



Huddersfield Road, Mirfield

Ecological Appraisal



For Morbaine

June 2019

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Document Control

Project: Huddersfield Road, Mirfield
 Client: Morbaine
 Job Number: A113371
 File Origin: N:\Projects\Projects A113000 on\A113371 Huddersfield Road, Mirfield\REPORTS

Version 1	June 2019	FINAL
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Version:	Date:	Updated by:	Verified by:	Description of changes:

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Executive Summary

Contents	Summary
Site Location	The 'site' is located south of the Huddersfield Road / The Maltings road junction in Mirfield, West Yorkshire and is centred at Ordnance Survey National Grid Reference SE 19839 20004.
Proposals	Development proposals include for a new discount foodstore, approximately 102 car parking spaces and associated infrastructure and landscaping.
Scope of this Survey(s)	An Ecological Appraisal, including desk study, extended Phase 1 habitat survey and an assessment of potential constraints/opportunities relating to ecological receptors on and directly adjacent to the site.
Results	Designated Sites - Five LWS and one LNR are located within 2km of the site. - The nearest Natura 2000 site is Denby Grange Colliery Ponds SAC, located 8.2km south east of site, which is designated for GCN presence there. - The River Calder falls within the Kirklees WHN. Habitats - The site largely comprises hardstanding with areas of woodland, scrub, species-poor grassland and introduced shrubs also present. Eight buildings are present on site, as well as fencing and a wall. - The woodland habitat on site and adjacent River Calder qualify as LBAP habitats, with respective HAPs. Protected & Notable Species - Opportunities exist on site for bats, badger, otter and breeding birds. The adjacent River Calder could support protected / notable aquatic invertebrates. Five Schedule 9 listed invasive species have also be identified on site.
Recommendations	Designated Sites - The proposed works are considered unlikely to have any significant impact upon Natura 2000 sites, the LNR or LWS within the study area. - To prevent pollution of the river, it is recommended that best practice guidance for pollution prevention is reviewed and appropriate measures adopted. Habitats - It is recommended that the woodland is retained and, where possible, enhanced through increasing structural and species diversity. - Where woodland loss is essential to facilitate the proposed retaining wall, habitat loss should be minimised, wherever possible, and replacement habitat planted. - Works are considered unlikely to impact upon the River Calder; however, best practice guidance for pollution prevention should be reviewed and appropriate measures adopted, to avoid pollution of the river. - Opportunities to enhance the river and adjacent woodland have been suggested. Protected & Notable Species - Three buildings and one tree offer suitability to support roosting bats. These buildings / tree should be subject to emergence / re-entry surveys, with reference to the recommended guidance (Collins, 2016).



	• The site offers 'Low' suitability to support foraging / commuting bats; therefore, it is recommended that bat activity surveys, comprising a walked transect of the site and deployment of one static detector, are undertaken on a seasonal basis. • It is recommended that the woodland habitat is retained and sensitive lighting (BCT & ILP, 2018) adopted on site, to minimise impacts upon foraging / commuting bats. • An otter survey of the River Calder, including 200m up and down stream of the site is recommended, to search for evidence of otter and / or potential breeding or resting places. • Given the limited access to the woodland on site during the site visit, it is recommended that the woodland (plus a 50m buffer) is assessed in detail for evidence of badger and / or their setts, during the otter survey. • Multiple habitats on site (i.e. woodland, scrub and introduced shrubs) could support breeding and foraging birds. It is recommended that any vegetation clearance is undertaken outside of the main breeding bird season (i.e. avoid March – September, inclusive) or is immediately preceded by a nest check by a suitably experienced ecologist. Any lost vegetation should ideally be replaced with planting of value to birds (e.g. berry / seed yielding species). • Five non-native invasive species are present on site. It is recommended that an Invasive Species Management Plan is created prior to commencement of any works on site, to reduce the likelihood of invasive species being spread on or off site. • Hedgehog could seek refuge or hibernate (November - February, inclusive) in the woodland, scrub and introduced shrub on site. Where clearance of vegetation is undertaken between November and February (inclusive), it is recommended that these works are overseen by a suitable experienced ecologist. Should a hedgehog be found, it should be moved to a safe, off-site area, away from roads. • Works are considered unlikely to impact upon aquatic invertebrates, white-clawed crayfish or European eel; however, best practice guidance for pollution prevention should be reviewed and appropriate measures adopted, to avoid pollution of the river.
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Glossary

Badger Act	Protection of Badgers Act 1992
BCT	Bat Conservation Trust
BoCC	Bird(s) of Conservation Concern
BSI	British Standard Institute
BTO	British Trust for Ornithology
CIEEM	Chartered Institute of Ecology & Environmental Management
CRoW Act	Countryside and Rights of Way Act 2000
DEFRA	Department for the Environment, Food and Rural Affairs
EcIA	Ecological Impact Assessment
EPS	European Protected Species
EPSL	European Protected Species Licence
GCN	Great Crested Newt
Grad CIEEM	Graduate Member of CIEEM
Habitat Regulations	Conservation of Habitats and Species Regulations 2017 (as amended)
HAP	Habitat Action Plan
Hedgerow Regulations	Hedgerow Regulations 1997
HPI	Habitat(s) of Principal Importance
HRA	Habitats Regulations Assessment
JNCC	Join Nature Conservation Committee
LBAP	Local Biodiversity Action Plan
LNR	Local Nature Reserve
LWS	Local Wildlife Site
MCIEEM	Member of Chartered Institute of Ecology & Environmental Management
Natura 2000 site	A European site designated for its nature conservation value
NERC Act	Natural Environment and Rural Communities Act 2006
NNR	National Nature Reserve
NPPF	National Planning Policy Framework
OS	Ordnance Survey
PEA	Preliminary Ecological Appraisal
PRF	Potential Roost Feature
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SAP	Species Action Plan
SPA	Special Protection Area
SPI	Species of Principal Importance
SSSI	Site(s) of Special Scientific Interest
W&CA	Wildlife & Countryside Act 1981 (as amended)
WHN	Wildlife Habitat Network
WYES	West Yorkshire Ecology Service



1.0 Introduction

1.1 Background

WYG was commissioned by Morbaine on the 17th April 2019 to undertake an Ecological Appraisal of the site known as 'Huddersfield Road, Mirfield'. The site is currently in use as a caravan sales forecourt, largely comprising hardstanding with associated buildings and areas of landscaping. Semi-natural woodland is located in the south of the site.

This report has been prepared by Consultant Ecologist Jonathan Siberry Grad CIEEM and the conditions pertinent to it are provided in Appendix A.

1.2 Site Location

The 'site' is located south of the Huddersfield Road / The Maltings road junction in Mirfield, West Yorkshire and is centred at Ordnance Survey National Grid Reference SE 19839 20004. Please see Figure 1.

1.3 Development Proposals

Development proposals include for a new discount foodstore, approximately 102 car parking spaces and associated infrastructure and landscaping (Appendix F).

1.4 Purpose of the Report

The purpose of this report is to complete:

- A desk study to obtain existing information on statutory and non-statutory sites of nature conservation interest and relevant records of protected/notable species within the site and its zone of influence;
- An extended Phase 1 habitat survey, involving a walkover of the site to record habitat types and dominant vegetation, including any invasive species, and a reconnaissance survey for evidence of protected fauna or habitats capable of supporting such species;
- An assessment of the potential ecological receptors present on site, identify any constraints they pose to future development and (if possible) any recommendations for any further surveys, avoidance, mitigation or enhancement measures that are needed (as appropriate).

Note that scientific names are provided at the first mention of each species and common names (where appropriate) are then used throughout the rest of the report for ease of reading.

A summary of the key legislation is also provided in Appendix B.



2.0 Methodology

2.1 Desk Study

2.1.1 Previous Reports

WYG reviewed the Kirklees Council Planning Portal for any existing ecology information relating to the site; however, no existing reports were identified.

2.1.2 Local Ecological Records Centre

Information was requested from West Yorkshire Ecology Service (WYES) for information on any nature conservation designations and protected or notable species records within 2km of the site.

The data search covered:

- Statutory designated sites for nature conservation, namely SACs, SPAs, Ramsar sites, SSSIs, NNRs and LNRs;
- Non-statutory designated sites for nature conservation, namely LWS;
- Legally protected species, such as great crested newts (GCN) *Triturus cristatus*, badger *Meles meles* and bats;
- Notable habitats and species, such as those listed as Habitats or Species of Principal Importance (HPIs or SPIs); and,
- Priority habitats or species within the Kirklees LBAP.

The data search did not cover:

- Tree Preservation Orders (TPOs); or
- Conservation Areas designated for their special architectural and historic interest.

Relevant extracts from the desk study are provided in Appendix C, as appropriate. In addition, species records returned over 10 years ago (i.e. before 2009) are considered to be historic and; therefore, less relevant to this assessment. As such, these records are only discussed briefly below, with more detailed discussion provided for recent records (post-2009).

2.1.3 Online Resources

A search for relevant information was also made on the following website:

- MAGIC www.magic.gov.uk - DEFRA's interactive, web-based database for statutory designations, information on any EPSL applications that have been granted in the local area and access to online Ordnance Survey (OS) imagery.

2.2 Field Surveys

The following methodologies have been used to identify the ecological receptors present on or near the site, which are relevant to the proposed development.

2.2.1 Habitats

An extended Phase 1 habitat survey was undertaken on the site on 7th May 2019 by WYG Project Ecologist Luke Verrall MCIEEM. The weather conditions were mild, with an air temperature of 10°C, 50% cloud cover, a wind speed of BF1 (Beaufort Scale) and no precipitation.

The vegetation and broad habitat types within the site were noted during the survey in accordance with the categories specified for a Phase 1 Vegetation and Habitat Survey (JNCC, 2010). Dominant plant species were recorded for each habitat present using nomenclature according to Stace (2019). The site was also appraised for its suitability to support notable flora, with regard to the *Guidelines for Preliminary Ecological Appraisal* (CIEEM, 2017).

2.2.2 Protected & Notable Species

The site was inspected for evidence of, and its potential to support, protected or notable species, especially those listed under the Schedule 2 of the Habitat Regulations, Schedule 5 of the W&CA, the CRoW Act, those given extra protection under the NERC Act, and species included in the Kirklees LBAP.

Great Crested Newt

The site was appraised for its suitability to support GCN. The assessment was based on Guidance outlined in the *Herpetofauna Workers' Manual* (Gent & Gibson, 2003) and the *Great Crested Newt Conservation Handbook* (Langton, Becket & Foster, 2001).

Bats

Roosting Bats – Buildings / Structures / Trees

Any suitable buildings, structures or trees on site were assessed from the ground for their suitability to support breeding, resting and hibernating bats using survey methods based on the BCT *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collins, 2016) – hereafter referred to as the 'BCT Guidelines'. The following system has therefore been used to categorise the bat roost suitability of any features found:

Table 1: Categories of Bat Roost Suitability (BCT Guidelines)

Suitability	Typical Roosting Features
Negligible	Negligible habitat feature on site likely to be used by roosting bats.
Low	A structure 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 conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain potential roost features but with none seen from the ground or features seen with only very limited roosting potential.
Moderate	A structure or 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 unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis & potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.

Foraging/commuting Bats

The BCT Guidelines use the following criteria to categorise the potential value of habitats and features for use by foraging and commuting bats and these have been used to characterise the value of this site:

Table 2: Categories of Habitat Suitability (BCT Guidelines)

Suitability	Typical Foraging & Commuting Features
Negligible	Negligible habitat features on site likely to be used by commuting or foraging bats.
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 situation) or a patch of scrub.
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.
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, streams, 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.

Reptiles

The site was appraised for its suitability to support reptiles. The assessment was based on guidance outlined in the *Herpetofauna Workers' Manual* (Gent & Gibson, 2003).

Badgers

The site was surveyed for evidence of badger setts or other badger activity such as paths, latrines or signs of foraging. Methodologies used and any setts recorded were classified according to published criteria (Harris, Cresswell & Jefferies, 1989).

Other Species

The site was also appraised for its suitability to support other protected or notable fauna including mammals, amphibians, birds and invertebrates with regard to the *Guidelines for Preliminary Ecological Appraisal* (CIEEM, 2017) and *BS42020:2013 Biodiversity – Code of Practice for Planning and Development* (BSI, 2013). Evidence of any current or historical presence of such species was recorded.

2.2.3 Invasive Species

The site was searched for evidence of invasive plant species, such as Japanese knotweed *Reynoutria japonica* (formerly *Fallopia japonica*), Indian (Himalayan) balsam *Impatiens glandulifera*, giant hogweed *Heracleum mantegazzianum*, wall cotoneaster *Cotoneaster horizontalis* and rhododendron



Rhododendron ponticum × *Rhododendron maximum*. A full list of all invasive plant species is provided in Appendix B.

2.3 Limitations

The optimal period to undertake an extended Phase 1 habitat survey is April-September. The survey was completed in May which is within the optimal survey window. As such this is not considered to be a limitation to the accurate assessment of the habitats as the dominant species of the respective vegetation types were visible and identifiable.

To determine presence or likely absence of protected species usually requires multiple visits at suitable times of the year. As a result, this survey focuses on assessing the potential of the site to support species of note, which are considered to be of principal importance for the conservation of biodiversity with reference to those given protection under UK or European wildlife legislation. This report cannot therefore be considered a comprehensive assessment of the ecological interest of the site. However, it does provide an assessment of the ecological interest present on the day the site was visited and highlights areas where further survey work may be recommended.

It was not possible to directly access the woodland in the south of the site due to the presence of a chain link / palisade fence, and unsafe footing due to the steep gradient of the bank. This also restricted the ability to assess all aspects trees in the woodland for bat roost suitability. This is not considered to be a significant limitation to this assessment as it was possible to identify the habitat and dominant species present from the fence line (also assisted by use of binoculars). In addition, this woodland area will be searched in more detail for evidence of protected species, during future survey visits to the site.

It was not possible to access all areas within 50m of the site to check for evidence of badger. This is not considered to be a significant limitation to this assessment as it was possible to view most areas within 50m through use of binoculars and where this was not possible, these areas were considered unlikely to support badger setts (i.e. residential gardens and road networks).

The details of this report will remain valid for a period of **18 months** from the date of the survey, after which the validity of this assessment should be reviewed to determine whether further updates are necessary. Note that the recommendations within this report should be reviewed (and reassessed if necessary) should there be any changes to the red line boundary or development proposals which this report was based on.

3.0 Baseline Conditions

3.1 Designated and Non-designated Sites

The following designated sites of ecological importance have been identified within 2km of the site.

Table 3: Designated Sites Within 2km

Designation	Site Name	Distance & Direction	Summary of features
LNR & LWS	Sunny Bank Ponds	1.6km north	A mini parkland area with mature trees and two sunken man-made pits that make up a wetland area. The pond area is home to a large population of smooth newts <i>Lissotriton vulgaris</i> , frogs <i>Rana temporaria</i> and toads <i>Bufo bufo</i> . Other wildlife attracted to the pond include many species of garden birds, foxes <i>Vulpes vulpes</i> , deer, pipistrelle bats <i>Pipistrellus spp.</i> and other small mammals. GCN are not referenced in the site citation / summary.
LWS	Briery Bank Wood	1.25km south-east	Replanted ancient semi-natural woodland, designated for its good density cover of native bluebell <i>Hyacinthoides non-scripta</i> .
LWS	Covey Clough Wood and Hepworth Wood	1.65km south	Two blocks of replanted ancient woodland, designated through qualifying as a species-rich acid woodland (Covey Clough) and due to the good density cover of native bluebells.
LWS	Whitley Wood	1.75km south-east	Replanted ancient semi-natural woodland, designated for its good density cover of native bluebell.
LWS	Gregory Spring	1.95 south-east	Replanted ancient woodland with a beck, designated through qualifying as a species-rich acid woodland (and due to the good density and coverage of native bluebells).

