

Land off Leak Hall Lane, Denby Dale

ECOLOGICAL IMPACT ASSESSMENT REPORT

April 2024



KNIGHT SKY ECOLOGY
PRACTICAL ECOLOGY SOLUTIONS

Email: info@knightskyecology.co.uk

Tel: 07535 457027

Web: www.knightskyecology.co.uk

Project	Land off Leak Hall Lane, Denby Dale	
Report Title	Ecological Impact Assessment Report	
Report Reference	KSE_028_01	
Commissioning Agent	Robert Halstead Chartered Surveyors & Town Planners	
Client	-	
Author and Approver	Ryan Knight MCIEEM	
Version	00	01
Issue Date	30 April 2024	14 June 2024
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KNIGHT SKY ECOLOGY		
Registered Address: 9 Montgomery Grove, Burnley, Lancashire, BB12 6DR		
Email: info@knightskyecology.co.uk		
Tel: 07535 457027		
Web: www.knightskyecology.co.uk		

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1 INTRODUCTION

1.1 Instruction and Background

Knight Sky Ecology was commissioned to undertake an Ecological Impact Assessment (EclA) for a proposed development located off Leak Hall Lane, Denby Dale (“the site”).

EclA is a process of identifying, quantifying and evaluating potential effects of development-related or other proposed actions on habitats, species and ecosystems (CIEEM, 2018). This document presents the results of this process in relation to the site.

In addition, the results of both a Preliminary Ecological Appraisal and initial Biodiversity Net Gain (BNG) Assessment conducted for the site have been incorporated into this EclA report.

1.2 Proposed Development

An outline application for a residential development is to be submitted for the site. In-depth design and construction details were not available including housing layout, extent of access and landscaping. However, reasonable assumptions have been made relating to the likely construction and operational activities and conditions at the site. This includes aspects such as ground clearance, use of heavy machinery, noise and lighting.

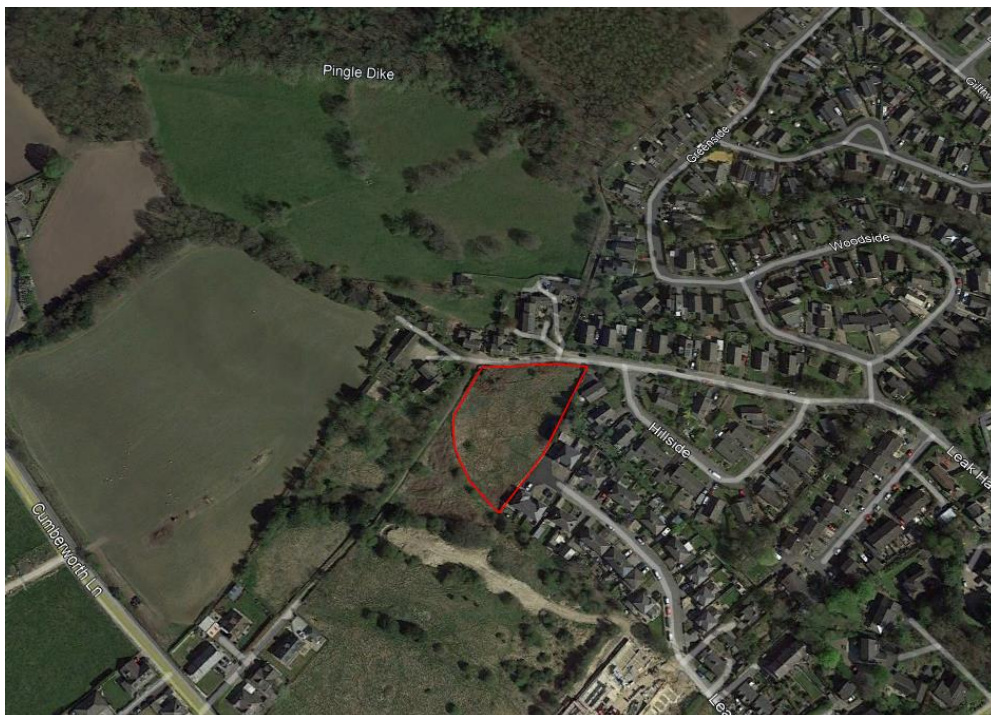
1.3 Site Description

The proposed development would be sited within a rough grassland field located to the south of Leak Hall Lane at grid reference SE 22909 08835. The site is located towards the very western end of the lane and bound by housing to the east/ south-east and north. Leak Hall Farm and associated grounds are to the west. To the south is further rough grassland and pasture land. A Public Right of Way (PRoW) runs adjacent to the west boundary. The wider area is a mix of housing, agricultural land and woodlands. Figures 1.1 and 1.2 provide images of the site location.

Figure 1.1. Site planning boundary (red line)



Figure 1.2. Aerial image of the site (approximate boundary line)



1.4 Purpose of Report

The framework of this report and its main objectives are listed as follows:

Ecological Impact Assessment

- To identify and describe all potentially significant ecological effects associated with the proposed development;
- to set out the mitigation measures required to ensure compliance with nature conservation legislation and to address any potentially significant ecological effects;
- to identify how mitigation measures will / could be secured;
- to provide an assessment of the significance of any residual effects;
- to identify appropriate enhancement measures; and
- to set out the requirements for post-construction monitoring (if required).

Biodiversity Net Gain

- To confirm if and how the development would achieve Biodiversity Net Gain (BNG) to comply with legislative and policy requirements.

1.5 Legislation and Policy

Many UK wildlife species and habitats are protected by law and these important ecological features form a key consideration in the EclA process. The key legislation of potential relevance to the site includes:

- Environment Act 2021
- The Conservation of Habitats and Species Regulations 2017 (as amended)
- Wildlife and Countryside Act 1981 (as amended)
- Countryside and Rights of Way (CROW) Act 2000
- Natural Environment and Rural Communities (NERC) Act 2006
- Protection of Badgers Act 1992

A summary of the legislation pertinent to the findings within this EclA is also provided in Appendix A. In addition to the above, biodiversity protection and enhancement is underpinned by national and local planning policies. Therefore, consideration has also been given in this report to the natural environment aspects of the National Planning Policy Framework (2021) and Kirklees Council's Local Plan (Adopted 2019).

In England, BNG is required under a statutory framework introduced by Schedule 7A of the Town and Country Planning Act 1990 (inserted by the Environment Act 2021).

Under the statutory framework for biodiversity net gain, subject to some exceptions, every planning permission is subject to a condition that the biodiversity gain objective is met ("the biodiversity gain condition"). This objective is for development to deliver at least a 10% increase in biodiversity value relative to the pre-development biodiversity value of the on-site habitat. This increase can be achieved through on-site biodiversity gains, registered off-site biodiversity gains or through statutory biodiversity credits.

2 METHODS

2.1 Ecological Impact Assessment

The methodology of this EclA has been based on the ‘*Guidelines for Ecological Impact Assessment in the UK and Ireland; Terrestrial, Freshwater, Coastal and Marine*’ (CIEEM, 2018). The level of detail within this EclA is considered proportionate to the scale of the project and the complexity of potential impacts identified. The refined approach to EclA within this document is in adherence with the guidelines.

The findings of a Preliminary Ecological Appraisal undertaken using standard guidance (CIEEM, 2017) are incorporated into this EclA report and do not form a separate document.

2.2 Preliminary Ecological Appraisal

2.2.1 Survey Area

The spatial scope of the desk and field-based survey area has taken account of all areas where significant effects to ecological features could occur throughout the lifetime of the development proposal including the construction footprint and locations of any ancillary works (i.e., all development related land within the planning (red-line) boundary).

