Rob and Dena Frith trading as ***RDF*** Ecology
5 Stamford Road
Woodlaithes
Rotherham
South Yorkshire
S66 3YY
Tel: 01709 531 868
Enquiries: sales@rdfecology.co.uk
Web: www.rdfecology.co.uk

Waters Mill, Penistone

Preliminary Ecological Appraisal

Prepared for Mulgrave Developments Ltd

November 2024

	Staff Member	Position
Extended Phase I Habitat Survey	Rob Frith BSc (Hons) MRSB	Principal Ecologist
Report prepared by	Rob Frith BSc (Hons) MRSB	Principal Ecologist
Reviewed by:	Dena Frith	Senior Ecologist
Approved by	Rob Frith BSc (Hons) MRSB	Principal Ecologist
Notes:	**This report contains sensitive information concerning protected species and caution should be exercised when copying and distributing to third parties.**	

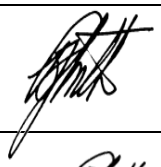
Report Status	Authorised for Release	Date	Position
Final Draft	Rob Frith 	21 July 2023	Principal Ecologist
Final	Rob Frith 	2 September 2023	Principal Ecologist
Final (including Barnsley Biological Records Centre Data)	Rob Frith 	31 October 2023	Principal Ecologist
Final (with revised BNG proposals)	Rob Frith 	6 February 2024	Principal Ecologist
Final (with revised layout and BNG proposals)	Rob Frith 	26 November 2024	Principal Ecologist

TABLE OF CONTENTS

LIST OF TABLES

LIST OF PHOTOGRAPHS

EXECUTIVE SUMMARY

Mulgrave Developments Ltd is seeking planning permission for a small residential development comprising 17 dwellings and associated access at land off Watermill Gardens, Penistone.

RDF Ecology were appointed to undertake a desktop study, extended phase I habitat and protected species walkover survey, to prepare a preliminary ecological appraisal report and provide advice on ecological habitat creation and complete the current Biodiversity Net Gain metric (Statutory Metric) calculations for the development.

Assessment Summary

Survey Item	Conclusions
Designated Sites	**No** impacts upon designated sites are predicted and **no** further survey and assessment work are recommended.
Habitats	The habitats within the site have no intrinsic botanical value and the loss of the area of improved agricultural grassland, ruderal and ephemeral vegetation would have negligible ecological effects Off-site habitat creation measures are proposed and indicate that overall the development delivers the net gains as set out below Habitats 12.61% Hedgerows Delivers an additional 0.75 biodiversity units (100.00%) The Statutory metric trading rules were satisfied **No** further survey or assessment work is recommended with regard to the sites botanical value.
Bats—Buildings and Structures	There are no buildings within the site. N**o** impacts upon roosting bats in buildings are predicted and **no** further survey or assessment work is recommended
Bats—Trees and Habitats	There are no large trees with potential roost features to be removed or directly affected by the proposed development and no commuting routes would be disrupted. **No** significant impacts upon commuting or feeding bats or upon bats roosting in trees are predicted and **no** further survey and assessment work is recommended
Badger	**No** evidence of badger activity was recorded and **no** impacts upon badgers are predicted and **no** further survey or assessment work is recommended.
Otter	The site **does not** contain any habitats of potential value to otters, **no** evidence of otter activity was recorded during the field survey. **No** impacts upon otters are predicted and **no** further survey or assessment work for otters is recommended
Water Vole	The site **does not** contain any habitats of potential value to water vole, **no** evidence of water vole activity was recorded during the field survey. **No** impacts upon water vole are predicted and **no** further survey or assessment work for water vole is recommended
Hedgehogs	**No** significant impact upon hedgehogs predicted. Hedgehog highways to be included in fence design for the development
Brown Hare	**No** evidence of brown hare activity was recorded and no impacts upon brown hare are predicted and **no** further survey or assessment work is recommended.
Breeding Birds	**No** significant impacts upon nesting birds are predicted and **no** further ornithological survey work is recommended
Amphibians	N**o** impacts upon amphibians are predicted and **no** further survey work is recommended
Reptiles	**No** significant impacts upon reptiles are predicted and **no** further survey work is recommended
Recommendations	
Breeding Birds	That removal of trees, shrubs and surface vegetation should be completed outside of the bird breeding season (March to September inclusive). Where this is not possible a suitably qualified and experienced ecologist should complete a survey of the site immediately prior to completion of the proposed works to search for nesting birds and to advise on exclusion zones or timing of works if nesting birds are recorded

1. INTRODUCTION

1.1. Project Background

1.1.1. Mulgrave Developments Ltd is seeking planning permission for a small residential development comprising 17 dwellings and associated access at land off Watermill Gardens, Penistone (hereafter referred to as 'the site') whose location and extent is shown in Figure 1.

1.2. Planning Background

1.2.1. The site is allocated for new housing in the Barnsley Local Plan (site reference HS70).

1.3. Ecological Background

1.3.1. There have been no previous ecological surveys of the site.

1.3.2. However, planning permission was granted (Ref 2015/1637) for the "Demolition of existing buildings and erection of 11no. detached dwellinghouses, access, landscaping, drainage and associated works". This application related to the area immediately south of the Site and within allocation HS70.

1.3.3. A preliminary Ecological Appraisal report (Brooks Ecological 2015a) was submitted with the planning application and recommended further bats surveys for the old Mill building adjacent to Barnsley Road. These surveys were completed in August and September of 2015 (Brooks Ecological 2015b and 2015c). The surveys did not identify any bat roosts within the buildings surveyed. They did however record a single common pipistrelle *(pipistrellus pipistrellus)* commuting along the River Don to the south of the site and other common pipistrelle bat activity which suggested the possible presence of a small common pipistrelle bat roost in the farm buildings north east of the permitted development.

1.4. Project Brief and Objectives

1.4.1. ***RDF*** Ecology were appointed to undertake a desktop study, extended phase I habitat and protected species walkover survey, to prepare a preliminary ecological appraisal report and provide advice on ecological habitat creation and complete the current Biodiversity Net Gain metric (version 4.0) calculations for the development.

1.4.2. The objectives of the commission were to:

- To complete a desk-top study to review any existing information regarding protected or notable species and designated sites within a 2 kilometre (km) radius of the site, extended to 10 km for International and European

conservation sites including Special Areas of Conservation (SAC), Special Protection Areas (SPA) and Ramsar sites;

- To undertake an extended phase 1 habitat and protected species walkover survey to describe and map the habitats on the site and to identify the presence or potential presence of any protected or notable species;
- To identify and assess potential ecological constraints to the proposed development;
- To prepare a preliminary ecological appraisal report
- To provide recommendations for further ecological surveys where necessary; and,
- Recommend appropriate mitigation measures to enable compliance with wildlife legislation, offset potential negative ecological effects and enhance biodiversity where possible.
- To complete and update the Biodiversity Net Gain Metric (Statutory Version) for the development in light of comments received from Barnsley MBC.

1.4.3. This report describes the findings of the desktop study and field survey work, considers the potential impacts arising from the proposed development and proposes appropriate mitigation measures.

2. THE DEVELOPMENT PROPOSALS

2.1. The proposals considered by this preliminary ecological appraisal are for the erection of 17 dwellings and associated access at land off Watermill Gardens, Penistone.

2.2. To compensate for onsite habitat losses, some off-site habitat enhancements are proposed for an area of nearby scrub and disturbed ground habitats on a bank to the east of the fishing ponds and approximately 200m north of the application site boundary.

3. SURVEY METHODS

3.1. Desktop Study

3.1.1. A desk study was carried out in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) 'Guidelines for Preliminary Ecological Appraisal' (2017). Records of any protected or notable species, habitats and designated nature conservation sites within a 2km radius of the site were obtained and reviewed. This radius was extended to 10km for International and European conservation sites including Special Areas of Conservation (SAC), Special Protection Areas (SPA) and Ramsar sites.

3.1.2. The following organisations were contacted for protected sites and species data:

- Barnsley Biological Records Centre (BBRC)

3.1.3. Additional information on sites and species of nature conservation interest was obtained from:

- Multi Agency Geographic Information for the Countryside (MAGIC) website;
- Natural England web site and online SSSI database;

3.2. Field Survey

3.2.1. The extended phase I habitat study area covered the whole site and extended 50m beyond the site boundary where access was possible.

3.2.1. Extended Phase I Habitat Survey

3.2.1.1. An extended phase 1 habitat survey of the site was completed on 4 May 2023 All habitats within the site were surveyed. Habitats within the proposed off-site BNG compensation area were surveyed on 7 December 2023 and at the same time the habitats within the development site were revisited to ensure that there had been no material changes since the survey visit in May 2023.

3.2.1.2. Habitats present on the site were classified and mapped according to the Joint Nature Conservation Committee (JNCC) Phase 1 Habitat survey methodology (JNCC, 2010).

3.2.1.3. A phase 1 habitat survey provides sufficient information on the composition of the vegetation present to enable it to be characterised and assessed.

3.2.1.4. Fauna and flora present at the time of survey were recorded and the site was assessed for its potential to support notable and/or protected species that could be impacted by development following CIEEM guidance (CIEEM, 2017 and 2018).

3.2.1.5. Target notes were prepared for any features of ecological interest and their locations noted in Figure 3. Plant species were recorded following the nomenclature in Stace (1997) and lists of species are included in Appendix 1.

3.3. Protected Species

3.3.1. Badger Survey

3.3.1.1. Areas of suitable habitat on site and within 50m of the site boundary (where accessible) were searched for evidence of badger with reference to the methodology defined in Harris et al. (1991). The following field signs were recorded, if encountered, during the protected species walkover survey:

- Setts;
- Latrines;
- Prints and paths or trackways;
- Hairs caught on rough wood or fencing; and
- Other evidence including snuffle holes, feeding remains and scratching posts.

3.3.1.2. Where setts were recorded, their status and level of activity was noted. Sett status is broadly categorised as follows:

- Main: generally the largest sett within a badger clan's territory, with a relatively large number of sett entrances with well-worn pathways between them, and conspicuous spoil mounds. This type of sett will be occupied throughout the year and used for breeding;
- Annexe: normally found within 150m of the main sett comprising many entrances, this type of sett may not be occupied throughout the year, and can be used for breeding if there is more than one breeding sow within the clan;
- Subsidiary: similar to an annexe sett, but typically located further from the main sett. This type of sett will not be occupied throughout the year and lacks the well-worn paths associated with main and annexe setts; and
- Outlier: consisting of one or two entrances, this type of sett will be found furthest from the main sett and will only be used sporadically throughout the year.