The nearest Natura 2000 site is the Denby Grange Colliery Ponds SAC, located 8.2km south-east of the site. This SAC is designated for its notable population of GCN.

The site also falls within an Impact Risk Zone for the Denby Grange Colliery Ponds SAC / SSSI. As such, consultation with Natural England would be required for any development which meets the following criteria:

- Livestock & poultry units with floorspace > 500m², slurry lagoons > 4000m².



- General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.

It should also be noted that that River Calder, located directly adjacent to the southern boundary of the site, falls within the Kirklees Wildlife Habitat Network (WHN).

3.2 Habitats

The following habitats have been identified through our assessment, with detailed Target Notes included in Appendix D, as appropriate:

3.2.1 Broad-leaved Semi-natural Woodland

Broad-leaved semi-natural woodland is present on site, along the southern site boundary, between the hardstanding forecourt and buildings, and the River Calder (TN1). A fence separates the woodland from the forecourt area, restricting access. Tree species present within the woodland included sycamore *Acer pseudoplatanus*, cherry *Prunus sp.*, elder *Sambucus nigra*, ash *Fraxinus excelsior*, a poplar species *Populus sp.* and alder *Alnus glutinosa*.

The woodland understory lacked significant botanical interest but included species such as cleavers *Galium aparine*, tufted hair-grass *Deschampsia cespitosa*, wood avens *Geum urbanum*, ragwort *Senecio jacobaea*, ivy *Hedera helix*, bramble *Rubus fruticosus* agg., cranesbill *Geranium sp.*, garlic mustard *Alliaria petiolata*, forget-me-not *Myosotis sp.*, Japanese knotweed and *Aquilegia sp.*

3.2.2 Dense and Scattered Scrub

Dense and scattered scrub was present along the north-western site boundary.

The dense scrub was located on the western side of the site fenceline and was dominated by bramble, with other species present including rosebay willowherb *Chamerion angustifolium* and common nettle *Urtica dioica* (TN2).

Scattered scrub was located both on the eastern and western side of the western fence boundary. Scattered scrub on the eastern side of the fence was dominated by hollyberry cotoneaster *Cotoneaster bullatus* with firethorn *Pyracantha sp.* present occasionally (TN3). Scattered scrub located on the western side of the fence comprised saplings of silver birch *Betula pendula*, ash and willow, with bramble also present (TN4).

3.2.3 Broad-leaved scattered trees

Semi-mature, broad-leaved scattered trees were present in both the east and west of the site. Species present in the east of the site comprised sycamore, plum *Prunus domestica* and ash (TN5), while scattered trees in the west of the site comprised willow species *Salix spp.*, ash and silver birch (TN6).

3.2.4 Poor semi-improved neutral grassland

This habitat is located adjacent to the western site boundary (TN7) and covers only a small area of the site. The sward height was short (approx. 10cm) and species present included Yorkshire fog *Holcus lanatus*, ragwort dandelion *Rumex sp.*, bramble, hedge bindweed *Calystegia sepium*, colts-foot



Tussilago farfara, rosebay willowherb, ribwort plantain *Plantago lanceolata*, herb-Robert *Geranium robertianum*, creeping buttercup *Ranunculus repens*, wood avens and vetches *Vicia spp.*.

3.2.5 Introduced shrub

Introduced shrub was present along the northern site boundary, located in either side of the site entrance (TN8). A variety of different ornamental species were present including wall cotoneaster, Himalayan cotoneaster *Cotoneaster simonsii*, entire-leaved cotoneaster *Cotoneaster integrifolius*, honeysuckle species *Lonicera sp.* and daffodil *Narcissus sp.*. Three of the cotoneaster species were noted to be invasive (i.e. wall cotoneaster, Himalayan cotoneaster, entire-leaved cotoneaster) and these species are therefore discussed in detail in Section 3.3.8. In addition, native ash saplings were also present.

3.2.6 Wall

A stone wall with mortar is present along the length of the northern and eastern boundaries (TN9), although gaps in the wall were noted which could be used by nesting birds; no evidence of current or historic birds nests were recorded.

3.2.7 Fence

Palisade fencing (TN10) is present on the eastern, southern and western boundaries of the hardstanding on site, separating the hardstanding forecourt from the broad-leaved woodland and dense scrub habitat. A section of the southern fenceline is comprised of chain link fencing (TN11). All fencing on site is approx. 7ft high.

3.2.8 Buildings

A total of seven buildings were present on site comprising a mixture of outbuildings, portacabins and the main shop building. The portacabins are all pre-fabricated, while the outbuildings were constructed from wood and brick / metal. The main shop building is constructed from stone with a corrugated metal clad upper floor. The buildings were generally in a good state of repair, with all buildings appearing to be in current use; however, some damaged cladding and soffit boxes were noted. Full descriptions of each building are included within Appendix E.

3.2.9 Hardstanding

The majority of the site comprised an asphalt sales forecourt, which was generally in good condition. A concrete pathway was present around the back (southern aspect) of the buildings which appeared to be sloping towards the river.

3.2.10 Running Water (River Calder – Adjacent to Site)

The River Calder is located off-site but directly adjacent to the southern site boundary. At this point of the river, it measures approx. 35m wide and had a moderate flow. No emergent or aquatic vegetation was seen of the river from the site. It should be noted that the river is included in the Kirklees WHN.

3.3 Protected & Notable Species

3.3.1 Great Crested Newts

Three historic records of GCN were returned by WYES, from 2000 – 2007, located at least 1.6km from the site. There is considered to be no suitable habitat connecting the site to these records. In addition, one recent record and 11 historic records of other amphibian species were returned,



including common frog, common toad *Bufo bufo*, smooth newt *Lissotriton vulgaris* and palmate newt *Triturus helveticus*. All records were greater than 1.2km from the site. A search of MAGIC for granted GCN EPSL applications returned no results within 2km of the site.

A review of online OS imagery identified three waterbodies within 500m of the site (270 – 370m west of the site). However, these ponds were all located south of the River Calder and this is considered to be a major barrier to the movement of GCN. As such, these waterbodies were not subject to a Habitat Suitability Index assessment (Oldham *et al.* 2000).

The woodland habitat on site offers some suitability as a GCN commuting route; however, the woodland eventually reduces to bankside trees / tow-paths and with no waterbodies connected to this woodland, it is considered unlikely that this habitat would support GCN. Other habitats on site offer limited value to GCN and as the woodland is the only potential commuting route onto the site for GCN, it is considered unlikely that GCN would be present in other habitats on site.

GCN are considered unlikely to be present on site and are not discussed further.

3.3.2 Reptiles

No records of reptiles were returned by WYES.

Hardstanding forms the majority of the site area and is considered to be of negligible suitability for reptiles. Some features which could potentially be utilised by reptiles for refugia were identified on site and included features such as stacked wooden pallets and cut vegetation (TN12, Figure 2). While woodland edges and scrub habitat can support reptiles, particularly when associated with rough grassland habitat with a taller sward height, the woodland and scrub on site is considered to have limited value for reptiles. The woodland has a dense canopy cover, reducing insolation / opportunities for basking, and a poor coverage of ground flora. The scrub habitat is limited in size and the associated poor semi-improved grassland is also considered to have limited value for reptiles, due to the short sward height. In addition, the river acts as a barrier to movement for most reptiles (except grass snake) which restricts access to the site and generally, the largely urbanised habitats surround the site offer negligible suitability for reptiles.

Reptiles are considered unlikely to be present on site and are not discussed further.

3.3.3 Bats

A total of 185 bat records were returned by WYES, 81 of which were recent. At least six different species were included within the records, including common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, Natterer's bat *Myotis nattereri*, Leisler's bat *Myotis leisleri*, noctule *Nyctalus noctule* and brown long-eared bat *Plecotus auritus*. In addition, records of unknown bat species and unknown pipistrelle species *Pipistrellus sp.* were also returned. The nearest record to the site is for a common pipistrelle roost, located 400m south-east of the site. An additional 18 roosts are located within 2km of the site, 12 of which are located less than 700m away and support common pipistrelle, Leisler's bat, noctule and brown long-eared bat.

A search of MAGIC for granted bat EPSL applications identified three granted applications for destruction of common pipistrelle resting place (500m south, 760m south-east and 1km north-west) and a single granted application for destruction of a common pipistrelle and Natterer's breeding site (1.7km south-east).

Roosting Bats

All trees and buildings on site were assessed for their suitability to support roosting bats, with reference to the BCT Guidelines. Table 4 details those buildings and trees which offer suitability to support roosting bats. Full details of the bat roost suitability assessments are detailed within Appendix E.

Table 4: Buildings and Trees with Bat Roost Suitability

Building / Tree #	Photograph	Potential Roost Features (PRFs)	Bat Roost Suitability
B3		Hole in soffit in south-west corner of building; access behind barge board on southern aspect.	Moderate
B5		Large gap under external stairs, where stairs join the cladding of the main building. Gap around pipe on north-west aspect.	Moderate
B7		Gaps behind barge boards.	Low

Building / Tree #	Photograph	Potential Roost Features (PRFs)	Bat Roost Suitability
T2		Dense ivy cover over both trees (sycamore and alder), partially detached from the tree in places.	Low
T4		Mature Ash. No obvious PRFs noted on site-side but some rotting was noted. Could be PRF's on river side of tree.	Low
T5		Mature Poplar sp. A few areas of loose bark on northern aspect at around 8m. Broken limbs also present.	Moderate

Foraging & Commuting Bats

Suitable foraging / commuting habitat is present on site, with the most suitable habitats associated with the woodland on site and the adjacent River Calder. Other habitats on site, offer limited foraging resources to bat species. The hardstanding is considered to offer negligible foraging / commuting value to bats. As such, with reference to the BCT Guidelines, the site is considered to be of 'Low' value to foraging / commuting bats.

Further recommendations for bats are made within Section 5.3.1.

3.3.4 Badger

One historic record of badger was returned from 2008. The record was for a sett, located 1.3km from the site. Connectivity between this record and the site is considered to be poor due to the highly urbanised nature of the habitat between the site and the records. As such, it is considered highly unlikely that a badger would navigate between the site and sett.

The majority of the site is considered to be of negligible suitability for badger, as it largely comprises hardstanding. Woodland habitats can support badger and as such there is a possibility that badger could use the woodland area in the south; although, given the steep banks of the River Calder, suitability of this habitat for badger is considered to be limited. The woodland area was not accessible during the survey, due to the presence of fencing and steep gradient of the embankment, but no evidence of badger or mammal trails were found within the accessible areas of the site.

Pre-cautionary measures for badger are discussed further in Section 5.3.2.

3.3.5 Otter & Water Vole

No records of otter or water vole were returned by WYES.

The majority of the site is hardstanding and is considered to be of negligible suitability for otter and water vole. The woodland located directly adjacent to the River Calder could provide opportunities for otter breeding / resting places and suitable foraging habitat exists within this habitat along the southern boundary. In addition, gaps underneath the portacabin (B1) at TN13 could be used by otter as a potential couch / lie up, particularly with this area of the site being connected to the woodland and riverine habitats and being subject to less disturbance than the rest of the site.

Habitats in the south of the site are not considered to be suitable for water vole, given the heavy shading of the bank, dense bankside vegetation cover, and the size of / strong flow of the River Calder.

Water vole are considered unlikely to be present on or directly adjacent to site.

Further recommendations for otter are provided within Section 5.3.3.

3.3.6 Birds

A total of nine records of seven bird species were returned by WYES. All records were recent and located between 1.2km – 2km from the site. Species returned include: goldfinch *Carduelis carduelis*, cuckoo *Cuculus canorus*, kestrel *Falco tinnunculus*, swallow *Hirundo rustica*, house sparrow *Passer domesticus*, dunnoek *Prunella modularis* and song thrush *Turdus philomelos*.

Bird species recorded on site are summarised below in Table 5, along with their respective designations.

Table 5: Bird Species Recorded On Site

Species Name	Common Name	Species Name	Common Name
<i>Aegithalos caudatus</i>	Long-tailed tit	<i>Motacilla alba</i>	Pied wagtail
<i>Anas platyrhynchos</i>	Mallard	<i>Phylloscopus collybita</i>	Chiffchaff
<i>Carduelis carduelis</i>	Goldfinch	<i>Phylloscopus trochilus</i>	Willow warbler
<i>Chroicocephalus ridibundus</i>	Black-headed gull	<i>Pica pica</i>	Magpie
<i>Columba palumbus</i>	Woodpigeon	<i>Prunella modularis</i>	Dunnock
<i>Corvus corone</i>	Carrion crow	<i>Streptopelia decaocto</i>	Collared dove

Species Name	Common Name	Species Name	Common Name
<i>Corvus frugilegus</i>	Rook	<i>Sylvia atricapilla</i>	Blackcap
<i>Corvus monedula</i>	Jackdaw	<i>Troglodytes troglodytes</i>	Wren
<i>Cyanistes caeruleus</i>	Blue tit	<i>Turdus merula</i>	Blackbird
<i>Emberiza schoeniclus</i>	Reed bunting	<i>Turdus philomelos</i>	Song thrush
<i>Erithacus rubecula</i>	Robin		
<u>Key</u>			
NERC S41	BoCC Red	BoCC Amber	BoCC Green

The majority of these species were recorded within the woodland, scattered trees and introduced shrub on site and included a rookery of approx. six nests within the woodland and a blue tit *Cyanistes caeruleus* nest within an ash tray on a metal storage cage (TN14, Figure 2). These habitats, as well as dense scrub, offer potential to support breeding and foraging birds. In addition, the stone wall on site has holes present which could be used by nesting birds such as robin *Erithacus rubecula* and wren *Troglodytes troglodytes*; although, no evidence of nesting birds was recorded within the wall during the site visit.

Birds are discussed further in Section 5.3.4.

3.3.7 Invertebrates

A total of 14 historic invertebrate records were returned by WYES. These records included five species recorded between 2006 – 2007, including horsetail weevil *Grypus equiseti*, small heath butterfly *Coenonympha pamphilus* and Cinnabar moth *Tyria jacobaeae*. All records were returned greater than 1.1km from the site. In addition, no records of white-clawed crayfish *Austropotamobius pallipes* were returned by WYES.

The hardstanding area on site offers negligible suitability for invertebrate species. Woodland, scrub, grassland and scattered trees on site are considered to be common and widespread within the locale, and unlikely to support notable / protected invertebrate species. However, the adjacent River Calder could support aquatic invertebrates and white-clawed crayfish.

Aquatic invertebrates and white-clawed crayfish are discussed further in Section 5.3.5.

3.3.8 Invasive Species

A total of 19 records of invasive botanical species were returned by WYES. Species returned include wall cotoneaster, Japanese knotweed, Indian balsam, Nuttall's water-weed *Elodea nuttallii*, giant rhubarb *Gunnera tinctoria*, floating pennywort *Hydrocotyle ranunculoides* and curly waterweed *Lagarosiphon major*. The closest records were for Indian balsam and Japanese knotweed, located 700m south-east and 950m south-east of site, respectively.

At least five non-native invasive species were recorded on site. These included Japanese knotweed, hollyberry cotoneaster *Cotoneaster bullatus*, Himalayan cotoneaster *Cotoneaster simonsii*, entire-leaved cotoneaster *Cotoneaster integrifolius* and wall cotoneaster. In addition, an unidentified cotoneaster and short-felted cotoneaster *Cotoneaster tomentellus* were also identified. The unidentified cotoneaster could also be a potential non-native invasive species.

Five stands of Japanese knotweed (TN15) were identified within the woodland area, separated from the forecourt area of the site by palisade / chain link fence. However, some stands of knotweed were noted to be encroaching through the fence line, into the main forecourt area although it appeared that some of these areas may have been subject to herbicide treatment.

