



**Upper Hoyland Road, Barnsley
Ecological Appraisal**

Eton Construction Ltd

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Summary

The c. 0.5 ha site on the north-western outskirts of Hoyland in Barnsley comprises an improved grassland field, currently used as equestrian pasture. A native hedgerow comprises the western and southern site boundary, whilst three native hedgerows informally separate the field into four paddocks. Post and rail fencing with scrub planting beyond form the eastern and northern boundaries of the site.

Development proposals for the site comprise residential housing with associated access roads and soft landscaping.

The habitats on site are considered to be of importance to nature conservation at the site level only.

No further survey in relation to amphibians, badger, bats, reptiles, riparian mammals, or white clawed crayfish is recommended.

However, a best practice approach to works in relation to badgers and hedgehogs is recommended as a precautionary measure. All deep excavations should be covered overnight unless completely fenced off and any unfenced/uncovered shallow excavations should have a scaffold board or equivalent placed in them to act as a ramp to allow any mammals to exit, should they fall in.

A pre-commencement check for the presence of nesting birds is recommended if hedgerow removal cannot be scheduled outside the bird nesting season, which runs from March to August (inclusive). The nesting bird check should be undertaken by an ecologist no more than 2 days prior to clearance to check for the presence of active nest sites.

No invasive species were recorded on site on the day of survey and no mitigation measures are considered to be required.

Ecological enhancement recommendations have been made as appropriate within the report.

1. Introduction

- 1.1.1 Ecus Ltd was commissioned by Eton Construction Ltd in February 2016 to undertake an Ecological Appraisal of an area of land off Upper Hoyland Road in Barnsley, South Yorkshire (central national grid reference: SE 36091 01427), prior to proposed development of the site.
- 1.1.2 Development proposals for the site comprise residential housing with associated access roads and soft landscaping.
- 1.1.3 The purpose of survey was to carry out an extended Phase 1 habitat survey and to review the potential for the site to contain, or be used by, species protected under either UK or European nature conservation legislation. Namely, the Wildlife & Countryside Act 1981 (as amended), the Conservation of Habitats and Species Regulations 2010 and the Natural Environment and Rural Communities Act 2006. Any impact upon such habitats or species that is likely to result from the proposed development has been assessed.
- 1.1.4 This report details the findings of the survey work and subsequent assessment. Methodologies employed are described including site surveys and evaluation, and the need for any further survey work and/or mitigation is included, where appropriate.

2. Methodology

2.1 Data Consultation

- 2.1.1 Data consultation with Sheffield Biological Record Centre (SBRC), which covers the South Yorkshire District including Barnsley, was undertaken by Ecus Ltd in February 2016. Information on existing biological records or locally designated sites of nature conservation interest within 2 km of the site was requested.
- 2.1.2 The Multi Agency Geographical Information for the Countryside (MAGIC) website (www.magic.gov.uk) was consulted for information on statutorily designated sites of nature conservation interest within 2 km of the site in February 2016.
- 2.1.3 Information returned from SBRC and collated from MAGIC is included within this report within the relevant sections.

2.2 Extended Phase 1 Habitat Survey

- 2.2.1 The site was surveyed by consultant ecologist Helen Lloyd MCIEEM on 17th February 2016 following an extended Phase 1 habitat survey methodology (JNCC, 2010). The habitats and vegetation types present were recorded on to a field map. This survey method aims to characterise habitats and communities present and is not intended to provide a complete list of all plants occurring across the site.
- 2.2.2 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 in Figure 1, using Target Notes (TN) to identify particular features of interest, where appropriate.
- 2.2.3 Habitats present that are listed under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 or the Local Biodiversity Action Plan (LBAP) for Barnsley were noted.
- 2.2.4 The value and sensitivity of ecological features present on site were determined based on the guidance given in 'Guidelines on Ecological Impact Assessment' (CIEEM, 2016). 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 to lastly, site level only.

Hedgerow Assessment

- 2.2.5 A hedgerow is defined as "...any boundary line of trees or shrubs over 20 m long and less than 5 m wide, and where any gaps between the trees and shrub species are less than 20 m wide (Bickmore, 2002). Any bank, wall, ditch or tree within 2 m of the centre of the hedgerow is considered to be part of the hedgerow habitat, as is the herbaceous vegetation within 2 m of the centre of the hedgerow."

