Brooks Ecological
Grounded advice

Wood Street, Scissett

Preliminary Ecological Appraisal Report

Report Ref. ER-7197-01

17/05/2024

Phoenox Textiles Ltd.

Report reference	**ER-7197-01 – Preliminary Ecological Appraisal Report**
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Date	17/05/2024
Report duration	In accordance with CIEEM (2019), unless otherwise stated the findings of this report remain valid for a period of 18 months. After this period advice should be sought on the scope of any updating work required.

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Summary

This report is produced to inform Phoenox Textiles Ltd. of potential ecological constraints associated with their proposed development site and the need for further reporting or output to support a planning application.

This 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 May 2024.

Key Findings

The Site encompasses a series of connected industrial buildings, alongside an area of woodland and the River Dearne. Most of the Site, being hardstanding, it is of limited ecological value, with the woodland and river being features of higher ecological value. Impacts upon these habitats should be kept to a minimum, and suitable mitigation put in place.

Biodiversity Net Gain

Details on measurement of the Site's biodiversity and the implications of complying with the requirement to provide a net gain for biodiversity are provided in our separate report ER-7197-03.

A Modular River Physical (MoRPh) survey has been completed on the River Dearne to inform the BNG Assessment; see report ER-7197-02 for details.

Further Surveys

Further surveys have been recommended for bats and white clawed crayfish.

Introduction

1. Brooks Ecological Ltd was commissioned by Phoenox Textiles Ltd. to carry out a Preliminary Ecological Appraisal (PEA) of land at Wood Street, Scissett. The survey includes land within the red line boundary shown in Figure 1, opposite.
2. This report is produced with reference to British Standard BS:42020 'Biodiversity Code of Practice for Planning and Development' and the CIEEM (2017) Guidelines for Preliminary Ecological Appraisal.

Purpose of a PEA

3. A PEA is an *initial assessment* of the baseline for a proposed development site and establishes whether the Site is likely to be constrained by ecology, and whether more information is needed to identify the ecological baseline.
4. The subsequent Preliminary Ecological Appraisal Report (PEAR) is intended to give guidance to a developer and assist with the early stages of project planning and design. Where a site is not complex or constrained, and no additional ecological input is necessary, the PEAR *may* be sufficient and suitable to support a planning application.
5. Biodiversity Accounting metrics are used separately to quantify the value of a Site in Biodiversity Units, which helps in the later stage of assessing the ecological impacts of the proposed development. This process is set out separately in the Biodiversity Gain Report which accompanies this PEAR.

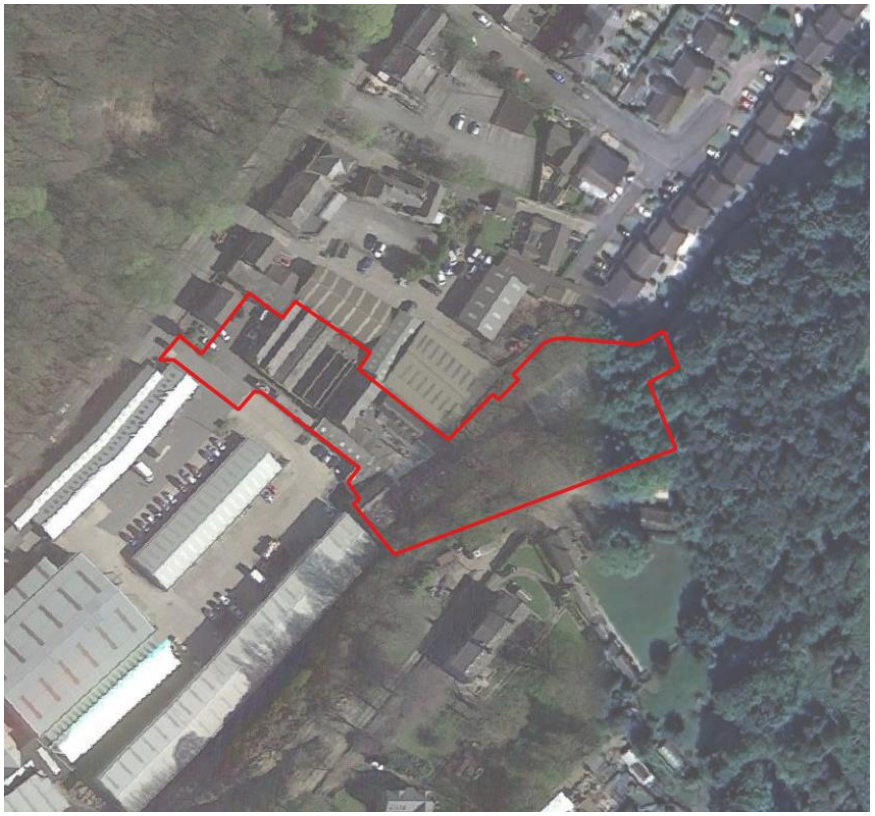
Proposals/Reason for PEA

6. The PEA has been commissioned to inform proposals to reconfigure the Site, to replace existing buildings with new modern industrial units.

The Site

7. The application site 'the Site' encompasses a series of connected industrial buildings, built over a range of time periods with different construction techniques and materials.
8. For the purposes of metric calculations, the Site area has been measured using GIS against the provided red line boundary as 0.50 ha.

Figure 1 The Site (red line boundary).



Desk Study

Landscape

9. The Site is located along the southern edge of Scisset, within a small light industrial estate.
10. The Site lies within a narrow valley, with industrial land to the north and south, and woodland to the east and west.
11. The River Dearne passes through the landscape from southwest to northeast, with a mix of woodland and built development flanking it. Beyond this, the land use switches to mixed farmland.
12. The Site overlies a bedrock geology of Pennine Lower Coal Measures Formation (mudstone, siltstone and sandstone), which is likely to give rise to sandy, well-drained soil conditions, ranging from neutral to slightly acidic.

