

PRELIMINARY ECOLOGICAL APPRAISAL

DECEMBER 2022

Land adjacent to 2 Hoyle Ing

Hoyle Ing,
Linthwaite,
Huddersfield
HD7 5RX

U R B A N
G R E E N



QUALITY MANAGEMENT

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Project:	Land Adjacent to 2 Hoyle Ing			
Location:	Hoyle Ing, Linthwaite, Huddersfield, HD7 5RX			
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NON-TECHNICAL EXECUTIVE SUMMARY

Redwaters Yorkshire Ltd. are proposing to develop land on Hoyle Ing in Linthwaite, Huddersfield (hereafter referred to as ‘the site’). The proposals include the development of two residential units with associated hard and soft landscaping.

Urban Green have been appointed to complete a Preliminary Ecological Appraisal of the site. The objectives of the assessment are to identify habitats on site and determine the suitability for any ‘protected and/or notable’ species that may occur on site. Further ecological surveys and mitigation are recommended to aim to minimise potential impacts on ecology, due to the proposed development.

Following the survey work, the key recommendations are summarised in the following table

Current Site Use and Adjacent Site Use	The site is currently disused and unmanaged, bound to the north by Hoyle Ing, a residential road, to the east and west by residential and commercial developments, and to the south by broadleaved woodland.
Potential Impacts on Designated Sites	No potential impacts on designated sites nearby to the site are anticipated to occur due to the proposed development. The site is located at a sufficient distance from nearby designated sites, and the proposed development activities have been considered.
Habitats	The site comprised predominantly artificial unvegetated, unsealed surface, with bramble scrub, mixed scrub, and modified grassland surrounding. A built linear feature was present across the north western aspect of the site.
Ecological Constraints	The following potential ecological constraints were identified during the assessment: • W1 was assessed as providing high bat roosting potential. • Suitable habitats for common amphibians, nesting birds, bats, hedgehog, and badger.
Recommended Ecological Mitigation	The following mitigation measures are recommended to minimise potential impacts due to the proposed development: • Precautionary Working Methods during the construction phase for common amphibians, nesting birds, bats, hedgehog, and badger. • If any vegetation require removal, it should be completed outside of the breeding bird season (March to September, inclusive). If this is not feasible, a Nesting Bird Check is to be completed by a qualified ecologist within 48 hours before removal is completed.
Recommended Further Surveys and Reports	If works are to be conducted on the retaining wall, a minimum of three Nocturnal Bat Surveys are to be completed to further assess the suitability of the structure for roosting bats.
Recommended Ecological Enhancements	The National Planning Policy Framework (NPPF) (2021) highlights the requirement for planning policies and decisions to conserve and enhance the natural environment. The proposed development provides the opportunity to enhance the site and ecological enhancements have been recommended.

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1 Introduction

1.1 Background to the Scheme

Redwaters Yorkshire Ltd. are proposing to develop land on Hoyle Ing in Linthwaite, Huddersfield (hereafter referred to as 'the site'). The proposals include the development of two residential units with associated hard and soft landscaping. Urban Green have been appointed to undertake a Preliminary Ecological Appraisal (PEA) of the site.

The author of the report is Max Grindle, BSc, QCIEEM, Assistant Ecologist at Urban Green. Max has experience providing ecological consulting services for a range of development schemes across the UK, including residential and commercial schemes.

1.2 Site Context

The site is located at National Grid Reference SE 09822 14457 and comprises a total area of approximately 0.04ha (see Figure 1).

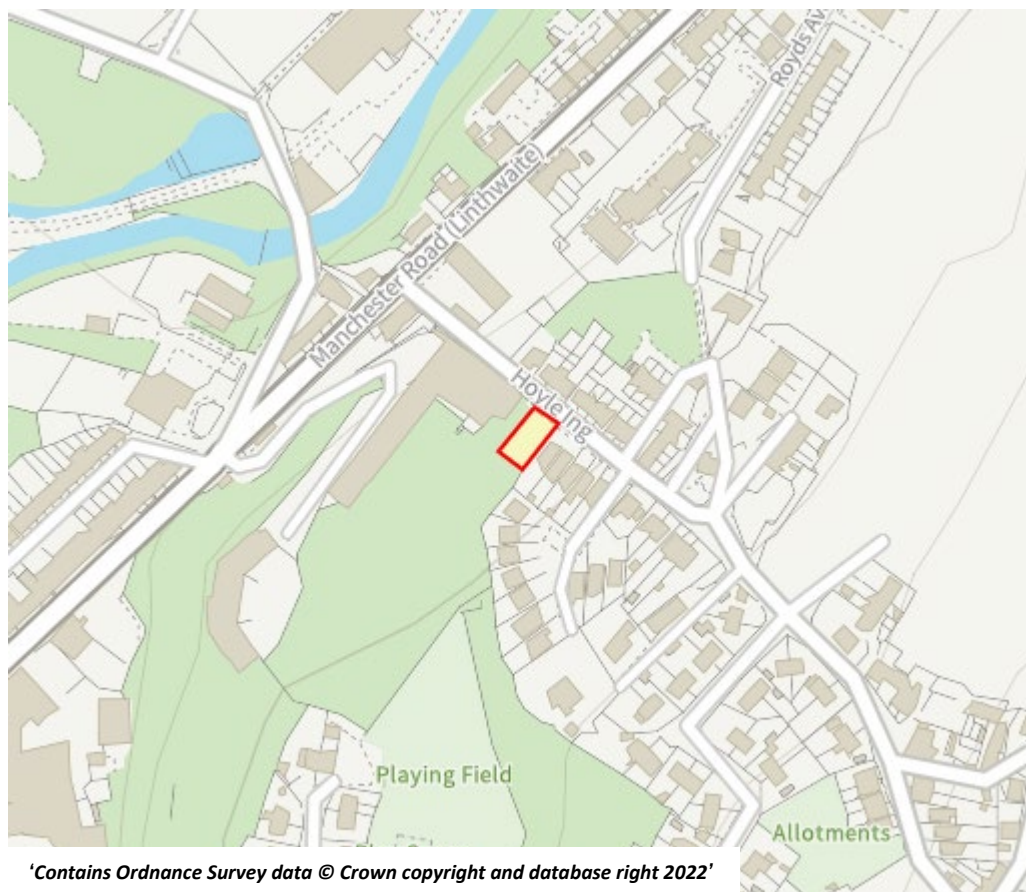


Figure 1 – Site Extent

The site is located in an urban area of Linthwaite, approximately 5.1km west of the centre of Huddersfield. The site is bordered on the south eastern and north western aspects by residential and commercial developments, with Hoyle Ing present across the north eastern aspect, and a large expanse of broadleaved woodland present to the south and west. In the wider landscape, the River Colne lies approximately 100m northwest of the site, with Manchester Road present adjacent to the river.

