ASOS Carpark, Park Spring Road

Ecological Assessment

Barnsley, South Yorkshire

Report ID 184-03
OCTOBER 2017

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1. INTRODUCTION

1.1. BACKGROUND

1.1.1. This report provides an ecological assessment of proposals for development of land adjacent to ASOS warehouse near Barnsley in South Yorkshire. The ecological assessment was commissioned by Knight Webb on behalf of ASOS.

1.1.2. This assessment has been produced to accompany a full planning application for the proposals. It provides an assessment based on up-to-date data on species and habitats to be affected from both a data trawl and field work and provides recommendations for mitigation to ensure future detailed proposals remain compliant and follow good practice.

Size

1.1.3. The land (otherwise known as the Applicant Site) encompasses that portion of land which sits to the northwest of the roundabout on the A6195 adjacent to the existing ASOS warehouse, at Park Spring Road. The Applicant Site proposals encompass 0.919 ha as shown in Figure 2.

Location

1.1.4. The applicant site is centred on OS grid reference SE 41691 06447, at address Park Spring Rd, Barnsley S72 7LG, UK. The site lies west of the A6195 (Park Spring Road) and to the east of the River Dearne and is a patch of scrubby, unoccupied land. A location plan and site boundary is shown in Figure 1.

1.2. PROPOSALS

1.2.1. The application is a full application for a proposed car park with associated landscaping & lighting. There is consideration of a pedestrian footbridge across the A6195 and use of the existing drainage infrastructure for surface water drainage. The proposals are shown in Figure 2.

1.3. Regulatory Framework

Legislation

1.3.1. This report has been prepared taking relevant statutory instruments into account. This includes domestic legislation such as Acts of Parliament, and Regulations to comply with European Directives. This is described in full in Appendix 1, and in summary as follows:

- Wildlife and Countryside Act 1981
- Protection of Badgers Act 1992
- Countryside and Rights of Way (CRoW) Act 2000
- Natural Environment and Rural Communities (NERC) Act 2006
- The Conservation of Habitats and Species Regulations 2010
- ODPM Circular 06/2005 Biodiversity and Geological conservation

Priority Habitats and Species

1.3.2. As well as species and habitats formerly protected through statute, this assessment will take into account 'Habitats and Species of Principal Importance', otherwise referred to as Priority Habitats and Species (see http://www.ecologypractice.co.uk/services/). In accordance with obligations set out in Section 40 of the NERC Act 2006 the planning authority will make reference to these habitats and species as material considerations, which are defined in a List through Section 41 of the Act. This list is maintained by Natural England[1] and includes species and habitats identified in local and national Biodiversity Action Plans.

1.4. Planning Framework

National Planning Policy Framework 2012 (NPPF)

1.4.1. National policy for nature conservation is determined through the National Planning Policy Framework 2012 and with respect to wildlife supersedes Planning Policy Statement 9 (PPS 9).

1.4.2. Generally, there is a presumption within the NPPF for planning permissions to favour net-gain sustainable development, to avoid sensitive landscapes under designation as

[1] http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/habsandspeciesimportance.aspx

Greenbelt (Subsection 8), and to protect wildlife sites including local wildlife sites (Ss 11).

1.4.3. The NPPF bases delivery of ecological protection on maintenance of ecological networks and protection of sites, and does not focus on species. Nonetheless, the tools for species protection are still fully present through the above statutory instruments and Circulars since NPPF policy does not alter statutory legal requirements.

Local Wildlife

1.4.4. Ss 11, paragraph 113 states that "*Local planning authorities should set criteria-based policies against which proposals for any development on or affecting protected wildlife or geodiversity sites or landscape areas will be judged. Distinctions should be made between the hierarchy of international, national and locally designated sites, so that protection is commensurate with their status and gives appropriate weight to their importance and the contribution that they make to wider ecological networks*."

Local Planning Policy

1.4.5. Locally, planning is carried out by Barnsley Metropolitan Borough Council. Barnsley MBC's current Statutory Development Plan includes such relevant documents as the Core Strategy, and the remaining saved policies of the Unitary Development Plan. They have also produced supplementary planning documents as guidance and advice with planning applications. A new Local Plan is yet to be adopted and the Council ecologist has asked this also to be taken into account. The current adopted (not draft) policy with respect to this site and Ecology is CSP 36 in the Core Strategy, which states:

Biodiversity and Geodiversity

Development will be expected to conserve and enhance the biodiversity and geological features of the borough by:

- *protecting and improving habitats, species, sites of ecological value and sites of geological value with particular regard to designated wildlife and geological sites of international, national and local significance, ancient woodland and species and*

habitats of principal importance identified in Section 74 of the Countryside and Rights of Way Act 2000 and in the Barnsley Biodiversity Action Plan

- *maximising biodiversity and geodiversity opportunities in and around new developments*
- *conserving and enhancing the form, local character and distinctiveness of the river corridors of the Dearne and Dove as natural floodplains and important strategic wildlife corridors*

Development which may harm a biodiversity or geological feature will not be permitted unless effective mitigation and/or compensatory measures can be ensured.

1.4.6. Policy CSP 34 is also relevant for this assessment, being concerned with Protection of the Green Belt.

1.4.7. The draft local plan site policy states that any development should 'retain the marshy grassland areas…where these cannot be retained, suitable wetland features should be incorporated into the development as replacement habitat.'

1.5. UK Biodiversity Policy

1.5.1. There is a 'Biodiversity Duty' for local authorities set out in the NERC Act 2006 Sections 40 and 41 (reinforcing the requirements of the CRoW Act 2000), guiding national policy for priority habitats and species (i.e. the S41 List), and importantly linking these to both the National Biodiversity Action Plan for the UK and local Biodiversity Action Plans (BAPs).

UK Biodiversity Action Plan (UK BAP)

1.5.2. The UK BAP describes the UK's biological resources and commits a detailed plan for the protection of these resources. Although not statutorily binding, nonetheless it provides policy direction at a national, regional and local scale.

1.5.3. It currently has 391 Species Action Plans, 45 Habitat Action Plans and 162 Local Biodiversity Action Plans with targeted actions. This list, a result of the most comprehensive analysis ever undertaken in the UK, contains 1149 species and 65 habitats that have been listed as priorities for conservation action.

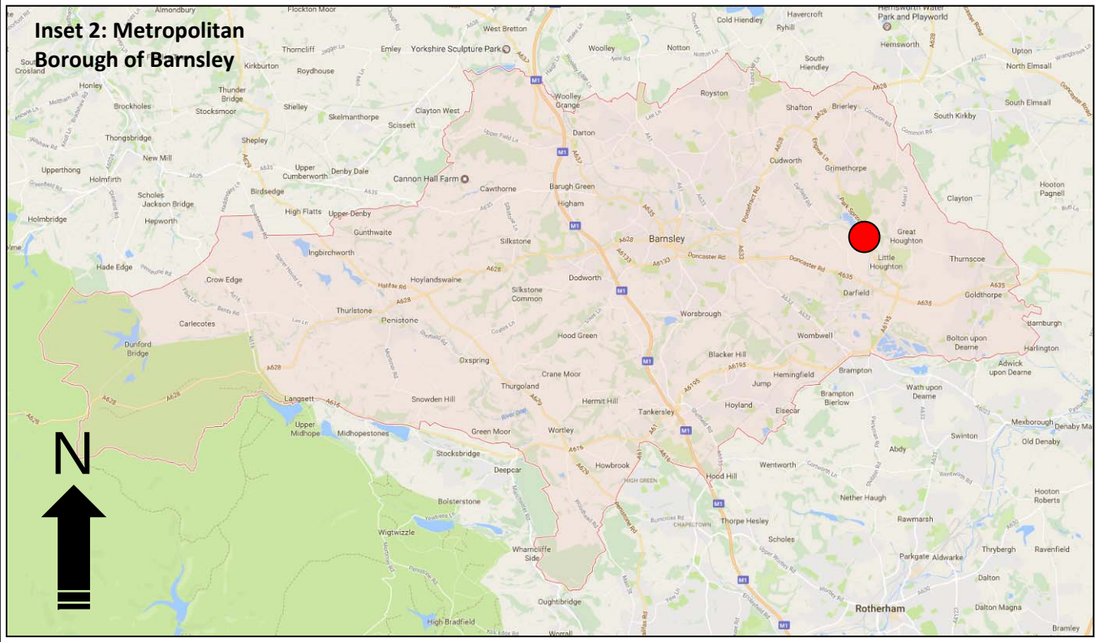
Local Biodiversity Action

1.5.4. Implementation of the UK BAP is channelled through local Biodiversity Action Plans (BAPs): the local BAP for this site is operated by the Barnsley Biodiversity Trust[2]. Within the project, in addition to those species and habitats listed in S41 (refer to 1.3.2), there are Species and Habitat Action Plans as listed Table 1 below.

Table 1: *Relevant Barnsley Action Plans*

Species Action Plans (potential for site in bold)		
Hedgehog (SAP1)	Bats (SAP2)	Water vole (SAP3)
Otter (SAP4)	Grey partridge (SAP5)	Bittern (SAP6)
Kestrel (SAP7)	Little ringed plover (SAP8)	**Lapwing (SAP9)**
Barn owl (SAP10)	**Skylark (SAP11)**	Tree sparrow (SAP12)
Twite (SAP13)	**Great crested newt (SAP14)**	Salmon (SAP15)
Bullhead (SAP16)	White-clawed crayfish (SAP17)	Glow worm (SAP18)
Dingy skipper (SAP19)	Bluebell (SAP20)	
Habitat Action Plans (potential for site in bold)		
Upland Oakwood (HAP1)	**Lowland mixed deciduous woodland (HAP2)**	Wet woodland (HAP3)
Wood pasture & Parkland (HAP4)	**Hedgerows (HAP5)**	Arable Field Margins (HAP6)
Floodplain Grazing Marsh (HAP7)	**Lowland Meadow (HAP8)**	Lowland Dry Acidic Grassland (HAP9)
Lowland Heathland (HAP10)	Upland Heathland (HAP11)	Blanket Bog (HAP12)
Purple Moor Grass & Rush Meadow (HAP13)	Reedbeds (HAP14)	**Standing water: Ponds (HAP15)**
Rivers (HAP16)	Open Mosaic Habitats on Previously Developed Land (HAP17)	

[2] http://www.barnsleybiodiversity.org.uk/Barnsley%20BAP%202009.pdf



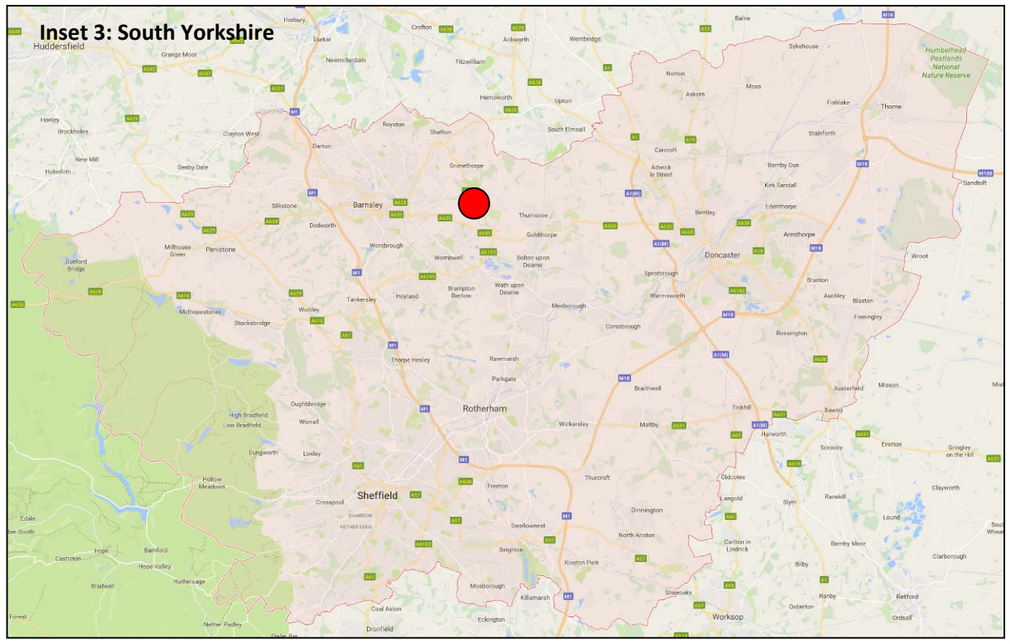


Figure 1

Location

ASOS Carpark, Barnsley

Legend

Applicant site

Site location

OS X (Eastings) 441712
OS Y (Northings) 406458
Nearest Post Code S72 7GX
Lat (WGS84)
N53:33:11 (53.553101)
Long (WGS84)
W1:22:19 (-1.371867)
Lat,Long
53.553101,-1.371867
Nat Grid
SE417064 / SE4171206458
mX -152715
mY 7051573
Mapcode GBR LWVC.S1

Boundaries and other extents are indicative. Please refer to Architect drawings for accuracy.

