



Ecological Impact Assessment

Land at Dearne Valley Parkway, Barnsley
for:

Hartwood Estates

CRM.1122.006.EC.R.001



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For:	Hartwood Estates
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Non-Technical Summary

- i. In February 2019 Enzygo Ltd was commissioned by the Hartwood Estates (the client) to undertake an Ecological Impact Assessment (EclA) of Land at Dearne Valley Parkway, Barnsley S70 5SZ (central grid reference: SE 34942 00544), located within the Barnsley Metropolitan Borough Council (Rockingham Ward) planning authority. The study will inform proposals for a mixed-use development including a hotel and industrial units.
- ii. The following ecological constraints and associated recommendations to avoid/ mitigate/ compensate for potential impacts have been identified:
 - **Bats** – (single overhanging mature Ash beyond southern tip of site supports suitable features for roosting bats and is the proposed location of bat roost box agreed as biodiversity enhancement for the development to the north) – retain and protect the tree throughout the works and implement sensitive lighting scheme;
 - **Birds** - (tree, scrub and piles of debris provide limited nesting potential, and single bird box proposed as enhancement for development to the north on a tree immediately off-site to the west) – Clearance outside nesting period or Ecological Clerk of Works (ECoW) to conduct nesting bird check prior to clearance, and retain off-site trees where bird box is proposed; and
 - **Reptiles, England SPI and Notable Species** – (grassland and debris piles at the south of the site provide limited suitable foraging and shelter habitat for a range of wildlife including common amphibian and small mammals, with low risk of reptile presence. Informal hibernacula as enhancements for development to the north are proposed at the site boundaries) - Habitats to be cleared in a sensitive manner under the direct supervision of an ECoW and informal hibernacula (when created) to be protected throughout development.
- iii. This assessment has demonstrated that, if the recommended mitigation measures are implemented in full, the proposals will result in no net loss to biodiversity and provide opportunities for ecological enhancements in accordance with local and national planning policy.

1 Introduction

1.1 Commission

- 1.1.1 In February 2019 Enzygo Ltd was commissioned by the Hartwood Estates (the client) to undertake an Ecological Impact Assessment (EclA) of Land at Dearne Valley Parkway, Barnsley S70 5SZ (central grid reference: SE 34942 00544), located within the Barnsley Metropolitan Borough Council (Rockingham Ward) planning authority. The study will inform proposals for a mixed-use development including a hotel and industrial units.
- 1.1.2 The proposed development would include site clearance, including removal of existing vegetation, and development of industrial units, hotel and food and drink units, with associated roads and car parking, utilising an existing access from the north of the site. Landscaping is proposed along the eastern boundary and at the south of the site; the details of which are to be confirmed at the reserved matters stage. A confirmation of the site proposals is provided at Appendix A.

1.2 Aims and Objectives

- 1.2.1 The aim of the survey and supporting desk study was to satisfy the requirements of the National Planning Policy Framework (NPPF), identifying ecological features within or near the site that could potentially pose a constraint to the proposed development and opportunities for incorporating biodiversity enhancements into the development proposals. The following ecological features are relevant to this exercise:

- Statutory sites designated or classified under international conventions or European legislation;
- Statutory sites designated under national legislation (excluding geological);
- Locally designated wildlife sites;
- Ancient Woodland Inventory sites, Important Hedgerows (as defined by The Hedgerow Regulations 1997), Veteran Trees, trees listed under Tree Preservation Orders (TPOs), and trees within a Conservation Area;
- England Habitats of Principal Importance (HPI) identified as requiring action in the UK Biodiversity Action Plan (UK BAP) and Local BAP Habitats;
- Legally protected species;
- England Species of Principal Importance (SPI) identified as requiring action in the UK BAP and Local BAP Species;
- Notable species (which includes: Species of conservation concern and Red Data Book (RDB) species, Birds of Conservation Concern (BOCC), and nationally rare and nationally scarce species);
- Invasive species (listed under section 14 of Schedule 9); and
- The wider green infrastructure resource.

- 1.2.2 This report has been produced with reference to Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017), Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2018) and is in accordance with BS42020:2013: Biodiversity – Code of Practice for Planning and Development (BSI, 2013).

- 1.2.3 This report remains valid for 2 years from the date of survey, or until conditions across the site should substantially alter.

1.3 Background

- 1.3.1 The site and the land to the immediate north was subject to a previous planning application (2014) for a mixed-use development comprising office, industry, warehouse/distribution, retail, hotel, petrol station and associated infrastructure (planning ref: 2014/1452) which was approved subject to conditions. This application was supported by a previous Preliminary Ecological Appraisal undertaken in August 2014 (Enzygo, 2014).
- 1.3.2 A subsequent reserved matters application was approved in 2017 for the plot to the immediate north of the site (planning ref: 2017/1094) for the erection of a petrol filling, shop and drive-through café. This application was supported by a Construction Environmental Management Plan (Enzygo, 2017) to discharge Condition 10 of the consent which provides details of biodiversity mitigation and compensation measures to be implemented. It is noted that the enhancement measures of bird boxes, bat boxes and informal hibernacula were proposed for the wider site, including the site assessed in this report. No evidence of these enhancements were noted during the survey however it is understood these are still to be implemented and this report assumes their presence.
- 1.3.3 The Barnsley Council website indicates an historic application at the site, namely a 2003 application for a mixed-use development which was withdrawn (planning ref: B/03/0517/H). No information is available for this application; therefore, it is not known if any supporting ecological application was produced.
- 1.3.4 A 2014 application on land to the east and south was approved subject to conditions for *"Replacement and upgrade of A61 Birdwell Roundabout, realignment and upgrade of links to the A61 Sheffield Road and to Junction 36 of the M1"* and further road improvements (planning ref: 2014/1516). This application was supported by an Extended Phase 1 Habitat Survey (Wildscapes, 2014) and Environmental Impact Assessment which included a Nature Conservation Chapter (Barnsley Metropolitan Borough Council, 2014).
- 1.3.5 The above applications, supporting information and consultation responses have been reviewed, where available, with the details used to inform the scope of this assessment and pertinent information incorporated into the appropriate section of this report.
- 1.3.6 There has been no known correspondence with any third parties (i.e. County Ecologist, Natural England etc.) in relation to this proposed development. Additionally, we have not been made aware of any validation requirements (i.e. completion of a biodiversity checklist or specific protected species survey requirements).