The cotoneaster species were noted within the introduced shrub along the northern site boundary and within the scattered scrub on the western site boundary.

Further recommendations for non-native invasive species are provided within Section 5.3.6.

3.3.9 Other Notable Species

Four recent records of West European hedgehog *Erinaceus europaeus* were returned from 2016 – 2017, with the closest located 600m north-east of the site. In addition, one historic record of brown hare *Lepus europaeus* was returned from 1984.

WYES also returned one historic record of European eel *Anguilla anguilla* within 100m of the site, in the River Calder.

The majority of the site (i.e. hardstanding) is considered to be unsuitable for hedgehog, as it provides no value for foraging or opportunities for refuge. The woodland, dense scrub and introduced shrub area could support hedgehog seeking refuge throughout the year, as could features such as cut vegetation (TN12), although connectivity to the site is limited to the woodland corridor.

There is considered to be no suitable habitat for brown hare on or connected to the site.

The River Calder offers suitable habitat for European eel.

Recommendations for other notable species are provided in Section 5.3.7.

3.4 Importance of Ecological Features

In line with the CIEEM PEA Guidelines, and based on the above baseline information, each ecological feature recorded within the study area is considered to have the following importance, using the Methodology as defined in Section 4 of the CIEEM EcIA Guidelines (2018):

Table 6: Importance of Ecological Features

Feature	Importance	Rationale
Sunny Bank Ponds LNR & LWS; Briery Bank Wood LWS; Covey Clough Wood and Hepworth Wood LWS; Whitley Wood LWS; Gregory Spring LWS.	County	Locally designated site for their local importance for the conservation of wildlife (LWS) or their wildlife or geological features that are of special interest locally
Broad-leaved semi-natural woodland	Local	Woodlands listed under LBAP. Potential to support bats, birds, badger, otter and hedgehog.
River Calder	Local	Included within the Kirklees WHN, providing suitable habitat and commuting corridors for protected / notable species.

Feature	Importance	Rationale
Scrub, scattered trees, poor semi-improved grassland, introduced shrub, wall, fence, buildings, hardstanding	Negligible	Little ecological value. Some potential opportunities for birds, bats and hedgehog.
Bats	Unknown	A European Protected Species. Roost suitability identified in buildings and trees. Suitable commuting and foraging habitat present. Further surveys needed.
Badger	Unknown	Protected under the Badgers Act 1992. Potential for setts / commuting routes through woodland area. Further survey needed.
Otter	Unknown	A European Protected Species. Potential for holts and couches in woodland. Further surveys needed.
Birds	Local	Some BoCC Red and Amber species recorded and suitable habitat present on site.
Aquatic invertebrates (incl. white-clawed crayfish)	Local	White-clawed crayfish is a European Protected Species and listed as a aPriority Species under the LBAP.
European Eel	Local	Adjacent River Calder supports European eel. Listed as an SPI under the NERC Act and commuting routes are protected.
Hedgehog	Local	Some hibernation and refuge opportunities on site. Listed as an SPI under the NERC Act.
Non-native invasive species	N/A	No ecological value but listed on Schedule 9 of W&CA
GCN, reptiles, water vole, terrestrial invertebrates and brown hare.	Negligible	Little to no suitable habitat present on site. Unlikely to be present.
Either: International (incl. European) / National / Regional / County / Local / Negligible Or: Unknown (i.e. further surveys/information needed)		

The potential for the proposals to have adverse or beneficial impacts on these features, along with the need for any mitigation or enhancement measures are discussed in detail below.



4.0 Relevant Planning Policy & Legislation

4.1 Revised National Planning Policy Framework

A revised NPPF was issued on 19th February 2019 (Ministry of Housing Communities and Local Government, 2019) and currently supplements government Circular 06/2005, *Biodiversity and Geological Conservation: Statutory Obligations and their Impact within the Planning System* (Office of the Deputy Prime Minister, 2005).

Circular 06/2005 states that the presence of protected species is a material consideration in the planning process. Paragraph 170 of the NPPF also states that:

'Planning policies and decisions should contribute to and enhance the natural 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.*

Paragraph 174 then goes on to confirmed 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 incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.*

Regarding EcIA's and HRA's – any sites identified, or required, as compensatory measures for adverse effects on any Natura 2000/habitats site should also be given the same level as protection as the pSPA's and cSAC's themselves. In addition, when an application is being determined, Paragraph 177 clarifies 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."

Paragraph 180 is also relevant as;

Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:...

- c) limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.*

4.2 Biodiversity 2020: A strategy for England's Wildlife & Ecosystem Services

Biodiversity 2020 (DEFRA, 2011) replaces the previous UK Biodiversity Action Plan and sets national targets to be achieved. The intent of Biodiversity 2020, however, is much broader than the protection and enhancement of less common species, and is meant to embrace the wider countryside as a whole.

The priority species and habitats considered under Biodiversity 2020 are the SPI & HPI detailed under NERC Act (see Appendix B for further details).

4.3 Local Biodiversity Action Plan

Local Biodiversity Action Plans (LBAPs) identify habitat and species conservation priorities at a local level (typically County by County) and are usually drawn up by a consortium of local Government organisations and conservation charities. Although they are no-longer managed at a national level many are still reviewed and updated at a local level.

The Kirklees LBAP is the relevant document for this site and it contains the following Habitat & Species Action Plans:

Table 7: LBAP SAPs

Species Action Plans	
Floating Water Plantain <i>Luronium natans</i>	Great Crested Newt
Marsh Helleborine <i>Epipactis palustris</i>	Northern Wood Ant <i>Formica lugubris</i>
Twite <i>Linaria flavirostris</i>	Water Vole
White-clawed Crayfish	

Table 8: LBAP HAPs

Habitats Action Plans	
Grasslands: Semi-natural pasture; Lowland and upland meadows; and Lowland dry acid grassland.	Uplands: Blanket bog; Upland heath; Upland flushes; and Lowland heathland.
Forest habitats: Upland oak woodland; Lowland deciduous and other woodland; Upland mixed ash-woods; and Wet woodland.	Arable and pastoral areas: Arable field margins; and Hedgerows.
Wetland and riverine habitats: Rivers, riverine corridors and associated habitats; and Reedbeds.	Urban areas and previously developed land: Scrub and habitat mosaics on previously developed land.

It should be noted that the existence of a SAP or HAP does not always infer an elevated level importance for those features. These plans may be designed to encourage an increase in these habitats/species, rather than to protect a county-scarce feature (for example).

4.4 Local Plan

The Kirklees Local Plan was adopted on 27th February 2019 and the relevant policy extracts are detailed below.

"Policy PLP 30: Biodiversity & Geodiversity

The council will seek to protect and enhance the biodiversity and geodiversity of Kirklees, including the range of international, national and locally designated wildlife and geological sites, Habitats and Species of Principal Importance and the Kirklees Wildlife Habitat Network.

South Pennine Moors

Proposals which may directly or indirectly compromise achieving the conservation objectives of a designated or candidate European protected site will not be permitted unless the proposal meets the conditions specified in Article 6 (3) - (4) of the Habitats Directive.

Statutory Designated Sites

Statutory designated sites, including the South Pennine Moors Special Protection Area (SPA) and Special Area for Conservation (SAC) and Sites of Special Scientific Interest, are already highly protected through existing laws and legislation. In accordance with legislation, the Council will seek to ensure that harmful impacts to these areas as a result of development proposals are avoided.



Development proposed within or outside a designated Site of Special Scientific Interest, likely to have an adverse effect on the site's special nature conservation features, will not normally be permitted. Exceptionally development will be allowed where the benefits of the development clearly outweigh the impacts on the site's special conservation features and measures are provided to mitigate harmful impacts.

The Dark Peak Nature Improvement Area

Proposals that contribute to the aims and objectives of the Dark Peak Nature Improvement Area will in principle be supported, subject to other policies in this plan. Development likely to have an adverse impact on the aims and objectives of the NIA will not be permitted.

Local Designated Sites & Important Local Ecological Features

Proposals having a direct or indirect adverse effect on a Local Wildlife Site or Local Geological Site, Ancient Woodland, Veteran Tree or other important tree, will not be permitted unless the development can be shown to be of an overriding public interest and there is no alternative means to deliver the proposal. In all cases, full compensatory measures would be required and secured in the long term.

Habitats and Species of Principal Importance

Proposals will be required to protect Habitats and Species of Principal Importance unless the benefits of the development clearly outweigh the importance of the biodiversity interest, in which case long term compensatory measures will need to be secured.

Biodiversity and Development

Development proposals will be required to:

- i. avoid significant loss or harm to biodiversity in Kirklees through protection, mitigation and compensatory measures secured through the establishment of a legally binding agreement;*
- ii. minimise impact on biodiversity and provide net biodiversity gains through good design by incorporating biodiversity enhancements and habitat creation where opportunities exist;*
- iii. safeguard and enhance the function and connectivity of the Kirklees Wildlife Habitat Network at a local and wider landscape-scale unless the loss of the site and its functional role within the network can be fully maintained or compensated for in the long term;*
- iv. establish additional ecological links to the Kirklees Wildlife Habitat Network where opportunities exist; and*
- v. incorporate biodiversity enhancement measures to reflect the priority habitats and species identified for the relevant Kirklees Biodiversity Opportunity Zone."*

4.5 Legislation

Full details of the UK legislation and offences which are relevant to the ecological receptors identified are included in Appendix B. However, based on the findings of our assessment, it is considered that the proposals will need to consider the following legal provisions:

- Disturbance or killing of an EPS (bats / otter)
- Disturbance of nesting wild birds
- Disturbance of nesting Schedule 1 bird species or their dependant young
- Harm / disturbance of badger and/or disturbance of an active sett



- Harm / disturbance of white-clawed crayfish or other protected aquatic invertebrates
- Cause of permit the spread of an invasive species into the wild



5.0 Discussion

5.1 Designated and Non-Designated Sites

Natura 2000 Sites

The Denby Grange Colliery Ponds SAC is located on a tributary of the River Calder. This tributary meets the River Calder 9.5km downstream of the site; however, as the SAC is located upstream on the tributary (i.e. water flowing from the SAC to the River Calder) and given the relatively small scale of works, it is considered unlikely that the proposed works would have any significant impact upon Natura 2000 sites.

Local Nature Reserves & Local Wildlife Sites

All of the LNR & LWS are located greater than 1.2km away from the site. The majority of the LWS within 2km of the site are woodland habitats, some with watercourses running from the woodland to the River Calder (i.e. LWS located upstream on tributaries of the Calder). Sunny Bank Ponds LNR & LWS is the only non-woodland designated site and is not hydrologically connect to the site. As such, it is considered unlikely that the proposed works would have any significant impact upon any of the LWS or the LNR.

It is considered unlikely that the proposed development (i.e. new food store) would lead to increased footfall in any of the LWSs or the LNRs. In addition, given the scope of works, the proposed retention of the woodland habitat between the location of works and the River Calder and the location of the designated sites upstream on tributaries of the River Calder, it is considered unlikely that clearance / construction works would impact upon these designated sites.

The River Calder forms part of the Kirklees WHN and a target of the Local Plan is to "*safeguard and enhance the function and connectivity of the Kirklees Wildlife Habitat Network*". It is considered unlikely that the proposed works will directly impact upon the River Calder due to retention of the woodland on site, which would act as a buffer between the development and the river. However, it is recommended that best practice guidance for pollution prevention¹ is reviewed and appropriate measures adopted, to prevent pollution of the river.

5.2 Habitats

Woodland

The LBAP lists a HAP for 'Lowland deciduous and other woodland', with the woodland on site falling within this category. It is recommended that the woodland on site is retained to prevent habitat loss on site and within the local area (with reference to the 'Lowland deciduous and other woodland' HAP). It is noted that the proposed site layout (Appendix F) references the potential for a retaining wall along the northern edge of the woodland. Should any vegetation removal be required to facilitate this retaining wall, it is recommended that vegetation loss is minimised, wherever possible, and any lost vegetation is replaced with the same / similar native species.

Where possible, the woodland could be enhanced (with reference the LBAP, Local Plan and NPPF) by increasing structural and species diversity and / or through introduction of wildlife boxes.

¹ Available at: <https://www.gov.uk/guidance/pollution-prevention-for-businesses>



River Calder (located adjacent to site boundary)

Located adjacent to the site, the River Calder is within the Kirklees WHN and 'Rivers, Riverine Corridors and Associated Habitats' are afforded a HAP under the LBAP. It is considered unlikely that there will be any significant negative impacts upon the river; however, best practice guidance to avoid pollution of the river should be adopted (see Section 5.1).

To maximise habitat diversity along the river corridor and reinforce links between the river and existing habitats, with reference to the HAP for 'Rivers, Riverine Corridors and Associated Habitats', it is recommended that the woodland habitat on site is retained and opportunities to enhance the woodland for river-based species could be pursued (please see species sections below). Such enhancements would also aid towards achieving an overall net gain in biodiversity, with reference to the Local Plan and NPPF.

5.3 Protected & Notable Species

5.3.1 Bats

Roosting Bats

Suitability for roosting bats has been highlighted in three buildings and three trees. It is anticipated that all buildings on site will be demolished, although the retention status of the trees remains unknown, given the potential retaining wall (Appendix F). With reference to the BCT Guidelines, buildings with 'Low' or 'Moderate' suitability, or greater, and trees with 'Moderate' suitability, or greater, require further surveys. Given for the likely impact upon the buildings on site and the potential impact upon trees, it is recommended that emergence / re-entry surveys are undertaken on B3, B5, B7 and T5. One dusk and one dawn survey are required on buildings / trees with 'Moderate' suitability and one dusk or dawn is required on buildings with 'Low' suitability. For 'Moderate' trees / buildings, at least one of the two surveys should be completed between May – August, inclusive.

The site could be enhanced (with reference to the LBAP, Local Plan and NPPF) for bat species by erecting bat boxes on retained trees within the woodland on site. An ecologist should be consulted with regards to the type of boxes to be installed and siting information.

Foraging & Commuting Bats

With the exception of the woodland habitat along the southern boundary, which links to the River Calder corridor of higher commuting / foraging suitability, the majority of habitats on site offer lower suitability. As such, the site has been assessed as having 'Low' suitability for foraging / commuting bats (with reference to the BCT Guidelines). Therefore, it is recommended that bat activity surveys, comprising a walked transect of the site and deployment of one static detector, are undertaken on a seasonal basis. This involves one survey in Spring (April / May), one survey in summer (June, July or August) and one survey in Autumn (September / October).

The proposed site layout indicates retention of the woodland on site. As this habitat provides the most suitable foraging / commuting corridor on site, it is recommended this habitat is retained, to prevent biodiversity losses (with reference to the NPPF and Local Plan). In addition, it is recommended that any artificial lighting located adjacent to the woodland is sensitive to wildlife and minimises illumination of the woodland (BCT & ILP, 2018).



5.3.2 Badger

The woodland habitat present in the south of the site offers some limited potential to support badger. As it was not possible to access the woodland habitat during the walkover survey, it is recommended that the woodland (plus a 50m buffer) is assessed in detail for evidence of badger and / or their setts, during the otter survey (as detailed below). Should a badger sett be identified, it may be necessary to undertake further surveys. In addition, should an active sett be a risk of disturbance by the proposed works, it may be necessary to apply for a disturbance licence from Natural England and adopt mitigation measures.

5.3.3 Otter

Although no records of otter were returned by WYES within 2km, the River Calder, features on site (i.e. tree roots in the woodland and a gap under B1) provide suitability to support otter. As such, it is recommended that an otter survey is undertaken on site plus 200m up and down stream of the site, to search for evidence of otter and / or potential breeding or resting places. Should otter be identified within the survey area, it may be necessary to adopt suitable mitigation. Such mitigation would be detailed within an specific otter survey report but could include measures such as creation of a replacement holt or adoption of suitable 'no works' buffers.