Wildlife Corridors

13. The River Dearne represents the most significant wildlife corridor locally; see Figure 2 opposite.
14. This passes through the Site and forms a corridor through Scissett to the northeast. To the southwest, the River Dearne is culverted for circa 180m before opening up into woodland – limiting its function as a corridor in this direction.

Figure 2 Analysis of wildlife corridors visible on mapping in relation to the Site.

Designations

15. 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.

Statutory Designations

16. A search has been made to identify any nationally designated sites within a 2km radius of the Site, or internationally designated sites within a 5km radius.

17. There are no designated sites within these search parameters.

SSSI Impact Risk Zones (IRZs)

18. The Site lies within at least one IRZ but does not fall into any of the highlighted categories which require the LPA to consult with Natural England in relation to potential impacts.

Non-Statutory Designations

19. There are six Local Wildlife Sites (LWS) in the search area, these being:

    - Blacker Wood LWS
    - Deffer Wood LWS
    - High Bridge Wood LWS
    - Hob Royd Shrogg and Miry Greaves Shrogg LWS
    - Park Gate Dyke LWS
    - Riding Wood LWS

20. None of these LWS's fall within the Site's Ecological Zone of Influence (EZoI), and as such, impacts upon them as a result of this development can be ruled out.

Nature Improvement Area

21. The Site is not within any Nature Improvement Area.

Mapped Ancient Woodland

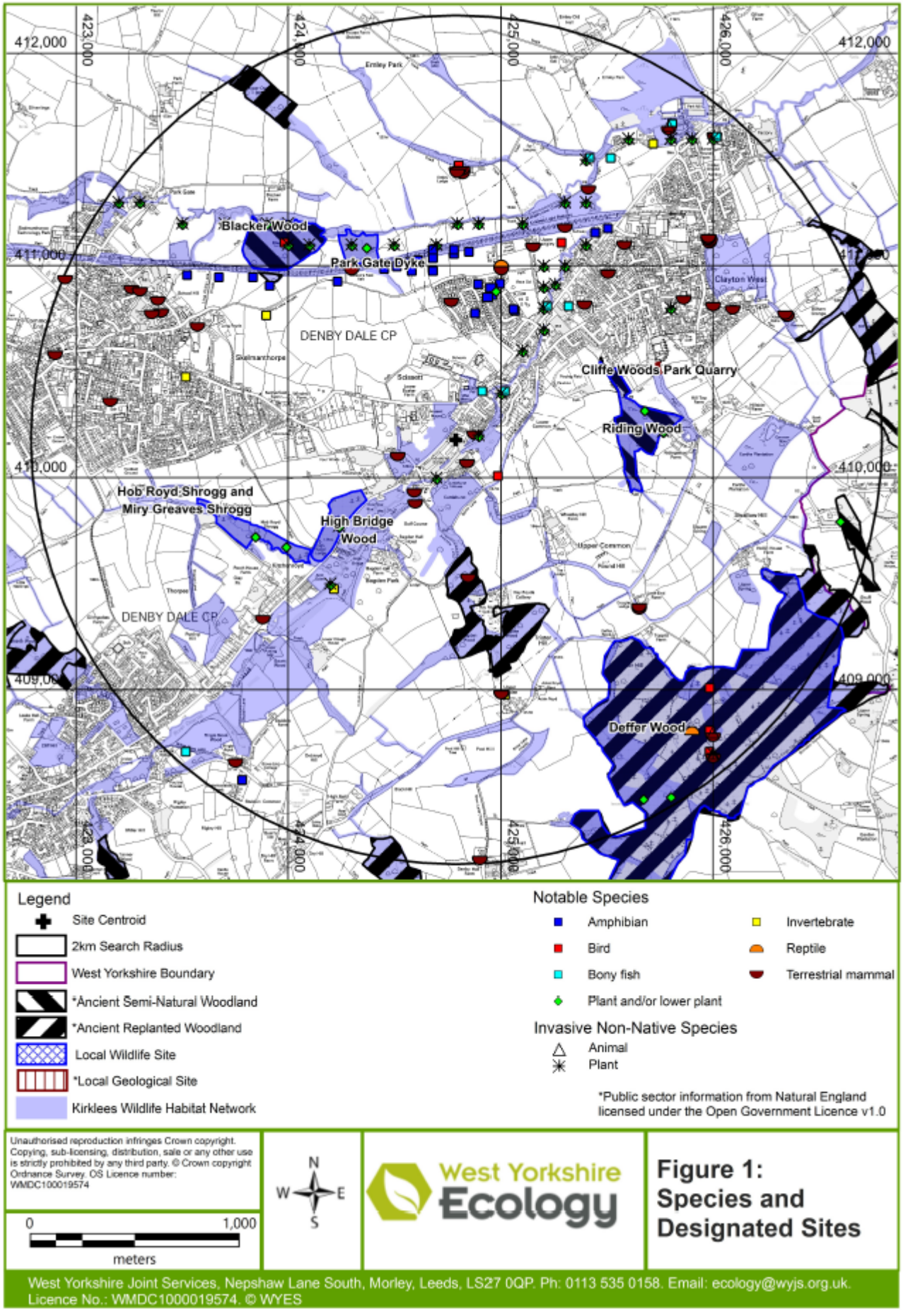
22. The Site does not contain any woodland mapped as either ancient or ancient re-planted, nor are their any such woodlands within a 15m radius of the Site boundaries.

Wildlife Habitat Network

23. Most of the woodland within the southern part of the Site is mapped as part of the Kirklees Wildlife Habitat Network (KWHN). This can be seen in Figure 3 below.

Figure 3 Kirklees Wildlife Habitat Network in relation to the Site.

Figure 4 Records of designated sites and notable species within 2km of the Site; West Yorkshire Ecology.



