# Coniston Farm, Staincross

## Preliminary Ecological Appraisal

## 14th June 2022

**Prepared by:**

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|---|---|---|---|---|
| Purpose and Description | Originated | Checked | Reviewed | Date |
| For Planning | P Middleton MCIEEM | R Bell MCIEEM | Greg Slack MCIEEM | 14/06/22 |

**Disclaimer**

| Site Name<br>Coniston Farm | Location<br>Coniston Road, Staincross, Barnsley |
|---|---|
| **Local Authority**<br>Barnsley Metropolitan Borough Council | **Grid Reference**<br>SE 32032 11023 |
| **Surveyor**<br>Peter Middleton MCIEEM | **Date of Survey**<br>02/03/2021 |
| **National Character Area**<br>The Nottinghamshire, Derbyshire and Yorkshire Coalfield (NCA 38) | **Designation of Site**<br>None |

| |
|---|
| **UK Primary Habitats**<br>g3c Other neutral grassland, g4 Modified grassland, g Grassland (with secondary codes 16, 17), h2a Hedgerow (priority habitat), h2b Other hedgerows, u1b5 Buildings, u1b6 Other developed land, u1c Artificial unvegetated, unsealed surface. |
| **Secondary (habitat) Codes**<br>10, Scattered scrub, 11 Scattered trees, 16 Tall herb, 17 Ruderal/ephemeral, 48 Non-native, 73 Bare ground, 112 Ruined building, 132 Nutrient-poor substrate, 133 Nutrient-enriched substrate.1160 Introduced shrub. |
| **Protected/Notable Species, Constraints on Site**<br>Nesting birds, hedgerows |
| **HPIs and SPIs under NERC Act 2006**<br>Hedgerows, house sparrow |
| **Barnsley BAP**<br>Hedgerows, house sparrow |

## Contents

# 1. Summary

1.1.1 The preliminary ecological appraisal for land and buildings at Coniston Farm, Staincross was commissioned by architect Mark Brotherton on behalf of the clients R & S Senior on 10th March 2021. The surveys were commissioned to inform a planning application for a small residential development comprising five dwellings. The field survey was undertaken on 14th June 2021.

1.1.2 Site habitats are considered to be of importance to nature conservation at the site level only. The site is not considered to be of importance to any species or species group at greater than the site level.

1.1.3 The proposed landscaping plan will comprise the creation of 0.44ha of species rich wildflower meadows which will be appropriately managed. In addition, 0.13ha of mixed native scrub will be planted along the northern boundary and there will be 0.18ha of domestic gardens. The proposed habitat creation could be secured through a planning condition requiring a Landscape and Ecological Management Plan (LEMP), to be produced.

1.1.4 In addition to the mitigation and compensation detailed above, enhancement recommendations include:

- The new development should include two wall-integrated bat boxes, situated high on south or west facing gables and away from artificial light spill. Boxes should not be located directly above windows or doors.
- House sparrow terraces should be installed integral to the fabric of the buildings or externally mounted under soffits.
- Dwelling boundaries and fences should not impede the free movement of hedgehogs throughout the site.

1.1.5 The scheme will not result in impacts of greater than site level importance to nature conservation. In order to further reduce scheme impacts and to ensure the scheme maximises potential benefits to nature conservation, it is recommended that mitigation and enhancement measures detailed in Sections 6.3 and 6.4 are adopted.

1.1.6 It is calculated the post-development the site will have an ecological value of 4.18 Habitat Units, resulting in a net gain of Habitat Units on site of 1.18 Habitat Units (+39.60% of the existing site's ecological value).

## 2. Introduction

2.1.1 This preliminary ecological appraisal of land and buildings at Coniston Farm, Staincross was commissioned by the architect Mark Brotherton on behalf of the client R & S Senior on 10th March 2021. The surveys were commissioned to inform a planning application for a small residential development. The field survey was undertaken on 14th June 2021.

2.1.2 The site consists of a former farm and complex of associated buildings together with a derelict single storey dwelling. The site is in a somewhat rural location on the northwest periphery of Staincross approximately 5km north-northwest of Barnsley town centre.

2.1.3 A previous Preliminary Ecological Appraisal of the site was undertaken in 2018, to inform a historic unsubmitted planning application (MBE, 2018). The habitats mapped for the Phase 1 Habitat Survey in 2018 have not changed, however, the red line boundary now does not include an occupied dwelling.

2.1.4 The purpose of this report is to present the findings of a desk study to identify existing records of protected and notable species, UK Habitat Classification survey, and nocturnal bat surveys. The work was completed to determine the potential for, or presence of, protected and notable species and habitats.

2.1.5 An appended map of the site shows the habitats present. Where impacts can be confidently determined, recommendations in relation to avoiding, mitigating and compensating for these impacts are included in this report, together with biodiversity enhancement recommendations.

2.1.6 Key legislation relating to designated sites and protected species and habitats is presented in Appendix 3. The implications of legislation are detailed in the body of the report where necessary.

## 3. Site Description

3.1.1 The site is accessed at the end of Coniston Lane at Staincross, Barnsley. It consists of a former farm comprising a derelict dwelling and a complex of large agricultural buildings and other outbuildings. The site of approximately 1.13ha comprises several habitats including neutral grassland, modified grassland, bare ground, tall herb, scattered scrub and trees and boundary hedgerows.

3.1.2 Land adjacent to the site to the south, west and north consists of arable, with residential properties and associated gardens to the east. Beyond the arable field to the west is a relatively large woodland block, whilst further north beyond the arable field is a housing estate, with the large conurbation of Staincross and Mapplewell further east (see Figure 1).

3.1.3 The site falls within National Character Area (NCA) 38: The Nottinghamshire, Derbyshire and Yorkshire Coalfield. This 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.

3.1.4 The soils in the area comprise freely draining slightly acid loamy soils.

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


# 4. Methodology

## 4.1 Data Consultation

4.1.1 Barnsley Biological Records Centre (BBRC) were contacted in 2018 in relation to a previous site survey (MBE, 2018) to request the following information for locations within a 1.5km radius of the site:

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

4.1.2 The data request was not renewed as the author has knowledge of new Local Wildlife Sites in the area. Furthermore, findings of the 2018 surveys, notably bats, are included in this report.