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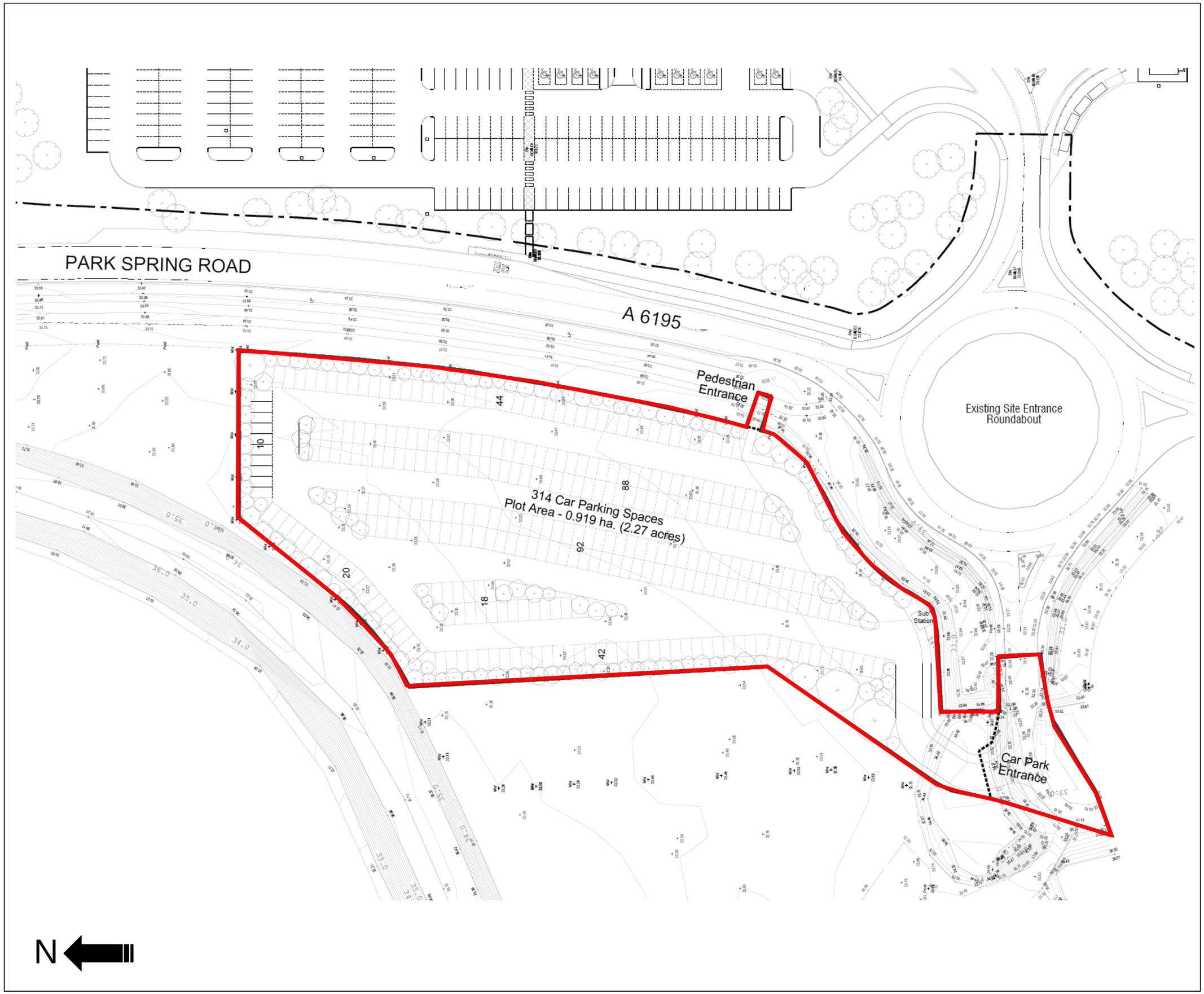

Figure 2

Proposals

ASOS Carpark, Barnsley

Legend

Applicant Site

Refer to aja architect drawing no. 6057-004

aja architects

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2. ECOLOGY SURVEY METHODS

2.1. DESK WORK

Data search

2.1.1. A biological records search was carried out to determine the known features on and surrounding the site. The Biological Records Centre was contacted and the results are summarised in Section 3 below[3].

2.1.2. The Multi-Agency Geographical Information System (MAGIC) website (www.magic.gov.uk), which now also replaces Natural England's Nature on the Map (www.natureonthemap.org.uk), has been used to search for statutory designated sites of nature conservation value within 5km of the site. The website has been used to determine designated site boundaries and also to search for Priority Habitats and any European protected species licence applications.

2.1.3. The National Biodiversity Network (NBN) website (www.nbn.org.uk) was used to search for records of protected species within and adjacent to the site.

Survey Seasons

2.1.4. Where surveys were out of season/not possible, the data trawl was used to make certain predictions based on trends, and if further survey is required at the appropriate time of year then this is stated in the recommendations in later Chapters.

Local Planning Documents

2.1.5. The local planning documents were reviewed to ensure that policy site designations were taken into account and general ecology policies are followed (refer to 1.4.5). The Council ecologist required this to include the unadopted emerging Local Plan.

2.1.6. The Council Ecologist also requests that we take into account a previous 2013 assessment of the application site (known as N2).

[3] The Ecology Practice considers some data confidential, and summarises the results in this report where details are relevant. The full dataset can be obtained with permission from Barnsley Metropolitan Borough Council.

2.2. FIELDWORK

2.2.1. Fieldwork was carried out by Jake Robinson BSc Pg.Cert MCIEEM MRSB, class 1 bat licensee (2015-10745-CLS-CLS). Reporting was then written by Andrew Arnott and subsequently reviewed by Oliver Ramm BSc MCIEEM.

Phase I Habitat Survey

2.2.2. A habitat survey of the applicant site was carried out on 24th May 2017, which involved identifying and mapping the dominant habitat types following the Phase 1 habitat survey methodology recommended by Natural England (JNCC 2010[4]).

2.2.3. Dominant plant species were noted (including aliens), as were any uncommon species or species indicative of habitat types, but not all species would have been visible and there was no attempt to compile exhaustive species lists. Botanical names follow Stace 1997[5].

2.2.4. During this field survey, attention was paid to habitats and features that may provide opportunities for protected species to be present at other times of year in the context of the proposals. Survey conditions were ideal: dry, warm (22°C), F1 wind, 10% cloud cover, 50% humidity.

Badgers

2.2.5. The use of the site by badgers was assessed, following classification such as that found in Cresswell *et* al. 1990[6].

Breeding birds

2.2.6. The applicant site was visited twice, once in each of May and June, following Bibby *et* al. 2000[7], requiring a 'look-see' method to be applied by an experienced ornithologist.

---

4 **Joint Nature Conservation Committee 2010** Handbook for Phase I habitat survey: a technique for environmental audit. JNCC, Peterborough.

5 **Stace, C. 1997** New Flora of the British Isles. 2nd Ed. Cambridge University Press, Cambridge

6 **Cresswell P, Harris S and Jefferies D J (1990).** The history distribution status and habitat requirements of the badger in Britain. Nature Conservancy Council.

7 **Bibby, C.J., Burgess, N.D., Hill, D.A. & Mustoe, S. 2000**. Bird Census Techniques. Second Edition. Academic Press, London.

2.2.7. An assessment of the status of the site for barn owls was carried out, following the methods provided by Shawyer 2011[8].

Great crested newt

Pond suitability

2.2.8. The site was assessed for its use by great crested newts. Ponds and watercourses were first of all identified within 500m of the site boundary (refer to Figure 3) and their suitability for great crested newt occupation was assessed (e.g. the Habitat Suitability Index [HSI] [Oldham *et* al. 2000[9]]).

eDNA & field surveys

2.2.9. Samples of water were then taken from suitable waterbodies, and eDNA tests were carried out.

Surveys lifetime

2.2.10. The results of surveys will remain valid as follows:

i) The desk top survey is unlikely to need updating within the next 5 years;

ii) The Phase I survey is likely to have a working life of 10 years where conditions have not changed (JNCC 2010[4] para 7.1);

iii) Great crested newt survey data is given a working life by Natural England in their GCN Licence Method Statement (Natural England 2015[10]) (refer to http://www.ecologypractice.co.uk/FILES/data-age-table.pdf). They refer to data for proposals where the nearest pond is 100-250m away, and there will be ≤.5ha of terrestrial habitat loss as being valid for 3 active seasons. This survey data is therefore valid until early-May 2021.

---

8 **Shawyer, C. R. 2011**. Barn Owl *Tyto alba* Survey Methodology and Techniques for use in Ecological Assessment: Developing Best Practice in Survey and Reporting. IEEM, Winchester.

9 **Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000).** Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). Herpetological Journal 10 (4), 143-155.

10 **Natural England 2015** Template for Method Statement to support application for licence under Regulation 53(2)e of The Conservation of Habitats and Species Regulations 2010 (as amended) in respect of great crested newts *Triturus cristatus.* Form WML-A14-2 (Version December 2015)

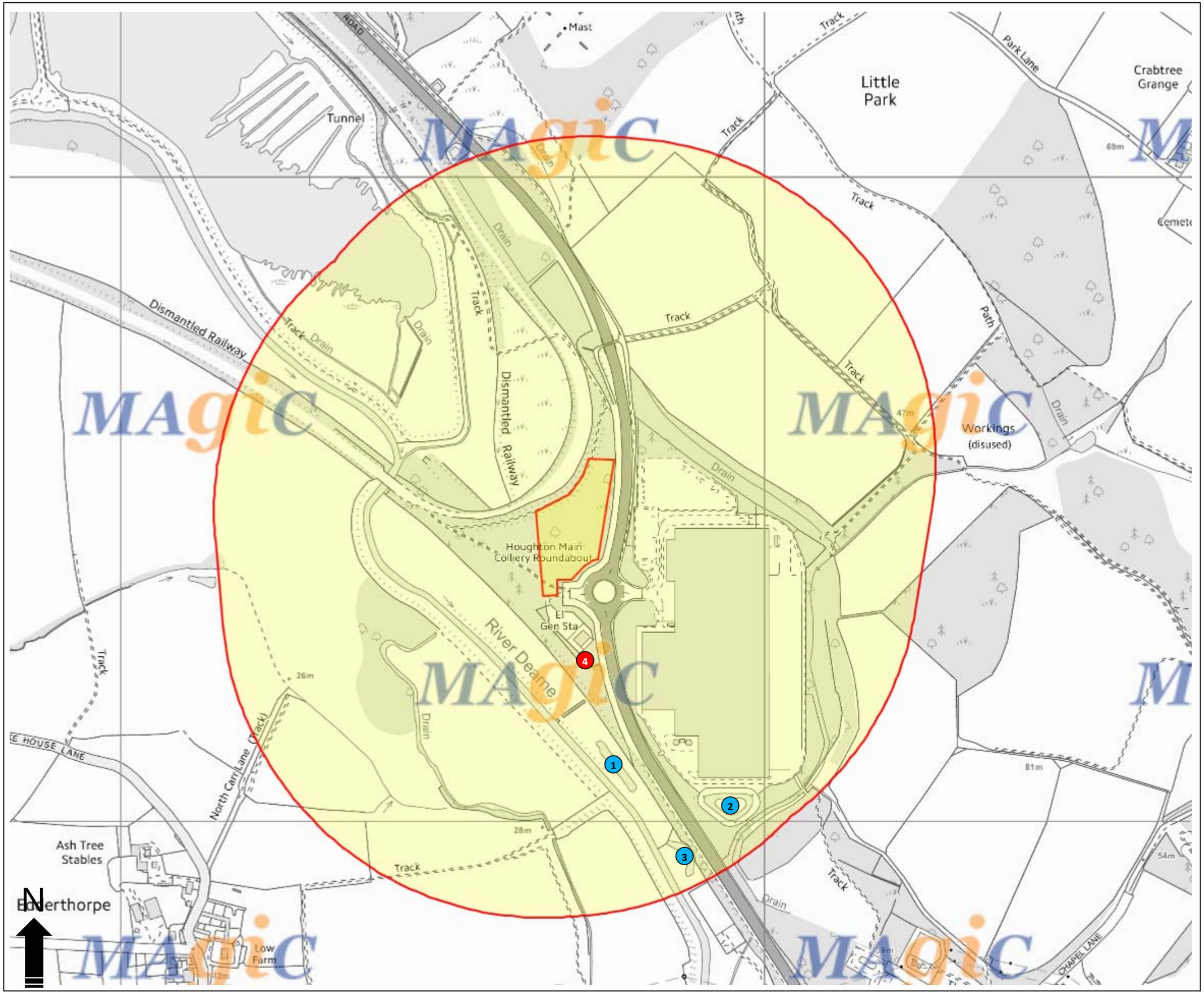

Figure 3

Pond locations within 500m

ASOS Carpark, Barnsley

Legend

- Applicant site
- 500m AOS radius
- Pond / waterbody
- Pond no longer present

Boundaries and other extents are indicative. Please refer to Architect drawings for accuracy.

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3. DESK TOP SURVEY RESULTS

3.1. SITE DESIGNATIONS

Statutory sites

3.1.1. The Government MAGIC website (www.magic.gov.uk) was investigated to determine the location of statutory sites of importance for wildlife within 5km. The results are described below and shown on Figure 4.

Sites of Special Scientific Interest (SSSI)

3.1.2. The search shows that there are two Sites of Special Scientific Interest (SSSI) within 5km:

i) Carlton Main Brickworks, 1.4km from the site boundary, and

ii) Stairfoot Brickworks, c.4km from the site.

Local Nature Reserves (LNRs)

3.1.3. The search also revealed two LNRs were within 5km:

i) West Haigh Wood LNR c.1.7km from the site boundary, and

ii) Carlton Marsh LNR, c. 4.8km from the site.

Non-statutory sites

3.1.4. Barnsley BRC provided records showing that there are three Local Wildlife Sites within 2km of the applicant site, including Edderthorpe Ings which lies within 150m west of the site (refer to Figure 5). See also 6.2 which provides detailed boundaries. Table 2 below provides citation summaries.

Table 2: *Local Wildlife Sites within 2 km*

Ref.	Name	Distance	**Citation summary** (refer to 6.2)
654	Sunny Bank, Horse Carr and Storrs Wood	1.31km	The Sunny Bank, Horse Carr and Storrs Wood site comprises five separate areas of broadleaved semi-natural woodland which are connected through tree lined fields, tracks and disused railways.
655	Edderthorpe Ings	160m	This is a site of formerly drained agricultural land that has flooded due to subsidence caused by the collapse of workings from the adjacent Grimethorpe Colliery. In other words, it is a wetland.
656	West Haigh Woods	1.04km	This is a large and overwhelmingly wooded site existing in two separate sections.

3.1.5. The emerging, draft and unadopted local plan contains reference to a Nature Improvement Area (NIA) which the site sits wholly within.

3.2. HABITATS

3.2.1. The Government MAGIC website was investigated to determine the recorded distribution of Priority Habitats as listed by Natural England under Section 41 of the Natural Environment and Rural Communities Act 2006 (refer to 1.3.2).

3.2.2. No habitat designated as Priority Habitat is within the applicant site, nor are any bordering or adjacent to it (refer to Figure 6).

3.2.3. Of the surrounding Priority Habitats there are areas of deciduous woodland within 100m of the western site boundary.

