Brooks Ecological
Grounded advice

Preliminary Ecological Appraisal

Land off Halifax Road, Thurgoland

Report reference: R-3112-01

December 2017

Report Title:	Preliminary Ecological Appraisal Land off Halifax Road, Thurgoland
Report Reference:	R-3112-01
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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 Land off Halifax Road, Thurgoland, 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.

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 and Bat Roost Suitability Assessment carried out in November 2017.

Findings Key-Points

The Site primarily comprises species poor habitat of limited ecological value.

Buildings on Site have some potential to support roosting bats and further survey has been recommended to ascertain the status of roosting.

Boundary hedgerows and trees are of higher ecological value and should be retained where possible.

Introduction

1. Brooks Ecological Ltd was commissioned by Johnson Mowatt Ltd to carry out a Preliminary Ecological Appraisal of land off Halifax Road, Thurgoland, South Yorkshire (grid reference SE 29120 01120).

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' comprises an unoccupied farmhouse, outbuildings and small fields. 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. Detailed proposals have not yet been made available for the Site.

Site Context

6. The Site is located at the eastern edge of Thurgoland, a village set amongst large arable and pastoral fields. Several large woods and woodland bands are also present in the wider area.

7. Immediate boundaries include housing associated with Thurgoland to the north, west and south with arable and pasture to the east.

8. Beyond, the landscape is characterised by increasing amounts of development towards Barnsley to the north east. Several large reservoirs and heathland are found further to the west.

Wildlife Corridors

9. The Site is not associated with any significant wildlife corridors and does not form any key parts of wildlife corridors. Hedgerows in the area form tenuous links to a nearby wooded disused railway line and more hedgerow bound farmland to the north east.

Figure 2 Analysis of wildlife corridors and higher value habitat in relation to the Site.



Water Bodies

10. The nearest pond is 240m to the south with another two found 450m to the north west of the Site, comprising a large pond and smaller pond directly adjacent to one another. Houses and associated roads lie in between the ponds and the Site, forming a barrier to amphibian movement.

Designated Sites

Statutory Designations

11. 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. The results are shown in the below table.

Table 1 Statutory Designated Sites

Site name	Distance from Site	Designation	Summary Interest
South Pennine Moors	6.2km to south east	SAC/SPA	Habitats including; European dry heath, blanket bog, old sessile oak woodland.

12. Impacts related to development would not be expected on this Site due to the distance, size of the development Site and lack of shared habitats.

SSSI Impact Risk Zones (IRZs)

13. The Site lies within the 5km IRZ for Pye Flatts Meadows SSSI, 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

14. There are four locally designated sites within 1km of the Site.

- Mag Wood Meadow local wildlife Site (LWS) is c. 670m to the east of the Site.
- Romticle Viaduct and Thurgoland Tunnels LWS is c. 800m south west of the Site.
- Black Moor Common LWS is c. 1km also to the south west of the Site.
- Forge Rocher and Tin Mill Rocher LWS c. 1.35km south east of the Site.

15. All sites are sufficiently distant from the development Site for impacts associated with residential development to be considered highly unlikely.

Habitats

Method

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

Limitations

17. The survey was carried out in November when many plant species have died back however the habitat type and likelihood of supporting notable species or communities could still be assessed at this time by the surveyor.

18. The vast majority of the Site was accessible with exceptions being the densest bramble scrub which accounts for no more than 5 % of the Site by area.

19. Sufficient time was afforded the surveyor to carry out the survey. The survey was not constrained by poor weather.

Results

20. The Site comprises an unoccupied farmhouse and barn, with hardstanding present where other buildings have been demolished, all set within unmanaged fields dominated by competitive plants.

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

- Rank Grassland
- Scrub/ Competitive Species
- Buildings
- Hardstanding
- Trees
- Hedgerow

[1] This Report has been prepared during December 2017 following a visit to the site in November 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.

Rank Grassland

22. Creeping bent (Agrostis capillaris) is the most abundant grass noted, forming a thick mat with cocksfoot (Dactylis glomerata), false oat grass (Arrhenatherum elatius), perennial rye grass (Lolium perenne) and tufted hair grass (Deschampsia cespitosa) also present.

23. A limited number of common competitive forbs are present throughout the grass, including broad leaved dock (Rumex obtusifolius) and ragwort (Senecio jacobaea), with yarrow (Achillea millefolium) also present on occasion. Creeping thistle (Cirsium vulgare) is dominant in several bands running through and around more open grassland.