5.3.4 Birds

The woodland, introduced shrub and scrub habitats on site could support breeding birds. As such, any vegetation clearance on site could directly impact nesting birds. In addition, a net loss in vegetation could negatively impact upon foraging opportunities for birds.

It is recommended that any vegetation removal required as part of the proposed works, is undertaken outside of the main breeding bird season (i.e. avoid March – September, inclusive), where possible. In the event that vegetation removal is required during the main bird breeding period, it is recommended that these works are overseen by a suitably experienced ecologist. Should an active nest be identified, the nest and a suitable 'no works' buffer zone should be adopted and remain *in situ* until the young have fledged the nest. Such buffer zones are species specific, but for those likely to be encountered on this site, a 5m buffer area is likely to be sufficient; however, this would be confirmed by the ecologist.

Any lost breeding / foraging habitat (i.e. woodland, introduced shrub and scrub) should be replaced like-for-like as minimum, or ideally in greater area / quality than the vegetation lost. Planting of berry and seed yielding species (e.g. hawthorn *Crataegus monogyna* or elder *Sambucus nigra*) as replacement habitat could benefit foraging birds, as well as breeding birds.

The site could be enhanced for nesting birds (with reference to the LBAP, Local Plan and NPPF) by installing nest boxes on retained trees or new buildings. Integral bird boxes could be adopted on any new buildings, to remain inconspicuous and in-keeping with the building's design (e.g. swift *Apus apus* bricks). The opportunity to create an artificial kingfisher *Alcedo atthis* burrow / nest within the woodland habitat adjacent to the River Calder, could have a positive impact on biodiversity along the river. An ecologist should be consulted with regards to box type and siting details.

5.3.5 Aquatic Invertebrates and White-Clawed Crayfish

It is understood that works are unlikely to directly impact the River Calder due to the proposed retention of the woodland habitats, which acts as a buffer between the river and the proposed works. However, it is recommended that best practice pollution prevention measures are adopted on site to



avoid pollution of the River Calder (e.g. avoid substance discharge into the river), particularly when working on creation of the proposed retaining wall.

Should the woodland buffer be lost or development proposals alter to include direct impacts upon the river, an ecologist should be consulted at the outset to advise further.

5.3.6 Invasive Species

Given the presence of at least five non-native invasive species on site, it is recommended that an Invasive Species Management Plan is created prior to commencement of any works on site, to reduce the likelihood of invasive species (i.e. Japanese knotweed and cotoneaster species) being spread on or off site, which would constitute a contravention of the Wildlife and Countryside Act 1981 (as amended).

5.3.7 Other Notable Species

As woodland, dense scrub and introduced shrub areas could support refuge seeking / hibernating hedgehog, there is the potential that site clearance works could impact upon hedgehog. Hedgehog hibernate between November – February (inclusive) and are therefore vulnerable to construction activities during this time. Where clearance of vegetation is undertaken between November and February (inclusive), it is recommended that these works are overseen by a suitably experienced ecologist. Should a hedgehog be found, it should be moved to a safe, off-site area, away from roads.

Although the River Calder could support European eel, the proposed works are not considered to impact upon the passage of eel up / down the river. Therefore, it is considered unlikely that the works would significantly impact upon European eel. However, best practice pollution prevention measures should be adopted, as detailed within Section 5.1, to prevent any impact of pollution on potential eel habitat.



6.0 Summary

6.1 Designated Sites

- Five LWS and one LNR are located within 2km of the site.
- The nearest Natura 2000 site is Denby Grange Colliery Ponds SAC, located 8.2km south east of site, which is designated for GCN presence there.
- The River Calder falls within the Kirklees WHN.
- The proposed works are considered unlikely to have any significant impact upon Natura 2000 sites, the LNR or LWS within the study area.
- To prevent pollution of the river, it is recommended that best practice guidance for pollution prevention is reviewed and appropriate measures adopted.

6.2 Habitats

- The woodland habitat on site and the adjacent River Calder qualify as LBAP habitats, with respective HAPs.
- It is recommended that the woodland is retained and, where possible, enhanced through increasing structural and species diversity.
- Where woodland loss is essential to facilitate the proposed retaining wall (Appendix F), habitat loss should be minimised, wherever possible, and replacement habitat (same or similar native species) planted.
- Works are considered unlikely to impact upon the River Calder; however, best practice guidance for pollution prevention should be reviewed and appropriate measures adopted, to avoid pollution of the river. Opportunities to enhance the river and adjacent woodland have been suggested.

6.3 Protected & Notable Species

- Three buildings and one tree offer suitability to support roosting bats. These buildings / tree should be subject to emergence / re-entry surveys, with reference to the recommended guidance (Collins, 2016).
- The site offers 'Low' suitability to support foraging / commuting bats; therefore, it is recommended that bat activity surveys, comprising a walked transect of the site and deployment of one static detector, are undertaken on a seasonal basis.
- It is recommended that the woodland habitat is retained and sensitive lighting (BCT & ILP, 2018) adopted on site, to minimise impacts upon foraging / commuting bats.
- The site offers limited potential to support badgers, with the woodland providing the most suitable habitat on site.
- Given the limited access to the woodland on site during the site visit, it is recommended that the woodland (plus a 50m buffer) is assessed in detail for evidence of badger and / or their setts, during the otter survey.
- The River Calder could support otter and there is suitability for otter holts / couches within the woodland and under B1 on site.
- An otter survey of the River Calder, including 200m up and down stream of the site is recommended, to search for evidence of otter and / or potential breeding or resting places.
- Multiple habitats on site (i.e. woodland, scrub and introduced shrubs) could support breeding and foraging birds. It is recommended that any vegetation clearance is undertaken outside of the main breeding bird season (i.e. avoid March – September, inclusive) or is



immediately preceded by a nest check by a suitably experienced ecologist. Any lost vegetation should ideally be replaced with planting of value to birds (e.g. berry / seed yielding species).

- The River Calder could support notable aquatic invertebrates and white-clawed crayfish. It is considered unlikely that the proposed works will impact upon the river but it is recommended that *Guidance for Pollution Prevention* is reviewed and appropriate measures adopted, to prevent pollution of the river.
- Five non-native invasive species are present on site. It is recommended that an Invasive Species Management Plan is created prior to commencement of any works on site, to reduce the likelihood of invasive species being spread on or off site.
- Hedgehog could seek refuge or hibernate (November - February, inclusive) in the woodland, scrub and introduced shrub on site. Where clearance of vegetation is undertaken between November and February (inclusive), it is recommended that these works are overseen by a suitable experienced ecologist. Should a hedgehog be found, it should be moved to a safe, off-site area, away from roads.
- European eel are known to be present in the River Calder. The proposed works are considered unlikely to impact upon the passage of eel on the river; however, it is recommended that best practice pollution prevention guidance is reviewed and appropriate measures adopted, to prevent pollution of the river.



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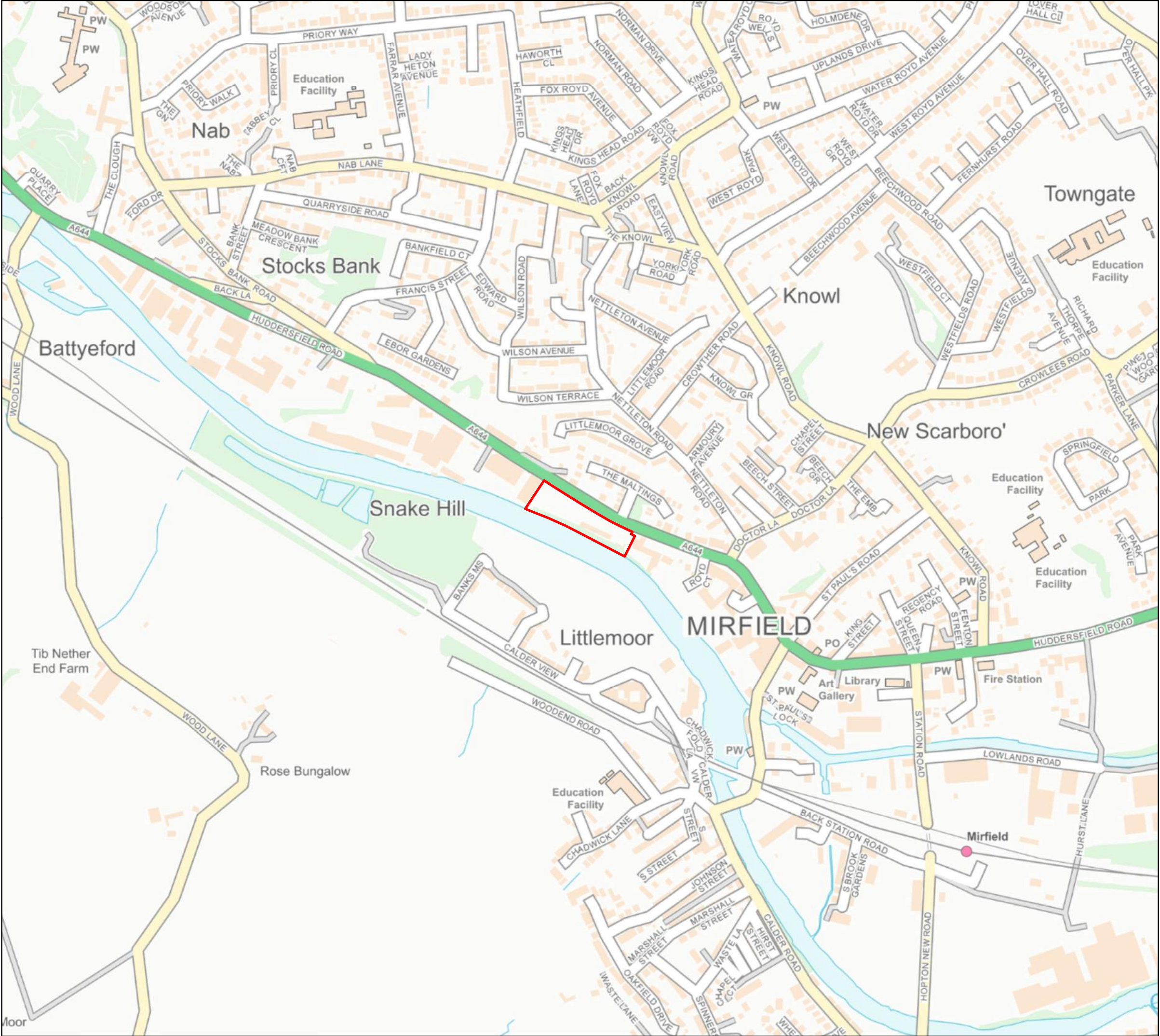
Please note that the legislation which is relevant to this report is not included in the list above, but details are included in Appendix B below.



FIGURES

Figure 1 – Site Location Plan

Figure 2 – Phase 1 Habitat Plan



Rev	Date	Notes
A	09/05/19	Initial map production

Legend

Site boundary



Site Location Plan

**Huddersfield Road, Mirfield
Morbaine**

Scale at A3: 1:6,000	Project No: A113371	Drawing No: Figure 1	Revision: A
Drawn by: Ben Blowers	Drawn date: 09/05/2019	Approved by: Luke Verrall	

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Rev	Date	Notes
A	04/06/19	Initial map production

Legend

- Site boundary
- Broadleaved woodland - semi-natural
- Scrub - dense/continuous
- SI Poor semi-improved grassland
- Introduced shrub
- Japanese knotweed
- Buildings
- Tent
- Hardstanding
- Fence
- Wall
- Scattered scrub
- Scattered tree
- Tree assessed for bats
 - Moderate
 - Low
 - Negligible
 - Target note

0 5 10 20 Metres



Phase 1 Habitat Plan

Huddersfield Road, Mirfield
Morbaine

Scale at A3: 1:600	Project No: A113371	Drawing No: Figure 2	Revision: A
Drawn by: Ben Blowers	Drawn date: 04/06/2019	Approved by: Luke Verrall	

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Appendix A – Report Conditions

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The report refers, within the limitations stated, to the environment of the site in the context of the surrounding area at the time of the inspections'. Environmental conditions can vary and no warranty is given as to the possibility of changes in the environment of the site and surrounding area at differing times. No investigative method can eliminate the possibility of obtaining partially imprecise, incomplete or not fully representative information. Any monitoring or survey work undertaken as part of the commission will have been subject to limitations, including for example timescale, seasonal and weather-related conditions. Actual environmental conditions are typically more complex and variable than the investigative, predictive and modelling approaches indicate in practice, and the output of such approaches cannot be relied upon as a comprehensive or accurate indicator of future conditions. The "shelf life" of the Report will be determined by a number of factors including; its original purpose, the Client's instructions, passage of time, advances in technology and techniques, changes in legislation etc. and therefore may require future re-assessment.

The whole of the report must be read as other sections of the report may contain information which puts into context the findings in any executive summary.

The performance of environmental protection measures and of buildings and other structures in relation to acoustics, vibration, noise mitigation and other environmental issues is influenced to a large extent by the degree to which the relevant environmental considerations are incorporated into the final design and specifications and the quality of workmanship and compliance with the specifications on site during construction. WYG accept no liability for issues with performance arising from such factors.



Appendix B – Key Legislation

Bern Convention

The *Convention on the Conservation of European Wildlife and Natural Habitats* (the *Bern Convention*) was adopted in Bern, Switzerland in 1979, and was ratified in 1982. Its aims are to protect wild plants and animals and their habitats listed in Appendices 1 and 2 of the Convention, and regulate the exploitation of species listed in Appendix 3. The regulation imposes legal obligations on participating countries to protect over 500 plant species and more than 1000 animals.

To meet its obligations imposed by the Convention, the European Community adopted the *EC Birds Directive* (1979) and the *EC Habitats Directive* (1992 – see below). Since the Lisbon Treaty, in force since 1st December 2009, European legislation has been adopted by the European Union.

Bonn Convention

The Convention on the Conservation of Migratory Species of Wild Animals or 'Bonn Convention' was adopted in Bonn, Germany in 1979 and came into force in 1985. Participating states agree to work together to preserve migratory species and their habitats by providing strict protection to species listed in Appendix I of the Convention. It also establishes agreements for the conservation and management of migratory species listed in Appendix II.

In the UK, the requirements of the convention are implemented via the Wildlife & Countryside Act 1981 (as amended), Wildlife (Northern Ireland) Order 1985 (as amended), Nature Conservation and Amenity Lands (Northern Ireland) Order 1985 and the Countryside and Rights of Way Act 2000 (CRoW).

Habitats Directive

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, or the 'Habitats Directive', is a European Union directive adopted in 1992 in response to the Bern Convention. Its aims are to protect approximately 220 habitats and 1,000 species listed in its several Annexes.

In the UK, the Habitats Directive is transposed into national law via the Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales, and via the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended) in Northern Ireland.

Birds Directive

The EC Directive on the Conservation of Wild Birds (79/409/EEC) or 'Birds Directive' was introduced to achieve favourable conservation status of all wild bird species across their distribution range. In this context, the most important provision is the identification and classification of Special Protection Areas (SPAs) for rare or vulnerable species listed in Annex 1 of the Directive, as well as for all regularly occurring migratory species, paying particular attention to the protection of wetlands of international importance.

Conservation of Habitats and Species Regulations 2017 (as amended)

Regulations place a duty on the Secretary of State to propose a list of sites which are important for either habitats or species (listed in Annexes I or II of the Habitats Directive respectively) to the European Commission. These sites, if ratified by the European Commission, are then designated as Special Protection Areas (SPAs) within six years. Public bodies must also help preserve, maintain and re-establish habitats for wild birds.