1.4 Site Context

- 1.4.1 The approximately 2.1Ha proposed development site occupies an undeveloped parcel of land within Rockingham Business Park adjacent to the A6195. The site supports extensive bare ground habitat devoid of vegetation, with unmanaged species-poor neutral grassland and an area of sparse colonising vegetation to the south. The south-western boundary supports a strip of dense scrub and tall ruderal herb vegetation, with overhanging broadleaf trees.
- 1.4.2 The north-east and north-west boundaries are defined by fencing beyond which is industrial and retail buildings. The south-east boundary is demarcated by post-and-rail fencing beyond which is the A6195 and further undeveloped parcels of land. The south-west boundary is defined by fencing and a stone wall with further industrial land beyond.

- 1.4.3 The wider landscape is dominated by industrial and residential development and major roads including the M1 300m to the east.
- 1.4.4 The site lies within the Nottinghamshire, Derbyshire and Yorkshire Coalfield National Character Area (Natural England, 2013) which is characterised as *“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.”*

Figure 1.1: Surveyed Area



Image courtesy of Google Image Pro 7.1.8.3036, 53°29'59.97"N 1°28'30.17"W Elev. 138m. Imagery date 25th June 2018. Image accessed 28th March 2019.

2 Methodology

2.1 Desk Study

2.1.1 Desk study details were obtained from the following sources on the associated dates to provide background on ecological features in the vicinity of the site. Records over 10 years old for transient species and all species protected from sale only are excluded. In each case the search included the site and the specified area beyond the site boundary. The search radius was based on the professional judgement of the ecologist leading the appraisal, taking into account the scope of the proposed works and associated potential impacts, with reference to current guidelines for preliminary ecological appraisal (CIEEM, 2017). Records obtained included:

- European statutory sites within a 5km radius, national statutory sites and previous EPS licence applications within a 2km radius, and England HPI identified as requiring action in the UK BAP (JNCC, 2015) and Ancient Woodland within a 0.5km radius (Magic Map, 28th March 2019);
- TPOs and Conservation Areas within the immediate zone of influence (Barnsley Council, 28th March 2019);
- Waterbodies within a 0.5km radius (Online mapping sources including: Google Maps; Magic Map; and Ordnance Survey, 28th March 2019); and
- Locally designated wildlife sites, legally protected species, England SPI identified as requiring action in the UK BAP (JNCC, 2015), Local BAP Species, any Notable species (which includes: species of conservation concern and RDB species (JNCC, 2014a), Birds Of Conservation Concern (Eaton et al., 2015), and nationally rare and nationally scarce species (JNCC, 2014b)), and Invasive species within a 2km radius, and Local BAP Habitats and important hedgerows/veteran trees within the immediate zone of influence (Barnsley Biological Record Centre (BBRC), 18th March 2019).

2.2 Field Survey

2.2.1 A Phase I Habitat Survey was undertaken on 19th March 2019 by Chris Schofield MSc BSc (Hons) ACIEEM (Senior Ecologist at Enzygo) who satisfies all necessary field survey competencies as stipulated by the Chartered Institute for Ecology and Environmental Management (CIEEM). Weather conditions at the time of survey were dry and 100% overcast, with a light breeze and a temperature of 9°C.

Phase I Habitat Survey

- 2.2.1 Phase I Habitat Survey (JNCC, 2010) is a standard technique for obtaining baseline ecological information for large areas of land in which the main vegetation types present within the survey area are mapped using a standard set of habitat categories.
- 2.2.2 In addition to mapping, each of the main habitats within the survey area was described; including details of component plant species abundances (recorded using the DAFOR scale: D=Dominant, A=Abundant, F=Frequent, O=Occasional, R=Rare).
- 2.2.3 Incidental observations of Legally protected species, England SPI/Local BAP Species, any Notable species (which includes: Species of conservation concern and RDB species; BOCC; and nationally rare and nationally scarce species) and Invasive species, and the potential for such species to occur on site (and in the surrounding landscape where relevant) were also noted.

2.3 Assessment

- 2.3.1 Potential ecological constraints to development have been identified from desk study and field survey data using current development proposals. An ecological value has been assigned to each ecological feature that poses a constraint/potential constraint to development in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) guidelines (CIEEM, 2016), where sufficient baseline data are available to do so. Where no value has been assigned, this is due to insufficient information.
- 2.3.2 An assessment of likely ecological impacts has been undertaken in accordance with CIEEM guidelines (CIEEM, 2016) only where clear evidence is available to substantiate and justify the findings. In the absence of such evidence, the ecological feature is merely identified as a potential constraint to development.
- 2.3.3 Where ecological constraints to development are identified, further survey requirements and/or avoidance, mitigation, compensation measures that are proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed works are described. In addition, in accordance with the NPPF, opportunities to enhance or create benefits to wildlife are explored alongside the hierarchy of measures.

2.4 Nomenclature

- 2.4.1 The English names of flora and fauna species are given in the main text of this report. Scientific names are used alongside the English name where this first occurs. Vascular plants and Stoneworts (Charophytes) follow the nomenclature of The Botanical Society for the British Isles database (BSBI, 2007) with all other flora and fauna following the National Biodiversity Network (NBN) Gateway (NBN, 2014).

2.5 Limitations

- 2.5.1 This document does not contain a comprehensive list of botanical species on site. Only plant species characteristic of each habitat and incidental observations of notable plant species were recorded.
- 2.5.2 In March, many plant species are in a state of senescence and are not readily identifiable. However, the surveyor is experienced in plant identification through vegetative characteristics, and the habitats within the site are common and typical of the conditions present. It is considered that sufficient survey to inform the Preliminary Ecological Appraisal (and identify common Phase I habitats) was feasible and appropriate, and the timing of the survey does not represent a significant survey limitation.
- 2.5.3 Data held by consultees may not be exhaustive. The absence of evidence does not indicate evidence of absence.
- 2.5.4 Enzygo cannot take responsibility for the accuracy of external data sources and as such discrepancies and inaccuracies may occur.
- 2.5.5 Natural England do not hold information on Ancient Woodland less than 2ha in size.
- 2.5.6 BBRC do not supply information on Important Hedgerows or Veteran Trees.

3 Results and Evaluation

3.1 Sites and Habitats Identified by the Desk Study

3.1.1 Sites and habitats identified by the desk study are presented below, along with the reason(s) for their designation and associated ecological value. Potential direct or indirect impacts resulting from the construction phase or operation of the site, and the associated ecological effect have been identified, including details of any relevant Impact Risk Zone (IRZ) within which the proposed works fall. Where potential impacts/effects to ecological features have been identified, the site/habitat is shown on Drawing CRM.1122.006.EC.D.001.