- 2.2.6 Hedgerow on site was assessed under the landscape and wildlife criteria listed in Schedule 1 Part II of the Hedgerow Regulations 1997, using the standard methodology in the Regulations, which is detailed below.
- 2.2.7 For hedgerows of 30 m in length or less, the entire hedgerow is surveyed. Hedgerows of over 30 m are split in to 100 m sections and the central 30 m of each 100 m section is surveyed. The number of woody species present is recorded within each length along with the presence of any of the features listed in Sub-paragraph 4 of the Regulations, including presence of a bank, wall, or ditch, less than 10 % gaps, at least one standard tree per 50 m, at least three woodland plant species, at least four points achieved from connections to other hedgerows, woods or ponds, and/or a parallel hedge within 15 m.
- 2.2.8 A hedge is considered important under the Regulations if:
- It has an average of seven or more woody species in the surveyed section(s);
 - It has an average of six woody species in the surveyed section(s) and three or more features from Sub-paragraph 4;
 - It has six woody species and one of the following rare trees – black poplar, large leafed lime, small leafed lime, wild service tree;
 - It has an average of five woody species on average in the survey section(s) and has four or more features from Sub-paragraph 4;
 - It has four woody species on average in surveyed section(s), is adjacent to a footpath, bridleway or byway open to all traffic (BOAT) and has two or more features from Sub-paragraph 4.

2.3 Protected and Key Species

- 2.3.1 Any evidence of protected species or groups encountered during the survey was recorded. This included observations of field signs and an assessment of the suitability of the habitats present to support protected species. For full details of legislation relating to all habitats and species discussed within this report visit <http://www.legislation.gov.uk>.

Amphibians

- 2.3.2 Waterbodies within 500 m of the site, which are not separated from the site by a major barrier, were searched for using an Ordnance Survey (OS) map. No ponds were identified on mapping and none were observed during the site visit. However great crested newt (*Triturus cristatus*) records were returned in the data consultation, therefore the site habitats have been assessed for their suitability to be used by great crested newt and common amphibians.

Badger

- 2.3.3 Signs of badger (*Meles meles*) activity were searched for on site and within approximately 50 m of the site boundary as part of the extended Phase 1 survey. Survey followed standard methodology detailed in Surveying Badgers (Harris *et al.*, 1989). This included survey for badger setts, along with survey of linear features and boundaries for signs of badger activity

including dung pits, foraging marks, feeding signs and pathways.

Bats

- 2.3.4 There are no buildings or trees present within the site boundary to provide features with potential to be of interest to roosting bats.
- 2.3.5 The site habitats, including adjacent scrub planting, were assessed for their suitability to be used by foraging and commuting bats.

Birds

- 2.3.6 A detailed bird survey was not undertaken as part of this assessment, however the opportunity was taken to record all species of birds encountered whilst on site and habitats on site were assessed for their value to nesting and foraging birds.

Reptiles

- 2.3.7 The survey area was assessed for its potential to support UK reptile species found in the South Yorkshire region.

Riparian mammals and white-clawed crayfish

- 2.3.8 Watercourses within 30 m of the site were searched for using an OS map. No watercourses were identified within this distance and as such, otter (*Lutra lutra*), water vole (*Arvicola amphibius*) and white-clawed crayfish (*Austropotamobius pallipes*) are not considered to be receptors to the proposed development and are not discussed further within the report.

Other protected and key species

- 2.3.9 The opportunity was taken whilst on site to assess habitats for the potential to support any other protected species, search for signs of nationally or locally scarce or notable species, or any species protected under national or international nature conservation law.

2.4 Invasive species

- 2.4.1 During the extended Phase 1 habitat survey, any evidence of invasive species, as listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), was recorded.

2.5 Limitations

- 2.5.1 The survey was undertaken during February, which is not within the optimal flowering season for most species. However, extended Phase 1 habitat survey methodology allows for habitats to be broadly characterised at any time of year and taking the intensively managed/modified nature of the site into account, it is considered that sufficient information was gathered to undertake an accurate assessment of the site habitats and provide a robust evaluation of habitat types and the overall site character.

3. Findings and Evaluation

3.1 Site Description

- 3.1.1 The site comprises a c. 0.5 ha field of very short sward, improved grassland which is currently in use as pasture. Native hedgerow lines the western and southern boundaries, whilst post and rail fencing with scrub planting behind denotes the eastern and northern boundaries.
- 3.1.2 The site is situated on the north-western outskirts of Hoyland, approximately 5 km south of Barnsley City Centre. The site is located immediately to the south of the A6195 (Dearne Valley Parkway dual-carriageway), with industrial units and housing prevalent to the east and south with farmland dominant to the west. Farmland and woodland dominate the wider area to the north, beyond the A6195.

3.2 Designated Sites

- 3.2.1 A single statutorily designated site of importance to nature conservation, Worsborough Reservoir Local Nature Reserve (LNR), was identified within 2 km of the site area using MAGIC. Details taken from the citation are provided in Table 1 below.
- 3.2.2 Sheffield Biological Record Centre provided details of two non-statutorily designated Local Wildlife Sites (LWS) and a single candidate LWS within 2 km of the site; details of which are provided in Table 1 below.

Table 1. Designated sites within 2 km of the site.

