Newlands Developments

Land Off Barnsley Road, Goldthorpe

ECOLOGICAL APPRAISAL

June 2023

This document contains information on the location of badger setts and activity. Due to the sensitive nature of these records and the current public awareness, this document should remain confidential for the use of the planning application and should not be made publicly available.

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1.0 EXECUTIVE SUMMARY

1.1 This report provides an assessment of ecological value of Land Off Barnsley Road, Goldthorpe and has been produced by FPCR Environment and Design Ltd on behalf of Newlands Developments.

1.2 The Site lies north-east and within 100m of Dearne Valley Wetlands SSSI and as such falls into the Impact Risk Zone (IRZ) of Dearne Valley Wetlands SSSI.

1.3 The Site, at the time of survey comprised predominately arable habitat of low ecological value, bound in places by hedgerows, with occasional stands of plantation woodland on the Site boundary and flanking a steep-sided stream (Carr Dike) flowing in a general south-westerly direction through the centre of the Site and connected to a ditch which discharges from the area off-site to the east and flows in a general west/south-west direction.

1.4 Hedgerows were noted to be native species dominant and, as such, represent a habitat of principal importance under the NERC Act 2006, and a priority habitat within the Local Biodiversity Action plan (LBAP), although many of the hedgerows were heavily managed. Hedgerows were also assessed against the wildlife and landscape criteria of the Hedgerow Regulations 1997, and none were assessed to be 'important'. Where possible hedgerows will be retained within the landscaping and green infrastructure proposals for the development of the Site. In addition, the proposed habitat creation will include hedgerow creation to compensate for areas of hedgerows which will be lost to the development.

1.5 Plantation broad-leaved woodland (PBWs 2 to 5) interspersed by arable margins of poor semi-improved grassland was noted to create a linear corridor of habitat following the channel of Carr Dike across the centre of the Site. This corridor will be retained and extended under the proposed scheme of habitat creation for the development.

1.6 Scrub is included in the LBAP as a priority habitat. Where areas of scattered scrub are to be lost. Habitat creation for the proposed development will include the planting of new scrub and woodland habitats across the Site.

1.7 The arable margins are habitats of principal importance under the NERC Act 2006 and priority habitats under the LBAP. In addition, poor semi-improved grassland is included as a habitat under the LBAP that has value and is important in Barnsley for biodiversity. Habitat creation within the proposed development will include areas of grassland which will be managed to provide biodiversity and habitat for protected and notable species..

1.8 A suite of breeding bird surveys and bat surveys has been completed and assessment covering these groups is provided in separate reports. Further bat surveys will be undertaken to establish whether trees T4 and T5 support bat roosts prior the determination of the planning application for the Site

1.9 It is considered that GCN and reptiles are likely absent from the Site. No badger setts were recorded within the Site or 30m from boundaries and no evidence of badger was recorded. No evidence of water vole or otter was recorded on-site and as such these species are considered likely absent from the Site.

2.0 INTRODUCTION

2.1 This report has been produced by FPCR Environment and Design Ltd on behalf of Newlands Developments to provide an assessment of ecological value of Land Off Barnsley Road, Goldthorpe (central grid ref. SE 4414 0356) herein referred to as the 'Site'.

Proposals

2.2 Proposed development is for employment uses (B2 and B8), a new link road and associated works including provision of internal access roads, landscaping, and drainage/flood compensation areas.

Context

2.3 The Site lies to the west of the town of Goldthorpe on farmland, south of the A635 Barnsley/Doncaster Road and adjacent to the west of Aldi Goldthorpe Regional Distribution Centre. Carr Dike bisects the Site flowing in a general south-westerly direction from Barnsley/Doncaster Road in the north-east of the Site. Dearne Valley Wetlands Site of Special Scientific Interest (SSSI) lies to the south-west with the land between dominated by large cultivated arable fields.

2.4 The Site at the time of survey, comprised predominately large arable fields with boundary features which include plantation woodland, Carr Dike (stream), a wet ditch (connecting to Carr Dike), and native hedgerows with associated mature trees. A small pond was located in the north of the Site adjacent to a small conifer plantation.

Objectives

2.5 FPCR were commissioned to undertake an Ecological Appraisal of the Site in order to identify habitats or species that may be affected by the proposed development. The objectives of the study were to:

- Identify the existing habitats within the survey area.
- Check for evidence of, or potential for, protected species.
- Identify potential ecological constraints to the proposed development.
- Identify any potential requirements for further survey.
- Consider any mitigation and enhancement measures that might be required for development within the survey area.

3.0 METHODOLOGY

Desk Study

3.1 In order to compile existing baseline information, relevant ecological data was requested from both statutory and non-statutory nature conservation organisations for the purposes of this Ecological Appraisal, including:

- Multi Agency Geographic Information for the Countryside (MAGIC),
- Barnsley Biological Records Centre (BBRC)

3.2 The search area for biodiversity information was related to the significance of sites and species and potential zones of influence, as follows:

- 15km around the application area for sites of International Importance (e.g. Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Ramsar sites).
- 2km around the application area for sites of National or Regional Importance (e.g. Sites of Special Scientific Interest (SSSIs))
- 1km around the application site for sites of County Importance and species records (e.g. Local Wildlife Site, proposed Wildlife Sites) and protected and/or notable species.

3.3 The MAGIC website was also consulted to establish whether the Site lay within an Impact Risk Zone (IRZ). IRZs have been developed by Natural England to provide an initial assessment of the potential risk to statutory designated sites from development proposals. These zones are defined around statutory designated sites to reflect their sensitivity. A citation is given for each IRZ, indicating the types of development which could potentially have adverse impacts on the statutory designated site.

3.4 Further inspection, using colour 1:25,000 OS base maps (www.ordnancesurvey.co.uk) and aerial photographs from Google Earth (www.maps.google.co.uk), was also undertaken in order to provide additional context and identify any features of potential importance for nature conservation in the wider countryside.

Field Survey: Extended Phase 1 Survey

Habitats

3.5 An Extended Phase 1 Habitat Survey was undertaken, generally in accordance with JNCC Methodology[1], to classify and record the broad habitat types present at the Site, and extended to assess the potential for the Site to support protected, notable, or invasive species.

3.6 The initial survey of the Site was completed on 19th April 2022 (within the optimal period for survey of flora and habitats) by Andrew Burrows, an ecologist with over 10 years' experience and a FISC Level 4 botanist. For each habitat recorded, a list of botanical species present was produced (Appendix A). This list is not considered to be exhaustive, but sufficient information was gained to ascertain broad habitats and features of interest present.

[1] Joint Nature Conservation Committee, 2016. *Handbook for Phase 1 habitat survey: A technique for environmental audit (Revised 2016)*. JNCC. Peterborough.

3.7 Since the field survey was completed, the boundary of the Site and the proposed development design have been revised and updated. As such, an additional survey was carried out on 12th January 2023 by Matt Falconer, an ecologist with over 6 years' experience, and a FISC level 4 botanist, in order to assess habitats within areas not previously captured by the April 2022 survey.

3.8 Hedgerows within the Site were assessed;

- In accordance with wildlife and landscape criteria contained within Part II of the Hedgerow Regulations 1997, to determine whether the hedgerow qualified as an 'Important Hedgerow'; and
- In accordance with the Hedgerow Evaluation and Grading System (HEGS) to establish the conservation value of the hedgerows.

Protected Species

3.9 During the surveys, observations, identification, and signs of any species protected under the Wildlife and Countryside Act 1981 (as amended) (WCA), the Protection of Badgers Act 1992, and the Conservation of Habitats and Species Regulations ('Habitats Regulations') 2017 (as amended) were recorded. Any sightings, evidence of, or suitable habitats for other protected fauna, species of principal importance under the Natural Environment and Rural Communities Act (NERC) 2006, or Local Biodiversity Action Plan (LBAP)[2] or otherwise notable species including breeding birds were recorded during the visit.

Badgers

3.10 During the phase 1 and walkover survey, all potentially suitable habitats within the survey area and within 30m of the Site boundary (where accessible/appropriate) were searched for evidence of badger *Meles meles* activity, using standard methodology as recommended by Harris, Creswell, and Jefferies[3]. Evidence of badger occupation and activity sought included:

- Setts: including earth mounds, evidence of bedding and runways between setts.
- Latrines: often located close to setts, at territory boundaries or adjacent to favoured feeding areas.
- Prints and paths or trackways.
- Hairs caught on rough wood or fencing.
- Other evidence: including snuffle holes, feeding, and playing areas and scratching posts.

Bats

Ground-based Assessment of Trees

3.11 Trees within the Site were assessed for their suitability to support roosting bats by a licenced and experienced bat ecologist (Natural England Licence no. 2020-48320-CLS-CLS). Potential Roosting Features (PRF) sought to be identified and assessed included: man-made holes, woodpecker

[2] Barnsley Biodiversity Trust http://www.barnsleybiodiversity.org.uk/biodiversityplan.html [accessed 11.01.23]
[3] Harris, S., Cresswell, P. & Jefferies, D. (1989). *Surveying for badgers*. *Occasional Publication of the Mammal Society No. 9*. Mammal Society: Bristol.

holes, cracks/splits, loose or flaking bark, matted ivy stems over 50mm diameter and other hollows or cavities (based on p16, British Standard 8596:2015[4]).

3.12 Certain factors such as orientation of the feature, its height from the ground, the direct surroundings, and its location in respect to other features may enhance or reduce the potential suitability of the feature to support a bat roost.

3.13 Trees were classified into general bat roost potential groups (negligible, low, medium, or high) based upon the presence of suitable features and classification and assessment of such features based upon Bat Conservation Trust Guidelines[5].

Foraging/commuting Habitat Suitability Assessment

3.14 As part of the Phase 1 habitat survey and subsequent walkover, an assessment of the suitability within the survey area for foraging and commuting bats was undertaken. This included consideration of the structure and connectivity of hedgerows, the presence of tree cover and woodland edge habitat and overall connectivity of these features to suitable linear habitat networks offsite.

Great Crested Newt (GCN) Waterbodies Assessment

3.15 Where this information did not already exist, a habitat suitability index (HSI) assessment was undertaken during the Phase 1 and walkover surveys on all waterbodies identified within Site and its vicinity. This assessment provides a measure of the likely suitability that a waterbody has for supporting great crested newts *Triturus cristatus* (GCN). Whilst not a direct indication of whether or not a waterbody will support GCN, generally, those with a higher score are more likely to support this species than those with a lower score and there is a positive correlation between HSI scores and waterbodies in which GCN are recorded. Ten separate attributes are assessed for each waterbody to calculate the suitability of the ponds to support GCN:

- Geographic location
- Waterbody area
- Waterbody drying
- Water quality
- Shade
- Presence of water-fowl
- Presence of fish
- Number of linked waterbodies
- Terrestrial habitat
- Aquatic plant coverage

3.16 A score is assigned according to the most appropriate criteria level set within each attribute and a total score calculated of between 0 and 1. Waterbody suitability is then determined according to the scale set out in Table 1 below. Using the index score the predicted presence of GCN being

[4] BSI Publications (2015) *BS 8596:2015 Surveying for bats in trees and woodland – Guide*. BSI Standards Publication. London.
[5] Collins J. (2016) *Bat Surveys for Professional Ecologists – Good Practice Guidelines (3rd Edition).* Bat Conservation Trust.

found within a waterbody can be made, based on the proportion of waterbodies typically occupied at that suitability level.