~~3.3. PLANNING POLICY~~

~~3.3.1. Figure 7 shows that there are no site-based policies, and that the proposals fall wholly outwith the Green Belt, in compliance with Policy CSP 34.~~

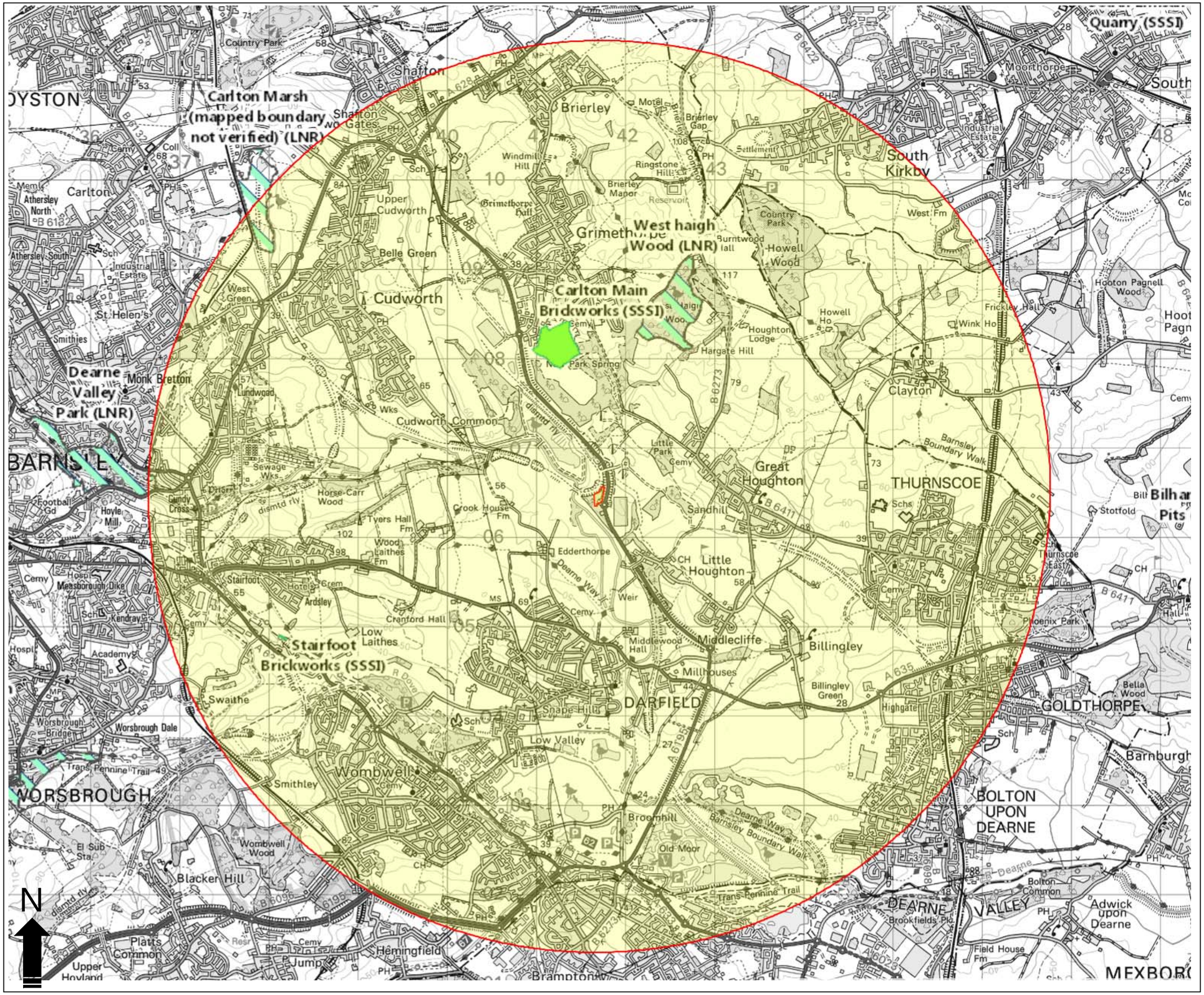

Figure 4

Statutory Sites (5km)

ASOS Carpark, Barnsley

Legend

- Applicant site
- 5km AOS radius
- SSSI (Site of Special Scientific Interest)
- LNR (Local Nature Reserve)

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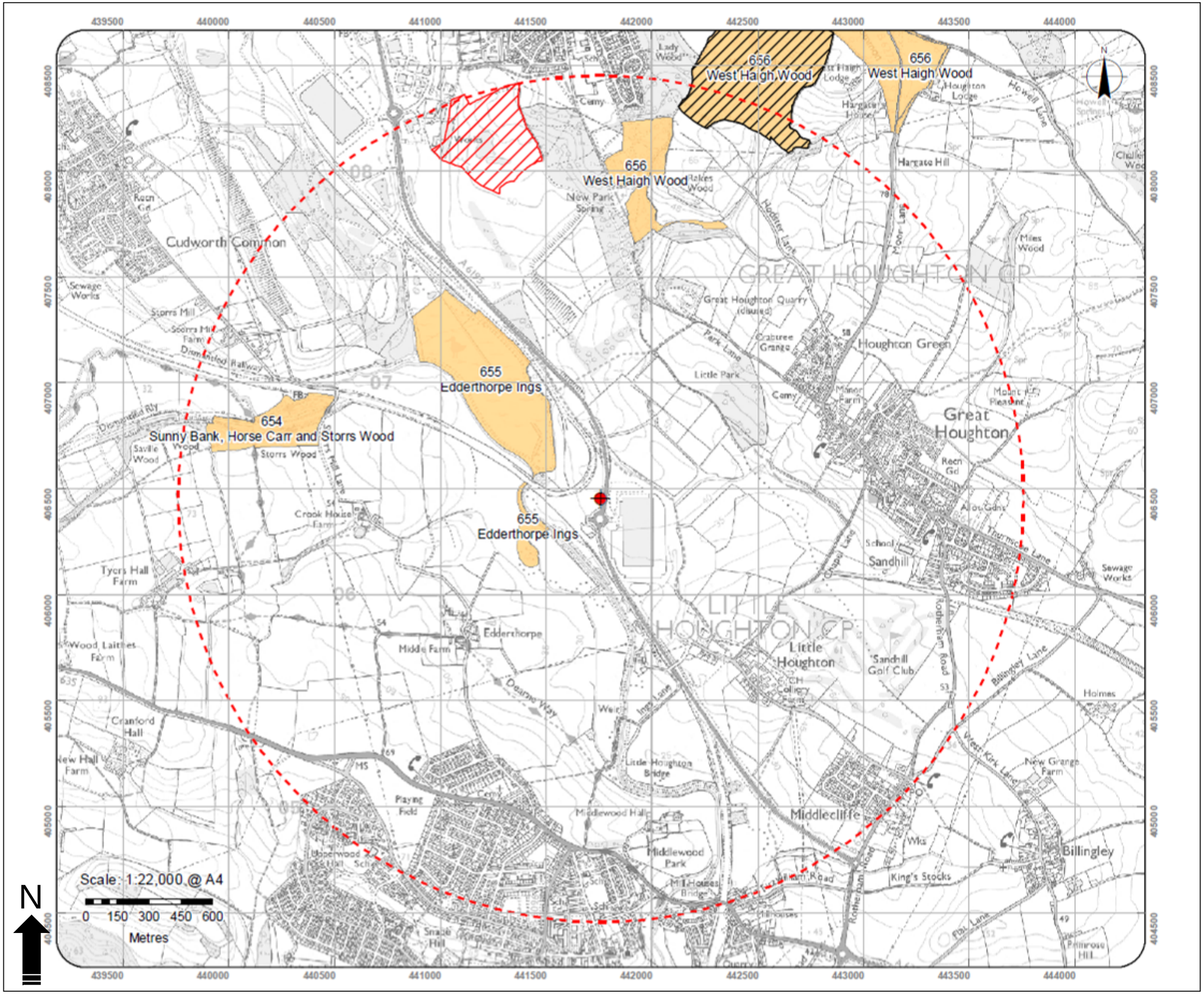


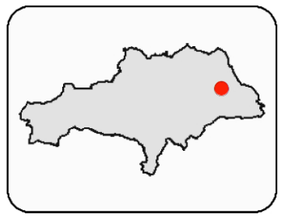
Figure 5

Non-statutory Sites (2km)

ASOS Carpark, Barnsley

Legend

- Local wildlife sites
- Local nature reserves
- Sites of special scientific interest
- 2km radius



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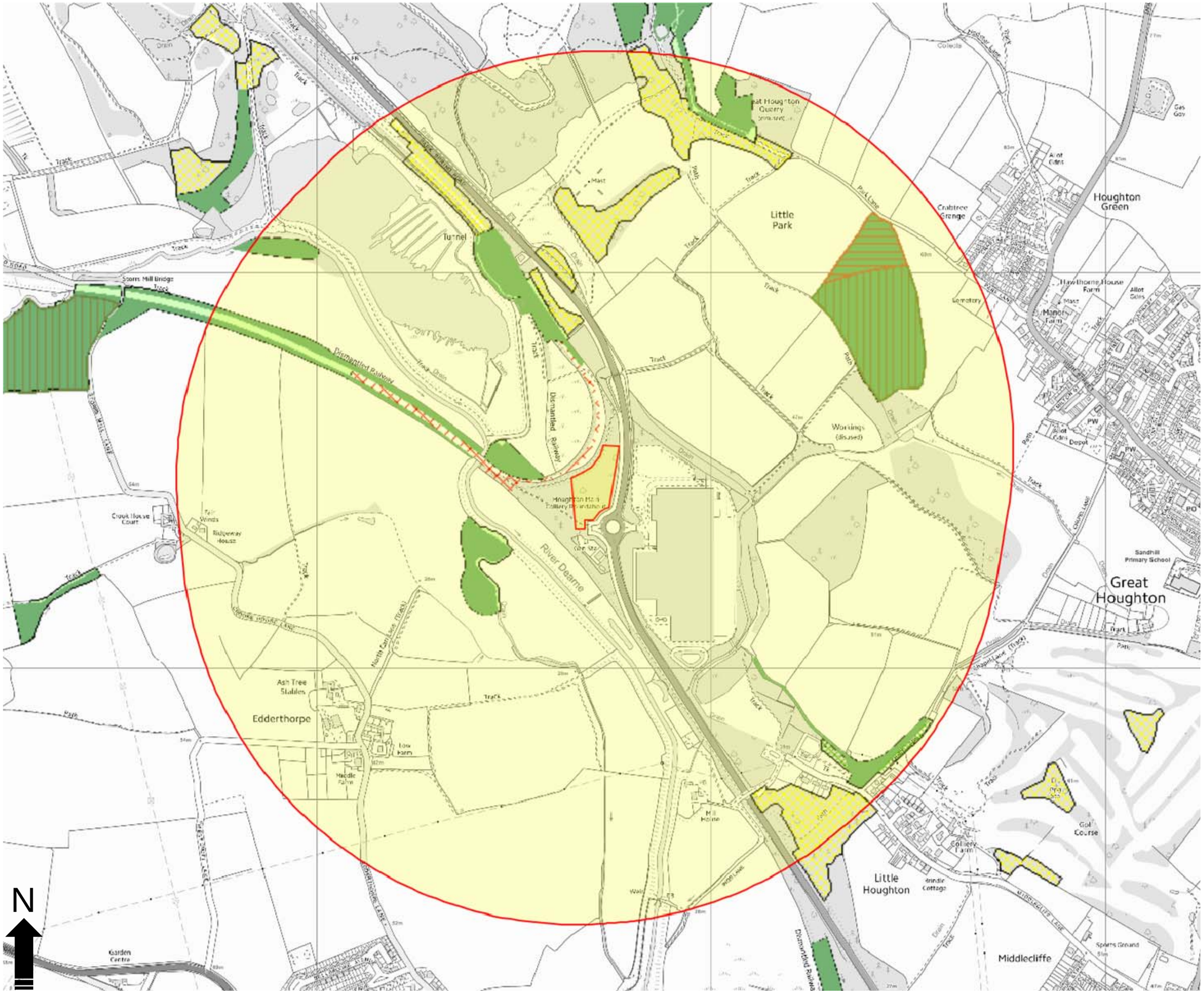

Figure 6

Priority Habitats (DEFRA)

ASOS Carpark, Barnsley

Legend

- Applicant site
- 1km AOS radius
- Deciduous Woodland (Priority Habitat)
- Broadleaved woodland (Non-Priority Habitat) (not the main habitat)
- Deciduous woodland (Priority Habitat) (not the main habitat)
- Ancient Woodland (Non-Priority Habitat)
- Ancient & Semi-Natural Woodland (Non-Priority Habitat)
- Young trees (Non-Priority Habitat) (National Forest Inventory)

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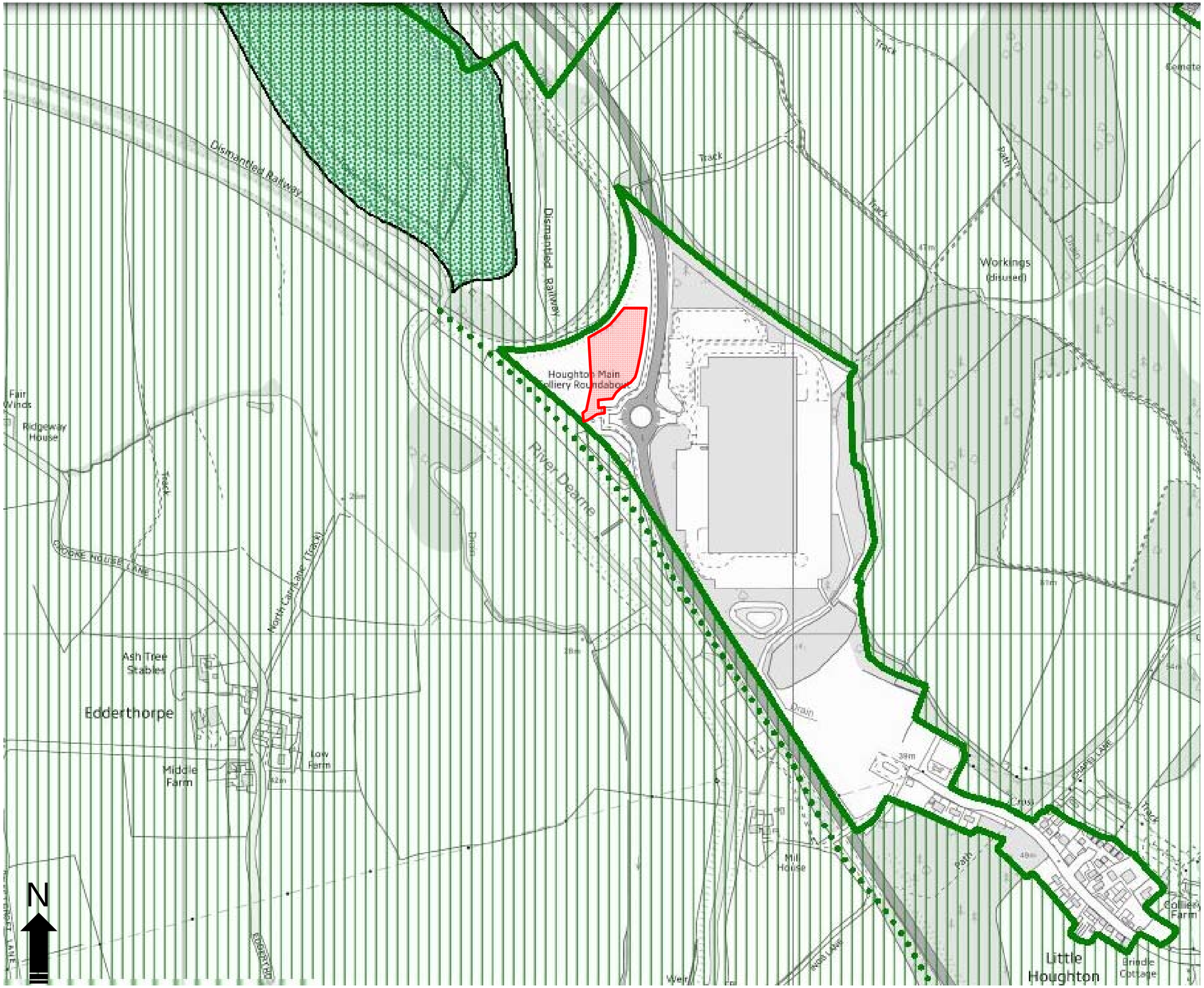

Figure 7

Planning Status

ASOS Carpark, Barnsley

Legend

- Area Of Borough Landscape Value
- Allotments
- Green Belt
- Urban Greenspace
- Urban Greenspace Proposal
- Old Moor Wetlands Centre
- Multi User Recreational Route
- Nature Conservation Site
- Proposed Golf Course
- Proposed Recreational Railway
- Site Of Scientific Interest (Geological)
- Site Of Special Scientific Interest
- South Yorkshire Forest
- Conservation Area
- Applicant site

Note: the site also lies within a Nature Improvement Area (NIA) which is an emerging, unadopted policy in Draft.

