

**274 Cumberworth Lane, Denby Dale**

**Ecological Impact Assessment**

**8<sup>th</sup> September 2025**



**Prepared by:**

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## Contents

|                                                             |    |
|-------------------------------------------------------------|----|
| 1. Summary .....                                            | 4  |
| 2. Introduction .....                                       | 5  |
| 3. Site Description.....                                    | 5  |
| 4. Methodology .....                                        | 6  |
| 5. Ecological Baseline.....                                 | 10 |
| 6. Assessment .....                                         | 23 |
| 7. References .....                                         | 27 |
| Appendix 1. Proposed Plan.....                              | 28 |
| Appendix 2. Relevant Legislation and Planning Policy.....   | 29 |
| Appendix 3. UK Habitat Classification Plan.....             | 31 |
| Appendix 4. Plant Species Recorded on Site.....             | 32 |
| Appendix 5. Location of Designated Sites Within 2 km .....  | 33 |
| Appendix 6. Bat Survey Results .....                        | 34 |
| Appendix 7. Roofing and Cladding Membranes .....            | 37 |
| Appendix 8. Biodiversity Net Gain Headline Results.....     | 39 |
| Appendix 9. UK Habitats Plan Showing The Proposed Site..... | 40 |

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|----------------------------------------------------------------------------------|-----------------------------------------|
| <b>Site Name:</b> 274 Cumberworth Lane, Denby Dale                               |                                         |
| <b>Local Authority</b><br>Kirklees Metropolitan Borough Council                  | <b>Grid Reference</b><br>SE 22683 08652 |
| <b>Surveyor</b><br>Greg Slack MCIEEM                                             | <b>Date of Survey</b><br>05/08/2025     |
| <b>Soilscape</b><br>Within an area of freely draining slightly acid loamy soils. | <b>Designation of Site</b><br>None      |

**UK Habitat Classification habitats on Site**

Habitats: u1b5 - buildings, u1b6 - other developed land, uc1 – unvegetated, unsealed surface; h2b – non-native and ornamental hedgerow

Secondary codes: 828 – vegetated garden

**Protected/Notable Species, Constraints on Site**

Foraging bats, common bird species, and potentially also hedgehog and common amphibian and invertebrate species.

## 1. Summary

- 1.1.1 This Ecological Impact Assessment for a site at 274 Cumberworth Lane, Denby Dale was commissioned by the planning consultant James Roberts on behalf of FFH Developments (Yorkshire) Ltd. The survey was commissioned to support a planning application for the demolition of the existing buildings, and their replacement with two new dwellings.
- 1.1.2 The site comprised a bungalow, garage, outbuildings, and a garden with areas of lawn, flower beds, vegetable patches, hard standing, and two hedgerows. The habitats were used by foraging bats, nesting and foraging birds, and had the potential to be used occasionally by hedgehogs, amphibians, and invertebrates. The bat and bird populations using the site were considered to be of up to local importance, while all other species and habitats were of no more than site-level importance.
- 1.1.3 The bungalow and garage had low suitability for roosting bats, while the sheds had negligible potential. A bat survey was undertaken and no bats were recorded roosting within the site, although they were recorded flying through and foraging over the site.
- 1.1.4 The proposals comprise the demolition of all buildings and the removal of one internal hedgerow to allow for the construction of two new dwellings and gardens. The likely unmitigated impacts were:
- The loss of approximately 26 m of non-native hedgerow, which will be replaced with about 11 m of native hedgerow.
  - The loss of nesting habitat for birds and the potential destruction of active nests.
  - The loss of a small area of terrestrial habitat used by common amphibian species and the potential disturbance, killing, or injury of amphibians (not great crested newts).
  - Increased lighting affecting bats, birds, and hedgehogs.
  - Biosecurity risks from importing soil, seeds, or plants.
- 1.1.5 Mitigation and enhancement measures were recommended, including:
- Demolition and vegetation clearance outside of the bird nesting season, or following a check for active nests.
  - Measures to protect amphibians during construction.
  - The planting of a new native species-rich hedgerow and the creation of wildflower-rich lawns.
  - Installation of integrated bat and bird boxes in the new dwellings.
  - Lighting designed to minimise impacts on nocturnal wildlife.
  - Use of peat-free soils and locally sourced plants free from invasive species.
- 1.1.6 With mitigation, the development was expected to deliver a small biodiversity net gain of less than 0.01 Habitat Units (0.66 % gain) and 0.07 Hedgerow Units (a 259 % gain).
- 1.1.7 The survey and this report were considered valid for a period of 12 months from the date of issue. After this time Middleton Bell Ecology should be contacted to determine the need for update survey.

## 2. Introduction

- 2.1.1 This Ecological Impact Assessment for a site at 274 Cumberworth Lane was commissioned by the planning consultant James Roberts on behalf of the client, FFH Developments (Yorkshire) Ltd., on 6<sup>th</sup> July 2025. The survey was commissioned to inform a planning application for the demolition of the existing dwelling, garage and outbuildings/sheds, and their replacement with two new dwellings. The proposed layout is shown in Appendix 1.
- 2.1.2 The red line boundary was approximately 0.74 ha in size. The development site was located on the northwest edge of Denby Dale, West Yorkshire (Figure 1).

**Figure 1. The site location as indicated by red line boundary shown**



- 2.1.3 The purpose of this report is to present the findings of a desk-based study, UK Habitat Classification survey, and assessment of the site's suitability to support protected or notable species. The report includes consideration of the value, likely impacts and effects of the proposed development to protected and notable species and habitats. Detail on suitable mitigation and compensation measures necessary to avoid or reduce these impacts are included within the report.
- 2.1.4 Key legislation relating to designated sites, protected species, and habitats is detailed in Appendix 2. The implications of legislation are detailed in the body of the report where applicable.

## 3. Site Description

- 3.1.1 The site consisted of a bungalow, garage, and outbuildings as well as a garden. The garden included patios, parking and driveway. A hedgerow was present along the southwest edge of the site and additional short section of hedgerow extending between the bungalow and garage.
- 3.1.2 The site falls within National Character Area 38: The Nottinghamshire, Derbyshire and Yorkshire Coalfield. This National Character Area (NCA) comprises a generally low-

lying area, with hills and escarpments above wide valleys, the landscape embraces major industrial towns and cities as well as villages and countryside. Over half of the NCA is currently designated as greenbelt land; this maintains some distinction between settlements and represents areas that are often under pressure for development and changes in land use. Very little of the NCA is designated for geology or nature conservation, but instead the landscape is dotted with many pockets and patches of habitat where species find refuge. This is often on land that was once worked for minerals or occupied by major industry.

- 3.1.3 The Soilscales resource<sup>1</sup> shows the site to be within an area of freely draining slightly acid loamy soils.

## 4. Methodology

### 4.1 Data Consultation

- 4.1.1 West Yorkshire Ecology were contacted to request the following information for locations within a 2 km radius of the site:

- Protected and notable species records.
- The boundaries of non-statutory designated sites of nature conservation interest.

- 4.1.2 A search of the Multi-Agency Geographical Information for the Countryside (MAGIC) website was also undertaken to determine the following for locations within a 2 km radius of the site:

- The boundaries of statutory designated sites of nature conservation interest.
- The locations of historic European Protected Species (EPS) licences granted by Natural England.

### 4.2 Field Survey

#### UK Habitat Classification Survey

- 4.2.1 The site was surveyed on 5<sup>th</sup> August 2025 using UK Habitat Classification habitat survey methodology (UKHab Ltd, 2023) by Greg Slack MCIEEM. Greg is a competent ecologist with more than 15 years' experience and holds a Natural England bat survey licence (WML-A34-Level 4, 2017-28068-CLS-CLS) and Natural England great crested newt *Triturus cristatus* survey licence (CL08-Level 1, 2015-18073-CLS-CLS).
- 4.2.2 The surveyor methodically covered the site, searching for notable, rare or scarce plant species and evidence of protected species including bats and species of nature conservation importance (including a search of suitable features for signs of bats). The interior of the buildings was checked with particular attention paid to the roof void present in the dwelling. Features of interest are presented on the UK Habitat Classification plan, using Secondary Codes and Target Notes.
- 4.2.3 Aerial photographs (Google Earth, Bing Mapping, and ESRI imagery) and Ordnance

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<sup>1</sup> <http://www.landis.org.uk/soilscales/> [accessed 20<sup>th</sup> August 2025]

Survey mapping were studied to consider the wider context and to look for ecological features that would not be evident on the ground during the walkover survey. This is particularly useful for identifying wildlife corridors and ponds.