Table 1: HSI Score and Suitability for Supporting Great Crested Newts

HSI score	Waterbody Suitability
<0.5	Poor
0.5 - 0.59	Below average
0.6 – 0.69	Average
0.7 – 0.79	Good

Limitations and Assumptions

3.17 The additional walkover update survey was undertaken during January which is sub-optimal for the identification of flora and detailed classification of habitats. As such, some plant species may not have been present at the time of survey. However, given the results of the previous survey and relatively homogenous habitats present it is considered that the walkover survey was sufficient to provide broad habitat classifications and assess the potential to support protected and notable species. .

4.0 RESULTS

Desk Study

Review of Previous Reports

4.1 FPCR were provided with previous reports associated with the ES10 Masterplan allocation of part of the Site and reports relating to the development of the Goldthorpe Unit D Access Roundabout. Relevant information from the review of these reports is presented below.

BMBC, August 2016. Local Plan Site D1A Assessment

4.2 This report provided an assessment of the ecological value of the Site for inclusion in the BMBC local plan. It includes the findings of a habitat survey and assessment of the value of habitats present to support protected and notable species undertaken in 2013 and reported on wintering bird surveys undertaken in 2013/2014. The area surveyed included the area of the subject Site and additional land to the west, referenced in the report as Site D1A.

4.3 The report stated that the wintering bird surveys were aimed at determining whether the site was used by golden plover, however the survey concluded that golden plover do not use the site in significant numbers.

4.4 The habitat survey reported that the habitats within the site were of relatively low ecological value. Recommendations were to retain an 8m habitat corridor along the channel of Carr Dike and where possible to retain hedgerows and woodland.

4.5 The habitats were assessed as being of low potential to support reptiles and amphibians but of moderate value to support invertebrates, mammals, birds, and fish. The notes provided stated that a short-eared owl *Asio flammeus* had been observed at the site though the exact location was not provided.

Wildscapes, Sept. 2019. Preliminary Ecological Appraisal Goldthorpe Unit D

4.6 This report provides a preliminary record of habitats and potential to support notable species. The report covers the area of a proposed access roundabout on the A635 road and includes some of the land within the north of the subject Site.

4.7 The report provides a description of the habitats present and a summary of the ecological value of the habitats. In general the habitats present were assessed to be of limited ecological value, but the hedgerows were noted to have some value through connectivity and recommended to be compensated for if they were to be lost.

4.8 The report assessed the likely presence of notable species. A small number of trees were identified as having bat roost potential, with other habitats as having only limited foraging/commuting potential.

4.9 The report included the survey of a pond within the study area (identified as Pond P2 within the current subject Site). The pond was surveyed for great crested newt eDNA and found to be negative, therefore GCN were assessed as being unlikely to be present. The presence of reptiles within the area was considered to be unlikely.

4.10 Habitats within the area were assessed as having some value for foraging/commuting birds with hedgerows providing habitat for nesting birds.

4.11 A water vole survey was conducted on Carr Dike and confirmed that the species is absent from the watercourse in this location. The survey also reported evidence of American mink *Neovison vison*, a non-native species known to predate water vole.

Wildscapes, Dec. 2019. Ecological Impact Assessment Goldthorpe Unit D Access Roundabout

4.12 This report provides an assessment of the impact that the proposed development of an access roundabout on the A635 would have on ecological receptors. The report presented the baseline ecological conditions for the study area consistent with those reported within the previous Wildscapes PEA (Sept. 2019).

4.13 The assessment considered that impacts to designated sites from the proposed development of the roundabout would be negligible.

4.14 Impacts to habitats were considered to be varied, with the loss of 0.45ha of broadleaved woodland plantation considered to be a major negative impact at the local level, loss of poor semi-improved grassland road verges considered to be moderate negative impact at the site level, loss of arable habitats considered to be minor negative impact at the local level, loss of improved grassland to be of negligible effect, loss of tall ruderal habitat to be a minor negative impact at the local level, and loss of hedgerows to be a moderate negative impact at the local level.

4.15 The impact to Carr Dike was assessed as major negative at the site level in the short term due to the potential of construction to lead to pollution events.

4.16 The impact to bat roosts was considered to be negligible with no roost features within the development area. The impact to foraging and commuting bats was considered to be minor negative from the loss of habitat.

4.17 The potential impact (without mitigation) to common and widespread amphibians was considered to be major negative at the local level in the short term, in relation to direct injury/death due to the proximity of the pond (identified in current proposals as P2). The loss of habitat for amphibians was considered to have a negligible effect.

4.18 The impact on birds (without mitigation) was considered to be major negative at the regional level in the short term due to the potential to disturb breeding/nesting birds during construction. The loss of bird breeding habitat was considered to be moderate negative at the site level.

4.19 Potential impact to fish (within Carr Dike and without mitigation) were considered to be minor negative at the site level in the long term due to the increased risk of pollution events.

4.20 The impact to reptiles (without mitigation) was considered to be major negative at the local level due to the potential of injury/death during construction. The loss of habitat was considered to be major negative in the long term at the local level. However, the presence of reptiles had not be confirmed by surveys.

4.21 Impact to hedgehogs *Erinaceus europaeus* (without mitigation) was considered to be major negative at the local level due to the potential for injury or death during construction. The loss of habitat for hedgehogs was considered to be a minor negative impact at the site level.

4.22 The report provides recommendations for mitigation and compensation to reduce the potential impacts. After mitigation, the majority of impacts were considered to be negligible or present a positive impact. Potential impacts to amphibians remained major negative at the local level for the potential of injury or death during construction (despite recommendation to implement

precautionary working methods) and minor negative at the site level for the loss of foraging and commuting habitat (despite the recommendation to create compensatory habitats). Potential impacts to hedgehogs from construction activities and loss of habitat remained minor negative at the local level (despite the recommendation to implement working practices to protect mammals and reinstate habitats).

Middleton Bell Ecology, June 2020. Goldthorpe ES10 Preliminary Ecological Appraisal

4.23 The report provides a survey of baseline ecological conditions for the area comprising the majority of the current subject Site in relation to the ES10 masterplan area to be included within the allocations of the BMBC local plan.

4.24 The baseline survey identified habitats and potential to support protected species similar to those already reported in previous surveys.

4.25 Potential ecological constraints were reported to include; marsh harrier *Circus aeruginosus*, skylark *Alauda arvensis*, grey partridge *Perdix perdix*, song thrush *Turdus philomelos*, yellow wagtail *Motacilla flava*, yellowhammer *Emberiza citrinella*, and a hedgerow which had been assessed to be "Important" under the Hedgerow Regulations (1997).

4.26 A number of further habitats and species of principal importance under the NERC Act (2006) and habitats and species included within the Barnsley Local Biodiversity Action Plan were reported to be present.

4.27 Himalayan balsam *Impatiens glandulifera,* an invasive non-native species was reported to be present in a number of locations along Carr Dike.

4.28 A pond located to the south of the site was sampled for GCN eDNA and found to be negative.

4.29 The report stated that marsh harriers were known to have nested at the nearby RSPB Old Moor reserve and that the area of the site was likely to be used for foraging.

4.30 The report considered potential impacts from the proposed development of the area. Potential impacts to designated sites presented included the potential for development to restrict foraging and dispersal of species which use the nearby SSSI and LWS sites (RSPB Old Moor, Wath Ings and Bolton Ings). The species listed include marsh harrier (not a species listed on the designation for the SSSI) and bittern (which is listed on the designation).

4.31 Additionally, flood events or pollution events to Carr Dike were reported to have the potential to impact downstream designated sites.

4.32 The report also states that habitat loss due to development could adversely affect birds and bats using the site as well as generalist wildlife (such as hedgehogs). Though it is stated that negative impacts to many of the species could be avoidable.

4.33 Recommendations for mitigation and compensation include retention of habitat along Carr Dike, and creation of reedbed areas which could benefit marsh harrier and other bird species. Integrated nest boxes were also recommended on new buildings.

4.34 The report also recommended the consideration for use of green roofs to limit rainwater run off and provide habitat for invertebrates and bird species.

Middleton Bell Ecology, Feb. 2021.Goldthorpe ES10 – Bird Survey and Defra Metric Briefing Note v3

4.35 The briefing note states that it is intended to serve as a partial update to the previous Middleton Bell Ecology PEA report (June 2020) and provides details of bird surveys conducted between July and August 2020 and over the winter of 2020/2021, as well as presenting initial calculations of potential biodiversity change using the Natural England/DEFRA Biodiversity Metric version 2.0.

4.36 The bird surveys concluded that the site was of local importance for farmland birds but of local/district level importance to grey partridge and district level importance to yellow wagtail.

4.37 The report provided details of sightings of marsh harrier during 2020 including a map showing areas of the site used by the species. The report indicated that seven marsh harriers had been recorded including three adult females, three juveniles and a single adult male. The report indicated that the species used the site for foraging and dispersal and that the site may be of county level importance to the species.

4.38 The wintering bird survey results reported that the site was not considered important for wintering farmland birds but is used by wildfowl and waders prior to sowing of winter crops.

4.39 The report provides recommendations for mitigation for marsh harrier and includes options for maintaining a large area of buffer habitat along Carr Dike or providing a smaller buffer habitat along the watercourse and another corridor of habitat to the west of the site.

4.40 The calculation of biodiversity change did not provide details of what the post development layout would comprise. The calculation indicated that there would be a significant reduction in the biodiversity habitat units as a result of the proposed development and that off-site compensation may be required.

Envirotec, March 2021. Letter Report RE: Goldthorpe Barnsley

4.41 This letter report provided the results of a desk study and a site screening survey to identify habitats and potential ecological constraints for the area which comprises the majority of the subject Site.

4.42 The letter reported that the development of the site would be unlikely to impact upon statutory sites of nature conservation in the vicinity.

4.43 The screening assessment noted that the majority of habitats present were of limited ecological value, with the exception of a number of large semi-mature trees which had intrinsic ecological and landscape value. The assessment noted that ash trees within the woodland blocks exhibited characteristics of ash die back.

4.44 The letter also stated that the habitats at the site are of limited ecological value to notable species and do not expect species to occur on site which could not be adequately dealt with via mitigation and compensation on-site.

4.45 The letter provided details of a preliminary assessment of biodiversity units and gave recommendations for potential enhancements which could be provided.

Envirotec, April 2021. Goldthorpe Ecology Briefing Note

4.46 This briefing note provides a summary of discussions had with the ecology officer for BMBC at the time (Trevor Mayne).

4.47 The note provided reference to the local plan and reference to the presence of golden plover. This was reported to be discounted due to previous surveys identifying that the species did not use the site in significant numbers.

4.48 The note then detailed that the ecology officer would expect 10% biodiversity net gain post development and an 8m undeveloped corridor along Carr Dike (the diversion of Carr Dike is no longer being considered as part of the current proposals). Additional discussion is reported which related to the retention of hedgerows within the Site.

4.49 The diversion of Carr Dike was discussed but the ecology officer stated that as that would lead to loss of woodland he would object to the diversion. In addition a large attenuation swale, outside of the Site red line boundary was discussed and agreed that it could provide ecological benefit (this swale is no longer being considered as part of the current proposals)

4.50 The letter reported that (at the time of reporting), marsh harrier had been known to have bred in at the nearby RSPB Old Moor reserve and that mitigation through a habitat linkage to provide continued connectivity across the site would be sought.

Statutory Designated Sites

4.51 Statutory designated sites are shown in relation to the Site in Figure 1. The Site is not covered by any statutory designation, and there are no international nature conservation designations (Special protection Areas SPAs, Special Areas of Conservation SACs, and RAMSAR Sites) recorded within 15km of the Site.