3.3.1.3. The suitability of the existing habitats on site, as badger breeding and foraging habitat, was assessed.

3.3.2. Otter Survey

3.3.2.1. Areas of suitable habitat on site and within 50m of the site boundary (where accessible) were searched for evidence of otter (*Lutra lutra)*. The following field signs were recorded, if encountered, during the protected species walkover survey:

- Sightings of Otters
- Otter Holts
- Otter footprints
- Otter spraints
- Otter slides

3.3.2.2. The suitability of the existing habitats on site, as otter breeding and foraging habitat, was assessed.

3.3.3. Water Vole Survey

3.3.3.1. Areas of suitable habitat on site and within 50m of the site boundary (where accessible) were searched for evidence of water vole *(Arvicola amphibius)*. The following field signs were recorded, if encountered, during the protected species walkover survey:

- Sightings of Water Voles
- Water Vole tunnel entrances
- Water Vole “lawns”
- Water Vole feeding stations
- Water Vole latrines
- Waterside paths
- Runs in vegetation
- Water Vole footprints
- Sounds of Water Voles 'plopping' into the water

3.3.3.2. The suitability of the existing habitats on site, as water vole breeding and foraging habitat, was assessed.

3.3.4. Bat Surveys

3.3.4.1. Whilst completing the extended phase I habitat survey a preliminary bat roost assessment was undertaken in accordance with best practice guidelines (Collins 2016 and Hundt, 2012).

Tree Assessment

3.3.4.2. There are no trees within the site boundary, however or immediately adjacent to the site were assessed for their potential to support roosting bats in accordance with best practice guidelines (Collins 2016 and Hundt, 2012).

3.3.4.3. The trees were examined from the ground using binoculars and a high-powered torch where appropriate to look for any potential roost features (PRF's) such as natural holes, woodpecker holes, cracks/splits in major limbs, loose bark, thick stemmed ivy growth, hollows/cavities and within dense epicormic growths.

3.3.4.4. The trees were classified according to the criteria detailed in Table 1 below, based upon the visible PRF's identified during the ground levels survey. For extensive areas of woodland, where all trees could not be fully checked the woodland as a whole, was assessed for its potential for roosting bats based upon the overall age and character of the trees present.

Table 1—Criteria for bat roost potential assessment of trees (based on Collins 2016 and Hundt, 2012)

Tree Category	Description
Confirmed	Tree with features confirmed to be used by roosting bats either by historic records (verified appropriately), or evidence recorded during survey.
High	Tree with many suitable PRF's capable of supporting larger roosts. The tree is located within habitat that is connected to wider landscape by strong linear features that may be used by commuting bats e.g. river valley, streams and hedgerows.
Moderate	Tree with definite bat roost potential but with fewer larger PRF's or several PRF's with the potential to be used by individual/small numbers of bats. Surrounding area includes good quality foraging habitat for bats e.g. broadleaved woodland, tree-lined watercourses and grazed parkland; or tree with highly suitable features though its context is less optimal.
Low	Tree with less PRF's capable of supporting only individual/small numbers of bats within a suboptimal location; tree in suitable habitat and of a size and age that elevated surveys are considered likely to result in cracks or crevices being found; or tree with definite bat roost potential which is isolated and within low quality foraging habitat meaning that the presence of a roost is considered less likely.
Negligible	Tree with no visible PRF's, or very few or minor features in an isolated/unsuitable location such that the presence of a roost is considered highly improbable e.g. isolated from suitable foraging or commuting habitats.

Buildings Assessment

3.3.4.5. There are no buildings within the site boundary.

Habitat Assessment

3.3.4.6. Habitat within and adjacent to the site boundary was assessed for its suitability for commuting and feeding bats in accordance with current guidance (Table 4.1 in Collins, 2016) with habitats categorised as having negligible, low, moderate or high suitability for commuting and feeding bats and are summarised in Table 2 below:

Table 2— Criteria for habitat suitability assessments (based on interpretation of Collins 2016 and Hundt, 2012)

Habitat Suitability	Description
High	Continuous high quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, stream, hedgerows, lines of trees and woodland edge. High quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree lined watercourses and grazed parkland Site is close to and connected to known roosts.
Moderate	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
Low	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream but isolated i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland setting) or a patch of scrub.
Negligible	Negligible habitat features on site likely to be used by commuting or foraging bats.

3.3.5. Wild Birds

3.3.5.1. Habitat within and adjacent to the site boundary was assessed for its suitability for nesting birds. Bird species seen or heard during the survey were recorded.

3.3.6. Amphibian Survey

Habitat Suitability Index Assessment

3.3.6.1. All accessible water bodies within 500m of the site, which are not separated from the site by significant barriers to amphibian movement, were assessed for their suitability as aquatic habitat for great crested newts (*Triturus cristatus*) (GCN) using the criteria in the HSI assessment method developed by Oldham et al (2000) and modified further by the Amphibian and Reptile Groups of the United Kingdom (ARG 2010).

3.3.7. Reptile Survey

3.3.7.1. Any casual observations of reptiles within the site were recorded and the habitats within the site were assessed for their potential value for reptiles.

3.4. Limitation of Field Survey

3.4.1. The extended phase 1 habitat survey was undertaken on 4 May 2023 within the period generally considered to be the optimal vegetation survey period (i.e. April to September).

3.4.2. The off-site compensation area was surveyed on 7 December 2023 outside of the normal botanical survey season but provided sufficient information to consider biodiversity enhancements and to assess the condition of habitats for completing the BNG Metric calculations.

3.4.3. Further botanical surveys would be completed to develop a Biodiversity Enhancement and Management Plan for the site, to include the off-site habitats if planning permission were granted.

3.4.4. Given the timings of the survey and the nature of the modified habitats recorded on site it is considered that no limitations are present in the assessment of the development site for protected/notable species and habitats. However, an extended phase 1 habitat survey does not comprise a full botanical assessment of all species present within a site; therefore species lists are indicative only.

3.4.5. The baseline conditions described in this report are accurate at the time at which the survey was undertaken. Should a considerable time pass (e.g. more than 2 years) and/or conditions/land-use on the site change prior to the commencement of works, it is recommended that an up-date survey is undertaken.

4. DESKTOP STUDY RESULTS

4.1. Introduction

4.1.1. The desk study results are summarised below and include a review of data provided by Barnsley Biological Records Centre (BBRC).

4.1.2. Data older than 10 years is considered to be less important than more recent data due to the length of time that has elapsed since being collected (and the chance that they are no longer valid for a current assessment) and these have therefore been excluded from the protected species summary unless the historical records are the sole record for that particular species.

4.2. Designated Sites

4.2.1. Nature Conservation designations within 2km of the site are shown in Figure 2.

4.2.1. Statutory Designated Sites

4.2.1.1. The site is not covered by any statutory nature conservation designations and there are no sites covered by statutory nature conservation designations within 2km of the site boundary.

4.2.1.2. The closest site covered by a statutory nature conservation designation is Pye Flatts Meadows Site of Special Scientific Interest (SSSI) located approximately 3km north east of the site boundary

4.2.1.3. In addition there are 2 sites covered by European nature conservation designations within 10km of the site boundary and these are summarised in Table 3 below.

Table 3—Statutory Designations within 2km and 10km of the site

Site Name	Designation	Distance from Site at Nearest Point
Statutory Designations within 2km		
None		
European Designations within 10km		
South Pennine Moors	SSSI, SAC	5.5km SW
Peak District Moors (South Pennine Moors Phase 1)	SSSI, SPA	5.5km SW
Key SAC = Special Area of Conservation SPA = Special Protection Area	SSSI = Site of Special Scientific Interest	

4.2.1.4. Annex I habitats that are a primary reason for selection of the south Pennine moors SAC include, European dry heaths, Blanket bogs and Old sessile oak woods with *Ilex* and *Blechnum* whilst the Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site include Northern Atlantic wet heaths with Erica tetralix and Transition mires and quaking bogs.

4.2.1.5. Peak District Moors (South Pennine Moors Phase 1) qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive:

During the Breeding Season

Table 4— Qualifying Criteria under Article 4.1

Species	Qualifying Interest
Golden Plover *(Pluvialis apricaria)*	752 pairs representing at least 3.3% of the breeding population in Great Britain (Count as at 1990)
Merlin *(Falco columbarius)*	77 pairs representing at least 5.9% of the breeding population in Great Britain
Peregrine *(Falco peregrinus)*	16 pairs representing at least 1.4% of the breeding population in Great Britain
Short-eared Owl *(Asio flammeus)*	25 pairs representing at least 2.5% of the breeding population in Great Britain

4.2.1.6. This site also qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species.

During the Breeding Season

Table 5— Qualifying Criteria under Article 4.2

Species	Qualifying Interest
Dunlin *(Calidris alpina schinzii)*	140 pairs representing at least 1.3% of the breeding Baltic/UK/Ireland population

4.2.2. Non-Statutory Designated Sites

4.2.2.1. Local Wildlife Sites (LWS) are identified as the most important areas for biodiversity outside statutory designated sites within Barnsley Borough. They are selected and designated for their locally important, distinctive, and threatened habitats and species. This is in order to protect them from inappropriate development and promote the conservation of their biodiversity. Ther are currently 62 Local Wildlife Sites designated in Barnsley Borough.

4.2.2.2. There are three LWS's within 2km of the site boundary and these are summarised in Table 6 below. The closest identified LWS is Scout Dyke Reservoir LWS located approximately 1.1km north west of the site boundary.

Table 6—Non-statutory Designations within 2km of the site

Name	Designation	Distance to nearest point on site boundary
Scout Dyke Reservoir	LWS	1.1km NW
Royd Moor Reservoir	LWS	1.9km W
Small Shaw and High Bank	LWS	1.8km W

4.3. Protected Species

4.3.1. Bats

4.3.1.1. Data provided by Barnsley Biological Records Centre (BBRC) contained 97 records for bats and these are summarised in Table 7 below.

Table 7—Summary of Barnsley Biological Records Centre Bat Data

Species	Number of Records	Closest Distance from Site Boundary
Unidentified bat *(Chiroptera)*	15	299
Unidentified Myotis species *(Myotis sp.)*	6	586
Brandt's Bat *(Myotis brandtii)*	1	355
Daubenton's Bat *(Myotis daubentoni)*	1	1065
Whiskered Bat (Myotis mystacinus)	2	355
Whiskered/Brandt's Bat *(Myotis mystacinus/brandtii)*	2	1331
Natterer's Bat *(Myotis nattereri)*	2	1331
Nyctalus Bat species *(Nyctalus sp.)*	2	1331
Noctule *(Nyctalus noctula)*	9	355
Pipistrelle species *(Pipistrellus sp.)*	2	1317
Common Pipistrelle *(Pipistrellus pipistrellus)*	47	79
Soprano Pipistrelle *(Pipistrellus pygmaeus)*	8	586
Total	97	

4.3.1.2. The data included details of 7 roosts locations of which 5 were common pipistrelle, one was an unidentified pipistrelle roost comprising a single bat and the other a roost of a single Whiskered/Brandt's bat. The closest roost identified in the data was a maternity roost of common pipistrelle located approximately 355m south east of the site boundary with a maximum count of 76 bats recorded in July 1989.

4.3.1.3. The pipistrelle roosts were associated with the residential areas south of the site and the Whiskered/Brandt's bat roost was located in farm buildings approximately 1.3km north of the site boundary

4.3.1.4. The closest records to the site were of feeding and commuting common pipistrelle recorded during surveys of buildings south of the site that were demolished for the adjacent new residential development. These records were from 2015.