The 2018 amendments mainly related to the impact of the *People Over Wind* decision and some implications arising for neighbourhood plan development and a range of other planning tools including Local Development Orders and Permission in Principle – see here for full details:

<https://www.legislation.gov.uk/uksi/2018/1307/note/made>

The Regulations make it an offence to deliberately capture, kill, disturb or trade in the animals listed in Schedule 2, or pick, uproot, destroy, or trade in the plants listed in Schedule 5 - see below:

Schedule 2 – European Protected Species of Animals	Schedule 5 – European Protected Species of Plants
Horseshoe bats <i>Rhinolophidae</i> - all species	Shore dock <i>Rumex rupestris</i>
Common bats <i>Vespertilionidae</i> - all species	Killarney fern <i>Trichomanes speciosum</i>
Large Blue Butterfly <i>Maculinea arion</i>	Early gentian <i>Gentianella anglica</i>
Wild cat <i>Felis sylvestris</i>	Lady's-slipper <i>Cypripedium calceolus</i>
Dolphins, porpoises and whales <i>Cetacea</i> – all sp.	Creeping marsh-wort <i>Apium repens</i>
Dormouse <i>Muscardinus avellanarius</i>	Slender naiad <i>Najas flexilis</i>
Pool frog <i>Rana lessonae</i>	Fen orchid <i>Liparis loeselii</i>
Sand lizard <i>Lacerta agilis</i>	Floating-leaved water plantain <i>Luronium natans</i>
Fisher's estuarine moth <i>Gortyna borelii lunata</i>	Yellow marsh saxifrage <i>Saxifraga hirculus</i>
Great crested newt <i>Triturus cristatus</i>	
Otter <i>Lutra lutra</i>	
Lesser whirlpool ram's-horn snail <i>Anisus vorticulus</i>	
Smooth snake <i>Coronella austriaca</i>	
Sturgeon <i>Acipenser sturio</i>	
Natterjack toad <i>Epidalea calamita</i>	
Marine turtles <i>Caretta caretta</i> , <i>Chelonia mydas</i> , <i>Lepidochelys kempji</i> , <i>Eretmochelys imbricata</i> , <i>Dermochelys coriacea</i>	

Wildlife & Countryside Act 1981 (as amended)

This is the principal mechanism for the legislative protection of wildlife in the UK. This legislation is the chief means by which the 'Bern Convention' and the Birds Directive are implemented in the UK. Since it was first introduced, the Act has been amended several times.

The Act makes it an offence to (with exception to species listed in Schedule 2) intentionally:

- kill, injure, or take any wild bird;
- take, damage or destroy the nest of any wild bird while that nest is in use; or
- take or destroy an egg of any wild bird.

Or to intentionally do the following to a wild bird listed in Schedule 1:

- disturbs any wild bird while it is building a nest or is in, on or near a nest containing eggs or young; or
- disturbs dependent young of such a bird.

In addition, the Act makes it an offence (subject to exceptions) to:

- intentionally or recklessly kill, injure or take any wild animal listed on Schedule 5;
- interfere with places used for shelter or protection, or intentionally disturbing animals occupying such places; and
- The Act also prohibits certain methods of killing, injuring, or taking wild animals.

Finally, the Act also makes it an offence (subject to exceptions) to:

- intentionally pick, uproot or destroy any wild plant listed in Schedule 8, or any seed or spore attached to any such wild plant;
- unless an authorised person, intentionally uproot any wild plant not included in Schedule 8; or
- sell, offer or expose for sale, or possess (for the purposes of trade), any live or dead wild plant included in Schedule 8, or any part of, or anything derived from, such a plant.

Following all amendments to the Act, Schedule 5 'Animals which are Protected' contains a total of 154 species of animal, including several mammals, reptiles, amphibians, fish and invertebrates. Schedule 8 'Plants which are Protected' of the Act, contains 185 species, including higher plants, bryophytes and fungi and lichens. A comprehensive and up-to-date list of these species can be obtained from the JNCC website.

Part 14 of the Act makes unlawful to plant or otherwise cause to grow in the wild any plant which is listed in Part II of Schedule 9.

It is recommended that plant material of these species is disposed of as bio-hazardous waste, and these plants should not be used in planting schemes.

Schedule 1 - Birds which are protected by special penalties

Avocet	<i>Recurvirostra avosetta</i>	Osprey	<i>Pandion haliaetus</i>
Bee-eater	<i>Merops apiaster</i>	Owl, Barn	<i>Tyto alba</i>
Bittern	<i>Botaurus stellaris</i>	Owl, Snowy	<i>Nyctea scandiaca</i>
Bittern, Little	<i>Ixobrychus minutus</i>	Peregrine	<i>Falco peregrinus</i>
Bluethroat	<i>Luscinia svecica</i>	Petrel, Leach's	<i>Oceanodroma leucorhoa</i>
Brambling	<i>Fringilla montifringilla</i>	Phalarope, Red-necked	<i>Phalaropus lobatus</i>
Bunting, Cirl	<i>Emberiza cirlus</i>	Plover, Kentish	<i>Charadrius alexandrinus</i>
Bunting, Lapland	<i>Calcarius lapponicus</i>	Plover, Little Ringed	<i>Charadrius dubius</i>
Bunting, Snow	<i>Plectrophenax nivalis</i>	Quail, Common	<i>Coturnix coturnix</i>
Buzzard, Honey	<i>Pernis apivorus</i>	Redstart, Black	<i>Phoenicurus ochruros</i>
Capercaillie	<i>Tetrao urogallus</i>	Redwing	<i>Turdus iliacus</i>
Chough	<i>Pyrrhocorax pyrrhocorax</i>	Rosefinch, Scarlet	<i>Carpodacus erythrinus</i>
Corncrake	<i>Crex crex</i>	Ruff	<i>Philomachus pugnax</i>
Crake, Spotted	<i>Porzana porzana</i>	Sandpiper, Green	<i>Tringa ochropus</i>
Crossbills (all species)	<i>Loxia</i>	Sandpiper, Purple	<i>Calidris maritima</i>
Curlew, Stone	<i>Burhinus oedecnemus</i>	Sandpiper, Wood	<i>Tringa glareola</i>
Divers (all species)	<i>Gavia</i>	Scaup	<i>Aythya marila</i>
Dotterel	<i>Charadrius morinellus</i>	Scoter, Common	<i>Melanitta nigra</i>
Duck, Long-tailed	<i>Clangula hyemalis</i>	Scoter, Velvet	<i>Melanitta fusca</i>
Eagle, Golden	<i>Aquila chrysaetos</i>	Serim	<i>Serinus serinus</i>
Eagle, White-tailed	<i>Haliaetus albicilla</i>	Shorelark	<i>Eremophila alpestris</i>
Falcon, Gyr	<i>Falco rusticolus</i>	Shrike, Red-backed	<i>Lanius collurio</i>
Fieldfare	<i>Turdus pilaris</i>	Spoonbill	<i>Platalea leucorodia</i>
Firecrest	<i>Regulus ignicapillus</i>	Stilt, Black-winged	<i>Himantopus himantopus</i>
Garganey	<i>Anas querquedula</i>	Stint, Temminck's	<i>Calidris temminckii</i>



Godwit, Black-tailed	<i>Limosa limosa</i>	Swan, Bewick's	<i>Cygnus bewickii</i>
Goshawk	<i>Accipiter gentilis</i>	Swan, Whooper	<i>Cygnus cygnus</i>
Grebe, Black-necked	<i>Podiceps nigricollis</i>	Tern, Black	<i>Chlidonias niger</i>
Grebe, Slavonian	<i>Podiceps auritus</i>	Tern, Little	<i>Sterna albifrons</i>
Greenshank	<i>Tringa nebularia</i>	Tern, Roseate	<i>Sterna dougallii</i>
Gull, Little	<i>Larus minutus</i>	Tit, Bearded	<i>Panurus biarmicus</i>
Gull, Mediterranean	<i>Larus melanocephalus</i>	Tit, Crested	<i>Parus cristatus</i>
Harriers (all species)	<i>Circus</i>	Tree-creeper, Short-toed	<i>Certhia brachydactyla</i>
Heron, Purple	<i>Ardea purpurea</i>	Warbler, Cetti's	<i>Cettia cetti</i>
Hobby	<i>Falco subbuteo</i>	Warbler, Dartford	<i>Sylvia undata</i>
Hoopoe	<i>Upupa epops</i>	Warbler, Marsh	<i>Acrocephalus palustris</i>
Kingfisher	<i>Alcedo atthis</i>	Warbler, Savi's	<i>Locustella luscinioides</i>
Kite, Red	<i>Milvus milvus</i>	Whimbrel	<i>Numenius phaeopus</i>
Merlin	<i>Falco columbarius</i>	Woodlark	<i>Lullula arborea</i>
Oriole, Golden	<i>Oriolus oriolus</i>	Wryneck	<i>Jynx torquilla</i>
Animal (Vertebrate) Species Listed in Schedule 5 (full legal protection at all times)			
Horseshoe Bats (all species)	<i>Rhinolophidae</i>	Newt – Great Crested	<i>Triturus cristatus</i>
Typical Bats (all species)	<i>Vespertilionidae</i>	Snake – Smooth	<i>Coronella austriaca</i>
Dolphin – Bottle-nosed	<i>Tursiops truncatus (tursio)</i>	Toad, Natterjack	<i>Epidalea calamita</i>
Dolphin – Common	<i>Delphinus delphis</i>	Turtles – All Species	<i>Cheloniidae & Dermochelyidae</i>
Dormouse – Hazel	<i>Muscardinus avellanarius</i>	Basking Shark	<i>Cetorhinus maximus</i>
Pine Marten	<i>Martes martes</i>	Burbot	<i>Lota lota</i>
Porpoise – Harbour	<i>Phocaena phocaena</i>	Goby – Giant	<i>Gobius cobitis</i>
Otter – Eurasian	<i>Lutra lutra</i>	Goby – Couch's	<i>Gobius couchii</i>
Squirrel – Red	<i>Sciurus vulgaris</i>	Seahorse – Short-snouted ²	<i>Hippocampus hippocampus</i>
Walrus	<i>Odobenus rosmarus</i>	Seahorse – Spiny	<i>Hippocampus guttulatus</i>
Water Vole	<i>Arvicola amphibius</i>	Sturgeon	<i>Acipenser sturio</i>
Whales – All Species	<i>Cetacea</i>	Vendace	<i>Coregonus albula</i>
Wildcat	<i>Felis sylvestris</i>	Whitefish	<i>Coregonus lavaretus</i>
Lizard – Sand	<i>Lacerta agilis</i>		
Animal (Vertebrate) Species Protected under Section 9 (1) part: Killing and Injuring & Section 9 (5) Sale			
Adder	<i>Vipera berus</i>	Slow-worm	<i>Anguis fragilis</i>
Lizard – Viviparous	<i>Zootoca vivipara</i>	Snake – Grass	<i>Natrix helvetica (natrix)</i>
Animals (Vertebrate) Species Protected under Section 9 (5) Sale only			
Frog – common	<i>Rana temporaria</i>	Newt – Smooth	<i>Lissotriton vulgaris</i>
Newt – Palmate	<i>Lissotriton helvetica</i>	Toad – Common	<i>Bufo bufo</i>
Animals (Vertebrate) Species Protected under Section 9 (1) (4)(a): Killing, Injuring & Taking and Damage / Destruction of place of shelter / protection only			
Allis Shad	<i>Alosa alosa</i>	Shark – Angel	<i>Squatina squatina</i>
Twaite Shad	<i>Alosa fallax</i>		
Butterflies & Moths – Full Protection under Schedule 5³ at all times			
High brown fritillary	<i>Argynnis adippe</i>	Fisher's Estuarine Moth	<i>Gortyna borelii</i>
Large Blue	<i>Maculinea arion</i>	Barberry Carpet	<i>Pareulype berberata</i>

² Both sea horse species are protected in England only.

³ Viper's Bugloss Moth *Hadena irregularis* was removed from Schedule 5 in 1996 as it is believed to be extinct.

Heath Fritillary	<i>Melicta athalea</i>	Black-veined Moth	<i>Siona lineata</i>
Marsh Fritillary	<i>Eurodryas aurinia</i>	Sussex Emerald	<i>Thalera fimbrialis</i>
Swallowtail	<i>Papilio machaon britannicus</i>	Essex Emerald	<i>Thetidia smaragdalis</i>
Large Copper	<i>Lycaena dispar</i>	Fiery Clearwing	<i>Bembecia chrysidiformis</i>
Reddish-buff Moth	<i>Acosmetia caliginosa</i>	New-Forest Burnet	<i>Zygaena viciae</i>
Butterflies – Protected under Section 9 (5) Sale Only			
Purple Emperor	<i>Apatura iris</i>	Adonis Blue	<i>Lysandra bellargus</i>
Northern Brown Argus	<i>Aricia artaxerxes</i>	Chalkhill Blue	<i>Lysandra coridon</i>
Pearl-bordered Fritillary	<i>Boloria euphrosyne</i>	Glanville Fritillary	<i>Melitaea cinxia</i>
Chequered Skipper	<i>Carterocephalus palaemon</i>	Large Tortoiseshell	<i>Nymphalis polychloros</i>
Large Heath	<i>Coenonympha tullia</i>	Silver-studded Blue	<i>Plebejus argus</i>
Small Blue	<i>Cupido minimus</i>	Black Hairstreak	<i>Strymonidia pruni</i>
Mountain Ringlet	<i>Erebia epiphron</i>	White-letter Hairstreak	<i>Strymonidia w-album</i>
Duke of Burgundy	<i>Hamearis lucina</i>	Brown Hairstreak	<i>Thecla betulae</i>
Silver-spotted Skipper	<i>Hesperia comma</i>	Lulworth Skipper	<i>Thymelicus acteon</i>
Wood White	<i>Leptidea sinapis</i>		
Other Invertebrates – Full Protection under Schedule 5 at all times			
Rainbow Leaf-beetle	<i>Chrysolina cerealis</i>	Tadpole Shrimp	<i>Triops cancriformis</i>
Spangled Diving-beetle	<i>Graphopterus zonatus</i>	Trembling Sea-mat	<i>Victorella pavidia</i>
Lesser Silver Water-beetle	<i>Hydrochara caraboides</i>	De Folin's Lagoon Snail	<i>Caecum armoricum</i>
Moccas Beetle	<i>Hypebaeus flavipes</i>	Sandbowl Snail	<i>Catinella arenaria</i>
Violet Click-beetle	<i>Limoniscus violaceus</i>	Freshwater Pearl Mussel	<i>Margaritifera margaritifera</i>
Bembridge Beetle	<i>Parcymus aeneus</i>	Glutinous Snail	<i>Myxas glutinosa</i>
New Forest Cicada	<i>Cicadetta montana</i>	Lagoon Snail	<i>Paludinella littorina</i>
Wart-Biter	<i>Decticus verrucivorus</i>	Lagoon Sea Slug	<i>Tenellia adspersa</i>
Mole-Cricket	<i>Gryllotalpa gryllotalpa</i>	Northern Hatchet-shell	<i>Thyasira gouldi</i>
Field-Cricket	<i>Gryllus campestris</i>	Tentacled Lagoon-worm	<i>Alkmaria romijni</i>
Norfolk Hawker Dragonfly	<i>Aeshna isosceles</i>	Lagoon Sand-worm	<i>Armandia cirrhosa</i>
Southern Damselfly	<i>Coenagrion mercuriale</i>	Medicinal Leech	<i>Hirudo medicinalis</i>
Fen Raft Spider	<i>Dolomedes fimbriatus</i>	Marine Hydroid	<i>Clavopsella navis</i>
Ladybird Spider	<i>Eresus niger (cinaberinus)</i>	Ivell's Sea Anemone	<i>Edwardsia ivelli</i>
Fairy Shrimp	<i>Chirocephalus diaphanus</i>	Starlet Sea Anemone	<i>Nematosella vectensis</i>
Lagoon Sand Shrimp	<i>Gammarus insensibilis</i>	Atlantic Stream (White-clawed) Crayfish	<i>Austropotamobius pallipes</i>
Other Invertebrates Protected under Section 9 (1) Possession & 9 (2) (5) Sale only			
Stag Beetle	<i>Lucanus cervus</i>	Roman Snail ⁴	<i>Helix pomatia</i>
Fan Mussel	<i>Atrina fragilis</i>	Pink Sea-fan	<i>Eunicella verrucosa</i>
Other Invertebrates Protected under Section 9 (4) (a) Damage / Destruction of Place of Shelter / Protection only			
Mire Pill Beetle	<i>Curimopsis nigrita</i>		
Vascular Plant Species - Full Protection under Schedule 8 at all times (previous Scientific name in brackets)			
Adder's-tongue Least	<i>Ophioglossum lusitanicum</i>	Lily – Snowdon	<i>Gagea serotina (Lloydia serotina)</i>
Alison- Small	<i>Alyssum alyssoides</i>	Marsh-mallow – Rough	<i>Malva setigera (Althaea hirsuta)</i>