Site Name	Approximate distance and direction from site	Detail
Statutory		
Worsborough Reservoir LNR	The site is good for waterfowl. Habitats include a reservoir, willow carr, managed grassland/meadowland, reedbed and woodland.	1.7 km north
Non Statutory		
Short Wood and Hey Green LWS	Ancient woodland, lowland mixed deciduous woodland, wet woodland, lowland meadow, semi-improved neutral grassland, with a species-poor hedgerow.	0.4 km north-west
Barrow Colliery Site Candidate LWS	Open mosaic habitats on previously developed land, with lowland mixed deciduous woodland.	0.5 km north
Wombwell	Ancient woodland,	1.1 km north-east

Site Name	Approximate distance and direction from site	Detail
Wood LWS	lowland mixed deciduous woodland, ponds and remnants of heath.	

3.2.3 The statutory site is considered to be of importance at up to a county level, whilst the non-statutory designated sites are considered to be of importance to nature conservation at the local level.

3.3 Habitats

Improved grassland

3.3.1 The sward composition on site is consistent with improved grassland that has been subject to heavy grazing. The grassland composition noted on the day of survey is considered to be dominated by perennial rye-grass (*Lolium perenne*) with common forbs comprising creeping buttercup (*Ranunculus repens*), white clover (*Trifolium repens*), common ragwort (*Jacobaea vulgaris*), broadleaved dock (*Rumex obtusifolius*) and lesser burdock (*Arctium minus*).

3.3.2 The improved grassland on site contributes to the overall mosaic of grassland habitats within the wider landscape, however it is heavily modified by intensive grazing and supports only a low diversity of common grassland species. The grassland on site is not considered to be of importance to nature conservation outwith the site level.

Hedgerow

3.3.3 Well established, managed, native hedgerow lines two of the site boundaries (H1, Figure 1) and creates informal paddock divides within the field itself (H2, H3 and H4, Figure 1).

3.3.4 H1 is the tallest of the hedgerows on site, at a height of between 1 - 2 m with 0.5 - 1 m width. It is dominated by hawthorn (*Crataegus monogyna*) and holly (*Ilex aquifolium*) with elder (*Sambucus nigra*) and field maple (*Acer campestre*) present in lesser quantities. Ground flora comprised ivy (*Hedera helix*), common nettle (*Urtica dioica*) and cow parsley (*Anthriscus sylvestris*) at the time of survey.

3.3.5 H2, H3 and H4 are also dominated by hawthorn with varying degrees of elder also present. Evidence of previous laying was observed. Ground flora was typically sparser beneath the internal field hedgerows, but of the same composition and H1.

3.3.6 None of the hedgerows include the required number of species or features listed within Sub-paragraph 4 to be classed as important under Schedule 1 Part II of the Hedgerow Regulations 1997. However, all four hedgerows comprise >80% of one or more native species and are therefore classed as a habitat of principal importance under the NERC Act 2006.

3.3.7 In addition, hedgerows are listed as a priority habitat on the Barnsley LBAP,

with the hedgerows on site considered to be relatively good quality examples due to their age, size, structure and native composition. However, the hedgerows do not contribute to a significant local hedgerow network and are heavily managed. As such, the hedgerow habitat on site is considered to be of importance at a site level.

3.4 Species

Amphibians

- 3.4.1 A total of 98 amphibian records were returned by SBRC. These include five great crested newt records, 36 common frog (*Rana temporaria*), 32 common toad (*Bufo bufo*) and 25 smooth newt records (*Lissotriton vulgaris*).
- 3.4.2 The great crested newt records were made in 2013 and 2014 and originate from three locations approximately 0.8 km west, 0.9 km west and 1.5 km south-west of the site. The closest records appear to comprise a potential metapopulation using woodland and a cluster of up to six waterbodies that are located on the far side of the A6195 (Dearne Valley Parkway dual-carriageway). An underpass beneath the A6195 provides a potential connectivity link between this metapopulation and a waterbody on the site-side of the A6195, which in turn has suitable terrestrial habitat linking to the site.
- 3.4.3 However, the site is situated 0.9 km from the waterbody and there are no waterbodies present on site or beyond to the east so GCN are highly unlikely to disperse towards the site. Furthermore, the short sward and disturbed nature of the grassland limits its suitability. As such, great crested newts are considered unlikely to be a receptor for the proposed development, however a precautionary approach during construction phase is recommended (see Section 4.4).
- 3.4.4 Common amphibian records also predominantly relate to the ponds located north of the A6195. As an abundance of higher quality habitat is available in the wider area, the grassland and hedgerow on site are not considered to be of importance to common amphibians outwith the site level.