4.3.2. Badgers

4.3.2.1. Data from BBRC contained 27 records for badger activity within 2km of the site boundary. The closest record was a road casualty on the adjacent A628 approximately 170m east of the site boundary.

4.3.2.2. Ther were no other records within 800m of the site boundary.

4.3.3. Otters

4.3.3.1. Data from BBRC did not include any records for otter *(Lutra lutra)* within 2km of the site boundary

4.3.4. Water Vole

4.3.4.1. Data from BBRC did not include any records for water vole *(Arvicola amphibius)* within 2km of the site boundary

4.3.5. Hedgehog

4.3.5.1. Data provided by BBRC contained 84 records of hedgehog *(Erinaceus europaeus)* and the closest record was of a dead animal on the verge of the A628 immediately south of the site boundary. There were 16 other records of hedgehogs found dead near roads.

4.3.5.2. The remaining records included were generally evenly distributed among the adjacent residential areas with one garden in Penistone approximately 1.3km south east of the site boundary recording hedgehogs on 19 occasions in 2018 feeding underneath a bird feeder.

4.3.5.3. The species appears to be evenly distributed within the 2km buffer zone around the site boundary.

4.3.6. Brown Hare

4.3.6.1. Data provided by BBRC contained 60 records of brown hare *(Lepus europaeus)* with the closest a dead animal on the road north of Penistone Gramma school approximately 350m from the site boundary.

4.3.6.2. The remainder of the records were from farmland to the north and north west of the site and more than 500m from the site boundary.

4.3.7. Wild Birds

4.3.7.1. Data from BBRC contained 2318 bird records of 118 species within 2km of the site boundary. There were no records from the site itself or for areas within 100m of the site boundary.

4.3.7.2. The data included a number of species protected under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) with the closest records being those of kingfisher *(Alcedo athis)* from the River Don corridor south of the site boundary along with three historic records dating from 1994 to 1997 from a residential garden located approximately 300m south of the site boundary

4.3.7.3. The data contained records for Barn owl *(Tyto alba)* with the closest recent record form 2022 being more than 800m form the site boundary to the east.

4.3.7.4. The data also included records for notable species including curlew *(Numenius arquata)* and lapwing *(Vanellus vanellus)* with records typically coming from areas around Scout Dyke Reservoir to the north west of the site and from fields around Cross Lane, southwest of the site boundary.

4.3.8. Amphibians

4.3.8.1. The date provided by BBRC contained records for three species of amphibians and these are summarised in Table 8 below.

Table 8—Summary of BBRC Amphibian Records

Species	Number of Records	Closest Distance from Site Boundary
Common Toad *(Bufo bufo)*	2	152
Smooth Newt *(Lissotriton vulgaris)*	3	1275
Common Frog *(Rana temporaria)*	5	267
Total	10	

4.3.8.2. The data did not include any records for great crested newts *(Triturus cristatus)*.

4.3.9. Reptiles

4.3.9.1. Data from BBRC did not include any records for reptiles within 2km of the site boundary

4.3.10. Invertebrates

4.3.10.1. The data from BBRC included a single record for white-clawed crayfish *(Austropotamobius pallipes)* dating from 2017 and from a location on Tanyard Brook approximately 1.2km north of the site boundary.

5. SURVEY RESULTS

5.1. Introduction

5.1.1. The results of the extended phase 1 habitat and protected species walkover surveys are presented below. Figure 3 illustrates the location and extent of all habitat types recorded on site. A list of species recorded on the site is included in Appendix 1.

5.2. Habitat Descriptions—Development Site

5.2.1. The following phase 1 habitat types (JNCC codes in parenthesis) were recorded on site during the field survey:

Table 9—Phase 1 Habitats on Site

Habitat	Area (ha)
Improved (modified) Grassland (B4)	0.58
Ruderal Vegetation (C3.1)	0.04
Ephemeral Vegetation (J4)	0.07
Bare Ground (J1.3)	0.05
Total site Area	0.74

5.2.1. Improved Grassland (B4)

5.2.1.1. The majority of the site comprises improved grassland **(TN1)** used for hay and livestock grazing with a grass dominated sward containing perennial rye-grass *(Lolium perenne)*, crested dog's-tail *(Cynosurus cristatus)*, common bent *(Agrostis capillaris)*, red fescue *(Festuca rubra)*, Yorkshire fog *(Holcus lanatus)* and cock's-foot *(Dactylis glomerata)* with false oat grass *(Arrhenatherum elatius)* more frequent around the margins of the site.

Photograph 1—Improved grassland

5.2.1.2. Broad-leaved species were present typically at low abundance and included yarrow *(Achillea millefolium)*, common mouse-ear *(Cerastium fontanum)*, smooth hawk's-beard *(Crepis capillaris)*, cat's-ear *(Hypochaeris radicata)*, ribwort plantain *(Plantago lanceolata)*, creeping buttercup *(Ranunculus*

repens), common sorrel *(Rumex acetosa)*, broad-leaved dock *(Rumex obtusifolius)*, dandelion *(Taraxacum officinale agg.)* and white clover *(Trifolium repens)*.

5.2.1.3. BNG Condition Assessment - Poor

5.2.2. Ruderal Vegetation (C3.1)

5.2.2.1. At the entrance to the site are a number of soil mounds with stored stone and building materials **(TN2)**. The soil banks contain coarse ruderal vegetation with false oat-grass, cock's-foot, common couch *(Elytrigia repens)* along with common nettle *(Urtica dioica)*, mugwort *(Artemisia vulgaris)*, cleavers *(Galium aparine)*, broad-leaved dock, creeping thistle *(Cirsium arvense)* and occasional rosebay willowherb *(Chamerion angustifolium)*.

5.2.2.2. BNG Condition Assessment - Poor

Photograph 2 and 3—Ruderal Vegetation on spoil mounds

5.2.3. Bare Ground and Ephemeral Vegetation (J1.3/J4)

Photograph 4—Bare ground at site entrance

5.2.3.1. At the site entrance **(TN3)** is an area of bare ground supporting some sparse vegetation with yarrow, thale cress *(Arabidopsis thaliana)*, daisy *(Bellis perennis)*, wavy bitter-cress *(Cardamine flexuosa)*, common mouse-ear, annual meadow-grass *(Poa annua)*, procumbent pearlwort *(Sagina procumbens)*, dandelion and white clover. Much less frequently encountered

species included creeping bent *(Agrostis stolonifera)*, sticky mouse-ear *(Cerastium glomeratum)*, Canadian fleabane *(Conyza canadensis)*, bird's-foot-trefoil *(Lotus corniculatus)* and thyme-leaved speedwell *(Veronica serpyllifolia).*

5.2.3.2. In the south west corner of the site **(TN4)** is another area of revegetating bare ground with some ruderal vegetation and species here included broad-leaved dock, creeping thistle, mugwort, false oat-grass, cock's-foot and Yorkshire fog along with some common mouse-ear, white clover, dandelion, common sorrel and wavy bittercress and a single cowslip *(Primula veris)*.

5.2.3.3. BNG Condition Assessment - Poor

5.3. Habitat Descriptions—Off-Site BNG Area

5.3.1. The phase 1 habitats contained within the off-site BNG area are shown in Figure 4.

5.3.1. Dense Scrub (A2.1)

5.3.1.1. The steep slopes below the grassland area support a dense scrub of hawthorn with large dense stands of bramble underscrub with frequent common nettle and coarse grasses including cock's-foot, false-oat-grass and Yorkshire fog.

5.3.1.2. Other species included rosebay willowherb, creeping thistle, broad-leaved dock, cow parsley and hogweed *(Heracleum sphondylium)*.

5.3.1.3. BNG Condition Assessment - Moderate

5.3.2. Semi-improved Neutral Grassland (B2.2)

5.3.2.1. The majority of the grassland comprised coarse tussocky neutral grassland which was previously grazed by sheep but has not been grazed for a number of years.

5.3.2.2. Species here included common bent, red fescue, sweet vernal-grass *(Anthoxanthum odoratum)*, cocks'-foot, Yorkshire fog and developing patches of false oat-grass.

5.3.2.3. Broad-leaved species were at low abundance apart from frequent to locally abundant common knapweed *(Centaurea nigra)*. Other species included common mouse-ear, dandelion. cat's-ear, ribwort plantain, white clover, creeping buttercup and common sorrel *(Rumex acetosa)* along with some broad-leaved dock and common nettle.

5.3.2.4. Bramble scrub is invading the grassland from the adjacent areas of scrub and has a greater than 10% overall coverage. Ther are also occasional saplings of hawthorn establishing.

5.3.2.5. BNG Condition Assessment – Moderate

5.3.3. Ruderal Vegetation (C3.1)

5.3.3.1. A new drain has been installed from the adjacent residential development through the southern end of the BNG area and although it has been re-seeded the vegetation comprises a range of common ruderal species typical of bare ground habitats including broad-leaved dock, creeping thistle colt's-foot *(Tussilago farfara)*, prickly sow-thistle *(Sonchus asper)*, common nettle, spear thistle *(Cirsium vulgare)*, common chickweed *(Stellaria media)*, creeping buttercup and white clover along with common bent, annual meadow-grass (Poa annua), cock's-foot and Yorkshire fog.

5.3.3.2. BNG Condition Assessment - Poor

5.4. Protected Species

5.4.1. Bats

Trees

5.4.1.1. The site does not contain any large trees with potential value to roosting bats.

5.4.1.2. Trees around the margins of the site were examined and no significant PRF's identified and all trees were considered to have negligible value for roosting bats.

Buildings

5.4.1.3. The site does not contain any buildings or other structures of potential value to roosting bats.

5.4.1.4. A small common pipistrelle *(Pipistrellus pipistrellus)* bat roost is reported from the farm buildings 120m east of the site boundary (pers. comm.).

Habitats

5.4.1.5. The site lies on the northern boundary of Penistone Village adjacent to the grounds of Penistone Grammar School. To the north are the fishing ponds of Nether Mill Fishery with associated areas of grassland and woodland. The wooded outfall from Scout dyke reservoir connects the fishery with Scout dyke Reservoir. To the east of the fisher are fields of improved grassland and large new housing development on Housing Allocation site HS75.

5.4.1.6. To the east of Penistone Grammar School are areas of arable agricultural land with some improved grassland and gappy agricultural hedgerows.

5.4.1.7. South of the site are areas of grassland that link to Watermeadows Park with grassland and wooded areas and the large Penistone Railway viaduct.

5.4.2. Badgers

5.4.2.1. No badger setts were recorded within or immediately adjacent to site.

5.4.2.2. No evidence of badger foraging activity was recorded during the field survey.

5.4.3. Otters

5.4.3.1. The site does not contain any habitats of potential value to otter *(Lutra lutra)*, no evidence of otter activity was recorded during the field survey.

5.4.4. Water Vole

5.4.4.1. The site does not contain any habitats of potential value to water vole *(Arvicola amphibius)*, no evidence of water vole activity was recorded during the field survey.