4.1.3 A search of the Multi-Agency Geographical Information for the Countryside (MAGIC) website was undertaken to determine the following:

- 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 14th June 2021 using the UK Habitat Classification survey methodology (Butcher *et al*., 2020) by Peter Middleton. The surveyor is a competent botanist who was a major contributor to the South Yorkshire Plant Atlas (Wilmore *et. al*., 2011). He has more than 20 years' experience of undertaking botanical surveys including appraisals of Local Wildlife Sites (LWSs) in Barnsley, Doncaster and East Yorkshire, as well as National Vegetation Classification (NVC) survey in the Yorkshire Dales National Park.

4.2.2 Notable, rare or scarce plant species were highlighted if present. Evidence of protected species or species of nature conservation importance was recorded where present at the time of survey. Species recorded are included within the report as appropriate. Information is presented on the UK Habitat Classification plan, using Secondary Codes and Target Notes where appropriate to identify particular features of interest, where appropriate.

4.2.3 Aerial photographs (Google Earth) were studied to place the site in its wider context and to look for ecological features that would not be evident on the ground during the walkover survey. This was particularly useful for identifying wildlife corridors and ponds but because the latter are often not apparent on aerial photographs, OS 1:25 000 scale maps were also used.

4.2.4 Habitats of Principal Importance (HPIs) and Species of Principal Importance (SPIs) are included on Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 were noted together with priority species and habitats as included on the Local Biodiversity Action Plan (LBAP).

Nocturnal bat surveys

4.2.5 Previous nocturnal surveys at the site were undertaken by Middleton Bell Ecology in 2018, but given the delay in submission of the application, there was a need for them to be updated.

4.2.6 The following personnel conducted the update nocturnal surveys:

- Peter Middleton and Carl Dixon

4.2.7 The following activities were carried out in compliance with relevant Bat Survey Guidelines (Collins 2016):

- A dusk emergence survey covering B4 on 28th June 2021.
- A dusk emergence survey covering B2 on 5th July 2021,

4.2.8 In each case the survey continued from 15 minutes prior to sunset until 1.5 hours after this time. Survey works covered all sections of the surveyed buildings.

4.2.9 The following equipment was used during the surveys:

- Wildlife Acoustics EM Touch bat detectors and iPad/iPod recorders and Canon XA10 infra-red lit video cameras.

## 4.3 Methods of Assessment

4.3.1 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) for the scheme were assigned levels of importance for nature conservation. The highest level is international, then decreasing in order of importance through national, regional, county, local and lastly site.

## 4.4 Biodiversity Calculation

4.4.1 Biodiversity calculations provide a numeric method of calculating biodiversity gains and losses as a result of a proposed development.

4.4.2 The Biodiversity Metric 3.1 (Panks *et al*., 2022) is used to calculate the biodiversity impact of this scheme. 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'. Biodiversity Metric 3.1 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 limitations to effective ecological survey works were encountered.

# 5. Ecological Baseline

## 5.1 Data Consultation

5.1.1 An area of land known as Mapplewell Tip, has been recently accepted by the Local Wildlife Site (LWS) partnership for non-statutory designation; this has occurred since the original 2018 data consultation. This new LWS, included in Table 1, has also been added to the 2018 designated sites plan included in Appendix 4.

**Table 1. Designated sites**

| Designation | Name | Interest | Distance from site |
|---|---|---|---|
| Local Wildlife Site (LWS) | Mapplewell Tip | Coal spoil/heath | 1.3km south |

5.1.2 There are four ancient semi natural woodlands within a one-kilometre radius of the site, the nearest is Husband Wood, which is 110m northwest of the application site.

5.1.3 Records of protected and notable species obtained are discussed in the species sections of the results.

## 5.2 Field Survey

UK Habitat Classification Survey

5.2.1 The arrangement of site habitats is shown on the UK Habitat Classification plan in Appendix 1, whilst a field survey botanical species list is provided in Appendix 2.

5.2.2 The site is considered to be of no more than site level importance to nature conservation for the habitats supported. The site is not considered to be of importance to any species or species groups at greater than the site level.

5.2.3 A detailed description of the site habitats and the site's potential to support protected and notable species is provided below.

*Habitats*

g3c Other neutral grassland

5.2.4 There is an area of other neutral grassland on site, which is considered to be in moderate condition as it meets four of the condition criteria for this habitat presented in the Defra Metric 3.1 Technical Supplement (Panks *et al.,* 2022) (Plate 1).

**Plate 1. Other neutral grassland**

Yorkshire fog *Holcus lanatus* is abundant together with frequent meadow buttercup *Ranunculus acris* and red clover *Trifolium pratense.* Species found occasionally in the sward include soft brome *Bromus hordeaceus*, perennial ryegrass *Lolium perenne*, timothy *Phleum pratense*, cocksfoot *Dactylis glomerata*, white clover *Trifololium repens*, meadow grasses *Poa*, Dandelion *Taraxacum officinale* agg, creeping buttercup *Ranunculus repens*, cow parsley *Anthriscus sylvestris*, broad leaved dock *Rumex obtusifoilius*, common sorrel *Rumex acetosa*, ribwort plantain *Plantago lanceolata*, creeping thistle *Cirsium arvense* and tufted vetch *Vicia cracca* (Plate 1). The grassland fails two condition criteria because: sward height is not varied, and there are less than nine species per metre square.

g4 Modified grassland

5.2.5 An area of modified grassland adjacent to the northern boundary of the site shows signs indicative of nutrient enrichment as undesirable species dominate including cow parsley and nettle *Urtica dioica*. Frequent or occasional species include common couch *Elytrigia repens*, broad leaved dock, cocksfoot, meadow-grasses and cleavers *Galium aperine*. This grassland is considered to be in moderate condition as it meets five of the seven criteria for this habitat type (low distinctiveness grassland) (Panks *et a*l., 2022) (see Plate 2). The criterion the grassland fails are; less than six species per metre square, sward height is varied.

**Plate 2. Modified grassland dominated by tall herb adjacent to northeast boundary of site**

g grassland (ruderal/ephemeral),

5.2.6 At the periphery of the bare ground, adjacent to the buildings, there are linear areas of grass and herbs containing a much larger assemblage of vascular plant species than elsewhere on site (see Plate 2). (see Appendix 3). The same habitat is also present to the rear and sides of Buildings 10, 11 & 12.