Table 3.1: Sites and Habitats Identified by the Desk Study

Name (distance/direction from works)	Details and Ecological Value	Potential Impact/Effect
Statutory sites designated or classified under international conventions or European legislation		
None	-	-
Statutory sites designated under national legislation		
Potter Holes Plantation Local Nature Reserve (LNR) 700m South-west	Site supports semi-ancient woodland developed in and around old bell-pits, plus newer, planted woodland adjacent on a reclaimed colliery site. Site is of County value.	No – no direct or indirect impacts predicted. The proposals are of a type, scale and distance that any construction or operational impacts on the LNR are reasonably discounted.
Impact Risk Zone (IRZ)	The proposed development site does not lie within a SSSI Impact Risk Zone for which the are advised to consult with Natural England on the likely impacts of development.	N/A
Locally designated wildlife sites		
Potter Holes Local Wildlife Site (LWS) 700m South-west	Site supports lowland mixed deciduous woodland. Site is of County value (also LNR designation, see above)	No – no direct or indirect impacts predicted. The proposals are of a type, scale and distance that any construction or operational impacts on the LWS are reasonably discounted.
Rockley Woods LWS 900m North-west	Site supports ancient woodland, lowland mixed deciduous woodland, wet woodland, rivers and ponds. Site is of Local value.	No – no direct or indirect impacts predicted. The proposals are of a type, scale and distance that any construction or operational impacts on the LWS are reasonably discounted.
Short Wood and Hay Green LWS 900m North-east	Site supports lowland mixed deciduous woodland, semi-improved neutral grassland and swamp habitat. Site is of Local value.	No – no direct or indirect impacts predicted. The proposals are of a type, scale and distance that any

Name (distance/direction from works)	Details and Ecological Value	Potential Impact/Effect
		construction or operational impacts on the LWS are reasonably discounted.
Sowell Pond LWS 1.5km South-west	Site supports pond habitat. Site is of Local value.	No – no direct or indirect impacts predicted. The proposals are of a type, scale and distance that any construction or operational impacts on the LWS are reasonably discounted.
Barrow Colliery Site LWS 1.9km North-east	Site supports open mosaic habitats on previously developed land and lowland mixed deciduous woodland. Site is of Local value.	No – no direct or indirect impacts predicted. The proposals are of a type, scale and distance that any construction or operational impacts on the LWS are reasonably discounted.
England HPI, Local BAP Habitats, Ancient Woodland, Important Hedgerows, Veteran Trees, TPOs and Conservation Areas		
Lowland Deciduous Broadleaved Woodland HPI 200m South	Total of 1.7Ha of the HPI within a 500m radius of the site boundary. The closest is a 0.7Ha area 200m to the south. Local value.	No – no direct or indirect impacts predicted. The proposals are of a type, scale and distance that any construction or operational impacts on the HPI are reasonably discounted.
Green/Blue Infrastructure, Dark Zones & Local Policy		
Green Infrastructure	The vast majority of the site supports bare ground habitat, sparse colonising vegetation and species-poor neutral grassland providing negligible green infrastructure function. It is considered the trees and shrubs along the south-west and south-east boundaries do not provide or contribute to any significant green infrastructure or wildlife corridor function across the landscape with no connectivity to off-site habitats,. Negligible value.	No impacts on any green infrastructure resource (no fragmentation effects).
Blue Infrastructure	No permanent watercourses or waterbodies within or adjacent to the site. It is assessed the seasonal pool within the site (described in Table 3.2 below) will be entirely dry for the majority of the year and does not contribute to any significant blue infrastructure function across the local area.	No impacts on any blue/aquatic infrastructure resource.
Dark Zones	There are no known dark zones across the site. In accordance with the standard guidance specified in the <i>Guidance Notes for Reduction of Obtrusive Lighting</i> (2011), the application site likely falls under Environmental Zone E3 (Medium district brightness).	N/A

3.2 Habitats Identified on Site

3.2.1 Habitats identified on site during the field survey are presented below, along with their associated ecological value. The distribution of these habitats is shown on Drawing CRM.1122.006.EC.D.001. Potential direct or indirect impacts resulting from the construction phase or operation of the site, and the associated ecological effect have been identified.

Table 3.2: Habitat Identified on Site

Habitat Type (code)	Details and Ecological Value	Potential Impact/Effect
Bare Ground (J4) 	Central and northern areas of the site support cleared bare ground of compacted brown earth and rubble substrate which is devoid of vegetation. No early successional vegetation is present within this area and therefore does not meet the criteria to qualify as Open Mosaic Habitat on Previously Developed Land (OMH) (Maddock, 2008). Towards the north-west of the site is an area which at the time of survey supported a large shallow pool (as indicated on the photo to the left). This feature appears to have been created as a result of the recent site clearance activities resulting in localised uneven levels and a poorly drained area. This pool was significantly shallow at a maximum of 15cm depth with no aquatic, marginal or emergent vegetation present. No significant hollow or depression is present which would indicate any areas which are likely to hold water for longer periods. It is assessed that this area does not represent a permanent waterbody and will likely be entirely dry for much of the year. This seasonal pool does not represent Pond Priority Habitat (Maddock, 2008), and due to its temporary nature and characteristics, is not considered to represent Standing Water habitat for the purposes of this Phase I Habitat Survey (JNCC, 2010). Habitat does not represent England HPI or Local BAP Habitat. Negligible ecological value only.	No - loss of this habitat is not perceived to be significant.