The scope of the survey area also considers the potential Zone of Influence (Zoi) of the development proposal. The Zoi is the area over which ecological features may be subject to likely significant effects as a result of the proposals and associated activities. These effects (and therefore the distance and area of the Zoi) vary for each ecological feature and are dependent on several factors including the presence of connective pathways and sensitivity or importance of the ecological feature.

The scope of the survey area was informed by professional judgment in line with good practice and is referenced within the methodology where relevant.

2.2.2 Desk Study

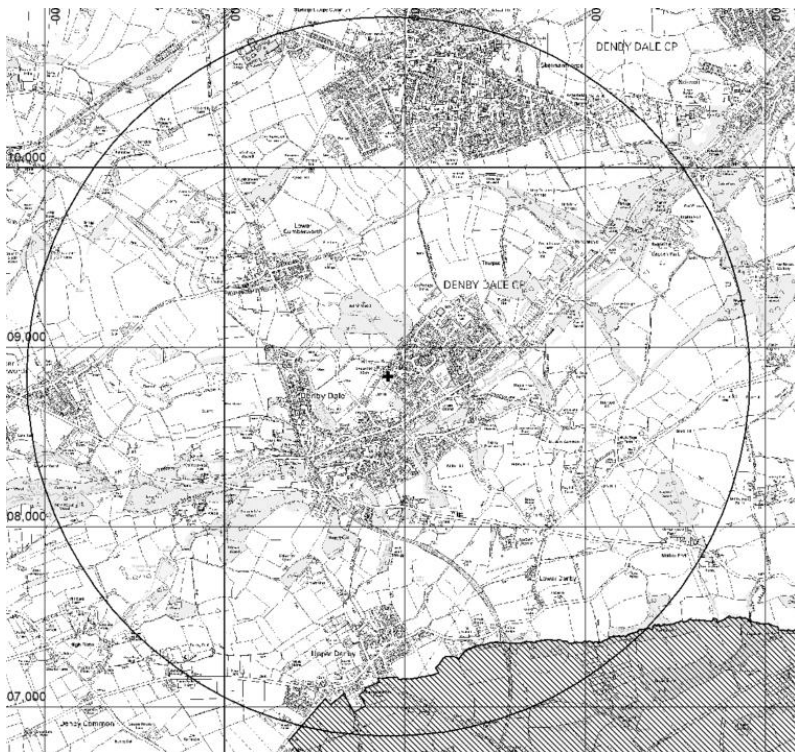
West Yorkshire Ecology Service

West Yorkshire Ecology Service (WYES) was commissioned to undertake an ecological records search within a 2km radius of the centre of the site. WYES conducted a search for the following information:

- Internationally / nationally designated sites (e.g., Site of Special Scientific Interest (SSSI)).
- Locally designated sites (e.g., Local Wildlife Sites (LWS)).
- Ancient woodlands (within a 100m radius).
- Habitats of principal importance (as listed within Section 41 of the NERC Act 2006) within a 2km radius. Such habitats are referred to as ‘priority habitats’ within this report.
- Areas within the Kirklees Wildlife Habitat Network.
- Protected / notable species records.

It should be noted that a small, outer section of the 2km radius search area was within the catchment of Barnsley Biological Record Centre (BBRC) (see Figure 2.1 below). However, due to the small size of the area, the obtaining of records for this area was not considered to be necessary.

Figure 2.1. Search Area for Biological Data (BBRC catchment in black hatching)



On-Line Resources

The Multi-Agency Geographic Information for the Countryside (MAGIC) mapping tool (available from: <https://magic.defra.gov.uk/>) was used to search for ecological information contained within the following datasets:

- SSSI Impact Risk Zones - to assess for likely impacts on international, European and nationally designated sites over a 2km radius from the proposed development.
- Granted European Protected Species (EPS) mitigation licenses for bats and great crested newts¹ within a 1km radius.
- Survey licence returns for great crested newts within a 1km radius.

Basic initial information about the site and surrounding area was also obtained from aerial imagery (Google Earth – latest imagery dated 23/04/2021) and Ordnance Survey maps in order to provide further contextualised information to the site survey findings. A search for waterbodies with the potential to support great crested newts within a 250m radius of the site was also undertaken using the MAGIC mapping tool along with Google Earth and Ordnance Survey maps.

2.2.3 Field Survey

A site walkover was undertaken on 11th April 2024 by Ryan Knight MCIEEM. Ryan has extensive experience in survey and site assessment for habitats and protected species and holds a Level 2 Natural England Class Licence for bats (ref. 2015-12611-CLS-CLS) and a Level 1 licence for great crested newts (ref. 2015-16727-CLS-CLS). The aim of the site visit was to gather sufficient baseline

¹ English common names for species of fauna are used throughout this report unless otherwise stated.

information of the habitats within the site and to identify any habitats or features of potential ecological significance.

All habitats within the site were described and mapped using UK Habitat Classification (UKHab) Version 2 definitions (UKHab Ltd, 2023) unless otherwise stated. Dominant and notable plant species were recorded, and relative abundance was expressed using the DAFOR scale: dominant, abundant, frequent, occasional and rare. Botanical taxonomic nomenclature follows the New Flora of the British Isles, Fourth Edition (Stace, 2019).

In addition, the site visit included a search for incidental evidence of protected / notable species and an assessment of the sites potential to support protected / notable species.

2.3 Biodiversity Net Gain

2.3.1 Guidance

The BNG results outlined within this report have been produced using the methodology and tools set out in the following documents:

- The Statutory Biodiversity Metric: User Guide. Department for Environment, Food and Rural Affairs, February 2024.
- The Statutory Biodiversity Metric Calculation Tool.
- The Statutory Biodiversity Metric: Condition Assessment

The above documents are available from:

<https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides>

2.3.2 Habitat Metrics

The Biodiversity Metric generates a value measured in biodiversity units for a site prior to development and after the development is completed. This allows the difference in biodiversity units and corresponding positive or negative percentages to be calculated. A biodiversity value for each habitat parcel is generated based on four factors that are multiplied together. These are:

- The area of the habitat (in hectares (ha)).
- The distinctiveness of the habitat.
- The condition (poor, moderate or good) of the habitat.
- The strategic significance of the habitat.

In the metric, hedgerows (including tree lines) and watercourses (including rivers, canals and culverted waterways) are measured separately. Linear features are measured in length (metres) and use the same factors listed above. It is only possible to compensate for the loss of hedgerow units through the creation or enhancement of hedgerows units (i.e., there is no crossover in net gain between habitats, hedgerows or watercourses).

It is confirmed that there were no hedgerows within the site and no watercourses within 10m of the site. As a result, there is no requirement for BNG in respect of these features.

2.4 Field Survey and Report Comments

The UKHab survey was conducted in spring and within a time when later emerging plants would not have been as readily identifiable as compared to the summer months, if present. However, the habitats within the site were not complex and the surveyor was able identify a significant proportion

of plants in order to classify the habitat types and to provide a condition assessment. An element of precaution was also applied when assigning the habitat type.

This report will remain valid for a period of 24 months from the date of issue. An ecologist should be contacted for advice on the revalidation requirements of the report if planning permission is not obtained or works do not commence within this time period.

3 BASELINE ECOLOGICAL CONDITIONS

3.1 Designated Sites

3.1.1 Internationally / Nationally Designated Sites

There are no internationally / nationally designated sites for nature conservation within a 5km radius of the site.