4.52 One statutory designated site of national nature conservation interest is present within 2km of the Site. Dearne Valley Wetlands Site of Special Scientific Interest (SSSI) comprises a number of separate areas, the nearest of which is approximately 100m south-west of the site, with a second discrete area lying 1.7km north-west, and a third discrete area lying 1.6km south-east of the development. The SSSI is designated for:

- Breeding gadwall *Mareca strepera*, shoveler *Spatula clypeata*, garganey *Spatula querquedula*, pochard *Aythya farina*, bittern *Botaurus stellaris*, black-headed gull *Chroicocephalus ridibundus* and willow tit *Poecile montanus klienschmidtii*
- Non-breeding gadwall and shoveler; and
- Diverse assemblage of breeding birds of lowland damp grassland, scrub, open water, and fen.

4.53 The Site falls into the Impact Risk Zone (IRZ) of Dearne Valley Wetlands SSSI which lists large non-residential development as a potential impact to the SSSI.

Non-statutory Designated Sites

4.54 Non -statutory designated sites are shown in relation to the Site in Figure 1. One non-statutory site of local nature conservation interest is present within 1km of the Site. Old Moor and Wath Ings Local Wildlife Site (LWS) lies 950m south-west of the Site and is considered to be important for a range of habitats and species of flora and fauna, and particularly important for birds.

4.55 It should also be noted that several of the RSPB Dearne Valley sites lie south-west of the Site including Bolton Ings RSPB site (620m south-west) and Old Moor RSPB site (950m south-west).

4.56

Protected Species

4.57 Records for protected species in relation to the Site are provided on Figures 2a and 2b. The below summarises records that have been returned by BBRC. For conciseness only records from the last 20 years are included.

Badger – Confidential

4.58 One record for Badger *Meles meles* has been recorded within RSPB Old Moor at an unknown location. No further information was given in this record.

Bats

4.59 Common pipistrelle *Pipistrellus pipistrellus*, Leisler's bat *Nyctalus leiserli*, myotis species *Myotis sp.,* noctule *Nyctalus noctula* and soprano pipistrelle *Pipistrellus pygmaeus* have been recorded within the Site. At unknown locations within OS grid square SE4202, the nearest point of which is 790m south-west of the Site, brown long-eared bat *Plecotus auritus*, Leisler's bat, noctule and soprano pipistrelle have been recorded.

Water Vole and Otter

4.60 Otter *Lutra lutra* has been recorded 750m south of the Site in association with the River Dearne, and at an unrecorded location within OS grid square SE4302 immediately south-west of the Site.

4.61 Water vole *Arvicola amphibious* have been recorded in association with the River Dearne, the nearest record approximately 890m south of the Site.

4.62 Previous surveys (Wildscapes, 2019) found no evidence of either water vole or otter at the Site but did find evidence of American mink which are known to predate and severely impact water vole populations.

Birds

4.63 Figure 2b indicates the locations of individual protected and notable bird records received from BBRC. The majority of these records are from two locations in the Site's vicinity (Dearne Valley Wetlands SSSI and the environs of Billingley).

4.64 Records have also been provided showing bird species to an accuracy of a 1km and 2km OS Grid square, the actual location of the species within that grid square being unknown. Figure 2b shows the relevant grid squares for which data have been provided, and data tables of these records are provided in Appendix B, which shows 169 records of different bird species identified within the search area. The majority of these records are from grid squares SE4202 and SE4302, which lie south-west of the Site and contain the RSPB wetlands within them.

4.65 The following protected and notable bird species were recorded as individual records within the Site or its immediate vicinity: dunnock *Prunella modularis*, green sandpiper *Tringa ochropus*, greenfinch *Chloris chloris*, grey partridge, house martin *Delichon urbicum*, house sparrow *Passer domesticus*, kestrel *Falco tinnunculus*, linnet *Linaria cannabina*, meadow pipit *Anthus pratensis*, moorhen *Gallinula chloropus*, song thrush *Turdus philomelos*, sparrowhawk *Accipiter nisus*, swift *Apus apus*, woodpigeon *Columba palumbus*, wren *Troglodytes troglodytes*, whitethroat *Sylvia communis*, yellow wagtail and yellowhammer.

4.66 Within the two 1km grid squares that overlie the Site, the following additional species have been recorded: barn owl *Tyto alba,* bullfinch *Pyrrhula pyrrhula*, curlew *Numenius arquata*, lapwing *Vanellus vanellus*, Quail *Coturnix coturnix*, reed bunting *Emberiza schoeniclus,* sedge warbler *Acrocephalus schoenobaenus*, skylark, starling *Sturnus vulgaris*, stock dove *Columba oenas*, tree sparrow *Passer montanus*, whitethroat *Sylvia communis*, and willow warbler *Phylloscopus trochilus*.

4.67 The Middleton Bell Goldthorpe ES10 – Bird Survey and Defra Metric Briefing Note v3 (Middleton Bell Ecology 2021) reported that Marsh Harrier were present at the Site in 2020. The species were recorded as using the south-west of the Site for foraging and later for dispersal away from the area, after successfully breeding at the RSPB Old Moor reserve to the south-west in 2020. A marsh harrier technical note (FPRC 2023) provides more detail on the presence and likely constraints represented by this species.

Herptiles: Amphibians and Reptiles

4.68 No records of great crested newt were returned within 1km of the Site.

4.69 Grass snake *Natrix Helvetica* have been recorded approximately 730m north-west of the Site, associated with arable farmland beyond the A635 Barnsley Road/Doncaster Road (which would be considered to be a significant barrier to dispersal).

4.70 Common lizard *Zootoca vivipara* and slow-worm *Anguis fragilis* have been recorded at unknown locations within OS grid square SE4202 which is associated with the Dearne Valley Wetlands SSSI approximately 800m to the south-west of the Site at the nearest point.

Invasive and Non-Native Species (INNS)

4.71 No INNS have been recorded within the Site. American mink *Mustela vision* has been recorded 700m south of the Site (associated with the River Dearne). Records of unidentified cotoneaster species, Japanese rose *Rosa rugosa*, variegated yellow archangel *Lamium galeobdolon subsp. Argentatum* and Monbretia c*rocosmia x crocosmiiflora* are located within residential areas to the east of the Site; and giant hogweed *Heracleum mantegazzianum,* Himalayan balsam *Himalayan glandulifera* and Japanese knotweed *Fallopia japonica* are located along the River Dearne, approximately 720m to the south of the Site at the nearest location.

Invertebrates

4.72 Two protected species of butterfly and twelve protected species of moth have been recorded at unknown locations within OS grid square SE4202, which is associated with the Dearne Valley Wetlands SSSI approximately 800m south-west of the Site at the nearest point. Butterflies included: - dingy skipper; and wall *Lasiommata megera*; and moths: cinnabar *Tyria jacobaeae*; dark-barred twin-spot carpet *Xanthorhoe ferrugata*; dusky thorn *Ennomos fuscantaria*; ghost moth *Hepialus humuli*; green-brindled crescent *Allophyes oxyacanthae*; grey dagger *Acronicta psi*; latticed heath *Chiasmia clathrate*; mottled rustic *Caradrina morpheus*; rosy rustic *Hydraecia micacea*; shaded broad-bar *Scotopteryx chenopodiata*; small square-spot *Diarsia rubi*; and white ermine *Spilosoma lubricipeda*.

4.73 Cinnabar moth has also been recorded associated with woodland in the vicinity of Billingley, approximately 740m north-west of the Site.

Notable Species

4.74 Notable Species are presented on Figure 2a.

4.75 Brown hare *Lepus europaeus* have been recorded in arable fields in the immediate vicinity to the Site and at unrecorded locations within OS grid squares SE4202, SE4203, SE4302, and SE4403 which includes the Site (the Site lies mostly within SE4403).

4.76 Hedgehog *Erinaceus europaeus* have been recorded approximately 100m to the north-east and around 70m south of the Site as well as unrecorded locations within OS grid square SE4202 to the south-west of the Site, and within SE4403, in which the Site is located.

4.77 Harvest mouse *Micromys minutus* have been recorded at an unknown location within OS grid square SE4202 which is associated with the Dearne Valley Wetlands SSSI approximately 800m south-west of the Site at the nearest point.

4.78 Common toad *Bufo bufo*, common frog *Rana temporaria* and smooth newt *Lissotriton vulgaris* have been recorded within 1 km of the Site and at unknown locations within OS grid square SE4202 which is associated with the Dearne Valley Wetlands SSSI approximately 800m south-west of the Site at the nearest point.

4.79 Butterfly species, small heath *Coenonympha pamphilus* and dingy skipper *Erynnis tages* have been recorded in Dearne Valley Wetlands SSSI to the south.

4.80 Notable plants chamomile *Chamaemelum nobile* and northern hawk's-beard *Crepis mollis* have been recorded at unknown locations within OS grid square SE4202, which is associated with the Dearne Valley Wetlands SSSI approximately 800m south-west of the Site at the nearest point.

Field Survey – Habitats

4.81 The following habitat features were recorded within the Site and are presented on the Phase 1 Habitat Survey Plan (Figure 3):

- Plantation broadleaved woodland
- Plantation coniferous woodland
- Broadleaved tree
- Scrub
- Poor semi-improved grassland
- Open water
- Arable
- Hedgerow
- Dry ditch
- Bare ground

Plantation: Broadleaved Woodland

4.82 Compartments of plantation woodland were recorded in association with Carr Dike and land adjacent to Barnsley/Doncaster Road (A635).

4.83 Compartment PBW1 was a young plantation directly south of the A635 with visible planting lines and tree guards in place at the time of survey. Common ash *Fraxinus excelsior* and field maple *Acer campestre* were abundant, and hawthorn *Crataegus monogyna* was frequent at the boundaries. Pedunculate oak *Quercus robur* was occasional and silver birch *Betula pendula* and dog-rose *Rosa canina* were rarely encountered. The woodland was divided into two separate sections through the recent removal of a central section. The canopy was approximately 6m high

and ground flora included abundant cow parsley *Anthriscus sylvestris* and occasional hogweed *Heracleum sphondylium.*

4.84 PBW 2 comprised several compartments within the centre of the Site adjacent to the west/north of Carr Dike, all compartments being of a very similar composition of canopy species and ground flora. The presence of planted lines and tree guards was clearly visible and a more or less open canopy with poorly developed shrub layer was recorded throughout. Pedunculate oak dominated, and other tree/shrub species included bramble *Rubus fruticosus agg*, dog-rose, silver birch, hazel *Corylus avellana* and rowan *Sorbus aucuparia.* Ground flora was dominated by hogweed, with grasses *Poa sp.* and cow parsley frequently encountered. Garlic mustard *Alliaria petiolate* was occasional and white dead-nettle *Lamium album* was rarely encountered.

4.85 PBW3 bordered arable land and hedgerow H8 in the north-eastern part of the Site. The woodland was dominated by common ash. Trees were clearly planted in rows with guards visible. Silver birch and pedunculate oak were frequent, dog-rose, hazel, and field maple were rarely encountered. Hogweed was abundant in the ground flora..

4.86 PBW4 was a larger compartment connected with the southern extent of PBW3 and was also planted in rows with tree guards present. Common ash dominated and field maple was frequent. Wild cherry *Prunus avium* was also present. Cow parsley was abundant in the ground flora and common nettle *Urtica dioica* was occasional. Both PBW3 and PBW4 supported a poorly developed shrub layer.