Habitat Type (code)	Details and Ecological Value	Potential Impact/Effect
Poor Semi-improved Grassland (B6) 	At the west and south-east of the site is unmanaged species-poor neutral grassland. This grassland is characterised by abundant Yorkshire-fog (<i>Holcus lanatus</i>), Red Fescue (<i>Festuca rubra</i>) and False Oat-grass (<i>Arrhenatherum elatius</i>), with frequent Common Bent (<i>Agrostis capillaris</i>), Perennial Rye-grass (<i>Lolium perenne</i>), White Clover (<i>Trifolium repens</i>) and Creeping Buttercup (<i>Ranunculus repens</i>), and occasional Cock's-foot (<i>Dactylis glomerata</i>), Crested Dog's-tail (<i>Cynosurus cristatus</i>), Hard Rush (<i>Juncus inflexus</i>), Dandelion (<i>Taraxacum officinale</i> agg.), Bush Vetch (<i>Vicia sepium</i>), Ribwort Plantain (<i>Plantago lanceolata</i>), Common Field-speedwell (<i>Veronica persica</i>), Bristly Oxtongue (<i>Helminthotheca echinoides</i>), Spear Thistle (<i>Cirsium vulgare</i>), Curled Dock (<i>Rumex crispus</i>), Common Hogweed (<i>Heracleum sphondylium</i>) and Colt's-foot (<i>Tussilago farfara</i>). This habitat does not represent England HPI or Local BAP Habitat. Negligible ecological value only.	No - loss of this habitat is not perceived to be significant.
Sparse colonising vegetation (J1.3) 	At the south of the site is an area of disturbed ground which has been tracked over by machinery and supports sparse colonising vegetation totalling approximately 10% cover with the remainder bare ground. The vegetation assemblage is characterised by occasional Yorkshire-fog, Annual Meadow-grass (<i>Poa annua</i>), Cock's-foot, Dandelion, Broad-leaved Dock, Scentless Mayweed (<i>Tripleurospermum inodorum</i>), Ribwort Plantain, Common Field-speedwell, Groundsel (<i>Senecio vulgaris</i>), Creeping Buttercup, Common Nettle and Colt's-foot. This colonising ground does not represent England HPI or Local BAP Habitat. Negligible ecological value only.	No - loss of this habitat is not perceived to be significant.

Habitat Type (code)	Details and Ecological Value	Potential Impact/Effect
Dense/continuous Scrub (A2.1) and Scattered Shrubs (A2.2) 	Along the south-west boundary is a strip of dense unmanaged scrub vegetation. This habitat is characterised by dominant Bramble (<i>Rubus fruticosus</i> agg.), with abundant Cleavers (<i>Galium aparine</i>), frequent Common Nettle (<i>Urtica dioica</i>), and occasional Broad-leaved Dock (<i>Rumex obtusifolius</i>), Common Hogweed and Dandelion. There are further areas of scattered shrubs and saplings at the south-west boundary and planted along a section at the at the south-east boundary. These areas of characterised by frequent Hawthorn (<i>Crataegus monogyna</i>), Ash (<i>Fraxinus excelsior</i>), Sycamore (<i>Acer pseudoplatanus</i>) and Goat Willow (<i>Salix caprea</i>), and occasional Blackthorn (<i>Prunus spinosa</i>) and Dog Rose (<i>Rosa canina</i>). These habitats do not represent England HPI or Local BAP Habitat. Negligible ecological value only.	No - loss of this habitat is not perceived to be significant.
Tall Ruderal Herb Vegetation (C3.1) 	In addition to the scrub at western boundary is an area supporting unmanaged tall ruderal herb vegetation. This habitat supports abundant Common Nettle, with frequent Great Willowherb (<i>Epilobium hirsutum</i>) and Spear Thistle, and occasional False Oat-grass, Cock's-foot, Bramble and Hawthorn shrubs. This habitat does not represent England HPI or Local BAP Habitat. Negligible ecological value only.	No - loss of this habitat is not perceived to be significant.

Habitat Type (code)	Details and Ecological Value	Potential Impact/Effect
Fence (J2.4) and Wall (J2.5) 	Demarcating the site boundaries is a combination of metal palisade security fencing, timber post-and-rail fence, low timber knee-rail fence and low stone wall. No significant vegetation communities are specifically associated with any of these boundary features. Habitats do not represent England HPI or Local BAP Habitat. Negligible ecological value only.	No - loss of this habitat is not perceived to be significant.

3.3 Protected and Notable Species

- 3.3.1 Legally protected species, England SPI/Local BAP Species, any Notable species (which includes: Species of conservation concern and RDB species; BOCC; and nationally rare and nationally scarce species), and Invasive species identified by the desk study and field survey are presented below, along with their associated ecological value. Potential direct or indirect impacts resulting from the construction phase or operation of the site, and the associated ecological effect have been identified. This is based on an assessment of habitat suitability and other relevant factors, such as: national distribution of each species/group; previous records of species occurrence obtained through the desk study; connectivity to suitable habitats in the surrounding landscape; and any field signs suggesting presence of species within or near to the site. Given the large number of England SPI/Local BAP Species, and Notable species (which includes: Species of conservation concern and RDB species; BOCC; and nationally rare and nationally scarce species), these have only been included if identified from the desk study and/or observed on site during the field survey.

Table 3.3: Species Identified from the Desk Study and Field Survey

Species/Group	Desk Study Record (distance/direction from works)	Field Survey Habitat/Evidence	Ecological Value	Potential Impact/Effect
Bats (<i>Chiroptera spp.</i>)	Recent development to the north proposed a bat roost box as biodiversity enhancement to be located on the mature Ash beyond the southern tip of the site. Records in the wider area of Common Pipistrelle (<i>Pipistrellus pipistrellus</i>), Soprano Pipistrelle (<i>Pipistrellus pygmaeus</i>), Natterer's Bat (<i>Myotis nattereri</i>) and Brown Long-eared Bat (<i>Plecotus auritus</i>). The closest is a record of a Brown Long-eared roost at Glebe Farm 600m to the south from 2009. In addition, there is record of a 2013 EPS licence in relation to Soprano Pipistrelle and Natterer's Bat located 1.4km to the north-west (licence reference: EPSM2013-6384).	There are no buildings or structures within the site or at the site boundaries which have any suitability for roosting bats. A single mature Ash tree which lies outside the site to the south but overhangs the southern boundary supports features which may provide opportunities for roosting bats with knot-holes which appear to provide access into cavities within the tree. This tree is also the location of the bat box proposed as enhancement for the application to the immediate north, however it has not yet been installed. All other vegetation within the site and on the boundaries provides no Potential Roosting Features (PRF's). The predominantly bare ground, sparse colonising and grassland habitats provide <i>Negligible</i> suitability (Collins, 2016) foraging and commuting habitat isolated within the developed landscape. It is considered there are no habitats likely to attract large numbers or a diversity of foraging bats, and no features are present which likely contribute to any significant commuting route. Lighting overspill from the adjacent major roads and industrial development further reduces the suitability of the habitats for bats.	Single mature Ash at the south provides PRF's and is located of proposed bat box for application to the north. Otherwise, site is of <i>Negligible</i> suitability for bats (Collins, 2016).	Yes – potential killing/injury of roosting bats and loss/damage to roosts IF works proposed at the mature Ash beyond the boundary at the south of the site Low risk of significant adverse, permanent, irreversible impact.
Badger (<i>Meles meles</i>)	Single record from 2010 greater than 1.4km from the site boundary.	Observations during the Phase 1 survey did not detect any evidence of Badger within site boundary or the immediate surrounds. The bare ground, sparse colonising habitats provide no opportunities for Badger, with the	Negligible	No