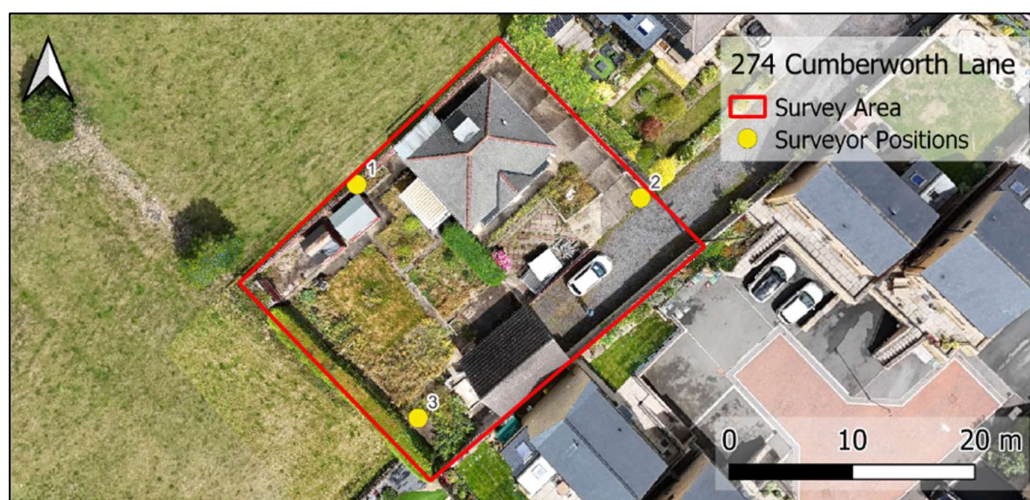
#### Nocturnal Survey

4.2.4 One nocturnal bat survey was completed on 19<sup>th</sup> August 2025. The following personnel conducted the nocturnal surveys and were equipped with Wildlife Acoustics Echo Meter Touch bat detectors and tablet recorders:

- Greg Slack; and
- Carl Dixon.

4.2.5 Three surveyor positions were covered during the survey, with an unsupervised camera covering one position. The night vision equipment used and surveyor coverage is shown in Table 2. The surveyor locations are shown on Figure 2.

**Figure 2. Nocturnal survey plan**



**Table 2. Night vision equipment used during the surveys**

| Surveyor Position | 14 <sup>th</sup> May 2025                              |
|-------------------|--------------------------------------------------------|
| 1                 | Unsupervised Pixfra Arc A613 Thermal Imaging Monocular |
| 2                 | CD – Canon XA10                                        |
| 3                 | GS - Guide TK612 Gen2 Thermal Imaging Monocular.       |

4.2.6 The camera footage from locations covered by surveyors was reviewed as required to check and confirm the observations made by the surveyors. The camera footage from unsupervised positions was initially analysed by Wildlife Imaging Systems. Their software identified all movement (frame by frame) within the videos and produced a set of images showing the movement traces for each 30 seconds of video. These images were then reviewed by Greg Slack and where the image identified a trace that could potentially have been a bat flight, the relevant section of the video was also reviewed. An example image produced by the software is shown in Plate 1.

Plate 1. An example image showing the flight path of a common pipistrelle as viewed from Surveyor Position 1



- 4.2.7 The nocturnal survey was carried out in compliance with relevant Bat Survey Guidelines (Collins 2023). The survey continued from 15 minutes before sunset until 1.5 hours after sunset.

### **4.3 Method of Assessment**

- 4.3.1 In line with CIEEM guidelines (CIEEM, 2017) the survey results were used to identify any ecological constraints to the proposed development, any further surveys, and any mitigation measures likely to be required. Opportunities for ecological enhancement measures were also included where possible.
- 4.3.2 The value and sensitivity of ecological features present on site were determined based on the guidance provided within 'Guidelines on Ecological Impact Assessment in the UK and Ireland' (CIEEM, 2018). Individual ecological receptors (habitats and species that could be affected by the development) were assigned a geographic level of importance for nature conservation. The highest level is international, decreasing through national, regional, county, local and lastly site importance.

### **4.4 Biodiversity Calculation**

- 4.4.1 The Statutory Biodiversity Metric (Defra, 2023) was used to calculate the ecological impact of this scheme within the context of the red line boundary. This metric uses habitat as a proxy for wider biodiversity with different habitat types scored according to their relative biodiversity value. This value is then adjusted depending on the condition and location of the habitat, to calculate 'biodiversity units'. The Statutory Biodiversity Metric incorporates similar but separate calculations for habitats that require a different method of measurement such as hedgerows, lines of trees, rivers, streams and street trees. Calculations are undertaken in a purpose designed spreadsheet, which provides the main output of the process.

### **4.5 Survey Limitations**

- 4.5.1 No survey limitations were encountered.

## 5. Ecological Baseline

### 5.1 Summary

- 5.1.1 The site comprised a bungalow, garage, sheds and garden with two hedgerows (Plate 2).

**Plate 2. The approximate survey area outlined in red, viewed from the southeast**



- 5.1.2 The survey area was used by foraging but not roosting bats, common bird species (including for nesting) and was potentially suitable for use by hedgehogs, common amphibian species (but not likely to include great crested newts) and common invertebrate species.
- 5.1.3 The populations of bats and birds using the site were considered to potentially be of up to local importance. All other habitats and species present were considered to be of no greater than Site level importance.
- 5.1.4 A plan of the habitats recorded within the site is given as Appendix 3 with a list of plant species recorded during the survey given in Appendix 4.

### 5.2 Designated Sites

- 5.2.1 Four Local Wildlife Sites were present between 1.2 and c. 1.7 km from the site. A summary of the sites present is included in Table 1, with their locations shown in Appendix 5.

**Table 1. Designated sites**

| Designation         | Name        | Description                                                        | Distance and direction to site |
|---------------------|-------------|--------------------------------------------------------------------|--------------------------------|
| Local Wildlife Site | Turpin Hill | A field with an area of species-rich neutral grassland at one end. | 1200 m west                    |

| Designation | Name                                    | Description                                                                                                                                    | Distance and direction to site |
|-------------|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
|             | Denby Delf                              | Area of acid and neutral grassland and heath with scattered scrub and areas of woodland.                                                       | 1215 m southwest               |
|             | Hob Royd Shrogg and Miry Greaves Shrogg | Two areas of plantation woodland sloping down towards a stream. A species rich ground flora (including bluebells) was present.                 | 1500 m northeast               |
|             | High Bridge Wood                        | Area of plantation woodland with improved grassland and arable. The woodland has a dense cover of bluebells <i>Hyacinthoides non-scripta</i> . | 1715 m northeast               |

5.2.2 The site lay outside the Kirklees Wildlife Habitat Network, the network included a site c. 80 m southwest, and a second c. 75 m east. Ancient woodland areas were present in the wider landscape. The location of the designated sites, the Kirklees Wildlife Habitat Network, and the ancient woodland in the area is shown in a figure provided by West Yorkshire Ecology included as Appendix 5.

### 5.3 Habitats

#### h2b – non-native and ornamental hedgerow

- 5.3.1 Two hedgerows were present within the site, both comprising non-native and ornamental hedgerows.
- 5.3.2 Hedgerow 1 comprised a Leyland cypress *Cupressus × leylandii* hedge located on the southwest boundary of the site. The hedge was c. 2 m high and 1 m wide (Plate 3).

**Plate 3. Hedgerow 1 viewed from the east**



- 5.3.3 Hedgerow 2 was dominated by garden privet *Ligustrum ovalifolium* although also included rowan *Sorbus aucuparia* and a French hydrangea *Hydrangea macrophylla* (Plate 4). This hedgerow partially divided the plot running from the south corner of Building 1 approximately two thirds of the way to the north corner of Building 2. The

hedge was c. 3 m high and 1.5 m wide.

**Plate 4. Hedgerow 2 viewed from the east**



u1b5 - buildings

- 5.3.4 Two buildings were present within the site. The buildings comprised a dwelling (B1), and detached garage (B2). Three sheds (B3 – B5) were also present on site (Appendix 3).
- 5.3.5 The dwelling was a bungalow constructed from brick and render with a two -pitched, hipped roof with additional dormer above the front door, and a second at the rear of the building (Plate 5 and 6). The roof was covered with Welsh slate and angle cap ridge tiles. The rafters were exposed at the eaves. The dormer over the door had wooden cladding and a pitched roof. The rear dormer had a flat roof covered with sheet lead.
- 5.3.6 A flat roofed porch was present at the rear (north) with a conservatory on the southwest side of the building. The roof of the porch was also covered with sheet lead and the windows were framed with uPVC.

**Plate 5. The façade (southeast elevation) and side (northeast elevation) of B1**



**Plate 6. The northwest elevation of B1**



- 5.3.7 A bedroom was present in the attic with a vaulted ceiling and rear dormer window. A void used for storage had been retained within the eaves (Plate 7). The roof was supported by purlins and rafters. The slates were backed by a breathable membrane (Proctor Roofshield) with timber sarking below.

**Plate 7. The eaves storage space within B1**



5.3.8 Building 2 was a detached double garage with a first floor storage area. The building was constructed from concrete blocks with a steep two-pitched roof. The roof was covered with interlocking concrete tiles and angle cap ridge tiles. A soffit box enclosed the eaves. The windows had wooden frames and one roller door was present on the northeast elevation (Plate 8 & 9).

**Plate 8. the northeast elevation of B2**



**Plate 9. The southwest elevation of Building 2**



- 5.3.9 The building had a vaulted ceiling although a small void (less than 0.5 m in height) had been retained at the top of the pitched roof (Plate 10). Storage space had been retained at the eaves and the bitumen coated Type 1F felt was visible below the tiles (Plate 11).

**Plate 10. The interior of the first floor of Building 2.**



**Plate 11. The storage space at the eaves of Building 2**



5.3.10 Building 3, 4, and 5 were a series of wooden sheds with pitched roofs. Building 3 had had the roof recently recovered with bitumen coated felt (Plate 12). The roof covering on Building 4 was becoming dislodged and the roof covering on Building 5 was in reasonable condition. All three had wooden framed windows with high interior light levels.

**Plate 12. From right to left: Buildings 3, 4, and 5 viewed from the south**



5.3.11 The suitability of the buildings to be used by protected or notable species is considered in Section 5.4.

5.3.12 No condition assessment criteria are applicable to this habitat type (Defra, 2023).

u1b6 – other developed land

5.3.13 A series of hard standing paths, driveways, patios, and what appeared to be the bases of demolished buildings were present within the garden (Plate 13 & 14).