1.3 Purpose of this Report

This report has been produced to set out the methods, results, and conclusions of a PEA. The purpose of the PEA report is to identify habitats on site and determine the sites potential value for protected and/or notable fauna and flora, with the addition of potential impacts on designated sites. This will inform the need for any further ecological surveys and/or mitigation to minimise the potential impacts on ecology on site and within the local area.

Further information and details of UK legislation for those species which are formally protected is defined in Appendix 1, which are considered throughout the assessment.

The National Planning Policy Framework (NPPF) (2021) and other Local Planning Policies are considered with the PEA. Ecological enhancements are advised to be in line with relevant Planning Policies.

2 Methods

The PEA assessment and Report follows the good practice methodology as detailed within the *Guidelines for Preliminary Ecological Appraisal* (CIEEM, 2019).

2.1 Desk Study

2.1.1 Online Resources and Local Records Centre

Due to the size and low impact of the proposed development and being located within a predominantly urban area of Linthwaite, a 1km Local Data Search was conducted as it is deemed an appropriate distance for the Zone of Influence.

Sources of information used in the desk study are presented in Table 1.

Table 1 – Desk Study Sources of Information

Source	Date Consulted	Information Sought
MAGIC website (www.magic.gov.uk)	01/12/2022	Locations of statutory designated sites within 1km of the site boundary. Locations of Natura 2000 sites (Ramsar, Special Area of Conservation (SAC) and Special Protection Area (SPA)) within 5km of the site boundary. Locations of European Protected Species Licences (EPSL) and Class Licences within 1km.
Natural England (https://designatedsites/.naturalengland.org.uk/)	01/12/2022	Relevant statutory designated site citations.
JNCC (https://jncc.defra.gov.uk/)	01/12/2022	Information on European wildlife sites. Details of relevant Section 41 species and habitats.
West Yorkshire Ecology Service	01/12/2022	Locally designated wildlife sites within 1km of site boundary. Records of protected and notable species within 1km of the site boundary.
West Yorkshire Local Biodiversity Action Plans	01/12/2022	Species and habitats which are given special conservation status at the local level.

2.2 Field Survey

2.2.1 Vegetation

The site was subject to a field survey on 30th November 2022, by Assistant Ecologist Max Grindle. The weather conditions were 7°C, overcast (8/8 oktas), wind speed 1 Beaufort scale.

The methods were based on the standard methodology as detailed by The UK Habitat Classification User Manual (Butcher et al, 2020). A UKHab Habitat Plan has been produced to demonstrate habitats within the proposed development and the surrounding area. The mapping techniques are based on The UK Habitat Classification User Manual (Butcher et al, 2020) guidance.

Flora species listed as protected in the *Wildlife and Countryside Act 1981* (as amended) and species which are indicators of important and/or uncommon habitats, were searched for during the survey.

Species abundance is described using the DAFOR scale as shown in Table 2. Percentages are an approximate indication rather than a quantitative measure.

Table 2 – Key to Species Abundance

		Description	Indicative Percentage Ranges
D	Dominant	Covers most of the area	90% or greater
A	Abundant	Very common throughout the area.	50 – 90%
F	Frequent	Common or with many individuals.	20 – 50%
O	Occasional	Occurs in several places but not throughout. Populations are not large.	5 – 20%
R	Rare	Occurs in low numbers in relation to size of area.	Less than 5%
“L” will be used to indicate abundance in a localised area, e.g. LA = Locally abundant			

Any invasive species, including those listed on the revised (April 2010) Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended) were noted during the field survey when sighted.

2.2.2 Fauna

A site search for field signs of protected and notable fauna was undertaken, and incidental sightings are detailed. The searches completed were as follows:

- Suitability of any ponds to support notable and protected amphibians, and the suitability of the site’s terrestrial habitats to support amphibians.
- Suitability of the site to support reptiles by way of habitat structure and refuge piles, as well as links to the wider landscape.
- Search of any watercourses for signs or suitability for white clawed-crayfish (*Austropotamobius pallipes*), water vole (*Arvicola amphibius*) and otter (*Lutra lutra*) by way of burrows, resting places, holts and foraging signs.
- Suitability of the site to support notable bird species. Bird nests and droppings of notable and protected bird species.
- Suitability of the site to support notable invertebrates.
- Search of the site for any invasive species.
- Badger (*Meles meles*) field signs such as setts, mammal, paths, snuffle holes and latrines.

- Suitability of the site to support notable terrestrial mammals including harvest mouse (*Micromys minutus*) and brown hare (*Lepus europaeus*).

2.3 Bat Assessment

2.3.1 Preliminary Roost Assessment

A Preliminary Roost Assessment (PRA) was carried out on the site buildings and trees using a high-powered torch and close-focussing binoculars.

The PRA methodology is based on information contained within the Bat Conservation Trust (BCT) guidelines, 3rd edition (Collins, 2016). The categorisation within this report is based on that set out in Table 3, which is used as a basis for determining the requirement for further surveys.

Table 3 – Suitability of Buildings and Trees for Roosting Bats (adapted from Collins, 2016)

Category of Suitability	Typical Characteristics	Further Survey Requirements
High Roost Suitability	A structure/tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	Three separate survey visits. At least one dusk emergence and a separate dawn re-entry survey. Surveys can be undertaken between May and September, with at least two surveys between May and August.
Moderate Roost Suitability	A structure/tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but are unlikely to support a roost of high conservation status.	Two separate survey visits. One dusk emergence and a separate dawn re-entry survey. Surveys can be undertaken between May and September with at least one survey between May and August.
Low Roost Suitability	A structure/tree with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate condition and/or suitable surrounding habitat to be used on a regular basis by larger numbers of bats.	Structures: one emergence/re-entry survey between May and August. Trees: No further survey required but precautionary methods of felling recommended.
Negligible Suitability	Negligible habitat features on site likely to be used by roosting bats.	No further work required.

2.3.2 Commuting and Foraging Bats

The site was assessed for its suitability for use by commuting and foraging bats.

The commuting and foraging assessment methodology is based on information contained within the Bat Conservation Trust guidelines 3rd edition (Collins, 2016). The categorisation within this report is based on that set out in Table 4, which is used as a basis for determining the requirement for further surveys.