5.4.5. Wild Birds

5.4.5.1. A single skylark *(Alauda arvensis)* was recorded singing over the grassland to the east of the site boundary. A male blackbird *(Turdus merula)* was recorded from the mature trees with the grounds of Penistone Grammar School to the north of the site along with a singing robin *(Erithacus rubecula)*, wren *(Troglodytes troglodytes)* and chiffchaff *(Phylloscopus collybita)*.

5.4.6. Amphibians

5.4.6.1. The site does not contain any ponds suitable for breeding amphibians including great crested newts *(Triturus cristatus)* and no amphibians were recorded during the field survey.

5.4.6.2. There are two large ponds to the north and east of the site and these are part of the Nether Mill Fishery and being heavily stocked with fish are unlikely to be of value to breeding great crested newt. However they may provide breeding habitat for other common amphibian species

5.4.6.3. Examination of OS maps and satellite imagery indicates that there are no other ponds located within 500m of the site boundary that are connected to the site by areas of suitable terrestrial habitat

5.4.7. Reptiles

5.4.7.1. The improved grassland and bare ground habitats within the site are of limited value to reptiles due to high levels of disturbance.

6. PLANNING POLICY CONTEXT

6.1. National Planning Policy 2023

6.1.1. The National Planning Policy Framework (NPPF 2023) sets out the Government's planning policies for England and how these are expected to be applied. The NPPF sets out the Government's national principles and policies for England on the protection of biodiversity and geological conservation through the planning system.

6.1.2. At the heart of the NPPF is a clear *"presumption in favour of sustainable development"* (Para 11).

6.1.3. The UK's Sustainable Development Strategy "Securing the Future" sets out 5 guiding principles of sustainable development:

- living within the planet's environmental limits;
- ensuring a strong, healthy and just society;
- achieving a sustainable economy;
- promoting good governance; and
- using sound science responsibly.

6.1.4. Section 15 (paragraph 180) of the NPPF sets out how Planning policies and decisions should contribute to and enhance the natural and local environment by:

a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and

f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

6.1.5. Paragraph 185 refers to protecting and enhancing biodiversity and geodiversity, stating that plans should:

a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity65; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and

b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity

6.1.5. Paragraph 186 notes that When determining planning applications, local planning authorities should apply the following principles:

a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

6.1.6. Paragraph 187 insists that the following should be given the same protection as habitats sites:

a) potential Special Protection Areas and possible Special Areas of Conservation;
b) listed or proposed Ramsar sites; and
c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

6.1.7. Furthermore paragraph 188 notes that the presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site

6.1.8. Annex 1 of the NPPF sets out the detail of implementation.

6.1.9. *ODPM Circular 06/2005* (Government Circular: Biodiversity and Geological Conservation—Statutory Obligations and their Impact within the Planning System) continues to provide administrative guidance on the application of the law relating to planning and nature conservation as it applies in England. It complements and supports the expression of national planning guidance set out in NPPF.

6.2. Barnsley Local Plan Policies

6.2.1. The site forms part of a parcel of land allocated for housing under Site HS70 referred to as 'Land north of Barnsley Road'

6.2.2. The Development Plan for Barnsley currently comprises the Barnsley Local Plan (the 'Local Plan'), adopted in January 2019, and its associated Policies Map.

6.2.3. Local Plan Policies relevant to this assessment include the following:

Policy GL1 – Green Infrastructure

We will protect, maintain, enhance and create an integrated network of connected and multi-functional Green Infrastructure assets that:

- *Provides attractive environments where people want to live, work, learn, play, visit and invest;*
- *Meets the environmental, social and economic needs of communities across the borough and the wider City Regions; Enhances the quality of life for present and future residents and visitors;*
- *Helps to meet the challenge of climate change; Enhances biodiversity and landscape character;*
- *Improves opportunities for recreation and tourism; Respects local distinctiveness and historical and cultural heritage;*

- *Maximises potential economic and social benefits; and*
- *Secures and improves linkages between green and blue spaces;*

At a strategic level Barnsley's Green Infrastructure network includes the following corridors which are shown on the Green Infrastructure Diagram:

- *River Dearne Valley Corridor.*
- *River Dove Valley Corridor.*
- *River Don Valley Corridor.*
- *Dearne Valley Green Heart Corridor.*
- *Historic Landscape Corridor.*

The network of Green Infrastructure will be secured by protecting open space, creating new open spaces as part of new development, and by using developer contributions to create and improve Green Infrastructure.

We have produced a Green Infrastructure Strategy for Barnsley which is informed by the Leeds City Region and South Yorkshire Green Infrastructure Strategies.

Policy BIO1 Biodiversity and Geodiversity

Development will be expected to conserve and enhance the biodiversity and geological features of the borough by:

- *Protecting and improving habitats, species, sites of ecological value and sites of geological value with particular regard to designated wildlife and geological sites of international, national and local significance, ancient woodland and species and habitats of principal importance identified via Section 41 of the Natural Environment & Rural Communities Act 2006 (for list of the species and habitats of principal importance) and in the Barnsley Biodiversity Action Plan.*
- *Maximising biodiversity and geodiversity opportunities in and around new developments.*
- *Conserving and enhancing the form, local character and distinctiveness of the boroughs natural assets such as the river corridors of the Don, the Dearne and Dove as natural floodplains and important strategic wildlife corridors.*
- *Proposals will be expected to have followed the national mitigation hierarchy (avoid, mitigate, compensate) which is used to evaluate the impacts of a development on biodiversity interest.*
- *Protecting ancient and veteran trees where identified.*
- *Encouraging provision of biodiversity enhancements.*

Development which may harm a biodiversity or geological feature or habitat, including ancient woodland and aged or veteran trees found outside ancient

woodland, will not be permitted unless effective mitigation and/or compensatory measures can be ensured.

Development which adversely effects a European Site will not be permitted unless there is no alternative option and there are imperative reasons of overriding public interest (IROPI).

6.3. Barnsley Local Plan - Supplementary Planning Document – Biodiversity ang Biodiversity

6.3.1. This Supplementary Planning Document offers guidance to anyone seeking to develop land which may have, or is in proximity to a site that has, value for biodiversity and/or geological conservation and was adopted in May 2019.

7. EVALUATION AND RECOMMENDATIONS

7.1. Overall Approach to Assessment

7.1.1. The overall approach to assessment adopted by the study team is based upon the guidelines for Guidelines for Ecological Impact Assessment in the UK and Ireland—Terrestrial, Freshwater, Marine and Coastal published by the Chartered Institute of Ecological and Environmental (CIEEM 2018) and can be summarised as below:

1. To identify the likely zone of influence (study area) arising from the whole lifespan of the project;
2. To identify and value the features of nature conservation interest within the ecological study area in a systematic way by establishing levels of interest for ecological features measured against definable criteria and is used to select the species, communities, habitats or sites that require further detailed examination during the process of ecological impact assessment.
3. To identify the biophysical changes attributable to the project that are likely to affect valued ecological features and resources;
4. To assess whether these biophysical changes are likely to give rise to a significant ecological impact, defined as an impact on the integrity of a defined site or ecosystem and/or the conservation status of habitats or species within a given geographical area, including cumulative and in-combination impacts;
5. To consider appropriate refinement of the project to avoid or reduce identified negative impacts and incorporate mitigation measures and/or compensation measures for any residual significant negative impacts and ecological enhancement measures to improve the wider environment;
6. To undertake an assessment of the ecological impacts of the refined project and definition of the significance of these impacts, including cumulative and in-combination impacts;
7. To provide advice on the consequences for decision making of the significant ecological impacts, based on the value of the resource, feature or function; and

8. Where appropriate to make recommendations for monitoring the implementation and success of mitigation and compensation measures and ecological outcomes, including feedback in relation to predicted outcomes.

7.2. Determining Value

7.2.1. The CIEEM guidelines advocates an approach to the valuation of ecological features using a geographical framework (full details in Appendix 2) based upon the following:

- International;
- National; (i.e. England/Northern Ireland/Scotland/Wales)
- Regional;
- County/Metropolitan
- District/Unitary Authority/City or Borough
- Local/Parish
- Within zone of influence only

7.2.2. The thorough evaluation of the ecological importance of the features of a site is essential in order to assess the significance of the ecological effects of the development proposals.

7.2.3. The evaluation criteria are given in detail in Appendix 2. Their aim is to consider the habitats, communities and species present on site in relation to the following:

1. The legislative framework (e.g. the Wildlife and Countryside Act 1981 and the EC Directive on the Conservation of Habitats and Wild Fauna and Flora (92/43/EEC) for the presence of protected species and habitats).
2. Nature conservation designations, including national site designations (Sites of Special Scientific Interest, National Nature Reserves etc), local designations (Sites of Importance for Nature Conservation, Local Nature Reserves, County Wildlife Sites etc).
3. Accepted criteria for species rarity and declining populations, and rarity of habitat types or communities, including species and habitats identified in the British Red Data Books, national biodiversity action plan, and species and habitats identified in regional or local biodiversity action plans where available.
4. Accepted criteria for overall site evaluation (including rarity, diversity, naturalness, historical factors and issues relating to landscape ecology).

7.3. Development Impacts

7.3.1. The development as proposed will result in the loss of all habitats within the site boundary including areas of improved grassland, ruderal and bare ground habitats.

7.3.2. The habitats delivered by the landscape plan for the proposed development are summarised in Table 10 below

Table 10—Proposed On-site Habitat Creation

Habitat Created		Habitat Condition	Area (ha)
Habitats			
Grassland	Modified grassland	Moderate	0.0754
Urban	Introduced shrub	Condition Assessment N/A	0.0054
Urban	Vegetated garden	Condition Assessment N/A	0.233
Urban	Developed land; sealed surface	N/A - Other	0.427
Individual trees	Urban tree (outside private gardens x 2)	Moderate	0.0081
Hedgerows			
Native hedgerow		Moderate	162m
Non-native and ornamental hedgerow		Poor	278m

7.3.3. On-site habitat provision does not deliver the required 10% net gain in biodiversity.

7.3.4. To enable a 10% or greater biodiversity net gain to be achieved it is proposed to enhance an area of hawthorn scrub and ruderal vegetation on the banks above the nearby fishing ponds and 200m north of the site boundary.

7.3.5. The off-site proposals are summarised in Table 11 below and include enhancing the scrub habitats by planting of additional scrub species including hazel *(Corylus avellana)*, holly *(Ilex aquifolium)*, alder buckthorn *(Frangula alnus)*, guelder rose *(Viburnum opulus)* and blackthorn *(Prunus spinosa)* and replacing ruderal habitats with other neutral grassland by seeding with an appropriate wildflower meadow mix.

Table 11—Proposed Off-site BNG

Existing Habitat	Enhanced and/or created habitat	Distinctiveness Change	Habitat Condition Change	Area (ha)
Heathland and shrub - Hawthorn scrub	Mixed scrub	Medium - Medium	Moderate - Good	0.23
Sparsely vegetated land - Ruderal/Ephemeral	Other neutral grassland	Low - Medium	Lower Distinctiveness Habitat - Moderate	0.035

7.3.6. The future management of the BNG proposals (both on-site and off-site) would be included in the Biodiversity Enhancement and Management Plan that would be prepared and can be a matter for planning condition if the application were to be approved.