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3.4. SPECIES

3.4.1. The record centre was not able to restrict the list to protected species only, and unable to highlight those species of principle importance, therefore the data trawl returned an impossible 3188 records after eliminating from the main data set records greater than 10 years old. To qualify this further, only those listed on the Wildlife and Countryside Act 1981, those birds of conservation concern and BAP records were retained, the number then reducing, but still at 553.

3.4.2. Analysis showed that the majority (523) of these records related to birds mostly in the neighbouring nature reserve at Eddlethorpe Ings; of these birds there appear to be no records from the applicant site, however the vast majority of records do not contain more than 4 figure grid references (often only two) making the data set only indicative at best and a diagrammatic representation focussing on the applicant site is therefore not possible being in the same 1km square as the nature reserve. There are other difficulties with the data trawl dataset:

i) Blackbird is shown as a BoCC Red/Amber species.

ii) There is no differentiation between BoCC Red and Amber

iii) Water vole is not listed as protected by the WCA 1981

iv) Priority species are not highlighted

v) Eurasian / common prefixes are sometimes included sometimes not making sorting of data difficult (or impossible)

vi) Grid references are mostly not greater than two/four

vii) The results are skewed therefore towards a nature reserve in the same grid square as the applicant site (hence recording is also skewed)

3.4.3. This assessment does however make certain observations per species where relevant in later sections, but the lack of grid reference or any other indication of location means that data trawl observations should be treat with extreme caution.

4. FIELD SURVEY RESULTS

4.1. PHASE I HABITAT SURVEY (REFER TO FIGURE 8)

4.1.1. This site is dominated by dense scrub and immature broadleaved woodland with a mosaic of rough neutral grassland and marshy grassland.

Trees and scrub

4.1.2. The dense scrub habitats were a mix of *Salix* species and silver birch with some pedunculate oak and ash saplings. The diversity of the ground layer was relatively low particularly in the woodland patch to the west of the site, where the immature tree density was very high.

4.1.3. In some areas, notably TN2, hazel, goat willow, silver birch and hawthorn characterized the scrub, with a ground layer comprising creeping buttercup, cow parsley, common dock, red campion, rosebay willowherb, creeping thistle, oxeye daisy, broadleaved plantain and cleavers.

4.1.4. At TN4 scrub gave way to immature broad-leaved woodland comprising grey willow, silver birch, hazel & hawthorn as a very dense copse with poor ground layer diversity. Also at TN11 again dense scrub was dominated by immature broad-leaved woodland, comprising silver birch, willow sp., hawthorn, ash saplings, grassy ground layer – cocksfoot, Yorkshire fog, ribwort plantain

Hedgerows

4.1.5. The hedgerow along the eastern boundary is species-poor and mostly composed of common hawthorn approximately 1.5m high x 1m wide. This hedgerow has a grassy ground layer on the site-site, and a tall-herb ground layer on the road-side. There were several areas of compressed rubble and bare ground.

HEGS criteria

4.1.6. The hedgerow (TN10) is hawthorn dominated with 10% blackthorn, hazel & sycamore (2%). There were 4 x native woody species in total. The ground layer is grassy with some great willowherb, cow parsley, hogweed and ribwort plantain on the roadside. It comprised more than 80% native species qualifying for S41 Habitat of Principal Importance. The approximate length was 300m with 10% gaps and no ditch. The average species per 30m is 1. There are no end connections to other hedgerows. It is at least 15 years old, but unlikely to be as old as 30 years. It is therefore not considered to be 'important'.

Grassland

4.1.7. There are areas of semi-improved grassland, with herb-rich neutral grassland in substantial areas throughout, occasionally interspersed with marshy patches.

4.1.8. There were areas of earth-bank at TN1 surrounding the roundabout on the A6195, comprising the usual opportunistic colonisers such as rough hawkbit, ribwort plantain, common dock, cocksfoot, red clover and pineapple mayweed.

4.1.9. The neutral grasslands are herb-rich with species such as meadow saxifrage, birds foot trefoil, and an abundance of ribwort plantain. At TN3 dock, creeping buttercup, ribwort plantain, red clover, vetch sp., common birds foot trefoil, cocksfoot, Yorkshire fog, and hogweed dominated. At TN6 the sward height was approx. 20cm, with creeping buttercup, Yorkshire fog, red clover, cuckoo flower, meadow buttercup, meadow saxifrage and ribwort plantain. Neutral grassland was particularly herb-rich at TN9, with creeping buttercup, red clover, meadow saxifrage, vetch sp., ribwort plantain, with a scattering of compact rush. The neutral grasses at TN13 comprised red and white clover, common hawkbit, birds foot trefoil, Yorkshire fog and ribwort plantain. Refer also to the previous 2013 survey and report.

4.1.10. Marshy grassland was found in small patches (refer to Figure 8), and at TN7 was dominated by compact rush. In other areas, such as TN12, *Typha* spp. and *Juncus* spp. were present but without water. Refer also to the previous 2013 survey and report.

Aquatic habitats: Ponds

Table 3: *Ponds 1 – 3 (Refer to Figure 3)*

Pond details	Photographs
Pond 1 (eDNA ref: GCN 281) 53.54825, -1.36920 Inflow – culvert in the south east Arable surroundings, with willow and hawthorn scrub Steep banks (high nettle coverage) 60% shade Turbidity: 2 Vegetation cover: 5% No fish or fowl 40% accessible	**Photograph 1**: Pond 1 **Photograph 2**: Pond 1

Pond details	Photographs	
Pond 2 (eDNA ref: GCN 280) 53.54972, -1.3703 No apparent inflow Reedbed banks Arable surroundings 25% shade Turbidity: 2 Vegetation cover: 15% (common reed fringe) No fish, signs of possible fowl (faeces) 50% accessible	**Photograph 3**: Pond 2 	**Photograph 4**: Pond 2
Pond 3 (eDNA ref: GCN 282) 53.54933, -1.36777 Inflow/outflow – culvert Willow scrub / SI grassland surroundings 30% shade Turbidity: 2 Vegetation cover: 80% - dense reedmace No fish or fowl 30% accessible	**Photograph 5**: Pond 3 	**Photograph 6**: Pond 3

Species notes

4.1.11. There were no significant opportunities for roosting bats on site, although the general habitat does provide suitable foraging/connectivity.

4.1.12. The habitats on and around the site are suitable for reptiles – with various suitable basking areas and foraging habitat. No animals were recorded.

4.1.13. Habitat is suitable for badgers – but no evidence of their presence was found.

4.1.14. Water voles and otter habitat may be present in the west (300m from site) along the River Dearne.

4.1.15. Nesting bird habitat present throughout – in the scrub, grassland and hedgerow. See BBS results for more info on species recorded.

Table 4: *Target Notes (refer to Figure 8)*

TN ref	Details
1	Earth (grassy) bank
2	Dense scrub (immature broadleaved woodland)
3	Neutral/rough grassland
4	Immature broadleaved woodland
5	Flattened rubble stones (10cm diameter), with grassy shoots and scattered scrub
6	Neutral grassland
7	Marshy grassland – dominated by compact rush
8	Dense scrub – grey and goat willows, silver birch, mixed with rough grassland
9	Herb-rich neutral grassland
10	Species-poor hedgerow
11	Dense scrub (immature broadleaved woodland)
12	Marshy grassland/wetland patch – rushes (Typha), Juncus etc., No water present
13	Neutral grassland

Table 5: *Species list.*

Common Name	Latin name
Neutral grassland	
Rough hawkbit	*Leontodon hispidus*
Meadow saxifrage	*Saxifraga granulata*
Ribwort	*Plantago lanceolata*
Common dock	*Rumex acetosa*
Cocksfoot	*Dactylis glomerata*
Red clover	*Trifolium pratense*
Creeping buttercup	*Ranunculus repens*
Common vetch	*Vicia sativa*
Common bird's foot trefoil	*Lotus corniculatus*
Yorkshire fog	*Holcus lanatus*
Common hogweed	*Heracleum sphondylium*
Lady's smock	*Cardamine pratensis*
Meadow buttercup	*Ranunculus acris*
Pineapple weed	*Matricaria discoidea*
Semi-improved grassland	
Ribwort plantain	*Plantago lanceolata*
Cocksfoot	*Dactylis glomerata*
Red clover	*Trifolium pratense*
White clover	*Trifolium repens*
Perennial ryegrass	*Lolium perenne*
Cleavers	*Galium aparine*
Marshy grassland	
Common rush	*Juncus effusus*
Compact rush	*Juncus conglomeratus*
Typha sp.	
Northern marsh orchid	*Datylorhiza purpurella*
Lady's smock	
Dense scrub	
Hazel	*Corylus avellana*
Goat willow	*Salix caprea*
Grey willow	*Salix cinerea*
Ash	*Fraxinus excelsior*
Silver birch	*Betula pendula*
Hawthorn	*Crataegus monogyna*
Pedunculate oak saplings	*Quercus robur*
Cleavers	*Galium aparine*
Creeping buttercup	*Ranunculus repens*
Cow parsley	*Anthriscus sylvestris*
Common dock	*Rumex acetosa*
Rosebay willowherb	*Chamaenerion angustifolium*
Oxeye daisy	*Leucanthemum vulgare*

Table 5: *Species list.*

Common Name	Latin name
Broadleaved plantain	*Plantago major*
Scattered scrub	
Silver birch	*Betula pendula*
Goat willow	*Salix caprea*
Grey willow	*Salix cinerea*
Ash	*Fraxinus excelsior*
Hawthorn	*Crataegus monogyna*
Hazel	*Corylus avellana*
Pedunculate oak saplings	*Quercus robur*
Creeping buttercup	*Ranunculus repens*
Common dock	*Rumex acetosa*
Rosebay willowherb	*Chamaenerion angustifolium*
Cow parsley	*Anthriscus sylvestris*
Broadleaved woodland	
Silver birch	*Betula pendula*
Salix sp.	
Hawthorn	*Crataegus monogyna*
Pedunculate oak saplings	*Quercus robur*
Creeping buttercup	*Ranunculus repens*
Cow parsley	*Anthriscus sylvestris*
Common dock	*Rumex acetosa*
Rosebay willowherb	*Chamaenerion angustifolium*
Species-poor hedgerow	
Hawthorn	*Crataegus monogyna*
Blackthorn	*Prunus spinosa*
Sycamore	*Acer pseudoplatanus*
Hazel	*Corylus avellana*
Great willowherb	*Epilobium hirsutum*
Cow parsley	*Anthriscus sylvestris*
Hogweed	*Heracleum sphondylium*
Ribwort plantain	*Plantago lanceolata*

Figure 8

Field Survey

ASOS Carpark, Barnsley

- Dense scrub
- Neutral grassland
- Marshy grassland
- Scattered scrub
- Broadleaved woodland
- Hard standing
- Building
- SI Semi-improved grassland
- A Arable
- R Flattened rubble
- Earth bank
- Road
- 1 Target note

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Drawing No: 18403-09 Rev: B

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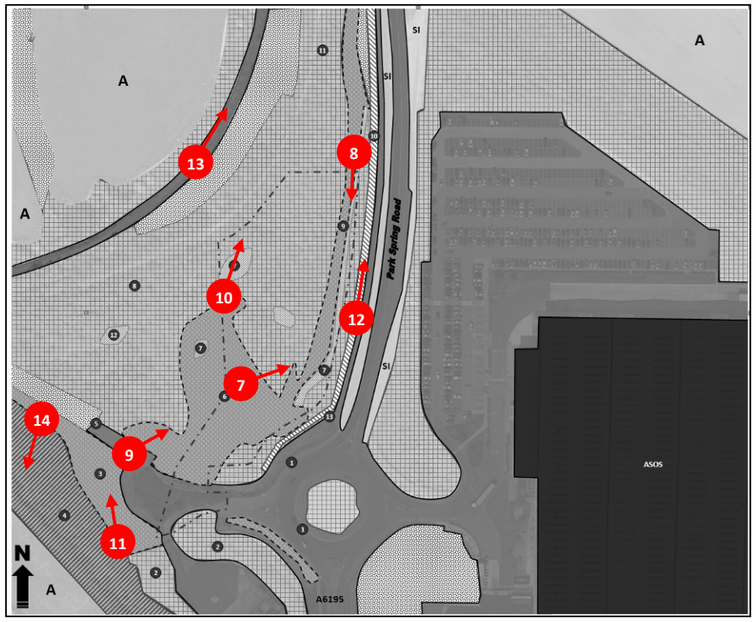
Photograph 7: Neutral grassland (TN6)

Photograph 8: Herb-rich neutral grassland (TN9)

Photograph 9: Flattened stones and scattered scrub at TN5

Photograph 10: Marshy grassland (TN7)



Photograph 11: Dense scrub (e.g. TN2)

Photograph 12: Hedgerow (TN10)

Photograph 13: Earth bank with scattered scrub

Photograph 14: Dense scrub transition to immature woodland

Figure 9

Site Photographs

ASOS Carpark, Barnsley

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4.2. BADGER

4.2.1. No badgers were recorded during the field survey, although there was ample suitable habitat.

4.3. BATS

4.3.1. No habitat suitable for bats to roost was recorded during the field survey, although there was some suitable foraging habitat.