Table 4 – Suitability of Site for Foraging and Commuting Bats (adapted from Collins, 2016)

Category of Suitability	Typical Characteristics
High Suitability	Continuous high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting or foraging bats such as; river valleys, streams, hedgerows, lines of trees or woodland edge. Site is close to or connected to known roosts.
Moderate Suitability	Continuous habitat connected to the wider landscape that could be used by commuting bats such as lines of trees, scrub or linked back gardens. Habitat connected to wider landscape that could be used for bats for foraging such as; trees, scrub, grassland or water.
Low Suitability	Habitat that could be used by small number of commuting bats such as; defunct hedgerow, isolated features not well connected to surrounding habitat or Isolated habitat that could be used by a small number of foraging bats such as a lone tree or patch of scrub.
Negligible Suitability	No features on site suitable for use by commuting and foraging bats.

2.4 Habitat Suitability Index

No ponds were present on site; however, one pond (P1) was identified within 250m of the site boundary (see Section 3.3.4 for further details). As great crested newts' upper dispersal limit is generally considered to be up to 250m from a waterbody (though occurrence of greater distances does exist), ponds beyond this distance were not assessed due to limited connectivity (English Nature, 2001).

This pond was considered for its suitability to support great crested newts (*Triturus cristatus*) and underwent a Habitat Suitability Index (HSI) assessment following the methodology set out in ARG UK Advice Notice 5 (Oldham *et al.*, 2010). Ten habitat suitability indices were assessed and inputted into the HSI equation, which generates a score between 0 and 1. The calculated score corresponds to the estimated pond suitability for great crested newt, as outlined in Table 5. Refer to Appendix 3 for further details.

Table 5 – Pond Suitability Scores for Great Crested Newts

HSI Score	Habitat Suitability
<0.5	Poor
0.5 – 0.59	Below average
0.6 – 0.69	Average
0.7 – 0.79	Good

HSI Score	Habitat Suitability
>0.8	Excellent

2.5 Constraints to the Survey

Whilst every effort has been made to provide a comprehensive description of the site, no investigation could ensure the complete characterisation and prediction of the natural environment.

This PEA does not constitute a full botanical survey. The protected species assessment provides a view of the likelihood of protected species occurring on the site based on the known distribution of species in the local area and the suitability of the habitat.

November is a suboptimal time for carrying out UKHab Habitat Surveys due to being outside of the optimal plant growing season. Therefore, it is likely that some plants are present on the site but were not evident at the time of the survey and were not recorded. This is not considered to be a significant constraint with regards to the general UKHab Habitat Survey results as due to the size and location of the site and limited extent of the habitats, it is considered very unlikely that any rare or priority plant species were missed.

It should not, however, be taken as providing a full and definitive survey of any protected species group.

Where a lack of records is found during the desk search for a defined geographical area, it does not necessarily mean that there is a lack of ecological interest; the area may be simply under-recorded.

The conclusions and recommendations detailed in this report are based upon the site redline boundary and the development proposals as outlined by the client at the time of writing. Should there be any changes to the site redline boundary or development proposals at a later stage, this assessment should be reviewed to determine whether any amendments or additional survey work is required.

The findings of this report represent the professional opinion of qualified ecologists and do not constitute professional legal advice. The client may wish to seek professional legal interpretation of the relevant wildlife legislation cited within this document.

2.6 Lifespan of Report

In accordance with CIEEM's Advice Note on the Lifespan of Ecological Reports and Surveys (CIEEM, 2019), the details of this report will remain valid for a period of **18 months** from the date of the survey (i.e. until 30th May 2024). After this date, this assessment should be reviewed to determine whether any updated surveys are required.

2.7 Definitions

For the purposes of this report, the term 'protected and notable species' relates to:

- Species included on Schedules 2 and 4 of *The Conservation of Habitats and Species Regulations 2017*;
- Species included on Schedules 1, 5 and 8 of the *Wildlife and Countryside Act 1981* (as amended), excluding species that are only protected in relation to their sale (see section 9[5] and 13[2]);

- Invasive non-native species included on Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended);
- Species of principal importance for the conservation of/maintaining and enhancing biodiversity as required under: Section 41 of the *Natural Environment and Rural Communities Act 2006* (England), Section 7 of the *Environment (Wales) Act 2016*, Section 2[4] of the *Nature Conservation (Scotland) Act 2004*;
- Local species of importance as identified within various local biodiversity action plans; and,
- Badgers, which are protected under the *Protection of Badgers Act 1992*.

3 Baseline Ecological Conditions

3.1 Desk Study

3.1.1 Site Location

The site is located in an urban area of Linthwaite, approximately 5.1km west of the centre of Huddersfield. The site is bordered on the south eastern and north western aspects by residential and commercial developments, with Hoyle Ing present across the north eastern aspect, and a large expanse of broadleaved woodland present to the south and west. In the wider landscape, the River Colne lies approximately 100m northwest of the site, with Manchester Road present adjacent to the river.

3.1.2 Designated Sites

Two sites that form part of the National Site Network were located within 5km of the site boundary, with three non-statutory designated sites located within 1km, and detailed within Table 6.

Table 6 – Designated Sites within the Search Areas

Designated Site	Approx. Distance from Site	Details
Statutory designated sites		
South Pennine Moors Special Area of Conservation (SAC)	4.2km southwest	Designated primarily for the presence of the following Annex I habitats: european dry heaths, active blanket bogs, and old sessile oak woods with Ilex and Blechnum in the British Isles.
Peak District Moors (South Pennine Moors Phase 1) Special Protection Area (SPA)		Designated primarily for the presence of breeding populations of the notable bird species merlin (<i>Falco columbarius</i>), golden plover (<i>Pluvialis apricaria</i>), and short-eared owl (<i>Asio flammeus</i>).
Non-statutory designated sites		
Low Westwood Pond Local Wildlife Site (LWS)	175m northwest	Designated primarily for the presence of species rich standing water (Sw1).
Huddersfield Narrow Canal LWS	330m northwest	Designated primarily for the presence of species rich standing water (Sw1) and value for appreciation of nature (Van1)
Johnsons Wellfield Quarries Local Geological Site (LGS)	950m east	Designated primarily for its valuable historical associations, educational value, and aesthetic characteristics,

The site also falls within the Impact Risk Zone of the Dark Peak Site of Special Scientific Interest (SSSI), South Pennine Moors SAC, and Peak District Moors (South Pennine Moors Phase 1) SPA, based on consultation with MAGIC. Dark Peak SSSI is located 4.2km southwest of the site and is designated due to its nature as a wild, open, and largely continuous moorland, with blanket peatland stretching the length and breadth of the area.

3.1.3 Flora and Fauna

The following section summarises protected and/or notable species records that have been recorded within 1km of the site.

Vascular Plant

Six records of the notable vascular plant species floating water-plantain (*Luronium natans*) were returned within the data search, with the closest record located approximately 130m northwest of the site on an unspecified date.

Floating water-plantain is listed under Schedule 8 of the Wildlife and Countryside Act (WCA) 1981 and the West Yorkshire Local Biodiversity Action Plan (LBAP).