Figure 3

Rank grass has formed a thick thatch in many area areas.

Scrub/Competitive Species

24. Thick bands of scrub are present along the Site boundaries. These are dominated by bramble (Rubus fructicosus agg.) with nettle (Urtica diocia) and creeping thistle (Cirsium vulgare) forming dense bands and the occasional addition of other competitive species such as hedge bindweed (Calystegia sepium).

25. A small amount of Himalayan balsam (Impatiens glandulifera) is present around the old barn.



Figure 4

Scrub with rank grassland in foreground to the north of the Site.

Buildings

26. Three buildings are present on Site, these being a stone built farmhouse with a slate roof, a stone barn and a small brick garage. The buildings appear unoccupied with the garage and barn having sustained considerable damage and now being open to prevailing weather conditions. These are described in detail in the faunal appraisal section.

Hardstanding

27. There are three areas of hardstanding around the Site. Analysis of mapping indicate these were barns until recently demolished.



Figure 5

Hardstanding with encroaching vegetation and on-Site barn in background.

Trees

28. A row of young–early mature sycamores (Acer pseudoplanatus) are noted growing out of a hedgerow along the southern boundary.

Hedgerows

29. The southern hedgerow comprises mainly blackthorn (Prunus spinosa) within the Site boundaries, but along the road side additional species include dogwood (Cornus sp.), elder (Sambucus nigra) and cherry laurel (Prunus laurocerasus).

30. This hedgerow branches off north along the eastern boundary. This section is well maintained and contains hawthorn (Crataegus monogyna) alongside holly (Ilex aquifolium) and elder (Sambucus nigra). Very small amounts of dog's mercury (Mercurialis perennis), dog rose (Rosa canina) and ivy (Hedera helix) were noted in the narrow band of vegetation along the hedge base.

Habitats Summary

31. The Site comprises a limited array of habitats primarily of low ecological value. The hedgerow should be retained and protected where possible, and given its location along the boundaries this should be achievable.

Fauna

Bats

32. A moderate number of records have been returned for common and soprano pipistrelle, Leisler's bat, noctule, natterers bat, Daubenton, brown long-eared and more general bat records, with the closest record being of two undetermined species within 200 metres of the south west of the Site, across the main road (A629).

33. Records are primarily of field sightings, but with up to 13 bat roosts having been recorded in 2014 and 2015 within the Romticle Viaduct, 1.5 km to the south west of the Site.

34. The Site is unlikely to be of any specific value to foraging bats, generally lacking features attractive to this group, however low numbers of common species will still likely make use of the Site on occasion. The network of hedgerows around the Site will facilitate some commuting through the area.

35. The suitability of buildings and trees has been assessed against the criteria set out in Table 2 overleaf.

Table 2 Bat Roosting Suitability of buildings and trees

Suitability	Criteria
Negligible	Negligible habitat features on site likely to be used by roosting bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions, and/or suitable surrounding habitat to be used on a regular basis or by a larger number of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.
Moderate	A structure or tree with one or more potential roost sites that could be used due to their size, shelter, protection, conditions, and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only - the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protections, conditions and surrounding habitats.

Farmhouse

36. The building is a currently unoccupied, stone built farmhouse with a slate roof, and shares external walls with an adjacent barn and outbuilding.



Figure 6

General view of farmhouse.

37. The walls are for the most part well sealed however two locations were noted where there were significant cracks in the mortar, which may allow access into the wall cavity if present or provide a somewhat limited roost feature in itself.

38. Some cracks are also present at the verges, beneath the capping stones, and within the chimneys creating further potential roost features.



Figure 7

Deep crack in mortar.

39. Several tiles are missing along the bottom row and where the gutter sits proud of the wall in several points this may allow access to roosting areas at the wall tops or within the roof space.

40. Several displaced and a small number of missing slates are noted which may allow access to suitable roosting areas inside, though ultimately missing tiles will allow some water ingress reducing potential roost suitability in the immediate surrounding area. Gaps were also noted below the ridge tiles in multiple locations and in the adjacent outbuilding.

Barn

41. A large stone built barn is present immediately adjacent to the farmhouse, approximately half of which has a slate roof. Some of this has been replaced relatively recently, whilst the rest is missing.



Figure 8

General view of stone built barn with missing roof and collapsed wall section evident.