4.4. BREEDING BIRD SURVEYS

4.4.1. A breeding bird survey was carried out in May and June, following Bibby et *al.* 2000[7], comprising 2 visits.

Visit One – 25/05/17

4.4.2. The site supported a moderate number of species (approx. 27 spp.) – mostly passerines. Willow warbler and chiff chaffs were the most abundant song birds, and recordings were relatively evenly distributed throughout the site and the surrounding habitat.

4.4.3. In terms of BoCC notable birds on site (amber/red-listed), willow warbler (amber-listed) is the only one. Two skylark (red-listed) were hovering over the field across the road (100m east). Notable flyovers include swifts, black-headed gulls (amber-listed), and lapwing (red-listed). However, most other notable species were recorded on a large wetland area to the north west, and west of the site (approx. 300m away - Edderthorpe Ings LWS). On this wetland, there are avocet and redshank attempting to breed (both amber-listed on BoCC list) and probable breeding lapwing (red-listed) – distraction behaviour noted during the survey. There were also some greylag geese in the distance (300-400m away).

4.4.4. The majority of small songbirds were recorded within the dense scrub (immature broadleaved woodland) habitat that dominates the site. No confirmed breeders on site, however several 'probable' breeders were recorded (refer to Table 6).

Table 6: *Bird records visit 1 (refer to Figure 10).*

Coordinates		Species Code	Common name	Count	Breeding code (refer to Table 8)
X	Y				
406532	406515	BB	Blackbird	1	H
441179	406551	GJ	Greylag goose	4	P
441191	406502	CG	Canada goose	10	P
441301	406494	AV	Avocet	1	H
441302	406467	RK	Redshank	2	P
441304	406425	AV	Avocet	2	P
441431	406449	MA	Mallard	4	P
441490	406438	L.	Lapwing	2	DD
441546	406457	WP	Woodpigeon	2	F
441571	406441	CC	Chiffchaff	1	S
441576	406452	BZ	Buzzard	1	F
441587	406422	BB	Blackbird	2	P
441589	406457	C.	Carrion crow	3	F
441598	406441	WP	Woodpigeon	2	F
441602	406465	CC	Chiffchaff	1	B
441609	406429	CC	Chiffchaff	1	S
441615	406464	BH	Black-headed Gull	2	F
441616	406392	SI	Swift	3	F
441620	406480	R.	Robin	1	S
441622	406442	SI	Swift	1	F
441626	406373	R.	Robin	1	S
441629	406410	WP	Woodpigeon	1	F
441637	406483	WR.	Wren	1	S
441639	406452	BH	Black-headed Gull	2	F
441644	406422	WW	Willow Warbler	1	S
441649	406496	WP	Woodpigeon	2	F
441650	406392	WW	Willow Warbler	1	S
441651	406470	MG	Magpie	1	H
441653	406375	WR.	Wren	1	S
441657	406460	LT	Long-tailed tit	3	S
441659	406442	BT	Blue tit	1	S
441663	406491	CC	Chiffchaff	1	S
441665	406475	GO	Goldfinch	1	S
441666	406483	GR	Greenfinch	2	S
441669	406385	MG	Magpie	1	H
441669	406432	WW	Willow Warbler	1	S

Table 6: *Bird records visit 1 (refer to Figure 10).*

Coordinates		Species Code	Common name	Count	Breeding code (refer to Table 8)
X	Y				
441670	406462	BB	Blackbird	2	P
441674	406583	S.	Skylark	1	S
441674	406506	WR.	Wren	1	S
441674	406347	WW	Willow Warbler	1	S
441682	406449	CC	Chiffchaff	1	S
441687	406412	BB	Blackbird	1	S
441689	406348	WP	Woodpigeon	1	F
441692	406486	WP	Woodpigeon	2	F
441698	406466	BT	Blue tit	1	S
441700	406337	WR.	Wren	1	S
441701	406429	CH	Chaffinch	1	S
441704	406385	WW	Willow Warbler	1	S
441715	406530	MG	Magpie	1	H
441716	406497	WP	Woodpigeon	1	F
441718	406475	BT	Blue tit	1	S
441719	406420	R.	Robin	1	S
441721	406395	GO	Goldfinch	3	S
441725	406447	BB	Blackbird	1	H
441725	406486	CH	Chaffinch	1	S
441732	406483	MG	Magpie	1	H
441733	406532	WH	Whitethroat	1	H
441737	406508	WR.	Wren	1	S
441739	406429	L.	Lapwing	1	F
441742	406543	R.	Robin	1	S
441743	406460	CC	Chiffchaff	1	S
441745	406530	BT	Blue tit	1	S
441748	406486	WW	Willow Warbler	1	S
441752	406587	WP	Woodpigeon	1	H
441755	406543	G.	Green woodpecker	1	H
441757	406563	GR	Greenfinch	2	S
441765	406481	GO	Goldfinch	4	S
441765	406606	MG	Magpie	1	H
441766	406579	BB	Blackbird	2	P
441767	406537	WW	Willow Warbler	1	S
441772	406556	CT	Coal tit	1	H
441845	406657	S.	Skylark	2	S

Visit Two – 12/06/17

4.4.5. The results of the second BBS are consistent with the first visit. Willow warbler and chiff chaffs were again amongst the most abundant song birds, and recordings were relatively evenly distributed throughout the site and the surrounding habitat.

4.4.6. New observations include a jay on site, three yellowhammer in nearby scrubby habitat, additional long-tailed tits and a bullfinch on site. An active willow warbler nest was recorded within the site boundary.

4.4.7. Similar notable species were once again recorded on the wetland area to the north west, and west of the site (approx. 300m away) – avocet, redshank, plus significant lapwing activity including territorial calls.

4.4.8. 22 unique counts on this survey (excluding the nearby wetland!).

Table 7: *Bird records visit 2 (refer to Figure 11).*

Coordinates		Species	Common name	Count	Breeding code (refer to Table 8)
X	Y				
441580	406443	WP	Woodpigeon	2	F
441581	406446	WW	Willow warbler	1	S
441589	406402	WH	Whitethroat	1	H
441598	406433	GT	Great tit	1	S
441603	406460	CH	Chaffinch	1	S
441612	406425	SI	Swift	4	F
441615	406391	R.	Robin	1	S
441618	406445	WR.	Wren	1	S
441621	406380	BH	Black-headed Gull	2	F
441628	406419	CC	Chiffchaff	1	S
441640	406479	LT	Long-tailed tit	5	S
441644	406454	CC	Chiffchaff	1	S
441645	406504	YH	Yellowhammer	3	S
441647	406402	CD	Goosander	2	P
441650	406423	WP	Woodpigeon	1	F
441655	406470	MG	Magpie	1	H
441663	406439	WW	Willow warbler	1	S
441668	406403	CC	Chiffchaff	1	S
441673	406493	CC	Chiffchaff	1	S

Table 7: *Bird records visit 2 (refer to Figure 11).*

Coordinates		Species	Common name	Count	Breeding code (refer to Table 8)
X	Y				
441673	406420	R.	Robin	1	S
441675	406467	WP	Woodpigeon	1	H
441677	406447	BH	Black-headed Gull	2	F
441685	406348	WW	Willow warbler	1	S
441686	406346	CC	Chiffchaff	1	S
441687	496376	WW	Willow warbler	1	S
441689	406452	R.	Robin	1	S
441693	406432	WR.	Wren	1	S
441696	406405	BB	Blackbird	2	P
441699	406500	J	Jay	1	H
441702	406525	MG	Magpie	2	H
441705	406474	BT	Blue tit	1	S
441706	406500	CC	Chiffchaff	1	S
441710	406535	CC	Chiffchaff	1	S
441713	406445	BF	Bullfinch	1	S
441714	406387	WP	Woodpigeon	2	P
441716	406482	WW	Willow warbler	1	S
441718	406422	BB	Blackbird	2	P
441720	406458	WW	Willow warbler	2	UN
441722	406509	SI	Swift	10	F
441728	406400	WP	Woodpigeon	2	P
441729	406441	BB	Blackbird	1	S
441734	406550	BB	Blackbird	1	H
441736	406520	CH	Chaffinch	1	S
441736	406576	WW	Willow warbler	1	S
441738	406466	WR.	Wren	1	S
441742	406499	WW	Willow warbler	1	S
441747	406553	CT	Coal Tit	2	P
441748	406426	GR	Greenfinch	2	S
441749	406518	LT	Long-tailed tit	7	S
441753	406563	GT	Great tit	1	S
441761	406449	GO	Goldfinch	3	S
441762	406585	BH	Black-headed Gull	1	F
441763	406479	MG	Magpie	1	H
441765	406547	BT	Blue tit	1	S

Table 8: *Breeding codes (after BTO)*

Code	Non-breeding
F	**F**lying over
M	Species observed but suspected to be still on **M**igration
U	Species observed but suspected to be s**U**mmering non-breeder
	Possible breeder
H	Species observed in breeding season in suitable nesting **H**abitat
S	**S**inging male present (or breeding calls heard) in breeding season in suitable breeding habitat
	Probable breeding
P	**P**air observed in suitable nesting habitat in breeding season
T	Permanent **T**erritory presumed through registration of territorial behaviour (song etc) on at least two different days a week or more part at the same place or many individuals on one day
D	Courtship and **D**isplay (judged to be in or near potential breeding habitat; be cautious with wildfowl)
N	Visiting probable **N**est site
A	**A**gitated behaviour or anxiety calls from adults, suggesting probable presence of nest or young nearby
I	Brood patch on adult examined in the hand, suggesting **I**ncubation
B	Nest **B**uilding or excavating nest-hole
	Confirmed breeding
DD	**D**istraction-**D**isplay or injury feigning
UN	**U**sed **N**est or eggshells found (occupied or laid within period of survey)
FL	Recently **FL**edged young (nidicolous species) or downy young (nidifugous species). Careful consideration should be given to the likely provenance of any fledged juvenile capable of significant geographical movement. Evidence of dependency on adults (e.g. feeding) is helpful. Be cautious, even if the record comes from suitable habitat.
ON	Adults entering or leaving nest-site in circumstances indicating **O**ccupied **N**est (including high nests or nest holes, the contents of which cannot be seem) or adults seen incubating
FF	Adult carrying **F**aecal sac or **F**ood for young
NE	**N**est containing **E**ggs
NY	**N**est with **Y**oung seen or heard

Figure 10

Breeding bird survey (visit 1)

ASOS Carpark, Barnsley

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Figure 11

Breeding bird survey (visit 2)

ASOS Carpark, Barnsley

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4.5. GREAT CRESTED NEWT

Habitat suitability

4.5.1. All water features within 500m of the applicant site boundary were first of all assessed for their suitability to support GCN. This totalled 4 waterbodies and included all ponds and ditches – refer to Figure 3. Pond 4 was excluded because it was no longer there.

4.5.2. The conditions making them unsuitable contribute towards a low Habitat Suitability Index (HSI) and are: [i] not there or dry, [ii], comprised running water, [iii] fish-stocked and finally [iv] not in contiguous habitat (e.g. a barrier). The results of this initial visit are Table 9 below.

Table 9: *Habitat Suitability Index*

Pond ref	Pond 1	Pond 2	Pond 3
SI1 - Location	1	1	1
SI2 - Pond area	1	0.8	0.85
SI3 - Pond drying	1	1	1
SI4 - Water quality	0.33	0.33	0.33
SI5 - Shade	1	1	1
SI6 - Fowl	1	0.67	1
SI7 - Fish	1	1	1
SI8 - Ponds	0.8	0.8	0.8
SI9 - Terrestrial habitat	0.67	0.67	0.67
SI10 - Macrophytes	0.3	0.35	0.3
HSI	**0.75**	**0.71**	**0.73**

eDNA

4.5.3. Ponds 1, 2 & 3 were considered suitable ponds for great crested newts to breed. A set of eDNA samples were therefore taken from each pond on the 24th May 2017 and

analysis was carried out by the lab on 01/06/17. The results show that there is evidence of great crested newts in each pond. The results are provided in 6.3 and in Table 10.

Table 10: *eDNA results*

Pond Number	**eDNA reference**	**HSI** (Refer to Table Table **9**)	**Distance** Centre Pond to Site boundary (m)	**eDNA result**
1	GCNK281	0.75	270	6/12 +ve
2	GCNK280	0.71	410	12/12 +ve
3	GCNK282	0.73	420	11/12 +ve

5. ASSESSMENT

5.1. SITE DESIGNATIONS

Status

5.1.1. There is one site which lies within 150m of the proposed site boundary. Edderthorpe Ings is a Local Wildlife Site (LWS) designated primarily for its breeding bird interest (refer to Figure 5 and 6.2).

5.1.2. The applicant site lies within 100m of the River Dearne corridor.

Legislation & Policy

5.1.3. Policy CSP 36 states that development will be expected to protect and improve sites of ecological value.

5.1.4. The same policy continues and states: Development will be expected to conserve and enhance the biodiversity and geological features of the borough by conserving and enhancing the form, local character and distinctiveness of the river corridor of the Dearne.

5.1.5. The emerging Local Plan includes this area as a Nature Improvement Area (NIA). We are advised this should be taken into account.

Unmitigated Impacts

5.1.6. The proposed works may temporarily use land outside the proposed boundary for access, storage of materials, site-compound area and other uses.

5.1.7. Noise associated with construction, where it is accentuated at night-time may affect roosting birds at the LWS.

5.1.8. Light from both construction and from operation may illuminate the neighbouring LWS.

5.1.9. Surface water run-off may be channelled in such a way as to cause changes to the River Dearne and its banks.

Recommendations

5.1.10. Access for both construction and operation should have no effect on the neighbouring LWS. The route should be agreed in advance in a Construction Environmental Management Plan (CEMP).

5.1.11. All works should be confined to within the site boundary. Where this is not possible, works should not have any effect on the neighbouring LWS; the area of all associated works should be delineated in a CEMP and be subject to agreement with the LPA.