Invertebrates

One record of the notable moth species white ermine (*Spilosoma lubricipeda*) was returned within the data search, located approximately 550m north of the site in 2016.

White ermine are listed under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 and the West Yorkshire LBAP.

Fish

Eight records of brown trout (*Salmo trutta*) were returned within the data search, with the closest record located approximately 150m west of the site in 2012.

Brown trout are listed under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 and the West Yorkshire LBAP.

Birds

A total of 22 records of protected or notable birds were returned within 1km of the site as detailed in Table 7.

Table 7 – Protected or notable birds recorded within 1km

Scientific Name	Common Name	Protection	Closest Record to Site	
			Approx. Min. Distance	Date
<i>Motacilla cinerea</i>	Grey wagtail	BoCC5**	825m	2005
<i>Falco tinnunculus</i>	Kestrel	BoCC5**, LBAP	340m	2005
<i>Anas platyrhynchos</i>	Mallard	BoCC5**	330m	2015
<i>Gallinula chloropus</i>	Moorhen	BoCC5**	340m	2005
<i>Tringa totanus</i>	Redshank	BoCC5*	700m	2007
<i>Hirundo rustica</i>	Swallow	LBAP	340m	2005
<i>Columba palumbus</i>	Woodpigeon	BoCC5**	310m	2015
<i>Troglodytes troglodytes</i>	Wren	BoCC5**	310m	2015

* Red list of BoCC5 (2021)

** Amber list of BoCC5 (2021)

*** Black list BoCC5 (2021)

**** Section 21 of the NERC Act (2009)

***** Schedule 1 or 5 of the WCA (1981)

Invasive Non-native Species

Fauna

Two records of invasive non-native fauna were returned within the data search, comprising American mink (*Mustela vison*) and grey squirrel (*Sciurus carolinensis*), with the closest record relating to american mink, located approximately 340m north of the site in 2005.

Both species are listed under Schedule 9 of the WCA 1981.

Flora

Forty records of invasive non-native plant species were returned within the data search, comprising canadian waterweed (*Elodea canadensis*) japanese knotweed (*Fallopia japonica*), himalayan balsam (*Impatiens glandulifera*), and rhododendron ponticum (*Rhododendron ponticum*), with the closest records relating to canadian waterweed and himalayan balsam, both located approximately 190m north of the site in 2001.

All species are listed under Schedule 9 of the WCA 1981.

No Records Returned

The data search returned no records for:

- Common amphibian
- Great crested newt – no granted EPSL within 1km
- Reptile
- Bat
- Hedgehog
- Water vole
- Hazel dormice
- Red Squirrel (*Sciurus vulgaris*)
- Badger
- Otter
- White-clawed crayfish

3.2 Field Survey

The site habitats and accompanying Target Notes are presented in the UKHab Habitat Map in Appendix 4.

Secondary codes are added to confirm the identity of a habitat (when necessary), and also to provide information on management and the environment relating to that habitat parcel. The number and type of secondary codes added to a primary habitat will vary depending on the habitats present. There is no limit to the number of secondary codes that can be used for a single parcel. More details regarding the secondary codes used can be found in Appendix 2.

3.2.1 Artificial unvegetated, unsealed surface (u1c 189)

The largest portion of the site featured unsealed, bare ground, with intermittent scattered grasses and other patches of plant associations across the habitat's fringes. Meadowgrass (*Poa sp.*), bentgrass (*Agrostis sp.*), and sphagnum (*Sphagnum sp.*) were locally abundant, with occasional dandelion (*Taraxacum sp.*), fringed willowherb (*Epilobium ciliatum*), and common ragwort (*Jacobaea vulgaris*), and rare buddleja (*Buddleja sp.*).



Photograph 1 – Artificial unvegetated, unsealed surface, north facing.



Photograph 2 – Artificial unvegetated, unsealed surface, south facing.

3.2.2 Bramble scrub (h3a 11 189)

A length of bramble scrub was present across the northeast boundary of the site, featuring dominant bramble (*Rubus fruticosus*), with abundant sphagnum (*Sphagnum sp.*), frequent hairy willowherb (*Epilobium hirsutum*), fern (*Polypodiopsida sp.*), fringed willowherb (*Epilobium ciliatum*), herb robert (*Geranium robertianum*), and cocksfoot (*Dactylis glomerata*). Juvenile ash (*Fraxinus excelsior*) was also present within this habitat.



Photograph 3 – Bramble scrub.



Photograph 4 – Bramble scrub.

3.2.3 Mixed scrub (h3h 11)

The western border of the site hosted a strip of mixed scrub, dominated by dense ivy (*Hedera helix*) with abundant bramble and frequent nettle (*Urtica dioica*), dandelion, and common ragwort. Yorkshire fog (*Holcus lanatus*) and buddleja appeared occasionally, with holly (*Ilex aquifolium*) shrub and ash appearing rarely.

The habitat featured much canopy cover from trees located adjacent to the west of the site at an approximately 3-4m sheer descent from site ground level. The majority of this canopy cover was provided by goat willow (*Salix caprea*), with some ash within the habitat providing further cover.



Photograph 5 – Mixed scrub (understorey) featuring overhanging canopy from offsite trees.



Photograph 6 – Mixed scrub.

3.2.4 Built linear features (u1e 67 68 77)

The western aspect of the site was bound by a retaining wall roughly 3-4m in height across its extent. Ivy was locally dominant across the southernmost part of the wall, with numerous crevices visible across the northernmost section. Please refer to the PRA found in Appendix 2 for more information regarding the condition of the wall.



Photograph 7 – Built linear features, poor quality mortared wall featuring cracks/cavities.



Photograph 8 – Built linear features, mortared wall featuring overhanging dense ivy.

3.2.5 Modified grassland (g4 17)

The southern aspect of the site featured a small area of modified grassland, consisting of abundant orchard grass and yorkshire fog, frequent nettle, creeping buttercup (*Ranunculus repens*), and hairy willowherb, with occasional bramble, lady's mantle (*Alchemilla sp.*), fern, and chinese privet (*Ligustrum sinense*).



Photograph 9 – Modified grassland



Photograph 10 – Modified grassland

3.3 Site Suitability for Protected and Notable Species

3.3.1 Species Discounted from Assessment

Water vole, otter and white-clawed crayfish have been discounted from assessment as no aquatic habitats are located on site or within proximity. The closest aquatic habitat, the River Colne, is located approximately 100m northwest of the site, though it is sufficiently separated from the site via residential housing, the busy Manchester Road, and a steep elevation. Furthermore, due to the developed nature of this site, no suitable resting places are present.