7.3.7. No significant off-site impacts are predicted with foul and surface water drains being connected to existing systems.

7.3.8. The BNG metric calculations show the following gains. The metric has been supplied in support of this PEA report.

Table 12—BNG Metric Headline Results

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	0.19
	Hedgerow units	0.75
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	12.61%
	Hedgerow units	N/A
	Watercourse units	0.00%
Trading rules satisfied?	Yes ✓	

7.4. Nature Conservation Designations

7.4.1. Statutory Designations

7.4.1.1. The site is not covered by any statutory or non-statutory nature conservation designations.

7.4.1.2. The nearest site covered by a statutory designation is Pye Flatts meadow SSSI located more than 3km from the site boundary

7.4.1.3. There are two sites covered by European or International nature conservation designations within 10km of the site boundary.

7.4.1.4. The qualifying interest for the Peak District Moors (South Pennine Moors Phase 1) include breeding Golden Plover *(Pluvialis apricaria)*, Merlin *(Falco columbarius)*, Peregrine *(Falco peregrinus)* and Short-eared Owl *(Asio flammeus)*.

7.4.1.5. The habitats within the site do not constitute breeding habitat for any of these species. However golden plovers are known known to utilise enclosed pastureland in close proximity to their breeding grounds for foraging and the high densities of golden plover on British moorlands is attributed in part to the proximity of moorland breeding habitat close to enclosed pasture (Byrkjedal & Thompson 1998). Pearce-Higgins and Yalden (2003) found in the south Pennines that during incubation, off-duty female adults during the day flew from 6.6 to 7.2 km from the nest to feed, whilst at night off-duty male birds commuted from 2.4 to 2.7 km to feed on pasture grasslands.

7.4.1.6. The site has not been identified as functionally linked land with regard to the South Pennines SPA and the adopted Barnsley Local Plan does not require any species assessment for the site in relation to those associated with the

South Pennines SPA. The extract below is taken from the Barnsley adopted Local Plan.

Penistone

Site HS70 Land to north of Barnsley Road, Penistone Indicative number of dwellings 32

Part of the site has planning permission for 11 dwellings. The indicative number of dwellings above relates to the remainder of the site.

The development will be expected to:

Respect the setting of the listed complex of buildings at Nether Mill 60m to the West by the use of appropriate site layout, sympathetic design that reflects the setting, scaling, massing, details and materials; and

Avoid locating built development in parts of the site within flood zone 2 and 3.

Archaeological remains are known/expected to be present on this site therefore proposals must be accompanied by an appropriate archaeological assessment (including field evaluation if necessary) that must include the following:

Information identifying the likely location and extent of the remains, and the nature of the remains;

An assessment of the significance of the remains; and

Consideration of how the remains would be affected by the proposed development.

7.4.1.7. In any case the site is too urban to be of potential value for feeding golden plover and its small, enclosed nature further reduces its potential value. Field size has been shown to be an important factor influencing choice of fields by foraging golden plover field size (O'Connell et al. 1996). Whittingham et al, (2000) noted that "casual observations indicated that birds mainly used areas away from field edges (although edges were utilized for feeding particularly when the flock size was greater)".

7.4.1.4. Given the distance between these sites, the habitats present and its small enclosed urban location **no** impact on the qualifying interest for the Peak District Moors (South Pennine Moors Phase 1) are predicted and **no** further survey or assessment work is recommended.

7.4.1.4. In consideration of lack of significant off-site impacts and the distance between the site and the South Pennine Moors SAC (5.6km at the closest point) whose qualifying interest features are , European dry heaths, Blanket bogs and Old sessile oak woods with *Ilex* and *Blechnum* **no** impact on the qualifying interest

features are predicted and **no** further survey or assessment work is recommended.

7.4.2. Non-Statutory Designations

7.4.2.1. The site is not covered by any non-statutory nature conservation designation.

7.4.2.2. The closest LWS is Scout Dyke Reservoir LWS located more than1km north west of the site boundary.

7.4.2.3. No significant off-site impacts are predicted and given the distance between the site and Scout Dyke Reservoir LWS, **no** impacts upon the LWS are predicted and **no** further assessment work is recommended.

7.5. Habitats

7.5.1. The site contains habitats that are widespread in their distribution and support a limited range of common and widespread species.

7.5.2. No priority habitats identified with the Barnsley Biodiversity Action Plan (2010) are present with the site boundary. The small area of distributed ground at the site entrance is too small to be considered a priority habitat type. The UK BAP Priority Habitat Descriptions (2011) only recognises areas of greater than 0.25ha to qualify as Open Mosaic Habitats on Previously Developed Land.

7.5.3. Thes habitats within the site have no intrinsic botanical value and the loss of the improved grassland and disturbed ground habitats would only be felt within zone of influence of the development and therefore **no** further survey or assessment work is recommended with regard to their existing botanical value.

7.5.4. However in order to achieve an overall BNG the proposals set out in section 7.3 - Development Impacts above will be implemented and together the on-site and off-site provisions will deliver an overall BNG of 12.61% for habitats and a further 0.75 biodiversity units for hedgerows.

7.5.5. **No** further survey or assessment work is recommended beyond that required to prepare a BEMP for the development and this can form a planning condition if the development were to be approved.

7.6. Protected Species

7.6.1. Bats

7.6.1.1. All UK species of bat are afforded full protection under Section 9 of the Wildlife and Countryside Act 1981 (as amended) through their inclusion on Schedule 5 of the Act and also receive full protection as European Protected Species under Section 41 of The Conservation of Habitats and Species Regulations 2017 through their inclusion on Schedule 2.

Buildings

7.6.1.2. The site does not contain any buildings of potential value to roosting bats.

7.6.1.3. Whilst a small roost of common pipistrelle is reported from one of the farm buildings 120m east of the site boundary (pers. comm.) the buildings would not be directly impacted by the development and the loss of open grassland is unlikely to have a detrimental impact upon the foraging habitat resources available to these bats given the areas of woodland and wetland to the north.

7.6.1.4. **No** impacts upon roosting bats in buildings are predicted and **no** further survey and assessment work is recommended.

Trees

7.6.1.5. The site does not contain any trees of potential value to roosting bats

7.6.1.6. **No** impacts upon roosting bats in trees are predicted and **no** further survey and assessment work is recommended.

Habitats

7.6.1.7. The habitats within the site provide some sheltered foraging areas for feeding bats along the wooded boundary with the Penistone Grammar School and this boundary would remain as a potential commuting route for bats.

7.6.1.8. Other local areas of high value to feeding bats include the angling ponds to the north east of the site boundary and the development would not prevent access to these areas.

7.6.1.9. A suitable lighting scheme will be developed in accordance with current best practice to minimise the risk of the development affecting commuting bats. The properties would be served by low level motion activated lighting and the access road would be illuminated to adoptable highway standards as required by the LPA.

7.6.1.10. **No** significant impacts upon commuting or feeding bats are predicted and **no** further survey and assessment work is recommended.

7.6.2. Badgers

7.6.2.1. Badgers are protected under the Protection of Badgers Act 1992.

7.6.2.2. No badger setts were recorded within or immediately adjacent to the site and no evidence of badger foraging activity was recorded during the field survey.

7.6.2.3. The closest recorded areas of badger activity identified by BBRC were more than 780m from the site boundary.

7.6.2.4. **No** impacts upon badgers are predicted and **no** further survey or assessment work is recommended.

7.6.3. Otters

7.6.3.1. Otters are afforded full protection under Section 9 of the Wildlife and Countryside Act 1981 (as amended) through their inclusion on Schedule 5 of the Act and also receive full protection as European Protected Species under Section 41 of The Conservation of Habitats and Species Regulations 2017 through their inclusion on Schedule 2.

7.6.3.2. The site **does not** contain any habitats of potential value to otters, **no** evidence of otter activity was recorded during the field survey and the desktop study did **not** provide any records for this species within 2km of the site boundary. **No** impacts upon otter are predicted and **no** further survey or assessment work for otters is recommended.

7.6.4. Water Vole

7.6.4.1. Water vole is afforded full protection under Section 9 of the Wildlife and Countryside Act 1981 (as amended) through their inclusion on Schedule 5 of the Act.

7.6.4.2. The site **does not** contain any habitats of potential value to water vole, **no** evidence of water vole activity was recorded during the field survey and the desktop study did **not** provide any records for this species within 2km of the site boundary. **No** impacts upon water vole are predicted and **no** further survey or assessment work for water vole is recommended.

7.6.5. Hedgehogs

7.6.5.1. The Hedgehogs are listed on schedule 6 of the Wildlife and Countryside Act 1981 (as amended) which makes it illegal to kill or capture wild hedgehogs, with certain methods listed, they are also listed under the Wild Mammals Protection Act (1996), which prohibits cruel treatment of hedgehogs and they are listed a species of as a species of 'Principal Importance' under section 41 of the Natural Environment and Rural Communities (NERC) Act (2006).

7.6.5.2. Hedgehogs are likely to be present in the vicinity of the site and to accommodate their movement between gardens and adjacent areas hedgehog gates will be provided in garden and boundary fences.

7.6.5.3. **No** significant impacts upon hedgehogs are predicted and **no** further survey or assessment work for hedgehogs is recommended.

7.6.6. Brown Hare

7.6.6.1. Brown hare is listed a species of 'Principal Importance' under Section 41 of the NERC Act 2006

7.6.6.2. Data provided by BBRC contained 60 records for brown hare with the records coming predominantly from farmland to the north and north west of the site and more than 500m from the site boundary. Ther were no records from the site itself and the habitats within the site are suboptimal for this species comprising agricultural managed improved grassland close to areas of residential development.

7.6.6.3. **No** significant impacts upon brown hare are predicted and **no** further survey or assessment work for brown hare is recommended.

7.6.7. Wild Birds

7.6.7.1. With certain exceptions, all wild birds, their eggs, nests and young are protected under the *Wildlife and Countryside Act 1981* (as amended) and some species are given special protection under Schedule 1.

7.6.7.2. The desktop study did not identify any significant ornithological interest within the immediate vicinity of the development beyond records for kingfisher along the River Don corridor to the south of the site and separated from it by the busy A628 Barnsley Road.

7.6.7.3. The main ornithological interest recorded during the survey was from the wooded grounds of Penistone Grammar School and the grassland to the east of the site boundary where skylark was recorded. The new hedgerow planting and the proposed off-site scrub enhancement measures will provide improved habitat for nesting birds.

7.6.7.4. During the phase 1 habitat survey in April 2023 a single singing skylark, a red list species of conservation concern, was recorded over the grassland to the east of the site boundary. The grassland within the site is managed for silage cropping with late summer grazing and in April the sward was already almost 30cm high and growing rapidly. Silage fields do attract nesting skylarks but are generally cut too frequently to allow successful breeding.

7.6.7.5. The small area of grassland within the site is only likely to support a single pair of nesting skylark given that the average nesting territory of a single pair of skylarks is between 0.25-2ha (Wilson *et al* 1997). Poulsen, Sotherton & Aebischer (1998) found the mean territory size across all fields on farmland to be 2.62 ha.

