Preliminary Ecological Appraisal

Former Goldthorpe Colliery,
Barnsley

Report reference: R-2908-01

June 2017

Report Title:	Preliminary Ecological Appraisal Former Goldthorpe Colliery, Barnsley
Report Reference:	R-2908-01
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The information which we have prepared and provided is true and has been prepared and provided in accordance with the CIEEM's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions. This report does not constitute legal advice.

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Non-technical Summary

Purpose of report

This report is produced to present an initial assessment of the potential ecological constraints and opportunities relating to a Site known as the former Goldthorpe Colliery in Barnsley; to inform the Site's potential for development.

The report has been prepared to advise the client of potential ecological constraints and opportunities, in preparing an application for planning permission.

This survey and report will require the support of further surveys / reports.

Methodology

The report is based on a Desk Study of designated wildlife sites and records of protected or notable species, and an extended Phase 1 Habitat Survey carried out in June 2017.

Findings Key-Points

The Site supports a typical mosaic of secondary habitats, all of which are common and widespread, and would not represent a constraint to the development proposed.

A dismantled railway line passes along the Site's southern boundary and represents a potential landscape-scale corridor for local wildlife; recommendations are made for its protection from the effects of development.

Further survey is recommended for bats (activity) and reptiles, with a precautionary approach being put forward for badgers and nesting birds.

Japanese knotweed has been found growing on Site, and an Invasive Species Management Plan will need to be produced to show how this species will be brought under control prior to development commencing.

A relatively large number of orchids have been found growing on Site, and although not legally protected, it is recommended that these plants be rescued and replanted elsewhere on Site.

Introduction

1. Brooks Ecological Ltd was commissioned to carry out a Preliminary Ecological Appraisal of the former Goldthorpe Colliery off Kingsmark Way in Goldthorpe, Barnsley, South Yorkshire, Grid Reference SE 466 042.

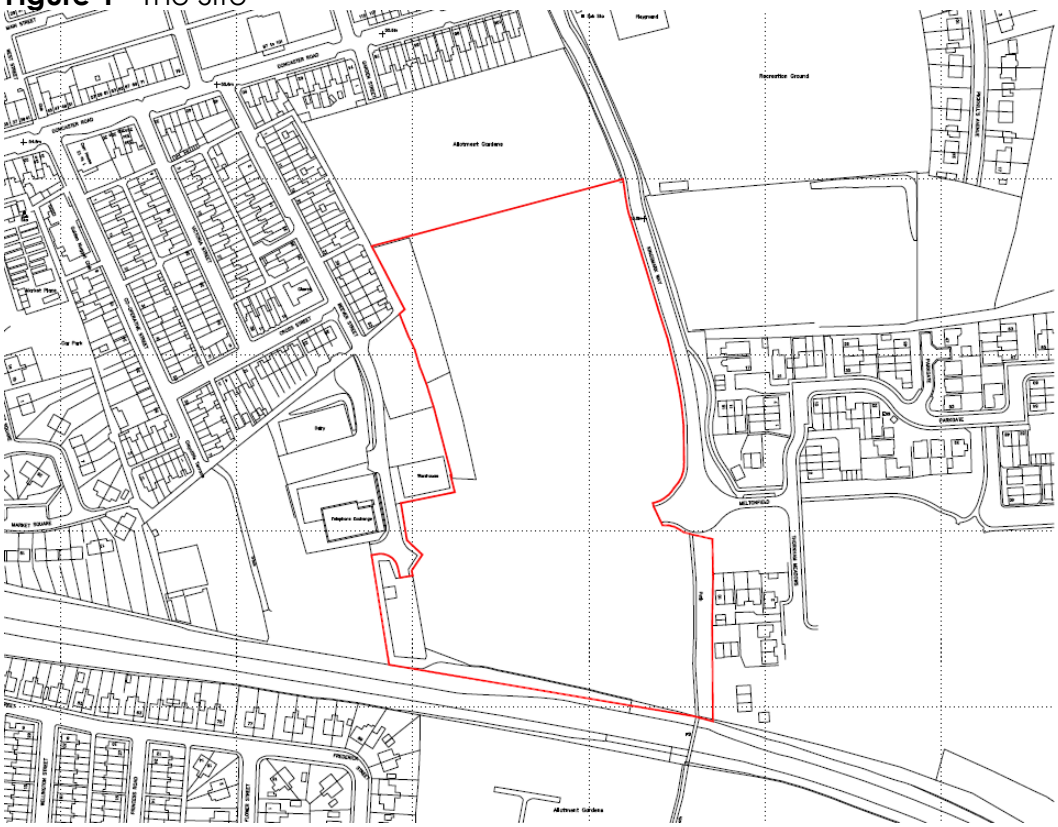
2. This report is produced with reference to British Standard BS42020 'Biodiversity Code of Practice for Planning and Development' and the CIEEM (2013) Guidelines for Preliminary Ecological Appraisal.