Hazel dormouse (*Muscardinus avellanarius*) mainly occur in southern counties, especially in Devon, Somerset, Sussex and Kent. There are few recorded localities north of the Midlands, though they are present in parts of the Lake District and in scattered Welsh localities (Matthews *et al.*, 2018). The species are not generally known to be present within the Linthwaite area (Wembridge *et al.*, 2016). The habitats on site are of limited value due to limited areas of extensive woodland and scrub. As such, the species are reasonably discounted from site.

Red squirrel have been discounted from the assessment. Red squirrel populations are limited to small areas of northern England and are not known to be present in the area; with no previous records returned in the data search. It is anticipated that high abundances of grey squirrel are present within this region (Shuttleworth/RSST n.d.). This species will displace red squirrel through competition as well as cause increased red squirrel mortality through the spread of squirrel pox (The Mammal Society, 2020).

3.3.2 Vascular Plants

The site holds limited potential to support notable vascular plant species due to the majority of the site consisting of bare ground, with vegetation generally confined to the edges of the site. Habitats onsite were common and widespread, featuring no notable or protected vascular plant species.

As such, notable vascular plant species have been reasonably discounted.

3.3.3 Invertebrates

No deadwood, aquatic habitats or high floristic diversity was located on site which would provide an important resource for invertebrates during their life cycle. It is anticipated common species will be present due to the minimal management on site.

Overall, the presence of notable invertebrates within the site is reasonably discounted.

3.3.4 Amphibians

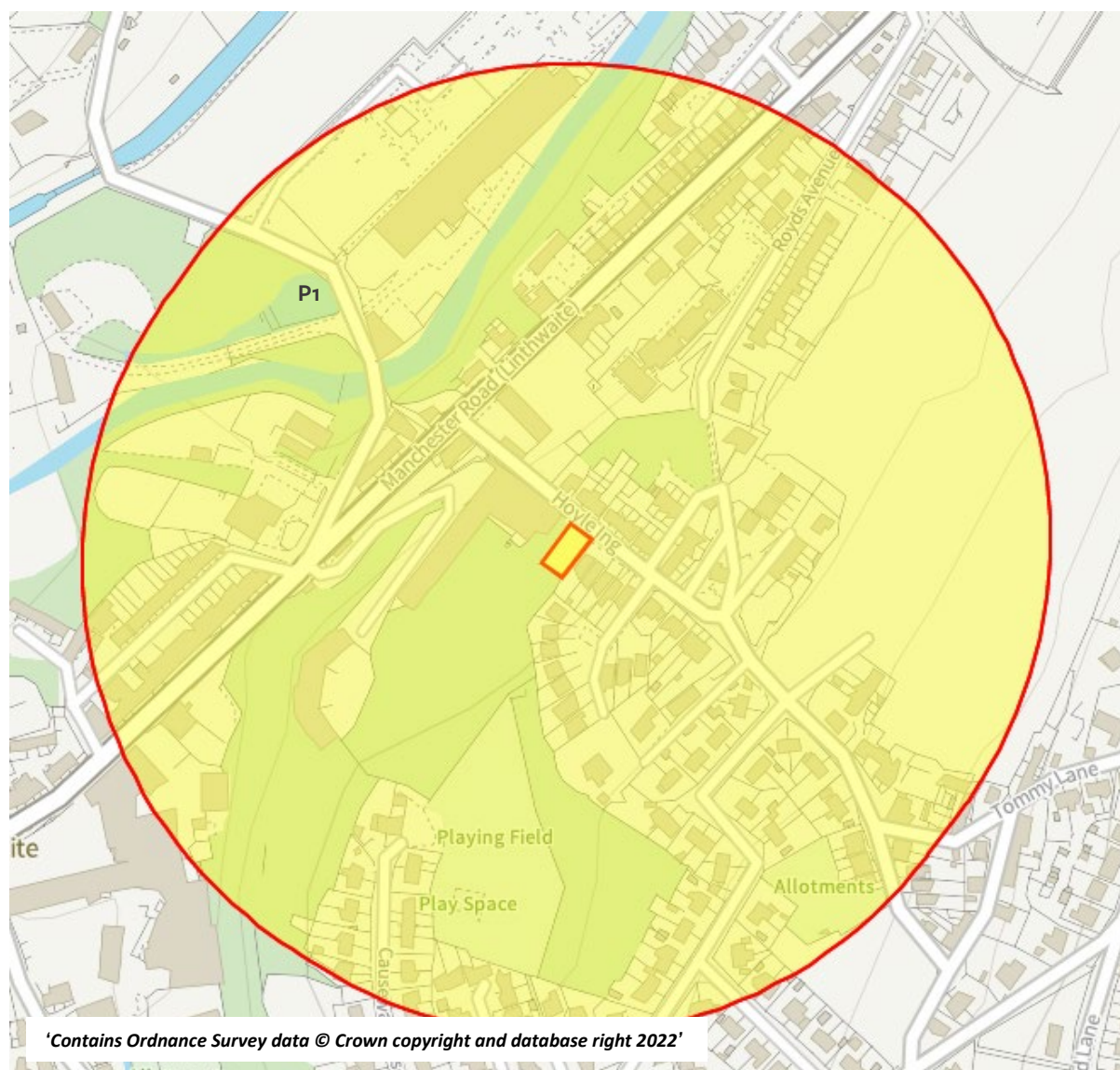


Figure 2 – Ponds within 250m of the site.

One pond (P1) was located approximately 175m northwest of the site boundary, within 250m of the site boundary. P1 was subjected to a HSI assessment and was assessed as providing **Average** potential to support great crested newts. However, P1 features limited connectivity to the site due to the presence of the intersecting Colne River, as well as the busy Manchester Road, which both constitute major obstacles and will prevent dispersal of amphibians from this pond (if present) onto site.

The site comprised a mosaic of unmanaged habitats which may provide suitable foraging resources and cover for common amphibians such as common toads. Ornamental water bodies may be located within nearby residential gardens which may provide suitable conditions for breeding common amphibians.

The presence of great crested newts within the can be reasonably discounted, although common amphibians may occur on site.

3.3.5 Reptiles

The site was found to provide limited value for reptiles, given the majority of the site comprised unsealed surface, grassland and scrub areas, which lack the structure and habitat quality to support the species

group. The woodland habitat south of the site and onsite scrub habitats could provide some terrestrial cover for the species, though these are generally confined to the boundaries and offsite.

Overall, the habitats on site were of limited value and no records of the species group were identified. Reptiles are not considered to be present on site.

3.3.6 Birds

Ground Nesting

The site provides limited potential for wild ground nesting birds due to the high level of anthropogenic disturbance within the wider environment, such as the adjacent Hoyle Ing, that will restrict opportunities for such species. More optimal habitat is present within the surrounding area, such as expanses of open greenspace surrounding Linthwaite, that will likely be used preferentially.