5.1.12. Construction works should be confined to daylight hours. This should be acknowledged in a CEMP.

5.1.13. A lighting strategy should be agreed for both the construction phase and the operation phase of the proposals. The strategy should seek to avoid illumination of the LWS and other natural habitat areas beyond 50m from the boundary of the proposals.

5.1.14. Refer to Appendix 6.4, where the drainage consultant confirms that:

i) Surface water drainage will be from the car park only;

ii) Drainage will pass through a petrol interceptor;

iii) Run off will be limited to greenfield rates and therefore the flow into the Dearne will not change as a result of the proposals;

iv) The drainage proposals will use existing infrastructure.

5.1.15. Through the Nature Improvement Area there are opportunities for biodiversity improvement. These are listed under the various relevant headings (e.g. 5.2.9, 5.2.11 (iv), 5.5.8, 5.5.9, 5.6.9 (d) & (e) and 5.7.8 (iii))

5.2. HABITATS

Status

5.2.1. Some areas of the applicant site comprise species-rich neutral grassland and marshy grassland.

5.2.2. The applicant site borders a hawthorn-dominated, species-poor hedgerow. The hedgerow is not 'important' under the HEGS criteria.

Legislation & Policy

5.2.3. The hedgerow qualifies as a priority habitat and is therefore a material consideration for planning stages.

5.2.4. Both habitats above are listed in the local BAP and have Habitat Action Plans. Policy CSP 36 in the Core Strategy states that development will be expected to conserve and enhance the biodiversity and geological features of the borough by protecting and improving habitats of principal importance identified in Section 74 of the Countryside and Rights of Way Act 2000 and habitats in the Barnsley Biodiversity Action Plan.

5.2.5. The previous 2013 assessment requires retention or replacement of marshy grassland habitat. The Council ecologist requires either retention, mitigation or a commuted sum with respect to the nature conservation that exists on site at present.

Unmitigated impacts

5.2.6. The areas of neutral and marshy grassland within the applicant site will be permanently lost to development.

5.2.7. The construction of the car park will avoid the hedgerow, but may cause damage to the hedgerow roots, thus indirectly having an adverse effect on the hedgerow.

5.2.8. The proposals also include the possible addition of a pedestrian link from the existing logistics building, to break the hedgerow and finish on the proposed carpark side of the road. This will cause hedgerow destruction for a length of at least 20m.

Recommendations

5.2.9. It will not be possible to re-create the entire extent of neutral and marshy grassland to be lost to the proposals, but landscaping should include areas of grassland comprising a native seed mix (e.g. EM5[11]) as much as possible within the design. However, since this will not fully mitigate the areas involved, a commuted sum is proposed. The commuted sum (amount to be agreed) deals with this issue and that of breeding birds (refer to 5.5.8)

5.2.10. A hedgerow root protection area (RPA) should be established, which will be a minimum of 5m from the base of a hedge and delineated by a barrier. The barrier should be in accordance with BS 42020:2013. To guarantee the protection to the retained hedgerow, contractors will be required to adhere to the following:

i) The protective fencing shall be maintained throughout the development phase.

ii) No materials, machinery, temporary structures, chemicals or fuel shall be stored within the RPA.

iii) No excavations or increases in soil level within the RPA should be permitted without prior written approval.

iv) Care should be taken to ensure that wide or tall loads or plant with booms, jibs and counterweights avoid the retained hedgerow. Any transit or traverse of plant in close proximity to the hedgerow should be conducted under the supervision of a banks person to ensure that adequate clearance from plants is maintained at all times.

v) Material which will contaminate the soil such as concrete mixing, diesel oil and vehicle washing must not be discharged within 10m of the RPA boundary.

vi) Fires must not be lit in a position where their flames can extend to within 5m of foliage, branches or trunk. This will depend on the size of the fire and the wind direction.

[11] https://wildseed.co.uk/mixtures/view/6

vii) Any landscaping within the RPA must avoid soil disturbance. Therefore, re-grading and rotovators are not permitted. Any agreed soil re-profiling to facilitate final agreed levels must be carried out by hand with topsoil.

5.2.11. Where there is to be hedgerow destruction to make way for a pedestrian link:

i) Hedgerows to be removed should be carried out in a manner sensitive to important species that are dependent on them:

a) Hedgerows should be topped to 1 metre from the ground the day before complete removal. This will allow hedgehogs to escape prior to works at root level.

b) The legislation regarding breeding birds must be observed (see 5.5.7). The breeding period should be protracted to account for the possible presence of yellowhammer, a hedgerow breeding bird which is known to breed into September.

ii) The hedgerows is a priority habitat (refer to Table 1), and therefore hedgerow creation should form part of the proposals to replace the entire length that is to be lost, both in-situ where appropriate and as part of the landscape proposals.

iii) The hedgerow to be laid as a barrier to uncontrolled foot access;

iv) Removal of the hedgerow will not require a Hedgerow Removal Notice since it will be lawful when carrying out development for which planning permission has been granted or, in some cases, is deemed to have been granted;

v) Generally, all hedgerow planting should be carried out using native species and following the guidelines provided by the Hedgelink[12] website.

[12] http://www.hedgelink.org.uk/

5.3. BADGER

5.3.1. Although there is suitable habitat present, no animal or evidence of any animal was recorded by the field survey. The nearest record of badgers is c.3.5km to the east and therefore it is unlikely that there will be any effect. ~~We therefore have no further recommendations~~.

Recommendations

5.3.2. However, it will be good practice for the following recommendations to be followed:

i) During site construction works, appropriate safety measures for badgers must be taken to avoid harm to animals visiting the site after nightfall. They will not be present post-dawn until dusk. Therefore we recommend that works are limited to these daylight hours. Where works are to take place during night hours, then a Method Statement should be approved by the local planning authority prior to any works commencing.

ii) Any excavations greater than 1.5m in depth and to be left open overnight will have a means of escape for any animals that might fall in and daily inspection of such excavations will be carried out by the contractor at the end of each day prior to dusk, allowing enough time to install the necessary mitigation.

iii) To protect badger movement around the site, a virtual easement of 1 – 2 metres should be maintained along the perimeters of the site. The easement should be free of any obstacle, trench, fence and so on.

iv) Any internal or boundary barriers such as fencing should allow badgers freedom of access throughout the development site and should avoid using orange or brightly coloured plastic tape that can alarm badgers. Barriers should at a minimum provide a gap 200mm high at regular intervals, although permanent access under for example post and rail fence is preferred. Access under any barrier must be 300mm at locations where existing badger paths cross the boundary. This will be set out by an experienced Ecologist.

v) The contractors and sub-contractors must not leave any food on the site, including food wrappers and discarded food items.

5.4. BATS

5.4.1. Although there is suitable habitat present, no animal or evidence of any animal was recorded by the field survey. There are no records of any species of bat in the data trawl and therefore it is unlikely that there will be any effect. We therefore have no further recommendations.

5.5. BREEDING BIRDS

Status

5.5.1. The results of the bird survey show that a total of 31 bird species were recorded during the survey, of which one is listed in Schedule 1 of the Wildlife & Countryside Act 1981, two on the BoCC Red List, five on the BoCC Amber List, four are priority species and two have a Species Action Plan. These are detailed in Table 11 below. Notably:

i) Avocet was recorded twice; possibly and probably breeding, but both times in wetland habitat off-site;

ii) Lapwing was recorded twice; once flying over the site, and in arable fields to the south west off the site exhibiting distraction display (breeding);

iii) Skylark was recorded twice; both times north of the applicant site and both times the bird was a singing male present (or breeding calls heard) in breeding season in suitable breeding habitat;

<u>Breeding bird Legislation & Policy</u>

5.5.1. Generally, all birds, their nests, eggs and unfledged young are protected from harm (not disturbance) by Part 1 of the Wildlife and Countryside Act 1981.

5.5.2. It is also an offence to intentionally or recklessly disturb at, on or near an 'active' nest those birds that are listed on Schedule I of the Wildlife and Countryside Act 1981. This includes avocet.

5.5.3. Policy CSP 36 states that development will be expected to protect species with particular regard to designated wildlife of international, national and local significance,

and species of principal importance identified in Section 74 of the Countryside and Rights of Way Act 2000 and in the Barnsley Biodiversity Action Plan.

Table 11: *Bird status*

Name	Status				
	WCA	BoCC (R)	BoCC (A)	S41 spp.	SAP
Avocet	*				
Blackbird					
Black-headed Gull			*		
Blue tit					
Bullfinch			*	*	
Buzzard					
Carrion crow					
Chiffchaff					
Canada goose					
Chaffinch					
Coal tit					
Collared dove					
Great tit					
Green woodpecker					
Greylag goose					
Goldfinch					
Greenfinch					
Jay					
Lapwing		*		*	*
Long-tailed tit					
Mallard					
Magpie					
Robin					
Redshank					
Skylark		*		*	*
Swift			*		
Whitethroat					
Woodpigeon					
Wren					
Willow Warbler			*		
Yellowhammer			*	*	

Unmitigated Impacts

5.5.4. Works could take place during the bird breeding season, harming birds, their nest, eggs or unfledged young.

5.5.5. The site will be levelled, making it impossible to maintain any habitat as part of the proposals, thereby destroying all breeding bird habitat.

5.5.6. Since avocet prefers nesting habitat in wetlands it is extremely unlikely that there will be any disturbance of this species while it breeds and in this respect, we have no further recommendations.

Recommendations

5.5.7. Works to affect bird breeding habitat should not take place during the period 1st March to 31st August, or:

i) bird breeding habitat should be removed outside the bird breeding season in advance of the works, or

ii) where clearance of vegetation likely to support nesting birds takes place between 1st March and 31st August a method statement will be agreed in writing by the Local Planning Authority.

5.5.8. Suitable nest boxes should be placed throughout remaining habitat (e.g. neighbouring hedgerow & scrub) for species known to breed on the applicant site (refer to Table 11). This should include a range of boxes for small passerines and larger thrush spp. The Council ecologist also requires a commuted sum (amount to be agreed) to be applied to fully mitigate this item (refer also to 5.2.9).

5.5.9. Areas of landscaping should include grassland to provide future opportunities for ground-nesting species (refer to 5.2.9).

5.6. GREAT CRESTED NEWT

Status

5.6.1. Three ponds were identified within 500m (but >250m) from the applicant site. They each tested positive for eDNA and in accordance with Biggs *et* al. 2014[13], great crested newts may be present.

5.6.2. No GCN has been recorded by the data trawl for 2km surrounding the site.

GCN Legislation & Policy

5.6.3. Great crested newts (GCN) are afforded full protection under the Conservation of Habitats and Species Regulation 2010 and the Wildlife & Countryside Act 1981 (as amended). It is illegal to:

- Deliberately capture, injure or kill any wild animal of a European Protected Species (EPS) under Regulation 41 of the Conservation of Habitats and Species Regulations 2010; or recklessly or intentionally kill, injure or take any wild animals included in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).
- Deliberately disturb wild animals of an EPS which will affect their ability to survive, breed or rear young, impair their ability to migrate or hibernate, or affect the local distribution and abundance of that species; or recklessly or intentionally disturb any such animal while it is occupying a structure or place which it uses for shelter or protection.
- Damage or destroy a breeding site or resting place of a wild animal of an EPS; or recklessly or intentionally damage or destroy, or obstruct access to any structure or place which any wild animal included in Schedule 5 uses for shelter or protection.

5.6.4. GCN are also listed in the Barnsley BAP and have a dedicated Species Action Plan. Policy CSP 36 states that development will be expected to protect species with particular regard to designated wildlife of international, national and local significance, and species in the Barnsley Biodiversity Action Plan.

[13] **Biggs J., Ewald N., Valentini A., Gaboriaud C., Griffiths R.A., Foster J., Wilkinson J., Arnett A., Williams P. and Dunn F. 2014**. Analytical and methodological development for improved surveillance of the Great Crested Newt. Defra Project WC1067. Freshwater Habitats Trust: Oxford.

5.6.5. DEFRA[14] have recently made amendments to their guidance, and have produced new policies to assist consultants and developers with compliance, including Policy 1 & 4:

- **Policy 1 - Greater flexibility when excluding and relocating European Protected Species (EPS) from development sites:** Defra considers that compensation for EPS impacts can be delivered without the need to relocate or exclude populations, where: exclusion or relocation measures are not necessary to maintain the conservation status of the local population; the avoid-mitigate-compensate hierarchy is followed; and compensation provides greater benefits to the local population than would exclusion and/or relocation.
- **Policy 4 - Appropriate and relevant surveys where the impacts of development can be confidently predicted:** Natural England will be expected to ensure that licensing decisions are properly supported by survey information, taking into account industry standards and guidelines. It may, however, accept a lower than standard survey effort where: the costs or delays associated with carrying out standard survey requirements would be disproportionate to the additional certainty that it would bring; the ecological impacts of development can be predicted with sufficient certainty; and mitigation or compensation will ensure that the licensed activity does not detrimentally affect the conservation status of the local population of any EPS.

Unmitigated Impacts

5.6.6. GCN may reach the applicant site during their terrestrial phase and therefore if present they may be killed or injured during the construction phase and their habitat will be destroyed within the applicant site.

5.6.7. Although evidence to suggest GCN are present, the ponds are >250m from the applicant site and there is ample habitat in between. It is therefore unlikely that any newts that may reach the applicant site would form a significant proportion of the

[14] https://www.gov.uk/government/consultations/wildlife-licensing-comment-on-new-policies-for-european-protected-species-licences

population, and therefore should there be any impact it is unlikely to affect the favourable conversation status of the local population.

5.6.8. The discovery of positive eDNA in ponds within 500m of the applicant site was in late May 2017 and therefore any further fieldwork would not be able to follow Natural England guidance (3 visit must be between mid-April to mid-May) until the following season in 2018. The delay associated with waiting until 2018 to carry out surveys would be disproportionate to the additional certainty that it would bring. Natural England have produced a Rapid Risk Assessment to help with guidance on whether an unlawful act may be committed by the proposals. The assessment shows that an unlawful act would be highly unlikely and a licence to carry out the works will not be necessary, as follows:

Component	**Likely effect** (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)	**Notional offence probability score**
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	No effect	0
Land 100-250m from any breeding pond(s)	0.1 - 0.5 ha lost or damaged	0.1
Land >250m from any breeding pond(s)	0.5 - 1 ha lost or damaged	0.03
Individual great crested newts	No effect	0
	Maximum:	0.1
Rapid risk assessment result:	**GREEN: OFFENCE HIGHLY UNLIKELY**	

Recommendations

5.6.9. We therefore recommend:

i) In accordance with Policy 4, further survey work is not necessary to predict the ecological impacts;

ii) A licence to carry out the works is not required, and this is shown by the RRA above;

iii) To ensure there is no impact to great crested newts we recommend that the works are carried out employing Reasonable Avoidance measures:

a. Site clearance works should not take place in temperatures less than 5°C (normally between mid-October to late-March);

b. An initial destructive search should be carried out by the ECoW prior to works commencing, to take place in temperatures ≥ 5°C. If animals are found then works should cease and Natural England should be informed and further advice taken at that point.

c. During construction, materials and arisings should be stored in a raised manner ensuring that areas of refuge are not created;

d. The proposals will include a drainage scheme, which should not include gully pots, or the pot should otherwise include an amphibian ladder as a means of escape from the gully. Drainage grates should be no greater than 8mm in width to avoid animals falling through.

e. Within 500m of a known breeding pond (and therefore for the entire applicant site), wherever habitat (e.g. landscaping) meets with hardstanding, kerbing should allow animals that fall off kerbs the opportunity to return by way of dropped kerbs every 3rd kerb, or there should be no kerbs at all.