Badger

- 3.4.5 Sheffield Biological Record Centre returned three records of badger (*Meles meles*) within 2 km of the site. All records are situated to the north of the A6195, with the closest record approximately 650 m from the site and the remaining records located over 1.5 km from the site.
- 3.4.6 No badger setts or field signs, including pathways and latrines, were identified within the hedgerow bases or across the grassland during the survey. Given the abundance of optimal foraging habitat available around the existing records to the north of the A6195, the site's location away from any potential foraging routes between woodland blocks to the north and south and the suboptimal nature and limited extent of habitats available on site, badger are considered unlikely to be a receptor to the proposed development, however a precautionary approach during construction phase is recommended (see Section 4.4).

Bats

- 3.4.7 Sheffield Biological Records Centre supplied 100 bat records for within 2 km of the site, comprising 18 common pipistrelle (*Pipistrellus pipistrellus*) records, three soprano pipistrelle (*Pipistrellus pygmaeus*) records, three indeterminate pipistrelle species (*Pipistrellus* sp.) records, one brown long-eared (*Plecotus auritus*) record, 14 noctule (*Nyctalus noctula*) records, four Leisler's (*Nyctalus leisleri*) records, nine indeterminate nyctalus species records (*Nyctalus* sp.), one whiskered/brandt's bat (*Myotis mystacinus/brandtii*) record and 47 records not identified to species level.
- 3.4.8 The closest recorded roosts to site relate to common pipistrelle and Leisler's bats recorded at Worsborough Hall, approximately 1.2 km from the site. The closest general activity records to site pertain to noctule and common pipistrelle bats foraging approximately 200 m to the north of the site.
- 3.4.9 South Yorkshire Bat Group (SYBG) provided 189 bat records. These comprise two brown long-eared records, 47 soprano pipistrelle, 43 pipistrelle species records, 15 noctule records, seven common pipistrelle, five Leisler's bat records, one myotid bat species record, seven nyctalus species records, one whiskered bat record and 61 records where the species was not identified. Twenty-one of these records specifically pertain to roosts. The closest of these is located 1.5 km from the site in Birdwell and the roost was a pipistrelle species roost. All other roosts are more than 1.5 km from the site.
- 3.4.10 There are no buildings or trees present on site to provide roosting opportunities for bats. The hedgerows may contribute to foraging opportunities for any bats resident within the local area, but do not provide any direct links to other suitable habitat and are limited in extent compared to the abundance of alternative habitat present within the wider area, therefore the site is considered to be of importance to foraging bats at the site level only.

Birds

- 3.4.11 Sheffield Biological Record Centre provided numerous records for a large variety of birds within 2 km of the site. These include a total of 16 Wildlife and Countryside Act 1981 (as amended) Schedule 1 bird species, a full list of which is included within Table 3.1 in Appendix 3. There is some limited potential for species such as barn owl (*Tyto alba*) and fieldfare (*Turdus pilaris*) to use the site habitats as part of a wider area, however the site is limited in extent and more optimal habitat is present in the wider area. The site is not considered to be of importance to Schedule 1 bird species outwith the site level.
- 3.4.12 In 2015, a re-assessment of Birds of Conservation Concern (BoCC) was published by Eaton *et al.* (2015), which defined rare and threatened bird species on two lists (Red and Amber) describing the level of threat to each species of concern.
- 3.4.13 "Red" is the highest conservation priority, with species needing urgent action due to either a historical decline in breeding population, severe (>50%) decline in breeding or non-breeding population, or severe decline in breeding range over 50 years or more. "Amber" is the next most critical group, with species qualifying for this status as a result of either recovery

from red list criterion, being classed as rare breeders in the UK, moderate (>25%) decline in breeding or non-breeding population or moderate decline in breeding range over 25 years or more. These categories are followed by Green, indicating that the species are relatively unthreatened.

3.4.14 The existing records include 28 BoCC Red list bird species and 24 BoCC Amber list species. Details of the Red and Amber listed species are provided within Table 3.1 in Appendix 3. A total of 61 BoCC Green (unthreatened), Schedule 9 (invasive) and species with no status were also supplied, whilst goldfinch (*Carduelis carduelis*) and blue tit (*Cyanistes caeruleus*) were recorded on site on the day of survey. Evidence of use by nesting birds in the form of a disused nest was recorded within H3 (TN1, Figure 1).

3.4.15 The improved grassland on site is not considered suitable for use by ground nesting birds due to its extremely short sward which provides no shelter and being subject to regular equine disturbance. However, the hedgerows have high potential to provide structural cover for nesting passerine species, such as house sparrow, yellowhammer and dunnock and evidence of previous use in the form of a disused nest was recorded within H3 (TN1, Figure 1) on the day of survey. Taking the availability of alternative habitat within the wider area in to account, the site is considered to be of importance to nesting and foraging birds at the site level only.

Reptiles

3.4.16 A total of twelve grass snake (*Natrix natrix*) records were supplied for within 2 km of the site. The closest record is located approximately 900 m north of the site at the edge of an area of woodland around Short Wood Dike.