3.1.2 Locally Designated Sites

Table 3.1 provides a list of the four LWS located within 2km of the site centroid. The locations are also shown on WYES Figure 1 (Appendix B). All LWS are located over 1km from the site.

Table 3.1. Locally designated site information

Site name and designation	Reason for designation ²	Distance and direction from the site	Biodiversity importance
Denby Delf LWS	Gr3 - Species rich neutral grassland Mh2 - Mosaic habitat	1.5km south-west	County
High Bridge Wood LWS	Wd5 - native bluebell cover	1.43km north-east	County
Hob Yord Shrogg and Miry Greaves Shrogg LWS	Wd3 - species rich acid woodland	1.35km north-east	County
Turpin Hill LWS	Gr1 - rare grassland habitat (MG5) Gr4 - species rich acid to neutral grassland	1.4km east-south-east	County

3.1.3 Kirklees Wildlife Habitat Network (County Importance)

The site is within Kirklees Wildlife Habitat Network as illustrated in Figure 3.1.

Figure 3.1. Kirklees Wildlife Habitat Network (pink) and approximate site boundary.



² Habitat codes and designation criteria can be found at West Yorkshire Local Wildlife Site Selection Criteria. West Yorkshire Local Sites Partnership (2016). <https://www.wyjs.org.uk>

3.1.4 Priority Habitats (including Ancient Woodland) (District to National Importance)

WYES Figure 2 in Appendix B provides a map of the priority listed habitats and ancient woodlands within 2km of the site. The habitats identified within the search area are:

- Ancient Semi-natural Woodland
- Ancient Replanted Woodland
- Traditional Orchard
- Deciduous Woodland
- Lowland Heathland
- Lowland Dry Acid Grassland
- Lowland Meadows
- Purple Moor Grass and Rush Pasture

Of the above, there is an area of ancient replanted woodland located 130m north of the site and an area of deciduous woodland 210m east.

3.2 Habitats

Habitat Description and Habitat Classifications of Development Site

Photos of the site are provided in Appendix C and a UKHab Classification map of the site is provided in Appendix D (Figure 1 – Baseline).

g3c - Other neutral grassland (incorporating 16 Tall forbs and h3d bramble scrub) (Less than local)

The entire site comprised a field containing neutral grassland which had a tussocky sward and appeared to be unmanaged at the time of survey. Overall species richness was low but dense stands of tall forbs were present throughout the site. Bramble scrub (*Rubus fruticosus* agg.) was colonising the south-western boundary along the fence line and in the north-western corner. There was also a footpath on the western boundary of the field.

The grassland comprised a mosaic of frequent cocks-foot (*Dactylis glomerata*), false-oat grass (*Arrhenatherum elatius*), Yorkshire fog (*Holcus lanatus*) and perennial rye grass (*Lolium perenne*) with occasional red fescue (*Festuca rubra*) and rare tufted hairgrass (*Deschampsia cespitosa*). Dominant tall forbs included rosebay willowherb (*Chamaenerion angustifolium*), common nettle (*Urtica dioica*), creeping thistle (*Cirsium arvense*) and hogweed (*Heracleum sphondylium*). A range of other forbs were found occasionally throughout the field and included common sorrel (*Rumex acetosa*), wavy bittercress (*Cardamine flexuosa*), cleavers (*Galium aparine*), vetch species (*Vicia* sp.), and creeping buttercup (*Ranunculus repens*).

u1b5 Building / u1b sealed surface (Less than local)

There was a very small, stone built farm building located in the north-west corner of the site. A footpath runs between Leak Hall Lane and Leak Hall Crescent on the east boundary.

Individual trees (Less than local)

Several trees (diameter breast height ranging between 7.5cm to 30cm) were found through the site and included hawthorn (*Crataegus monogyna*), elder (*Sambucus nigra*), a stand of mature holly (*Ilex aquifolium*) and a semi-mature cherry (*Prunus* sp.) on the east boundary and a mature cherry on the gravel footpath on the east boundary.

In addition, there were several cherry saplings in the south-east corner. It not known if these were self-seeded or had been recently planted. Furthermore, there were three semi-mature ash (*Fraxinus excelsior*) and a hawthorn located on the opposite side of the fence line along Leak Hall Lane. These trees were assessed as being outside the site boundary.

Surrounding Area

Dry stone walls and fences provide the boundaries of site. A PRoW runs north to south on the west boundary. To the direct west are the large garden, hedgerows, mature trees and buildings associated with Leak Hall Farm. To the east / south east is an area of housing. To the south / south-west are further similar fields. On the north boundary was a line of ornamental shrubs possibly associated with the adjacent properties to the north on Leak Hall Lane.

3.3 Protected / Notable Species

Table 3.3 provides an overview of the most relevant ecological records as provided by WYES along with the field survey findings for each ecological feature.

Table 3.3. Protected / notable species records, field survey findings and value

Ecological Feature	Data Origin	Records Overview and Evaluation of Presence / Absence	Importance
Plants & Fungi	Desk Study	129 records of notable plants and two records of fungi. Plant records included two species listed on Kirklees Biodiversity Action Plan (bluebell and Dyer's greenwood). No records under a 320m distance from the site. 14 records of 6 non-native invasive species (INNS) were provided. No records within the site or within 250m.	N/A
	Field Survey	The site is unlikely to support any notable plants. No INNS were present within the site. No further assessment or mitigation is deemed to be required.	
Amphibians	Desk Study	28 records of amphibians were provided and included great crested newt, smooth newt, common toad and common frog. Only one amphibian record was under a 1km radius from the site and comprised a record of great crested newt located 922m from the site centroid. No great crested newt licence returns were found within 1km on the MAGIC database.	N/A
	Field Survey	No ponds with the potential to support great crested newts within 500m of the site were identified. In consideration of the absence of nearby standing waterbodies, the site is unlikely to support notable concentrations of amphibians. No further site survey or assessment is deemed to be required.	
Reptiles	Desk Study	WYES supplied two records of grass snake located 1.4km and 1.5km from the site.	N/A
	Field Survey	The grassland within the site offers limited structural diversity. There are no known distributions of reptiles in the locality and reptiles such as common lizard and grass snake are not likely to occur within the site. No further site survey or assessment is deemed to be required.	

Ecological Feature	Data Origin	Records Overview and Evaluation of Presence / Absence	Importance
Breeding and Wintering Birds	Desk Study	70 records for 42 species including several red-listed birds (Stanbury, <i>et al.</i> , 2021). All but six records were located over 1km from the site. Three records (dunnock, wood pigeon and wren) were located within 283m. A total of 28 records were dated 1970-1988.	Less than Local (nesting & foraging populations)
	Field Survey	<p>Birds recorded via audible or visual means during the site visit included wood pigeon, sparrowhawk, carrion crow, goldfinch, dunnock, blue tit, greenfinch, wren and great tit. Of these species, greenfinch is a red listed bird of conservation concern (Stanbury, <i>et al.</i>, 2021). Other red-listed birds which may be present within the immediate surrounding area includes house sparrow and starling.</p> <p>No evidence of open-ground nesting species was observed and the site was not considered suitable for the species. Suitable nesting habitat for birds was limited within the site with only the single hawthorn and the small stand of holly trees providing sufficient cover. The bramble scrub is likely to become more suitable for nesting over time.</p> <p>Most observations were of birds in flight over the site or in song / calling within the trees to the west of the site. The field is also bound by footpaths on the west and east boundaries with several dogwalkers observed during the survey which provide a disturbance factor to certain bird species.</p> <p>The site measures around 0.4ha only and is likely to form part of a wider foraging resource for breeding birds. The site is unlikely to have significant value for wintering populations.</p> <p>No further site survey is deemed to be required as the nesting bird population within the site is highly likely to be limited. However, further consideration is required due to the legislation afforded to nesting birds.</p>	
Badger	Desk Study	No records provided by WYES. The site is not within an area of increased probability of badger activity.	N/A
	Field Survey	<p>No evidence of badger was recorded. The field in which the proposed development is to be situated contains rough pasture only with limited topography. The site is also bound by a road and by a PRow. There are suitable woodland habitats for badger in the locality. Overall, badgers are unlikely to use the development site.</p> <p>No further site survey or assessment is deemed to be required.</p>	
Bats	Desk Study	46 records of bats were provided dating between 1985 and 2018. The data provided by WYES includes a mix of roost and field records for at least 5 bat species including soprano pipistrelle, pipistrelle	