5.2.7 Within this habitat there are a scattering of sapling trees (secondary code 10) in all areas within the western section of the site. Species present, include frequent elder *Sambucus nigra* occasional willow *Salix* and cherry *Prunus avium,* plus rarely occurring pedunculate oak *Quercus robur.* There are also several trees in excess of 5m (secondary code 11) towards the west end of the site, all of which are immature. Species present, include hybrid willow *Salix*, eucalyptus *Eucalyptus*. elder and hawthorn *Crataegus monogyna* (see Plate 6). These areas are considered to be in poor condition as there is much bare ground, combined cover of species is indicative of sub-optimal condition, it does not have the appearance of grassland and the sward height is not varied (Panks *et al*., 2022).

**Plate 3. Periphery vegetation (ruderal and tall herb)**

h2a Hedgerows

5.2.8 There is approximately 195m of intact hedgerow along the southern and eastern boundaries and adjacent to the access road. These hedges which are <1.5m high and <1.5m wide are dominated by hawthorn together with occasional elder and/or hazel *Corylus avellana* (see Plate 4). The hedgerow meets 6 of 8 condition assessment criteria and is therefore considered to be in good condition. Additionally, there is a short section of tall Leyland cypress *Cupressocyparis leylandii* hedge (h2b) associated with the garden of the main dwelling.

**Plate 4. Southern and eastern boundary hedges (October 2021)**

5.2.9 All native hedgerows on site qualify as a Habitat of Principal Importance (HPI) under Section 41 of the NERC Act 2006 and also as habitats included on the Barnsley BAP. The native hedgerows are however species poor (less than five woody species in representative 30m length) and do not classify as Important under the ecological criteria of the Hedgerow Regulations (1997).

h3h Mixed scrub & h3d Bramble scrub

5.2.10 On the northern boundary is an area of mixed scrub containing hawthorn, elder and willow. Also surrounding a derelict garage (TN2) is a small area of bramble scrub (see Appendix 1).

u1b5 Buildings

5.2.11 Twelve buildings occupy the site (11 within redline boundary) including a semi derelict single-story dwelling, large agricultural buildings and other outbuildings. The buildings are discussed in more detail in the species section of this report.

**Plate 5. Buildings & Other developed land (concrete)**

u1b6 Other developed land

5.2.12 Near to the buildings are areas of hard surface comprising concrete (see Plate 5 & Appendix 1).

**Plate 6. Unvegetated unsealed surface & scattered trees**

u1c Artificial unvegetated, unsealed surface

5.2.13 Bare ground constitutes a large proportion of the site. These areas extend from the end of the concrete access road at the east end of the site to a relatively large area of concrete between Buildings 8, 9 & 10. At the periphery of the bare ground adjacent to buildings there are linear areas of grass and herbs

*Species and species groups*

Amphibians

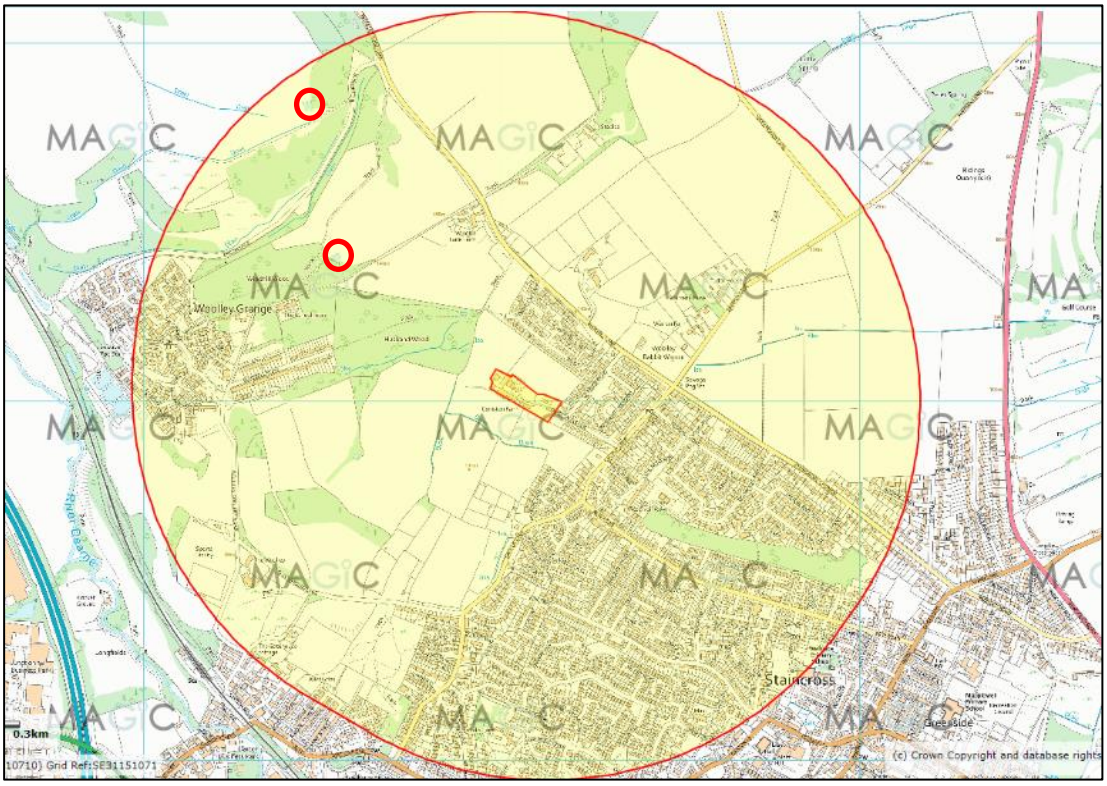
5.2.14 No Great Crested Newt (GCN) *Triturus cristatus* record was provided by BBRC for a location within a 1.5km radius of the site.

5.2.15 No GCN EPS mitigation licences has been issued for any locations within a 2km radius of the site. No GCN records are included in the GCN Pond Surveys 2017-2019 dataset, for locations within 2km of the site.

5.2.16 Two ponds were identified during the pond search for locations within 1km of the application site (Figure 2). Both ponds are located to the northwest of the site and are separated from it by distances of more than 500m. The nearest pond is 530m northwest of the site. It is separated from the site by extensive woodland that provides optimum terrestrial habitat for GCN.