Ground nesting birds are reasonably discounted from the site.

Passerine

The site does provide suitable value to passerine birds with various habitats offering nesting opportunities such as the scattered trees, canopy cover extending within the site, and adjacent woodland to the south of the site which could be utilised by species such as woodpigeon, returned within the data search.

The site was confirmed to provide value for nesting passerine birds.

Wintering

The site provides limited value to wintering birds due to it being limited in extent and subject to high levels of anthropogenic disturbance. The site offers no food source that would sustain an over wintering bird population and has limited sheltering opportunities for such species. More optimal habitat is present in the wider landscape that would be used preferentially over the site.

Wintering birds are reasonably discounted from the site.

Birds of prey

The site provides limited potential for birds of prey, with no large hollows within any of the trees that could support nesting barn owl (*Tyto alba*). The grassland is too limited in extent to provide suitable foraging opportunities, and it is anticipated that extensive grassland within the wider environment will provide more suitable habitat.

Birds of prey are reasonably discounted from the site.

3.3.7 Bats

Preliminary Roost Assessment

A PRA was completed on all structures and trees located on site. Please refer to Appendix 2 for the results of the PRA and imagery of Potential Roosting Features (PRFs) identified during the survey.

In summary, W1 was assessed as having **high** bat roost potential.

Commuting and Foraging Bats

Onsite habitats are limited in their suitability for commuting bats, with much of the site consisting of bare ground. However, the scrub and grassland habitats may provide suitability for foraging bats, providing a

source of invertebrate prey. The site also features good connectivity to broadleaved woodland to the south, which provides access to the site for commuting species.

As such, the site has been assessed as providing **low** foraging and commuting value.

3.3.8 Hedgehog

The scrub habitats will provide suitable cover and foraging habitats for the species.

Hedgehog are potentially present within the site.

3.3.9 Badger

No evidence of badger activity or a sett was found on site and the site is anticipated to provide limited opportunities for the species group. The site is small in extent, with the majority featuring bare ground not suitable for sett creation and all other habitats too small in extent.

The adjacent broadleaved woodland may provide some potential for the species, and as such presence of commuting or foraging badger cannot be reasonably discounted from the site.

3.4 Invasive Species

No invasive, non-native species were present on the site at the time of the field survey. However, it should be noted that some invasive non-native plants are very fast spreading and therefore the potential for these species to be introduced to the site at a later date cannot be ruled out.

4 Ecological Constraints and Recommended Mitigation

4.1 Proposed Development

Redwaters Yorkshire Ltd. are proposing to develop land on Hoyle Ing in Linthwaite, Huddersfield (hereafter referred to as 'the site'). The proposals include the development of two residential units with associated hard and soft landscaping.

4.2 Designated Sites

The site is located within the impact risk zone for an SSSI and two European designated sites within the local area. It is anticipated that the designated sites are a sufficient distance away and are separated by anthropogenic barriers such as the residential areas, such that no impacts as a result of development are anticipated.

Numerous non-statutory LWSs are located within 1 km of the site boundary. There may be small increase of visitors to the nearby sites. However, based on the very limited size and extent of the scheme, it is anticipated the potential impacts will not be of any significance.

4.3 Habitats

The site comprised habitats that were found to be widespread within the local area; however, they did contain value for wildlife such as bats, birds and terrestrial mammals. The broadleaved woodland and scattered broadleaved trees are of highest value, though the buildings may provide suitable roosting opportunities for bats

4.3.1 Scattered trees

It is recommended that trees be retained as part of the development wherever possible. Generally, the protection measures of retained trees will be through the use of temporary protective demarcation fencing to protect the trees and shrubs. The fencing must extend outside the canopy of the retained trees and must remain in position until all plots have been developed to ensure protection is provided throughout the construction phase.

The fencing will be in accordance with BS 5837:2012 Trees in Relation to Design, Demolition and Construction: Recommendations.

It is recommended that replacement tree planting at a 1:3 ratio is undertaken to compensate for loss of any trees. It is recommended that the planting comprises native species and species known to be of value for the attraction of wildlife. This will include fruiting and flowering species.

4.4 Fauna

4.4.1 Amphibians

Great crested newts were deemed unlikely to be present on site and no further consideration for the species is required. However, there is a possibility that common amphibians such as common toad may be present on site.

It is recommended that Reasonable Avoidance Measures are to be followed during site clearance. All site contractors are to be inducted to the potential presence of the species. Any debris is to be cleared by hand, and any common amphibians located moved carefully, by hand, to outside of the development area.

4.4.2 Birds

It is recommended that the habitats of value to birds, such as the onsite trees, should be retained as part of the development wherever possible. Where necessary, vegetation removal should be undertaken outside of the breeding bird season (March to September, inclusive). If this is not possible, a suitably experienced ecologist should check the habitat for breeding bird activity no more than 48 hours before clearance. If nesting activity is found, nests must be left in situ until the young have fledged.

The site has been assessed to provide some suitable habitat for nesting birds, therefore it is recommended that the landscape scheme for this site contains a range of habitats such as scrub and trees, which will provide suitable shelter and nesting habitat for a range of bird species which are likely to be present in the surrounding area.

4.4.3 Bats

Roosting Bats

As stated in Section 3.3.7, the retaining wall W1 was assessed as having **high** bat roosting potential. Further bat surveys are recommended to confirm presence or absence of roosting bats within this feature, if it is to be impacted in any way by the proposed works. If no impacts or works will be carried out to the identified feature with bat roost potential, then no further survey work would be required.

Details of all further surveys are provided in Section 5.

Foraging and Commuting Bats

It is recommended that the habitats of value to foraging and commuting bats, such as the onsite grassland and scrub habitat, should be retained as part of the development wherever possible. The site was assessed as being of **low** value to commuting and foraging bats due to the site being surrounded by urban development and a lack of connectivity to open natural space. It is recommended that the landscape designs for this site contain a mix of native plant species and those known to be of value to native invertebrate species, providing additional value to local bat populations as a foraging resource.

Slow-flying species such as brown long-eared and Myotis species, which are known to be in the local area, are sensitive to lighting and may be impacted by the proposed development, should no mitigation for lighting be considered.

Lighting mitigation should follow the guidance outlined in the Institute for Lighting Engineers document “Guidance for the Reduction of Obtrusive Lighting” (2005) and BCT’s “Bats and Artificial Lighting in the UK” (2018).

Construction lighting should not be directed towards retained and surrounding habitats including the broadleaved woodland and grassland. The construction lighting may impact bats which are sensitive to light. Directional lighting will be achieved by angle and orientation of beam, use of a cowl, louvre or other light shield, or a combination of these.