Scope

3. The application site 'the Site' encompasses reclaimed land which forms part of a former colliery located to the south east of the village of Goldthorpe. The colliery closed in 1994 and since this time the secondary vegetation has become well established on the Site. It is defined in figure 1 below.

4. The assessment uses a 2km area of search around the Site for records of protected and notable species and locally or nationally designated wildlife sites.

Figure 1 The Site



Proposals

5. Proposals are for residential development. An extant outline planning permission (all matters reserved apart from means of access) has previously been granted for circa 125 dwellings under reference 2013/1330. This application expires the 21st June 2017 and it has been decided to submit a fresh application for the Site.

6. The Site is 4.15 ha and the scheme would propose a range of house types, principally of two and two and a half storeys with approximately 15% public open space. The masterplan has not yet been finalised, but it is anticipated that the revised scheme will be similar to what was approved in 2014; see below figure.

Figure 2 Proposed development - granted Outline Planning Permission in 2014



Background

7. The Site was previously surveyed back in October 2013 by Brooks Ecological, to support the Outline Planning Application. Full details can be seen in Brooks Ecological's report: R-1705-01.

Site context

8. The Site is bordered by allotments to the north, a new housing development to the east, a disused railway line to the south and light industrial units and similar secondary habitats to the west.

9. The wider area consists of a patchwork of small towns and villages set within a mainly arable landscape. A large area of woodland / parkland is located a short distance to the east, with a golf course to the northeast and a restored colliery to the north. These features represent the areas of greatest wildlife value in the local area.

Water bodies

10. There are no ponds present on Site and no standing water bodies are highlighted on mapping within 500m of the application Site boundary.

Wildlife corridors

11. A disused railway line runs along the Site's southern boundary, and has established into a large wooded corridor which runs east to west linking Goldthorpe to the west and Harlington to the east. Arable fields run adjacent to much of the line and present little value for wildlife or connectivity.

12. The line is partially connected to Bella Wood - ancient re-planted woodland located c.750m east of site, with a c.350m section of reclaimed land between the two areas. Further east along the line is additional re-planted woodland.

13. To the northeast, the dismantled railway line connects to a number of other dismantled railway lines, along with tracks that are still in use. The vegetated embankments of these lines form further potential corridors, radiating out from the centre of Goldthorpe.

Figure 3 Analysis of potential wildlife corridors (dashed white lines)



Designated Sites

Statutory Designations

14. A search has been made to identify any nationally designated sites within a 2km radius of the Site, and for internationally designated sites within a 10km radius.

15. This search found no designated sites to be present within the distances defined above.

SSSI Impact Risk Zones (IRZs)