5.2.17 Taking into account the lack of records, the distance from the nearest pond and habitats between the pond and the site, GCN are considered highly unlikely to be a receptor to the proposed scheme.

**Figure 2. 1km pond search, ponds, as indicated by red circles.**




Badger

5.2.18 Badger *Meles meles* records were provided by BBRC for locations within a 1.5km radius of the site. No badger setts or other evidence of use were found on site. Whilst no evidence of use was recorded, it is considered possible that badger may make incidental use of the site as part of a wider foraging area.

Bats

*Historical records*

5.2.19 BBRC provided three records relating to either an unidentified pipistrelle *Pipistrellus* species, or an unidentified bat species, for locations within a 2km radius of the site. The nearest record to site (unidentified bat), comprised a bat found under a ridge tile in a location 160m north-northeast of the site in 2005.

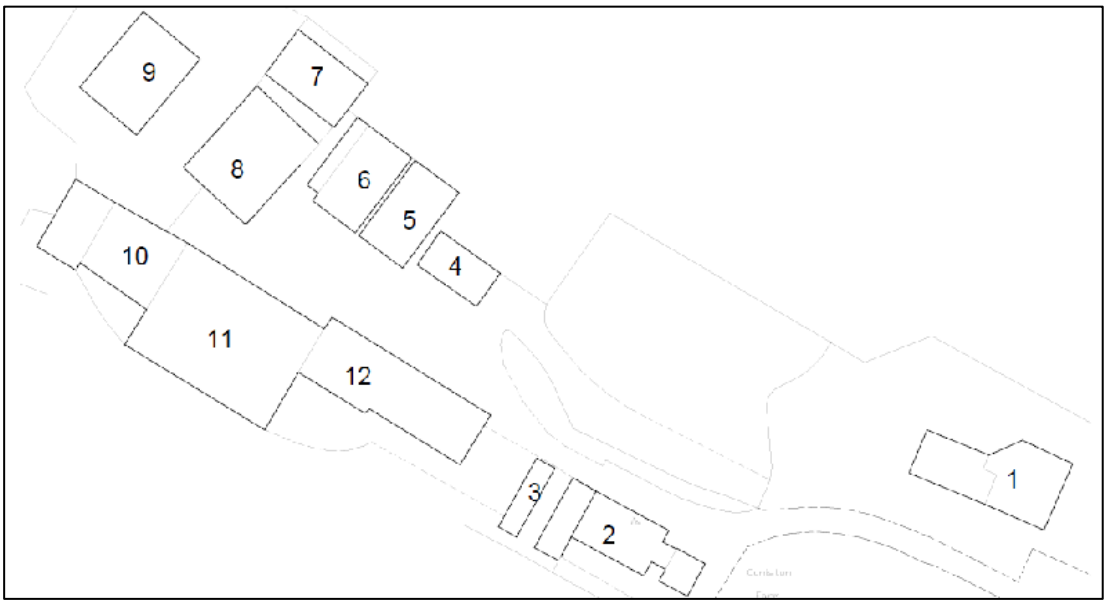
5.2.20 Buildings 1, 2 & 4 were included in the nocturnal surveys undertaken in 2018. Two day roosts used by a maximum count of one common pipistrelle were identified in B1 (outside the site, see Figure 3 & Appendix 1), this now constitutes the nearest record to site.

5.2.21 No historical bat EPS mitigation licences have been issued for locations within 2km of the surveyed building.

*Buildings – bat roost potential*

5.2.22 Twelve buildings are present at Coniston Farm (Figure 3), two dwellings (only one of which is included in the red line boundary), several large agricultural buildings and a number of other outbuildings. A description of Buildings 2 – 12, and their potential to support roosting bats, is provided below. Building 1 (dwelling) will be retained and is now outside the red line boundary of the scheme, so has not been considered further.

**Figure 3. Building layout**




Building 2

5.2.23 Building 2 is a rectangular shaped, single storey, brick-built dwelling with a pitched concrete tile roof. The building has wood framed single pane windows, wood doors, and wood fascia and barge boards throughout. The roof is supported by prefabricated roof trusses, there is Type 1F felt beneath the tiles and 100mm of glass fibre insulation on the ceiling.

5.2.24 Several gaps under the soffits at the gables that potentially allow access to the wall top are the only potential bat roost features displayed.

**Plate 7. Building 2**

5.2.25 No signs of bats were found, nevertheless, this building displays a low number and diversity of potential bat roost features and was considered to offer low bat roost potential.

Building 4

5.2.26 This building is used for housing chickens, it is rectangular in shape with a pitched corrugated asbestos-cement sheet roof. The walls are solid with brick on the outside and concrete blocks on the inside. The inside is open to the underside of the roof covering.

5.2.27 The walls lack features to accommodate bats. However, an asbestos roof verge capping above the gables has a gap between the capping and brick wall with potential for bats to access the wall top for roosting purposes.

5.2.28 No signs of bats were found, nevertheless, this building displays a low number and diversity of potential bat roost features and was considered to offer low bat roost potential.

**Plate 8. Building 4**

**Plate 9. Large steel framed agricultural buildings (2018)**

Remainder of buildings (B3, B5, B6, B7, B8, B9, B10, B11, B12)

5.2.29 The remainder of the buildings comprise either large modern steel-framed agricultural buildings with asbestos-cement sheet roofs (see Plate 9), open-sided timber-framed agricultural buildings (see Plate 10) or timber clad single storey outbuildings (a cattery) with pitched asbestos cement roofs (see Plate 11).

5.2.30 All these buildings lack features with potential to accommodate roosting bats and are considered to offer negligible bat roost potential.

**Plate 10. Timber framed agricultural building**

**Plate 11. Outbuildings formerly used as cattery**

*Trees – bat roost potential*

5.2.31 There are no trees on site that display features with potential to support roosting bats.

*Other structures*

5.2.32 There are two derelict single skin asbestos sheet garages south of the site entrance road, adjacent to the neutral grassland (Target note 2). One is entirely covered in introduced shrub. Both offer no more than a negligible level of bat roost potential (see Plate 12).

**Plate 12. Asbestos garages**

*Habitat assessment (bats)*

5.2.33 The site is situated in a semi-rural location on the periphery of Staincross and whilst there is optimum bat foraging habitat further to the west and north, the site itself provides poor bat foraging habitat.