5.7. REPTILES

Status

5.7.1. No animals were recorded on or adjacent to the site.

5.7.2. The data trawl recorded common lizard once but only provided a two-figure grid reference, stating that it was recorded in 2012 in Eddlethorpe Ings LWS.

5.7.3. The habitat survey recorded suitable habitat present.

Reptile Legislation & Policy

5.7.4. The more common reptiles (adder, common lizard, slow worm and grass snake) are afforded partial protection under the Wildlife & Countryside Act 1981 with respect to sub-section 9(1) and all of sub-section 9(5); these prohibit the intentional killing and injuring and trade (i.e. sale, barter, exchange, transporting for sale and advertising to sell or to buy). It is not an offence under the Wildlife and Countryside Act 1981 to possess these animals.

5.7.5. Common lizard is a priority species but do not feature in the local BAP.

5.7.6. Policy CSP 36 states that development will be expected to protect species with particular regard to designated wildlife of national and local significance, and species of principal importance identified in Section 74 of the Countryside and Rights of Way Act 2000.

Unmitigated impacts

5.7.7. Since no evidence of any animal has been found, and only a >5 year old record of one common lizard has been collected on the neighbouring nature reserve, it is unlikely that any animal is present on the applicant site. Nonetheless suitable habitat has been recorded and therefore although unlikely it is not impossible that a small population exists and an animal may be killed or injured during the construction phase.

Recommendations

5.7.8. As animals have not been found on the site, but are known to be in the area, it will be reasonable to ensure that the proposed activities follow guidelines set out by Natural England (English Nature 2004[15]), and employ reasonable avoidance measures as follows:

i) Immediately prior to any works, suitable refugia found on the site should be searched by an appropriately qualified ecologist then areas of suitable refugia should be hand-searched and destroyed in advance of clearance. Any animals found should be released to the nearby RSPB Edderthorpe Ings and Houghton Washlands nature reserves.

ii) During construction works, materials should be stored in such a way as to avoid creating refugia for animals, e.g. piles of rubble should be avoided and materials stored on pallets wherever is practical.

iii) Landscape design and management can benefit reptiles post-development (e.g. Bray & Gent 1997[16]). Consideration should be given to:

a. creation of refugia and hibernacula on the site, in non-operational landscapes;

b. areas of created grassland to have varied local topography, with large boulders in piles and small mounded places with an open southerly aspect to enhance basking;

c. landscape management in these areas should avoid close-cropped mowing, and create different sward heights.

[15] **English Nature 2004**. Reptiles: guidelines for developers. Cat. Code: IN15.1. ISBN 1 85716 807 0

[16] **Bray, R. & Gent, T. (1997)** Opportunities for amphibians and reptiles in the designed landscape. English Nature Science Series No. 30. English Nature. ISBN 1 85716 265 X.

6. APPENDICES

6.1. APPENDIX I: LEGISLATION

Wildlife and Countryside Act 1981

6.1.1. The principle statutory instrument that governs nature conservation in England is the Wildlife and Countryside Act 1981 as amended (WCA 1981).

6.1.2. The WCA 1981 consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and the Birds Directive in Great Britain. It is complimented by the Wildlife and Countryside (Service of Notices) Act 1985, which relates to notices served under the 1981 Act, and the Conservation Regulations 1994 (as amended), which implement the Habitats Directive.

6.1.3. Containing four Parts and seventeen Schedules, the Act covers protection of wildlife (birds, and some animals and plants), the countryside, National Parks, and the designation of protected areas, and public rights of way.

6.1.4. Amendments to the Act have been made and there is a statutory quinquennial review of Schedules 5 and 8 (protected wild animals and plant respectively), undertaken by the country agencies and co-ordinated by the Joint Nature Conservation Committee. The 5th review was submitted in 2008, notably increasing water vole protection from partial to full.

Protection of Badgers Act 1992

6.1.5. There are very few Acts of Parliament that are dedicated to one species with conservation as part of the aim. This Act supplements the WCA 1981 by affording protection to badgers against disturbance and their setts against unlawful damage and destruction. It provides a licensing system to allow works to proceed in a sensitive manner.

Countryside and Rights of Way (CRoW) Act 2000

6.1.6. The CRoW Act 2000 places a duty on Government Departments and the National Assembly for Wales to have regard for the conservation of biodiversity and maintain lists of species and habitats for which conservation steps should be taken or promoted, in accordance with the 1992 Rio Convention on Biological Diversity. The Act makes various amendments to the WCA 1981 including increasing SSSI protection, management and policing.

6.1.7. DEFRA published the first 'list' in 2002 under Section 74 of the CRoW Act 2000, which was identical with the UK BAP list at the time, now superseded by the Natural Environment and Rural Communities Act 2006 Section 41 list (see below).

Natural Environment and Rural Communities (NERC) Act 2006

6.1.8. The NERC Act 2006 makes provision in respect of biodiversity, pesticides harmful to wildlife and the protection of birds, and in respect of invasive non-native species.

6.1.9. Section 40 of the Act lays a duty on authorities to have regard to the purpose of conserving biodiversity in compliance with the UN Biodiversity Convention in 1992. This is otherwise known as the 'Biodiversity Duty'. Guidance for local authorities on implementing the Biodiversity Duty is provided in DEFRA (2007)[17].

Section 41 List

6.1.10. For the purposes of conserving biodiversity, habitats and species of principle importance are listed through the provisions set out in Section 41 of this Act (replacing Section 74 of the CRoW Act 2000), referred to in this chapter as the Section 41 List. DEFRA 2007[17] references the UK and local Biodiversity Action Plans (BAPs) (see below) as the source of data for the Section 41 List. This chapter uses the List, as updated by the UK BAP, as a key guide for identification of ecological features to be affected by proposals, and to guide and weigh recommendations and mitigation.

6.1.11. The Section 41 List has been further refined by DEFRA 2007, where seven sectors have been selected where public bodies and other stakeholders can make a significant

[17] **DEFRA 2007** Guidance for local authorities on implementing the Biodiversity Duty. PB12584

contribution to biodiversity conservation, through their Biodiversity Duty. Habitats and species relevant to each sector have been identified to help non-conservation professionals consider where the List might apply to them.

6.1.12. Of these seven, two are relevant to this assessment i.e. Land Use Planning and Regional & Local Government. The List was last updated in 2010 and referenced here as Natural England 2010[18].

The Conservation of Habitats and Species Regulations 2010

6.1.13. These Regulations consolidate the Conservation (Natural Habitats, &c.) Regulations 1994, and together they transpose the European Habitats Directive[19] into domestic law. The Regulations provide for the designation and protection of 'European sites' (referred to in this assessment as Natura 2000 sites), the protection of 'European protected species', and the adaptation of planning and other controls for the protection of such.

6.1.14. Under the Regulations, UK competent authorities have a general duty to have regard to the EC Habitats and Birds[20] Directives.

Habitats (Habitats Regulations Assessment)

6.1.15. The Regulations require competent authorities to consider or review planning permission, applied for or granted, affecting a European site, and, subject to certain exceptions, restrict or revoke permission where the integrity of the site would be adversely affected. Under Regulation 61 of the Conservation of Habitats and Species Regulations 2010, where any proposed plan or project is likely to have an effect on a Natural 2000 site or qualifying feature for a site, then the competent authority (normally the local planning authority) will carry out an appropriate assessment of those effects, referred to as a Habitat Regulations Assessment (HRA).

[18] http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/habsandspeciesimportance.aspx
[19] http://jncc.defra.gov.uk/page-1374
[20] http://jncc.defra.gov.uk/page-1373

Species

6.1.16. The Regulations make it an offence (subject to exceptions) to deliberately capture, kill, disturb, or trade in the animals listed in Schedule 2, or pick, collect, cut, uproot, destroy, or trade in the plants listed in Schedule 4. However, these actions can be made lawful through the granting of licenses by the appropriate authorities. Licenses may be granted for a number of purposes (such as science and education, conservation, preserving public health and safety), but only after the appropriate authority, including the planning authority, is satisfied that there are no satisfactory alternatives and that such actions will have no detrimental effect on wild populations of the species concerned: these three elements form the basis of the three derogation 'tests' to be applied to satisfy European legislation.

ODPM Circular 06/2005 Biodiversity and Geological conservation

6.1.17. This Circular provides administrative guidance on the application of the law relating to planning and nature conservation as it applies in England. With the onset of the National Planning Policy Framework in March 2012 (see below), this remains as the principal source of statutory interpretation of the legislation listed above.

6.1.18. The Circular is presented in four Parts, of which the first three are relevant here. The Circular requires updating since the publication of the National Planning Policy Framework in March 2012 replaced Planning Policy Statements (see below), but should be applied as follows:

Part I: Internationally Designated Sites

iv) This Part provides guidance on implementation of the Conservation of Species and Habitat Regulations 2010 (updating the Habitat Regulation 1994), in compliance with the Habitats Directive. The principal is maintenance of the Natura 2000 suite of sites. Helpful definition of derogation from the Habitats Directive and the 'three tests' is provided.

ii) The principal of compensation is included, although this will be subject to strict testing under the 'three tests' system and is unlikely to be effective at an international level.

Part II: Nationally Designated Sites

v) This Part focusses on Sites of Special Scientific Interest (SSSI) and provides guidance on interpretation of the Wildlife and Countryside Act 1981 (as amended, inc. the CROW Act 2000).

Part III: Conservation of habitats and species outside designated areas

vi) Part III pulls together statutory instruments and the route through which their protection is linked to Biodiversity Action Plans in the UK, both nationally and locally.

vii) Section 84 of this Circular states that the habitats and species listed in the S41 List are capable of being a material consideration.

viii) Section 85 refers to the CRoW 2000 Act, Section 74, which has been superseded by the S41 List and requires updating. The importance of the S41 List in principal is set out here.

ix) Section 95 identifies forthcoming DEFRA advice on Local Wildlife Sites. DEFRA 2006[21] subsequently defines local wildlife sites and their management, linking local wildlife sites to the Conservation of Habitats and Species Regulations 2010 (Regulation 39[3]) where they are referred to as 'Stepping Stones'. This is a key link for local wildlife site protection via the Natural Environment White Paper[22], and Lawton 2010[23], and subsequently informing the England Biodiversity Strategy for 2020[24], all of which provide policy guidelines for protection of stepping stones integral to ecological networks, the latter as referred to most recently in the National Planning Policy Framework 2012 (see earlier).

[21] **DEFRA 2006** Local Sites Guidance on their Identification, Selection and Management. PB11684

[22] **DEFRA 2011(a)** The Natural Choice: securing the value of nature.

[23] **Lawton 2010** Making Space for Nature: a review of England's wildlife sites and ecological network. Chaired by Professor Sir John Lawton. Submitted to DEFRA 16th September 2010.

[24] **DEFRA 2011(b)** Biodiversity 2020: A strategy for England's wildlife and ecosystem services. PB13583

6.2. LOCAL WILDLIFE SITE INFORMATION

Eddlethorpe Ings

Site Name:	Edderthorpe Ings
Site Area:	30.56ha
Survey Date:	August 2010
Nearest Settlement:	Cudworth, Grimethorpe, Great Houghton, Darfield
Grid Reference at Centre:	SE4121, 06961
Surveyor(s)	LAC, VG

Site Description:

This is a site of formerly drained agricultural land that has flooded due to subsidence caused by the collapse of workings from the adjacent Grimethorpe Colliery. It lies in the Dearne Valley in a mix of agricultural and post-industrial landscapes. The site is bounded by the embankments of disused railway lines on the north-eastern and south-eastern sides and by the River Dearne on the south-western edge. Along the eastern side, the recently constructed Park Spring Road runs parallel to the old railway bank.

The majority of the site, also known as Cudworth Washland, is open water with a narrow fringe of marginal vegetation (TN3) and an area of taller swamp on the eastern side of the water. Surrounding the large waterbody are areas of marshy grassland (TN2) and neutral grassland (TN4).

Along the banks of the River Dearne, on the western edge of the site, is a strip of nettle-dominated tall ruderal herb vegetation (TN5). In the north there is a small area of developing broadleaved plantation (TN1) and some peripheral scattered scrub, mainly along the north-eastern site boundary.

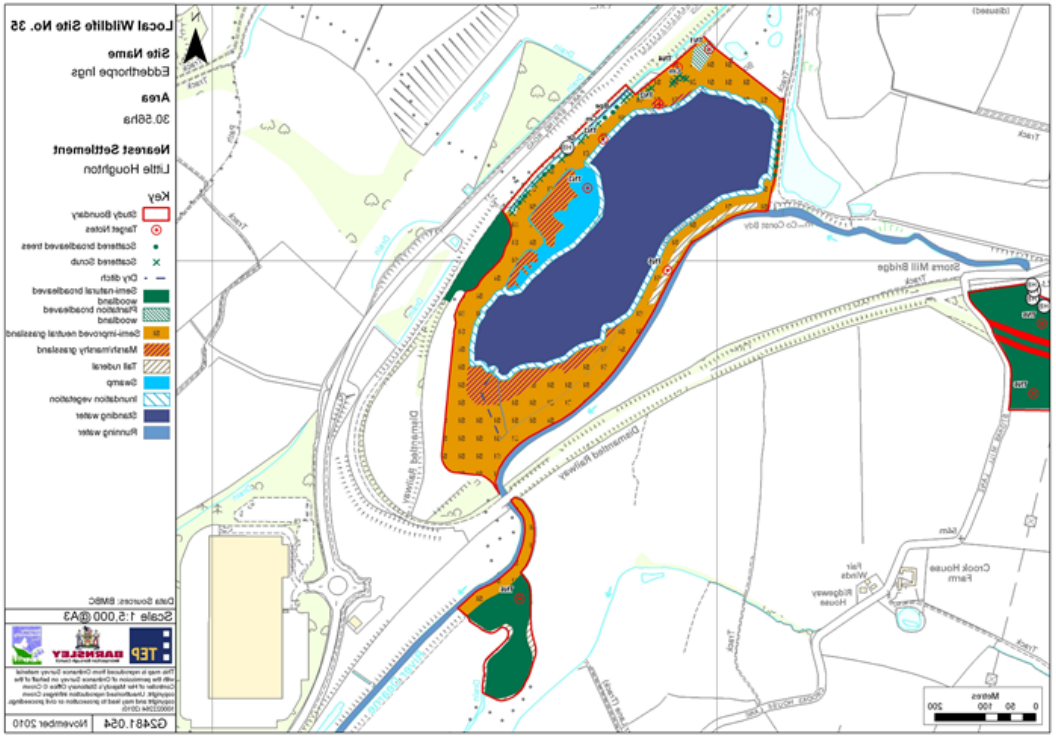
The southern extremity of the site is a small patch of semi-natural broadleaved woodland (TN6) linked to the northern part of the site by the course of the River Dearne.