**Plate 13. Area of hard standing driveway to the east of the dwelling (Building 1)**



**Plate 14. Hard standing paths within the garden viewed from the southwest corner of the site**



5.3.14 No condition assessment criteria are applicable to this habitat type.

5.3.15 *Secondary Code 828 – vegetated garden*

5.3.16 The garden comprised a lawn, vegetable patches and flower beds. A range of common grasses such as Yorkshire fog *Holcus lanatus* and cocksfoot *Dactylis glomerata* and colonising herbs such as ragwort *Jacobaea vulgaris* were present within the lawn areas with cultivated plants and colonising species such as strawberry *Fragaria × ananassa* and mint *Mentha sp.*, and Canadian fleabane *Conyza canadensis* present in the vegetable patches. All garden areas had been neglected and were overgrown (Plate 14). A full list of plant species recorded in the garden area is included in Appendix 4.

5.3.17 No condition assessment criteria are applicable to this habitat type.

u1c – artificial unvegetated unsealed surface

5.3.18 A gravel driveway was present at the southeastern corner of the site leading from the detached garage (Building2) to Cumberworth Lane (Plate 15).

5.3.19 No condition assessment criteria are applicable to this habitat type.

**Plate 15. The compacted gravel driveway at the eastern corner fo the site leading to Cumberworth Lane**



## 5.4 Species and Species Groups

5.4.1 records are confidential and are not included in detail here. The survey area was located outside the identified areas of increased probability. No records were present within or adjacent to the site. No signs were identified during the survey and no were recorded within the site or accessible areas within the surrounding 30 m.

5.4.2 can have relatively large territories, but the areas due to be impacted by the development were considered relatively unsuitable for use by this species when compared to the surrounding area.

5.4.3 Due to the lack of nearby records and field signs, it was considered unlikely that the site comprised part of the territory of a local population.

### Hedgehog

5.4.4 No hedgehog *Erinaceus europaeus* records were returned by the data search. No hedgehog signs were identified during the survey, but the habitats were considered broadly suitable for use by this species.

### Bats

5.4.5 A total of 42 bat records were returned by West Yorkshire Ecology. The species recorded comprised common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, brown long-eared bat *Plecotus auritus*, and noctule *Nyctalus noctula*. Additional records of bats identified as *Pipistrellus* bats and records of unidentified bat species were also provided.

5.4.6 The closest bat records were field records of a noctule and pipistrelle, located c. 50 m south of the survey area. The records dated from 2013.

- 5.4.7 No European Protected Species Licence applications for bats were identified within the 2 km search area.
- 5.4.8 The habitats within the site were considered to be of above average suitability for use by foraging bats due to the semi-rural location, presence of adjacent pasture and woodland, and the lack of light pollution in the area.
- 5.4.9 The bungalow (B1) and garage (B2) were identified as having low bat roost suitability with the wooden sheds (B3 – 5) identified as having negligible bat roost suitability. Potential bat roost features comprised gaps at the wall top and soffits, gaps between slates, air vent gaps leading into the wall cavity, and bird boxes.
- 5.4.10 A bat survey of the buildings was completed and no bats were recorded roosting. The level of bat activity was relatively low with three species recorded, comprising common pipistrelle *Pipistrellus pipistrellus*, noctule *Nyctalus noctula*, and a *Myotis* bat species. The full survey results are included in Appendix 6.

#### Birds

- 5.4.11 A total of 100 records of 48 bird species were returned by the local records centre. None of the records were for the site itself. The closest, were records of a swift *Apus apus*, grey wagtail *Motacilla cinerea* and a dunnock *Prunella modularis* located c. 280 m south of the site.
- 5.4.12 An old bird's nest was present within the soffit in the southeast corner of the garage (Plate 16). The presence of a dead juvenile starling *Sturnus vulgaris* in the ground floor of the garage suggested that the nest belonged to this species. Apart from the starling, bird species recorded on site and in the surrounding area comprised tawny owl *Strix aluco*, wood pigeon *Columba palumbus*, and jackdaw *Coloeus monedula*. Starling is a red listed bird species of conservation concern, wood pigeon and tawny owl are amber list species, and jackdaw are a green list species (Stanbury *et. al.*, 2021).

**Plate 16. Bird's nest in the soffit of the garage**



- 5.4.13 The soffits and bird boxes on B2, and hedgerows within the site were considered to have potential to be used by species which nest in buildings and gardens.
- 5.4.14 The habitats present on site were also considered to be suitable for foraging by

common garden and farmland species. The lack of rare and unusual habitats within the site and surrounding area meant that it was unlikely to be used, except very occasionally, for foraging by rarer bird species.

#### Reptiles

- 5.4.15 Two records of grass snake *Natrix helvetica* were returned by the local biological records centre for the search area. The records were clustered within a site c. 1.4 km northwest of the site.
- 5.4.16 The habitats present within the development site were considered broadly unsuitable for use by grass snake. This was due to the presence of disturbance from people and pets within the adjacent houses. It was considered very unlikely that reptiles would be present within the site.

#### Amphibians

- 5.4.17 The local record centre returned a total of 27 amphibian records comprising 11 records of great crested newt *Triturus cristatus*, four records of smooth newt *Lissotriton vulgaris*, seven records of common frog *Rana temporaria* and five records of common toad *Bufo bufo*.
- 5.4.18 Ten of the great crested newt records were located on the western edge of Skelmanthorpe, c. 1.9 km to the north of the site and dated from between 2004 and 2017. The 11<sup>th</sup> was located c. 1.1 km to the east of the site within a rural area to the east of Denby Dale. The record to the east was dated from 2000.
- 5.4.19 The MAGIC Great Crested Newt Class Survey Licence Returns dataset also identified the presence of great crested newt within the desk study area. These records were also located c. 1.8 km to the north of the site and all dated from 2017.
- 5.4.20 Although one pond was located just within 500 m of the red line boundary (c. 485 m southwest of site), it was separated from the site by the A636 (Wakefield Road), the Barnsley to Huddersfield railway line, Denby Dale Industrial Park and other houses and gardens. Figure 3 shows the pond location relative to the site. Given the pond's distance from the site and the barriers to movement, it was considered highly unlikely that great crested newts would be present within the survey area, even if present in the identified pond.
- 5.4.21 It was considered possible that other common amphibian species could occasionally be present within the survey area during their terrestrial phase.

**Figure 3. Pond location**



#### Invertebrates

- 5.4.22 The record search returned 194 notable invertebrate records. The majority of these records (169) comprised observations of hairy wood ant *Formica lugubris*. This included the closest notable invertebrate record to the site, located c. 730 m to the southwest. As this species only occurs within woodland edge habitat, the habitat present within the survey area was unsuitable. None of the other 13 notable invertebrate species were considered likely to be present within the survey area either.
- 5.4.23 A wasp nest, considered most likely to be common wasp *Vespula vulgaris* was present in the apex of the gable on the front of the bungalow. A healthy number of pollinating insects and moths were recorded during the initial inspection of the site and subsequent nocturnal bat survey. It is considered that the habitats present were likely to support a slightly above average diversity of invertebrate species. However, it was considered unlikely that rare species or a particularly diverse assemblage was present, due to the absence of rare habitats on site or within the immediate surrounding area.

#### Invasive species

- 5.4.24 A total of 30 records of invasive plant and animal species listed on Schedule 9 of the Wildlife and Countryside Act were returned for the desk study area. The plant species comprised six Japanese knotweed *Fallopia japonica* records, 11 Himalayan balsam *Impatiens glandulifera* records, four records of *Rhododendron ponticum*, three records of Canadian waterweed *Elodea canadensis*, two records of variegated yellow archangel *Lamium galeobdolon* subsp. *argenteum*, and one record each of New Zealand pigmyweed *Crassula helmsii*, and parrot's feather *Myriophyllum aquaticum*.
- 5.4.25 The records of Schedule 9 invasive animal species comprised two records of the relatively ubiquitous species grey squirrel *Sciurus carolinensis*. This, highly mobile species would both be capable of making use of the site but unlikely to breed within the habitats present.
- 5.4.26 The closest record was for Himalayan balsam located c. 270 m to the south.
- 5.4.27 No invasive species were recorded within the survey area.

Value of habitats and species

5.4.28 No other protected or notable species / species groups were considered likely to use the site. The ecological value of the habitats and species present, or potentially present is given in geographic terms (from site to international value) in Table 3 below.

**Table 3. Ecological importance of each habitat, species or species group using the site**

| Habitat, Species or Species Group              | Ecological value       |
|------------------------------------------------|------------------------|
| h2b – non-native and ornamental hedgerow       | Site                   |
| u1b5 - buildings                               | Negligible             |
| u1b6 – other developed land                    | Negligible             |
| u1c – artificial unvegetated, unsealed surface | Negligible             |
| 828 – vegetated garden                         | Site                   |
|                                                | Unlikely to be present |
| Hedgehog                                       | Site if present        |
| Bats                                           | Up to local            |
| Birds                                          | Up to local            |
| Reptiles                                       | Unlikely to be present |
| Amphibians (common amphibian species only)     | Site                   |
| Invertebrates                                  | Site                   |
| Invasive species                               | N/A                    |

## 6. Assessment

### 6.1 Proposals

- 6.1.1 The assessment of impacts is based upon a consideration of the proposed demolition of the existing buildings, the removal of the internal hedgerow (Hedgerow 2) and the construction of two new dwellings and gardens. The proposed plan for the development is shown in Appendix 1.
- 6.1.2 The presence of the following protected and notable species was identified or has been assumed: hedgehog, bats, birds and common amphibian species (not including great crested newt).