*Nocturnal surveys*

5.2.34 The results of previous nocturnal surveys undertaken at Coniston Farm in 2018 are presented in Appendix 8.

5.2.35 **Dusk survey B4, 28th June 2021** – (Sunset 21:38) – The temperature at the beginning of monitoring was 13ºC with a very light Beaufort Scale Force 1 north-westerly wind and 100% cloud. The conditions remained largely the same throughout the survey.

5.2.36 The first bat to be recorded comprised an overhead noctule, observed at 22:05. Single common pipistrelle bats were recorded foraging intermittently from 22:13. No bats emerged from the building being monitored.

5.2.37 **Dusk survey B2, 5th July 2021** – (Sunset 21:37) – The temperature at the beginning of monitoring was 16ºC with a very light Beaufort Scale Force 1 south easterly wind and 100% cloud. The temperature decreased to 15ºC by the end of monitoring and the other conditions remained the same.

5.2.38 No bats emerged from the surveyed building. The first bat to be recorded was a common pipistrelle at 21:50, followed by a noctule which was foraging overhead for approximately eight minutes. Single common pipistrelle bat passes were record occasionally thereafter.

*Summary and evaluation of building survey findings*

5.2.39 No bats were found roosting in the surveyed buildings during the preliminary daytime assessment and there were no signs of bat occupation. Of the 11 buildings subject to the planning application, only two display features with potential to accommodate roosting bats. Buildings 2 & 4 display a low number and diversity of roost features which results in an assessment of low bat roost potential. The nocturnal surveys further demonstrated the probable absence of roosting bats from site buildings.

Birds

5.2.40 House sparrow *Passer domesticus* and a small flock of linnets *Carduelis cannabina* were recorded on site, the latter at the site's boundary. Both these birds are species of principal importance, and they are red listed species on the Birds of Conservation Concern list (Eaton *et al.,* 2021).

5.2.41 The only other bird species recorded was robin *Erithacus rubecula*. The list is not exhaustive, and several other common resident species are likely to inhabit the site. House sparrow and robin are likely to nest on site whilst linnet is unlikely to nest on site. The site is considered to be of no more than site level importance to birds as house sparrows are abundant in the wider area.

Invasive species

5.2.42 Wall cotoneaster *Cotoneaster horizontalis* was found on site (TN1), This species is invasive and included on Schedule 9 of the Wildlife & Countryside Act 1981 (as amended). It is illegal to plant or facilitate the spread of this species in the wild.

Invertebrates

5.2.43 Considering the ubiquitous nature of habitats present on site, it is considered unlikely that a notable species assemblage would be present.

Hedgehog

5.2.44 One hedgehog *Erinaceus europaeus* record was provided by BBRC for a location within a 1.5km radius of the site. This species was recorded in 2012 from a location 500m east of the site. The site would offer some appeal to this species given adjacent habitats comprise arable and domestic gardens.

Plants

5.2.45 The peripheral ephemeral vegetation which has become established on previous unvegetated, unsealed surface does support a number of less common species of vascular plants. However, with the exception of viper's bugloss, no notable or rare species were recorded during the survey. The owner of the site is a beekeeper, and he is known to have sown wildflowers on site, therefore, the occurrence and provenance of this species is in doubt.

Reptiles

5.2.46 A recent data search provided by BBRC for a nearby site resulted in one common lizard *Zootoca vivipara* record collected in 2019 from a location 1km east of this site. The site does offer some appeal for this species but considering the lack of connectivity

with suitable habitats elsewhere, reptiles are not considered likely to be a receptor to the proposed scheme.

### 5.3 Biodiversity Calculation

5.3.1 The existing site's value as calculated by the Biodiversity Metric 3.1 tool is 3.0 Habitat Units and 0.95 Hedgerow Units (Appendix 5).

## 6. Assessment

### 6.1 Proposals

6.1.1 The proposed development will result in the land-take of land comprising largely building, hard surface and bare ground.

6.1.2 The assessment of impacts is based upon the Proposed Biodiversity Layout. Drawing no 2062SK202 May 2022. Fox Architecture & Design.

### 6.2 Assessment of Impacts

Designated sites

6.2.1 No impacts are anticipated upon designated sites due to the nature of the development and the distance of designated sites from the application area.

Habitats

6.2.2 Habitats within the red line boundary that will be lost as a result of the proposed development comprise largely buildings and hard surface, together with smaller areas of grassland. The impact associated with the loss of these habitats is considered to be of site level importance to nature conservation.

6.2.3 The development risks damage to the root systems or stems of site trees and hedgerows to be retained as a result of construction works.

Species

*Hedgehogs*

6.2.4 Boundary fences of proposed new dwellings are considered likely to impede the free movement of hedgehogs throughout the site.

*Bats*

6.2.5 Survey works have shown the probable absence of roosting bats and the site is considered to comprise largely suboptimal bat foraging habitat. For this reason, scheme impacts on bats are likely to be minimal.

*Birds*

6.2.6 If active nests are present in scrub, trees and/or site buildings at the time of site clearance, then damage to or the destruction of nests is a possibility. Nesting birds are subject to strong legal protections as outlined in Appendix 3. The appeal of the site to

birds for both foraging and nesting will increase as a consequence of the landscaping proposals if implemented.

## 6.3 Further Survey and Mitigation

Habitats

6.3.1 The owner of the site is a serious beekeeper who is keen to create species rich wildflower meadows on 0.44ha of the site along the southern boundary. A neutral grassland mix will be used with a single cut undertaken in late July or August. Arisings will be removed after cutting, to maximise the abundance of flowers to the benefit of both the client's bees and the site's wider biodiversity.

6.3.2 Approximately 0.128ha of mixed scrub will be created comprising native species including rowan *Sorbus aucuparia*, guelder rose *Viburnam opulus*, dogwood *Cornus sanguinea*, elder *Sambucus nigra*, spindle *Euonymus europaeus* and silver birch *Betula pendula*.

6.3.3 Existing trees and hedgerows at the boundaries will be retained. British Standard '5837 (2012): Trees in relation to design, demolition and construction', should be followed. Root Protection Zones (RPZ's) should be calculated and implemented to prevent harm to trees on-site or near the boundary. This should also apply to any trees out-with the site, up to 5 m from the boundary.

6.3.4 The proposed habitat creation could be secured through a planning condition requiring a Landscape and Ecological Management Plan (LEMP), to be produced.