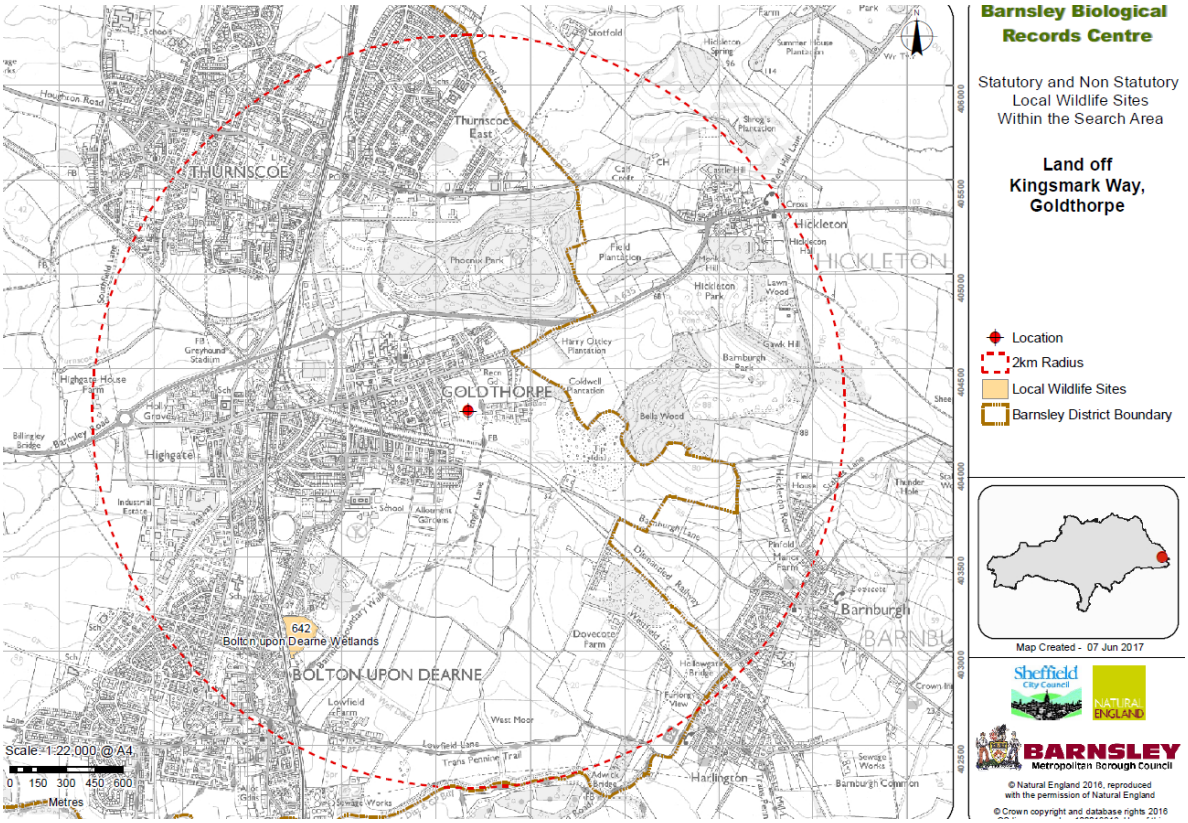
16. The Site lies within the IRZ for Denaby Igns SSSI, c.4.2km southeast, but does not fall into one of the highlighted categories which requires consultation between the Local Planning Authority (LPA) and Natural England (NE). The development is of a scale and nature which is unlikely to impact on this SSSI.

Non-Statutory Designations

17. Barnsley Biological Records Centre (BBRC) was contacted and asked to provide details on any locally designated sites present within a 2km radius of the Site. Only a single Local Wildlife Site (LWS) is present within this search area; this being Bolton upon Dearne Wetlands (642), situated c.1.2km SW.

18. This LWS is considered sufficiently distant and separated from the Site to remain unaffected by the development proposed. This assessment is supported by the fact that an outline application for residential development has already been granted at the Site. In granting permission, the council must have satisfied themselves that this LWS would not be adversely affected by the proposals.

Figure 4 Locally designated sites provided by BBRC



Habitats

Method

19. The survey was carried out during June 2017[1] and followed Phase 1 habitat survey methodology (JNCC, 2010).

Limitations

20. The vast majority of the Site was accessible with exceptions being the densest bramble scrub which accounts for no more than 10 % of the Site by area. Sufficient time was afforded the surveyor to carry out the survey. The survey was not constrained by poor weather.

Results

21. As previously described, the Site was surveyed in October 2013 by Brooks Ecological (R-1705-01). At this point, the Site was occupied primarily by rough neutral grassland, with small amounts of young scattered scrub and tall ruderal vegetation beginning to establish. At this time, these habitats were assessed as being of low ecological value, due to their recent origin.

22. In the four years since this initial survey was carried out, the Site has continued to mature, and in the absence of management, has continued to progress through the natural stages of succession. The Site still supports all the same habitats as before, but with tall ruderal vegetation and dense scrub now occupying a much greater proportion of the Site.

23. The Site can be best described as supporting a mosaic of secondary vegetation on made ground, with rough neutral grassland grading into thickets of tall ruderal vegetation and dense scrub. An attempt has been made to separate out and map the approximate location and extend of these habitats (see in drawing D-2908-01); however, in relatively, the sward constantly fluctuates between these communities.

24. The following habitats were identified within the Site and on its immediate boundaries:

- Rough neutral grassland
- Tall ruderal vegetation
- Scrub and young trees

[1] This Report has been prepared during June 2017 following a visit to the site in June 2017 and our findings are based on the conditions of the site that were reasonably visible and accessible at that date. We accept no liability for any areas that were not reasonably visible or accessible, nor for any subsequent alteration, variation or deviation from the site conditions which affect the conclusions set out in this report.

Rough neutral grassland

25. The rough neutral grassland supports a typical mix of common grasses and forbs, with red fescue (Festuca rubra), cock's-foot (Dactylis glomerata) and false oat grass (Arrhenatherum elatius) being the most abundant grasses throughout, with smaller amounts of perennial rye grass (Lolium perenne), Yorkshire fog (Holcus lanatus) and smooth meadow-grass (Poa pratensis) also being noted.