Ecological Feature	Data Origin	Records Overview and Evaluation of Presence / Absence	Importance
	Field Survey	<p>species, brown long-eared bat and noctule bat. There were several field and roost records located between 208m and 447m from the site centroid.</p> <p>The site contains a small, single storey, dilapidated stone outbuilding in the north-west corner. Half of the roof had collapsed and the stonework appears structurally unsound. The remaining part of the roof had traditional stone slates. No evidence of a bat roost was observed. However, there were several, cavities (albeit fairly open and exposed) within the stonework. Overall, the presence of a bat roost could not be fully discounted and the building had a low bat roost suitability.</p> <p>The development site comprises a rough grassland field with no notable habitat linkages (i.e., tree lines, hedgerows, watercourses) present. The site does not appear to be within a commuting flyway between / from potential roost sites and is unlikely to function as a ‘stepping stone’ between such sites. There is a hedgerow and a number of trees on the west boundary; however, these are located on the adjacent property. The site itself is expected to support low levels of bat activity overall.</p> <p>The site area is approximately 0.4ha and will form a small part of a much wider foraging habitat. There are habitats of high value for bats within 500m (including large woodlands).</p> <p><u>Building</u></p> <p>In order to provide further information on the presence or absence of a bat roost within the outbuilding, one further survey is recommended. The results of this survey (including full impact assessment) would be documented separately and do not form part of this EclA process.</p> <p><u>General bat activity</u></p> <p>With regards to general bat activity, no further site survey or assessment is considered to be necessary given small scale nature of the development site. However, good practice lighting measures in respect of bats are included in Section 5 as a matter of general good practice.</p>	<p>Foraging bat populations</p> <p>Less than local (site and immediate surrounding area)</p> <p>Presence / absence of a bat roost within the building to be confirmed.</p>
	Desk Study	<p>The records from WYES included two records of water vole (1.7km from the site) and one record of brown hare (855m from the site).</p>	

Ecological Feature	Data Origin	Records Overview and Evaluation of Presence / Absence	Importance
Other notable mammals	Field Survey	<p>The site is unsuitable to support both water vole and brown hare. Whilst there are no records of hedgehog, the site is considered suitable for foraging hedgehog.</p> <p>No further site survey or assessment is deemed to be required. However, good practice mitigation measures for hedgehog are included in Section 5.</p>	Less than Local (hedgehog if present)
Notable invertebrates	Desk Study	68 records of beetle, butterfly and ant were provided. Of these records, there were 48 records of hairy wood ant (all located over 1km from the site). No records were under an 800m distance from the site.	N/A
	Field Survey	<p>The grassland within the site is species poor and is not expected to support notable invertebrate species.</p> <p>No further site survey or assessment is deemed to be required.</p>	

4 SCREENING OF LIKELY SIGNIFICANT EFFECTS

4.1 Initial Screening

4.1.1 Internationally / Nationally Designated Sites

None present.

4.1.2 Locally Designated Sites

All four LWS are located over 1.3km from the site. It is highly unlikely that the development would impact these sites given the scale, nature and location of the development proposal. Stand-off distance and intervening land barriers are considered sufficient. All LWS are screened out of the EclA process.

4.1.3 Priority habitats

There are no priority habitats within the site and the construction and operation of the development is unlikely to adversely affect any priority habitats in the surrounding area. All priority habitats are screened out of the EclA process.

4.1.4 Kirklees Wildlife Habitat Network

The site forms part of Kirklees Wildlife Habitat Network. This important ecological feature is carried through the EclA process.

4.1.5 Other ecological features

Other ecological features that have been screened out of any further assessment include:

- All habitats (also see BNG Section 6)
- Notable plants
- All amphibians
- All reptiles
- Wintering birds
- Badger
- Bats
- Other notable mammals (e.g., brown hare)
- All notable invertebrates

These features have been screened out as:

- The ecological feature is not likely to be present within the zone of influence of the project (high confidence level);
- the ecological feature is not considered to be important (at a Local level or above);
- the ecological feature is unlikely to be subject to significant effects due to a lack of source of impact or pathway from the source of impact; or,
- the magnitude of impact is not considered sufficient to have a likely significant effect on the ecological feature.

The screening out of these features is deemed uncontroversial, in that, the information given in Section 3 is considered sufficient to justify this screening out process. Due to their legal protection, nesting birds are taken through the EclA process.

The report of the bat survey of the outbuilding (including full impact assessment) would be documented separately and does not form part of this EclA process.

5 IMPACT ASSESSMENT AND MITIGATION

This section details the potential impacts of the development on the important ecological features which have been screened in for further assessment or require further consideration due to the potential legal implications for the proposed development. Impacts are considered in the absence of mitigation during the construction and operation of the proposal and thereafter, the mitigation that is needed to avoid / minimise any potential impacts is given where required.

5.1 Kirklees Wildlife Habitat Network

Site clearance and construction

It has been assumed that the works will result in the loss of 0.4ha of grassland habitat within the Kirklees Wildlife Habitat Network. Such habitat networks were established as part of a combined authority plan to set out better links between nature conservation sites of higher existing wildlife value to reduce the isolation of such sites. The process was driven by the National Planning Policy Framework and subsequent local policies. The Wildlife Habitat Network for Kirklees was created between 2011 and 2016 and incorporated important ecological links between woodlands, grasslands, heathland and bog, wetlands and other habitats (including quarries and post-industrial open mosaics on previously developed land). Potential impacts to such areas will form a consideration in the planning decision-making process as protection and enhancement of ecological links (i.e., the Kirklees Wildlife Habitat Network) and forms part of Policy LP31 of Kirklees Local Plan (Strategic Green Infrastructure Network). In addition, as driven by the Environment Act 2021, the wildlife habitat network is also likely to form a component of the developing West Yorkshire Local Nature Recovery Strategy (to be published in 2025).

In consideration of the relatively small development footprint and the existing habitat type (other neutral grassland), no significant negative impacts are envisaged i.e., the loss of the land would not be significant at a local level or above. In addition, the loss of land is not considered to represent a significant impact to the functionality of the wildlife network. However, in the absence of mitigation, the proposed development will result in a loss in biodiversity value.

Mitigation

The development site will be subject to the BNG condition (see Section 6). The value of the habitat network is properly accounted for within the statutory metric as the land has a high strategic significance and this is reflected in the biodiversity value of the habitats within the site. The loss of biodiversity value is required to be off-set and at least a 10% net gain in biodiversity value is required to be achieved as part of legislative requirements driven by the Environment Act 2021.