42. The stonework is in a poor state of repair with small cracks suitable for roosting evident in multiple locations, whilst occasional potentially larger crevices are provided beneath verge capping stones.



Figure 9

Showing large internal beams with crevices where beams intersect evident.

43. Large roof beams are present internally. Where these intersect other beams or walls, crevices suitable for roosting could be created. Multiple holes are present in the front of the intact slate roof, despite the rear appearing to have been re-roofed recently. The open nature of the building may reduce its suitability to support roosting internally but does not completely remove the risk of roosts.

Outbuilding

44. A small brick built garage is the only other building present on Site. The flat roof of the building has completely caved in and given its simple structure this is considered highly unsuited to roosting.



Figure 10

Garage with collapsed roof.

Table 3 Bat roost suitability summary.

Building	Features Summary	Bat Roost Suitability
Farmhouse	Sizeable cracks in mortar at verges and in stonework. Access to the wall tops, roof interior and ridge tiles.	*Moderate*
Barn	Multiple significant cracks in stonework. Crevices between internal beams and between beams and walls.	*Moderate*
Outbuilding	None, open to prevailing weather conditions.	*Negligible*

Amphibians

45. Local records have been returned for common frog and common toad in the study area but not the Site. Records of amphibians typically coincide within 100 metres of the river Don where several adjacent ponds are present with common frog spawn recorded. The closest record is situated 800 metres east of the Site.

46. As previously described, three ponds are present within 500m of the Site. Their approximate locations can be seen in the below figure.

47. The closest water body 'Pond 3' is situated c. 240m to the south of the Site, though housing and roads separate this from the Site.

48. Two further ponds, parallel to one another can be seen c.450m to the north west. These were not accessed during the survey but from mapping appear to have been recently created and are similarly separated from the Site by roads and housing.

Figure 11 Local waterbodies in relation to the Site.



Birds

49. A large number of records have been returned for a wide range of common birds within the desk study area – though only a single record of Mistle Thrush has been returned from within the Site.

50. It is likely that a variety of common garden birds will make use of the Site, although these are unlikely to have any significant dependence on the Site for nesting or foraging.

51. There is some very limited potential for the Site to support farmland UK BAP or red/amber list species such as Yellowhammer, chiefly associated with adjacent farmland and the hedgerow on Site, however species such as this are unlikely to be dependent on the Site.

Badger

52. A total of 23 badger records have been returned for the area, the most recent of which is dated from 2016. This is also the nearest record, being from within 600m of the Site and detailing an old sett.

53. No evidence of badger was noted within the Site boundaries and, given the prevalence of better, less disturbed habitat off site, the risk of badger establishing within the survey boundaries in the near future is considered to be low. Despite this, given the large number of records in the area and some dense scrub on Site a precautionary pre-commencement survey is recommended to ensure the continued absence of badger and prevent impacting this species.

Hedgehog

54. There are seven records of hedgehog from the surrounding area and although this species is unlikely to be dependent on the Site, they will likely pass through and forage within the Site on occasion. Some recommendations have been made in the conclusions section to ensure this species can remain on Site.

Invasive Species

55. Himalayan balsam is listed on Schedule 9 of the Wildlife and Countryside Act (1981), making it an offence to cause or allow it to grow in the wild. Himalayan balsam was found growing around the barn and its location has been marked on D-3112-01.1. This species is easy to eradicate from most areas, however it is very capable of spreading and is very successful along watercourses.

Key Findings

56. The Site is primarily comprised of habitats of limited ecological value which do not represent a constraint to development.

57. A single hedgerow and trees around the southern and eastern boundaries are features which should be retained and protected through development. These features offer an opportunity to further enhance the Site as described below.

58. The farmhouse and barn have both been found to have *Moderate* suitability to support roosting bats and at least two further surveys will be required in the next bat active period (May – August 2018) to determine the status of roosting within them.

59. Precautionary badger and nesting bird surveys have been recommended prior to commencement due to the presence of badger records in the area and suitable habitat for nesting. Further surveys are summarised in the below table.

60. Hedgehog is a NERC Act Section 41 species and is likely to be occasionally present on Site. Plans should seek to retain access to the Site for hedgehog by providing a minimum 150mm diameter hole in all new walls or fences. Native hedges should be favoured as boundaries where possible.