Species/Group	Desk Study Record (distance/direction from works)	Field Survey Habitat/Evidence	Ecological Value	Potential Impact/Effect
		grassland providing limited foraging potential and the scrub habitats providing limited sub-optimal shelter and refuge suitable for sett creation. The surrounding land comprising built development and major roads provide no notable opportunities for Badger. It is considered significantly unlikely Badger utilise habitats within the site or are likely to colonise the site in the near future.		
Dormouse (<i>Muscardinus avellanarius</i>)	No records within search radius.	Scrub and shrubs provide significantly limited extent of sub-optimal habitat for Dormouse in an area of the country where this species is significantly rare and likely extinct.	Negligible	No
Otter (<i>Lutra lutra</i>)	No records within search radius.	No watercourses or waterbodies within or immediately adjacent to the site to provide any opportunities for Otter.	-	No
Water Vole (<i>Arvicola amphibious</i>)	No records within search radius.	No watercourses or waterbodies within or immediately adjacent to the site to provide any opportunities for Water Vole.	-	No
Other Protected Mammals	No records within search radius.	No habitats within or immediately adjacent to the site specifically suitable for other species of protected mammal.	Negligible	No
Specially Protected Birds	Records in the wider area of Redwing (<i>Turdus iliacus</i>), Fieldfare (<i>Turdus pilaris</i>), Garganey (<i>Anas querquedula</i>), Quail (<i>Coturnix coturnix</i>), Red Kite (<i>Milvus milvus</i>) and Barn Owl (<i>Tyto alba</i>).	Disturbed and enclosed site predominantly surrounded by significant development and major roads does not provide any specific opportunities for any specially protected bird species.	Negligible	No

Species/Group	Desk Study Record (distance/direction from works)	Field Survey Habitat/Evidence	Ecological Value	Potential Impact/Effect
All Other Birds	Records of UK BAP Priority Species (SPI) in the wider area comprising House Sparrow (<i>Passer domesticus</i>), Tree Sparrow (<i>Passer montanus</i>), Grey Partridge (<i>Perdix perdix</i>), Yellowhammer (<i>Emberiza citrinella</i>), Reed Bunting (<i>Emberiza schoeniclus</i>), Lapwing (<i>Vanellus vanellus</i>), Starling (<i>Sturnus vulgaris</i>) and Dunnock (<i>Prunella modularis</i>). Recent development to the north proposed a standard bird nest box as biodiversity enhancement to be located on a young tree immediately beyond the western boundary.	The boundary scrub and shrubs provide suitable nesting habitat for a restricted range of common nesting birds (considering the site location and conditions). The open bare ground habitats provide potential, albeit sub-optimal and rather disturbed, nesting habitat for ground-nesting species such as Lapwing and Skylark which have been recorded in the wider area. Bird box proposed on tree to the west of the site boundary has not yet been installed.	Likely Local value	Yes – potential disturbance of active nesting birds during works. Minor adverse, temporary, irreversible impact. (no significant loss of nesting habitat)
Common Reptiles	Two records of Grass Snake in the wider area, with a 2016 record 1.1km to the north-east and a 2010 record 1.25km to the south-west. Recent development to the north proposed 3x informal reptile hibernacula as biodiversity enhancement to be created at the site boundaries (at the north-west corner, western boundary and southern tip of the site)	The predominantly bare ground habitats with minimal vegetation structure provide limited suitability habitat for common reptiles, although the piles of brash and other debris within central areas at the south and west of the site provide suitable refuge and shelter habitat. No favourable habitats for reptiles, such as wetlands and heathland, adjacent to the site from which reptiles are likely to colonise. The informal reptile hibernacula proposed as enhancements for the development to the north have not yet been installed.	Likely Local value	Yes – low risk of killing/injury of common reptiles during construction activities Minor adverse, permanent, irreversible impact

Species/Group	Desk Study Record (distance/direction from works)	Field Survey Habitat/Evidence	Ecological Value	Potential Impact/Effect
Great Crested Newt (<i>Triturus cristatus</i>)	Total of 31 records in the wider area with the closest records situated 525m to the south at Tankersley Common from 2013. In addition, there is record of a 2009 EPS licence located 1.5km to the south-west (licence reference: EPSM2009-1366).	No potential breeding habitat within the site. A large shallow pool present within the bare ground habitat at the north of the site during the Phase I Survey is assessed to likely entirely dry for the majority of the year and therefore will not provide suitable habitat for the successful breeding of GCN (i.e. not remaining present through the spring/summer months to allow development of newt larvae). The pool was a maximum of 15cm in depth and was entirely devoid of vegetation (therefore no opportunities for GCN egg-laying). Aerial imagery and OS maps indicate two ponds within a 500m radius of the site, located 375m and 450m to the north-east. However, the major roads of the A6195 and A6135 and associated Rockingham Roundabout which lie between the site and the ponds represent a significant barrier to the dispersal of GCN. It is assessed as significantly unlikely any GCN will be able to disperse from these ponds to the site. Furthermore, the predominantly bare ground habitats within the site are unlikely to attract any dispersing GCN.	Negligible	No
Other Protected Herpetofauna	No records within search radius.	No suitable habitats within or immediately adjacent to the site specifically suitable for other species of protected herpetofauna.	Negligible	No
White-clawed Crayfish (<i>Austropotamobius pallipes</i>)	No records within search radius.	No watercourses within or immediately adjacent to the site to provide any opportunities for White-clawed Crayfish.	-	No