No details on the site layout were available as it an outline application only. However, the development may wish to consider incorporating habitat features within the layout which provide stepping stones for wildlife on the site including treelines, species rich grassland road verges and / or hedgerows. Please note, tree planting in private gardens cannot be accounted for in the metric as the long-term retention of such features cannot be guaranteed in the long term.

Significance of residual effects after mitigation

No significant residual effects are concluded.

5.2 Nesting Birds

Site clearance and construction

Several trees within the site and possibly the bramble scrub provide suitable nesting features for birds. Such habitats may need to be cleared prior to construction.

Under the Wildlife and Countryside Act 1981, it is illegal to intentionally take, damage or destroy a wild bird's nest while it is being used or built and it is illegal to intentionally take or destroy eggs. In the absence of mitigation, the works may result in the destruction of nest sites. A significant negative effect at site level is concluded.

No significant effects to birds outside of the breeding season or within the operational phase are envisaged.

Mitigation

It is advised to conduct vegetation clearance outside of the breeding bird season of March to August (inclusive). If it is necessary to conduct site clearance within this period, it should be preceded by a nesting bird check conducted by a suitably qualified ecologist. Active nests found at any time must remain unaffected until the nest is no longer in use (i.e., all chicks have fledged).

Significance of residual effects after mitigation

No significant residual effects are concluded

5.3 General Mitigation

Operational Lighting (Bats and general wildlife)

Lighting for the proposed development should follow current best practice guidelines (*Bats and artificial lighting in the UK*, (BCT / ILP, 2018) and *Guidance Note 01/21 – The Reduction of Obtrusive Light* (ILP, 2021)). The following mitigation measures are advised in respect of the use of external lighting within the site:

- Avoid light spill on the adjacent hedgerow and tree line to the west.
- Keep site lighting to minimum requirements.
- Use PIR lights set on short timers - avoid excessively strong security lighting.
- Use landscaping features to block light.
- All luminaires should lack UV elements when manufactured. Metal halide, fluorescent sources should not be used.
- LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability.
- A warm white spectrum (ideally <2700Kelvin) should be adopted to reduce blue light component.
- Luminaires should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats.
- Using luminaires with an upward light ratio of 0% and with good optical control.
- Luminaires should always be mounted on the horizontal, i.e., no upward tilt.
- Column heights should be carefully considered to minimise light spill.

Hedgehog

In order to allow hedgehog to forage within the new gardens and landscaped areas of the site, a hedgehog highway is recommended to be designed via the strategic placement of 13cm square holes through fences.

6 BIODIVERSITY NET GAIN

The below information has been based on a preliminary layout plan provided by the agent. No detailed landscaping plans were available.

6.1 On Site Baseline

A Statutory Biodiversity Metric Calculation Tool and a habitat condition assessment is to be provided separately. Figure 1 (Appendix D) provides an overview of the existing habitat baseline.

6.1.1 On-site Habitats Baseline: Distinctiveness, Condition and Strategic Significance

The main habitat of measurable value within the site was g3c other neutral grassland. There were also several broadleaved trees scattered throughout the site.

For the grassland and trees, strategic significance has been set at high (multiplier 1) in the metric as the site is within a habitat network. Habitat condition for the grassland is poor (see habitat condition assessment sheet) and habitat condition for the trees has been set at moderate.

Overall, the biodiversity value of the habitat is 2.3 units.

Assumptions

- The information from a tree survey report was not available at the time of survey. It is estimated that a total of 10 trees with a DBH of >7.5 to 30cm are present within the site and one tree with a DBH of over 30cm; and
- it has been assumed that all habitats are to be lost.

6.1.2 On-site Hedgerows Baseline

There were no linear habitats on the site and therefore, BNG has not been assessed.

6.1.3 On-site Watercourse

There were no watercourses on the site or within 10m and therefore, BNG has not been assessed.

6.2 On-Site Habitat Creation

Figure 2 (Appendix D) provides a UK Habitat Classification map of the site as proposed. Habitats within a measurable value within the site would be limited to vegetated gardens.

The post-development value of the site would be **0.30 habitat units**.

6.3 Biodiversity Net Gain – Estimated Values

The development would result in a **net loss of 2 habitat units (-87%)**.

The habitat units required to meet the 10% target is **2.23**.

6.4 Recommendations

Please note, the above deficit unit measurement comprises habitats with *medium distinctiveness* and therefore, the relevant trading rules will need to be applied.

As the development is unlikely to meet the BNG requirements as set out in the Environment Act 2021, the developer must therefore consider the following options:

- Achieve net gain on a parcel of land under the ownership of the applicant and ideally within the same local authority area as the site. This land would need to be subject to a UKHab survey.
- Purchase the required habitat units from a third-party provider.
- Contact Kirklees council regarding using their habitat bank vehicle as the council may be in a position to sell biodiversity units by the time the application is consented and the relevant planning condition needs to be discharged.
- Purchase statutory biodiversity credits from the Government (last resort).

Please be aware that a 'spatial risk multiplier' (SRM) will apply which would double the number of biodiversity units needed to achieve a 10% gain if there are no suitable options for off-site net gain within the local authority area.

7 SPECIES ENHANCEMENTS

7.1 Bats and Birds

The development presents an opportunity to increase roosting provision for bats and provide nesting features for birds via the integration of suitable boxes within the dwellings as they are being constructed. It is recommended to provide a bat / bird box scheme for the site which will detail the locations, positioning and box models to be used within the site. At least 30% of the dwellings are recommended to contain a bird box and 30% a bat box.

8 MONITORING AND MANAGEMENT

8.1 Biodiversity Net Gain

The statutory framework for biodiversity net gain requires a Biodiversity Gain Plan (BGP) to be submitted and approved by the planning authority to discharge the biodiversity gain condition prior to the commencement of development. Local planning authorities have and are integrating their own approaches to detailing planning conditions since the government issued further legislation and guidance on BNG planning requirements between November 2023 and February 2024.

Based on national guidance, it has been assumed that providing proof of biodiversity net gain (e.g., the purchasing of credits from a registered provider and the submission of a BGP prior to construction) is a post-permission matter through the mandatory BNG condition.

Further inputs required for the development in order to discharge any such future planning conditions / applications will include:

- The resubmission of the statutory biodiversity metric (as based on the approved layout),
- The submission of a post-development habitat plan,
- The submission of a post-development habitat management and monitoring plan.

8.2 General Enhancements

No strict monitoring or ecological supervision is required for the construction of the development other than to confirm that BNG commitments have been met and bat / bird boxes have been installed. An ecologist should be contacted if an unexpected wildlife issue is encountered during construction or if the relevant parties have any queries relating to this document.

9 CONCLUSIONS

Knight Sky Ecology was commissioned to undertake an Ecological Impact Assessment (EclA) for a proposed housing development located off Leak Hall Lane, Denby Dale. An accurate ecological baseline was gathered for the proposed development via a preliminary ecological appraisal which included a desk study and field survey.

The evaluation contained within this report has concluded that the proposed development will not result in likely significant effects to designated sites and priority habitats (regardless of mitigation) due to the significant distances between such features and the site.

Mitigation to avoid potential impacts to nesting birds has been detailed.

The site is within Kirklees Wildlife Habitat Network. The development will result in the loss of 0.4ha the habitat. The impacts on this loss are not considered to be significant; however, the strategic significance of the habitat has been accounted for in the biodiversity net gain calculations. Measures to avoid impacts to nesting birds have been put forward along with several good practice mitigation and enhancement recommendations for hedgehog, bat and nesting birds.

Based on an initial statutory metric calculation, the development will not achieve a 10% net gain in habitat value and recommendations have been made with regards to this.