Species

*Bats*

6.3.5 The proposed landscaping scheme and mixed native scrub planting will increase the appeal of the site to foraging bats. The quality of habitat on site and its appeal to foraging bats will increase with age as scrub matures.

*Birds*

6.3.6 Nesting birds are subject to legal protection (Appendix 3) which amongst other things makes it an offence to take, damage or destroy a bird nest. In the absence of mitigation, the removal of buildings, trees and scrub has potential to result in the destruction of active nests. Consequently, site clearance should not be undertaken during the bird nesting period (March-August (inclusive)) or this work should be proceeded by a nesting bird check, to be undertaken by an ecologist.

## 6.4 Enhancements

6.4.1 In accordance with the aims of planning policy NPPF: 15, it is suggested that the developer follows the recommendations detailed below. Please note that the enhancements have been informed by the results and findings of the field survey.

- The new development should include two wall-integrated bat boxes, situated high on south or west facing gables and away from artificial light spill. Boxes should not be located directly above windows or doors.

- Swift or house sparrow boxes should be installed integral to the fabric of all of the buildings or externally mounted under soffits.
- Dwelling boundaries and fences should be designed so that they do not impede the free movement of hedgehogs throughout the site.

## 6.5 Biodiversity Calculation

6.5.1 It is calculated the post-development the site will have an ecological value of 4.18 Habitat Units, resulting in a net gain of 1.18 Habitat Units on site (+ 39.60% of the existing site's ecological value). However, as a result of the development, -11% of hedgerow units will be lost which is compensated for by the creation of a substantial area of mixed scrub.

## 6.6 Conclusion and Residual Effects

6.6.1 Providing that new meadow and native scrub planting is created and managed appropriately then the scheme is expected to result in a significant biodiversity net gain of local importance to nature conservation. In addition, no impacts of greater than site level importance to nature conservation will result from the scheme. In order to maximise potential benefits to nature conservation, it is recommended that enhancement measures detailed in Sections 6.3 and 6.4 are adopted.

# 7. References


Butcher B, Carey P, Edmonds R, Norton L & J Treweek (2020) The UK Habitat Classification User Manuals Version 1.1 at http://www.ukhab.org/

Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines. The Bat Conservation Trust.

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.

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

Eaton MA, Aebischer NJ, Brown AF, Hearn RD, Lock L, Musgrove AJ, Noble DG, Stroud DA and Gregory RD (2021) Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and Isle of Man. British Birds.

MBE (2018) Coniston Farm, Preliminary Ecological Appraisal. Middleton Bell Ecology, Barnsley.

Panks S, White N, Newsome A, Potter J, Heydon M, Mayhew E, Alvarez M, Russell T, Scott SJ, Heaver M, Scott SH, Treweek J, Butcher B & D Stone (2022) Biodiversity metric 3.1: Auditing and accounting for biodiversity – User Guide. Natural England.

Wilmore GTD, Lunn J and Rodwell JS. (2011) The South Yorkshire Plant Atlas, Yorkshire Naturalist Union.

## Appendix 1. UK Habitat Classification Plan

## Appendix 2. Plant Species Recorded on Site

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

| Species | Common name | DAFOR Rating | Habitat |
|---|---|---|---|
| *Cerastium semidecandrum* | Little Mouse-ear | O | g 17 |
| *Ranunculus acris* | Meadow Buttercup | F | g3c |
| *Ranunculus repens* | Creeping Buttercup | O | g3c |
| *Trifolium pratense* | Red Clover | F | g3c |
| *Trifolium repens* | White Clover | O | g3c |
| *Phleum pratense* | Timothy | O | g3c |
| *Lolium perenne* | Perennial Ryegrass | O | g3c |
| *Holcus lanatus* | Yorkshire-fog | A | g3c |
| *Taraxacum officinale agg.* | Dandelion | O | g3c |
| *Rumex acetosa* | Common Sorrel | O | g3c |
| *Galium aparine* | Cleavers | O | g4 |
| *Elytrigia repens* | Common couch | F | g4 |
| *Rumex crispus* | Curled Dock | R | g3c |
| *Rumex obtusifolius* | Broad-leaved Dock | O | g3c, g4 |
| *Hordeum murinum* | Wall Barley | R | g3c, g4 |
| *Poa trivialis* | Rough meadow-grass | O | g3c, g4 |
| *Poa pratense* | Smooth meadow-grass | R | g3c |
| *Cuprocyparis leylandii* | Leyland Cypress | | h2b |
| *Crataegus monogyna* | Hawthorn | D | h2a |
| *Corylus avellana* | Hazel | R | h2a |
| *Sambucus nigra* | Elder | R | h2a |
| *Salix cinerea x caprea* | Hybrid willow | O | g17 |
| *Triticum aestivum* | Bread Wheat | R | g 17 |
| *Picris echioides* | Bristly Oxtongue | O | g 17 |
| *Geranium robertianum* | Herb-Robert | R | g 17 |
| *Mycelis muralis* | Wall Lettuce | O | g 17 |
| *Polygonum aviculare* | Knotgrass | R | g 17 |
| *??? chamomilla* | Scentless Mayweed | R | g 17 |
| *Eucalyptus* | Eucalyptus spp | R | g17 |
| *Dactylis glomerata* | Cock's-foot | O | g3c, g4 |
| *Epilobium tetragonum* | Square-stalked Willowherb | R | g 17 |
| *Bromus hordeaceus* | Soft brome | O | g3c, g4 |
| *Bromus sterilis* | Barren Brome | R | g 17 |
| *Chamerion angustifolium* | Rosebay Willowherb | R | g 16 |
| *Verbascum thapsus* | Great Mullein | O | g 17 |
| *Urtica dioica* | Common Nettle | O | g4 |
| *Leucanthemum vulgare* | Oxeye Daisy | R | g 17 |
| *Pentaglottis sempervirens* | Green Alkanet | R | g 17 |