### 6.2 Assessment of Impacts

- 6.2.1 The likely unmitigated impacts of the development were considered to comprise:
- A technical net gain of approximately 8 m<sup>2</sup> of vegetated garden.
  - The loss of approximately 26 m of non-native hedgerow and its replacement with c. 11 m of species rich native hedgerow.
  - The loss of bird nesting habitat and the potential removal of active birds' nests.
  - The loss of a small amount of amphibian terrestrial habitat, and the potential disturbance, killing or injury of common amphibian species.
  - Increased lighting affecting nocturnal species such as hedgehogs, bats, and some birds.
  - Biosecurity risks as a result of bringing in plants, seeds and soil for landscaping.
  - Without mitigation the proposed development is likely to result in a negligible net gain in Biodiversity Net Gain Habitat Units (less than 0.01 Unit), and a gain of 0.07 Hedgerow Units.
- 6.2.2 Mitigation and enhancement measures have been proposed for the site.

### 6.3 Mitigation and Enhancement Measures

#### Further survey

- 6.3.1 No further survey is required to identify the likely impacts and required mitigation for this project.

#### Biosecurity

- 6.3.2 During the landscaping, where additional subsoil or topsoil is required, it should be free of non-native invasive species. All bulk imported soils should be peat free. Seeds and plants should be sourced from a reputable UK supplier such as Mires Beck Nursery, and should be of UK provenance.

#### Protecting bats

- 6.3.3 The bat survey undertaken on B1 and B2 did not record the presence of roosting bats within the buildings. No further survey is required. However, bats were recorded in flight within the area, and an individual bats can occasionally roost almost anywhere. As a precaution, the roof coverings over the wall top of the bungalow and the soffits of the garage should be removed / demolished by hand with care. If bats or signs of bats

are recorded the work should stop and advice sought from a suitably qualified ecologist.

- 6.3.4 Many of the breathable roofing membranes are not safe for bats if they come into contact with them. As standard we recommend that one of the membranes which are safer for use in areas with roosting bats are used in areas where bats are present. Further information on the issue of bats and roofing membranes is included in Appendix 7.

#### Protecting nesting birds

- 6.3.5 Nesting birds within the building and hedgerow were considered a possibility and it is recommended that the start of the demolition work, and vegetation removal either avoids the nesting bird season (March to September inclusive), or a check for active nests is undertaken prior to the start of demolition. If an active nest is present, it must be retained in-situ until the young have fledged. As stated in Appendix 2 active bird's nests are legally protected.

#### Protecting amphibian species

- 6.3.6 Amphibians may be found resting beneath patio slabs and paths or at the base of hedgerows. If common amphibian species are present they can be moved to a safe area – the north of western boundaries of the site. Any excavations should be checked carefully for amphibians before recommencing work each morning.

#### Habitat creation

- 6.3.7 Within the development, any new areas of lawn to be created will be sown with a grass mix that includes fine grasses and wildflowers that will thrive in short grass<sup>2</sup>. Advice on how to take care of a flower rich lawn is given on the Plant Life website<sup>3</sup>.
- 6.3.8 The hedgerow on the western boundary will be replaced by a hedgerow containing a mix of at least five woody native species.
- 6.3.9 The new species rich native hedgerow and flower rich lawns will support invertebrates and other wildlife such as hedgehogs, amphibians, birds and bats, that feed on them.

#### Provision of bat and bird boxes

- 6.3.10 It is recommended that measures are installed to mitigate for the loss of bird nesting opportunities, and to enhance the site for both birds and bats. It is recommended that the new nest and bat roost provision is incorporated in both new dwellings. This provision should include an integrated bat box, and an integrated bird box. Swift *Apus apus* bricks are the most appropriate integrated bird box option. Boxes should be located as high as possible and ideally not directly over doors or windows. Suitable locations are shown on Figure 4.

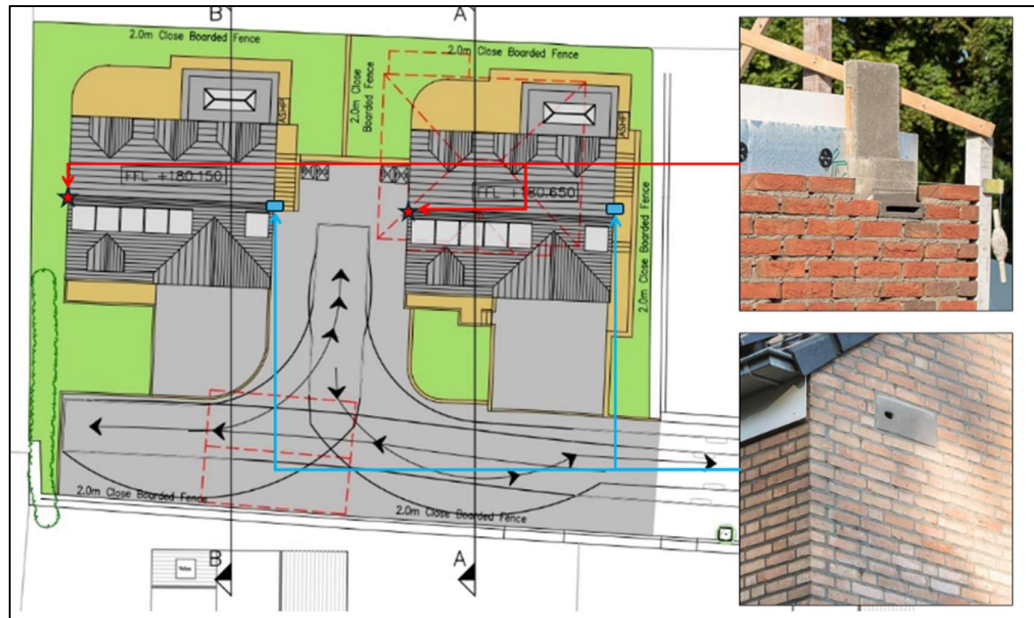
<sup>2</sup> An example of a flower rich short sward seed mix is available from:

<https://www.wildflowerlawnsandmeadows.com/product/wild-flower-lawn-seed-mix/>

<sup>3</sup> Information on how to mow a lawn to maximise the presence of wildflowers can be found at

<https://nomowmay.plantlife.org.uk/what-is-no-mow-may/wild-flower-lawn/>

**Figure 4. Suitable locations for bat and swift boxes**



### Lighting

6.3.11 The site is currently unlit with very low levels of lighting present in the surrounding area, the design of new outside lighting should be carefully considered in line with guidance from the Institute of Lighting Professionals and the Bat Conservation Trust Guidance (IILP, 2023). Where external lighting is required, it must be downwards facing and have a horizontal cut off, i.e. with no upwards component. The lighting should be relatively low level and have a warm colour tone (i.e. not cold white or blue). Lighting on the rear of the properties should be activated only by PIR sensors.

6.3.12 No lighting should illuminate the integrated bat or bird boxes.

## **6.4 Biodiversity Calculations**

6.4.1 The Headline Results output of The Statutory Biodiversity Metric is presented in Appendix 8, based on the proposed site habitats shown in the proposed UK Habitats Map included as Appendix 9, with the additional habitat enhancement identified above. The development is projected to result in a negligible net gain of less than 0.01 Habitat Unit (a 0.66 % gain) with a gain of 0.07 Hedgerow Units (a 258.96 % gain).

6.4.2 Due to the nature of the development and size of the site available it is not considered possible to deliver a 10 % net gain in Habitat Units as part of this project. The small net gain in Habitat Units required will need to be delivered off site.

## **6.5 Conclusion**

- 6.5.1 The mitigation and enhancement measures proposed have the potential to result in a slight net gain for roosting bats, and nesting birds, with a neutral effect for other protected and notable species and no tangible impact on other ecological receptors.
- 6.5.2 While the project is able to deliver an increase in biodiversity net gain habitat units it is not possible to generate the required 10 % gain within the site and the additional number of units required will need to be purchased from a third party.
- 6.5.3 The results of this survey and report are considered to be valid for a period of 12 months. After this time Middleton Bell Ecology should be contacted to determine the need for update survey.

## 7. References

CIEEM (2017) *Guidelines for Preliminary Ecological Appraisal, 2<sup>nd</sup> edition*. Chartered Institute of Ecology and Environmental Management, Winchester.

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

ILP (2023) Guidance Note 08/23 Bats and Artificial Lighting At Night. Bat Conservation Trust and Institute of Lighting Professionals.