7.6.7.6. The grassland area within the site amounts to 0.58ha , however areas closest to the northern boundary wall and shaded by trees are unlikely to be favoured because skylark prefer open nesting habitat so that they can more easily see the approach of predators. Similarly grassland close to the adjacent residential areas is likely to be avoided making the area of suitable habitat for nesting birds much smaller. A simple 5m field boundary buffer reduces the area of

suitable grassland down to 0.3ha and the impact of the trees along the northern boundary is more likely to be greater than 5m.

7.6.7.7. Beyond the site boundary is an area of approximately 2.3ha of grassland managed in the same way as the application site and this would be retained and provides alternative breeding habitat. The recorded singing bird was over the centre of this area and more likely to be defending territory over this much larger area of grassland than the application site.

7.6.7.8. The loss of grassland within the site will at worst displace a single pair of breeding skylark, but in reality, is unlikely to have any impact upon the breeding density of this species in the immediate locality due to the retention of large area of similar grassland adjacent to the site and the sub-optima value of the habitats with the application site.

7.6.7.9. Significant off-site impacts are not predicted and the development as proposed would not have any impacts upon the water quality of habitats along the River Don south of the site boundary.

7.6.7.10. In any case, potential impacts upon nesting birds can be prevented during construction by ensuring that vegetation removal is programmed to occur outside of the bird nesting season (March to August inclusive) or where this is not possible under the supervision of a suitably qualified and experienced ecologist as set out in the recommendations below.

7.6.7.11. **No** significant impacts upon nesting birds are predicted and **no** further ornithological survey work is recommended.

7.6.8. Amphibians

7.6.8.1. All UK native amphibians are afforded partial or full protection under Section 9 of the *Wildlife and Countryside Act 1981* (as amended) through their inclusion on Schedule 5 of the Act and Great Crested newts *(Triturus cristatus)* are provided the highest level of protection. Great crested newts (GCN) are fully protected from capture, injury, killing and damage or destruction of their breeding sites or resting places under The Conservation of Habitats and Species (as amended) Regulations 2017. Common Toad is listed as a species of 'Principal Importance' under section 41 of the NERC Act (2006).

7.6.8.2. The site does not contain any ponds suitable for breeding amphibians including great crested newts and no amphibians were recorded during the field survey.

7.6.8.3. The angling ponds to the north east of the site boundary are stocked with coarse fish and would be of no value to breeding great crested newts, although are likely to be suitable for other common breeding amphibian species.

7.6.8.4. No other ponds linked to the site by semi-natural vegetation were identified and **no** impacts upon amphibians are predicted and **no** further survey work is recommended.

7.6.9. Reptiles

7.6.9.1. All species of native reptiles are protected under the Wildlife and Countryside Act 1981 (as amended). The sand lizard *(Lacerta agilis)* and smooth snake *(Coronella austriaca)* are further protected under Conservation of Habitats and Species (Amendment) Regulations 2017.

7.6.9.2. Potential impacts upon reptiles can be prevented during the works proposed by completing them in accordance with standard mitigation measures and under the guidance of a reasonable avoidance measures method statement which sets out methods of working and timing of works.

7.6.9.3. **No** significant impacts upon reptiles are predicted and **no** further survey work is recommended.

7.6.10. White-clawed Crayfish

7.6.10.1. White-clawed crayfish are protected under the Wildlife and Countryside Act 1981 (as amended). It is an offence to intentionally take them. They are also listed as species of 'Principal Importance' under Section 41 of the NERC Act (2006).

7.6.10.2. The site **does not** contain any habitats of potential value to white-clawed crayfish, and the desktop study did **not** provide any records for this species within 1.2km of the site boundary.

7.6.10.3. **No** impacts upon white-clawed crayfish are predicted and **no** further survey or assessment work for white-clawed crayfish is recommended.

7.7. Recommendations

7.7.1. Breeding Birds

7.7.1.1. Whilst only limited bird activity was recorded from the wooded grounds of Penistone Grammar School and these would not be affected by the proposed development. The grasslands with the site are unlikely to be used by ground nesting birds given the nature of their management and agricultural usage, however given the protection afforded to wild birds and their nests the following precautionary measures are recommended:

- That removal of trees, shrubs and surface vegetation should be completed outside of the bird breeding season (March to August inclusive). Where this is not possible a suitably qualified and experienced ecologist should complete survey of the site immediately prior to completion of the proposed

works to search for nesting birds and to advise on exclusion zones or timing of works if nesting birds are recorded.

8. FIGURES

Waters Mill Residential Development

KEY

Site Boundary

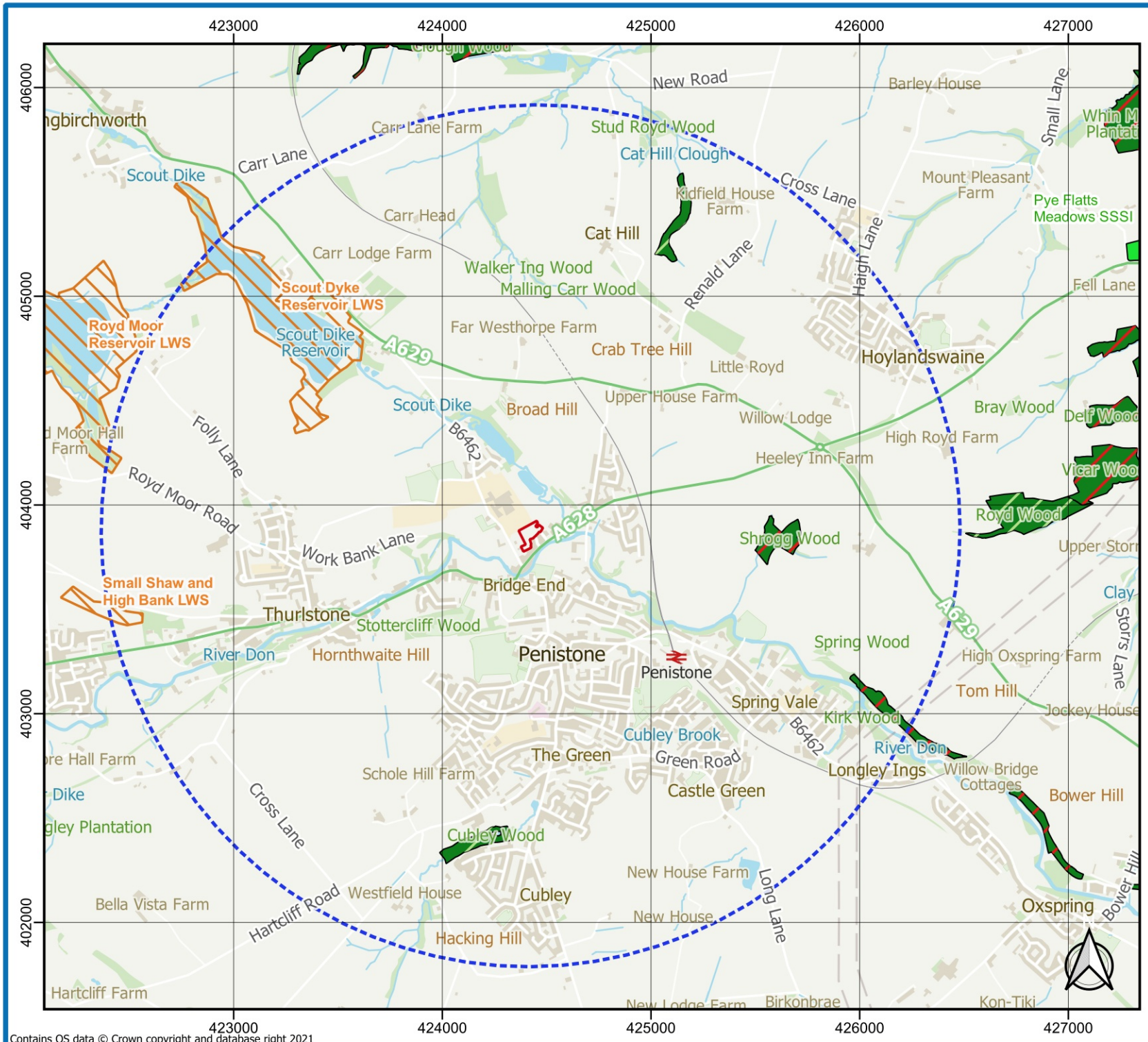
Scale: 1:20,000 @A4

RDF ecology
Consultant Ecologists

5 Stamford Road
Woodlaithes Village
Sunnyside
Rotherham
South Yorkshire
S66 3YY

Tel 01709 531 868
e-mail sales@rdfecology.co.uk

Fig 1 - Site Location



Contains OS data © Crown copyright and database right 2021

Waters Mill Residential Development

KEY

- Site Boundary
- 2km Site buffer

Statutory Designations

- Sites of Special Scientific Interest

Non-Statutory Designations

- Barnsley LWS

Ancient Woodlands

- Ancient & Semi-Natural Woodland
- Ancient Replanted Woodland

Scale: 1:25,000 @A4

RDF ecology
Consultant Ecologists

5 Stamford Road
Woodlaithes Village
Sunnyside
Rotherham
South Yorkshire
S66 3YY

Tel 01709 531 868
e-mail sales@rdfecology.co.uk

Fig 2 - Designations

Waters Mill Residential Development

KEY

- Site Boundary

On-Site Phase 1 Habitats

- Improved grassland
- Tall ruderal vegetation
- Bare ground/ephemeral vegetation
- Bare ground
- Target Notes