26. Overall, forbs make up a fairly small component of the sward, and include common knapweed (Centaurea nigra), ribwort plantain (Plantago lanceolata), common birds foot trefoil (Lotus corniculatus), colt's-foot (Tussilago farfara), dandelion (Taraxacum agg.), creeping thistle (Cirsium arvense), creeping cinquefoil (Potentilla reptans), mugwort (Artemisia vulgaris), common nettle (Urtica dioica), cleavers (Galium aparine), broad-leaved dock (Rumex obtusifolius), red clover (Trifolium pratense), ragwort (Senecio jacobaea), common hogweed (Heracleum sphondylium), hedge woundwort (Stachys sylvatica), hedge bindweed (Calystegia sepium), meadow vetchling (Lathyrus pratensis), rosebay willowherb (Chamaenerion angustifolium), meadow buttercup (Ranunculus acris), oxeye daisy (Bellis perennis), fox and cubs (Pilosella aurantiaca), smooth tare (Vicia tetrasperma), cat's-ear (Hypochaeris radicata), teasel (Dipsacus fullonum) and zigzag clover (Trifolium medium).

27. In addition to the above, a mix of common spotted orchid (Dactylorhiza fuchsii) and southern marsh orchid (Dactylorhiza praetermissa) were recorded on Site, along with some hybrids of the two. These were concentrated towards the centre-west of the Site, with a few hundred common spotted orchids being noted, and up to 50 marsh orchids and hybrids.

28. Young, self-set scrub vegetation is scattered throughout the grassland, with hawthorn (Crataegus monogyna), dog rose (Rosa canina) and bramble (Rubus fruticosus) being the most abundant species. Bracken (Pteridium aquilinum) and horsetail (Equisetum sp.) are also noted.



Figure 5a

Typical view of the rough neutral grassland







Figure 5b

Grassland populated with common spotted and southern marsh orchids (left).

Common spotted orchids – bottom left

Southern marsh orchids – bottom right

29. The Site is well used by dogwalkers and local residents alike, and this has given rise to a network of informal footpaths that criss-cross through the Site. Along these footpaths, the pressures of regular footfall have resulted in a slightly different neutral grassland community establishing, with perennial rye grass (Lolium perenne), white clover (Trifolium repens) and ribwort plantain being the most abundant species.



Figure 6

Looking along one of the informal pathways.

Tall ruderal vegetation

30. Tall competitive herbs are scattered throughout the Site, and in places form dense continuous stands, with common nettle (Urtica dioica), rosebay willowherb (Chamaenerion angustifolium) and creeping thistle (Cirsium arvense), being the most abundant species.



Figure 7

Tall ruderal vegetation along the southern edge of the Site

Scrub and young trees

31. Scrub now occupies a large proportion of the Site, and in places, forms dense impenetrable thickets. Bramble (Rubus fruticosus) and hawthorn (Crataegus monogyna) are the most commonly encountered species, with dog rose (Rosa canina), birch (Betula spp.), alder (Alnus glutinosa), buddleia (Buddleia davidii), elder (Sambucus nigra) and oak (Quercus robur) also noted.



Figure 8

Typical scrub vegetation

32. A small number of semi to early mature trees are present on Site, all growing along the Site boundaries. This includes a pair of goat willow (Salix caprea) trees to the western corner and a row of sycamore (Acer psuedoplatanus), ash (Fraxinus excelsior) and birch (Betula spp.) along the northern half of the eastern boundary, bordering Kingsmark Way.



Figure 9

Typical scrub vegetation

Off-site Habitats

Dismantled railway line

33. A dismantled railway line passes along the southern boundary - at a lower elevation than the Site. This supports a similar mosaic of rough neutral grassland, tall ruderal vegetation and scrub/ young trees to that present on Site. It is similarly well used by dogwalkers and members of the public.

Figure 10 Standing on the footbridge crossing the dismantled railway, looking easy (left) and west (right)




Fauna

Amphibians

34. As previously described, no ponds are present on Site and no standing water bodies are highlighted on mapping as being present within a 500m radius of the boundaries.

35. Despite this, four records of great crested newt (GCN) have been returned for a site detailed as 'pond adjacent to Barnburgh Lane' c.310m south. These records date back to April/ May 2011, and each detail a single adult male. This pond does not show up on mapping and is separated from the site by Barnburgh Lane, housing and large arable fields; all of which are likely to act as barriers or restrict the movement of amphibians. Individuals from this pond are therefore very unlikely to disperse into the Site.