4.87 PBW5 was located along the northern boundary of the Site (to the east of PBW1) and supported trees clearly planted in rows with guards. Common ash and field maple were abundant and sycamore *Acer pseudoplatanus* was frequent. Hawthorn was occasional and pedunculate oak and silver birch were rarely encountered. Yorkshire fog *Holcus lanatus* was frequent in the ground flora, and ivy *Hedera helix* and cleavers *Galium aparine* were occasional.

4.88 PBW6 in the north-western corner of the Site was also planted in rows with guards present. Tree species were mainly immature in this area, with abundant hawthorn, and frequent ash, dogwood, and field maple. Ground flora was predominantly tall ruderal vegetation and grasses, including frequent false oat-grass *Arrhenatherum elatius* and great willowherb *Epilobium hirsutum*, with occasional ragwort species *Senecio sp.* Some areas in the south of the compartment were overgrown with an understorey of hawthorn/dogwood scrub.

4.89 Due to the lack of mature trees and poor overall diversity, it is considered that all of these woodlands are a poor fit with the mixed deciduous woodland category described within the Barnsley Biodiversity Action Plan[6] and therefore are not considered to represent priority habitats.

Plantation: Coniferous woodland

4.90 A single compartment of plantation coniferous woodland was located along the northern boundary of the Site. It was dominated by immature Norway spruce *Picea abies* ranging in height from 0.5 – 4m. From review of historical aerial imagery it would appear that this area is regularly cleared (likely as a crop for Christmas trees) and the woodland is not allowed to become mature.

[6] Barnsley Biodiversity Trust (2022) *Barnsley Biodiversity Action Plan Consultation Draft 2022 – for comment. Available online at: http://www.barnsleybiodiversity.org.uk/deciduouswoodland_features.html [accessed 13.06.22].*

Photograph 1: Plantation coniferous woodland looking north-east.

4.91 As a coniferous woodland, it is not included within the Barnsley Biodiversity Action Plan.

Individual Broadleaved Trees

4.92 A line of mature pedunculate oak was observed to be associated with hedgerow H1. Although the extent of deadwood and other features did not indicate possible veteran status, two of the trees supported features such as stem cavities which are described in the faunal section below with regard to their bat roost potential features.

4.93 Mature trees associated with the Carr Dike corridor included crack willow *Salix fragilis*, pedunculate oak, and beech *Fagus sylvatica.* These are described in the faunal section below with regard to their bat roost potential features.

4.94 A line of approximately 14 mature sycamore was recorded at the southern boundary adjacent to Carr Head Lane. The feature continued for approximately 95m, trees appeared free of obvious disease and no features indicating possible veteran status were noted. No protected/undisturbed strip was recorded at the base in association with the feature.

Scrub

4.95 Scrub habitats comprising discreet patches of continuous and scattered scrub were observed in association with tall herbs within some of the grassland field margins. These areas were either dominated by bramble or hawthorn (with over 75% cover) and homogenous stands of common nettle and cleavers were recorded at their margins. Varied age classes were absent from these areas of scrub.

Poor semi-improved grassland

4.96 A number of semi-improved grassland parcels were located within the Site associated with field margins and boundaries.

4.97 Arable margin 1 (AM1): A 4-5m wide margin bordering the northern side of Carr Dike as it runs from the confluence of ditch D1 and Carr Dike across the Site to the north, and the eastern side of Carr Dike at the northern part of the Site. It comprised a mown 20cm high sward dominated by Yorkshire fog. Round-leaved crane's-bill *Geranium rotundifolium* was frequent and occasional species included creeping buttercup *Ranunculus repens*, hogweed, dandelion *Taraxacum officinale agg.* and broadleaved dock *Rumex obtusifolius.* Meadow buttercup *Ranunculus acris* and common sorrel *Rumex acetosa* were rare. No areas of bare ground were recorded, and scrub cover was estimated at <5%. The same habitat also occurred in 1-2m margins bordering dry ditches which bisected arable compartments in the north and south.

4.98 Arable margin 2 (AM2): A 4-5m wide margin adjacent to Carr Dike and arable habitat north of Carr Dike, and adjacent to AM1 east of Carr Dike in the northern part of the Site. It comprised an infrequently mown sward 30-40cm high with a margin of tall herbs (hogweed and cow parsley) at Carr Dike bank top. Dominant grasses were false oat-grass *Arrhenatherum elatius* and cocksfoot *Dactylis glomerata*. Hogweed and common nettle were frequent, rosebay willowherb *Chamerion angustifolium* and ground ivy *Glechoma hederacea* were rare. Tall herb coverage was estimated to be 20-30%, and no scrub was recorded.

4.99 Poor semi-improved grassland (PSI1) is located in the north of the Site, The area to the east of the plantation conifer woodland, and comprised a sward that varied from 10 to 45 cm in height. False oat-grass and perennial ryegrass *Lolium perenne* were abundant, with Yorkshire-fog, wild oat and rough meadow-grass *Poa trivialis* frequent. There was a wide range of ruderal species such as occasional broad-leaved dock *Rumex obtusifolius*, creeping thistle *Cirsium arvense,* and prickly sow-thistle *Sonchus asper*.

Open Water

Pond

4.100 Pond P2, following the nomenclature of previous report (MBE, June 2020[7]), is located in the north of the Site, within the area of coniferous plantation. It was observed to be approximately 4m wide by 8m long with relatively steep but small banks and tall grasses and herbs on the banksides..

Photograph 2: Pond P2 looking north-east.

Running Water

4.101 A stream (Carr Dike) bisected the Site, flowing in a general south-westerly direction, entering the Site from a culvert (TN1) under Barnsley/Doncaster Road in the north-east of the Site and exiting the Site in the central, western area. . The channel was approximately 2m wide throughout the length on-site with a moderate flow of water and very steep banks in most areas (set at around 80 degrees). The bank top areas near the water's edge supported hogweed (TN2), garlic mustard and locally dominant stands of common nettle. The channel was shaded in places by individual mature trees such as sycamore and also from areas of hawthorn scrub and plantation woodland.

[7] Middleton Bell Ecology (June 2020) *Goldthorpe ES10 Preliminary Ecological Appraisal.*

Photograph 5: Carr Dike

4.102 A single wet ditch/tributary (D1) of Carr Dike was located in the central area of the Site entering the Site from the eastern boundary (from the Aldi Regional Distribution Centre) and flowing in a general west/south-west direction discharging into Carr Dike at point in the central west area of the Site. The channel was observed to be approximately 2m wide, filled with slow flowing water and supported no aquatic vegetation or emergent vegetation and shaded by an adjacent dense hedgerow (H5).

Photograph 6: Ditch D1 looking south-east.

Arable

4.103 A series of large cultivated arable fields supported cereal crops and oilseed rape *Brassica napus.* With margins of 1m wide or less dominated by a small number of common grasses and herbs including cocksfoot and hogweed.

Hedgerow

4.104 Thirteen (13) hedgerows were identified within the Site and assessed under the Hedgerow Regulations 1997. Twelve (12) hedgerows did not qualify as 'important' due to low canopy diversity and lack of associated features. One hedgerow (H11) did not meet the criteria for 'important' as it was less than 30 years old, however it was noted to have the prerequisite number of woody species..

4.105 The hedgerows were further assessed under HEGS to assess their conservation value. Of the 13 hedgerows assessed most supported a dense structure with some connectivity (detailed within Table 2 below). Five hedgerows were graded moderately high, to high conservation value, and eight hedgerows were graded of moderate conservation value.

Table 2: Hedgerow Descriptions

Hedge No.	Structural Features (Dimensions W = width, H = height)	Total Woody Species	Average Woody Species (rounded up)	HEGS Score	Conservation Value
1	2-4m H x 2-3m W, dense, trimmed, no gaps, many trees. 2 connections.	9	4	-2	Moderately High to High
2	2-4m H x >3m W, dense, trimmed, trackside, no gaps. No connections.	4	-	3	Moderate
3	2-4m H x 2-3m W, dense, trimmed, bank, trackside, 0-10% gaps. No connections.	7	4	-3	Moderate
4	2-4m H x >4m W, trimmed, trackside, no gaps. One connection.	2	-	3	Moderate
5	2-4m H x 2-3m W, trimmed, dense, many trees, streamside, no gaps. One connection.	6	3	-2	Moderately High to High
6	2-4m H x 2-3m W, trimmed, dense, no gaps. Two connections.	6	3	2	Moderately High to High
7	2-4m H x 2-3m W, trimmed, dense, bank, 0-10% gaps. Two connections.	5	2	3	Moderate
8	2-4m H x 2-3m W, trimmed, dense. Three connections.	6	4	-2	Moderately High to High
9	1.5-2m H x 2-3m W, trimmed, wet ditch, no gaps two trees, three connections.	7	3	-2	Moderately High to High
10	2-4m H x 2-3m W, trimmed, dense, no gaps, two connections.	3	3	+3	Moderate
11	1.5-2m H x 1-1.5m W, trimmed, no gaps, three connections	8	8	+3	Moderate
12	1.5-2m H x 1.5-2m W, Trimmed, no gaps, no connections	6	5	3	Moderate
13	2-4m H x 2-3m W, Trimmed and adjacent to a track, 30-10% gaps, no connections	5	4	-3	Moderate

Dry Ditch

4.106 Typically, dry ditches encountered within the Site were approximately 0.5m wide and 0.5m deep with steeply sloping sides vegetated by encroaching grasses and herbs, although lacking in any aquatic vegetation.

4.107 Dry ditches D2 and D6 bisected arable compartments in the north and south of the Site respectively, with poor semi-improved grassland margins and D2 also contained some scattered hawthorn scrub. D3 was observed to be choked with bramble and was dry in March 2023. D5 is

located on the northern boundary, adjacent to a residential garden, and was also observed to be dry in March 2023.

Photograph 7: Ditch D2 looking north.

4.108 Ditches D4 and D4a were previously found to be wet in January 2023 but upon inspection in March 2023 were observed to be dry and comprised either bare ground or were encroached by grassland species. It is considered that these ditches (in continuity with pond P2) are occasionally wet after periods of heavy rainfall. As these ditches periodically dry, they have been considered as dry ditches for the purposes of biodiversity net gain calculation.

4.109 Ditch D7 is shown on ordnance survey mapping as a wet ditch or watercourse but was observed to be dry during bat surveys undertaken at the Site in 2022, and during additional surveys undertaken in January and March 2023.

Bare Ground

4.110 Recently cleared ground was observed between the two compartments of woodland PBW1on the northern boundary of the Site. This area comprised poached, and wheel rutted fresh earth, shredded fragments of wood/shrub brash, and young tree stumps with litter and occasional areas of regenerating herbs including common nettle, hogweed and broadleaved dock noted at the ground level. This area appears to have been felled at some point during 2021/early 2022 and was not cleared as part of the current development application but in relation to a separate development for a new roundabout on the A635 Barnsley/Doncaster Road.

Photograph 8: Area of bare ground along the north boundary looking east.

Field Survey – Fauna

Badgers

4.111 The majority of the Site provides limited potential for seasonal foraging for badgers, although the corridors of Carr Dike and the associated wet ditch (D1) provide more suitable foraging and connectivity through the Site. No evidence of badgers was recorded within the Site or 30m of its boundaries (surveyed where accessible).

Bats

Ground-based Assessment of Trees

4.112 Four trees detailed in Table 3 below were assessed to support some degree of bat roost potential (see Figure 3 for locations).