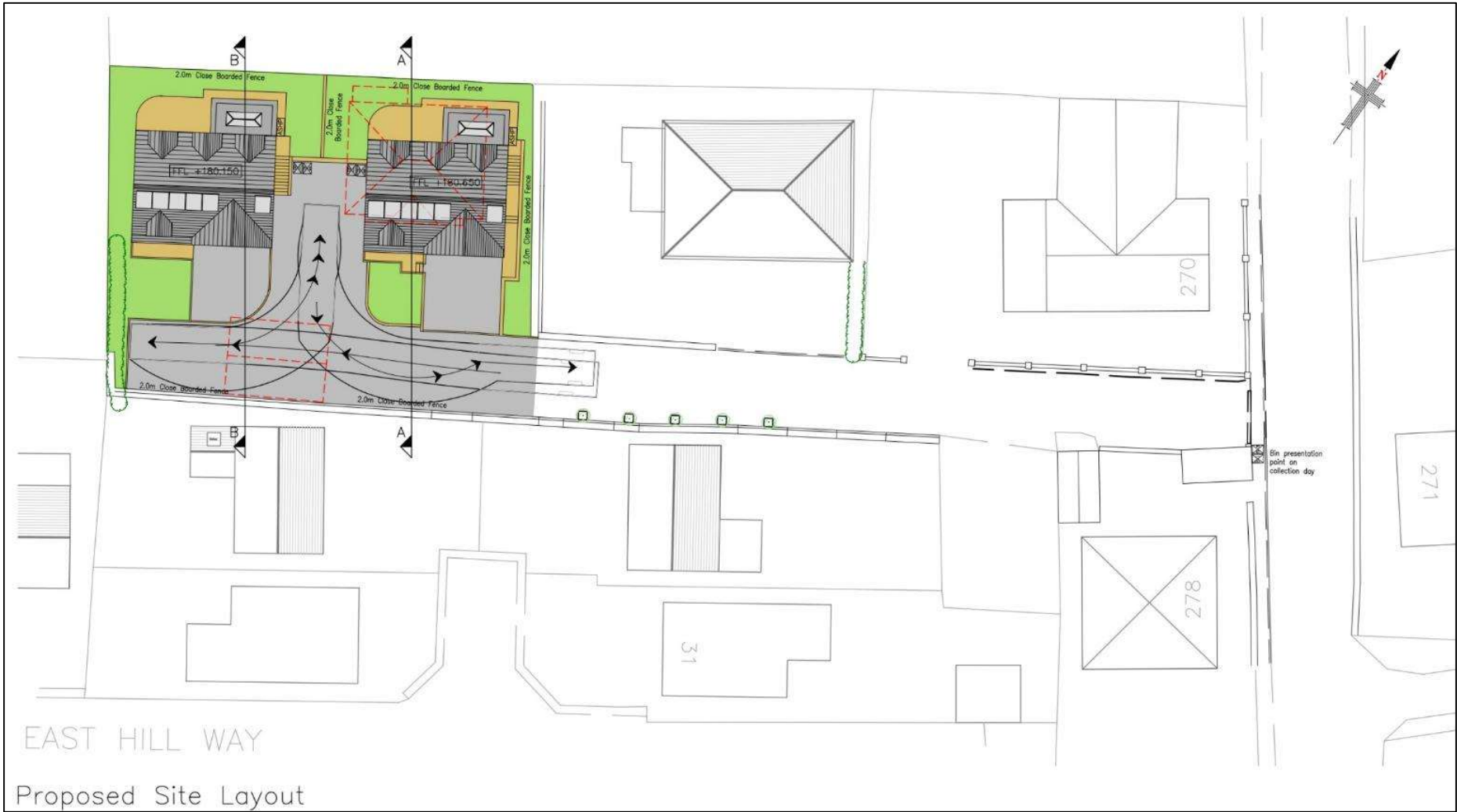
DEFRA (2023) The Statutory Biodiversity Metric User Guide (draft). DEFRA.

Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., & I Win (2021) *The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain*. British Birds 114: 723-747. Available online at: [www.britishbirds.co.uk/content/status-our-bird-populations](http://www.britishbirds.co.uk/content/status-our-bird-populations)

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

Appendix 1. Proposed Plan

The proposed development site plan is shown below.



## Appendix 2. Relevant Legislation and Planning Policy

Wildlife legislation relating to species is summarised in Table A2.1 below. This legal information is intended for summary only, and the original legal documents should be consulted if a detailed understanding is required.

**Table A2.1. Legislation relating to species**

| Species                                                                                                  | Legal Status                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>European protection</b>                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| European Protected Species (EPS) (including bats)                                                        | <p>These animal species and their breeding sites or resting places are protected under Schedule 2 of The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, which makes it illegal to:</p> <ul style="list-style-type: none"> <li>• Intentionally or deliberately capture, injure or kill any such animal or to deliberately take or destroy their eggs.</li> <li>• Deliberately disturb such an animal.</li> <li>• Damage or destroy a breeding site or resting place of such an animal.</li> </ul> <p>European Protected Species (EPS) licences can be granted by Natural England in respect of development to permit activities that would otherwise be unlawful under the Conservation Regulations, providing that the following 3 tests (set out in the EC Habitats Directive) are passed:</p> <ul style="list-style-type: none"> <li>• The development is for reasons of overriding public interest.</li> <li>• There is no satisfactory alternative; and</li> <li>• The favourable conservation status of the species concerned will be maintained and/or enhanced.</li> </ul> <p>Under Regulation 9(5) of The Conservation Regulations, Planning Authorities have a legal duty to 'have regard to the requirements of the EC Habitats Directive in the exercise of their functions'. This means that they must consider the above 3 tests when determining whether Planning Permission should be granted for developments likely to cause an offence under the Conservation Regulations. As a consequence, Planning Applications for such developments must demonstrate that the 3 tests will be passed.</p> |
| <b>National protection</b>                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| European Protected Species and other species including adder, grass snake, common lizard, and water vole | <p>These animals receive full protection under the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000), which makes it illegal (subject to exceptions) to:</p> <ul style="list-style-type: none"> <li>• Intentionally kill, injure or take any such animal.</li> <li>• Intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any such animal; and</li> <li>• Intentionally or recklessly disturb such animals while they occupy a place used for shelter or protection.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Schedule 1 birds (including barn owl)                                                                    | <p>Special penalties relate to offences concerning birds listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). In addition to the offences detailed above relating to all wild birds, it is</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

| Species          | Legal Status                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                  | illegal to intentionally or recklessly disturb any Schedule 1 bird or their dependent young while nesting.                                                                                                                                                                                                                                                                                         |
| All bird species | All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000), which makes it illegal (subject to exceptions) to: <ul style="list-style-type: none"> <li>• Intentionally kill, injure or take any wild bird.</li> <li>• Take, damage or destroy the nest (whilst being built or in use) or eggs of any wild bird.</li> </ul> |
| Invasive species | The Wildlife and Countryside Act 1981 (as amended) contains measures for preventing the establishment of non-native species which may be detrimental to native wildlife, prohibiting the release of animals and planting of plants listed in Schedule 9 of the Act. In relation to Schedule 9 plants, it is an offence to plant or otherwise cause these plant species to grow in the wild.        |

### Species and Habitats of Principal Importance

Planning authorities have a duty under Section 40 of the NERC Act 2006 to have regard to priority species and habitats in exercising their functions including development control and planning. In compliance with Section 41 of the NERC Act, the Secretary of State has published a list of species and habitats considered to be of principal importance for conserving biodiversity in England under the UK Post-2010 Biodiversity Framework. This is known as the list of Habitats and Species of Principal Importance (HPI/SPI). The HPI/SPI list is used to guide planning authorities in implementing their duty under the NERC Act.

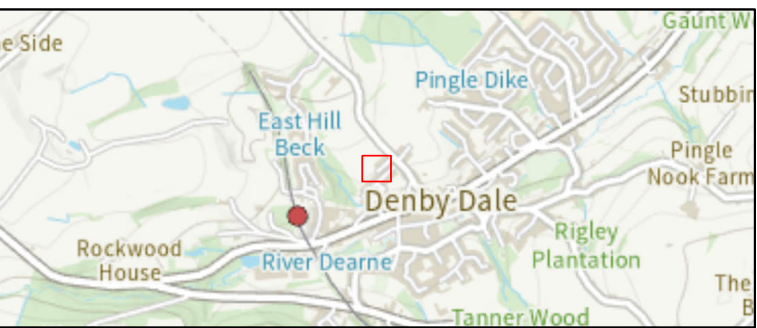
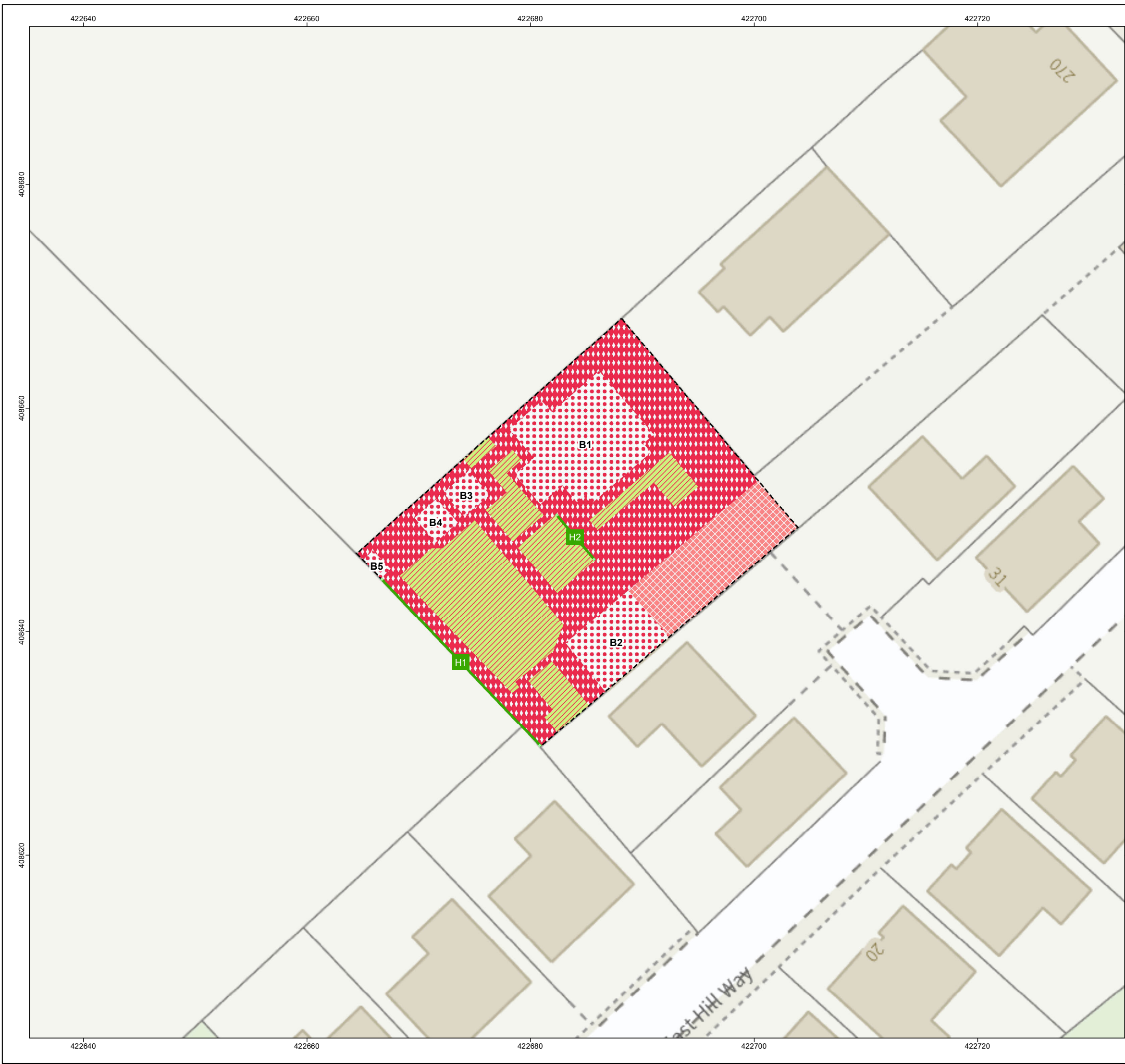
### National Planning Policy Framework