10 REFERENCES

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

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

Ministry of Housing, Communities and Local Government (2021). *National Planning Policy Framework*. ISBN: 978-1-4098-5302-2.

Stace, C.S. (2019). *New Flora of the British Isles, 4th edition*. University Press, Cambridge.

UKHab Ltd (2023). *UK Habitat Classification Version 2.0* (at <https://ukhab.org>)

APPENDIX A. LEGISLATION

The Environment Act 2021

An Act to make provision about targets, plans and policies for improving the natural environment; for statements and reports about environmental protection; for the Office for Environmental Protection; about waste and resource efficiency; about air quality; for the recall of products that fail to meet environmental standards; about water; about nature and biodiversity; for conservation covenants; about the regulation of chemicals; and for connected purposes.

Specific to biodiversity, the Act involves:

- Strengthened biodiversity duty.
- Mandatory biodiversity net gain to ensure developments deliver at least 10% increase in biodiversity (to be calculated using Biodiversity Metric and approval of a net gain plan and habitat needs to be secured for at least 30 years via obligations / conservation covenant).
- Local Nature Recovery Strategies to support a Nature Recovery Network.
- Duty upon Local Authorities to consult on street tree felling.
- Strengthen woodland protection enforcement measures.
- Conservation Covenants.
- Protected Site Strategies and Species Conservation Strategies to support the design and delivery of strategic approaches to deliver better outcomes for nature.
- Prohibit larger UK businesses from using commodities associated with wide-scale deforestation.
- Requires regulated businesses to establish a system of due diligence for each regulated commodity used in their supply chain, requires regulated businesses to report on their due diligence, introduces a due diligence enforcement system.

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

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

The Habitats Regulations 2017 (as amended) and WCA 1981 (as amended) are pieces of domestic legislation that transpose the land and marine aspects of the Habitats Directive (Council Directive 92/43/EEC) and certain elements of the Birds Directive (Council Directive 2009/147/EC) (known as the Nature Directives). Species of European (International) conservation importance are listed on Annexes II, IV and V of the Habitats Directive and Annex I of the Birds Directive. The Habitats Regulations 2017 were amended in 2018 and again on 1st January 2021 when the Conservation of Habitats and Species (Amendment) EU Exit) Regulations 2019 were adopted following the United Kingdom officially leaving the European Union. The Regulations provide for the designation and protection of 'European Sites', the protection of 'European Protected Species' (EPS), and the adaptation of planning and other controls for the protection of European Sites. EPS are listed on Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended).

Under the Conservation of Habitats and Species Regulations 2017 (as amended) it is an offence to:

- Deliberately capture, injure or kill any wild animal listed as a European Protected Species;
- Deliberately disturb wild animals of any such species in such a way as to be likely:
 - to impair their ability:
 - i) to survive, to breed or reproduce, or to rear or nurture their young, or;
 - ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate, or;

to affect significantly the local distribution or abundance of the species to which they belong.

- Deliberately take or destroy the eggs of such an animal; or,
- Damage or destroy a breeding site or resting place of such an animal.

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

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

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

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

Natural Environment and Rural Communities (NERC) Act 2006

Section 41 of the NERC Act 2006 requires the Secretary of State to publish a list of the living organisms and types of habitats which in the Secretary of State's opinion are of principal importance for the purpose of conserving or enhancing biodiversity. There are 56 habitats and 943 species of principal importance, often referred to as priority habitats and priority species respectively, which were initially identified as requiring conservation action under the UK Biodiversity Action Plan and which continue to be regarded as priorities under the UK Post-2010 Biodiversity Framework. The Section 41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their general biodiversity objective under Section 40 of the NERC Act 2006

Legislation relating to nesting birds

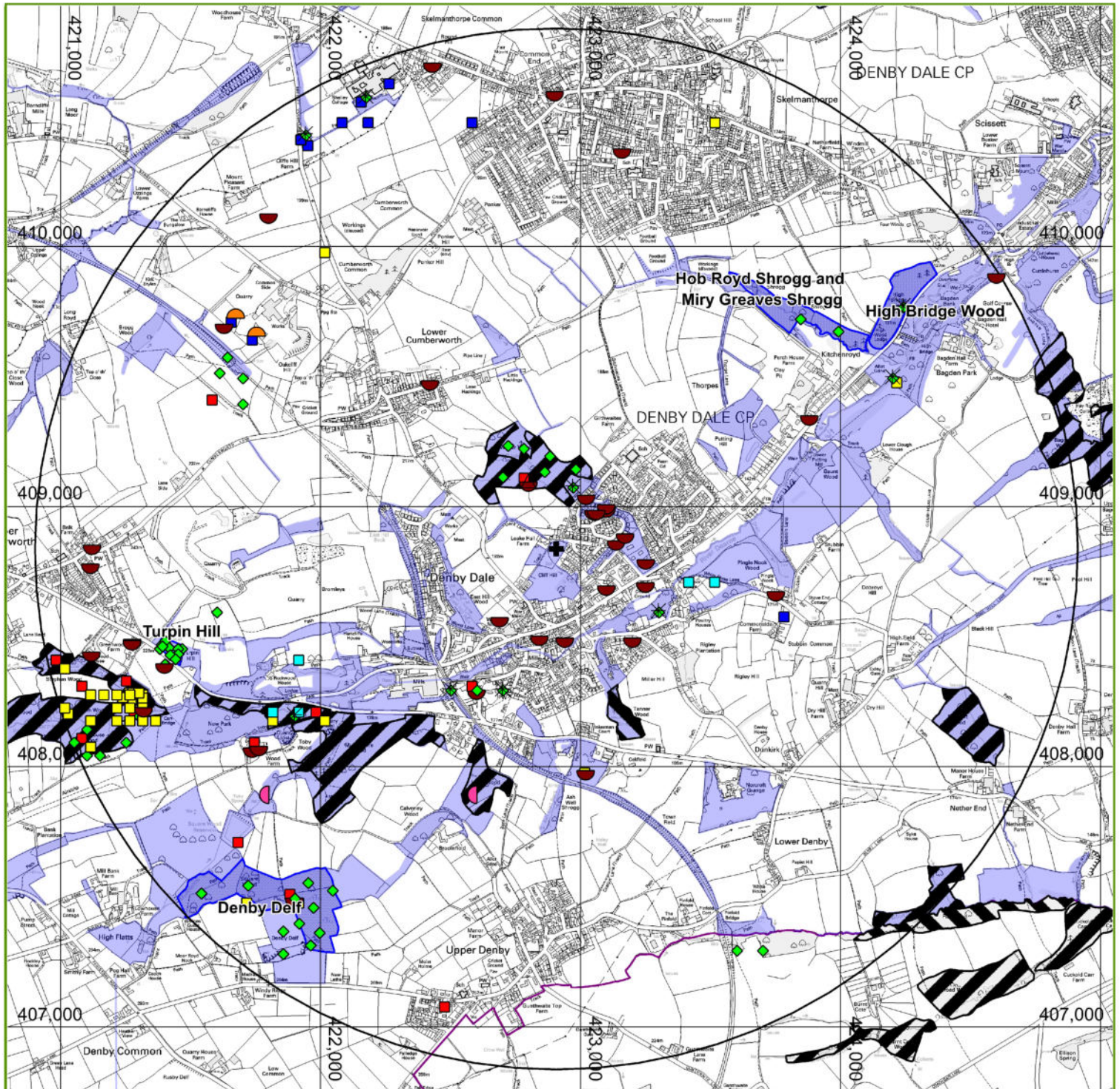
The Wildlife and Countryside Act 1981 (as amended) is the principal mechanism for the legislative protection of wildlife in Great Britain. All bird species are protected under elements of Section 1 of the Act and it is an offence, with certain exceptions, to:

- Intentionally kill, injure or take any wild bird;
- Intentionally takes, damages or destroys the nest of any wild bird included in Schedule ZA1 (for specific birds that reuse their nests);
- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built; and
- Intentionally take or destroy the egg of any wild bird.