Table 3: Bat Roost Potential Trees

Tree Ref.	Species	Feature	Initial Assessment of Bat Roost Suitability	Assessment of Bat Roost Suitability after Aerial Inspection
T1	Crack willow *Salix fragilis*	Cavity/rot hole in main stem c. 3m up.	Moderate	Low
T3	Pedunculate oak *Quercus robur*	Partially healed vertical split in main lateral and associated rot hole.	Moderate	Negligible
T4	Pedunculate oak	Vertical opening in main stem showing cavity between dead heartwood and cambium. Potentially leading to further cavity in lateral branches.	Moderate	Moderate
T5	Pedunculate oak	Similar feature as above	Moderate	Moderate

4.113 Further consideration of these trees is made within the FPCR Bat Assessment Report (June 2023).

Bat Foraging and Commuting Habitat

4.114 Carr Dike and its wet ditch tributary are considered to provide potential suitable foraging connectivity through the Site and to the wider landscape, including Dearne Valley Wetlands to the south and similar agricultural land use to the north. Boundary hedges and existing woodland along northern and southern boundaries provide further potential connectivity across the Site in an east/west orientation.

4.115 Further consideration of bat presence and activity at the Site is made within the FPCR Bat Assessment Report (June 2023).

Water Voles and Otters

4.116 Habitat along Carr Dike and the wet ditches provided potentially suitable habitat for water vole and otter.

Birds

4.117 Hedgerows, mature trees, and riparian habitat, including plantation woodland provide suitability for nesting and foraging for a range of bird species. Field centres also provided potential for ground nesting birds such as lapwing and skylark. Detailed assessment is provided in the Breeding Bird and Wintering Bird Survey reports (FPCR 2023).

Great Crested Newts (GCN)

4.118 The majority of the Site supported heavily cultivated arable fields of low value for terrestrial GCN. Hedgerows, plantation woodland and some areas of taller poor semi-improved grassland provide greater suitability as terrestrial habitat for GCN (foraging, refuge) but are considered to offer limited connectivity and remain mostly sub-optimal..

4.119 One pond P2 was recorded on-site, located within the coniferous plantation in north of the Site. Two further ponds were identified by previous survey work (Middleton Bell Ecology, ES10 PEA June 2020). Pond P1 was located approximately 10m to the north of the Site within a residential garden. P3 was approximately 410m south of the southern Site boundary, and from aerial imagery appears to have succeeded to reedbed.

4.120 Further habitats with potential to support breeding GCN included ditches D4 and D4a which may occasionally contain standing water.

4.121 The ponds and ditches were subject to an assessment of their suitability for breeding GCN, and the results contained in Table 4:

Table 4: Pond Descriptions and HSI Summary

Pond Ref.	Description (Dimensions approximate – Length x width)	HSI score	Pond suitability
P1	Large garden pond (c.25m x 40m), partial shading from bankside trees, set within amenity grassland and garden, no macrophyte vegetation.	0.73	Good
P2	Pond (4m x 8m), set within moderate suitability terrestrial habitat, limited shading from bankside vegetation and no macrophyte vegetation.	0.51	Below Average
P3	Reedbed (c. 50m x 30m) at arable field edge and bordered by trees. Dry when surveyed in late spring.	0.67	Average
D1	2m wide ditch linked to Carr Dike, with slow flow, no macrophyte vegetation and 50% shade.	0.67	Average
D4/4a	2m wide ditch x 240m length set within moderate suitability terrestrial vegetation, no macrophyte vegetation and 95% shaded. Observed to be dry in March 2023.	0.54	Below average

4.122 Pond P1 and P2 were subject to eDNA survey in 2019 by Wildscapes (Wildscapes, PEA 2019) and GCN were recorded to be absent. P3 was subject to eDNA survey in 2020 by Middleton Bell (Middleton Bell Ecology, ES10 PEA June 2020), which also confirmed absence of GCN.

Reptiles

4.123 The intensive management of the predominantly arable habitat within the Site has made habitats largely unsuitable for reptiles. In the north of the Site, the woodlands end abruptly at the trimmed edges of the arable boundaries providing sub-optimal habitat for reptiles that prefer varied edge habitats, and there is a lack of connectivity to other suitable habitats. Habitats with some suitability (albeit limited), for more mobile reptile species (such as grass snake) were located adjacent to Carr Dike and the linking wet ditch D1, and included some scrub and ruderal margins, as well as small areas of poor semi-improved grassland along the main riparian corridor. No habitats with significant suitability to support hibernating reptiles was identified at the Site.

5.0 DISCUSSION & RECOMMENDATIONS

5.1 Proposals for the Site include four development plots for commercial/industrial warehouse units, with associated infrastructure, flood attenuation/compensation areas, and green infrastructure/habitat creation.

Habitats/Flora

5.2 The degree to which habitats receive consideration within the planning system relies on a number of mechanisms, including:

- Inclusion as a statutory or non-statutory site designation. This ranges from sites of international importance, protected by UK legislation that transposes European directives, to protection under UK legislation, national planning policy or local planning policy.
- Identification as a habitat of principal importance (HPI) for biodiversity under Natural Environment and Rural Communities Act (NERC) 2006 or identification as a priority habitat on the local Biodiversity Action Plan (LBAP).
- Inclusion within specific policy. For example, the National Planning Policy Framework (NPPF) includes criteria for veteran trees, ancient woodland, and linear habitats.

5.3 At its nearest point, Dearne Valley Wetlands SSSI is located approximately 100m south-west of the Site, which is of national nature conservation interest. All SSSIs have Impact Risk Zones (IRZ), and the development falls into the IRZ of Dearne Valley Wetlands SSSI. The development falls within the risk impact category of large non-residential development, therefore potential impacts to the SSSI will need to be further considered.

5.4 One non-statutory designated site of local nature conservation interest, Old Moor and Wath Ings LWS, is located within 1km of the development: 950m to the south-west (included as part of the Dearne Valley Wetlands SSSI)..

5.5 The plantation broad-leaved and coniferous woodlands within the Site are not considered to be priority habitats under the LBAP and have limited ecological value. Therefore the woodland areas within the Site are not considered to be a constraint to the development..

5.6 Scrub is included in the LBAP as a priority habitat and there are areas of scattered scrub around the Site which are relatively small and discrete with limited botanical diversity (therefore reducing the inherent ecological value) but which could provide shelter, breeding and foraging opportunities for a range of species. Scrub areas along the Site boundary are proposed to be retained, with additional scrub areas proposed throughout the Site as native thickets/woodland edge which will compensate for any areas of scrub lost to the development.

5.7 There are a number of areas of poor semi-improved grassland that are relatively species poor comprising common and typical species but nonetheless which may provide some localised ecological value, Whilst these areas could be classified as neutral grassland, a priority habitat in the Barnsley LBAP, given the poor species diversity these areas are not considered to be prime examples of this habitat type and are considered unlikely to meet the criteria for a priority habitat. The proposed scheme of habitat creation will include flood compensation areas that will be planted as grasslands and areas of meadow grassland within public open space, these areas will be managed to provide a species rich sward throughout and are considered to be sufficient to compensate for areas of grassland lost to the development

5.8 The arable field margins AM1 and AM2 are dominated by tussock forming grasses and also provide some ecological value. Arable field margins are listed as a habitat of principal importance (NERC Act 2006) and a priority habitats under the Barnsley LBAP. However, given the limited extent of these habitats and similar habitats present within the wider area the loss of these margins is not expected to be significant and would not be expected to require mitigation.

5.9 Pond P2 was not considered to be of high-enough quality to be considered as a habitat of principal importance. There is no evidence that the pond supports key species such as water voles, otters, GCN and does not support any notable botanical species. The pond, therefore, is not considered to be a constraint to the development but does provide some inherent ecological value as a habitat. The proposed scheme of habitat creation will include 12 new drainage attenuation basins of which at least four will be managed to permanently hold water as ponds. This will provide an increase in standing water habitat at the Site post-development and will be sufficient to compensate for the loss of Pond P2 due to the development.

5.10 All the boundary hedgerows are native species dominant and therefore are classed as a habitat of principal importance (NERC Act 2006) and are also included as priority habitats in the LBAP. It is recognised that, owing to the nature of the development some hedgerow losses are unavoidable. However, the proposals for landscaping and habitat creation will retain the majority of boundary hedgerows and creation of new hedgerows throughout the Site.

Protected/Notable Species

5.11 Consideration was given throughout the survey to the potential presence of protected species. Principal pieces of legislation protecting wild species to be considered are Part 1 of the Wildlife and Countryside Act 1981 (as amended) (WCA) and the Conservation of Habitats and Species Regulations 2017 (Habitats Regulations). Some species, for example badgers, also have their own protective legislation (Protection of Badger Act 1992) and are also considered. The impact that this legislation has on the Planning system is outlined in ODPM 06/2005 Government Circular: Biodiversity and Geological Conservation – Statutory obligations and their Impact within the Planning System.

5.12 This presence of protected species is a material consideration in any planning decision. Therefore, the presence or otherwise of protected species, and the extent to which these species are affected by proposals, should be established prior to planning permission being granted. Furthermore, where protected species are present and proposals may result in harm to the species or its habitat, steps should be taken to ensure the long-term protection of the species.

5.13 In addition to protected species, those of principal importance for the purpose of conserving biodiversity under the NERC Act 2006 should also be considered. These are recognised in the NPPF which advises that when determining planning applications, Local Planning Authorities should aim to conserve and enhance biodiversity by applying a set of principles including:

- If significant harm resulting from a development cannot be avoided……, adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- Development proposals where the primary objective is to conserve or enhance biodiversity should be encouraged.

5.14 The implications that species identified as using the Site or considered potentially to use the Site may have for development of the Site are outlined below:

Badger

5.15 The margins of the mainly arable habitat and the woodland areas provide potential suitable habitat for foraging badgers, with the Carr Dike corridor providing a linkage from arable land to the north of the Site to the wetland areas to the south-west. However, no signs or evidence were seen during the field survey. Only one historical record exists for an area over 800m south-west of the Site. Therefore, it is considered that badgers are likely absent from the Site and do not pose a constraint to the development.

Bats

5.16 All species of bats and their roosts are afforded protection under the Conservation of Habitats and Species Regulations 2017 (as amended) making it illegal to deliberately disturb bats or damage or destroy their roosts. Bats are also afforded full legal protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).

5.17 Under this legislation it is illegal to recklessly or intentionally kill, injure or take a species of bat or recklessly or intentionally damage or obstruct access to or destroy any place of shelter or protection or disturb any bat whilst they are occupying such a place of shelter or protection. Some bat species are also species of principal importance under the NERC Act 2006.

Assessment of Trees

5.18 Four trees were noted with moderate potential to support roosting bats and in accordance with the bat survey guidelines (BCT, 2016) further surveys were carried out and are described fully in the Bat Assessment Report (FPCR, 2023). Following aerial investigation, Tree T3 was down-graded to negligible potential for roosting bats, and Tree T1 was down-graded to having low potential for roosting bats, these trees will also be retained within the proposed landscaping. The remaining two trees T4 and T5 are proposed to be lost and were unable to be downgraded after aerial assessment. As such, further survey was carried out and is presented in the separate Bat Assessment Report (FPCR, 2023)..

Foraging and Commuting Habitat

5.19 Available records and survey information (FPCR Bat Assessment Report 2023) indicate that that seven bat species are known to use the Site. The findings of the 2022 survey are detailed within the FPCR bat Assessment Report (2023) and considered that the number of bats using the Site (as indicated from static and transect surveys) were relatively low with the greatest activity being along Carr Dike and the Site boundary habitats.