3.4.17 The short sward grassland on site is frequently disturbed by horses and is considered sub-optimal for grass snake. The hedgerow bases lack hibernacula features and provide only limited suitability for temporary shelter and for basking at the edges. The known reptile records for the area are situated a considerable distance to the north and the A6195 severs any direct connectivity between them and the site. Taking the above into account, reptiles are not considered to be a receptor to the development and are not considered further within the report.

Other key/notable species

Brown hare

3.4.18 A total of 17 brown hare (*Lepus europaeus*) records within 2 km of the site were provided by SBRC. All records are located 1 km or further from the site.

3.4.19 Brown hare typically occupy large open, connected fields with tall sward margins to offer shelter. These features are absent from the site, the presence of horses may further reduce suitability and there is no direct connectivity with other suitable habitat due to the local access track/roads to the east, west and south and the A6195 to the north. As such, brown hare are not considered to be a receptor to the development and are not considered further within the report.

Hedgehog

3.4.20 A total of 24 hedgehog (*Erinaceus europaeus*) records for within 2 km of the site were returned by SBRC. However the closest hedgehog record is located 1 km south-east of the site.

3.4.21 The short sward grassland and hedgerow bases on site offer some potential foraging opportunities for hedgehog, should they pass through the area as part of a wider territory. However, the known records are a considerable distance from the site and there is an abundance of alternative habitat available within the wider area. As such, the site habitats are not considered to be of importance to hedgehog outwith the site level.

3.5 Invasive species

3.5.1 Japanese knotweed (*Fallopia japonica*) has been recorded approximately 400 m north of the site, within Shortwood Business Park. Indian balsam (*Impatiens glandulifera*) has been recorded approximately 600 m north-west of the site within Short Wood and Hey Green LWS.

3.5.2 No invasive species were recorded on site on the day of survey.

4. Ecological Assessment and Mitigation

4.1 Proposals

- 4.1.1 The proposed small scale development comprises new housing with associated access and soft landscaping.
- 4.1.2 The assessment of the proposed scheme is based upon the Proposed Site Plan (Drawing Reference EC02-22) produced by Eton Construction, December 2015.

4.2 Designated Sites

- 4.2.1 The statutorily designated Worsborough Reservoir LNR is designated for its wetland and waterfowl, which do not occur/will not be supported on the application site. The LNR is separated from the application site by considerable distance and therefore no impacts to the designated site resulting from the proposed works are anticipated.
- 4.2.2 All of the non-statutorily designated LWSs are separated from the application site by distance and roads. As the works will not extend outwith the site boundary, no impacts to any of the designated sites and the habitats and/or species that they support are anticipated.

4.3 Habitats

Improved grassland

- 4.3.1 Total landtake of the improved grassland on site will be required to accommodate the proposed development. Given the extent of similar habitat within the wider landscape, and that the habitat on site is species-poor, landtake of c. 0.6 ha of improved grassland is considered to be of importance to nature conservation at site level only.
- 4.3.2 Grassland incorporated within proposed landscaping is likely to comprise amenity grassland only, which is of limited ecological value. However, following a best practice approach, consideration can be given to planting of native or known wildlife-attracting shrub species within the soft landscaping scheme to enhance site habitats post-development. An ecologically sensitive landscaping plan has the potential to benefit invertebrates and birds and enhance the ecology of the proposed scheme, hereby complying with the National Planning Policy Framework (NPPF) aim that "opportunities to incorporate biodiversity in and around developments should be encouraged" (NPPF, 2012).
- 4.3.3 Where possible, native species should be favoured and species chosen should maximise flowering, pollen/nectar production and/or berries/fruit production to benefit invertebrates, birds and small mammals. Should a more formal approach be required, ornamental species may be considered more appropriate, however it is recommended that varieties should be chosen to maximise fruit, nectar and pollen sources for invertebrates and small mammals.
- 4.3.4 It will be beneficial for an ecologically sensitive landscaping plan, avoiding incorporation of Schedule 9 listed species, to be produced and implemented

on site post development.

Hedgerow

- 4.3.5 Retention of the majority of the western/southern boundary hedgerow (H1) is currently anticipated, whilst total landtake of the internal hedgerows (H2, H3 and H4) will be required. Retention of H1 is strongly encouraged, as it is the more diverse and larger of the hedgerows on site and will retain varied and established habitat structure on site. Where severance of H1 is required for access, it is recommended that this distance is minimised and consideration given to tree planting at each end of the hedgerow to provide canopy cover and reduce the effects of severance.
- 4.3.6 The internal hedgerows comprise entirely native species and are of mature age and good quality, but lack high quality connectivity links. Landtake is considered to be of importance to nature conservation at site level.
- 4.3.7 Any additional tree planting incorporated within the landscaping scheme for the proposed development would further increase varied habitat structure on site and is encouraged. A variety of native trees, typical of the local area and of UK provenance, should be chosen for any planting. It is also recommended that heavy standards are used to minimise the time taken for the trees to establish and provide ecological benefit.