Survey

24. The survey was carried out during May 2024[1] and followed the principles of Extended Phase 1 Habitat Survey methodology (JNCC, 2010).

25. The timing of the survey meant that it was possible to confidently classify the type and condition of habitats present on this Site.

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

27. Whilst most of the Site was accessible, at least 10% of the Site was inaccessible due to very dense vegetation, which could not be closely inspected. This could have concealed invasive species or protected species evidence.

Habitat Appraisal

28. The Site's habitats are described in order on the following pages. In line with the requirement to provide information on Biodiversity Net Gain (BNG), habitats are named in accordance with the UK Habitats classification system. We have used the UK Habitats v2.01 guidance in identifying habitats. Habitat descriptions are divided into the 'distinctiveness' categories used in the calculations presented in the Biodiversity Gain Assessment, with more weight being afforded the more distinctive/important habitats.

29. Generally, the following apply to each tier of distinctiveness, although some authorities might highlight some lower distinctiveness habitats as having a higher importance locally. Where relevant we have highlighted these.

Very Low Distinctiveness Habitats

30. Habitats of little or no habitat value, i.e., lacking any significant native vegetation, but could still provide supporting habitat for protected or notable fauna such as birds or bats. In the context of BNG, their areas are included in calculations, but mitigation or compensation is not required.

Low Distinctiveness Habitats

31. Habitats which are ubiquitous, often which have been created or modified intentionally. They tend to lack diversity of species and structure. They are unlikely to support notable flora but could still provide supporting habitat for protected or notable fauna. In the context of BNG, they are included in calculations, but compensation/mitigation needs only to provide habitat of similar or higher distinctiveness.

Medium Distinctiveness Habitats

32. Habitats which are common but provide a higher level of structural and species diversity. Though unlikely to support more notable assemblages, species of interest could be present here and they are more likely to be important supporting habitat to fauna. In the context of BNG, mitigation needs to provide habitat of the same broad habitat type, or that of higher distinctiveness.

High Distinctiveness Habitats

33. Habitats which are more natural and contain more important assemblages of plants and potentially species which are rare in their own right. They will provide good habitat for fauna. These habitats are likely to be targeted as conservation priorities and will be the subject of additional policy guidance or legislation. In the context of BNG, whilst mitigation or compensation for loss or damage is possible, provision of more of the same type of habitat would be required, which (with a few exceptions) is likely to be difficult.

Very High Distinctiveness Habitats

34. These are the UK's rarest/best habitats. They will be present in very particular locations and a range of rare or important plant and animal species will depend on the particular conditions they provide. These habitats will be the subject of restrictive policy guidance or legislation. Whilst the BNG metric does not preclude mitigation or compensation in respect of these habitats, creation of the same habitat type would be required, and this would range between very difficult/expensive and impossible.

Irreplaceable Habitats

35. These are habitats of high biodiversity value, which are so difficult to recreate that it would be impossible to achieve the requirement to increase biodiversity on top of no net loss. These habitats have significant protection in the NPPF; any impacts from development require a strong justification and will flag as unacceptable in the Biodiversity Metric. Bespoke compensation for any loss of these habitats must be agreed with the LPA.

Condition Assessment

36. Our condition assessment for each habitat described references where available the criteria set out in DEFRA (2024) Statutory Biodiversity Metric Condition Assessments. A completed version of this spreadsheet is provided digitally with the Biodiversity Gain Report which accompanies this report.

[1] This Report has been prepared during May 2024 following a visit to the Site in May 2024, 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.

Habitats of Low/Very Low Distinctiveness

Figure 5 Approximate location and extent of these habitats.

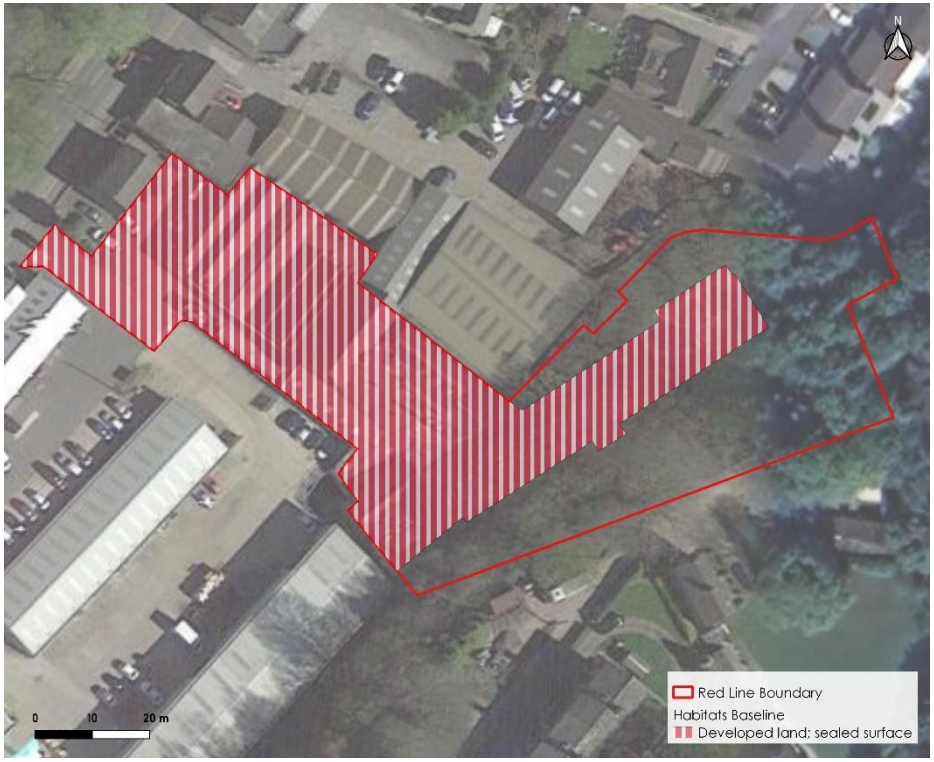


Table 1 Summary – Habitats of Low/Very Low Distinctiveness.