5.20 The majority of boundary hedgerows will be retained, as well as the Carr Dike corridor, and these features will continue to provide foraging and commuting habitat for bats. The loss of some internal hedgerows will be compensated for within the landscape design with additional woodland, woodland edge, and hedgerow creation.

5.21 A scheme of sensitive lighting design is recommended to maintain favourable conditions in habitats used by foraging and commuting bats. Detailed recommendations are provided within the Bat

Assessment Report (FPCR 2023) but in general include recommendations in accordance with industry guidance (BCT, 2018)[9] including:

- Reducing height of lighting columns (where appropriate).
- Placing lighting away from areas/habitats of interest, such as woodland edge.
- Use of directional lighting.
- Minimising lighting to only those areas where it is required (where appropriate).
- Using lighting that switches off when not required.
- Use of white rather than yellow lighting.

Water Vole and Otter

5.22 The habitat along Carr Dike and Ditch D1 provided potential suitable habitat for water vole and otter, there are records for both species associated with the River Dearne (over 750m) south of the Site. Additionally, previous surveys (Wildscapes, 2019) found no evidence of either species. There are records of American mink in the vicinity which are known to predate water vole. Given the lack of evidence of both species, it is considered that water vole and otter do not pose a constraint to the proposed development.

Birds

5.23 A suite of breeding bird and winter bird surveys were completed over the period of 2022 to 2023 (FPCR, Breeding Bird Report 2023, and FPCR Wintering Bird Report, 2023).

5.24 A number of notable species were recorded in the breeding bird surveys, of which six notable species were confirmed to be breeding. The breeding bird assemblage supported by the Site was assessed to be of **Local** importance. Specific recommendations for mitigation in relation to breeding birds is provided in the Breeding Bird Survey Report (FPCR, 2023)

5.25 The wintering bird assemblage supported by the Site was in general assessed to be of **Local** importance only, with some species encountered being of only **Site** importance. Specific recommendations for mitigation in relation to wintering birds is provided in the Wintering Bird Survey Report (FPCR 2023).Marsh Harrier were reported to be present in the south-west of the Site in 2020, having successfully bred in the RSPB Old Moor reserve to the south-west, but were not recorded during the 2022-2023 bird surveys. There remains the potential that this species could return and use suitable habitats present within the Site, particularly grassland areas near to Carr Dike. A Marsh Harrier Technical Note (FPCR 2023) provides more detail on the presence and likely constraints represented by this species. The proposed flood compensation areas in the west and north of the Site will be managed to provide suitable habitat for marsh harrier and maintain connectivity through the Site to the north and south.

5.26 All nesting birds are protected under the WCA 1981 (as amended). Any removal of woody vegetation including hedgerow, scrub and trees should therefore occur outside of the bird breeding season (March to August inclusive) to minimise the risk of disturbance to nesting birds. If this is not possible such vegetation should be checked prior to removal by a suitably experienced ecologist.

[9] Bat Conservation Trust and Institute of Lighting Professionals (2018) *Guidance Note 08/18 Bats and artificial lighting in the UK – Bats and the Built Environment series*. Institute of Lighting Professionals

If active nests are found, vegetation will be left untouched and suitably buffered from works until all birds have fledged. Specific advice should be sought prior to undertaking the clearance.

Great Crested Newts

5.27 GCN are protected under the WCA and The Conservation of Habitats and Species Regulations 2017 (as amended) from intentional or reckless disturbance, deliberate capture, killing and injury.

5.28 No records of GCN were provided within 1km of the Site. In addition, all ponds within 500m of the Site were subject to eDNA surveys by Wildscapes in 2019 or Middleton Bell in 2020 and the results from the eDNA surveys confirmed that GCN were absent from the ponds.

5.29 Ditches were not previously surveyed or eDNA assessed. Ditch D4/4a is connected to Pond P2 and is known to periodically dry, therefore it is reasonable to assume that GCN are also absent from the ditch as they were confirmed absent from Pond 2.

5.30 Ditch D1 was assessed for its suitability to support GCN, it contained slow-moving water, and is in connectivity with Carr Dike but with good terrestrial habitat nearby. It was considered to have average suitability to support GCN. . However, this terrestrial habitat is considered to have limited interconnectivity with other suitable habitats and therefore there is limited potential for GCN dispersal to/from this area. Carr Dike is considered to present a significant north/south barrier to dispersal across the Site with the A635 being a barrier directly to the north and significant barriers to movement exist in the form of developed land to the east. . Overall it is considered that GCN are likely absent from Ditch D1 and the Site in general. As such, GCN are not considered to be a constraint to the development.

Reptiles

5.31 All common reptile species are partially protected under Sections 9(1) and 9(5) of Schedule 5 of the WCA. This legislation includes protection from intentional killing or injury.

5.32 No records exist for reptiles within the Site, the nearest records being over 800m south-west of the Site within OS grid square SE4202. No reptiles were recorded during surveys carried out in 2020 (Middleton Bell Ecology 2020). It is considered that the predominately arable habitat is sub-optimal or unsuitable for reptiles, although peripheral habitats may provide limited suitability for foraging, refuge and breeding.

5.33 Although reptiles could potentially migrate along the linear corridor associated with Carr Dike, it is considered that this is unlikely given the superior suitability of the habitat around the SSSI. In addition, Carr Dike and ditch D1 present significant barriers to north/south movement across the Site. Overall it is considered that reptiles are likely absent from the Site and therefore are not considered to pose a constraint to the development.

Notable species

Brown Hare

5.34 It is considered that brown hare could be present at the Site, given that there are records of this species from the vicinity and from the grid square in which the Site is located. However, due to the availability of similar habitat in the wider vicinity, and the mobile nature of the species, it is considered that brown hare does not pose a constraint to development.

Hedgehog

5.35 Records show that hedgehogs are present in the wider area and within the grid square in which the Site is located. The grassland and woodland habitats provide some potential for foraging habitat although no evidence of this species was observed during the Site survey. The presence of hedgehog within the Site cannot be completely discounted and therefore precautionary methods of work are recommended in order to avoid harm to this species.

5.36 It is recommended that (where practical), log piles are incorporated into the proposed woodland creation areas to provide additional enhancement of habitat and foraging resources for this species.

Invertebrates

5.37 Records of notable invertebrate species exist (butterflies and moths), located within the general area of Dearne Valley Wetlands SSSI, and reflect the mosaic of habitats in that location. No invertebrate records exist within the Site, although the variety of habitats within the Site are considered to be limited and unlikely to support the protected/notable species recorded in the wider area. As such, it is considered invertebrates do not form a constraint to the development. The proposed habitat creation will provide additional habitat diversity that will be of benefit to in invertebrates.

Additional Enhancements for Biodiversity

5.38 The proposed development will include habitat creation and green infrastructure areas through and around the proposed commercial development plots. The habitat creation will provide a positive gain in biodiversity, providing areas of native structural planting (scrub, woodland, and hedgerows) and areas of open native grassland creation. Habitats created will retain and enhance habitat and wildlife connectivity and incorporate enhancements for a variety of wildlife. Attenuation basins will provide additional permanent water habitats (ponds) enhanced with native aquatic, emergent and marginal flora.

5.39 As well as the habitat enhancements described above and those provided for protected species (as detailed in the Bat Assessment Report, Breeding Bird Report, Wintering Bird Report and Marsh Harrier Technical Note (FPCR, 2023), the following enhancements are recommended to further benefit biodiversity within the proposed development;

- Inclusion within the planting scheme a range of fruit / flower / seed bearing tree/shrub species to provide foraging opportunities for a wide range of vertebrate and invertebrate wildlife.
- Recommend the seeding of a rich basal herbaceous flora (recommend the use of a species rich seed mix for hedgerows such as Emorsgate EH1 or similar) below new hedgerows to provide additional foraging opportunities for wildlife and protection from predators for a wide range of wildlife.
- It is recommended that grassland areas are seeded with a native species-rich seed mix (such as a diverse meadow mix and wet meadow mix in flood compensation areas)..
- It is recommended that ongoing management of habitats is targeted to promote biodiversity and ecological value. This may include cutting or thinning to provide a variety to the structure of habitats and to manage nutrient levels to ensure that a variety of floral species can thrive.

- It is recommended that log piles are provided in the areas of woodland creation as well as more secluded areas of the grassland and flood compensation areas of the Site. These log piles will provide potential habitat for invertebrates and a range of other species for foraging, refuge and potentially breeding or hibernation.
- It is recommended that boundaries remain somewhat porous with nature hedgerows, and where fencing is required, gaps are recommended to allow wildlife access to the Site (e.g. hedgehogs).

Appendix A: Species List

Common name	*Scientific Name*	AM1	AM2	PSI1	PBW1	PBW2	PBW3	PBW4	PBW5	PBW6
Alder	*Alnus glutinosa*					Y				R
Ash	*Fraxinus excelsior*				D	A	D	D	A	F
Blackthorn	*Prunus spinosa*									R
Bramble	*Rubus fruticosus agg.*	R			A	F				O
Broad-leaved Dock	*Rumex obtusifolius*	O		O	Y	O				O
Cleavers	*Galium aparine*			R					D	
Cock's-foot	*Dactylis glomerata*	O	D							
Common Nettle	*Urtica dioica*		F					O		O
Common Ragwort	*Senecio jacobaea*			R						
Common Sorrel	*Rumex acetosa*	R								
Cow Parsley	*Anthriscus sylvestris*	O	O		A	F		A		
Creeping Buttercup	*Ranunculus repens*	O		O						R
Creeping Thistle	*Cirsium arvense*	R		R						
Dandelion	*Taraxacum officinale agg.*	O								
Dog Rose	*Rosa canina agg.*				R	R	R			O
Dogwood	*Cornus sanguinea*									F
Dove's-foot Crane's-bill	*Geranium molle*			O						
Elder	*Sambucus nigra*				R					
False Oat-grass	*Arrhenatherum elatius*	R	D	A						F
Field Maple	*Acer campestre*				D		Y	F	A	
Garlic Mustard	*Alliaria petiolata*					O			Y	F
Great Willowherb	*Epilobium hirsutum*			Y						F
Grey Willow	*Salix cinerea*					R				O
Ground-ivy	*Glechoma hederacea*	R	R							
Groundsel	*Senecio vulgaris*			R						
Hard Rush	*Juncus inflexus*									LA
Hawthorn	*Crataegus monogyna*				F	O			O	A
Hazel	*Corylus avellana*				R	R	R			R

Common name	***Scientific Name***	**AM1**	**AM2**	**PSI1**	**PBW1**	**PBW2**	**PBW3**	**PBW4**	**PBW5**	**PBW6**
Hemlock	*Conium maculatum*			R L/F						
Hogweed	*Heracleum sphondylium*	O	F		O	A	A			R
Ivy	*Hedera helix*					LA			LA/O	LD
Meadow Buttercup	*Ranunculus acris*	R								
Meadow-grass	*Poa sp.*					F				
Michaelmas-daisy	*Aster sp.*									Y
Pedunculate Oak	*Quercus robur*				O	D	F		R	O
Perennial Rye-grass	*Lolium perenne*			A						
Prickly Sow-thistle	*Sonchus asper*			O						
Ragwort species	*Senecio sp.*									O
Red Dead-nettle	*Lamium purpureum*			R						
Red Fescue	*Festuca rubra agg.*	R								
Ribwort Plantain	*Plantago lanceolata*	R								
Rosebay Willowherb	*Chamerion angustifolium*		R							
Rough Meadow-grass	*Poa trivialis*			F						
Round-leaved Crane's-bill	*Geranium rotundifolium*	F								
Rowan	*Sorbus aucuparia*					R				
Silver Birch	*Betula pendula*				R	F	Y		R	O
Spear Thistle	*Cirsium vulgare*			O						
Sycamore	*Acer pseudoplatanus*								F	
White Dead-nettle	*Lamium album*	O	R			R				
Wild Cherry	*Prunus avium*							R		
Wild Oat	*Avena fatua*			F						
Wild Teasel	*Dipsacus fullonum*									R
Yorkshire-fog	*Holcus lanatus*	D		F	Y				F	