4.4 Species

Badger

- 4.4.1 Badgers and their setts are protected under the Protection of Badgers Act 1992. It is an offence under the act to kill, injure or take a badger. It is also an offence to destroy, damage or obstruct a currently active badger sett, or to disturb animals within the sett.
- 4.4.2 Badgers are not resident on site or within 50 m of it, however it cannot be ruled out that they may use the site habitats as part of a wider foraging resource from time to time. Alternative foraging habitat is available within the wider area, and as such, landtake associated with the proposed development is not considered to be of importance to badger outwith the site level.
- 4.4.3 However, given that badgers have potential to access the site from the surrounding area, a best practice approach to works is recommended. All deep excavations should be covered overnight unless completely fenced off and any unfenced/uncovered shallow excavations should have a scaffold board or equivalent placed in them to act as a ramp to allow any badgers to exit should they fall in.

Bats

- 4.4.4 All species of bat occurring within the UK are included in Schedule 2 of the Conservation of Habitats and Species Regulations 2010 (as amended). Under Regulation 41 bats are protected from deliberate capture, injury or killing, from deliberate disturbance and from deliberate damage or destruction of a breeding site or resting place (roost).
- 4.4.5 All UK bats are also included on Schedule 5 of the Wildlife and Countryside

Act 1981 (as amended). However, their protection is limited to certain offences. Under the 1981 Act (as amended) it is an offence to intentionally or recklessly disturb bats while they are occupying a structure or place used for shelter or protection, or to obstruct access to any such place.

- 4.4.6 Barbastelle, Bechstein's (*Myotis bechsteinii*), brown long-eared, greater horseshoe (*Rhinolophus ferrumequinum*), lesser horseshoe (*Rhinolophus hipposideros*), noctule and soprano pipistrelle (*Pipistrellus pygmaeus*) bats are included as priority species under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.
- 4.4.7 Roosting bats are not considered to be a receptor to the development and as such, no further survey is recommended.
- 4.4.8 The internal hedgerows and grassland on site may contribute to bat foraging habitat as part of a wider foraging resource, however the hedgerows do not provide connective features between habitat such as woodland blocks and are unlikely to be key features for bats moving throughout the landscape. There is an abundance of similar and higher quality bat foraging habitat available within the wider area and therefore landtake is not considered to be of importance to foraging bats outwith the site level.
- 4.4.9 Incorporation of long term bat roosting opportunities on site as part of the development could be considered as an ecological enhancement for the site. Suitable examples of integral roosting provision to be installed at the construction stage include Schwegler 1FR tubes or Habibat boxes. These provide integral roosting provision that is both discreet and secure, creating a self-contained cavity that does not provide access into the wall cavity. Bat tubes/boxes should be placed a minimum of 4 m from ground level on southerly facing aspects and ideally at eaves level. Boxes should be sited away from bright light spill.

Birds

- 4.4.10 All nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended) against destruction of the nest during the bird nesting season, which falls between March and August, inclusive.
- 4.4.11 Where hedgerow removal is required, it should be scheduled to be undertaken outside of the bird breeding season i.e. undertaken between September to February inclusive, if feasible. If it is not possible to schedule clearance works for these months, clearance should only be undertaken following inspection of the site by a suitably experienced ecologist. Should an active nest be identified, vegetation clearance would not be permitted until any chicks have fledged (nest to be monitored and fledging confirmed by an ecologist).
- 4.4.12 Inclusion of a range of bird nesting provision on new buildings post construction would be considered a positive enhancement for nature conservation and would comply with the NPPF 2012 aims for biodiversity. Suitable provision may include general bird boxes with 26 mm and 32 mm entrance holes suitable for a range of garden bird species and/or sparrow terraces for house sparrows. The bird boxes should be placed at a minimum height of 3 m in a number of locations facing different aspects to maximise the chances of occupation. However, full south aspects which receive full

sun all day during the summer months present a risk of overheating and should therefore be avoided.

Other/notable species

Hedgehog

4.4.13 Hedgehog are not afforded legal protection, however they are a species of principal importance under the NERC Act 2006 and should be taken into consideration.

4.4.14 The site habitats are suitable for foraging and alternative foraging habitat exists within the wider area, however it cannot be ruled out that hedgehog cross the site from time to time. As such, landtake associated with the proposed development is considered to be of importance to hedgehog at the site level.

4.4.15 A best practice approach to works is recommended. All deep excavations should be covered overnight unless completely fenced off and any unfenced/uncovered shallow excavations should have a scaffold board or equivalent placed in them to act as a ramp to allow any hedgehogs to exit should they fall in.