The National Planning Policy Framework for England was revised in 2021. This document states that plans should ‘promote the conservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity’. It also puts an emphasis on refusing development which would result in the ‘loss or deterioration of irreplaceable habitats (such as ancient woodland)’ unless there are ‘wholly exceptional reasons and a suitable mitigation strategy exists’.

### Local Biodiversity Action Plans

The HPI/SPI list included on Section 41 of the NERC Act 2006 is supported by a series of Local Biodiversity Action Plans (LBAPs), usually set up on a local authority local authority administrative boundary basis. Each LBAP identifies those habitats and species considered to be most important in that area (usually referred to as priority habitats and species). Commonly, an LBAP will identify a number of habitats and species for which “action plans” have been prepared.

## **Appendix 3. UK Habitat Classification Plan**



| Survey Information                                                                  |                                                              |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------|
|  | Site boundary (746.6m²)                                      |
| UK Habitat Survey (Primary Habitats)                                                |                                                              |
|  | u1b5 - Building (151.1m²)                                    |
|  | u1b6 - Other developed land (323.8m²)                        |
|  | u1c - Artificial unvegetated, unsealed surface (83.8m²)      |
|  | 828 - Vegetated garden (187.9m²)                             |
|  | h2b - Non-native and ornamental hedgerow (H1=20.7m, H2=5.4m) |

Source: Ordnance Survey © Crown copyright 2025, All rights reserved. License Number 100049837.

 0 2.5 5 10 Metres

PROJECT TITLE

**274 CUMBERWORTH LANE, DENBY DALE**

DRAWING TITLE

**Figure 1. UK Habitat Survey Plan**

| VER | DATE     | REMARKS | Drawn | Checked |
|-----|----------|---------|-------|---------|
| 1.0 | 05/08/25 | UKHab   | MP    | GS      |

DRAWING NUMBER:

**MIDDLETONBELLECOLOGY/274Cumberworth/UKHab**

| SCALE | 1:325 | PLOT SIZE | A3 | DATUM | OSGB | PROJECTION | BNG |
|-------|-------|-----------|----|-------|------|------------|-----|
|-------|-------|-----------|----|-------|------|------------|-----|

## Appendix 4. Plant Species Recorded on Site

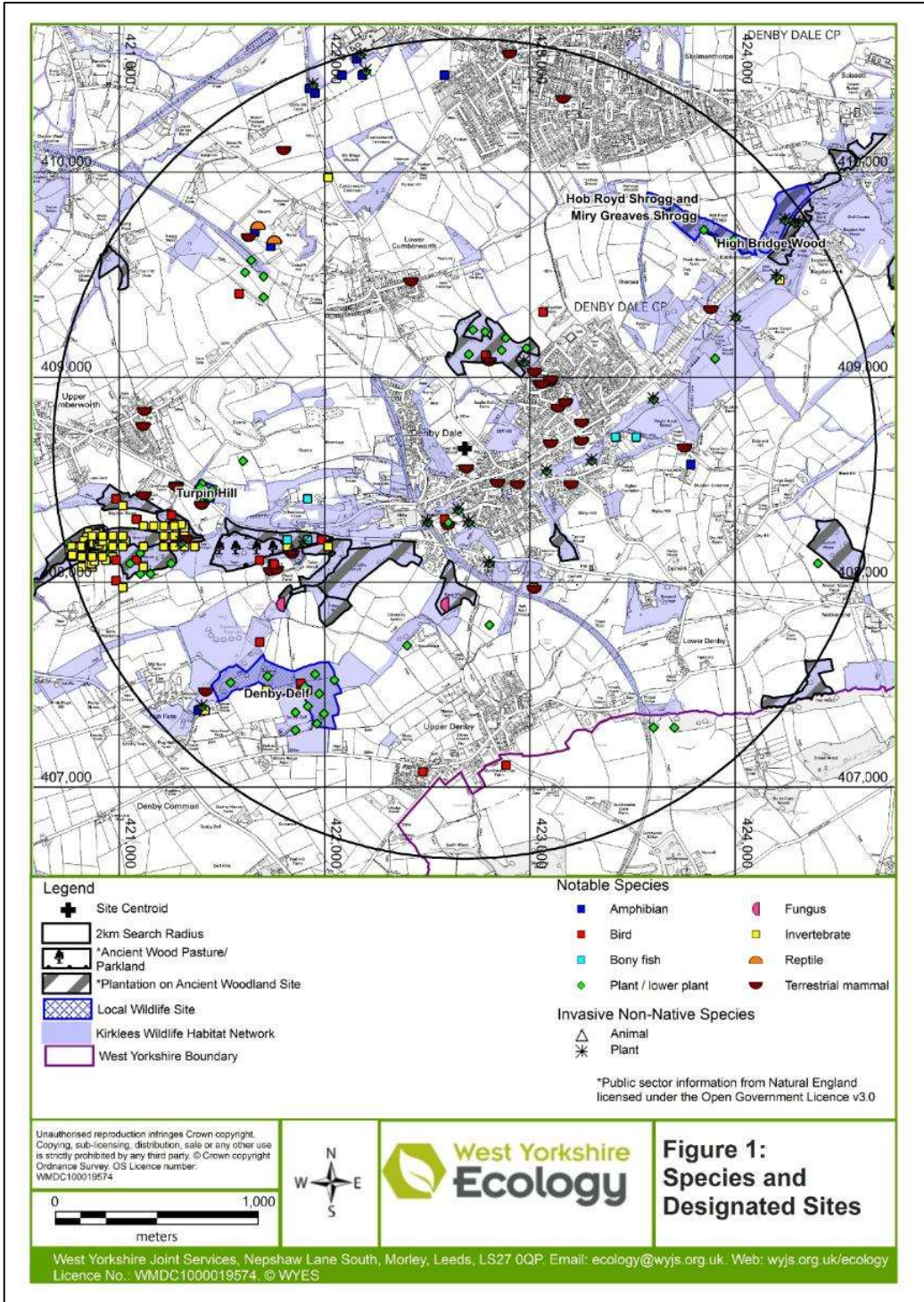
The plant species and their relative abundance within the habitats present on site are shown in Table A4.1 below.