| Species | Common name | DAFOR Rating | Habitat |
|---|---|---|---|
| *Tanacetum vulgare* | Tansy | R | g 17 |
| *Plantago lanceolata* | Ribwort Plantain | O | g 17 |
| *Agrostis stolonifera* | Creeping Bent | O | g 17 |
| *Equisetum arvense* | Field Horsetail | Loc A | g 17 |
| *Sonchus asper* | Prickly Sow-thistle | O | g 17 |
| *Echium vulgare* | Viper's-bugloss | O | g 17 |
| *Senecio vulgaris* | Groundsel | O | g 17 |
| *Vulpia bromoides* | Squirreltail Fescue | O | g 17 |
| *Sisymbrium officinale* | Hedge Mustard | Loc A | g 17 |
| *Reseda luteola* | Weld | Loc A | g 17 |
| *Artemisia vulgaris* | Mugwort | O | g 17 |
| *Geranium molle* | Dove's-foot Crane's-bill | Loc A | g 17 |
| *Cirsium vulgare* | Spear Thistle | R | g 17 |
| *Plantago major* | Greater Plantain | O | g 17 |
| *Matricaria discoidea* | Pineappleweed | O | g 17 |
| *Papaver rhoeas* | Common Poppy | R | g 17 |
| *Cotoneaster horizontalis* | Wall Cotoneaster | R | 1160 |
| *Senecio squalidus* | Oxford Ragwort | R | g 17 |
| *Trifolium dubium* | Lesser Trefoil | F | g 17 |
| *Myosotis arvensis* | Field Forget-me-not | O | g 17 |
| *Rubus fruticosus agg.* | Bramble | O | g 17 |
| *Lactuca serriola* | Prickly Lettuce | R | g 17 |
| *Poa pratensis* | Smooth Meadow-grass | O | g 4 |
| *Poa trivialis* | Rough Meadow-grass | O | g 4 |
| *Cirsium arvense* | Creeping Thistle | O | g 4 |
| *Poa annua* | Annual Meadow-grass | O | g 17 |
| *Crepis capillaris* | Smooth Hawk's-beard | Loc A | g 17 |
| *Papaver somniferum* | Opium Poppy | O | g 17 |
| *Senecio jacobaea* | Ragwort | O | g 17 |
| *Arctium minus* | Lesser Burdock | R | g 17 |
| *Sonchus oleraceus* | Smooth Sow-thistle | R | g 17 |
| *Ribes sanguineum* | Flowering Currant | R | 1160 |
| *Anthriscus sylvestris* | Cow Parsley | O | g3c, g4 |
| *Hieracium fulvocaesium* | Orange-flowered Hawkweed | O | g 17 |
| *Vicia cracca* | Tufted Vetch | O | g 4 |
| *Arrhenatherum elatius* | False Oatgrass | O | g 17 |
| *Trifolium campestre* | Hop Trefoil | O | g 17 |
| *Centranthus ruber* | Red Valerian | F | g 17 |

## Appendix 3. Relevant Legislation and Policy

Wildlife legislation relating to statutory designated sites and species is summarised in Table A1 and A2 below. This legal information is intended for summary only, and the original legal documents should be consulted if a detailed understanding is required.

**Table A1.** Legislation relating to designated sites and habitats.

| Designated Site | Legal Status |
|---|---|
| Local Wildlife Site (LWS) | While they have no direct legal status, Local Wildlife Sites are considered important enough to receive recognition within the planning system. National planning policy requires local authorities to identify Local Wildlife Sites and provide for their protection through local policy. |

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

| Species | Legal Status |
|---|---|
| European protection | |
| European Protected Species (EPS) (including bats, Great Crested Newt (GCN), otter and hazel dormouse) | 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:<br>• Intentionally or deliberately capture, injure or kill any such animal or to deliberately take or destroy their eggs.<br>• Deliberately disturb such an animal.<br>• Damage or destroy a breeding site or resting place of such an animal.<br><br>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:<br>• The development is for reasons of overriding public interest.<br>• There is no satisfactory alternative; and<br>• The favourable conservation status of the species concerned will be maintained and/or enhanced.<br><br>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 |

| Species | Legal Status |
|---|---|
| | Applications for such developments must demonstrate that the 3 tests will be passed.<br><br>Natural England also allow sites to be registered on the Bat Low Impact Class Licence to permit activities that would otherwise be unlawful under the Conservation Regulations where the 3 tests can be passed and the bat roosts to be impacted are of low conservation status. |
| National protection | |
| European Protected Species and other species including water vole and white clawed crayfish | 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:<br>• Intentionally kill, injure or take any such animal.<br>• Intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any such animal; and<br>• Intentionally or recklessly disturb such animals while they occupy a place used for shelter or protection. |
| Reptile species | These animals receive limited protection under The Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000), which makes it illegal to intentionally kill or injure any such animal. |
| Badger | The Protection of Badgers Act 1992 makes it illegal to wilfully kill or injure a Badger or attempt to do so and also make it illegal to intentionally or recklessly interfere with a Badger sett. This includes damaging or destroying a sett, obstructing access to a sett and disturbing a Badger while it is occupying a sett. Licences can be granted by Natural England to permit sett closure and/or disturbance between July and November inclusive. |
| Schedule 1 birds | 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 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:<br>• Intentionally kill, injure or take any wild bird.<br>• Take, damage or destroy the nest (whilst being built or in use) or eggs of any wild bird. |
| 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 |