Important Species:

The site is important for a range of bird species but particularly schedule 1 species: avocet *(Recurvirostra avosetta)* and little ringed plover *(Charadrius dubius)*. UKBAP species are: skylark *(Alauda arvensis)*, cuckoo *(Cuculus canorus)*, yellowhammer *(Emberiza citrinella)*, reed bunting *(Emberiza schoeniclus)*, grasshopper warbler *(Locustella naevia)*, yellow wagtail *(Motacilla flava)* and willow tit *(Poecile montanus)*.

Two alien invasive plant species, Himalayan balsam (*Impatiens glandulifera*) and New Zealand pygmyweed (*Crassula helmsii*) were also recorded in 2010.

35. Edderthorpe Ings 2



Sunny Bank, Horse Carr and Storrs Wood

Site Name:	Sunny Bank, Horse Carr and Storrs Wood
Site Area:	22.7ha
Survey Date:	September 2010
Nearest Settlement:	Ardsley, Cudworth and Lundwood
Grid Reference at Centre:	SE40279, 06835
Surveyor(s)	LAC, VG

Site Description:

The Sunny Bank, Horse Carr and Storrs Wood site comprises five separate areas of broadleaved semi-natural woodland which are connected through tree lined fields, tracks and disused railways. The areas of woodland lie in an agricultural landscape, close to the eastern edge of Barnsley with residential developments north, west and south of the site and industrial developments northeast of the site.

All five areas are on the register of ancient woodland sites. Sunny Bank Wood is separated by the Dearne Valley Way into two areas (TN3, TN4). The west area of Sunny Bank Wood (TN3) is dominated by English oak (*Quercus robur*) and diggings were noted in this wood which could be indicative of badger (*Meles meles*). Silver birch *(Betula pendula)* and sessile oak (*Quercus petraea*) are abundant in the east portion of Sunny Bank Wood (TN4). Bluebell (*Hyacinthoides non-scripta*) is present throughout the wood and there are three stands of Himalayan balsam *(Impatiens glandulifera).*

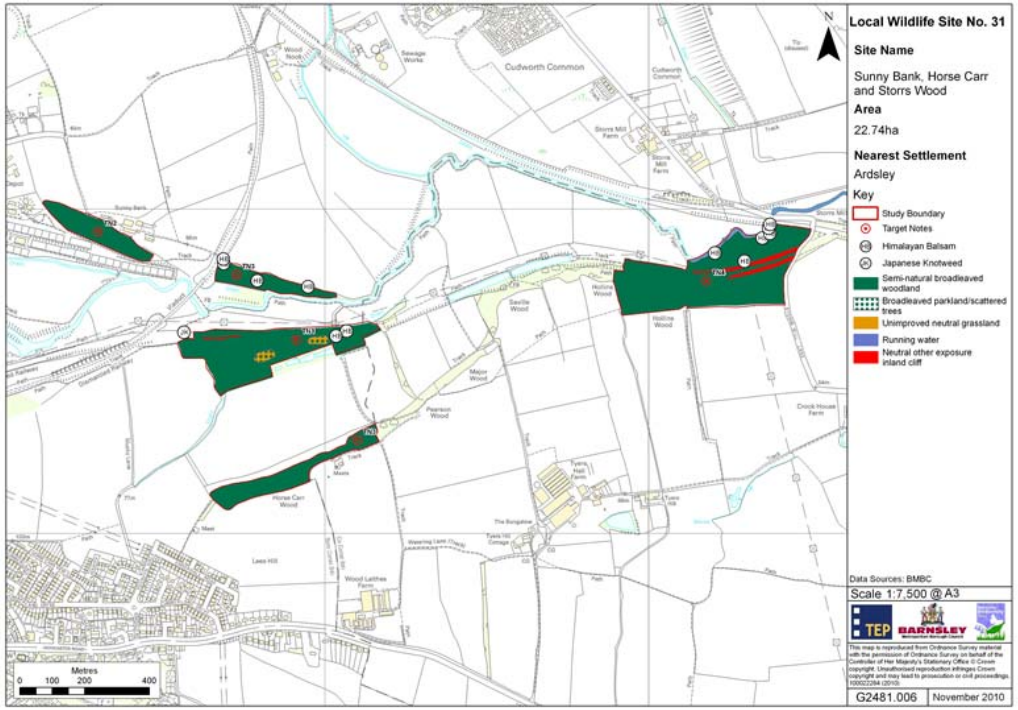
Horse Carr Wood is also separated into two areas of woodland. English oak is abundant in the canopy in the northern section (TN2), with sycamore (*Acer pseudoplatanus)* and silver birch *(Betula pendula)* both frequent as would be expected in a typical W16 woodland community. This wood becomes more open to the west, with sycamore occurring less frequently. As the canopy thins here, there are areas of unimproved neutral grassland where creeping soft grass *(Holcus mollis)* is abundant. The southern section of Horse Carr Wood is typical of W10 woodland community and bluebells are present throughout.

Storrs Wood (TN6) is the largest and most easterly area of the woodland blocks within the site, incorporating Hollins Wood at its western end. This is mainly of W10 type, apart from in the northeast, where W16 community prevails. The northern site boundary borders a dismantled railway and rock exposures run through the wood from west to east, along the sides of an old railway cutting. The River Dearne forms part of the northern edge of this woodland. There is a stand of Himalayan balsam along the old cutting and four more stands of Himalayan balsam in the north-eastern part of the woodland.

Important Species:

Wood millet (*Milium effusum*), yellow archangel (*Lamiastrum galeobdolon*), wood sorrel (*Oxalis acetosella*), bluebell (*Hyacinthoides non-scripta*), dog's mercury (*Mercurialis perennis*), great Wood rush (*Luzula sylvatica*) and greater stitchwort (*Stellaria holostea*) are all ancient woodland indicator species in South Yorkshire.

31. Sunny Bank, Horse Carr and Storrs Wood 2



West Haigh Woods

Site Name:	West Haigh Woods
Site Area:	69.73ha
Survey Date:	August and September 2010
Nearest Settlement:	Grimethorpe
Grid Reference at Centre:	SE42594, 08496
Surveyor(s)	PG, VG

Site Description:

This is a large and overwhelmingly wooded site existing in two separate sections. The larger northern and eastern section (West Haigh Wood) was surveyed on 6 August 2010 and the smaller area in the southwest (Rakes Wood) was surveyed on 16 September.

Most of the larger section (TN9, TN10, TN12, TN13, TN14 and TN15) is on the register of ancient and semi-natural woodlands; the remaining areas, to the east and southwest, are not. These areas outside the ancient woodland area formerly consisted of the more-open landscape of Houghton Common. However, a lack of management has resulted in a mix of silver birch (*Betula pendula*) and downy birch (*B. pubescens*) colonising the former common over the years. Oaks have also spread into this area. Patently, the traditional grazing typical of common land was not carried out intensively enough to prevent woodland establishment, so today the greater proportion of the area is dominated by a rapidly closing canopy.

Despite the difference in ages, samples of the woodland vegetation from both West Haigh Wood and the former Houghton Common both show very close matches to W16a woodland. This is the oak species (*Quercus robur* and *Q petraea*) sub-community of oak-birch-wavy hairgrass woodland community, typical of acidic soil conditions.

Bracken (*Pteridium aquilinum*) is most abundant over the eastern part of the former common (TN2, TN3, TN5), which was probably the latest area to be subsumed under woodland advancing from the west. Some areas still outside the woodland canopy are bracken dominated, including strips cleared along the route of overhead lines. Bracken is also still present in large amounts over the remainder of the entire woodland site, with some very dense areas also occurring in the western parts (TN10, TN11).

In the older woodlands, west of the former Houghton Common, oaks are more frequent and found as larger and more mature specimens. The older, denser canopy has produced a groundflora that is generally less bracken-dominated but also generally sparse and species-poor in the prevailing shaded and acidic condition. However, groundflora species typical of established woodlands are scattered sparsely through this large area. The most diverse woodland groundflora is found in the small southeast extension of TN14, where a stream course forms part of the site boundary.

West Haigh Wood is generally quite dry, but there is a small pond (TN12) in the south-eastern quarter, with a small stream flowing south from here.

34. West Haigh Woods 2

A system of informal, but probably very long-established, footpaths spreads through the woodland, some of them following old banks and in one instance, the remains of a stone wall within the woodland.

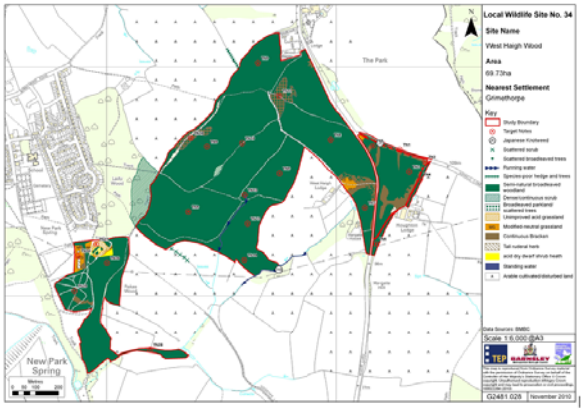
Rakes Wood is separated from West Haigh Wood and is located to the southwestern this site. Although separate, it is a continuation of the same W16a oak and birch woodland type found over West Haigh Wood and the former Houghton Common. However, this section, just south of Grimethorpe, is more disturbed than the rest of the site's woodland. There is much bare shale ground and signs of use of off-road vehicles on the numerous tracks which throughout this part of the woodland. Broad bare tracks make a much denser network through these woods than the footpaths in West Haigh Wood.

Where there has been loss of trees, in the north (TN27) of Rakes Wood, a mosaic of bare ground, acid grassland, heather heath and regrowth of trees is found. Elsewhere there is typical W16a mixed oak and birch woodland with sparse species-poor groundflora dominated by a mix of bracken, bramble (*Rubus fruticosus*), Yorkshire fog (*Holcus lanatus*) and wavy hair-grass (*Deschampsia flexuosa*). This part of the site is not on the register of ancient woodlands, but has a small array of typical woodland groundflora species scattered throughout.

Important Species:

Bluebell (*Hyacinthoides non-scripta*), great woodrush (*Luzula sylvatica*), wood millet (*Milium effusum*), sessile oak (*Quercus petraea*), greater Stitchwort (*Stellaria holostea*), remote sedge (*Carex remota*), wood melick (*Melica uniflora*), great woodrush (*Luzula sylvatica*) and dog's mercury (*Mercurialis perennis*) are all found on this site. These are ancient woodland indicator species for South Yorkshire.

UKBAP species found on the site are breeding dunnock *(Prunella modularis)*, bullfinch *(Pyrrhula pyrrhula* and song thrush *(Turdus philomelos)* and common lizard *(Zootoca vivipara)*.



6.3. eDNA Results

Applied Genomics

RESULTS

KIT REFERENCE	CLIENT REF	QPCR REPLICATES	INHIBITION CONTROL	DEGRADATION CONTROL
[redacted]				
GCNK280*		12/12	PASSED	PASSED
GCNK281		6/12	PASSED	PASSED
GCNK282		11/12	PASSED	PASSED

All controls performed as expected.

CONCLUSIONS

The results indicate that eDNA for great crested newt (*Triturus cristatus*) were detected in the samples corresponding to the following kit references:

KIT REFERENCE	CLIENT REF	EDNA DETECTION
[redacted]		
GCNK280*		YES
GCNK281		YES
GCNK282		YES

*NOTE: collected samples corresponding to kit 'GCNK280' showed a muddy appearance before starting with the eDNA extraction process. We encountered challenges extracting the expected volume of eDNA solution. The Control and Analysis experiments performed as expected, though we advise caution when interpreting results from this sample.

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6.4. 2013 Assessment (known as N2)

6.5. SURFACE WATER DRAINAGE DETAILS

Andrew Arnott

From: Gordon Barnard <gordon.barnard@rpsgroup.com>
Sent: 03 July 2017 16:15
To: Andrew Arnott
Cc: John Fitzgerald; Dean Watson
Subject: RE: [EXT] Re: Car park planning application

Hi Andrew

Yes surface water runoff will be from car park area only, and passed via a bypass petrol interceptor.

Runoff will be limited to greenfield rates therefore flow into the River Dearne will be no greater than at present.

We are proposing to connect to an existing surface water outfall via an existing outfall structure which is set back from the riverbank.

Best Regards

Gordon Barnard
Associate Director - RPS Planning & Development
Sherwood House, Sherwood Avenue,
Newark, Nottinghamshire, NG24 1QQ.
United Kingdom
Tel: +44 (0) 1636 605 700
Mobile: +44 (0) 7768 827 314
Email: gordon.barnard@rpsgroup.com
www: www.rpsgroup.com

From: Andrew Arnott [mailto:andrew.arnott@ecologypractice.co.uk]
Sent: 03 July 2017 15:01
To: Gordon Barnard
Subject: RE: [EXT] Re: Car park planning application

Thanks Gordon – can you confirm that run-off will be limited to the carpark tarmac and as such the additional flow into the River at peak times will be both treat by petrol interceptors and the volumes insignificant, as well as using an existing outfall?

Best wishes

Andrew Arnott

Principal, Ecology Practice

PHONE: 0845 602 3822

MOBILE: 07867 580491

EMAIL: andrew.arnott@ecologypractice.co.uk

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