UK Habitats	Summary Description
Developed land; sealed surface	The Site encompasses a section of tarmac access road and a ramshackle collection of industrial buildings, of varying ages and construction style. Buildings are described in greater detail in the Preliminary Roost Assessment section.

Habitats of Medium Distinctiveness

Figure 6 Approximate location and extent of these habitats.

Table 2 Summary of Medium Distinctiveness habitats.

UK Habitats	Summary Description
Other broadleaved woodland	Part of the Site is occupied by secondary broadleaved woodland, growing over a northwest facing slope. Construction of the southern most buildings has cut into the slope, resulting in vertical (non-reinforced) cliffs. The canopy is dominated by semi to early mature sycamore, with occasional lime, elm, ash, goat willow, silver birch and beech. The understorey is sparce, comprising of honeysuckle, young goat willow, black currant, raspberry, elder, cypress and cotoneaster. The ground layer comprises primarily of either bare ground/ leaf litter, or dense growth of tall ruderal species such as nettle and bramble. Scattered amongst this is a typical list of shade tolerant forbs and ferns. A small number of ancient woodland indicator species are also scattered along the wooded banks of the river, including ramsons, enchanters nightshade, dog's mercury, yellow archangel and wood speedwell. No mature, veteran or ancient trees are present on-Site.

Watercourses

Figure 7 Approximate location and extent of these habitats.

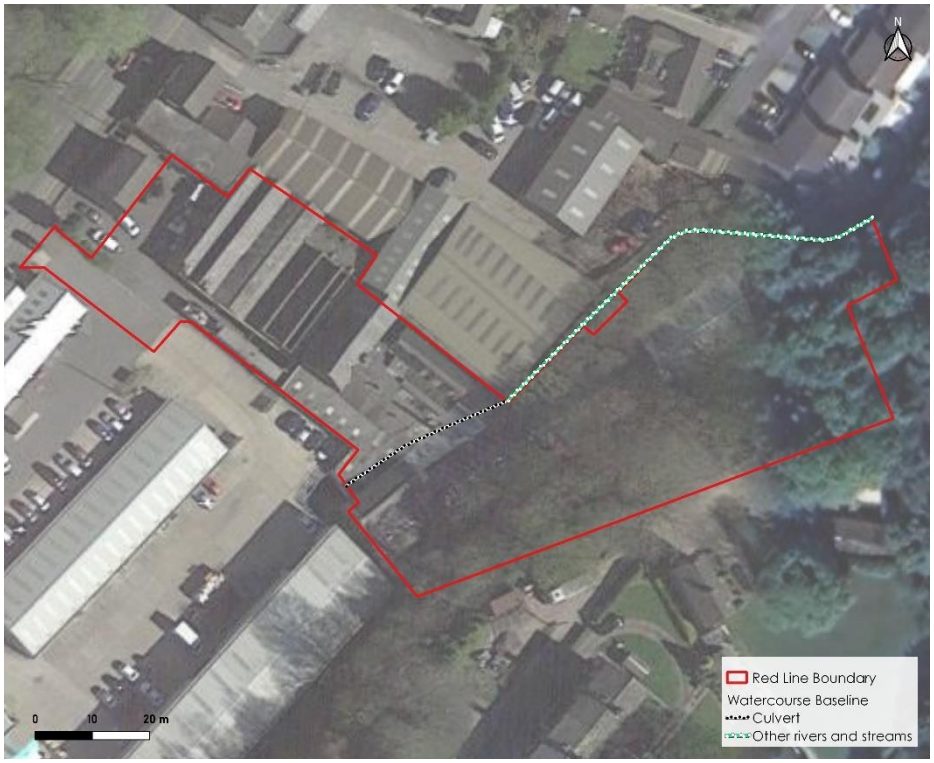


Table 3 Summary of Medium Distinctiveness habitats.

UK Habitats	Summary Description
Culvert	The River Dearne enters the Site through a closed culvert passing beneath the industrial buildings.
Other Rivers & Streams	Whilst the river maintains a fairly natural profile, much of the northern (far-side) banks are engineered. The southern (near-side) banks are not engineered, and take on a more natural profile, being tall and steep, ranging from 1m to circa. 2.5-3m high as the river progresses eastwards. The channel is circa. 2-3m wide and shallow, with the riverbed comprising of loose rocks and cobbles. The river is entirely shaded by surrounding buildings and woodland, with no in channel vegetation noted. The steep banks are vegetated by woodland ground flora to the south and scattered Himalayan balsam to the north.

Photographs

Figure 8 Developed land; sealed surface.

Figure 9 Other broadleaved woodland.

Figure 10 Other broadleaved woodland.

Figure 11 Culverted section of River Dearne.

Figure 12 River Dearne as it leaves the culvert.

Figure 13 River Dearne as it leaves the Site.

Faunal Appraisal

37. The following pages discuss only the groups and species that could be reasonably expected to be found on the type of habitats present on, or adjacent to, the Site.

Amphibians

Desk Evidence

38. Mapping highlights the presence of three ponds within a 250m radius, as shown in the figure opposite. Ponds 1 and 2 were visited by the surveyor and found not to be present, either having been lost or mapped incorrectly. Pond 3 is a typical mill pond connected to the River Dearne. Given the likely presence of coarse fish, this pond is considered unlikely to provide suitable breeding habitat for amphibians.

39. There are records of common frog, common toad, palmate newt, smooth newt and great crested newt (GCN) within the 2km search area. 27 records relate to GCN, all of which are clustered around gardens and farmland to the north, circa. 620m-920m from the site. Most of these records relate to survey completed in 2017, with counts either not included, or specifying less than 5 adults.