Table 4 Additional surveys recommended

Survey	Rationale	Timing
Bat Emergence Surveys	Bats are European Protected Species. In order to avoid impacts, further survey will be required to ascertain the status of roosting and inform mitigation should roosting be found.	May – August (inclusive).
Badger survey	Confirmation of the continued absence of this species from the site should be sought at a suitable time.	Walkover survey - ideally March – April, prior to clearance.
Nesting bird surveys	Destruction of active nests is prohibited by law* Survey will be needed prior to the Site clearance of only if carried out during the period March - August (inclusive). This would allow and active nests to be identified and protected.	Immediately prior to clearance.

Ecological Enhancement

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

62. The following themes, detailed in BS: 4202 Biodiversity Management Plan, provide opportunities for the proposals to deliver such a contribution:

- Hedges should be extended and improved via additional native species planting. Suitable species may include hazel (Corylus avellana), hawthorn (Crataegus monogyna), blackthorn (Prunus spinosa), holly (Ilex aquifolium) and field maple (Acer campestre).

- Tree planting should be focused on native canopy species where possible such as oak (Quercus robur & Quercus petraea), lime (Tilia cordata, Tilia x europaea & Tilia Platyphyllos) and ash (Fraxinius excelsior).

- Bat and bird boxes could be incorporated into new builds. Suitable bat boxes may include the ibstock bat brick or Schwegler 2FE. Bird boxes should be aimed at suitable declining species and may include the Schwegler sparrow terrace 1SP or starling boxes.

Appendices

1. Extended Phase 1 Habitat Plan
2. Explanatory Notes and Resources
3. Bat Activity Survey Rationale
4. Information on legislation / protection

References

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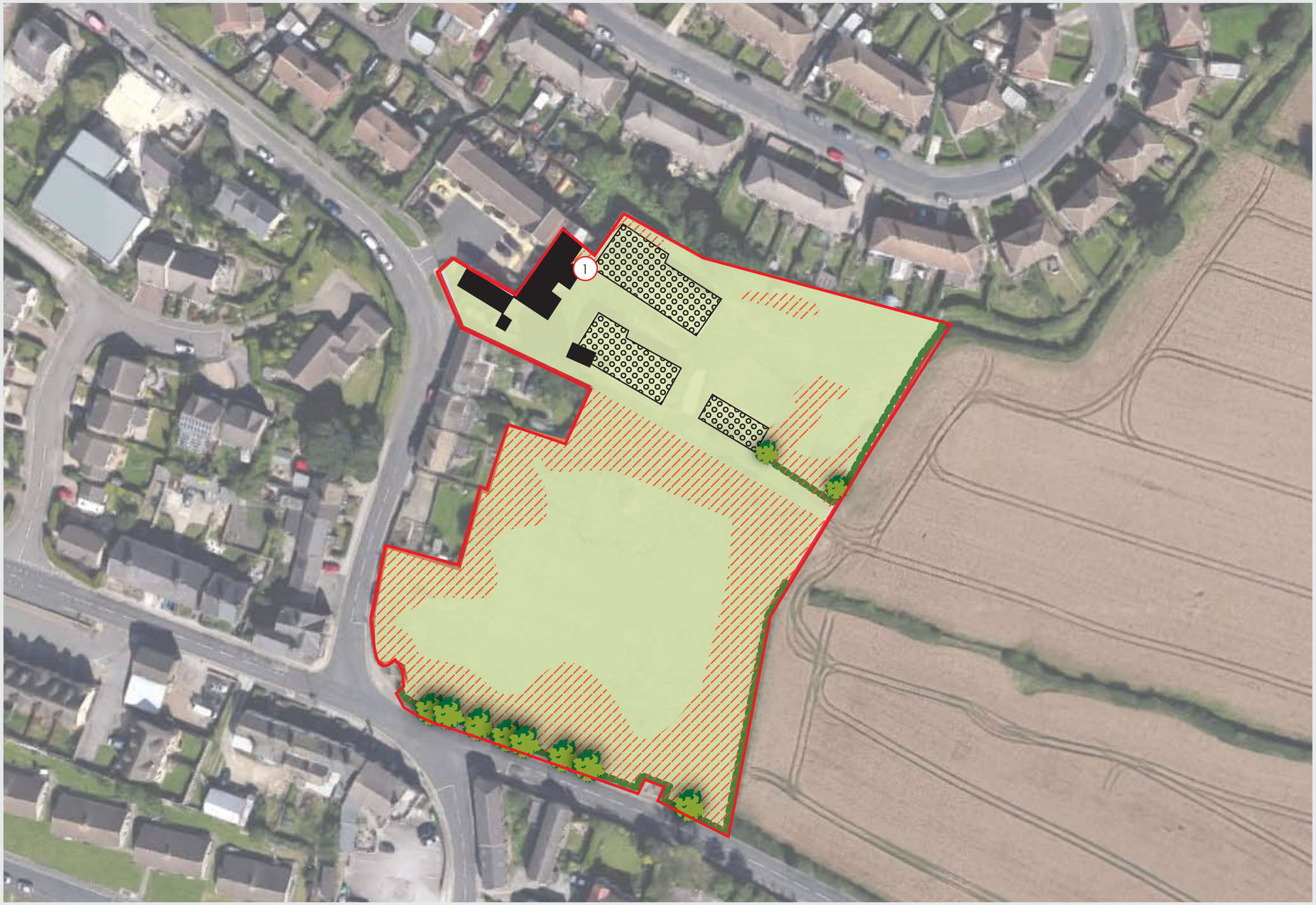
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Appendix 1 – Extended Phase 1 Habitat Plan