An External Lighting Scheme had not been produced on the writing of this report. As such, the following recommendations are to be considered within the scheme during its condition, to minimise impacts of lighting. The recommendations are as follows:

- Keep site lighting to minimum levels.

- Luminaries should lack UV elements and preferably LED lighting with a warm white light should be used over cool white light (ideally <2700Kelvin).
- Lighting should feature peak wavelengths greater than 550nm.
- Internal lighting should be positioned away from windows to minimise light spill, where appropriate.
- Light placement should be downward facing to prevent excess horizontal or vertical light spill.
- The use of integrated fittings such as cowls, shields, louvres, and hoods, that effectively contain light spill from unintended areas, where appropriate.
- The use of hard landscaping features to block light and create dark corridors.
- Avoid illuminating any suitable retained bat habitats, particularly the hedgerows and trees, that are potential commuting and foraging habitat for bats.
- Use of timed security lights should be set on motion-sensors and using short, 1-minute timers, to minimise light use, where appropriate.
- Column heights of lighting can be considered to minimise light spill.

4.4.4 Hedgehog

Hedgehog may be present on site, as such checks for hedgehogs should be carried out prior to grassland and scrub removal to avoid harming this species during works.

4.4.5 Badger

Badger could not be reasonably discounted from the site and as such any works on site should adhere to the following Precautionary Working Methods:

- All site operatives will be inducted to the potential presence of the species and the species legal protection.
- All site operatives will be inducted as to identifying potential badger setts and should be vigilant if they suspect they locate a new sett during works and inform the site manager immediately. A minimum 20m buffer will be maintained from the potential sett until an ecologist has been to site.
- All excavations will be battened at a 45-degree angle or ramps to be positioned to allow escape should animals become trapped.
- All site machinery and materials will be appropriately stored to avoid harm to the species, notably between July and November each year when extra care is needed to avoid potential impacts on pregnant females.

4.5 Invasive Species

No non-native invasive flora species were identified during the site walkover. However, it should be noted that some invasive non-native plants are very fast spreading and therefore the potential for these species to be introduced to the site at a later date cannot be ruled out.

5 Further Surveys

5.1 Bats

W1 was identified as having bat roosting potential. If no works to this structure are proposed as part of the development, then no further surveys would be required. However, if this structure will be impacted which could lead to the disturbance of roosting bats, further surveys in the form of emergence and re-entry surveys are recommended to confirm presence or absence of roosting bats. All surveys should be undertaken in accordance with the current BCT guidance (Collins, 2016).

The surveys would involve situating a number of suitably qualified surveyors around W1 to monitor for bats emerging from potential roost locations (dusk emergence survey) or entering potential roost locations (dawn re-entry survey) for a specified amount of time. The surveys should be completed between May – September (inclusive). It is recommended at least one survey is completed during the bat maternity season which is generally defined as June to July. It is anticipated 3 surveyors will be required.

The number of surveys recommended are detailed in Table 8.

Table 8 – Summary of Recommended Further Bat Survey Requirements

Reference	Category of Suitability	Minimum Survey Effort	Recommended Number of Surveyors
W1	High	Three separate survey visits. At least one dusk emergence and dawn re-entry survey, with one additional dusk or dawn survey, none of which may take place within the same 24 hour period. Surveys can be undertaken between May and September with a least one survey between May and August.	3

If bats are identified roosting within the buildings on site, a minimum of three surveys will be required to inform a Natural England EPSL. The surveys will identify what bat roosts are present and will in turn clarify what mitigation will be required as part of the ESPL. Roost provision, lighting and timescales will be considered as part of the licence.

An EPSL can only be submitted once full planning permission has been granted and all wildlife conditions have been discharged.

6 Opportunities for Enhancement

The National Planning Policy Framework (NPPF) (2021) highlights the requirement for planning policies and decisions to conserve and enhance the natural environment.

Paragraph 174 states that this should be achieved by (in terms of this assessment only):

- 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);*
- 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;*

Specific enhancement recommendations for the site include the following:

- Bat and bird boxes could be placed on the new buildings / retained trees. A plan to show the locations of these boxes and the specifications should be produced by a suitably qualified ecologist once the layout is finalised.
- Planting of linear features such as hedgerows and trees between garden plots where possible, to add commuting features withing the site.
- The inclusion of 'hedgehog highways' to facilitate movement across the site. This includes holes of 13 x 13cm at the bases of fence panels, leaving a sufficient gap beneath gates and/or leaving brick spaces at the bases of brick walls.
- An ecologically sensitive planting scheme could be incorporated on the site to promote invertebrate use of the site, which could benefit local bat and bird species.

7 Conclusion

The PEA has met the objectives of the report, by demonstrating the following:

- The major habitats identified on site included Artificial unvegetated, unsealed surface, bramble scrub, mixed scrub, modified grassland, and built linear features
- Potential ecological constraints identified included common amphibians, nesting birds, bats, hedgehog, and badger, and are detailed in Section 4.
- Mitigation recommendations to be completed prior and during the construction phase for common amphibians, nesting birds, bats, hedgehog, and badger, have been detailed in Section 4.
- Further nocturnal bat surveys are required to determine presence or absence of roosting bats and inform relevant mitigation requirements.
- General ecological enhancements are listed within Section 6.

8 References

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Appendix 1 – Relevant Legislation

Legislation relating to European Protected Species (e.g. bats, otter, great crested newt)

European Protected Species and their resting places (e.g. bat roosts) are protected under the Wildlife and Countryside Act 1981 (as amended), the Countryside and Rights of Way (CROW) Act 2000, and the Conservation of Habitats and Species Regulations 2017.

The Conservation of Habitats and Species Regulations 2017 transpose the European Union's 'Habitats Directive' (Council Directive 92/43/EEC) on the Conservation of Natural Habitats and of Wild Fauna and Flora (EC Habitats Directive) into UK law. The Regulations provide for the designation and protection of 'European Sites', the protection of 'European Protected Species' (EPS), and the adaptation of planning and other controls for the protection of European Sites. EPS are listed on Schedule 2 of the Conservation of Habitats and Species Regulations 2017.

Under the Wildlife and Countryside Act 1981 (as amended) it is an offence to:

- Intentionally kill, injure or take certain animals listed in Schedule 5;
- Intentionally or recklessly damage or destroy any structure or place which any wild animal specified in Schedule 5 uses for shelter or protection;
- Intentionally or recklessly disturb any such animal while it is occupying a structure or place which it uses for shelter or protection; or
- Intentionally or recklessly obstruct access to any structure or place which any such animal uses for shelter or protection.

In addition, under this legislation there are offences relating to sale, possession and control of wild animals listed in Schedule 5.