Hedgerows

Common name	Scientific Name	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12	H13
Ash	*Fraxinus excelsior*							T					R	
Beech	*Fagus sylvatica*											O		
Blackthorn	*Prunus spinosa*		Y	D		R	O		Y			R		F
Bramble	*Rubus fruticosus agg.*									Y			Y	O
Crack Willow	*Salix fragilis*	Y												
Dog-rose	*Rosa canina*		Y	R		O	O		Y		Y	O	R	O
Dogwood	*Cornus sanguinea*						R							
Elder	*Sambucus nigra*			R	Y	R	R	Y		R	Y			
Field Maple	*Acer campestre*	Y	Y				R	Y	Y	R		O	R	
Hawthorn	*Crataegus monogyna*		Y	F		D	D	Y	Y	D	Y	F	D	A
Hazel	*Corylus avellana*			R		F		Y	Y			O		
Holly	*Ilex aquifolium*											O		
Pedunculate Oak	*Quercus robur*	Y								Y		O		R
Sycamore	*Acer pseudoplatanus*			R	Y	F				Y		R		

Appendix B – Bird Species

Protected and notable species within 1 km and 2km grid squares (*__WCA 1981 Schedule 1__; NERC 2006 section 41; BoCC 5 red & amber designations) plus vagrants. The Site lies mainly within grid squares SE4303 and SE4403 (see Figure 2b).

Common Name	*Scientific Name*	Individual records	SE4202	SE4203	SE4204	SE4302	SE4303	SE4304	SE4402	SE4403	SE4404	SE4502	SE4503	SE4504	SE40G
American Golden Plover	*Pluvialis dominica*		Y												
American Wigeon	*Anas americana*		Y												
Arctic Skua	*Stercorarius parasiticus*		Y												
Arctic Tern	*Sterna paradisaea*		Y			Y									
***Avocet**	*Recurvirostra avosetta*		Y			Y									
Baird's Sandpiper	*Calidris bairdii*		Y												
***Barn Owl**	*Tyto alba*		Y			Y		Y		Y					
Barnacle Goose	*Branta leucopsis*		Y	Y											
Bar-Tailed Godwit	*Limosa lapponica*		Y												
Bean Goose	*Anser fabalis*		Y			Y									
***Bearded Tit**	*Panurus biarmicus*		Y												
***Bewick's Swan**	*Cygnus columbianus*		Y												
***Bittern**	*Botaurus stellaris*		Y			Y									
***Black Redstart**	*Phoenicurus ochruros*		Y												
Black Scoter	*Melanitta americana*		Y												
***Black Tern**	*Chlidonias niger*		Y			Y									
Black-Headed Gull	*Chroicocephalus ridibundus*	Y	Y	Y		Y									
***Black-Necked Grebe**	*Podiceps nigricollis*		Y			Y									
***Black-Tailed Godwit**	*Limosa limosa*		Y	Y		Y									
***Brambling**	*Fringilla montifringilla*		Y			Y									
Bullfinch	*Pyrrhula pyrrhula*	Y	Y	Y	Y	Y	Y		Y						Y
Caspian Gull	*Larus cachinnans*		Y			Y									

Common Name	*Scientific Name*	Individual records	SE4202	SE4203	SE4204	SE4302	SE4303	SE4304	SE4402	SE4403	SE4404	SE4502	SE4503	SE4504	SE40G
Cattle Egret	*Bubulcus ibis*		Y												
***Cetti's Warbler**	*Cettia cetti*	Y	Y			Y									
'Comic' tern	*Sterna paradisaea/hirundo*		Y												
Common (Mealy) Redpoll	*Acanthis flammea*		Y			Y									
Common Gull	*Larus canus*	Y	Y			Y									
***Common Scoter**	*Melanitta nigra*		Y	Y											
Common Tern	*Sterna hirundo*		Y			Y									
Corn Bunting	*Emberiza calandra*		Y												Y
Crane	*Grus grus*		Y			Y									
Cuckoo	*Cuculus canorus*		Y						Y				Y		
Curlew	*Numenius arquata*		Y	Y		Y	Y								
Curlew Sandpiper	*Calidris ferruginea*		Y												
Dipper	*Cinclus cinclus*		Y			Y									
***Dotterel**	*Charadrius morinellus*		Y												
Dunlin	*Calidris alpina*		Y			Y									Y
Dunnock	*Prunella modularis*	Y	Y	Y	Y	Y	Y		Y			Y	Y	Y	
Egyptian Goose	*Alopochen aegyptiacus*		Y												
***Fieldfare**	*Turdus pilaris*	Y	Y			Y									
***Firecrest**	*Regulus ignicapilla*		Y			Y									
Gadwall	*Anas strepera*	Y	Y	Y		Y									Y
***Garganey**	*Anas querquedula*		Y			Y									
Glaucous Gull	*Larus hyperboreus*		Y												
Glossy Ibis	*Plegadis falcinellus*		Y												
***Goldeneye**	*Bucephala clangula*	Y	Y			Y									
***Goshawk**	*Accipiter gentilis*		Y			Y			Y						

Common Name	*Scientific Name*	Individual records	SE4202	SE4203	SE4204	SE4302	SE4303	SE4304	SE4402	SE4403	SE4404	SE4502	SE4503	SE4504	SE40G
Grasshopper Warbler	*Locustella naevia*		Y	Y		Y									
Great Black-Backed Gull	*Larus marinus*		Y			Y									
Great Cormorant	*Phalacrocorax carbo*		Y	Y		Y									Y
Great White Egret	*Ardea alba*		Y			Y									
***Green Sandpiper**	*Tringa ochropus*	Y	Y	Y		Y									
Greenfinch	*Chloris chloris*	Y	Y	Y	Y	Y		Y				Y	Y	Y	Y
***Greenshank**	*Tringa nebularia*		Y			Y									
Grey Partridge	*Perdix perdix*	Y	Y			Y	Y		Y	Y					
Grey Phalarope	*Phalaropus fulicarius*		Y												
Grey Plover	*Pluvialis squatarola*		Y												
Grey Wagtail	*Motacilla cinerea*		Y	Y		Y			Y				Y		Y
Greylag Goose	*Anser anser*	Y	Y	Y		Y									
Gull-Billed Tern	*Gelochelidon nilotica*		Y												
Harris's Hawk	*Parabuteo unicinctus*		Y												
Hawfinch	*Coccothraustes coccothraustes*		Y			Y									
Herring Gull	*Larus argentatus*	Y	Y			Y									
***Hobby**	*Falco subbuteo*		Y			Y									
***Honey-buzzard**	*Pernis apivorus*		Y												
House Martin	*Delichon urbicum*	Y	Y	Y		Y		Y							
House Sparrow	*Passer domesticus*	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	
Iceland Gull	*Larus glaucoides*		Y												
Kestrel	*Falco tinnunculus*	Y	Y	Y		Y	Y		Y				Y		Y
***Kingfisher**	*Alcedo atthis*	Y	Y	Y		Y						Y			Y
Kittiwake	*Rissa tridactyla*		Y												
Knot	*Calidris canutus*		Y			Y									

Common Name	*Scientific Name*	Individual records	SE4202	SE4203	SE4204	SE4302	SE4303	SE4304	SE4402	SE4403	SE4404	SE4502	SE4503	SE4504	SE40G
Lapwing	*Vanellus vanellus*	Y	Y	Y		Y	Y		Y	Y					Y
Laughing Gull	*Larus atricilla*		Y												
Lesser Black-Backed Gull	*Larus fuscus subsp. Graellsii*	Y	Y			Y									
Lesser Redpoll	*Acanthis cabaret*		Y			Y									
Lesser White-Fronted Goose	*Anser erythropus*		Y	Y											
Linnet	*Linaria cannabina*	Y	Y	Y	Y	Y	Y				Y				Y
***Little Bittern**	*Ixobrychus minutus*		Y												
***Little Gull**	*Hydrocoloeus minutus*		Y												
***Little Ringed Plover**	*Charadrius dubius*		Y			Y									Y
***Little Tern**	*Sternula albifrons*		Y												
Mallard	*Anas platyrhynchos*	Y	Y	Y		Y			Y				Y		
Mandarin Duck	*Aix galericulata*		Y												
***Marsh Harrier**	*Circus aeruginosus*		Y			Y									
Marsh Tit	*Poecile palustris*		Y			Y									
Meadow Pipit	*Anthus pratensis*	Y	Y			Y	Y								
Mealy Redpoll	*Acanthis flammea subsp. Flammea*		Y			Y									Y
***Mediterranean Gull**	*Larus melanocephalus*		Y			Y									
***Merlin**	*Falco columbarius*		Y												
Mistle Thrush	*Turdus viscivorus*	Y	Y	Y		Y								Y	
Moorhen	*Gallinula chloropus*	Y	Y	Y		Y			Y	Y			Y		
***Osprey**	*Pandion haliaetus*		Y												
Oystercatcher	*Haematopus ostralegus*	Y	Y	Y		Y									
Pectoral Sandpiper	*Calidris melanotos*		Y												
***Peregrine**	*Falco peregrinus*		Y			Y									Y
Pheasant	*Phasianus colchicus*	Y	Y			Y			Y		Y		Y		Y

Common Name	*Scientific Name*	Individual records	SE4202	SE4203	SE4204	SE4302	SE4303	SE4304	SE4402	SE4403	SE4404	SE4502	SE4503	SE4504	SE40G
Pink-Footed Goose	*Anser brachyrhynchus*	Y	Y	Y		Y									
***Pintail**	*Anas acuta*		Y			Y									
Pochard	*Aythya ferina*	Y	Y			Y									
***Purple Sandpiper**	*Calidris maritima*		Y												
***Quail**	*Coturnix coturnix*		Y			Y	Y			Y					
***Red Kite**	*Milvus milvus*		Y			Y									
Red-Crested Pochard	*Netta rufina*		Y			Y									
***Red-necked Phalarope**	*Phalaropus lobatus*		Y												
Redpoll	*Acanthis flammea*		Y	Y		Y									Y
Redshank	*Tringa totanus*		Y												Y
Redstart	*Phoenicurus phoenicurus*		Y												
***Redwing**	*Turdus iliacus*		Y			Y									Y
Reed Bunting	*Emberiza schoeniclus*	Y	Y	Y		Y				Y		Y	Y		Y
Ringed Plover	*Charadrius hiaticula*		Y			Y									
Rook	*Corvus frugilegus*	Y	Y			Y									
Roseate Tern	*Sterna dougallii*		Y												
Ruddy Duck	*Oxyura jamaicensis*		Y	Y		Y									
Ruddy Shelduck	*Tadorna ferruginea*		Y												
***Ruff**	*Calidris pugnax*		Y			Y									
Sanderling	*Calidris alba*		Y			Y									
Sandpiper	*Actitis hypoleucos*		Y			Y									
Sandwich Tern	*Sterna sandvicensis*		Y												
***Savi's Warbler**	*Locustella luscinioides*		Y			Y									
***Scaup**	*Aythya marila*		Y												
Sedge Warbler	*Acrocephalus schoenobaenus*		Y	Y		Y	Y						Y		