36. The Site provides good terrestrial habitat for this group, however, the absence of well-connected potential breeding ponds, within the Site's sphere of influence, means that the likely absence of amphibians, including the protected great crested newt, can be reasonably concluded. No further survey is recommended.

Bats

Records

37. Fourteen bat records have been returned for the search area, including records of whiskered bat, noctule and common pipistrelle, along with indeterminate species of vesper bat. Many of these relate to roosts, with the most significant record, albeit old (1993), being of a large pipistrelle maternity colony c.1.2km northwest within a property off Thurnscoe Grove.

Roost Suitability

38. No buildings or other man-made structures are present on Site, and none of the trees were found to support any features with bat roost suitability. The likely absence of roosting bats can therefore be reasonably concluded.

Foraging/ commuting

39. Since the Site was surveyed in 2013, the vegetation has matured and developed into a more structured, mosaic habitat, which is of greater quality for bats. This, combined with the Site's proximity to a potential landscape scale wildlife corridor (adjacent dismantled railway line), means there is the potential for the Site to support good numbers of foraging bats.

40. The 'Best Practice' survey guidelines have also changed since the Site was last surveyed, and in line with this guidance, further survey is now recommended to establish a baseline for the Site's general use by bats. This information will then be used to inform the level and type of mitigation required.

Birds

41. The Site is likely to support a typical range of common garden birds during the main breeding season; however, given the Site's urban location (surrounded by housing to the north, east and west) and its use by dogwalkers, it is considered unlikely to support any notable bird assemblages. Other than standard precaution regarding impacts on active nests, no further survey is considered necessary.

Badger

42. No evidence of recent or historical badger activity was noted during the walkover survey, and as such, the currently likely absence of this species can be concluded. However, the Site supports good habitat for badgers, and is well connected to the wider landscape via the dismantled railway line. As such, there is a risk that this species could establish setts on Site in the future, prior to development commencing. Standard precaution is therefore recommended.

Reptiles

43. A single reptile record has been returned for the search area, detailing a grass snake within Adwick Washlands Nature Reserve, c.1.4km south.

44. The Site now represents an area of good reptile habitat, which is well connected to the wider landscape, via the dismantled railway line. Further survey is therefore recommended to clarify the status of this group on Site.

Invasive Species

Japanese Knotweed / Giant Hogweed

45. Several small stands of Japanese knotweed (Fallopia japonica) have been found on Site, and these have been marked indicatively on plan D-2908-01.1, which can be found in Appendix 1. This plant is listed on Schedule 9 of the Wildlife and Countryside Act (1981), and a plan to bring this species under control and prevent its further spread, is recommended.



Figure 11

Japanese knotweed

Horsetails

46. Horsetails are not listed on Schedule 9 of the Wildlife and Countryside Act (1981) but can cause damage to roads and paving post development. A small amount of this species was found scattered around the Site, growing amongst the sward of the rough neutral grassland.



Figure 12

Horsetail

Key Findings

Onsite habitats

47. The Site supports a typical mosaic of secondary habitats, which have arisen naturally on made ground, and allowed to mature through an absence of management. These habitats are common and widespread, and do not meet the criteria for any nationally or locally important habitat types.

48. Not unsurprisingly on a Site of this nature, a relatively large number of orchids (common spotted and southern marsh) have been found growing on Site. Although not legally protected, orchids are an emotive group of plants, and as the Site is well used by local residents, the loss of these flowers to development is a potential line of objection. It is therefore recommended that these plants be rescued prior to site clearance/ preparation, and relocated to an area of allocated greenspace. This could then be used as a theme for ecological enhancement of the retained grassland.

Off-site habitats

49. The embankments of the adjacent dismantled railway line support a similar assortment of secondary habitats to those found on Site. However, these extend for several kilometres to the east and west, and form a strong linear feature that could be of importance to the dispersal of local wildlife.

50. To protect this feature from the effects of development, it is recommended that the Site's Public Open Green Space be positioned along the southern boundary, so as to create a green buffer between the railway and the Site. This would provide an area in which to relocate orchids, and would increase the effectiveness of any ecological enhancement implemented. This buffer will need to be protected during construction by exclusion fencing.

Invasive Species

51. An Invasive Species Management Plan will need to be produced, to show how Japanese knotweed can be brought under control, and prevented from spreading further, prior to works commencing.

Bats

52. The Site supports an assortment of habitats that are likely to be attractive to foraging bats, and borders a feature that has the potential to be of importance to the movement of local bat populations. Further survey is therefore recommended in order to collect an accurate baseline for the Site, and highlight what level of mitigation will

be required for bats, if any. This would involve three activity surveys – walked transects and remote monitoring – carried out during early, mid and late summer 2017.

