the time of survey.

5.7.3.2 The site habitats are deemed to hold sub-optimal suitability for due to the small size of the site and lack of densely vegetated habitats present.

5.7.3.3 Recommendations regarding are detailed within the conclusion of this report.

5.7.4 **European Hedgehog**

5.7.4.1 No field-sign evidence of hedgehog was recorded on site at the time of survey.

5.7.4.2 The site habitats are deemed to provide low suitability to support sheltering and foraging hedgehog due to the small size of site and the open nature of the site with a limited amount of dense vegetation that could provide a place of shelter.

5.7.4.3 Recommendations regarding European hedgehogs are given within the conclusion of this report.

5.7.5 **Riparian/Aquatic Mammals**

5.7.5.1 No field sign evidence of aquatic mammals was recorded within the site at the time of survey.

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

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

5.7.5.4 No further recommendations are required in relation to riparian mammals.

5.7.6 **Amphibians**

5.7.6.1 The site is deemed to offer low suitability to support foraging and sheltering amphibians due to the presence of refugia piles on site and the presence of on-site hedgerow habitats. No presence of great crested newts was detected within the site during the survey; the site does not fall within a GCN risk zone category within the Natural England Risk Zone Map.

5.7.6.2 No habitats suitable for breeding amphibians were detected within the site or outside the site within a 250 m radius from the central grid reference. An eDNA will not be run on this site.

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

5.7.7 **Reptiles**

5.7.7.1 The site habitats provide low suitability to support foraging and sheltering reptiles due to the presence of refugia and dry-stone walls containing gaps. The habitats on site are isolated from habitats in the wider landscape as the habitats surrounding site are subject to high levels of human disturbance.

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

5.7.7.3 No suitable connectivity is present in which reptiles could utilise in the wider area surrounding the site.

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

5.7.8 **Other species**

5.7.8.1 The site does not contain suitable habitat for any other protected or significant fauna, such as: barn owl (*Tyto alba*), 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 1 km search radius.

6.1.2 A single Non-Statutory Designated Site was recorded within the 1 km search radius.

6.1.2.1 The site is not recorded as being within any notable designated sites or impact risk zones.

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 The non-native invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) that was recorded during the survey are as follows: Montbretia.

6.3 Recommendations for Further Surveys / Mitigation

6.3.1 **Birds**

6.3.1.1 Suitable habitats are recorded within the site in which, birds could utilise such as lines of trees, individual trees and ornamental hedgerow habitats.

6.3.1.2 It is recommended that any vegetation clearance work, if required, is undertaken outside the breeding bird season, which is typically recognised as March to September (inclusive). Should these timings not be feasible, then a walkover survey conducted by a suitably qualified ecologist should be undertaken in advance of the impactful works to ensure no breeding bird activity. 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 the nest.

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 at the time of survey.

6.3.2.2 Both buildings and trees were present within the site. Multiple PRF-M features were present under main roof tiles within the on-site building, as such the on-site building was assessed to provide **high** suitability to support roosting bats.

6.3.2.3 A total of six trees on site were assessed to provide suitability to support roosting bats, T2, T3, T4, T6 and T21 were assessed to provide **low** suitability to support roosting bats and T22 was assessed to provide **moderate** suitability to support roosting bats.

6.3.2.4 In line with current guidelines, three dusk activity surveys are required to be conducted at the on-site building to be conducted during the bat activity season (May to August inclusive). These surveys must be conducted in suitable weather conditions and spaced a minimum of three weeks apart.

6.3.2.5 As T22 is assessed to provide moderate suitability to support roosting bats and is not safe to climb and inspect with an endoscope, it is recommended that two dusk activity surveys are conducted during the bat activity season. These surveys must be conducted in suitable weather conditions and spaced a minimum of three weeks apart.

6.3.2.6 Trees T2, T3, T4, T6 and T21 will not require a bat survey. Works should follow a precautionary approach in line with best practice guidance (Collins, 2023). Where practicable, sectional felling should be used to sensitively remove the tree, with the tree being sectioned during felling, taking care not to crosscut into limb or stem sections that support cavities or voids. Any felled sections supporting PRFs such as lifted bark, dense ivy or cavities should be lowered to the ground and left in-situ overnight, with the cavity or feature facing upwards, prior to chipping or removal from the site the following day.

6.3.2.7 This will enable any bats to leave under their own volition in the unlikely event that they are present within a roosting feature. Should the presence of roosting bats be suspected immediately prior to felling, e.g. due to audible squeaking or the presence of droppings, or the presence of bats encountered during felling, works should cease and will not continue until a suitably qualified ecologist is contacted for advice.

6.3.2.8 The site lies within an immediate environment of relatively low artificial light levels, with natural commuting and foraging habitats present on site in the form of line of trees and hedgerow habitats. As such, the site will be subject to the implementation of a sensitive lighting scheme.

6.3.2.9 Due to the site's small size, the site is not deemed to hold potential to be a major foraging or commuting route for bats. No further recommendations are given in reference to bat activity surveys.

6.3.3 **European Hedgehog**

6.3.3.1 Residual impacts towards European hedgehog can be minimised by considering the timing and method of works. Whilst there is no optimum time of year for such works due to hedgehogs' use of nests all year round, an autumn site clearance will avoid the bulk of the breeding season and will be prior hibernation.

6.3.4 **Amphibians**

6.3.4.1 No field sign evidence was recorded within the site during the survey. However, due to the low suitability of refugia habitats within the site, it is deemed necessary for a precautionary method statement to be adopted within the scheme to ensure amphibians are not impacted by the proposed works.