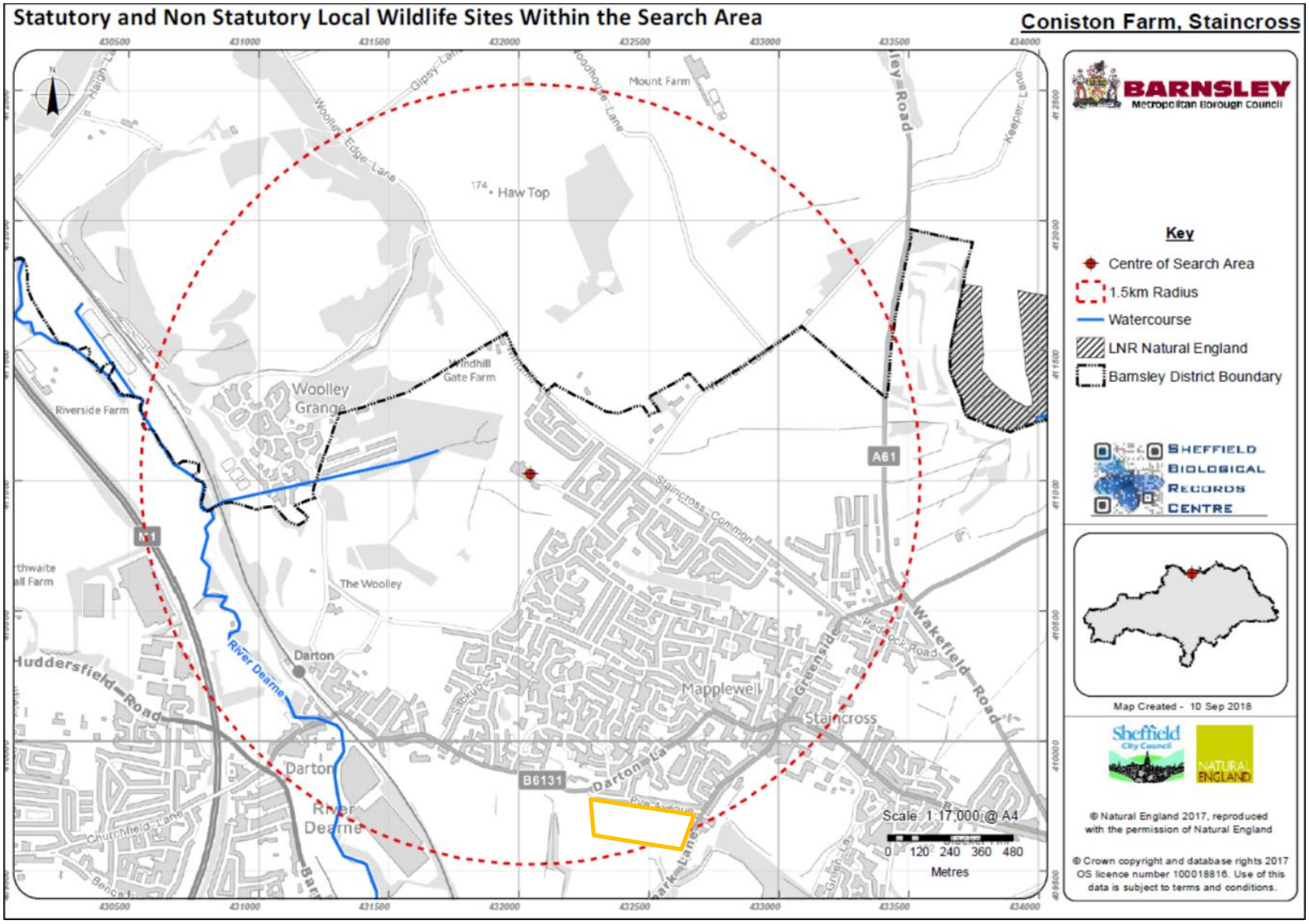
| Species | Legal Status |
|---|---|
| | 9 of the Act. In relation to Schedule 9 plants, it is an offence to plant or otherwise cause these plant species to grow in the wild. |

**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. The NPPF's policy on biodiversity has been summarised by the Government as: "The Framework underlines that the planning system should seek not just to protect, but, where possible to enhance biodiversity – making sure we don't just have isolated pockets of wildlife, but rich and connected green spaces for all kinds of species to thrive. Planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland."

**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 4. Designated Sites Map (2018), Including Mapplewell Tip LWS, As Indicated By Yellow Outline



## Appendix 5. Metric Headline Results

| | | |
|---|---|---|
| On-site baseline | *Habitat units* | 3.00 |
| | *Hedgerow units* | 0.76 |
| | *River units* | 0.00 |
| On-site post-intervention (Including habitat retention, creation & enhancement) | *Habitat units* | 4.18 |
| | *Hedgerow units* | 0.68 |
| | *River units* | 0.00 |
| On-site net % change (Including habitat retention, creation & enhancement) | *Habitat units* | 39.60% |
| | *Hedgerow units* | -10.99% |
| | *River units* | 0.00% |
| Off-site baseline | *Habitat units* | 0.00 |
| | *Hedgerow units* | 0.00 |
| | *River units* | 0.00 |
| Off-site post-intervention (Including habitat retention, creation & enhancement) | *Habitat units* | 0.00 |
| | *Hedgerow units* | 0.00 |
| | *River units* | 0.00 |
| Total net unit change (including all on-site & off-site habitat retention, creation & enhancement) | *Habitat units* | 1.19 |
| | *Hedgerow units* | -0.08 |
| | *River units* | 0.00 |
| Total on-site net % change plus off-site surplus (including all on-site & off-site habitat retention, creation & enhancement) | *Habitat units* | 39.60% |
| | *Hedgerow units* | -10.99% |
| | *River units* | 0.00% |

# Appendix 6. Metric Calculation Plan

## Appendix 7. 2018 Nocturnal bat surveys

7.1.1 **Dusk survey B2 & B4, 11th September 2018** – (Sunset 19:33) – The temperature at the beginning of monitoring was 15°C with a Beaufort Scale Force 3 westerly wind and 60% cloud. The temperature decreased to 14°C by the end of monitoring and the other conditions remained largely the same throughout the survey.

7.1.2 Single common pipistrelles were recorded foraging intermittently near both buildings being monitored from 19:44 to 20:53 together with two *Myotis* species passes at 20:24 and 20:26. No bats emerged from the buildings being monitored.

7.1.3 **Dusk survey B1, 12th September 2018** – (Sunset 19:29) – The temperature at the beginning of monitoring was 14°C with a Beaufort Scale Force 2 westerly wind and a clear sky. The temperature decreased to 11°C by the end of monitoring and the other conditions remained the same.

7.1.4 The first bat to be recorded was a common pipistrelle that emerged from under the soffit at the southeast corner of building 1 (B1) at 19:46. A minute late a second common pipistrelle emerged from the lower end of west facing gable soffit. Up to two common pipistrelles foraged within the garden of the dwelling intermittently thereafter.

Summary and Evaluation of Findings

7.1.5 No bats were found roosting in the buildings during the preliminary daytime assessment and there were no signs of bat occupation. Of the 12 buildings on site, only three displays features with potential to accommodate roosting bats. Buildings 1, 2 & 4 display a low number and diversity of roost features which results in an assessment of low bat roost potential.

7.1.6 The surveyed building (building 1) was found to support two day roosts, used by a maximum count of one common pipistrelle. The roosts are of low conservation value (Mitchell-Jones, 2004). No evidence of the building being used by maternity roosting bats was recorded. Common pipistrelle bats roost in a wide range of locations during the hibernation period and use of the building by this species during winter cannot be ruled out.