Species/Group	Desk Study Record (distance/direction from works)	Field Survey Habitat/Evidence	Ecological Value	Potential Impact/Effect
Fish/Marine	No records within search radius.	No watercourses within or immediately adjacent to the site to provide any opportunities any protected fish species.	Negligible	No
Protected Invertebrates	No records within search radius.	Only widespread and common habitats typical of the landscape are present. No habitats present which are likely to support a range or diversity of invertebrates or likely to support any protected invertebrate species.	Negligible	No
Protected Flora	No records within search radius.	No protected flora species detected during the Phase I Habitat survey. Only common and widespread habitats present, and unlikely to support any protected flora species.	Negligible	No
England SPI/Local BAP and Notable species	Records in the wider area of Hedgehog (<i>Erinaceus europaeus</i>), Brown Hare (<i>Lepus europaeus</i>), Common Toad (<i>Bufo bufo</i>), Dingy Skipper (<i>Erynnis tages</i>), Cinnabar (<i>Tyria jacobaeae</i>), Small Heath (<i>Coenonympha pamphilus</i>), Marsh Stitchwort (<i>Stellaria palustris</i>) and Cornflower (<i>Centaurea cyanus</i>).	The predominantly bare ground and unvegetated habitats provide significantly poor-quality habitat for a range of Priority Species and Notable species. However, the limited areas of scrub, unmanaged grassland and piles of brash/debris, provide suitable foraging and refuge habitat for a range of SPI including Hedgehog, Common Toad and invertebrates.	Likely Local value	Yes – risk of killing/injury of SPI during site clearance and construction activities Minor adverse, permanent, irreversible impact
Invasive Flora	Records in the wider area of species listed on Sch. 9 of the WCA 1981, comprising Indian Balsam (<i>Impatiens glandulifera</i>), Japanese Knotweed (<i>Fallopia japonica</i>), Canadian Waterweed (<i>Elodea canadensis</i>), Nuttall's Waterweed (<i>Elodea nuttallii</i>).	No invasive species detected during the survey.	-	No

Species/Group	Desk Study Record (distance/direction from works)	Field Survey Habitat/Evidence	Ecological Value	Potential Impact/Effect
	New Zealand (<i>Crassula helmsii</i>), False-acacia (<i>Robinia pseudoacacia</i>), Japanese Rose (<i>Rosa rugosa</i>), Rhododendron (<i>Rhododendron ponticum</i>) and Montbretia (<i>Crocasmia</i> × <i>crocosmiflora</i>).			
Invasive Fauna	Records of Grey Squirrel (<i>Sciurus carolinensis</i>) in the wider area.	No invasive species detected during the survey, and no specific opportunities for any invasive species identified.	Negligible	No

4 Relevant Legislation and Policy

4.1 Legislation

4.1.1 Wildlife legislation and policy relevant (or potentially relevant pending further survey) to the proposed works, based on the findings of the desk study and field survey are set out below. This legal information is a summary only, and the original legal documents should be consulted for definitive information.

Table 4-1: Legislation Protection Afforded to Sites/Habitats that could Potentially be Affected by the Proposed Works

Designated Site/Habitat	Legal Status
None	-

Table 4-2: Legislation Protection Afforded to Species that could Potentially be Affected by the Proposed Works

Species	Legal Status
European Protected	
Bats	These animal species and their breeding sites or resting places are protected under Regulation 41 of the Conservation of Habitats and Species (Amendment) Regulations 2012, which makes it illegal to: • Deliberately capture, injure or kill any such animal or to deliberately take or destroy their eggs; • Deliberately disturb such an animal; • Damage or destroy a breeding site or resting place of such an animal. 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: • The development is for reasons of overriding public interest; • There is no satisfactory alternative; and • The favourable conservation status of the species concerned will be maintained and/or enhanced. Under Regulation 9(5) of the Conservation Regulations, Planning Authorities have a legal duty to 'have regard to the requirements of the EC Habitats Directive in the exercise of their functions'. This means that they must consider the above 3 tests when determining whether Planning Permission should be granted for developments likely to cause an offence under the Conservation Regulations. As a consequence, Planning Applications for such developments must demonstrate that the 3 tests will be passed.
Nationally Protected	
Bats	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: • Intentionally kill, injure or take any such animal; • Intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any such animal; and • Intentionally or recklessly disturb such animals while they occupy a place used for shelter or protection.

Species	Legal Status
Nesting Birds (general)	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: - Intentionally kill, injure or take any wild bird; - Take, damage or destroy the nest (whilst being built or in use) or eggs of any wild bird.
Common Reptiles (e.g. Viviparous Lizard, Grass Snake and Slow-worm)	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.
Wild Mammals	The Wild Mammals (Protection) Act 1996 makes it illegal to mutilate, kick, beat, nail, or otherwise impale, stab, burn, stone, drown, crush, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.
Invasive Species	
None	-

4.1.2 Section 40 of the Natural Environment and Rural Communities Act 2006 (the NERC Act) places a legal duty on public bodies, including planning authorities, to 'have regard' to the conservation of biodiversity when carrying out their normal functions, which includes consideration of planning applications.

4.1.3 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), of which there are 56 habitats and 943 species. The HPI/SPI list is used to guide planning authorities in implementing their duty under the NERC Act.

4.2 National Planning Policy

4.2.1 The NPPF (2019) set out the Government's planning policies for England and how these are expected to be applied. At the heart of the NPPF is a presumption in favour of sustainable development. This presumption does not apply where development requiring Appropriate Assessment under the Birds or Habitats Directives is being considered, planned or determined.

4.2.2 The NPPF states that:

'When determining planning applications, local planning authorities should apply the following principles:

- if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
- development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists;

- development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity
- the following wildlife sites should be given the same protection as European sites: potential Special Protection Areas (SPA) and possible Special Areas of Conservation (SAC); listed or proposed Ramsar sites; and sites identified, or required, as compensatory measures for adverse effects on European sites, potential SPAs, possible SACs, and listed or proposed Ramsar sites.'

4.2.3 Under the NPPF, the Planning Authority has a responsibility to promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

4.2.4 Also, under the NPPF, the planning system should contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes and sites of biodiversity (in a manner commensurate with their statutory status or identified quality in the development plan) and to minimise impacts on, and provide net gains for biodiversity, including by establishing a coherent ecological network that are more resilient to current and future pressures

4.3 Local Planning Policy

4.3.1 The following policies of the Barnsley Local Plan (BMBC, 2019) are relevant to this assessment. Policy information is a summary only, and the original Barnsley Local Plan documents should be consulted for definitive information:

- Policy GI1: Green Infrastructure (to protect, maintain, enhance and create and integrated network of connected and multi-functional GI including enhancements for biodiversity through protection and creation of open space as part of new developments),
- Policy GS1: Green Space (includes open areas which are valuable for amenity, recreation, wildlife or biodiversity, loss of such space will not normally be permitted. To improve green space in the county, new residential developments will contribute in accordance with Green Space Strategy and Infrastructure and Planning Obligations Policy following assessment to determine appropriate provision), and
- Policy BIO1: Biodiversity and Geodiversity (development will be expected to conserve and enhance the biodiversity and geological features by, protecting and improving habitats, species and sites of value, maximising opportunities around new developments, conserving and enhancing local character, following mitigation hierarchy, protecting ancient woodland and trees and provision of biodiversity enhancements).