Common Name	*Scientific Name*	Individual records	SE4202	SE4203	SE4204	SE4302	SE4303	SE4304	SE4402	SE4403	SE4404	SE4502	SE4503	SE4504	SE40G
Shelduck	*Tadorna tadorna*	Y	Y			Y									
Shoveler	*Anas clypeata*	Y		Y		Y									Y
Silver Teal	*Anas versicolor*		Y												
Skylark	*Alauda arvensis*	Y	Y			Y		Y	Y	Y	Y			Y	Y
Smew	*Mergellus albellus*		Y												
Snipe	*Gallinago gallinago*	Y	Y			Y			Y						
***Snow Bunting**	*Plectrophenax nivalis*		Y												
Song Thrush	*Turdus philomelos*	Y	Y	Y		Y				Y			Y	Y	
Sparrowhawk	*Accipiter nisus*	Y	Y	Y		Y			Y						
***Spoonbill**	*Platalea leucorodia*		Y												
Spotted Crake	*Porzana porzana*		Y												
Spotted Flycatcher	*Muscicapa striata*		Y			Y									
Spotted Redshank	*Tringa erythropus*		Y			Y									Y
Starling	*Sturnus vulgaris*	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	
Stock Dove	*Columba oenas*	Y	Y	Y		Y	Y								
***Stone-Curlew**	*Burhinus oedicnemus*		Y												
Swift	*Apus apus*	Y	Y	Y		Y						Y	Y		
Tawny Owl	*Strix aluco*		Y	Y		Y									
Teal	*Anas crecca*	Y	Y	Y		Y									Y
***Temminck's Stint**	*Calidris temminckii*		Y												
Tree Pipit	*Anthus trivialis*		Y												
Tree Sparrow	*Passer montanus*	Y	Y			Y	Y								Y
Tundra Bean Goose	*Anser fabalis subsp. Rossicus*		Y			Y									
Turnstone	*Arenaria interpres*		Y												
Turtle Dove	*Streptopelia turtur*		Y												

Common Name	*Scientific Name*	Individual records	SE4202	SE4203	SE4204	SE4302	SE4303	SE4304	SE4402	SE4403	SE4404	SE4502	SE4503	SE4504	SE40G
Twite	*Linaria flavirostris*														Y
Water Pipit	*Anthus spinoletta*		Y												Y
Wheatear	*Oenanthe oenanthe*		Y			Y									Y
***Whimbrel**	*Numenius phaeopus*		Y	Y											
Whinchat	*Saxicola rubetra*		Y												
Whiskered Tern	*Chlidonias hybrida*		Y			Y									
White Stork	*Ciconia ciconia*		Y	Y											
White Wagtail	*Motacilla alba subsp. Alba*		Y												
White/Pied Wagtail	*Motacilla alba*		Y												
White-Fronted Goose	*Anserr albifrons*		Y			Y									
Whitethroat	*Sylvia communis*	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
***Whooper Swan**	*Cygnus cygnus*		Y			Y									Y
Wigeon	*Anas penelope*	Y	Y	Y		Y									Y
Willow Tit	*Poecile montana*	Y	Y	Y		Y								Y	
Willow Warbler	*Phylloscopus trochilus*	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y
***Wood Sandpiper**	*Tringa glareola*		Y												
Woodcock	*Scolopax rusticola*		Y												
Woodpigeon	*Columba palumbus*	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y		Y
Wren	*Troglodytes troglodytes*	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y
Yellow Wagtail	*Motacilla flava*	Y	Y				Y			Y	Y			Y	
Yellowhammer	*Emberiza citrinella*	Y	Y		Y	Y	Y		Y	Y	Y			Y	
Yellow-legged Gull	*Larus michahellis*		Y			Y									

Key

- Site Boundary
- 1 km Buffer
- 2 km buffer
- Dearne Valley Wetlands Site of Special Scientific Interest (SSSI)
- Old Moor and Wath Ings Local Wildlife Site (LWS)
- Dearne Valley RSPB Sites

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0 250 500 m

client
Newlands Developments

project
Barnsley Road,
Goldthorpe

drawing title
Consultation Data Results - Designated Sites

scale @ A3
1:15000

drawn
HEJ / PA

issue date
12/1/2023

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Figure 1

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Key

- Site Boundary
- 1 km Buffer

Bats

- Common Pipistrelle
- Leisler's Bat
- Myotis species
- Noctule
- Soprano Pipistrelle

Herptiles

- Common Frog
- Common Toad
- Grass Snake
- Smooth Newt

Invasive & Non-Native Species (INNS)

- American Mink
- Cotoneaster
- Giant Hogweed
- Himalayan Balsam
- Japanese Knotweed
- Japanese Rose
- Montbretia
- Yellow Archangel

Invertebrates

- Cinnabar
- Dingy Skipper
- Small Heath

Mammals

- Brown Hare
- Hedgehog
- Otter
- Water Vole

Species At Unknown Location Within 1 km Grid Squares

- SE4202: Brown Long-eared; Leisler's Bat; Noctule; Soprano Pipistrelle; Common Frog; Common Toad; Smooth Newt; Slow-worm; Common Lizard; Chamomile; Northern Hawk's-beard; Dingy Skipper; Wall; Cinnabar; Dark-barred Twin-spot Carpet; Dusky Thorn; Ghost Moth; Green-brindled Crescent; Grey Dagger; Latticed Heath; Mottled Rustic; Rosy Rustic; Shaded Broad-bar; Small Square-spot; White Ermine; Brown Hare; Harvest Mouse; Hedgehog
- SE4203: Brown Hare
- SE4302: Brown Hare; Otter
- SE4403: Brown Hare; Hedgehog

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Key

Site Boundary
1 km Buffer

Bird Species - individual records

- Black-Headed Gull
- Bullfinch
- Cetti's Warbler
- Common Gull
- Dunnock
- Fieldfare
- Gadwall
- Goldeneye
- Green Sandpiper
- Greenfinch
- Grey Partridge
- Greylag Goose
- Herring Gull
- House Martin
- House Sparrow
- Kestrel
- Kingfisher
- Lapwing
- Lesser Black-backed Gull
- Linnet
- Mallard
- Meadow Pipit
- Mistle Thrush
- Moorhen
- Oystercatcher
- Pheasant
- Pink-footed Goose
- Pochard
- Reed Bunting
- Rook
- Shelduck
- Shoveler
- Skylark
- Snipe
- Song Thrush
- Sparrowhawk
- Starling
- Stock Dove
- Swift
- Teal
- Tree Sparrow
- Whitethroat
- Wigeon
- Willow Tit
- Willow Warbler
- Woodpigeon
- Wren
- Yellow Wagtail
- Yellowhammer

1 km Grid Squares - for bird species see Appendix B

- SE4202
- SE4203
- SE4204
- SE4302
- SE4303
- SE4304
- SE4402
- SE4403
- SE4404
- SE4502
- SE4503
- SE4504

2 km Grid Squares - for bird species see Appendix B

- SE40G

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Consultation Data Results - Protected & Notable Bird Species

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Figure 2b

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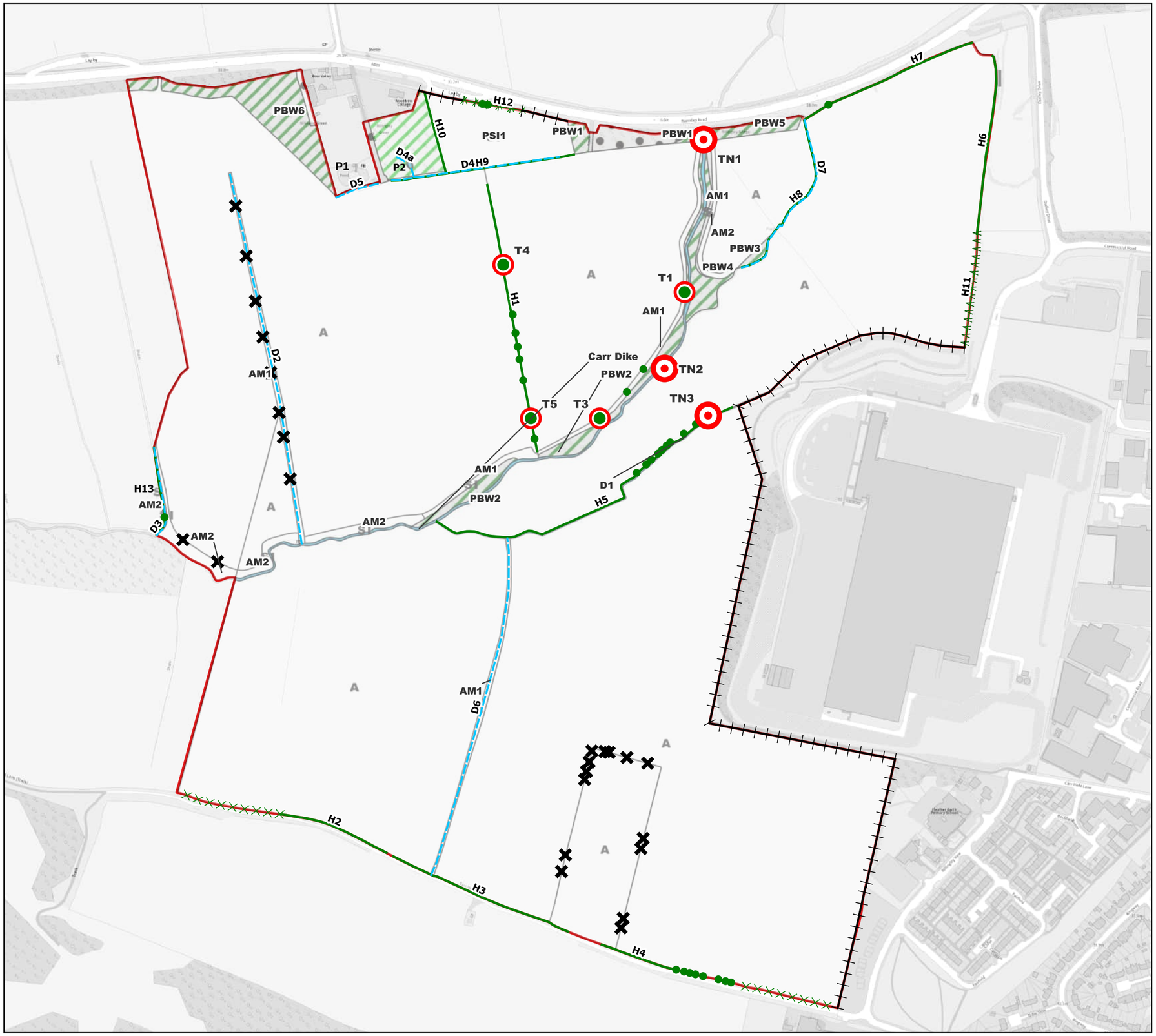

Key

- Red Line Boundary issued 03.11.22
- Bare ground
- Broadleaved woodland - plantation
- Coniferous woodland - plantation
- A — Cultivated/disturbed land - arable
- SI — Poor semi-improved grassland
- Running water
- Standing water
- Dry ditch
- Fence
- Hedge with trees - native species-rich
- Intact hedge - native species-rich
- Intact hedge - species-poor
- Scrub - scattered line
- Broadleaved tree
- Scrub - scattered
- Tree with bat potential
- Target note

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0 100 200 m

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drawing title
PHASE 1 HABITAT PLAN - using red line boundary issued 03.11.22

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Figure 3

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