⁴ England only

Broomrape – Bedstraw	<i>Orobanche caryophyllacea</i>	Milk-parsley – Cambridge	<i>Selinum carvifolia</i>
Broomrape – Oxtongue	<i>Orobanche picridis</i>	Mudwort – Welsh	<i>Limosella aquatica</i>
Broomrape – Thistle	<i>Orobanche reticulata</i> ⁵	Naiad – Holly-leaved	<i>Najas marina</i>
Cabbage – Lundy	<i>Coincya wrightii</i> (<i>Rhynchosinapis wrightii</i>)	Orache – Stalked	<i>Atriplex pedunculata</i> (<i>Halimione pedunculata</i>)
Calamint – Wood	<i>Clinopodium menthifolium</i> (<i>Calamintha sylvatica</i>)	Orchid – Early Spider	<i>Ophrys sphegodes</i>
Catchfly – Alpine	<i>Silene suecica</i> (<i>Lychnis alpina</i>)	Orchid – Ghost	<i>Epipogium aphyllum</i>
Centaury – Slender	<i>Centaureum tenuiflorum</i>	Orchid – Lapland Marsh	<i>Dactylorhiza lapponica</i>
Cinquefoil – Rock	<i>Potentilla rupestris</i>	Orchid – Late Spider	<i>Ophrys fuciflora</i>
Clary – Meadow	<i>Salvia pratensis</i>	Orchid – Lizard	<i>Himantoglossum hircinum</i>
Club-rush – Triangular	<i>Schoenoplectus triqueter</i> (<i>Scirpus triqueter</i>)	Orchid – Military	<i>Orchis militaris</i>
Colt's-foot – Purple	<i>Homogyne alpina</i>	Orchid – Monkey	<i>Orchis simia</i>
Cotoneaster – Wild	<i>Cotoneaster cambricus</i> (<i>C. integerrimus</i>)	Pear – Plymouth	<i>Pyrus cordata</i>
Cotton-grass – Slender	<i>Eriophorum gracile</i>	Pennycress – Perfoliate	<i>Microthlaspi perfoliatum</i> (<i>Thlaspi perfoliatum</i>)
Cow-wheat – Field	<i>Melampyrum arvense</i>	Pennyroyal	<i>Mentha pulegium</i>
Crocus – Sand	<i>Romulus columnae</i>	Pigmyweed	<i>Crassula aquatica</i>
Cudweed – Broad-leaved	<i>Filago pyramidata</i>	Pine - Ground	<i>Ajuga chamaepitys</i>
Cudweed – Jersey	<i>Gnaphalium luteoalbum</i>	Pink – Cheddar	<i>Dianthus gratianopolitanus</i>
Cudweed – Red-tipped	<i>Filago lutescens</i>	Pink – Childing	<i>Petrorhagia nanteuillii</i>
Cut-grass	<i>Leersia oryzoides</i>	Ragwort – Fen	<i>Jacobaea paludosa</i> (<i>Senecio paludosa</i>)
Deptford Pink	<i>Dianthus armeria</i>	Ramping-fumitory – Martin's	<i>Fumaria reuteri</i> (<i>F. martinii</i>)
Diapensia	<i>Diapensia lapponica</i>	Rampion – Spiked	<i>Phyteuma spicata</i>
Eryngo – Field	<i>Eryngium campestre</i>	Restharrow – Small	<i>Ononis reclinata</i>
Fern – Dickie's-bladder	<i>Cystopteris dickieana</i>	Rock-cress – Alpine	<i>Arabis alpina</i>
Fleabane – Alpine	<i>Erigeron borealis</i>	Rock-cress – Bristol	<i>Arabis scabra</i>
Fleabane – Small	<i>Pulicaria vulgaris</i>	Sandwort – Norwegian	<i>Arenaria norvegica</i> ⁶
Galingale – Brown	<i>Cyperus fuscus</i>	Sandwort – Teesdale	<i>Minuartia stricta</i>
Gentian – Alpine	<i>Gentiana nivalis</i>	Saxifrage – Drooping	<i>Saxifraga cernua</i>
Gentian - Dune	<i>Gentianella amarella</i> subsp. <i>occidentalis</i> (<i>Gentianella uliginosa</i>)	Saxifrage – Tufted	<i>Saxifraga cespitosa</i>
Gentian – Fringed	<i>Gentianopsis ciliata</i> (<i>Gentianella ciliata</i>)	Solomon's-seal – Whorled	<i>Polygonatum verticillatum</i>
Gentian - Spring	<i>Gentiana verna</i>	Sow-thistle – Alpine	<i>Cicerbita alpina</i>
Germander – Cut-leaved	<i>Teucrium botrys</i>	Spearwort – Adder's-tongue	<i>Ranunculus ophioglossifolius</i>
Germander – Water	<i>Teucrium scordium</i>	Speedwell – Fingered	<i>Veronica triphyllos</i>
Gladiolus – Wild	<i>Gladiolus illyricus</i>	Speedwell – Spiked	<i>Veronica spicata</i> ⁷
Goosefoot – Stinking	<i>Chenopodium vulvaria</i>	Spike-rush – Dwarf	<i>Eleocharis parvula</i>

⁵ The Weeds Act 1959 does not apply to thistles *Cirsium* & *Carduus* species supporting this broomrape.

⁶ All subspecies occurring in the UK

⁷ Both subspecies: *spicata* & *hybrida*

Grass-poly	<i>Lythrum hyssopifolia</i>	South-stack Fleawort	<i>Tephrosia integrifolia</i> <i>ssp. maritima</i>
Hare's-ear – Sick- leaved	<i>Bupleurum falcatum</i>	Star-of-Bethlehem – Early	<i>Gagea bohemica</i>
Hare's-ear – Small	<i>Bupleurum baldense</i>	Starfruit	<i>Damasonium alisma</i>
Hawk's-beard – Stinking	<i>Crepis foetida</i>	Strapwort	<i>Corrigiola littoralis</i>
Hawkweed – Northroe	<i>Hieracium northroense</i>	Violet – Fen	<i>Viola persicifolia</i>
Hawkweed – Shetland	<i>Hieracium zetlandicum</i>	Viper's-grass	<i>Scorzonera humilis</i>
Hawkweed – Weak- leaved	<i>Hieracium attenuatifolium</i>	Water-plantain – Ribbon- leaved	<i>Alisma gramineum</i>
Heath – Blue	<i>Phyllodoce caerulea</i>	Wood-sedge – Starved	<i>Carex depauperata</i>
Helleborine – Red	<i>Cephalanthera rubra</i>	Woodsia – Alpine	<i>Woodsia alpina</i>
Horsetail – Branched	<i>Equisetum ramosissimum</i>	Woodsia – Oblong	<i>Woodsia ilvensis</i>
Hound's-tongue – Green	<i>Cynoglossum germanicum</i>	Wormwood – Field	<i>Artemisia campestris</i>
Knawel – Perennial	<i>Scleranthus perennis</i> ⁸	Woundwort - Downy	<i>Stachys germanica</i>
Knot-grass – Sea	<i>Polygonum maritimum</i>	Woundwort – Limestone	<i>Stachys alpina</i>
Leek – Round-headed	<i>Allium sphaerocephalon</i>	Yellow-rattle – Greater	<i>Rhinanthus angustifolius</i>
Lettuce – Least	<i>Lactuca saligna</i>		
Vascular Plant Species – Partial Protection under Section 13 (2) Protection from commercial exploitation and sale			
Bluebell	<i>Hyacinthoides non-scripta</i>		
Bryophytes – Full Protection under Schedule 8 at all times			
Anamodon – Long- leaved	<i>Anomodon langifolius</i>	Flamingo Moss	<i>Desmatodon cernuus</i>
Blackwort	<i>Southbya nigrella</i>	Frostwort	<i>Gymnomitrium apiculatum</i>
Crystalwort – Lizard	<i>Riccia bifurca</i>	Glaucous Beard Moss	<i>Barbula glauca</i>
Earwort – Marsh	<i>Jamesoniella undulifolia</i>	Green Shield Moss	<i>Buxbaumia viridis</i>
Feathermoss – Polar	<i>Hygrohypnum polare</i>	Hair Silk Moss	<i>Plagiothecium piliferum</i>
Flapwort – Norfolk	<i>Leiocolea rutheana</i>	Knothole Moss	<i>Zygodon forsteri</i>
Grimmia – Blunt-leaved	<i>Grimmia unicolor</i>	Large Yellow Feather Moss	<i>Scorpidium turgescens</i>
Petalwort	<i>Petalophyllum ralfsii</i>	Millimetre Moss	<i>Micromitrium tenerum</i>
Lindenberg's Leafy- Liverwort	<i>Adelanthus lindenbergianus</i>	Multi-fruited River Moss	<i>Cryphaea lamyana</i>
Feather-moss Slender Green	<i>Drepanocladus vernicosus</i>	Nowell's Limestone Moss	<i>Zygodon gracilis</i>
Alpine Copper-Moss	<i>Melichhoferia melichoferia</i>	Rigid Apple Moss	<i>Bartramia stricta</i>
Baltic Bog-Moss	<i>Sphagnum balticum</i>	Round-leaved feather Moss	<i>Rhynchostegium rotundifolium</i>
Blue Dew-Moss	<i>Saelania glaucescens</i>	Schleicher's Thread Moss	<i>Bryum schleicheri</i>
Blunt-leaved bristle- Moss	<i>Orthotrichum obtusifolium</i>	Triangular Pygmy Moss	<i>Acaulon triquetrum</i>
Bright-Green Cave- Moss	<i>Cyclodictyon laetevirens</i>	Turpswort	<i>Geocalyx graveolens</i>
Cordate Beard Moss	<i>Barbula cordata</i>	Vaucher's Feather Moss	<i>Hypnum vaucheri</i>
Cornish Path Moss	<i>Ditrichum cornubicum</i>	Western Rustwort	<i>Marsupella profunda</i>
Derbyshire Feather Moss	<i>Thamnobryum angustifolium</i>		

⁸ Includes both subspecies: *perennis* & *prostratus*

Stoneworts – Full Protection under Schedule 8 at all times			
Bearded Stonewort	<i>Chara canescens</i>	Foxtail Stonewort	<i>Lamprothamnium papulosum</i>
Lichens – Full Protection under Schedule 8 at all times			
New Forest Beech Lichen	<i>Enterographa elaborata</i>	Forked Hair Lichen	<i>Bryoria furcellata</i>
Snow Caloplaca	<i>Caloplaca nivalis</i>	Golden Hair Lichen	<i>Teloschistes flavicans</i>
Tree Catapyrenium	<i>Catapyrenium psoromoides</i>	Orange-fruited Elm Lichen	<i>Caloplaca luteoalba</i>
Laurer's Catillaria	<i>Catillaria laurai</i>	River Jelly Lichen	<i>Collema dichotomum</i>
Convolute Cladonia	<i>Cladonia convoluta</i>	Starry Breck Lichen	<i>Buellia asterella</i>
Upright Mountain Cladonia	<i>Cladonia stricta</i>	Caledonia Pannaria	<i>Pannaria ignobilis</i>
Goblin Lights	<i>Catolechia wahlenbergii</i>	New Forest Parmelia	<i>Parmelia minarum</i>
Elm Gyalecta	<i>Gyalecta ulmi</i>	Oil Stain Parmentaria	<i>Parmentaria chilensis</i>
Tarn Lecanora	<i>Lecanora archariana</i>	Southern Grey Physcia	<i>Physcia tribacioides</i>
Copper Lecidea	<i>Lecidea inops</i>	Ragged Pseudo-cyphellaria	<i>Pseudocyphellaria lacerata</i>
Arctic Kidney Lichen	<i>Nephroma arcticum</i>	Rusty Alpine Psora	<i>Psora rubiformis</i>
Ciliate Strap Lichen	<i>Heterodermia leucomelos</i>	Rock Nail	<i>Calicium corynellum</i>
Coralloid Rosette Lichen	<i>Heterodermia propagulifera</i>	Serpentine Selanopsora	<i>Selanopsora liparina</i>
Ear-lobed Dog Lichen	<i>Peltigera lepidophora</i>	Sulphur Tresses	<i>Alectoria ochroleuca</i>
Lichens – Partial Protection under Section 13 (2) Commercial Exploitation and Sale Only			
Tree Lungwort	<i>Lobaria pulmonaria</i>		
Fungi – Full Protection under Schedule 8 at all times			
Royal Bolete	<i>Boletus regius</i>	Oak Polypore	<i>Buglossosporus pulvinus</i>
Hedgehog Fungus	<i>Hericium erinaceum</i>	Sandy Stilt Ball	<i>Battaria phalloides</i>
Invasive plant species listed in Schedule 9			
Australian swamp stonecrop or New Zealand pygmyweed	<i>Crassula helmsii</i>	Japanese rose	<i>Rosa rugosa</i>
Californian red seaweed	<i>Pilayella littoralis</i>	Japanese seaweed	<i>Sargassum muticum</i>
Curly waterweed	<i>Lagarosiphon major</i>	Laver seaweeds (except native species)	<i>Porphyra</i> spp
Duck potato	<i>Sagittaria latifolia</i>	Parrot's-feather	<i>Myriophyllum aquaticum</i>
Entire-leaved cotoneaster	<i>Cotoneaster integrifolius</i>	Perfoliate alexanders	<i>Smyrniolum perfoliatum</i>
False Virginia creeper	<i>Parthenocissus inserta</i>	Pontic rhododendron	<i>Rhododendron ponticum</i>
Fanwort or Carolina water-shield	<i>Cabomba caroliniana</i>	Purple dewplant	<i>Disphyma crassifolium</i>
Few-flowered garlic	<i>Allium paradoxum</i>	Red algae	<i>Grateloupia luxurians</i>
Floating pennywort	<i>Hydrocotyle ranunculoides</i>	Rhododendron	<i>Rhododendron ponticum</i> × <i>Rhododendron maximum</i>
Floating water primrose	<i>Ludwigia peploides</i>	Small-leaved cotoneaster	<i>Cotoneaster microphyllus</i>
Giant hogweed	<i>Heracleum mantegazzianum</i>	Three-cornered garlic	<i>Allium triquetrum</i>
Giant kelp	<i>Macrocystis</i> spp.	Variegated yellow archangel	<i>Lamiastrum galeobdolon</i> subsp. <i>argentatum</i>
Giant knotweed	<i>Fallopia sachalinensis</i>	Virginia creeper	<i>Parthenocissus quinquefolia</i>
Giant rhubarb	<i>Gunnera tinctoria</i>	Wakame	<i>Undaria pinnatifida</i>
Giant salvinia	<i>Salvinia molesta</i>	Wall cotoneaster	<i>Cotoneaster horizontalis</i>
Green seafringers	<i>Codium fragile</i>	Water fern	<i>Azolla filiculoides</i>

Himalayan cotoneaster	<i>Cotoneaster simonsii</i>	Water hyacinth	<i>Eichhornia crassipes</i>
Hollyberry cotoneaster	<i>Cotoneaster bullatus</i>	Water lettuce	<i>Pistia stratiotes</i>
Hooked asparagus seaweed	<i>Asparagopsis armata</i>	Water primrose	<i>Ludwigia grandiflora</i>
Hottentot fig	<i>Carpobrotus edulis</i>	Water primrose	<i>Ludwigia uruguayensis</i>
Hybrid knotweed	<i>Fallopia japonica</i> × <i>Fallopia sachalinensis</i>	Waterweeds	<i>Elodea</i> spp.
Indian (Himalayan) balsam	<i>Impatiens glandulifera</i>	Yellow azalea	<i>Rhododendron luteum</i>
Japanese knotweed	<i>Reynoutria japonica</i>		

Protection of Badgers Act 1992

The main legislation protecting badgers in England and Wales is the Protection of Badgers Act 1992 (the 1992 Act). Under the 1992 Act it is an offence to: wilfully kill, injure, take or attempt to kill, injure or take a badger; dig for a badger; interfere with a badger sett by, damaging a sett or any part thereof, destroying a sett, obstructing access to a sett, causing a dog to enter a sett or disturbing a badger while occupying a sett.