6.3.5

6.3.5.1 No field sign evidence pertaining to was recorded within the site during the survey. The site habitats were small and of limited suitability to support sheltering

6.3.6 **Reptiles**

6.3.6.1 No field sign evidence of reptiles was recorded within the site during the survey. However, due to the low suitability of habitats within the site, it is deemed necessary for a precautionary method statement to be adopted within the scheme to ensure reptile assemblages are not impacted by the proposed works.

6.3.7 **Aquatic Mammals**

6.3.7.1 No further recommendations are deemed necessary in reference to aquatic mammals.

6.3.8 **Other Species**

6.3.8.1 No field sign evidence of species not already stated above were recorded within the site during the survey. Therefore, no further recommendations in terms of formal mitigation are required.

6.3.9 **Schedule 9 Species**

6.3.9.1 **Montbretia** is recorded within the site. This species is a schedule 9 listed plant within The Wildlife and Countryside Act 1981. It is an offence to knowingly and intentionally spread any plant listed on schedule 9.

6.3.9.2 It is, however, not an offence to have the species on land, as long as it is not spread. It is an option to retain the species within the landscaping design for the site plan to reduce the risk of breaching biosecurity.

6.3.9.3 In relation to montbretia, if retaining the species is not an option for the scheme, then removal is possible provided that precautions are made to prevent the spread of the species. The removal will require the entire root systems to be removed to prevent the species regrowing. All plant material of each genus must be kept within itself when removed from its rooted location. Furthermore, care must be taken during removal to ensure no seeds are left on site which could subsequently germinate and grow.

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

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:

- Two building integrated bat boxes should be installed within the southwest elevations of both proposed residential buildings (one box per building). These boxes must be installed away from artificial lighting or any light splay and must be more than 2 meters above ground level. The specific model of bat boxes is to be determined by the results of the bat surveys. Any further recommendations in reference to bats detailed within the bat survey report must also be followed.
- Two bird boxes are recommended to be installed on the northern elevation of the proposed-on site buildings (one per building), one integrated house sparrow nest box and one integrated swift brick are recommended.
- New native tree planting is recommended to replace any felled trees, high value fruit bearing species are recommended to include hawthorn (*Crataegus monogyna*), bird cherry (*Prunus padus*), and rowan (*Sorbus acuparia*).
- New native hedgerow planting is recommended to be planted across the western site boundary to provide a suitable linear commuting feature for bats, herptiles and small mammals. Recommended species include hawthorn, dog rose (*Rosa canina*) and blackthorn (*Prunus spinosa*).
- Boundary features should be kept partly open and allow passage for small mammals such as hedgehog.

7.3 The client advises that this application pertains to a self-build development. It is therefore suggested the application should be considered under the 'Self-build and Custom Build Application' exemption. The exemption states that to qualify, the development must:

- Consist of no more than 9 dwellings;
- be on a site that has an area no larger than 0.5 hectares, and;
- consist exclusively of dwellings that are self-builds or custom house builds, as defined in section 1(A1) of the Self-build and Custom Housebuilding Act 2015.

7.4 If the application is compliant with the Self-build and Custom Housebuilding Act (2015), it is concluded that a full Biodiversity Net Gain assessment would not be required for the proposed development at this site.

Appendix One : UK Habitats Classification Map

UK Habitats Classification Map Key	
	Site Boundary
	Buildings
	Vegetated gardens
	Ornamental Hedgerow
	Native line of trees
	Ornamental Line of trees
	Individual Trees
	TN1 Refugia habitat pile
	TN2 Cotoneaster (non-Schedule 9)
	TN3 Montbretia

Appendix Two: Species list (on site)

Vernacular	Taxon
Flora	
Bird Cherry	*Prunus padus*
Blackthorn	*Prunus spinosa*
Box	*Buxus sempervirens*
Bramble species	*Rubus spp*
Buck's-horn Plantain	*Plantago coronopus*
Cock's-foot grass	*Dactylis glomerata*
Cherry species	*Prunus spp*
Common Couch	*Elytrigia repens ssp repens*
Common Nettle	*Urtica dioica*
Common Ivy	*Hedera helix*
Cow Parsley	*Anthriscus sylvestris*
Creeping Bent	*Agrostis stolonifera*
Creeping Buttercup	*Ranunculus repens*
Crested Dog's-tail	*Cynosurus cristatus*
Cypress Species	*Cupressus spp*
Daisy bush	*Brachyglottis greyi spp*
Dog Rose	*Rosa canina*
Franchet's Cotoneaster	*Cotoneaster franchetii Bois*
Foxglove	*Digitalis purpurea L.*
Golden ragwort	*Senecio doria L.*
Hawthorn	*Crataegus monogyna*
Holly	*Ilex aquifolium*
Hart's-tongue fern	*Asplenium scolopendrium*
Montbretia	*Crocosmia x crocosmiiflora*
New Zealand Holly	*Olearia macrodonta*

Poplar species	*Populus spp*
Rowan	*Sorbus acuparia*
Silver Birch	*Betula pendula*
Sycamore	*Acer pseudoplantanus*
Willow species	*Salix spp*

References:

Collins, J. (ed.) (2023). Bat Surveys for Professional Ecologists: Good Practice Guidelines 4th (edn.) The Bat Conservation Trust, London.

UKHab Ltd (2023). UK Habitat Classification Version 2.0 Available at [https://www.ukhab.org]

DEFRA (2023). Risk Zones for District Licensing of Great Crested Newts. [Available online at: https://naturalengland-defra.opendata.arcgis.com/search?q=gcn]

Environment Agency (2023). Guidance Note RSP 178 - Treatment and disposal of invasive non- native plants. [Available online at https://www.gov.uk/government/publications/treatment-and- disposal-of-invasive-non-native-plants-rps-178]