Field Evidence

40. Suitable breeding habitat is not present on-Site, and only a single pond is present within 250m of the site boundaries; this being likely unsuitable (due to the presence of fish) and disconnected from the Site by built development.

41. Whilst the woodland provides suitable terrestrial habitat for this group, the absence of breeding habitats means the likely absence of this group from site can be reasonably concluded.

Summary Evaluation

42. The likely absence of GCN from the Site can be reasonably concluded.

Further Surveys and Recommendations

43. No further surveys or precautions are considered necessary.

Figure 14 Ponds mapped in relation to the Site.

Bats

Desk Evidence

44. Records have been returned for common and soprano pipistrelle, brown long-eared, noctule and natterers bat, along with indeterminate pipistrelle and myotis species. Nineteen records relate to roosts, none of which relate to the Site or neighbouring properties.

Field Evidence (Roosting)

45. A single large building is present on-Site, comprising an agglomeration of 11 distinct structures. These are labelled B1 -11 on the figure overleaf, and described in the table below.

46. Trees have been inspected from ground level, with none found to contain any potential roost features (PRFs).

Table 4 Bat Roost Suitability Assessment.

Ref	Notes	Suitability
B1	Single-store, single-single, breeze block building, with corrugated metal cladding to wall tops and roof. Cladding well sealed, with no points of access.	None
B2	Single-storey, red brick and metal frame building, metal soffit and guttering to eaves – entirely sealed with no points of access. Corrugated asbestos roof.	None
B3	Mixed stone and brick construction. Masonry gaps to northeast & southwest elevations, providing access to wall cavities. Gaps along eaves leading to wall top and roof structure. Fronting onto River Dearne.	Moderate
B4	Single storey brick structure, with corrugated metal roof and chimney. Most wall sealed by surrounding buildings. No PRF's.	Negligible.
B5	Brick walls topped with corrugated metal cladding. Corrugated asbestos roof – single pitch. No PRF's.	Negligible
B6 & B7	Internal buildings – limited access for inspection. Mix of stone and brick walls, potential gaps along eaves. Small brick chimney. Double pitch late roofs, some slipped coping stones and roof titles.	Low
B8	Two-storey stone building with double pitch slate tile roof. Verges well sealed. Gaps under eaves leading to wall top and roof structure. Some slipped roof tiles.	Moderate
B9	Single storey stone building. Saw tooth roof, glass on northern aspect, slate to south. roof clad with wooden boarding internally. Some raised tiles.	Low
B10	Single-storey, metal clad building with double pitch roof covered in corrugate asbestos.	Negligible
B11	Single storey, solid brick construction. Saw tooth roof. Gaps under raised lead work. Some slipped tiles. Damaged ridge tiles.	Low

Field Evidence (foraging and commuting)

47. The Site encompasses a small section, of a much a larger block of broadleaved woodland, alongside industrial development. Whilst the woodland, and associated watercourse, will provide suitable foraging habitat for this group, its location will most likely limit its value to this group, being subject to noise and light pollution. Large areas of similar or better foraging habitat is present locally, which is subject to much lower levels of human disturbance. The Site is therefore not expected to attract significant foraging activity, nor would it be expected to be of importance to any local bat populations.

48. The River Dearne and associated woodland is likely to function as a dispersal route for bats travelling northwards, away from the Site. To the south, the river is culverted, meaning that bats are likely to disperse southwards through the site along the river, and would instead follow the tree line behind neighbouring industrial properties to the south.

Summary Evaluation

49. Whilst there is the potential for bats to roost on-Site, and commute along the river and adjacent woodland/ tree line, the Site itself is unlikely to be of importance to this group as a foraging resource. Direct habitat loss associated with the proposals are minor, and unlikely to be significant.

Further Surveys and Recommendations

50. Further surveys are recommended on building B3, B6, B7, B8 B9, and B10, to confirm the status of roosting bats.

51. Dedicated activity surveys are not considered necessary, with activity easy to predict. A sensitive lighting strategy is recommended, to ensure development does not introduce any additional light spill onto the woodland or watercourse. are not recommended. There would be opportunities to provide new roost sites.

Figure 15 Building plan.

Bat Roost Suitability Assessment

Figure 16 View of B1

Figure 17 View along northern elevation of B2

Figure 18 Internal view of B1 & 2.

Figure 19 View of B3

Figure 20 View of B4

Figure 21 View of B5

Figure 22 Limited views of B6 &7

Figure 23 Limited views of B6 &7

Figure 24 Internal views of B6 & 7

Figure 25 View of B8 & 9

Figure 26 View of B9

Figure 27 View of B10

Birds

Desk Evidence

52. A typical list of bird records was returned, covering common and declining garden species, as well as woodland and farmland birds. Most of these records relate to surveys completed between 1970-1988, but are still likely to be representative of the local bird assemblage.

Field Evidence

53. A small number of birds were noted on-Site during the survey, these include blackbird, mistle thrush, woodpigeon, bluetit, jackdaw and great tile, along with grey wagtail and mallard foraging within the river.

Summary Evaluation

54. A small number of territories of common species could be expected within the woodland and buildings. However, based on its size and habitats the Site will not be important to local bird populations.

Further Surveys and Recommendations

55. No further surveys are considered necessary to demonstrate current baseline in respect of birds.

56. Standard precautions apply in respect of restrictions on clearing vegetation during the nesting season.

Badgers

Desk Evidence

57. There are no badger records within 200m of the site centroid.

58. The nearest sett record is over 700m from the site centroid.

59. Your site centroid falls within the area of increased probability of badger activity.

Field Evidence

60. No evidence of badger activity was found on-Site.

Summary Evaluation

61. The woodland provides suitable habitat for badgers to establish setts, however, no evidence of badger activity was noted on site and there are no records for badgers within 700m.