The 1992 Act defines a badger sett as: "any structure or place which displays signs indicating current use by a badger"

Natural Environment and Rural Communities Act 2006

Section 41 (S41) of this Act requires the Secretary of State to publish a list (in consultation with Natural England) of Habitats and Species which are of Principal Importance for the conservation of biodiversity in England. The S41 list is used to guide decision-makers such as public bodies including local and regional authorities, in implementing their duty under Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal (e.g. planning) functions. The S41 list includes 65 Habitats of Principal Importance and 1,150 Species of Principal Importance.

Hedgerow Regulations 1997

The Hedgerow Regulations were made under Section 97 of the Environment Act 1995 and came into force in 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification. Important hedgerows are defined by complex assessment criteria, which draw on biodiversity features, historical context and the landscape value of the hedgerow.



Birds of Conservation Concern

This is a review of the status of all birds occurring regularly in the United Kingdom. It is regularly updated and is prepared by leading bird conservation organisations, including the British Trust for Ornithology (BTO), Joint Nature Conservation Committee (JNCC) and The Royal Society for the Protection of Birds (RSPB).

The latest report was produced in 2015 (Eaton *et al*, 2015) and identified 67 red list species, 96 amber species, and 81 green species. The criteria are complex, but generally:

- **Red list** species are those that have shown a decline of the breeding population, non-breeding population or breeding range of more than 50% in the last 25 years.
- **Amber list** species are those that have shown a decline of the breeding population, non-breeding population or breeding range of between 25% and 50% in the last 25 years. Species that have a UK breeding population of less than 300 or a non-breeding population of less than 900 individuals are also included, together with those whose 50% of the population is localised in 10 sites or fewer and those whose 20% of the European population is found in the UK.
- **Green list** species are all regularly occurring species that do not qualify under any of the red or amber criteria are green listed

Global IUCN Red List

The International Union for Conservation of Nature (IUCN) Threatened Species was devised to provide a list of those species that are most at risk of becoming extinct globally. It provides taxonomic, conservation status and distribution information about threatened taxa around the globe.

The system catalogues threatened species into groups of varying levels of threat, which are: Extinct (EX), Extinct in the Wild (EW), Critically Endangered (CE), Endangered (EN), Vulnerable (VU), Near Threatened (NT), Least Concern (LC), Data Deficient (DD), Not Evaluated (NE). Criteria for designation into each of the categories is complex, and consider several principles.

Local Biodiversity Action Plan (LBAP)

Local Biodiversity Action Plans (LBAP) identify habitat and species conservation priorities at a local level (typically at the County level), and are usually drawn up by a consortium of local Government organisations and conservation charities.

Some LBAP's may also include Habitat Action Plans (HAP) and/or Species Action Plans (SAP), which are used to guide and inform the local decision making process.

Wild Mammals (Protection) Act 1996

This Act offers protection to all wild species of mammals, irrespective of other legislation, and focussed on animal welfare, rather than conservation.

Unless covered by one of the exceptions, a person is guilty of an offence if he mutilates, kicks, beats, nails or otherwise impales, stabs, burns, stones, crushes, drowns, drags or asphyxiates any wild mammal with intent to inflict unnecessary suffering.

It's application is typically restricted to preventing deliberate harm to wildlife (in general) during construction works etc.



Appendix C – Relevant Desk Study Data



West Yorkshire
**Ecology
Service**

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West Yorkshire Joint Services
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ECOLOGICAL RECORDS SEARCH

FOR

HUDDERSFIELD ROAD, MIRFIELD

Ref No:- 20190430 K

Date: 02/05/2019

Prepared For Luke Verrall

WYG

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1 Introduction

This report provides a summary of the protected and notable species, habitats and designated sites information held by West Yorkshire Ecology Service (WYES) within 2km of grid reference SE 19849 20001.

The information within this report is supplied subject to WYES's 'Terms and Conditions', which can be viewed on the WYES website (<http://wyjs.org.uk/ecology-service/>).

2 Species

Please see Appendix D for records held by WYES within your defined search area.

2.1 SENSITIVE SPECIES RECORDS

2.1.1 Badgers

There is known badger activity in this area.

Badgers are protected under the Protection of Badgers Act 1992 and offences can result from both reckless and deliberate damage, disturbance or destruction.

Please see the separate confidential badger records for more information.

BADGERS ARE STILL BEING PERSECUTED, PLEASE DO NOT PASS THESE RECORDS ONTO THIRD PARTIES (INCLUDING SUPPORTING DOCUMENTATION FOR PLANNING APPLICATIONS).

3 Designated sites

3.1 INTERNATIONALLY/NATIONALLY DESIGNATED SITES

There are no internationally/nationally designated sites within your search area.

3.2 LOCALLY DESIGNATED SITES

The following Non-Statutory sites were found within the search area, and are shown on Fig 1.

Name of Site	Designation
Briery Bank Wood	Local Wildlife Site
Covey Clough Wood and Hepworth Wood	Local Wildlife Site
Gregory Spring	Local Wildlife Site
Sunny Bank Ponds	Local Wildlife Site
Whitley Wood	Local Wildlife Site

Explanations for designated sites are provided in Appendix B.

Citations for locally designated sites are provided in Appendix C.

The following Statutory local site was found within the search area, and is shown on Fig 1.

Name of Site	Designation
Sunny Bank Ponds	Local Nature Reserve

Explanations for designated sites are provided in Appendix B.

Citations for locally designated sites are provided in Appendix C.

4 Habitats

4.1 WILDLIFE HABITAT NETWORK

Your site centroid does not lie within the Kirklees Wildlife Habitat Network. See Figure 1 for Kirklees Wildlife Habitat Network data.

4.2 ANCIENT WOODLAND

Your site centroid falls within 1.273 km of Ancient Semi-natural Woodland/Ancient Replanted Woodland.

These relate to extracts from the West Yorkshire Ancient Woodland Inventory which is limited to woodlands over 2ha in size.

4.1 UK PRIORITY HABITATS

Natural England (English Nature) creates, maintains and publishes priority habitat inventories across the UK. These have been reproduced on Figure 2 with permission from Natural England. The terms of use for Natural England's Information and Data can be found at the following web site: <http://www.naturalengland.org.uk/copyright/>.

Please note that WYE has combined priority main habitats with those classified as candidate habitats. Please see the metadata description sheet produced by Natural England for further information. Detailed habitats can be supplied upon request.

The habitats identified within the search area are:

- Ancient Replanted Woodland
- Ancient Semi-Natural Woodland
- Traditional Orchards
- Deciduous Woodland

Figure 1 – Species and Designated Sites

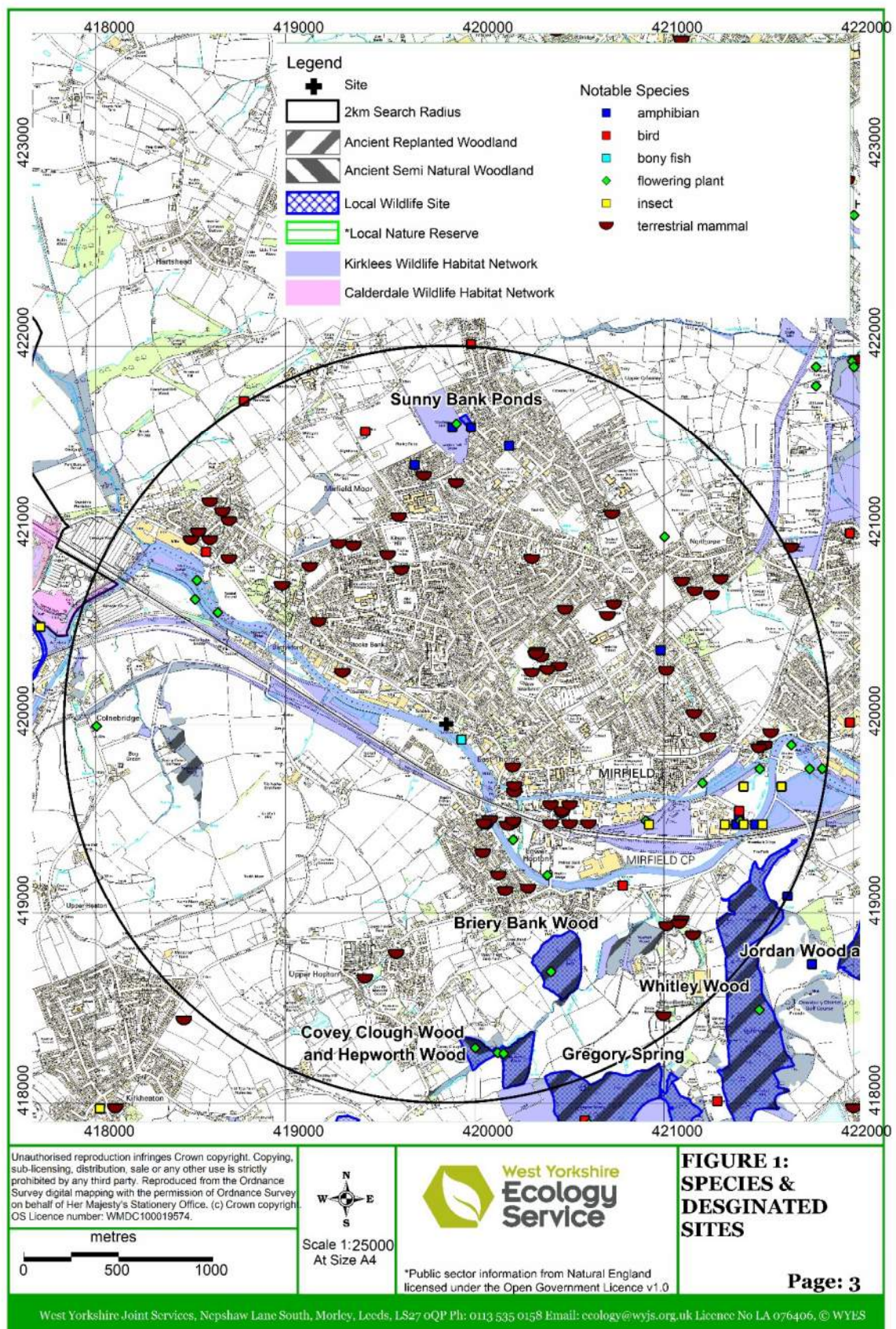
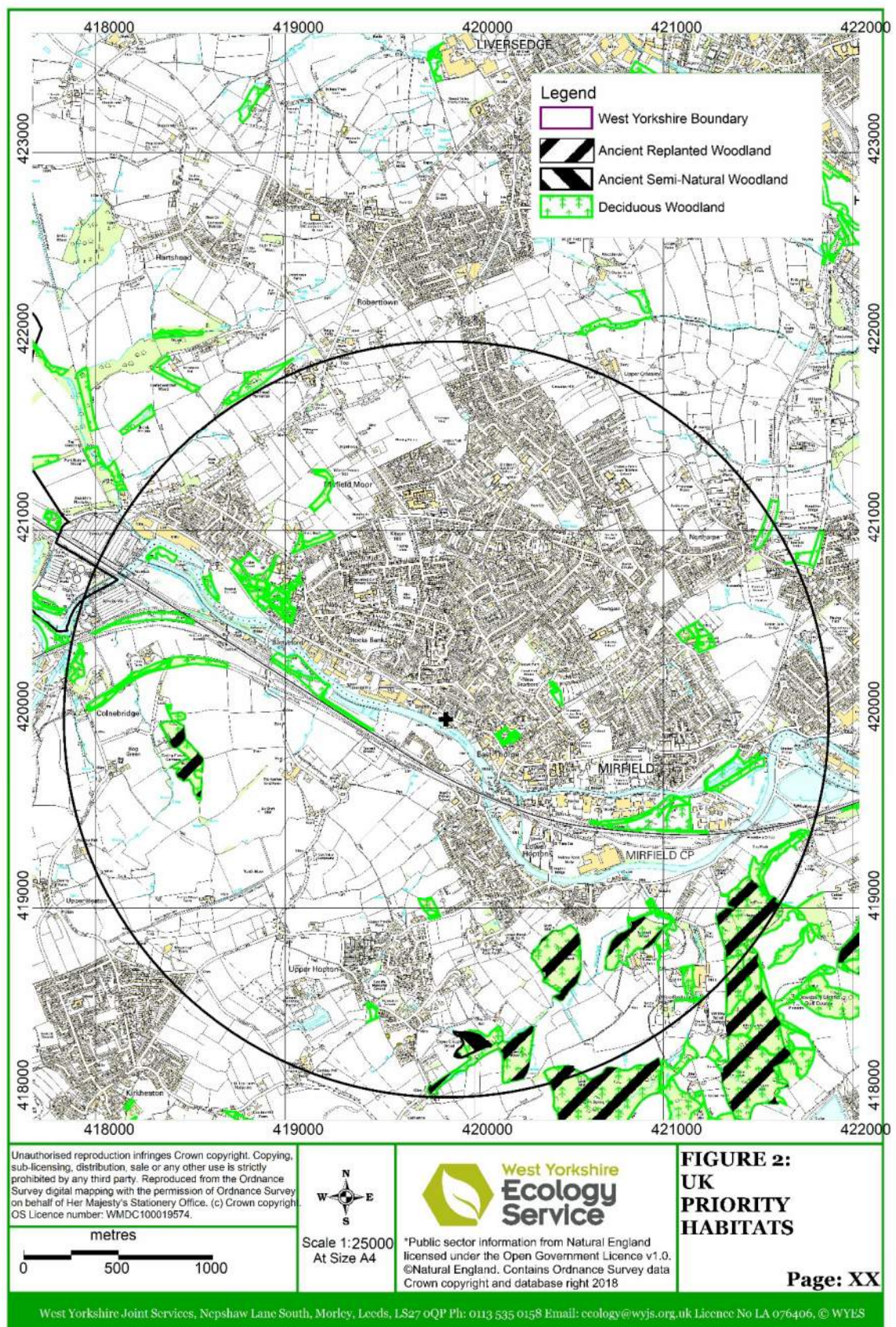


Figure 2 – UK Priority Habitats



Appendix A. Explanation of Species Designations

Wildlife and Countryside Act 1981 – main designations cited

Abbreviation	Full Name	Description	Offences include, but not limited to
Sch1_part1	Schedule 1, Part 1	Birds which are protected by special penalties at all times	- disturb any specially protected bird while it is building its nest; - disturb any specially protected bird while it is near a nest containing eggs or young; or - disturb the young of any of these birds before they are wholly independent.
Sch1_part2	Schedule 1, Part 2	Birds which are protected by special penalties during the close season	
Sch5	Schedule 5	Animals which are protected	- intentional or reckless killing, injuring, taking; - damage to, destruction of, obstruction of access to any structure or place used by a scheduled animal for shelter or protection; and - disturbance of animal occupying such a structure or place.
Sch5_sect9.1	Schedule 5, Section 9(1)	Animals which are protected from killing and/or taking	intentional killing, injuring and/or taking NB: certain species are only partly protected by this section. Check primary legislation for details.
Sch5_sect9.5	Schedule 5, Section 9(5)	Animals which are protected from sale	- selling, offering for sale, possessing or transporting for the purpose of sale (live or dead animal, part or derivative); and - advertising for buying or selling such things
Sch8	Schedule 8	Plants which are fully protected	pick, uproot, trade in, or possess (for the purposes of trade).
Sch8_sect 13.2 (sale only)	Schedule 8, Sections 13(2a+2b)	Plants which are protected from sale only	selling, offering for sale, possessing or transporting for the purpose of sale, any plant (live or dead, part or derivative) + advertising for buying or selling such things
Sch9_part1	Schedule 9, Part 1	Animals which are established in the wild.	- the release of animals and planting of plants listed in Schedule 9. - the above offences can be made legal through the granting of licences by the appropriate authorities. NB: <i>Tyto alba</i> refers to captive bred only.
Sch9_part2	Schedule 9, Part 2	Plants which are established in the wild.	