4.5 Invasive species

4.5.1 No mitigation measures for invasive species are required for the site.

5. References

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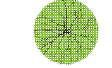



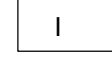
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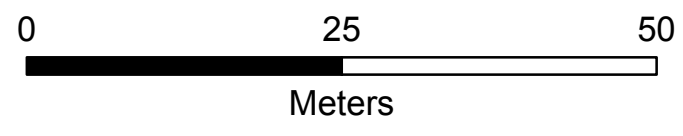
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Figure 1. Survey Findings

Legend

-  Boundary
-  Target note
-  Tree
-  Hedgerow
-  Scrub
-  SI Semi-improved grassland
-  I Improved grassland



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Figure 1
Survey findings

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Appendix 1. Target Notes

TN1 – Disused bird nest within H3.

Appendix 2. Site Images



1. Improved grassland with internal hedgerows forming internal barriers
2. Improved grassland paddock
3. Hedgerow around paddock boundary
4. Scrub outwith site boundary
5. Upper Hoyland Road with boundary hedgerow
6. Hedgerow with evidence of previous laying



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Appendix 2
Site images

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Appendix 3. Bird species recorded within 2 km of site (SBRC records)

Table 3.1. Bird records

Common name	Latin name	Status
Black redstart	<i>Phoenicurus ochruros</i>	Schedule 1, Red
Fieldfare	<i>Turdus pilaris</i>	Schedule 1, Red
Merlin	<i>Falco columbarius</i>	Schedule 1, Red
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red
Barn owl	<i>Tyto alba</i>	Schedule 1, Green
Brambling	<i>Fringilla montifringilla</i>	Schedule 1, Green
Cetti's warbler	<i>Cettia cetti</i>	Schedule 1, Green
Hobby	<i>Falco subbuteo</i>	Schedule 1, Green
Little ringed plover	<i>Charadrius dubius</i>	Schedule 1, Green
Woodlark	<i>Lullula arborea</i>	Schedule 1, Green
Goldeneye	<i>Bucephala clangula</i>	Schedule 1, Amber
Green sandpiper	<i>Tringa ochropus</i>	Schedule 1, Amber
Greenshank	<i>Tringa nebularia</i>	Schedule 1, Amber
Greylag goose	<i>Anser anser</i>	Schedule 1, Amber
Kingfisher	<i>Alcedo atthis</i>	Schedule 1, Amber
Osprey	<i>Pandion haliaetus</i>	Schedule 1, Amber
Corn bunting	<i>Emberiza calandra</i>	Red
Cuckoo	<i>Cuculus canorus</i>	Red
Curlew	<i>Numenius arquata</i>	Red
Grasshopper warbler	<i>Locustella naevia</i>	Red
Grey partridge	<i>Perdix perdix</i>	Red
Grey wagtail	<i>Motacilla cinerea</i>	Red
Hawfinch	<i>Coccothraustes coccothraustes</i>	Red
House sparrow	<i>Passer domesticus</i>	Red
Lapwing	<i>Vanellus vanellus</i>	Red
Lesser spotted woodpecker	<i>Dendrocopos minor</i>	Red
Linnet	<i>Carduelis cannabina</i>	Red
Mistle thrush	<i>Turdus viscivorus</i>	Red
Pochard	<i>Aythya ferina</i>	Red
Ring ouzel	<i>Turdus torquatus</i>	Red
Ringed plover	<i>Charadrius hiaticula</i>	Red
Skylark	<i>Alauda arvensis</i>	Red
Song thrush	<i>Turdus philomelos</i>	Red
Spotted flycatcher	<i>Muscicapa striata</i>	Red
Starling	<i>Sturnus vulgaris</i>	Red
Tree pipit	<i>Anthus trivialis</i>	Red
Tree sparrow	<i>Passer montanus</i>	Red