4.3.2 Additional supplementary planning documents (SPDs) (BMBC, 2012) relevant to nature conservation and this assessment comprises:

- SPD 'Open Space Provision on New Housing Developments', and
- SPD 'Trees and Hedgerows'.

5 Discussions and Recommendations

5.1 Overview of Ecological Features subject to Potential Impacts/Effects

5.1.1 In the absence of mitigation, the following ecological features could be subject to potential impacts/effects as a result of the proposed works:

- Bats;
- Nesting Birds; and
- Reptiles, England SPI and Notable Species.

5.2 Further Survey and Mitigation

5.2.1 For each potential impact/effect identified, all mitigation options provided follow the established mitigation hierarchy as set out in BS42020:2013 (BSI, 2013). This seeks as a preference to avoid impacts, then to mitigate unavoidable impacts, and as a last resort, to compensate for unavoidable residual impacts that remain after avoidance and mitigation measures. All recommended surveys and mitigation measures follow current best practice guidance as identified by CIEEM (CIEEM, 2014) and is proportionate to the level of impact identified and to the nature and scale of the proposed works. A clear and valid justification of methods has been provided where necessary.

Bats

5.2.2 *Avoidance:* To ensure there is no risk of killing/injury of roosting bats, the overhanging mature Ash tree beyond of the southern tip of the site will be retained and protected throughout the site works. Protecting the tree in accordance with *BS 5837:2012 Trees in relation to design, demolition and construction* with establishment of appropriate root protection areas with protection fencing will ensure this tree is protected and there is no risk of harm to roosting bats. In addition, a sensitive lighting scheme should be implemented during the construction and operational of the site, to ensure there is no significant artificial lighting overspill onto the retained off-site trees.

5.2.3 *Mitigation:* None proposed.

5.2.4 *Compensation:* None proposed.

Nesting Birds

5.2.5 *Avoidance:* To avoid an offence being committed in respect of nesting birds, clearance of any suitable bird nesting habitats, including trees, scrub and unmanaged grassland vegetation, should be conducted outside of the bird nesting season (March to August inclusive). If it is necessary to remove suitable nesting habitat during the bird nesting season, a nesting bird survey will need to be conducted by a suitably trained Ecological Clerk of Works (ECoW) to determine the presence or absence of nesting birds in the areas to be affected. If any active nests are detected, an appropriate protection area around the nest(s) will be established until it can be determined that the nest is longer active. In addition, the off-site trees to the west of the site boundary will be retained and protected to ensure no loss of the trees where proposed bird box for the development to the north is to be located.

5.2.6 *Mitigation:* None proposed.

5.2.7 *Compensation:* None proposed.

Common Reptiles, England SPI and Notable Species

- 5.2.8 *Avoidance*: When the proposed informal hibernacula enhancements from the development to the north are installed at the site boundaries (namely the north-west corner, western boundary and southern tip of the site) these will be suitably retained and protected throughout the construction period. It may be necessary to mark and fence off the features to indicate their presence to site contractors.
- 5.2.9 *Mitigation*: To minimise the risk of killing/injury of Common Reptiles, England SPI/Local BAP and notable species, including Slow-worm, Grass Snake, Hedgehog and Common Toad, during the construction phase, any scrub, grassland and existing debris piles will be cleared in an ecologically sensitive manner. This will be undertaken by an ecological contractor or under the direct supervision of a suitably qualified Ecological Clerk of Works. In each instance, an ecologist will check any potential habitats/refugia immediately prior to clearance. Vegetation will then be cut/flailed to a height of 0.15m in a phase manner from the centre of the habitats outwards to encourage any wildlife present to move outside of the working area. The cut habitats and any remaining refuge habitats will again be checked by an Ecological Clerk of Works prior to the stripping of the top-soil. Where possible, piles of debris will be dismantled carefully by hand. There is no timing or seasonal restriction on this recommendation. If necessary, this sensitive clearance and supervision can be subject to a suitably worded planning condition.
- 5.2.10 No further Reptile presence/absence survey is considered necessary as the risk of reptile presence is considered significantly low, with the suitability of the site for reptiles is limited by the extensive built development and roads surrounding the site, meaning that significant populations of any reptile species is considered highly unlikely.
- 5.2.11 *Compensation*: None proposed.
- 5.2.12 To comply with guidance set out in BS42020:2013, a Construction Environment Management Plan (CEMP) will be produced prior to the commencement of construction activities, including site clearance works or archaeological investigations etc. This will incorporate specific Method Statements (MS) for any protected species identified on-site and where EPS Licences are required from Natural England. A Landscape and Ecological Management Plan (LEMP) will then be produced prior to operation of the site to ensure the continued appropriate management and monitoring of ecological features. These documents will contain details on the mechanisms in place to secure mitigation works and refer to the Construction (Design and Management) Regulations 2015 (CITB, 2016) where applicable. The production of both a CEMP and a LEMP can be requested within a planning condition.

5.3 Further Survey Timings

- 5.3.1 The recommended further surveys (if required) will be undertaken in accordance with the proposed programme of works. The programme takes into account: seasonal survey constraints; the expected timetable of works (i.e. when site clearance needs to be undertaken and when construction works propose to commence); and any other timing considerations, such as planning application submission deadlines. Note: the requirement for these additional surveys can be avoided through appropriate site design (see details above).

Table 5.1: Further Survey Seasonal Restrictions

Recommendation	2019/2020											
	J	F	M	A	M	J	J	A	S	O	N	D
Nesting Bird Checks (if required)												

5.4 Opportunities for Biodiversity Enhancement

5.4.1 Opportunities for biodiversity enhancement (above and beyond those required to mitigate for any identified impacts) have been determined through consideration of: Ecological Features identified on site and within the zone of influence; Historical records of protected species/habitats present within the locality; National and Local planning policy including UK BAP SPI/HPI and Local BAP species/habitats; Local Development Plan including consideration of Green/Blue Infrastructure Resource; Consultation with third parties/stakeholders where applicable; and Other influencing factors such as Geology/Hydrology, intended operational activities, and existing disturbance activities within the locality. Where necessary, proposed enhancements should refer to the Construction (Design and Management) Regulations 2015 (CITB, 2016).

5.4.2 The scope of the proposed ecological enhancements, comprises:

- Provision of a single bat roost box and two bird nest boxes at suitable retained trees and/or new buildings;
- Landscape planting of native species, and species which are known to be of value to wildlife. Planting to be focussed on provide connectivity across and around the site; and
- Creation of two informal deadwood piles at the site boundaries to provide enhanced refuge, shelter and hibernation opportunities for a range of wildlife, including common amphibians, common reptiles and small mammals.