Further protection is given for certain species listed in Schedule 1 (Part 1) of the Act. It is an offence to intentionally or recklessly disturbs any wild bird included in Schedule 1 while it is building a nest; or, is in, on or near a nest containing eggs or young; or, disturb dependent young of such a bird.

APPENDIX B. WYES FIGURES

- **Figure 1. Species and Designated Sites**
- **Figure 2. UK Priority Listed Habitats**



Legend

- Site Centroid
- 2km Search Radius
- West Yorkshire Boundary
- *Ancient Semi-Natural Woodland
- *Ancient Replanted Woodland
- Local Wildlife Site
- Kirklees Wildlife Habitat Network

Notable Species

- Amphibian
- Bird
- Bony fish
- Plant and/or lower plant
- Fungus
- Invertebrate
- Reptile
- Terrestrial mammal

Invasive Non-Native Species

- Animal
- Plant

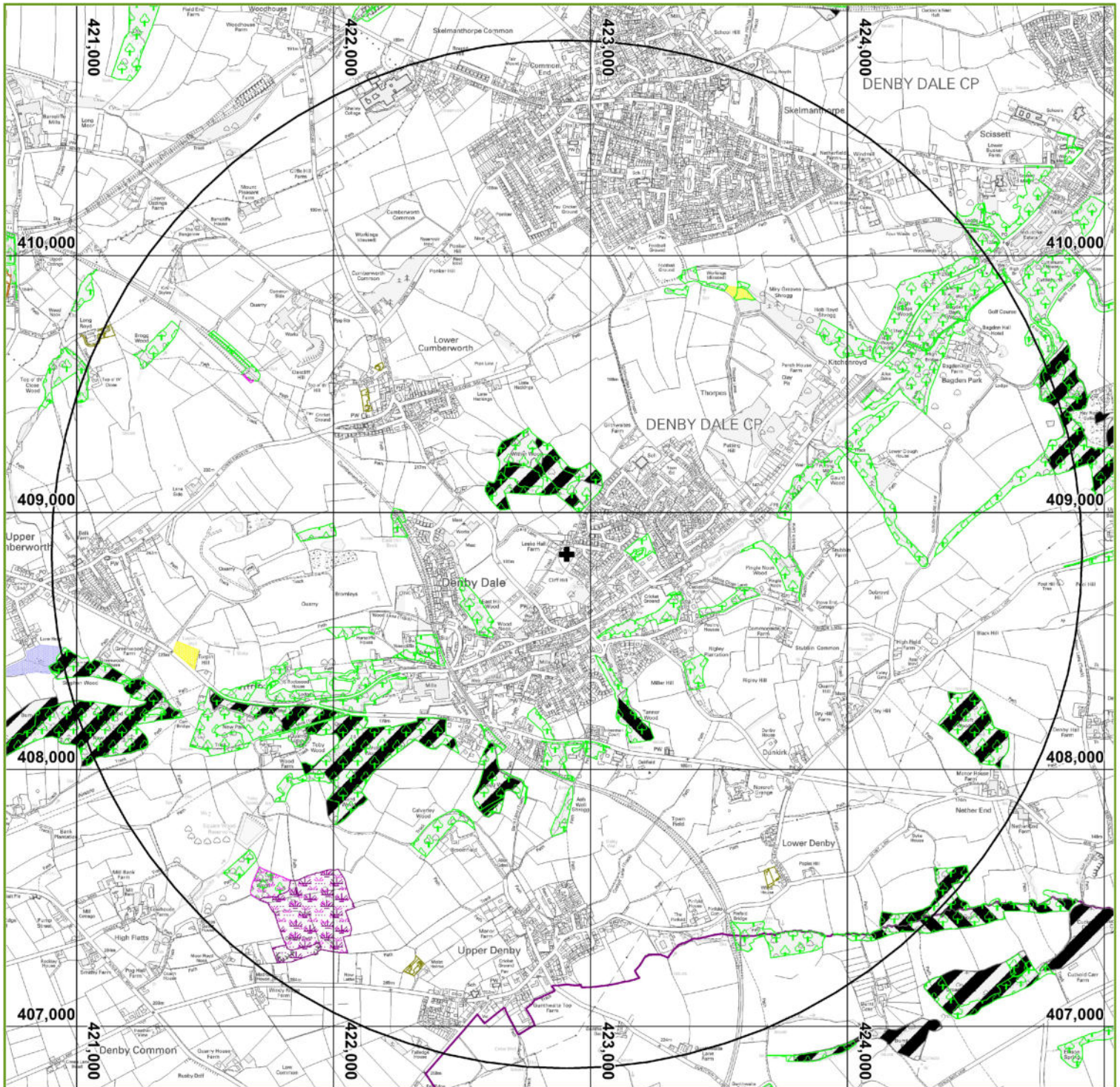
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**Figure 1:
Species and
Designated Sites**





Legend

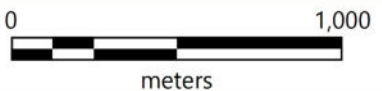
-  Site Centroid
-  2km Search Radius
-  West Yorkshire boundary
-  Deciduous woodland
-  Ancient Semi Natural Woodland
-  Ancient Replanted Woodland
-  Traditional orchard
-  Lowland heathland
-  Lowland dry acid grassland
-  Lowland meadows
-  Purple moorgrass and rush pasture

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**Figure 2:
UK Priority
Habitats**



APPENDIX C. SITE PHOTOS

Photo 1.

View south-west over the site from Leak Hall Lane.



Photo 2.

View south across the site.



Photo 3.

Bramble scrub and outbuilding in north-west corner.



Photo 4.

View of outbuilding.



Photo 5.

Internal view of outbuilding.



Photo 6.
Public
footpath on
opposite
side of
west
boundary
(left of
photo).

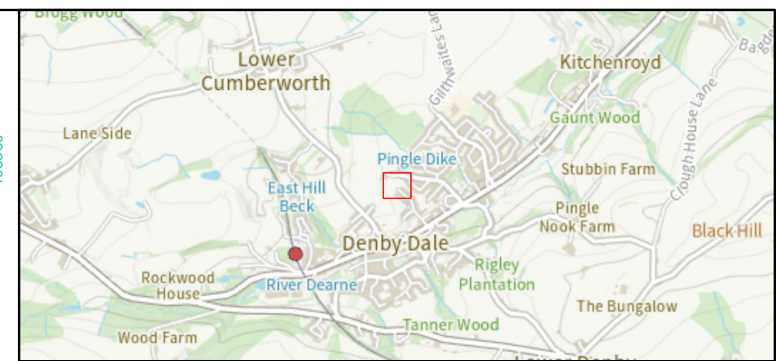






Photo 7.
Stand of
holly and
cherry tree
on east
boundary.