Common name	Latin name	Status
Turtle dove	<i>Streptopelia turtur</i>	Red
Twite	<i>Carduelis flavirostris</i>	Red
Whinchat	<i>Saxicola rubetra</i>	Red
Willow tit	<i>Poecile montanus</i>	Red
Woodcock	<i>Scolopax rusticola</i>	Red
Yellow wagtail	<i>Motacilla flava</i>	Red
Yellowhammer	<i>Emberiza citrinella</i>	Red
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber
Common gull	<i>Larus canus</i>	Amber
Common redstart	<i>Phoenicurus phoenicurus</i>	Amber
Dunnock	<i>Prunella modularis</i>	Amber
Gadwall	<i>Anas strepera</i>	Amber
Great black-backed gull	<i>Larus marinus</i>	Amber
House martin	<i>Delichon urbica</i>	Amber
Kestrel	<i>Falco tinnunculus</i>	Amber
Lesser black-backed gull	<i>Larus fuscus subsp. graellsii</i>	Amber
Mallard	<i>Anas platyrhynchos</i>	Amber
Meadow pipit	<i>Anthus pratensis</i>	Amber
Mealy redpoll	<i>Carduelis flammea</i>	Amber
Pink-footed goose	<i>Anser brachyrhynchus</i>	Amber
Redshank	<i>Tringa totanus</i>	Amber
Reed bunting	<i>Emberiza schoeniclus</i>	Amber
Short-eared owl	<i>Asio flammeus</i>	Amber
Smew	<i>Mergus albellus</i>	Amber
Snipe	<i>Gallinago gallinago</i>	Amber
Stock dove	<i>Columba oenas</i>	Amber
Swift	<i>Apus apus</i>	Amber
Tawny owl	<i>Strix aluco</i>	Amber
Teal	<i>Anas crecca</i>	Amber
Wigeon	<i>Anas penelope</i>	Amber
Willow warbler	<i>Phylloscopus trochilus</i>	Amber
Blackbird	<i>Turdus merula</i>	Green
Blackcap	<i>Sylvia atricapilla</i>	Green
Blue tit	<i>Cyanistes caeruleus</i>	Green
Buzzard	<i>Buteo buteo</i>	Green
Carrion crow	<i>Corvus corone</i>	Green
Chaffinch	<i>Fringilla coelebs</i>	Green
Chiffchaff	<i>Phylloscopus collybita</i>	Green
Coal tit	<i>Periparus ater</i>	Green
Collared dove	<i>Streptopelia decaocto</i>	Green
Coot	<i>Fulica atra</i>	Green
Cormorant	<i>Phalacrocorax carbo</i>	Green
Corvid sp	<i>Corvus sp.</i>	Green

Common name	Latin name	Status
Feral pigeon	<i>Columba livia feral</i>	Green
Garden warbler	<i>Sylvia borin</i>	Green
Goldcrest	<i>Regulus regulus</i>	Green
Golden plover	<i>Pluvialis apricaria</i>	Green
Goldfinch	<i>Carduelis carduelis</i>	Green
Goosander	<i>Mergus merganser</i>	Green
Great crested grebe	<i>Podiceps cristatus</i>	Green
Great spotted woodpecker	<i>Dendrocopos major</i>	Green
Great tit	<i>Parus major</i>	Green
Green woodpecker	<i>Picus viridis</i>	Green
Greenfinch	<i>Carduelis chloris</i>	Green
Grey heron	<i>Ardea cinerea</i>	Green
Jack snipe	<i>Lymnocyptes minimus</i>	Green
Jackdaw	<i>Corvus monedula</i>	Green
Jay	<i>Garrulus glandarius</i>	Green
Lesser whitethroat	<i>Sylvia curruca</i>	Green
Little grebe	<i>Tachybaptus ruficollis</i>	Green
Long-eared owl	<i>Asio otus</i>	Green
Long-tailed tit	<i>Aegithalos caudatus</i>	Green
Magpie	<i>Pica pica</i>	Green
Moorhen	<i>Gallinula chloropus</i>	Green
Northern goshawk	<i>Accipiter gentilis</i>	Green
Nuthatch	<i>Sitta europaea</i>	Green
Pheasant	<i>Phasianus colchicus</i>	Green
Pied wagtail	<i>Motacilla alba</i>	Green
Reed warbler	<i>Acrocephalus scirpaceus</i>	Green
Robin	<i>Erithacus rubecula</i>	Green
Rock dove	<i>Columba livia</i>	Green
Rock pipit	<i>Anthus petrosus</i>	Green
Rook	<i>Corvus frugilegus</i>	Green
Ruddy duck	<i>Oxyura jamaicensis</i>	Green
Sand martin	<i>Riparia riparia</i>	Green
Sedge warbler	<i>Acrocephalus schoenobaenus</i>	Green
Siskin	<i>Carduelis spinus</i>	Green
Sparrowhawk	<i>Accipiter nisus</i>	Green
Stonechat	<i>Saxicola torquata</i>	Green
Swallow	<i>Hirundo rustica</i>	Green
Treecreeper	<i>Certhia familiaris</i>	Green
Tufted duck	<i>Aythya fuligula</i>	Green
Water rail	<i>Rallus aquaticus</i>	Green
Waxwing	<i>Bombycilla garrulus</i>	Green
Wheatear	<i>Oenanthe oenanthe</i>	Green
Whitethroat	<i>Sylvia communis</i>	Green

Common name	Latin name	Status
Wood pigeon	<i>Columba palumbus</i>	Green
Wren	<i>Troglodytes troglodytes</i>	Green
Canada goose	<i>Branta canadensis</i>	Schedule 9
Great grey shrike	<i>Lanius excubitor</i>	No Status
Little owl	<i>Athene noctua</i>	No Status
Red legged partridge	<i>Alectoris rufa</i>	No Status