**D** = Dominant, **A** = Abundant, **F** = Frequent, **O** = Occasional, **R** = Rare, **L** = Locally

**Table A4.1. Plant species recorded and their relative abundance**

| common name        | Latin name                     | 828 | H1 | H2 |
|--------------------|--------------------------------|-----|----|----|
| Yorkshire fog      | <i>Holcus lanatus</i>          | A   |    |    |
| cocksfoot          | <i>Dactylis glomerata</i>      | O   |    |    |
| creeping bent      | <i>Agrostis stolonifera</i>    | LD  |    |    |
| common nettle      | <i>Urtica dioica</i>           | R   |    |    |
| spear thistle      | <i>Cirsium vulgare</i>         | R   |    |    |
| ragwort            | <i>Jacobaea vulgaris</i>       | F   |    |    |
| raspberry          | <i>Rubus idaeus</i>            | O   |    |    |
| rosebay willowherb | <i>Chamerion angustifolium</i> | O   |    |    |
| creeping thistle   | <i>Cirsium arvense</i>         | O   |    |    |
| strawberry         | <i>Fragaria × ananassa</i>     | O   |    |    |
| foxglove           | <i>Digitalis purpurea</i>      | O   |    |    |
| blackcurrant       | <i>Ribes nigrum</i>            | O   |    |    |
| rhubarb            | <i>Rheum rhabarbarum</i>       | O   |    |    |
| snapdragon         | <i>Antirrhinum majus</i>       | R   |    |    |
| Canadian fleabane  | <i>Conyza canadensis</i>       | R   |    |    |
| dandelion          | <i>Taraxacum officinale</i>    | R   |    |    |
| sedum sp.          | <i>Sedum sp.</i>               | R   |    |    |
| smooth sow-thistle | <i>Sonchus oleraceus</i>       | R   |    |    |
| sun spurge         | <i>Euphorbia helioscopia</i>   | R   |    |    |
| mint               | <i>Mentha sp.</i>              | R   |    |    |
| garden privet      | <i>Ligustrum ovalifolium</i>   |     | D  |    |
| bramble            | <i>Rubus fruticosus agg.</i>   | O   |    |    |
| rose               | <i>Rosa sp.</i>                | R   |    |    |
| alder buckthorn    | <i>Frangula alnus</i>          | R   |    |    |
| French hydrangea   | <i>Hydrangea macrophylla</i>   |     | R  |    |
| Leyland cypress    | <i>Cupressus × leylandii</i>   |     |    | D  |
| rowan              | <i>Sorbus aucuparia</i>        |     | R  |    |

# Appendix 5. Location of Designated Sites Within 2 km



## Appendix 6. Bat Survey Results

Building descriptions, and the features suitable for use by roosting bats are shown in the table below.

|                                                    |                                                                                      |                                                                                                                                                                                                                                                                                         |
|----------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Building 1</b><br><br>Low bat roost suitability |    |                                                                                                                                                                                                                                                                                         |
|                                                    | Description                                                                          | Bungalow with a hipped pitched roof with dormers at the front and rear. The roof was covered with Welsh slate and angle-cap ridge tiles and was backed with a breathable roofing membrane with wooden sarking below. The brick walls had been rendered and the windows had uPVC frames. |
|                                                    | Features of bat potential                                                            | Gap on wall top (a), gap between slates (b).                                                                                                                                                                                                                                            |
|                                                    | Bat evidence                                                                         | None recorded.                                                                                                                                                                                                                                                                          |
| <b>Building 2</b><br><br>Low Bat Roost Suitability |  |                                                                                                                                                                                                                                                                                         |
|                                                    | Description                                                                          | Garage constructed from concrete blocks with a two-pitched roof covered by interlocking concrete tiles. The tiles were backed by Type 1F bitumen-coated roofing felt. The building had a first floor with a partially vaulted ceiling. The windows had wooden frames.                   |
|                                                    | Features of bat potential                                                            | Bird box (c), air vent (d), and gap into the soffit (e).                                                                                                                                                                                                                                |
|                                                    | Bat evidence                                                                         | None recorded.                                                                                                                                                                                                                                                                          |

|                                                              |                                                                                    |                                                                                                                       |
|--------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| <b>Building 3 -5</b><br><br>Negligible Bat Roost Suitability |  |                                                                                                                       |
|                                                              | Description                                                                        | Series of three wooden sheds with pitched roofs covered with roofing felt. The single pane windows had wooden frames. |
|                                                              | Features of bat potential                                                          | None recorded.                                                                                                        |
|                                                              | Bat evidence                                                                       | None recorded.                                                                                                        |

**Figure A5.1. Potential bat roost features identified during the inspection**



19<sup>th</sup> August 2025 – dusk emergence survey

The temperature at the beginning of monitoring was 14 °C, with eight oktas cloud cover and a light air (Beaufort Scale 1). By the end of the survey, the temperature had fallen to 13 °C, the wind increased to a light breeze (Beaufort Scale 2), and cloud cover remained at eight oktas. No rain was recorded throughout. Sunset was at 20:26.

The light levels within the site were low, with no external lighting present on the structures and relatively few light sources within the immediate surrounding area (Plate A6.1).

**Plate A6.1. Photo of the building taken from Surveyor Position 3 at 21:34 (68 minutes after sunset)**



Bat activity was relatively low. The first bat recorded was a distant common pipistrelle at 20:46 (20 minutes after sunset), followed by a noctule at 20:49 (22 minutes after sunset). A *Myotis* bat species was recorded later in the survey at 21:30 (64 minutes after sunset). No bats emerged from the building. The activity recorded comprised occasional commuting and brief foraging passes by common pipistrelle, with isolated passes by noctule and *Myotis* species.

In accordance with best practice and the requirements of bat licensing, bat records collected during surveys are supplied to the relevant biological record centres and bat groups. The records to be supplied in accordance with this survey are shown below. House names/numbers are not given out by record holding organisations except under very particular circumstances. Please let us know if you object to the distribution of these records.

| Date                         | Species                   | Site Address                        | OS Grid Reference | Notes               |
|------------------------------|---------------------------|-------------------------------------|-------------------|---------------------|
| 19 <sup>th</sup> August 2025 | Common pipistrelle        | 274<br>Cumberworth Lane, Denby Dale | SE 22683 08652    | Foraging (one bat)  |
| 19 <sup>th</sup> August 2025 | <i>Myotis</i> bat species | 274<br>Cumberworth Lane, Denby Dale | SE 22683 08652    | Foraging (one bat)  |
| 19 <sup>th</sup> August 2025 | Noctule                   | 274<br>Cumberworth Lane, Denby Dale | SE 22683 08652    | Commuting (one bat) |

## Appendix 7. Roofing and Cladding Membranes

Standard roof membranes can cause the death of significant numbers of bats. Traditional bitumen coated roofing felt is recommended where roosting bats are expected to be present.

### The problem

Standard non-bitumen coated membranes (including almost all breathable membranes) used below roof slates and tiles present a significant problem for bats. Over time, strands are pulled away from the surface of these materials as bats crawl over them. These fuzzy strands are very strong and can tangle and trap bats, sometimes causing the death of bats over multiple years<sup>4</sup>.

One example we have encountered comprised a pipistrelle roost which formed in a building extension constructed in 2009. Over the course of just 13 years the roofing felt degraded to the extent that it trapped and killed more than 10 bats. Fortunately, the problem in this roost was identified and remedial work was undertaken to replace the roofing membrane in 2022.

### **Plate A7.1. Four dead pipistrelles tangled in breathable roofing membrane**



Although a new roof might be considered to lack potential bat access points, that is often not the case. Roofs covered with stone slates almost always have gaps large enough to be accessed by bats, this is often also the case where imitation stone slates are used. On older buildings the uneven roof timbers and/or building design also often results in gaps on wall tops and between slates. Even on new builds it is often possible for bats to access potential roosts via features such as dry verge capping. Some bats can access a space no wider than a biro pen, therefore it is not surprising that they can find their way into most buildings.

### Safe roofing membranes (and membranes behind cladding)

From a bat perspective, the best membrane option for areas where roosts are expected comprises traditional hessian-backed Type 1F bituminous felt. This product has been widely and safely used as a secondary weather barrier since approximately the 1950s/1960s. Wooden sarking has also been used for many decades and if

---

<sup>4</sup> Wearing S. Essah E., Gunnell K. & Bonser R. (2013) Double jeopardy: the potential for problems when bats interact with breathable roofing membranes in the United Kingdom. *Architecture and Environment*

appropriately treated, is safe for use in bat roosts. Wooden sarking also has the benefit of providing adding additional insulation and is usually breathable.

At the time of writing (and to our knowledge) two products have passed the 'snagging propensity' test; consequently these products are approved by Natural England for use in bat roosts. This test attempts to replicate the wear and tear which results from bats crawling over the membrane. The approved products are: TLX BatSafe<sup>5,6</sup> and SIGA Majcoat 350. Although approved, their long-term durability, particularly in larger bat roosts, remains unclear. Therefore we do not recommend that they are used for roosts with multiple bats, and particularly for large (maternity roosts). A third product, SIGA Majcoat 200 SOB Diffusion, passed the test for its upper surface only. This product should not be used in known bat roosts or locations where bat mitigation is to be installed. Although none of these products are considered to be as safe as traditional Type 1F bituminous felt, they may provide an option for roofs where future bat use cannot be ruled out, and a breathable solution is required.

#### Additional considerations

In recent years a fairly substantial proportion of the lofts we have surveyed which had existing breathable felt, were found to have been damaged by wasps (Plate A7.2). The wasps appear to have chewed holes in the felt and formed nests. This doesn't appear to be a problem associated with traditional bitumen coated roofing felt. Any holes within roofing felt are likely to significantly reduce its functionality as a secondary weather barrier. Where bats or birds come into contact with breathable roofing membranes, they can also damage it causing it to leak, they can also significantly reduce the breathability of the felt in that location.

#### **Plate A7.2. Damage to a breathable roofing membrane adjacent to a wasp nest**



Traditional bituminous Type 1F roofing felt is a non-breathable product and therefore ventilation is required. Sufficient ventilation can be usually be achieved, even in buildings with vaulted ceilings, however, some consideration during the design stage is required. Products to increase the ventilation within roofs where bituminous Type 1F felt has already been installed are also available.