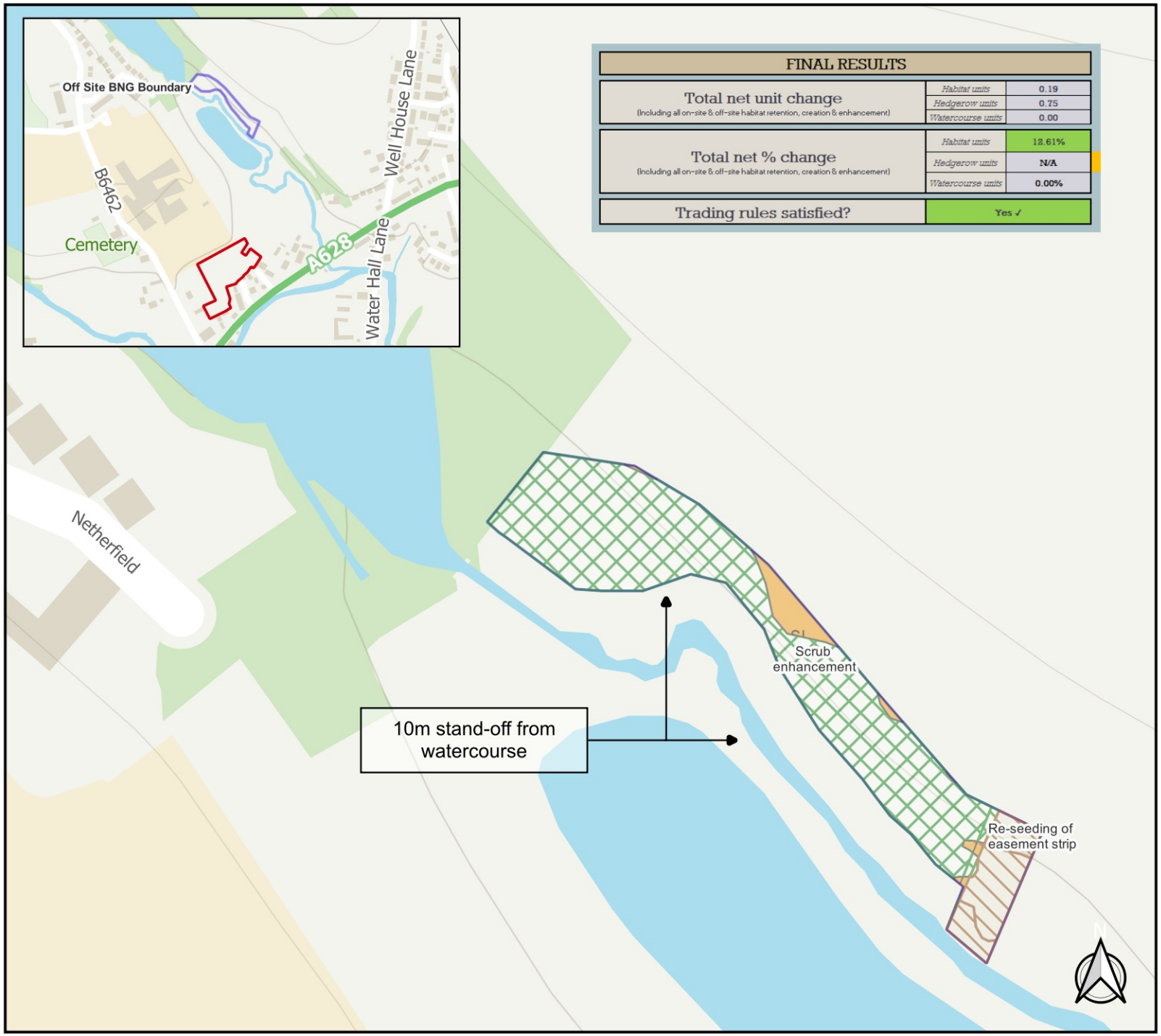
Scale: 1:1,250 @A4

RDF ecology
Consultant Ecologists

5 Stamford Road
Woodlaithes Village
Sunnyside
Rotherham
South Yorkshire
S66 3YY

Tel 01709 531 868
e-mail sales@rdfecology.co.uk

Fig 3 - Phase 1 Habitats



FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	0.19
	Hedgerow units	0.75
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	12.61%
	Hedgerow units	N/A
	Watercourse units	0.00%
Trading rules satisfied?		Yes ✓

Waters Mill Residential Development

KEY

- Site Boundary
- Off Site BNG Boundary

Off-Site BNG Habitats

- Dense scrub
- SI — Semi-improved neutral grassland
- SI — Neutral grassland and ruderal vegetation
- Tall Ruderal

Scale: 1:1,250 @A4

RDF ecology
Consultant Ecologists

5 Stamford Road
Woodlaithes Village
Sunnyside
Rotherham
South Yorkshire
S66 3YY

Tel 01709 531 868
e-mail sales@rdfecology.co.uk

Fig 4 - Off-Site BNG Habitats

9. REFERENCES

9.1. Project References

Barnsley Adopted Local Plan (2019)

Barnsley Local Plan - Supplementary Planning Document – Biodiversity ang Biodiversity (2019)

Barnsley Biodiversity Action Plan (Second Edition) (2010).

Brooks Ecological (2015a) Preliminary Ecological Appraisal Land off Barnsley Road, Penistone

Brooks Ecological (2015b) Bat Emergence Survey Barnsley Road Cottage, Penistone

Brooks Ecological (2015c) Bat Emergence Survey Old Mill, Barnsley Road, Penistone

DPP Planning (2023) - Planning Statement Land Off Watermill Gardens, Penistone

9.2. Technical References

Battersby et al (2005) UK Mammals: Species Status and Population Trends. JNCC.

BCT and Institute of Lighting Engineers (ILE) (2009) Bats and Lighting in the UK (Version 3).

Byrkjedal, I. & Thompson, D.B.A. 1998. Tundra Plovers. The Eurasian, Pacific and American Golden Plovers, and Grey Plover. London: T. & AD Poyser

CIEEM (2018)—Guidelines for Ecological Impact Assessment in the UK and Ireland—Terrestrial, Freshwater, Marine and Coastal. Chartered Institute of Ecology and Environmental Management, Winchester.

CIEEM (2017) Guidelines for Preliminary Ecological Appraisal (second edition). Chartered Institute of Ecology and Environmental Management, Winchester.

CIEEM (2016) Guidelines for Accessing and using Biodiversity Data. Chartered Institute of Ecology and Environmental Management, Winchester.

Collins, J. (ed) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn).

Department for Communities and Local Government (2012), National Planning Policy Framework. Department for Communities and Local Government, London.

English Nature (2001) Great Crested Newt Mitigation Guidelines. English Nature, Peterborough

HMSO Conservation of Habitats and Species (Amendment) Regulations 2017.

HMSO Wildlife and Countryside Act 1981 (as amended).

HMSO (2006) Natural Environment and Rural Communities Act.

HMSO (2005) Biodiversity and Geological Conservation – Statutory Obligations and Their Impact within the Planning System. Office of the Deputy Prime Minister (ODPM) Circular 06/2005 HMSO, Norwich.

Hundt (2012) Bat Surveys Good Practice Guidelines 2nd Edition, Bat Conservation Trust, London.

Pearce-Higgins, J.W. & Yalden, D.W. 2003. Variation in the use of pasture by breeding European Golden Plovers *Pluvialis apricaria* in relation to prey availability. Ibis 145: 365–381

Poulsen, J.G., Sotherton, N.W. & Aebischer, N.J. (1998) Comparative nesting and feeding ecology of skylarks *Alauda arvensis* on arable farmland in southern England with special reference to set-aside. *Journal of Applied Ecology*, 35, 131±147.

JNCC (2010) Handbook for Phase 1 Habitat Survey: A technique for environmental audit (reprint). Joint Nature Conservation Committee, Peterborough.

Stace, C. (1997) New Flora of the British Isles 2nd Edition. Cambridge University Press, UK.

Wilson, J.D., Evans, J., Browne, S.J. & King, J.R. (1997) Territory distribution and breeding success of skylarks *Alauda arvensis* on organic and intensive farmland in southern England. *Journal of Applied Ecology*, 34, 1462±1478.

10. APPENDICES

10.1. Appendix 1—List of Species

English Name	Scientific Name	Improved Grassland	Ruderal Vegetation	Bare Ground and Ephemeral Vegetation
Yarrow	*Achillea millefolium*	O	O	O
Common Bent	*Agrostis capillaris*	F-LA	O	R
Creeping Bent	*Agrostis stolonifera*			R
Meadow Foxtail	*Alopecurus pratensis*	R-O		
Thale Cress	*Arabidopsis thaliana*			O-LF
False Oat Grass	*Arrhenatherum elatius*	O-LF	F	
Mugwort	*Artemisia vulgaris*		LF	
Daisy	*Bellis perennis*	O		O
Butterfly-bush	*Buddleja davidii*		R	R
Wavy Bitter-cress	*Cardamine flexuosa*	O		O
Common Mouse-ear	*Cerastium fontanum*	O-LF	O	R-O
Sticky Mouse-ear	*Cerastium glomeratum*	R		R
Rosebay Willowherb	*Chamerion angustifolium*		O	
Creeping Thistle	*Cirsium arvense*	O	LF	
Spear Thistle	*Cirsium vulgare*	O	O	
Canadian Fleabane	*Conyza canadensis*			R
Smooth Hawk's-beard	*Crepis capillaris*	O	O	O
Crested Dog`s Tail	*Cynosurus cristatus*	F		
Cock`s Foot	*Dactylis glomerata*	O-LF	F-LA	
Foxglove	*Digitalis purpurea*	R	R	
Wild Teasel	*Dipsacus fullonum*		R	
Common Couch	*Elytrigia repens*	O	O	
Cleavers	*Galium aparine*	O	O	
Cut-leaved Cranesbill	*Geranium dissectum*	R		
Dove's-foot Crane's-bill	*Geranium molle*	R		
Hogweed	*Heracleum sphondylium*		O	
Yorkshire Fog	*Holcus lanatus*	O-LA	F	R
Cat's-ear	*Hypochaeris radicata*	O-LF		R
White Dead Nettle	*Lamium album*		R	
Perennial Ryegrass	*Lolium perenne*	A	O	R
Bird`s-foot-trefoil	*Lotus corniculatus*			R
Field Wood-rush	*Luzula campestris*	R		R
Field Forget-me-not	*Myosotis arvensis*			R
Ribwort Plantain	*Plantago lanceolata*	O-LF	R	
Greater Plantain	*Plantago major*			R
Annual Meadow-grass	*Poa annua*			O-LF
Smooth Meadow-grass	*Poa pratensis*	O-LF	O	

English Name	Scientific Name	Improved Grassland	Ruderal Vegetation	Bare Ground and Ephemeral Vegetation
Cowslip	*Primula veris*			VR
Creeping Buttercup	*Ranunculus repens*	O-LF	O	R
Common Sorrel	*Rumex acetosa*	O-LF	O	R
Curly Dock	*Rumex crispus*	R	O	
Broad-leaved Dock	*Rumex obtusifolius*	O-LF	F	
Procumbent Pearlwort	*Sagina procumbens*			O
Goat Willow	*Salix caprea*		R	
Ragwort	*Senecio jacobaea*	O	O	
Groundsel	*Senecio vulgaris*			O
Common Chickweed	*Stellaria media*	O		O
Dandelion	*Taraxacum officinale agg.*	O-LF	O	O
White Clover	*Trifolium repens*	O-LF	O	O
Common Nettle	*Urtica dioica*	O	O-LA	
Germander Speedwell	*Veronica chamaedrys*	R		
Thyme-leaved Speedwell	*veronica serpyllifolia*			R

Key

D	Dominant	51-100%
A	Abundant	35-50%
F	Frequent	16-30%
O	Occasional	6-15%
R	Rare	1-5%
No entry	Absent	0%
L	Local e.g. LF – Locally Frequent	-
V	Very e.g. VR = Very Rare	-

10.2. Appendix 2—Valuation Criteria

10.2.1. Guidelines for ecological evaluation and the assessment of impacts have been published by Institute of Environmental Assessment (1995) and the Chartered Institute of Ecology and Environmental Management (CIEEM 2018).

10.2.2. The value that is attached to an ecological resource influences:

- whether, as part of screening, potentially affected features or resources are considered sufficiently valuable that there could be a significant effect that would trigger an EIA;
- whether, as part of scoping, ecological features or resources are considered for inclusion in the EcIA—this is influenced by their value in relation to a 'threshold' level of value that should be defined during scoping;
- deciding what mitigation is appropriate and
- considering legal and policy implications.