Reptiles

53. The Site now provides an area of good reptile habitat, which is well connected to the wider landscape via the adjacent dismantled railway line. Grass snake have been recorded in the local area, fairly recently, and there is a risk of this species, and other reptiles, being present on Site. Further survey is therefore recommended to confirm presence or likely absence.

54. Should reptiles be found, a mitigation strategy will need to be designed, which may include the installation of exclusion fencing, pitfall traps, directional clearance (north to south) and the creation of replacement habitat, the latter of which would be best placed within greenspace along the southern boundary.

Badgers

55. Although current likely absence has been confirmed, the Site provides suitable habitat for badgers and this species could establish setts prior to development commencing. As such, a precautionary pre-commencement survey is recommended 2 – 3 months prior to works staring on Site.

56. Should badgers be found, it may be necessary to secure a licence with Natural England to close setts. In this instance, mitigation may be required in the form of new setts being dug – these would be best placed within greenspace along the southern boundary.



Figure 13

Constraints plan

Ecological Enhancement

57. The requirement for development to make a positive contribution to biodiversity is clearly set out in guidance such as the NPPF and BS:42020 - beyond mitigating or compensating any potential impacts.

58. The following themes provide opportunities for the proposals to deliver such a contribution. With the dismantled railway line to the south, ecological mitigation would be best placed along this boundary.

- A green buffer could be retained along the southern boundary and used as a receptor Site for some of the Site's orchids. This grassland could then be managed to promote the growth of species-rich grassland, with formalised footpaths and information boards creating an attractive 'wildlife area' for use by new residents.
- Logs created as a result of vegetation clearance could be retained, along the southern boundary, as 'habitat Piles'. These would then provide areas of shelter for various groups, such as small mammals, amphibians and reptiles.
- A range of boxes, aimed at attracting crevice dwelling bats and declining garden birds could be incorporated into the scheme.

Appendices

1. Extended Phase 1 Habitat Plan
2. Explanatory Notes and Resources
3. Information on legislation / protection

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Appendix 1 – Extended Phase 1 Habitat Plan



Rough neutral grassland

Scrub & young trees

Competitive/tall ruderal

Hard-standing

Scattered Trees

Target notes:

1. Japanese knotweed
2. Horsetail
3. Orchids - Common spotted, Marsh and hybrids.

Project: Goldthorpe Colliery

Title: Extended Phase 1 Habitat Plan

Drawing Number: D-2908-01.1

Scale: Do not scale Date: June 2017

Revision:

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Appendix 2 – Explanatory Notes and Resources Used

Site context

Aerial photographs published on commonly used websites were studied to place the site in its wider context and to look for ecological features that would not be evident on the ground during the walkover survey. This approach can be very useful in determining if a site is potentially a key part of a wider wildlife corridor or an important node of habitat in an otherwise ecologically poor landscape. It can also identify potentially important faunal habitat (in particular ponds) which could have a bearing on the ecology of the application site. Ponds may sometimes not be apparent on aerial photographs so we also refer to close detailed maps that identify all ponds issues and drains. We use Promap Street + scale maps for this purpose.

Designated Sites

A search of the MAGIC (Multi-Agency Geographic Information for the Countryside) website was undertaken. The MAGIC site is a Geographical Information System that contains all statutory (e.g. Sites of Special Scientific Interest [SSSI's]) as well as many non-statutory listed habitats (e.g. ancient woodlands and grassland inventory sites). It is a valuable tool when considering the relationship of a potential development site with nearby important habitats. In addition, information from the local record holders was referred to on locally designated sites.

Functional linkage with off-Site habitats

When assessing these we consider whether the Site could be functionally linked to them, considering links such as;

- Hydrological links - is the Site upstream downstream, or could ground water issues affect it?
- Physical links - is the site in close proximity and could it be directly or indirectly affected by construction and operational effects? Conversely it may be that despite proximity major barriers separate the two.
- Recreational links - Do footpaths and roads make it likely that increased recreational pressure could be felt?
- Habitat links - Is the site part of a network of similar habitat types in the wider area? These could be joined by linear corridors or could simply be 'stepping stones of habitat of similar form or function.