<sup>5</sup> <https://www.gov.uk/government/publications/bats-apply-for-a-mitigation-licence#full-publication-update-history:~:text=Use%20of%20safe%20roofing%20membranes>

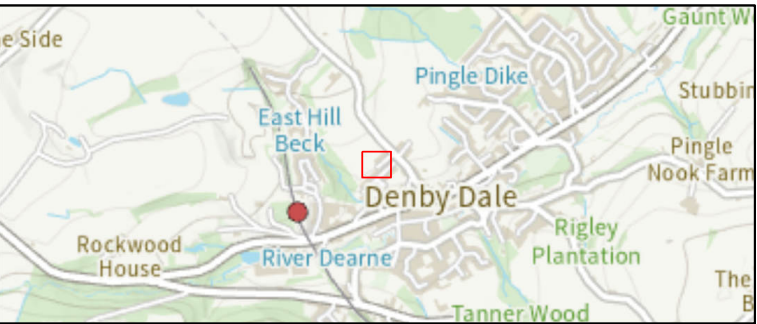
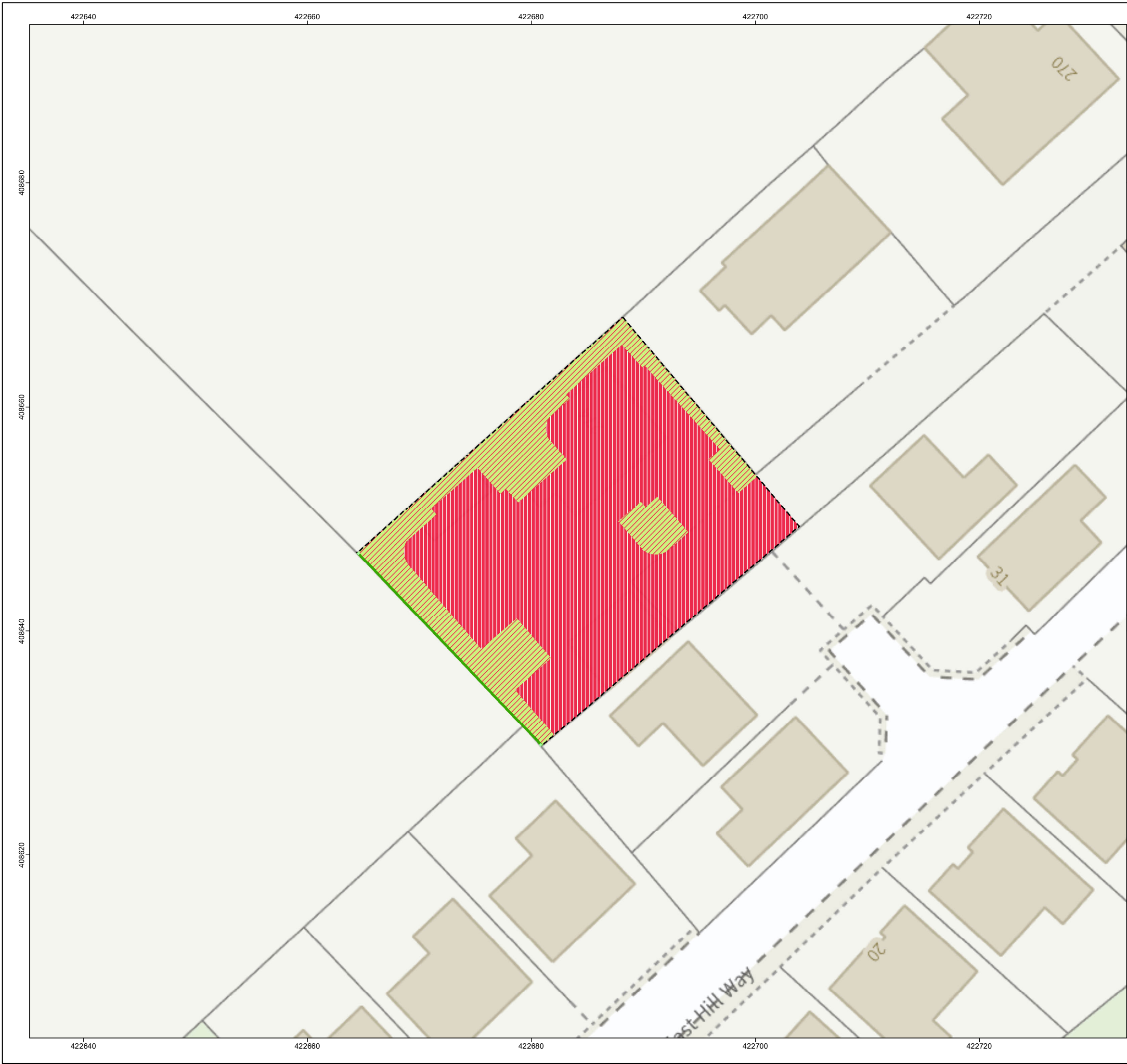
<sup>6</sup> TLX BatSafe requires all joints and cut edges to be taped in order to prevent the fraying of bare edges.

## Appendix 8. Biodiversity Net Gain Headline Results

The Biodiversity Net Gain Final Results show a negligible net gain Habitat Units (less than 0.01 unit, a 0.66 % gain), and a gain of 0.07 Hedgerow Units (a 258.96 % gain).

|                                                                                                          |                   |                |                |              |
|----------------------------------------------------------------------------------------------------------|-------------------|----------------|----------------|--------------|
| On-site baseline                                                                                         | Habitat units     | 0.04           |                |              |
|                                                                                                          | Hedgerow units    | 0.03           |                |              |
|                                                                                                          | Watercourse units | 0.00           |                |              |
| On-site post-intervention<br>(Including habitat retention, creation & enhancement)                       | Habitat units     | 0.04           |                |              |
|                                                                                                          | Hedgerow units    | 0.09           |                |              |
|                                                                                                          | Watercourse units | 0.00           |                |              |
| On-site net change<br>(units & percentage)                                                               | Habitat units     | 0.00           |                |              |
|                                                                                                          | Hedgerow units    | 0.07           |                |              |
|                                                                                                          | Watercourse units | 0.00           |                |              |
|                                                                                                          |                   |                |                |              |
| Off-site baseline                                                                                        | Habitat units     | 0.00           |                |              |
|                                                                                                          | Hedgerow units    | 0.00           |                |              |
|                                                                                                          | Watercourse units | 0.00           |                |              |
| Off-site post-intervention<br>(Including habitat retention, creation & enhancement)                      | Habitat units     | 0.00           |                |              |
|                                                                                                          | Hedgerow units    | 0.00           |                |              |
|                                                                                                          | Watercourse units | 0.00           |                |              |
| Off-site net change<br>(units & percentage)                                                              | Habitat units     | 0.00           |                |              |
|                                                                                                          | Hedgerow units    | 0.00           |                |              |
|                                                                                                          | Watercourse units | 0.00           |                |              |
|                                                                                                          |                   |                |                |              |
| Combined net unit change<br>(Including all on-site & off-site habitat retention, creation & enhancement) | Habitat units     | 0.00           |                |              |
|                                                                                                          | Hedgerow units    | 0.07           |                |              |
|                                                                                                          | Watercourse units | 0.00           |                |              |
| Spatial risk multiplier (SRM) deductions                                                                 | Habitat units     | 0.00           |                |              |
|                                                                                                          | Hedgerow units    | 0.00           |                |              |
|                                                                                                          | Watercourse units | 0.00           |                |              |
|                                                                                                          |                   |                |                |              |
| FINAL RESULTS                                                                                            |                   |                |                |              |
| Total net unit change<br>(Including all on-site & off-site habitat retention, creation & enhancement)    | Habitat units     | 0.00           |                |              |
|                                                                                                          | Hedgerow units    | 0.07           |                |              |
|                                                                                                          | Watercourse units | 0.00           |                |              |
| Total net % change<br>(Including all on-site & off-site habitat retention, creation & enhancement)       | Habitat units     | 0.66%          |                |              |
|                                                                                                          | Hedgerow units    | 258.96%        |                |              |
|                                                                                                          | Watercourse units | 0.00%          |                |              |
| Trading rules satisfied?                                                                                 | Yes ✓             |                |                |              |
|                                                                                                          |                   |                |                |              |
| Unit Type                                                                                                | Target            | Baseline Units | Units Required | Unit Deficit |
| Habitat units                                                                                            | 10.00%            | 0.04           | 0.04           | 0.00         |
| Hedgerow units                                                                                           | 10.00%            | 0.03           | 0.03           | 0.00         |
| Watercourse units                                                                                        | 10.00%            | 0.00           | 0.00           | 0.00         |

## **Appendix 9. UK Habitats Plan Showing The Proposed Site**



| Survey Information                                                                  |                                                             |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------|
|  | Site boundary (746.6m <sup>2</sup> )                        |
| UK Habitat Survey (Primary Habitats)                                                |                                                             |
|  | u1b - Developed land; sealed surface (550.6m <sup>2</sup> ) |
|  | 828 - Vegetated garden (196.0m <sup>2</sup> )               |
|  | h2a5 - Species-rich native hedgerow (23.9m)                 |

Source:  
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N

  
0 2.5 5 10  
Metres

PROJECT TITLE

274 CUMBERWORTH LANE, DENBY DALE

DRAWING TITLE

Figure 3. Proposed Habitat Plan

| VER | DATE     | REMARKS  | Drawn | Checked |
|-----|----------|----------|-------|---------|
| 1.1 | 08/09/25 | Proposed | MP    | GS      |

DRAWING NUMBER:

MIDDLETONBELLECOLOGY/274Cumberworth/Proposed

| SCALE | 1:325 | PLOT SIZE | A3 | DATUM | OSGB | PROJECTION | BNG |
|-------|-------|-----------|----|-------|------|------------|-----|
|-------|-------|-----------|----|-------|------|------------|-----|

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