Further Surveys and Recommendations

62. The likely absence of badgers from site can be reasonably concluded at present.

63. Given the high mobile nature of this species, and the presence of suitable habitat on-Site, a precautionary pre-works check for setts is recommended – co-ordinated with Site clearance.

Riparian Mammals

Desk Evidence

64. Two records have been returned for otter, dating to 2006/07 and relating to a downstream section of the River Dearne circa 1.3km north.

Field Evidence

65. No evidence of otter activity was noted on-Site; however, a detailed inspection of the watercourse was not undertaken.

Summary Evaluation

66. The river provides suitable habitat for otters, with the likely presence of this species reasonable to assume. There are no signs of holts or regular couching sites within the site, and as such, otter activity here is likely to be restricted to foraging and dispersal.

Further Surveys and Recommendations

67. Further survey is not considered necessary, as likely presence can be assumed.

68. A sensitive lighting scheme is recommended, which demonstrates that development will not lead to any additional light spill onto the river corridor.

White-clawed crayfish

Desk Evidence

69. Two records of white clawed crayfish (WCC) have been returned for the Site, both dating back to 2003. These relate to sections of the River Dearne circa. 900m upstream and 1.7km downstream of the Site.

70. There are no recent records of WCC and no records of any invasive non-native crayfish species.

Field Evidence

71. The River Dearne provides suitable habitat for this species, with good water levels and plentiful loose rocks.

Summary Evaluation

72. WCC have become a rare species in Britain, with the spread of invasive crayfish species and crayfish plague being the main contributors to their decline. Although no records have been submitted, there is a high risk that invasive crayfish will be present along this section of watercourse, and the likelihood of WCC still being present is very low. However, their absence can not be concluded at this stage.

Further Surveys and Recommendations

73. An environmental DNA (eDNA) survey is recommended on the watercourse, testing for the presence of WCC, signal crayfish and crayfish plague.

Invasive Non-Native Species (INNS)

74. INNS are species listed on Schedule 9 of the Wildlife and Countryside Act (1981), for which it is an offence to cause or allow it to grow in the wild.

75. Himalayan balsam was found growing in small amounts along the banks of the River Dearne[2].

Survey constraints

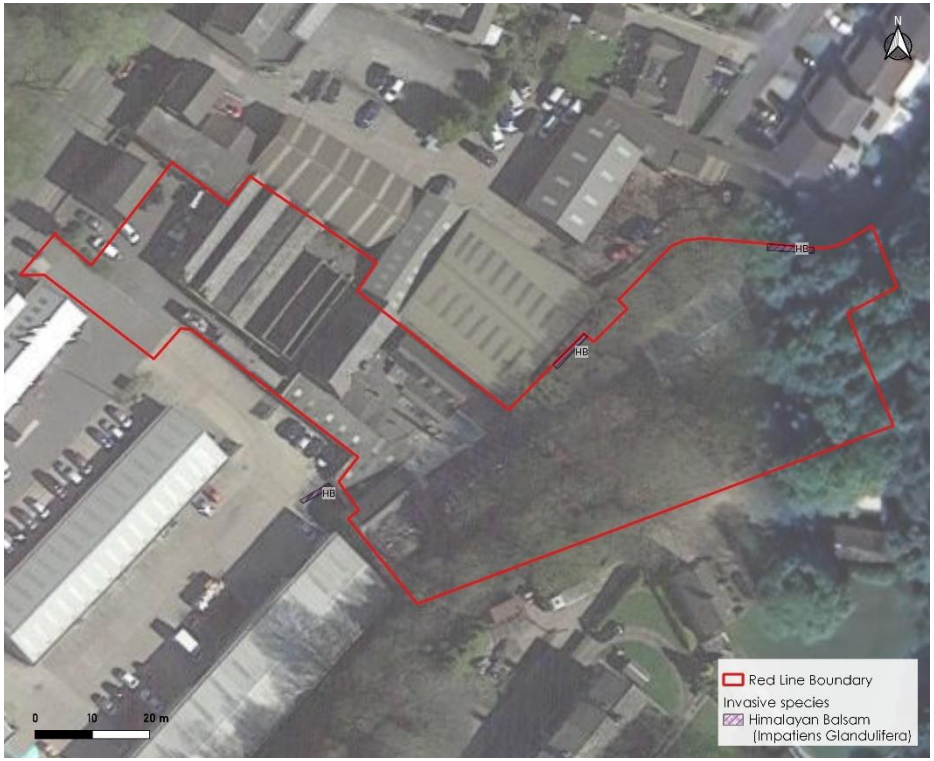
76. This Site presents a small risk of supporting undetected INNS based on the following factors:

- Areas of site inaccessible to survey
- Proximity to nearby potential sources of infection
- Potential for tipping of material

77. Should further assurances be needed in relations to INNS, a dedicated Invasive Weed Survey should be commissioned.

Figure 28 Himalayan balsam growing along the River Dearne.

Figure 29 INNS plan.



[2] Whilst our ecologists are trained in the identification of invasive species, this report is not a dedicated invasive species survey. Detectability of invasive plant species can be affected by several factors, and conclusive determination status, or extent, is not possible through preliminary survey alone. As the presence of invasive species can generate significant costs to development, the client may wish to instruct a dedicated invasive species survey prior to entering into contracts.

Ecological Constraints

Habitat Value

78. The usual approach to development is to minimise any net loss of biodiversity towards a gain in biodiversity value where this is possible on-Site. Our separate report on Biodiversity Gain sets out the position of the Site in terms of measured biodiversity.

79. Irrespective of the Biodiversity Gain process, development should still seek to retain what is best about the Site.

80. The plan opposite shows the Site in the context of mapped habitat distinctiveness with the aim of informing the design of any layout. The River Dearn is highlighted as a feature of high distinctiveness, which will need to be suitably protected during construction and beyond.