Method

Phase 1 habitat survey methodology (JNCC, 2010). This involves walking the site, mapping and describing different habitats (for example: woodland, grassland, scrub). The survey method was "Extended" in that evidence of fauna and faunal habitat was also recorded (for example droppings, tracks or specialist habitat such as ponds for breeding amphibians). This modified approach to the Phase 1 survey is in accordance with the approach recommended by the Guidelines for Baseline Ecological Assessment (IEA, 1995) and Guidelines for Preliminary Ecological Appraisal (CIEEM 2012).

Faunal appraisal

This section first looks at the types of habitat found on Site or within the sphere of influence of potential development, then considers whether these could support protected, scarce or NERC Act 2006 Section 41 species (referred to collectively as 'notable species').

Records of notable species supplied from a 2km area of search are used to inform this appraisal.

We discuss further only notable species or groups which could be a potential constraint due to the presence of suitable habitat and their presence (or potential presence) in the wider area. We screen out and do not present accounts of notable species or groups which do not meet these criteria – in some cases it may be necessary to explain this reasoning.

Evaluation

In evaluating the site the ecologist will take into account a number of factors in combination, such as;

- the baseline presented above,
- the site's position in the local landscape,
- its current management and
- its size, rarity or threats to its integrity.

There are a number of tools available to aid this consideration, including established frameworks such as Ratcliffe Criteria or concepts such as Favourable Conservation Status. Also of help is reference to Biodiversity Action Plans in the form of the Local BAP and Section 41 of the NERC Act (2006) to determine if the site supports any Priority habitats or presents any opportunities in this respect.

The assessment of impacts considers the generic development proposals from which potential effects include:

- Vegetation and habitat removal
- Direct effects on significant faunal groups or protected species
- Effects on adjacent habitats or species such as disturbance, pollution and severance
- Operation effects on wildlife such as noise and light disturbance

Consideration is given to the Local Biodiversity Action Plan (LBAP), which for this site is the '**Barnsley Biodiversity Action Plan**'.

Species/group	**Habitat**
Hedgehog	Upland Oakwood
Bats	Lowland Mixed Deciduous Woodland
Water Vole	Wet Woodland
Otter	Wood Pasture and Parkland
Grey Partridge	Hedgerows
Bittern	Arable Field Margins
Kestrel	Floodplain Grazing Marsh
Little Ringed Plover	Lowland Meadows
Lapwing	Lowland Dry Acidic Grassland
Barn Owl	Lowland Heathland
Skylark	Upland Heathland
Tree Sparrow	Blanket Bog
Twite	Purple Moor Grass and Rush Pasture
Great Crested Newt	Reedbeds
Salmon	Ponds
Bullhead	Rivers
White-clawed Crayfish	Open Mosaic Habitats on Previously Developed Land
Glow Worm	
Dingy Skipper	
Bluebell	

Appendix 3 Wildlife Legislation, Policy and Guidance

This is not an exhaustive list but sets out briefly the relevance of Legislation, Policy and Guidance in terms of planning applications and this assessment.

Legislation

Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (EC Habitats Directive).

Provides framework at an international (EU) level for the consideration / protection of European Protected Species (EPS), and habitats through the designation of sites.

Council Directive 79/409/EEC on the Conservation of wild birds (EC Birds Directive) and The Ramsar Convention on Wetlands of International Importance (1971)

Provides framework at an international (EU) level for the consideration / protection of important bird populations and the sites on which they are dependant.

The Conservation of Habitats and Species Regulations (2010)

This transposes 1) into UK law and provides the basis on which all EPS are protected and impacts on them can be licensed in the UK.

The Wildlife and Countryside Act (1981) as amended

This provides the basis on which UK species are legally protected or restricted and confers protection on Sites of Special Scientific Interest SSSIs. It contains annexes of plants and animals which are legally protected as well as those which are considered to be invasive or harmful. It provides the basis on which impacts on such species can be licensed in the UK and provides controls on work on or near SSSIs.

The Countryside and Rights of Way Act 2000 (CRoW)

Provides a statutory basis for nature conservation, strengthens the protection of SSSIs and UK protected species and requires the consideration of habitats and species listed on the UK and Local Biodiversity Action Plans (UKBAP / LBAP).

Natural Environment and Rural Communities Act 2006 (NERC)

Sets out the responsibilities of Local Authorities in conserving biodiversity. Section 41 of the Act requires the publishing of lists of habitats and species which are "of principal importance for the purpose of conserving biodiversity". At present these largely reflect those making up the UKBAP lists.

Hedgerows Regulations (1997)

Define and provide protection for Important Hedgerows.

Protection of Badgers Act (1992)

Protects badgers from persecution, this includes excavation / development in the proximity of setts.