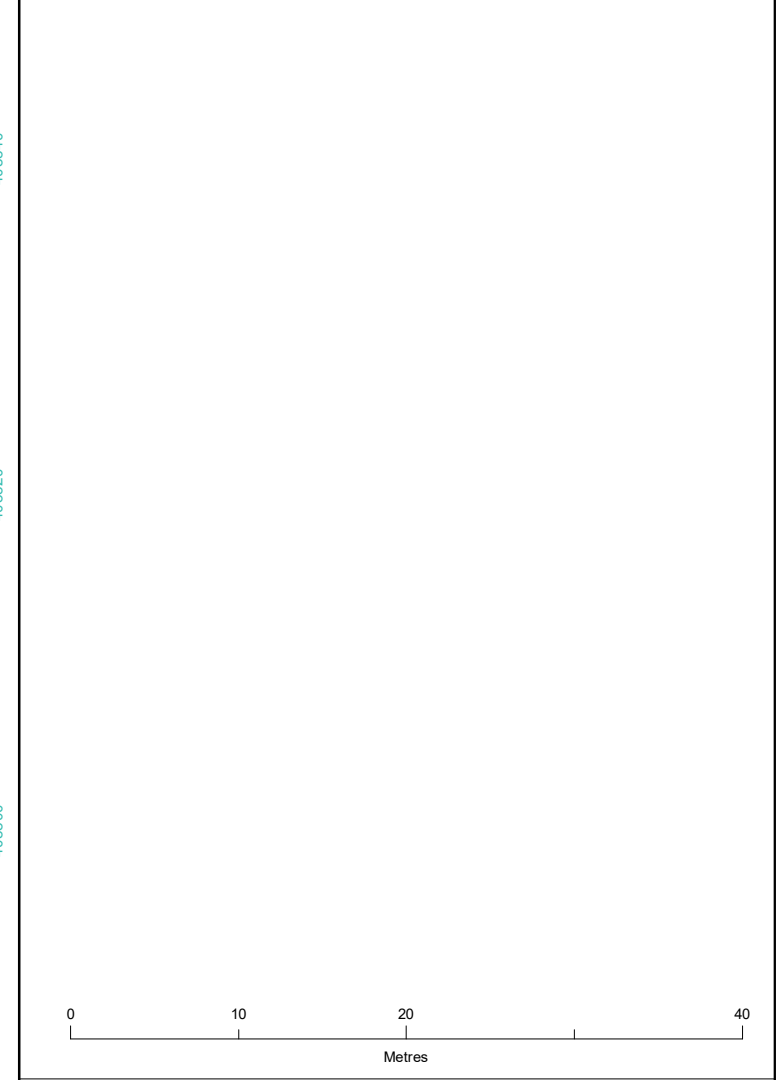


APPENDIX D. UKHAB CLASSIFICATION MAP

- **Figure 1. UK Habitat Classification Map (Baseline)**



Survey Information	
	Site boundary (3,859.9m ²)
UKHab Habitat Survey	
	g3c - Other neutral grassland (3,859.9m ²)
	612 - Fence (114.9m)
	32 - Scattered tree (11)



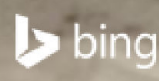
PROJECT TITLE
LAND OFF LEAK HALL LANE, DENBY DALE

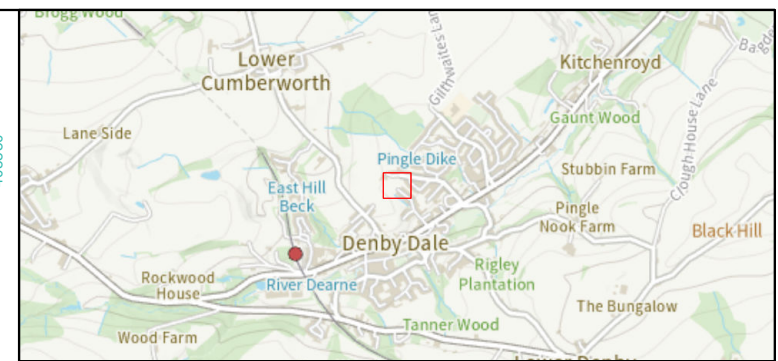
DRAWING TITLE
Figure 1: UK Habitat Classification Map (Baseline)

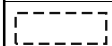




VER	DATE	REMARKS	Drawn	Checked
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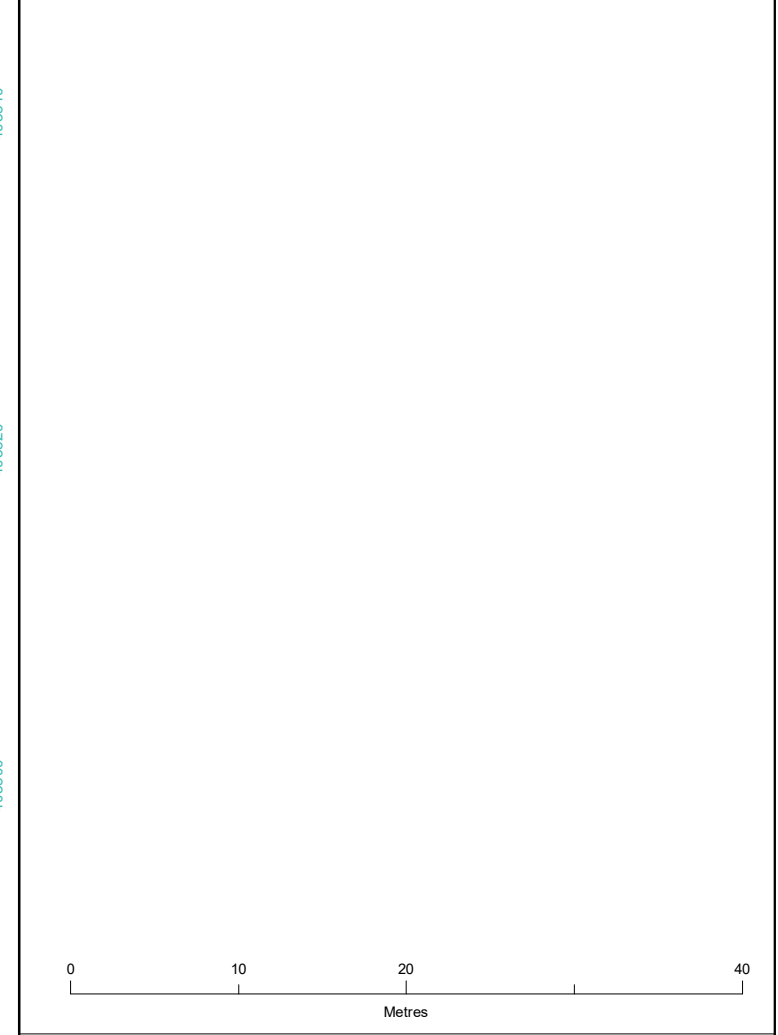
DRAWING NUMBER:
KSEcology/LeakHallLane/UKHab

SCALE	1:450	PLOT SIZE	A3	DATUM	OSGB	PROJECTION	BNG
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Survey Information	
	Site boundary (3,859.9m ²)
UKHab Habitat Survey	
	u1b - Developed land; sealed surface (988.7m ²)
	u1b5 - Buildings (745.4m ²)
	800 - Road (777.7m ²)
	828 - Vegetated garden (1,348.1m ²)



PROJECT TITLE
LAND OFF LEAK HALL LANE, DENBY DALE

DRAWING TITLE
Figure 2 : UK Habitat Classification Map (Post-Development)

VER	DATE	REMARKS	Drawn	Checked
1.0	04/06/24	Post-Development	MP	RK

DRAWING NUMBER:
 KSEcology/LeakHallLane/Post-Development

SCALE	1:450	PLOT SIZE	A3	DATUM	OSGB	PROJECTION	BNG
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