81. The broadleaved woodland should also be retained and protected wherever feasible, with any losses kept to a minimum and suitable mitigated.

82. In terms of structure and connectivity, the river and surrounding woodland are likely to act as corridors for a range of faunal groups/ species, including bats, otter and birds. This function will need to be maintained through development.

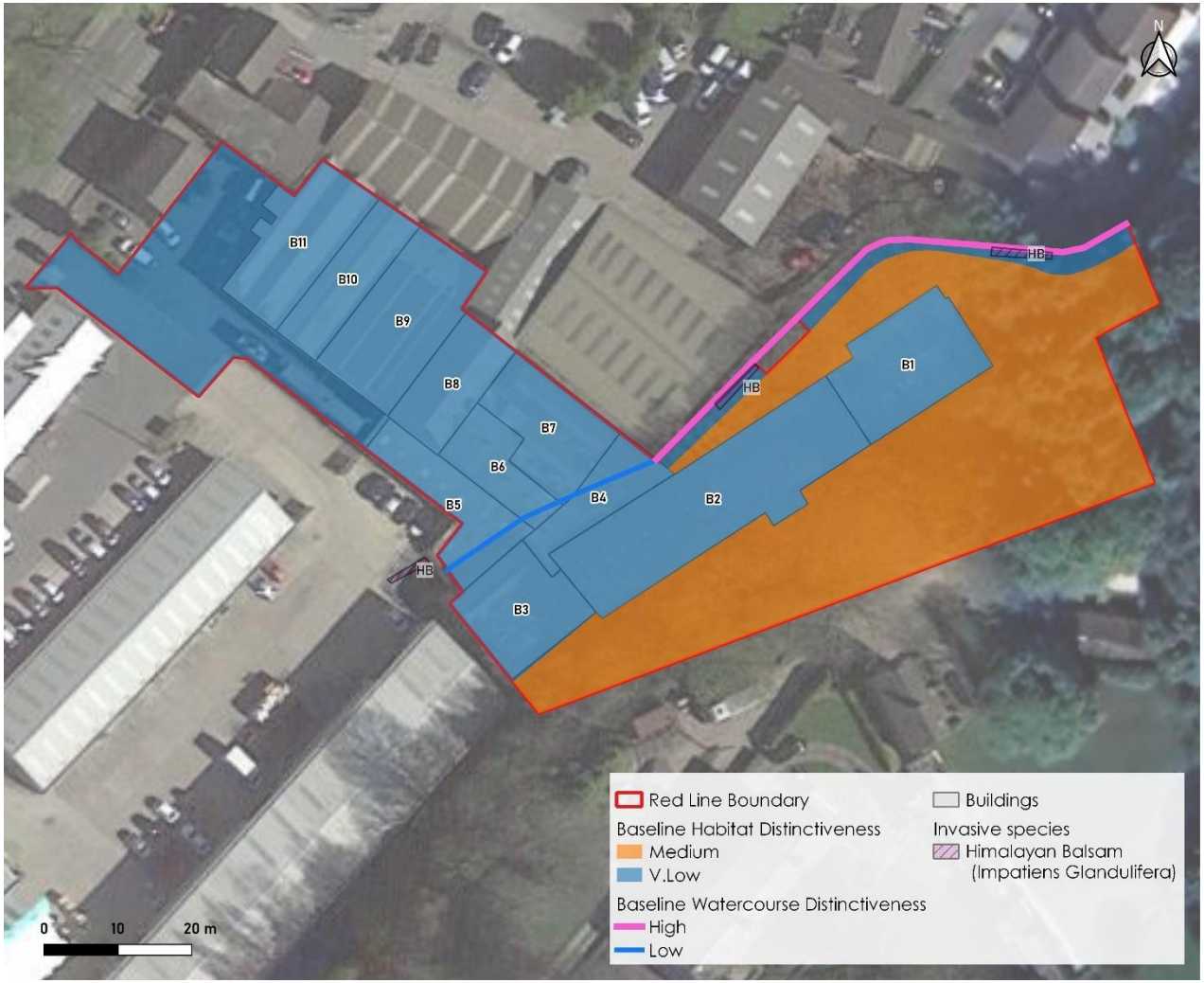
83. Small amounts of Himalayan balsam are present along the banks of the River Dearne.

Faunal constraints

84. Buildings have been assessed as having bat roost suitability, whilst the river has the potential (all be it limited) to support white clawed crayfish.

85. The watercourse is also expected to support otters (foraging and commuting only).

Figure 30 Distinctiveness of habitat.



Ecological Opportunities

86. Ecological opportunities at the Site relate to:
    - Potential to enhance the broadleaved woodland, through a combination of planting and management.
    - Installation of bat roosting and bird nesting features within the structure of new buildings, and on suitable woodland trees.
87. A Biodiversity Management Plan would be useful in defining these enhancements and can be secured by standard condition.

Figure 31 Ecological Opportunities.