6 Conclusion

- 6.1.1 Suitable mitigation measures can be incorporated into the proposed application to avoid/mitigate/ compensate any potential impacts to ecological features and to demonstrate 'no biodiversity net loss' in accordance with NPPF and local planning policy. As such, no significant residual impact can be expected which would prevent determination of a planning application or development of this site.
- 6.1.2 The proposals present the opportunity to provide ecological enhancements to demonstrate a 'biodiversity net gain'.

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Drawing CRM.1122.006.EC.D.001 – Phase I Habitat Map



- Key**
- Site Boundary
 - Scrub - dense/continuous (A2.1)
 - Scattered Shrubs (A2.2)
 - Broadleaf Tree (A3.3)
 - SI Poor Semi-improved Grassland (B6)
 - Tall Ruderal Herb Vegetation (C3.1)
 - Seasonal Pool
 - Sparse Colonising Vegetation (J1.3)
 - Fence (J2.4)
 - Wall (J2.5)
 - Bare Ground (J4)

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CLIENT:
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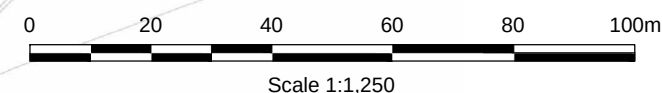
SCALE: 1:1,250@A3 PROJECT REF: CRM.1122.006

DRAWN: MG CHECKED: CS DATE: Mar 2019

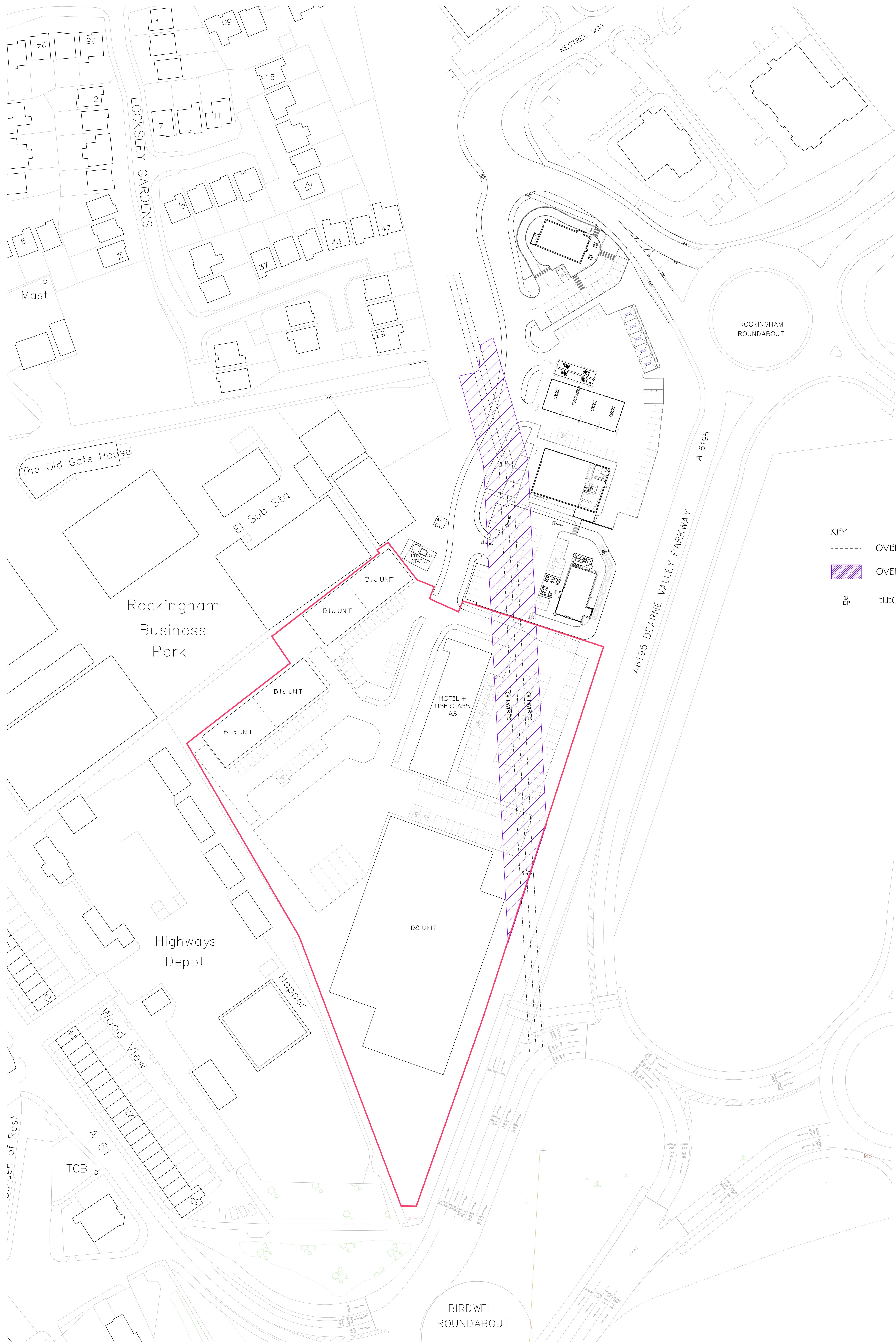
PROJECT:
**Land at Dearne Valley Parkway,
Barnsley**

TITLE:
Phase I Habitat Map

DRAWING NO:
CRM.1122.006.EC.D.001



Appendix A – Proposed Site Layout



- KEY
- OVERHEAD CABLE
 - OVERHEAD CABLE EASEMENT
 - EP ELECTRIC PYLON

B	01.03.19	AMENDED IN ACCORDANCE WITH SMITH JENKINS COMMENTS	KJR	VS
A	27.02.19	AMENDED IN ACCORDANCE WITH SMITH JENKINS COMMENTS	KJR	VS

REV	DATE	DESCRIPTION	BY	CHECK

1:500 SCALE

0m

10m

ARCHITECTURE | PLANNING | LANDSCAPE

CLIENT:
HARTWOOD ESTATES

PROJECT:
DEARNE VALLEY PARKWAY
SHEPHERD ROAD

DRAWING:
INDICATIVE SITE LAYOUT

DRAWING NUMBER:
13 4806 103 - B

SCALE @ A4:
1:500

DRAWN:
KJR

CHECKED:
VS

DATE:
FEB 19

DATE:
FEB 19



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