Rank Grassland

Competitive/ Scrub

Buildings

Hardstanding

Hedgerow

Trees

Target notes:

1 Himalayan Balsam

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Project: Land off Halifax Road

Title: Extended Phase 1 Habitat Plan

Drawing Number: D-3112-01.1

Scale: Do not scale Date: December 2017

Revision:

Appendix 2 – Explanatory Notes and Resources Used

Site context

63. 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

64. 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

65. 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

66. 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

67. 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').

68. Records of notable species supplied from a 2km area of search by West Yorkshire Ecology(WYE) are used to inform this appraisal.

69. 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

70. 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.

71. 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.

72. 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

73. 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
Tree Sparrow
Twite
Great Crested Newt
Salmon
Bullhead
White-clawed Crayfish

Glow Worm
Dingy Skipper
Bluebell

Upland Heathland
Blanket Bog
Purple Moor Grass and Rush Pasture
Reedbeds
Ponds
Rivers
Open Mosaic Habitats on Previously Developed Land

Appendix 3 – Bat Activity Survey Rationale

74. The Bat Conservation Trust Guidelines (BCTG) (Collins 2016) is now widely accepted as providing a basis and rationale for scoping and conducting bat surveys. It is acknowledged that the guidelines provide a wealth of background and are a very useful tool in standardising approaches to survey, it is also felt that an over reliance on some of the guidelines within this document can result in the provision of complicated surveys where they have significant consequences for the cost, or timescale of a large project, but could never deliver positives for bat conservation.

75. Taking the BCTG document as a whole, Chapter 2 helps the reader understand whether or not surveys are required, and that in the context of planning and development survey is required in relation to ensure;

- the avoidance of legal offences, and;
- the provision of a sufficient level of information - such that will allow the Local Planning Authority to make an informed decision on the proposals and their potential impacts on the Favourable Conservation Status (FCS) of bats.

76. Attendance at seminars presented by, and discussions with, those involved in production of the BCTG document has emphasised the point that it is within the remit of the consultant ecologist to make a decision on the necessity and scope of surveys - they will use the guidelines in doing so but are not in any way bound by them: this is reflected in Section 1.1 of the guidelines -

> *'The Guidelines do not aim to either override of replace knowledge and experience. It is accepted that departures from the guidelines (e.g. either decreasing or increasing the number of surveys carried out or using alternative methods) are often appropriate. However, in this scenario an ecologist should provide documentary evidence of (a) their expertise in making this judgement and (b) the ecological rationale behind the judgement. '*

77. Such decisions require a consideration of the potential of the project to impact on bat habitat, alongside analysis of the value of habitat on and around the site and of local records and the likelihood that bats might occur in significant numbers. Our reports aim to present information on how we have arrived at our decision on the site, what assumptions we have based this on, and where further survey is recommended we indicate what the objective of this survey should be and how best this would be achieved.

78. Given the farmhouse and barn have been evaluated as having moderate roost potential emergence surveys will be required to ascertain the status of roosting and inform mitigation should roosting be found.

79. Due to the Site being primarily comprised of lower value habitats for this group, it's open nature, location next to a busy road and small size, it is felt that the Site is unlikely to be of any specific foraging value to this group. Accordingly, it is anticipated that bat activity transects are unlikely to reveal any relevant information on this group.

Appendix 4 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.