10.2.1. Legislative Framework

10.2.1.1. Species, communities or habitats receiving legal protection under UK or EC law have high importance on national and international scales.

10.2.1.2. Internationally important sites include Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar sites. In the UK candidate SACs, potential SPAs and proposed Ramsar sites should be given the same consideration as designated sites in accordance with country specific policies and supporting guidance.

10.2.1.3. Species, communities or habitats requiring protection under EC law are listed on schedules I and II (whose conservation requires the designation of Special Areas of Conservation), IV (species in need of strict protection) and V (species whose exploitation may be subject to management measures) of the EC Directive on the Conservation of Habitats and Wild Fauna and Flora (92/43/EEC). The enabling legislation for the UK is the Conservation (Natural Habitat, &c) Regulations 2017. Species may also be scheduled under Appendix 1 of the Convention on the Conservation of European Wildlife and Natural Heritage 1979 (Bern Convention).

10.2.1.4. Other sites of international importance designated under international obligations include Biosphere Reserves (UNESCO Man and Biosphere Programme), Ramsar Sites (Convention on Wetlands of International Importance especially as Wildfowl Habitat 1971) and Special Protection Areas (EC Wild Birds Directive 79/409).

10.2.1.5. Species with special protection under UK law are listed on the schedules of the Wildlife and Countryside Act 1981 and amendments. The act also gives rise

to statutory site designations i.e. National Nature Reserves, Sites of Special Scientific Interest, Areas of Special Protection for Birds, and orders e.g. Limestone Pavement Orders.

10.2.2. UK Site Designations

10.2.2.1. Sites of national importance include the statutorily designated Sites of Scientific Interest (SSSI) and National Nature Reserves (NNRs).

10.2.2.2. Lower levels of importance attach to locally designated sites such as those non-statutory site designations applied by Local Authorities or Wildlife Trusts e.g. Sites of Importance for Nature Conservation (SINC's or equivalent) or Local Nature Reserves designated under the National Parks and Access to the Countryside Act 1949. Such sites may be considered to be of High Local Importance i.e. important at the county or metropolitan level (CIEEM 2018).

10.2.3. Rarity of Species and Habitats

10.2.3.1. The British Red Data Book for vascular plants (Perring and Farrell 1983) lists 317 species or subspecies as extinct, endangered, vulnerable and rare. Nationally rare species are defined as occurring in 1–15 10km squares of the national grid in Britain, nationally scarce species occurring in 16–100 10km squares. The presence of a breeding population of any nationally rare species is of national importance whereas a breeding population of a nationally scarce species is of regional importance. Assemblages of 2 or more species may increase the importance of a site further.

10.2.3.2. Regional rarities are defined as occurring in 15 or fewer localities or 1km squares in a former Nature Conservancy Council region (NCC 1989).

10.2.3.3. Biodiversity: The UK Steering Group Report contains a "Long List" of key species in the UK that fall into 1 or more of the following categories: threatened endemics or globally threatened; where the UK holds greater than 25% of the world population; where numbers or range have declined by more than 25% in the last 25 years; nationally rare species; and statutorily protected species. Presence of viable populations of such species may be of high importance.

10.2.3.4. County floras and biodiversity action plans, or district action plans may identify species that are rare at the county or district level. Viable populations will therefore have conservation importance in these contexts.

10.2.3.5. Further information on species rarity may be found in Scarce Plants in Britain (Stewart et al 1994) and the Atlas of the British Flora (Perring and Walters 1962) and subsequent revisions.

10.2.3.6. Biodiversity: The UK Steering Group Report has identified a number of key habitats under the following criteria: those for which the UK has international

obligations; rare habitats or those with high rates of decline; functionally critical habitats (marine areas); and habitats that are important for key species. Sites containing good examples of viable areas of any key habitat may be considered nationally important.

10.2.3.7. Importance may be attached to plant community types defined in the National Vegetation Classification (Rodwell 1991 etc) that are also described as rare, declining or with restricted distributions or are identified as being of particular botanical importance (NCC 1989).

10.2.4. Criteria for Overall Site Evaluation

10.2.4.1. The accepted criteria for site evaluation are set out by Ratcliffe (1977) in a Nature Conservation Review and are also explained in Guidelines for the Selection of Biological SSSI's (NCC 1989). The principal criteria are briefly outlined below:

10.2.4.2. **Naturalness.** Truly natural habitats are valued highly but are rare in Britain and most sites are modified and semi-natural at best. Physical habitat modifications vary greatly in their impact, some being beneficial whilst others are harmful. A greater degree of conformity of a particular community or site with semi-natural rather than highly modified vegetation types in the National Vegetation Classification and the absence of species indicating disturbance are likely to lead to attachment of higher importance. However, note that communities that appear to be intermediate between semi-natural NVC types are not necessarily of lesser quality.

Size. The area of a site or habitat judged to be viable varies greatly between different habitat types and with factors such as the condition of the habitat, the shape of the habitat area and surrounding land use. In addition, the territorial requirements of particular species within the site/habitat and habitat management factors may need consideration.

In general, larger sites or areas of habitat tend to be valued more highly because of the greater population sizes and hence more robust populations of the species within them; the potential for increased site or habitat diversity and hence greater species-richness over a larger area; and a reduced importance of edge effects (pollution drift, habitat degradation/change for other reasons at the site edge) if the site is block rather than ribbon shaped. Small sites become increasingly important in areas of little semi-natural habitat.

Rarity. Criteria for rarity of species and habitats are outlined above. The scarcer the habitat or species then the higher the level of importance attached.

Diversity. Diversity tends to be valued positively as it increases. At the phytosociological level, some habitats are more species-rich than others and

so have a higher value, provided that the richness does not involve non-native species. Some plant communities are intrinsically more species-rich than others so comparisons should only be made between the same community type.

The standard of floristic diversity is guided by the floristic tables within the National Vegetation Classification (NVC) (Rodwell 1991 etc). A community having more than 75% of the total plant species list for its type in the NVC would be rated very highly. Diversity of different communities within a vegetation formation (e.g. woodland) may also be rated highly as may structural diversity (e.g. rides, glades and differing age structures or canopy layering in woodland). Habitat diversity across a site may also increase its importance.

Fragility. Fragility is a measure of the intrinsic sensitivity of nearly all natural and semi-natural habitats and species to human impact. It is the fragility of such habitats and species which causes them to be more highly valued than any of the artificial substitutes which replace them through human activity; and the greater their fragility the greater their value. Fragility is therefore clearly related irreplaceability or non-recreatability. Re-creation of habitats that have taken centuries to develop, sometimes with centuries of traditional management, is impossible to the full extent of their former complexity.

Typicalness. Typicalness is an indication of how characteristic the features of a site are compared to its particular ecosystem. It is intended as a guard against designation of those sites with unusual features as being always the most important.

Position in an Ecological/Geographical Unit. This is a landscape ecological criteria designed to identify sites or habitats which may be important to maintaining the viability of a larger group thereof; or which is essential in maintaining the population of a species with a large territory spanning several sites; or is one of a number of sites important to a metapopulation of a species in fragmented landscapes; or may be important in a wildlife corridor or network of habitat patches.

10.2.5. Amenity Value

10.2.5.1. The amenity value of a site in ecological terms is generally seen as its value for the study or quiet enjoyment of wildlife. Sites with high intrinsic appeal and good access are therefore regarded as important in this context. Also important are issues such as site safety, proximity to schools and population centres and site management difficulties. Less emphasis is placed on the criteria outlined in section 9.1.4 in such situations.

10.2.6. Ecological Importance Summary Table

10.2.6.1. The following table has slightly modified from Regini (2000) with reference to CIEEM 2018. Its definitions are adopted in this report. Where species, habitats or sites occur in more than one category, the highest level of importance is applicable. Sites that meet the criteria for a particular designation are afforded the level of importance corresponding to that designation whether or not they are actually designated.

Table 13—Ecological Importance Summary Table

Level of Value	Examples
International	An internationally designated site or candidate site (SPA, pSPA, SAC, cSAC, pSAC , Ramsar site, Biogenetic Reserve). A viable area of a habitat type listed in Annex I of the Habitats Directive, or smaller areas of such habitat which are essential to maintain the viability of a larger whole. Any regularly occurring population of an internationally important species, which is threatened or rare in the UK. i.e. it is a UK Red Data Book species or listed as occurring in 15 or fewer 10km squares in the UK (categories 1 and 2 in the UK BAP) or of uncertain conservation status or of global conservation concern in the UK BAP. A regularly occurring, nationally significant population of any internationally important species. Also a regularly occurring and nationally significant number of an internationally important species during a critical phase of its life cycle.
National	A nationally designated site (SSSI, ASSI, NNR, Marine Nature Reserve) or a discrete area, which meets the published selection criteria for national designation (e.g. SSSI selection guidelines). A viable area of a priority habitat identified in the UK BAP, or of smaller areas of such habitat which are essential to maintain the viability of a larger whole. Any regularly occurring population of a nationally important species which is threatened or rare in the region or county (see local BAP). A regularly occurring, regionally or county significant population of any nationally important species. Also a regularly occurring and regionally or county significant number of a nationally important species during a critical phase of its life cycle.
Regional	Viable areas of key habitat identified in the Regional BAP or smaller areas of such habitat which are essential to maintain the viability of a larger whole; Viable areas of key habitat identified as being of Regional value in the appropriate Natural Area profile; Any regularly occurring, locally significant population of a species listed as being nationally scarce which occurs in 16-100 10km squares in the UK or in a Regional BAP or relevant Natural Area on account of its regional rarity or localisation; A regularly occurring, locally significant number of a regionally important species during a critical phase of its life cycle; Sites which exceed the County-level designations but fall short of SSSI selection guidelines, where these occur.
County / Metropolitan	Semi-natural ancient woodland greater than 0.25 ha; County/Metropolitan sites and other sites which meet the published ecological selection criteria for designation, including Local Nature Reserves selected on County / metropolitan; A viable area of habitat identified in County BAP; Any regularly occurring, locally significant population of a species which is listed in a County/Metropolitan “red data book” or BAP on account of its regional rarity or localisation; A regularly occurring, locally significant number of a County/Metropolitan important species during a critical phase of its life cycle.

Level of Value	Examples
District / Borough	Semi-natural ancient woodland smaller than 0.25 ha; Areas of habitat identified in a sub-County (District/Borough) BAP or in the relevant Natural Area profile; Local Nature Reserves selected on District/ Borough criteria Sites/features that are scarce within the District/Borough or which appreciably enrich the District/Borough habitat resource; A diverse and/ or ecologically valuable hedgerow network; A population of a species that is listed in a District/Borough BAP because of its rarity in the locality or in the relevant Natural Area profile because of its regional rarity or localisation; A regularly occurring, locally significant number of a District / Borough important species during a critical phase of its life cycle.
Parish / Neighbourhood	Areas of habitat considered to appreciably enrich the habitat resource within the context of the Parish or neighbourhood, e.g. species-rich hedgerows. Local Nature Reserves selected on Parish criteria.
Negligible	Low grade, widespread and common habitats.