Protected Sites

Statutory EU / International Protected Sites

Special Areas of Conservation (SACs); and Special Protection Areas (SPAs) and Ramsar Sites contain examples of some of the most important natural ecosystems in Europe. Work on or near these sites is strictly protected and Local Authorities will be expected to carry out 'Appropriate Assessment' of development in proximity of them. In this case there is often an increased burden on the developer in relation to provision of information and assessment.

Statutory UK Protected Sites

Local Nature Reserves (LNRs); National Nature Reserves (NNRs); Sites of Special Scientific Interest (SSSIs) all receive strict protection under UK legislation. Work in or in proximity to these sites would be restricted with any needing to be agreed with Natural England. Natural England now provide guidance on the nature of development which could impact on SSSIs through Impact Risk Zones.

Locally Protected Sites

Local Authorities have a variety of protected wildlife sites designated at a local or regional level. These are gradually being brought under the banner of Local Wildlife Sites (LWS) but at present a plethora of different designations exist - all subject to local policy.

Protected Species

European Protected Species

A number of species (most relevantly bats, great crested newts [GCN], and otters) receive strict protection from killing, injury and disturbance under The Conservation of Habitats and Species Regulations (2010). Protection is also conferred on the habitats on which they rely such as roost space in the case of bats and ponds and fields etc. in the case of GCN.

UK Protected Species

A number of species (including bats, GCN, watervole and white clawed crayfish) are strictly protected under The Wildlife and Countryside Act (1981) as amended, from killing, injury, disturbance and damage or destruction of their resting places etc. Certain species (such as reptiles) and some birds (such as barn owl) receive partial protection e.g. at certain times of the year or form certain activities only. All nesting bird species are protected from damage or destruction of their nests - whilst active.

Invasive species

Schedule 9 of the Wildlife and Countryside Act (1981) as amended, lists these species and makes it an offence to cause or allow their spread in the wild. This often has impacts on development and planning in relation to the presence of invasive plant species such as: himalayan balsam (*Impatiens glandulifera),* japanese knotweed (*Fallopia japonica*) and giant hogweed *(Heracleum mantegazzianum*).

Planning Policy / Guidance

The National Planning Policy Framework (NPPF)

The National Planning Policy Framework was published in 27 March 2012 replacing the majority of previous Planning Policy Guidance notes (PPGs) and Planning Policy Statements (PPSs). The most relevant paragraphs from the NPPF are set out below.

The general approach to assessing the natural environment is now embedded within the definition of what 'sustainable development' is. Paragraph 7 (P7) of the NPPF states that sustainable development should "contribute to protecting and enhancing our natural environment" and "help to improve biodiversity". There is also a need for positive inclusion of the natural environment in development design and "moving from a net loss of bio-diversity to achieving net gains for nature" (P9). P14 sets out the Frameworks presumption in favour of sustainable development.

The natural environment is stated within the NPPF core principles: development should "*recognise the intrinsic character and beauty of the countryside*" and contribute to conserving and enhancing the natural environment and reducing pollution. Allocations of land for development should, "*prefer land of lesser environmental value, where consistent with other policies in this Framework*" (P17).

Section 11 of the NPPF details the approach to the natural environment. The Framework states that development should "*minimise impacts on biodiversity and provide net gains in biodiversity, where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures*" (P109).

The Framework sets out ways to minimise the impacts on biodiversity through "*promoting the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets*" (P117).

The NPPF requires the consideration of the impacts of development on the natural environment. The Framework also encourages "*opportunities to incorporate biodiversity in and around developments*" (P118). Importantly this paragraph (P118) sets out the hierarchy of avoiding, mitigating and compensating harm from development - plans should ensure that they can demonstrate engagement with this hierarchy when required.

Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services.

This strategy builds on the Natural Environment White Paper (June 2011) - The Natural Choice: securing the value of nature. Setting out the current UK Government's approach to nature conservation. It promotes a more coherent and inclusive approach to conservation and the valuing in economic and social terms of economic resources.

The strategy promotes initiatives such as Biodiversity Offsetting, Nature Improvement Areas and a focus on well-connected natural networks and introduces the concept of securing a 'no net loss' situation with regard to UKBAP / Section 41 habitats and species.

ODPM circular 06/05 (2005) Biodiversity and Geological Conservation - Statutory Obligations and Their Impact Within the Planning System

Provides guidance to Local Authorities on their obligations to biodiversity – particularly in relation to assessing planning applications and ensuring the adequacy of information.

BSI (2013) British Standards Institute BS 42020:2013 Biodiversity — Code of Practice for Planning and Development.

Provides a standard for the biodiversity assessment and development industries and decision makers such as Local Planning Authorities to work to.