Conclusions & Recommendations

Planning considerations		
Recommendation	**Rationale**	**When**
R1 Additional Surveys		
R1.1 Vegetation	N/A	-
R1.2 Fauna	Bat Emergence White clawed crayfish eDNA testing	May to August April to October
R2 Produce a layout which minimises loss of biodiversity	Engage with the Constraints and Opportunities set out above, involve your ecologist in designs at an early stage. The proposals will need to consider the NPPF hierarchy of Avoid–Mitigate–Compensate in minimising any loss of biodiversity. Biodiversity Net Gain (BNG) policy mandates a minimum 10% Net Gain in Biodiversity Units, and the LPA may request additional gains. Your layout may need to change to accommodate your findings from R1 surveys.	During the design process
R3 Design	Make sure your design team follows ecological advice to and make sure there are no design conflicts. Produce a habitat retention plan at an early stage - which can be used to inform BNG and maximise scores. A habitat retention plan should identify areas which can be excluded from any impacts of clearance and construction. In producing a plan you should consider the need to provide (amongst other things) Site compounds, to store and move materials, to install drainage, flood storage, access and services - all with suitable easements.	During the design process
R4 Biodiversity Net Gain (BNG)	Carry out a BNG Assessment using the Statutory Biodiversity Metric Calculation Tool and accompanying Condition sheets produced by Defra.	During the design process
R5 Produce a Biodiversity Management Plan	To specify in detail how the development will cater for biodiversity on-Site and to show how habitats incorporated will be managed.	Delivery report Suitable for planning condition
R6 Produce a CEMP (Biodiversity)	To show how the Site will be built without affecting surrounding habitats and minimising risk of affecting protected or notable fauna. The CEMP will detail the following protection measures: • Location of Biodiversity Protection zones or fences. • Pre- or during- clearance ecology checks for protected species. • Protected/notable species method statements where licensing in not needed. • Nesting bird management.	Delivery report Suitable for planning condition
R7 INNS Management Plan	This provides a formal INNS Survey and sets out management prescriptions and timings in detail. It can provide security for the Main Contractor and assurance for future Site operators/purchasers/owners.	Best initiated at an early stage (INNS Survey would ideally be complete April - October)

References

Guidelines and Best Practise

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Desk Study

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Appendix 1 Habitats and Ecological Features

Appendix 2 List of species recorded

Common Name	Scientific Name
Ash	*Fraxinus excelsior*
Beech	*Fagus sylvatica*
Blackcurrant	*Ribes nigrum*
Bracken	*Pteridium aquilinum*
Broad buckler fern	*Dryopteris dilatata*
Cleavers	*Galium aparine*
Common hogweed	*Heracleum sphondylium*
Common lime	*Tilia × europaea*
Cotoneaster	*Cotoneaster spp.*
Creeping soft grass	*Holcus mollis*
Dandelion	*Taraxacum officinale agg.*
Dog's mercury	*Mercurialis perennis*
Elder	*Sambucus nigra*
Enchanter's nightshade	*Circaea lutetiana*
Figwort	*Scrophularia nodosa*
Garlic mustard	*Alliaria petiolata*
Goat willow	*Salix caprea*
Hedge woundwort	*Stachys sylvatica*
Herb robert	*Geranium robertianum*
Himalayan balsam	*Impatiens glandulifera*
Horse chestnut	*Aesculus hippocastanum*
Lawson's cypress	*Chamaecyparis lawsoniana*
Lesser celandine	*Ranunculus ficaria*
Nettle	*Urtica dioica*
Ramsons	*Allium ursinum*
Silver birch	*Betula pendula*
Sycamore	*Acer pseudoplatanus*
Variegated yellow archangel	*Lamium galeobdolon*
Wood avens	*Geum urbanum*
Wood speedwell	*Veronica montana*
Wych elm	*Ulmus glabra*
Yellow archangel	*Lamiastrum galeobdolon*

Appendix 3 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.

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 [SSSIs]) 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 2017).

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 by West Yorkshire Ecology 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.

Bats

Bat roosting potential is classified according to the following criteria set out below, taken from the Bat Conservation Trust Good Practice Guidelines (2023).

Bat Roosting Suitability of Buildings

Suitability	Criteria
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).
Negligible	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. 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 larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site but could be used by individual hibernating bats).
Moderate	A structure with one or more potential roost sites that could be used by bats 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, such as maternity and hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure 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, protection, conditions and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation site.

Bat Roosting Suitability of Trees

Suitability	Criteria
None	Either no PRFs in the tree, or highly unlikely to be any.
FAR	Further assessment required to establish if PRFs are present within the tree.
PRF	A tree with at least one PRF present.

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.

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 the EC Habitats Directive 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 (*Reynoutria japonica*), and giant hogweed *(Heracleum mantegazzianum*).

Planning Policy/Guidance

The National Planning Policy Framework (NPPF)

The National Planning Policy Framework was updated in December 2023. The most relevant paragraphs from the NPPF are set out below.

The approach to assessing the natural environment is now embedded within the definition of what 'sustainable development' is and this falls under one of three objectives of the planning system – the 'environmental objective' applying in this case. Paragraph 8c (P8c) of the NPPF states that sustainable development should "protect and enhance our natural, built and historic environment", including "improving biodiversity". P10 sets out the Framework's presumption in favour of sustainable development.

Section 11 of the NPPF details making effective use of land. The Framework states that planning policies and decisions should "take opportunities to achieve net environmental gains – such as developments that would enable new habitat creation" and should "recognise that some undeveloped land can perform many functions, such as for wildlife" (P124).

Section 15 details conserving and enhancing the natural environment; policies and decisions should be "protecting and enhancing valued landscape [and] sites of biodiversity […] value", "recognise the intrinsic character and beauty of the countryside" and contribute to conserving and enhancing the natural environment and reducing pollution (P180). Allocations of land for development should, "allocate land with the least environmental or amenity value, where consistent with other policies in this Framework" and "take a strategic approach to maintaining and enhancing networks of habitats" (P181).

The Framework sets out ways to minimise the impacts on biodiversity through plans which "identify, map and safeguard components of local wildlife rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity" and promote the "conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity" (P185).

It is made clear in P186 that local planning authorities should apply a set of principles when determining planning applications. Planning permission should be refused "if significant harm to biodiversity resulting from development cannot be avoided […], adequately mitigated, or, as a last resort, compensated for". Development should not normally be permitted where an adverse effect on a SSSI is likely, and "opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity".

UK Biodiversity Indicators 2023; update to Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services

The UK Biodiversity Indicators 2023 provide updates to the indicators set out in Biodiversity 2020 including new species abundance targets as set out in the Environment Act 2021. Biodiversity 2020 builds on the Natural Environment White Paper (June 2011) – 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.