Biodiversity Action Plans

Abbreviation

UKBAP
WYBAP
Bradford BAP
Calderdale BAP
Kirklees BAP
Leeds BAP
Wakefield BAP

Full Name

UK Biodiversity Action Plan
West Yorkshire Priority Species List
Bradford Biodiversity Action Plan
Calderdale Biodiversity Action Plan
Kirklees Biodiversity Action Plan
Leeds Biodiversity Action Plan
Wakefield Biodiversity Action Plan

Birds of Conservation Concern (BOCC) 2009

List

Red
Amber

Description

High conservation concern
Medium conservation concern

Red Data Book Categories (Based on ICUN Guidelines)

Abbreviation	Full Name
EX	Extinct
EW	Extinct in the Wild
CR	Critically Endangered
VU	Vulnerable
NT	Near Threatened
LC	Least Concern
DD	Data Deficient
NE	Not Evaluated

Nationally Notable Invertebrates:

Abbreviation	Full Name	Description
NR	Nationally Rare	found in 15 or fewer hectads
Notable or NS	Nationally Notable or Nationally Scarce	found in between 16 and 100 hectads
Notable A	Nationally Notable A	found in 16 to 30 hectads
Notable B	Nationally Notable B	found in between 31 and 100 hectads

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Appendix B. Explanation of Designated Sites

Internationally Designated Sites

Special Protection Areas (SPA)

SPA are European designated sites. They are identified by JNCC/Natural England as being of interest for their bird populations. They are of international importance and have statutory protection.

Special Areas of Conservation (SAC)

SAC are European designated sites. They are identified by JNCC/Natural England as being of interest for their habitat type and species. They are of international importance and have statutory protection.

Nationally Designated Sites

Sites of Special Scientific Interest (SSSI)

SSSI are first-tier sites for conservation. They are areas identified by Natural England as being of interest by reason of their flora, fauna, geological or physiological features. They are of national importance and have statutory protection.

Locally Designated Sites

Local Wildlife Sites (LWS)

This is the *new* term for locally designated sites being adopted across West Yorkshire. Districts are currently going through a process of merging *old* designated nature conservation sites (SEGI, SSI, Bradford Wildlife Areas (BWA), Leeds Nature Areas (LNA), Kirklees Sites of Wildlife Significance (SWS) and Wakefield Nature Areas (WNA)) into a single Local Wildlife Site (LWS) designation. Sites should be given the same protection as SEGIs/SSIs as set out in UDPs/LDFs. Please refer to the link below for the West Yorkshire Local Wildlife Site Selection Criteria.

<http://wyjs.org.uk/media/1425/240216-wy-local-sites-selection-criteria-21-01-2016-rm.pdf>

Sites of Scientific Interest (SSI)

SSI are an *old* system of designated sites which are gradually being reviewed and reassessed against new LWS selection criteria and where they qualify will be replaced by LWS designation.

Sites of Wildlife Significance (SWS)

Kirklees SWS are sites are an *old* system of designated sites, designated by the local authority on the basis of their wildlife and amenity value. Many of these sites have recently been resurveyed and are being assessed against new LWS criteria and where they qualify will be replaced by LWS designation.

***Further citations and species lists for specific sites can be supplied on request.**

Local Nature Reserves (LNR)

LNR's are statutory sites of district-wide importance for the enjoyment, study or conservation of wildlife, geological features and landforms, but there is seldom detailed ecological information on record for them. For more information on LNRs see <https://designatedsites.naturalengland.org.uk/SiteSearch.aspx>

Local Geological Sites (LGS)

LGS are areas identified as being important for their geological features. More details of this or other LGS sites can be obtained from the West Yorkshire Geology Trust (team@wyorksgeologytrust.org).

Wildlife Habitat Network

The Wildlife Habitat Network aims to meet the requirements of paragraph 114 of the National Planning Policy Framework for Conserving and enhancing the natural environment - Local planning authorities should: "set out a strategic approach in their Local Plans, planning positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure".

Kirklees

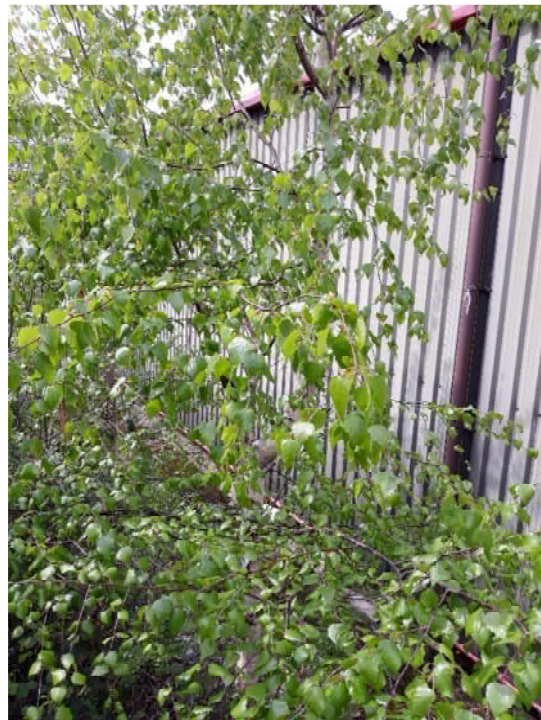
Wildlife Habitat Network data for Kirklees can be found on the link below:

http://consult.kirklees.gov.uk/portal/dlp_pol?pointId=s1442851813908

NE5 development proposals involving land identified on the proposals map as part of a wildlife corridor should make provision for the retention of the corridor and the protection of the wildlife value of the land.

Appendix D – Target Notes

Target Note	Description	Photograph
1	Broad-leaved semi-natural woodland in south of site. Species present include: sycamore <i>Acer pseudoplatanus</i> , cherry <i>Prunus sp.</i> , elder <i>Sambucus nigra</i> , ash <i>Fraxinus excelsior</i> , a poplar species <i>Populus sp.</i> and alder <i>Alnus glutinosa</i> .	
2	Dense scrub in west of site. Dominated by bramble <i>Rubus fruticosus</i> agg. with other species present including rosebay willowherb <i>Chamerion angustifolium</i> and nettle <i>Urtica dioica</i>	
3	Scattered scrub on eastern side of western site boundary fence. Species present include: hollyberry cotoneaster <i>Cotoneaster bullatus</i> with occasional firethorn <i>Pyrocanthasp.</i>	

Target Note	Description	Photograph
4	Scattered scrub on western side of western site boundary fence. Species present include: saplings of silver birch <i>Betula pendula</i> , ash, willow and bramble.	
5	Broad-leaved scattered trees in east of the site. Species present include: sycamore, plum <i>Prunus domestica</i> and ash.	
6	Broad-leaved scattered trees in west of the site. Species present include: willow species <i>Salix spp.</i> , ash and silver birch.	

Target Note	Description	Photograph
7	Poor semi-improved neutral grassland in the west of the site. Sward height of approx. 10cm. Species present include: Yorkshire fog <i>Holcus lanatus</i> , ragwort dandelion <i>Rumex sp.</i> , bramble, hedge bindweed <i>Calystegia sepium</i> , colts-foot <i>Tussilago farfara</i> , rosebay willowherb, ribwort plantain <i>Plantago lanceolata</i> , herb-Robert <i>Geranium robertianum</i> , creeping buttercup <i>Ranunculus repens</i> , wood avens and vetches <i>Vicia spp.</i>	
8	Introduced shrub , located along the northern site boundary. Some of the planting is in raised beds. Species present include: wall cotoneaster, Himalayan cotoneaster <i>Cotoneaster simonsii</i> , entire-leaved cotoneaster <i>Cotoneaster integrifolius</i> , honeysuckle species <i>Lonicera sp.</i> ash saplings and daffodil <i>Narcissus sp.</i>	
9	Stone wall along length of northern and eastern boundaries, with some gaps present in wall which could be used by nesting birds.	 

Target Note	Description	Photograph
10	Example of palisade fence forming the majority of the site boundaries.	
11	Small section of chain link fence along woodland edge in the south of the site (foreground).	
12	Examples of features with suitability as reptile / hedgehog refugia (i.e. stack of wooden pallets and cut vegetation).	 

Target Note	Description	Photograph
13	Gap underneath B1 which could be used by otter as couch / lie-up.	
14	Blue tit <i>Cyanistes caeruleus</i> nest within ash tray on metal storage cage.	
15	Example of Japanese knotweed <i>Reynoutria japonica</i> stand on site	

Appendix E – External Building Assessments

Building / Tree #	Photograph	Building / Tree Description	Potential Roost Features (PRFs)	Bat Roost Suitability
B1		Pre-fabricated portacabin. uPVC windows and doors and a flat roof. Building is generally in good condition.	None.	Negligible
B2		Pre-fabricated, concrete / pebble-dashed shed. Flat, corrugated asbestos sheet roof.	None.	Negligible

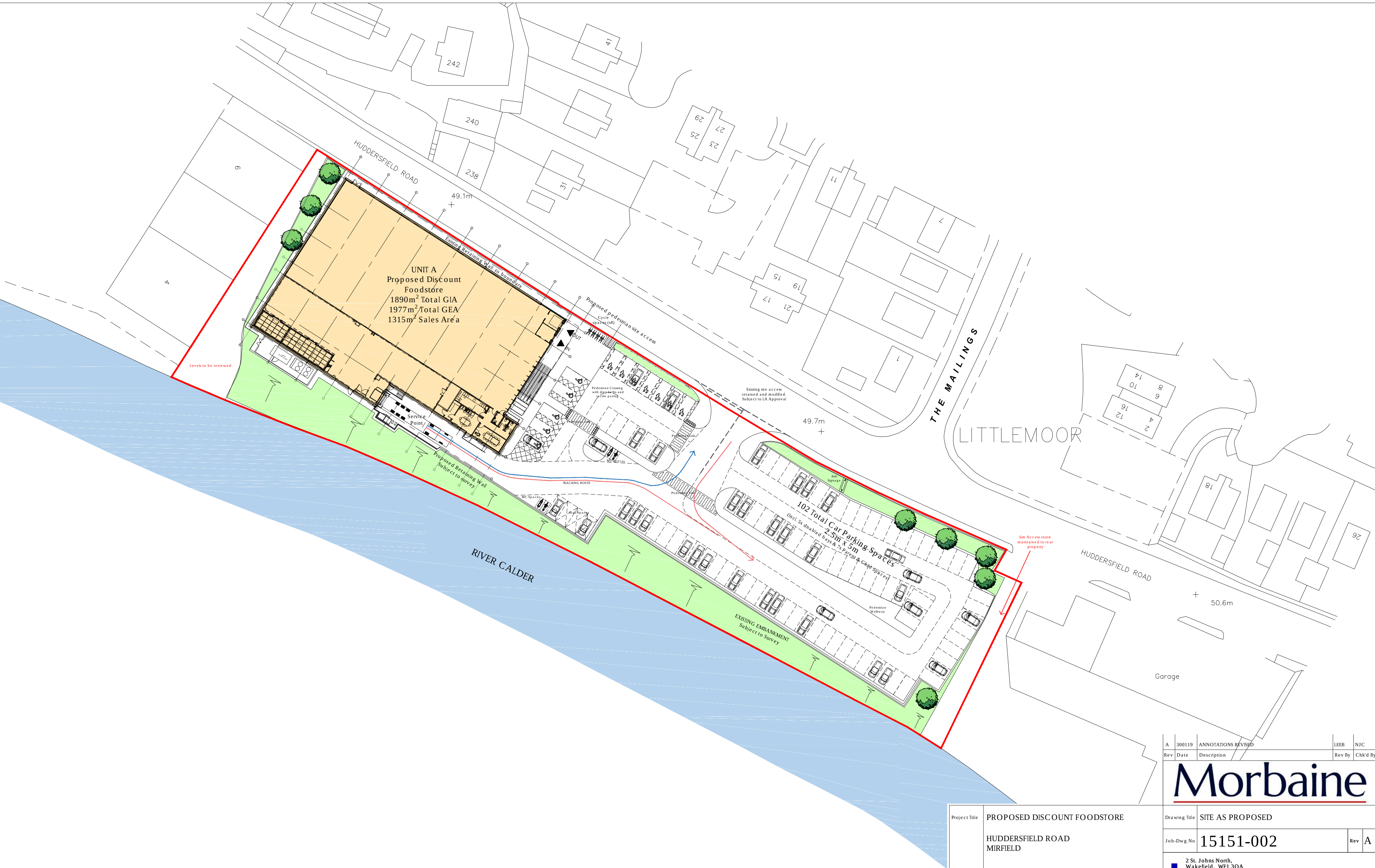
Building / Tree #	Photograph	Building / Tree Description	Potential Roost Features (PRFs)	Bat Roost Suitability
B3	  	Pre-fabricated, wooden portacabin. Timber soffits in a poor state of repair.	Hole in soffit in south-west corner of building; access behind barge board on southern aspect.	Moderate

Building / Tree #	Photograph	Building / Tree Description	Potential Roost Features (PRFs)	Bat Roost Suitability
B4		Metal shipping container.	None.	Negligible
B5		Approx. 1970's shop / warehouse. Stone walls on ground floor, with metal cladded first floor. Metal windows and metal roller doors also present.	Large gap under external stairs on southern aspect, where stairs join the cladding of the main building. Gap around pipe on north-west aspect.	Moderate

Building / Tree #	Photograph	Building / Tree Description	Potential Roost Features (PRFs)	Bat Roost Suitability
B6		Metal shipping container.	None.	Negligible
B7		Small wooden storage shed with slightly-pitched roof. Wooden barge boards present.	Gaps behind barge boards.	Low
B8		Metal framed structure/tent with canvas cover.	None.	Negligible

Building / Tree #	Photograph	Building / Tree Description	Potential Roost Features (PRFs)	Bat Roost Suitability
T1		Sycamore and alder	Dense ivy cover over both trees, partially detached from the tree in places.	Low
T2		Mature Ash	No obvious PRFs noted on site-side but some rotting was noted. Could be PRF's on river side of tree.	Low
T3		Mature Poplar sp.	A few areas of loose bark on northern aspect at around 8m. Broken limbs also present.	Moderate
Note – all other trees on site are considered to offer negligible suitability for roosting bats.				

Appendix F – Proposed Site Layout





ecology@wyg.com

**WYG Environment Planning Transport
Limited.**

Registered in England & Wales Number:
3050297

Registered Office: Arndale Court, Headingley,
Leeds, LS6 2UJ



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