- Under the Conservation of Habitats and Species Regulations 2017 it is an offence to:
- Deliberately capture, injure or kill any wild animal listed as a European Protected Species;
- Deliberately disturb wild animals of any such species in such a way as to be likely:
- to impair their ability:
 - to survive, to breed or reproduce, or to rear or nurture their young, or;
 - in the case of animals of a hibernating or migratory species, to hibernate or migrate, or;
- to affect significantly the local distribution or abundance of the species to which they belong.
- Deliberately take or destroy the eggs of such an animal, or;
- Damage or destroy a breeding site or resting place of such an animal.

In addition, under this legislation there are offences relating to possession, control sale and exchange of an EPS.

Great crested newt, otter and several species of bat are listed as a SoPI under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

Legislation for amphibians (other than great crested newt)

Under the Wildlife and Countryside Act 1981 (as amended) the four widespread amphibian species, smooth newt (*Triturus vulgaris*), palmate newt (*Triturus helveticus*), common toad (*Bufo bufo*) and common frog (*Rana temporaria*) receive limited protection through section 9(5) only which makes selling, offering for sale, possessing or transporting for the purpose of sale (live or dead animal, part or derivative) an offence.

Common toad is listed as a SoPI under Section 41 of the NERC Act 2006.

Legislation relating to breeding birds

All birds, their nests and eggs are protected by the Wildlife and Countryside Act 1981 (as amended) and it is an offence, with certain exceptions, to:

- Intentionally kill, injure or take any wild bird;
- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built;
- Intentionally take or destroy the egg of any wild bird; and
- Intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building or is in, on or near a nest with eggs or young; or disturb the dependent young of such a bird.

Schedule 1 of the Wildlife and Countryside Act 1981 provides further protection for selected species (including peregrine falcon (*Falco peregrinus*), barn owl (*Tyto alba*), little ringed plover (*Charadrius dubius*) and black redstart (*Phoenicurus ochruros*) during the breeding season. If any person intentionally or recklessly disturbs any wild bird included in Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young; or disturb dependent young of such a bird. That person shall be guilty of an offence.

A number of bird species are listed as SoPI under Section 41 of the NERC Act 2006.

Conservation status - Birds of Conservation Concern (Eaton et al. 2015)

The UK's leading bird conservation organisations have worked together on the third quantitative review of the status of the birds that occur regularly in the UK, updating the last review in 2011. The status of birds within the UK have been regularly monitored through a series of surveys, including the national Breeding Bird Survey, Common Bird Census, sea bird monitoring programs and wetland monitoring programs. The result of this review and continued monitoring is The Population Status of Birds in the UK, Birds of Conservation Concern 4: 2015.

Birds are assessed against criteria to place each species on one of three alert lists, red, amber or green. Red list species are considered to be of high conservation concern, being either globally threatened, having historical UK population declines, having a rapid population decline or breeding range contraction of 50% or more in the last 25 years.

Amber list species are considered to be of medium conservation concern as they meet one or more of the following criteria (but none of the red list criteria): Red listed for historical decline in a previous review but with substantial recent recovery (more than doubled in the last 25 years), a UK breeding range contraction of between 25% and 49%, a reduction of breeding or non-breeding population of 25-49% in the last 25 years, a 5-year mean of 1-300 breeding pairs in the UK, an unfavourable European conservation status, at least 50% of the UK breeding population found in 10 or fewer sites, or where the breeding population in the UK represents 20% or more of the European breeding populations.

Green list species are considered to be of low conservation concern. They include all regularly occurring species that do not qualify under any of the red or amber criteria are green listed. The green list also includes those species listed as recovering from Historical Decline in the last review that have continued to recover and do not qualify under any of the other criteria.

Legislation relating to badger

Badgers are protected under the Protection of Badgers Act 1992 (as amended) which makes it an offence to:

- wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so;
- intentionally or recklessly damage, destroy or obstruct access to a badger sett; and
- disturb a badger when it is occupying a sett.

These provisions have implications for construction or preparation works undertaken in the vicinity of an active sett and may be confounded by distance from the sett entrance. Any works resulting in ground penetration, vibration or noise near an identified badger sett entrance/s have the potential to disturb badgers and advice should be sought from a suitably experienced ecologist under such circumstances. If disturbance to an active sett is probable, then a licence may need to be obtained from Natural England before any works commence.

Appendix 2 – Preliminary Roost Assessment

Building Reference	Description	Evidence	Category of Suitability
W1	A retaining wall present on the north western site boundary, featuring a mixture of drystone walling and damaged mortared wall. A large portion featured a high number of visible cavities which extended far within the wall and underground, with a dense layer of ivy present on one side. The wall features high connectivity to good habitat in the wider environment, with broadleaved woodland adjacent to the south and the River Coyle present approximately 100m to the north.		High

Appendix 3 - Habitat Suitability Index Assessment

HSI Score	Standing water (P1)	
Photo		
Description	Located approximately 175m northwest of the site. A large pond, approximately 0.1ha in size, rectangular in shape. The pond features a good quality vegetation assemblage, locally designated an LWS due to the presence of species rich standing water (Sw1), hosting NVC communities A2, S12, and S28. The terrestrial habitat adjacent to the north of the pond is suitable for amphibian species, though the pond features no connectivity to other ponds, bound to the north by the Huddersfield Narrow Canal and to the south by the Colne River.	
	Field Score	HSI Score
Sl1 - Location	A	1
Sl2 - Pond area	~1000m ²	0.955
Sl3 - Pond drying	Never dries	0.9
Sl4 - Water quality	Moderate	0.67
Sl5 - Shade	20%	1
Sl6 - Waterfowl	Absent	1
Sl7 - Fish	Possible	0.7
Sl8 - Ponds	0	0.1
Sl9 - Terrestrial	Good	1
Sl10 - Macrophytes	20%	0.5
Overall HSI score	0.67 - Average	

Appendix 4 – Habitat Map and Target Notes

Hierarchical code	Code	Meaning
Primary Code	u1c	Artificial unvegetated, unsealed surface
	h3a	Bramble scrub
	h3h	Mixed scrub
	u1e	Built linear features
Secondary Code	11	Scattered Trees
	67	Dry stone wall
	68	Mortared wall
	77	Neglected
	189	Scattered grass

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Legend

- Artificial unvegetated, unsealed surface
- Blackthorn scrub
- Mixed scrub
- Modified grassland
- Built linear features
- Red Line Boundary



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Client:
Redwaters

Project:
Land Adjacent to 2 Hoyle Ing

Title:
UKHAB Habitat Map

Issue:
01

Drawn: CL	Checked: MG	Approved: MB
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Project: UG1837	Scale @ A3: 1:119	Date: 12/12/2022
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Dwg No: UG1837_ECO_HM_01	Revision: 01
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