

Warren Lane, Sheffield



Preliminary Ecological Appraisal Report

Report Ref. ER-8426-01

15/07/2025

Milton Peterborough Estate

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Contents

Introduction..... 1

Desk Study 2

Designations..... 3

Habitat Appraisal..... 4

Ancient and veteran trees 11

Faunal Appraisal..... 12

Ecological Constraints 17

Ecological Opportunities..... 18

Conclusions and Recommendations 19

References..... 21

Appendix 1 Habitats and Ecological Features..... 24

Appendix 2 List of species recorded 25

Appendix 3 Explanatory Notes and Resources Used 26

Appendix 4 Bat Activity Survey Rationale..... 29

Appendix 5 Wildlife Legislation, Policy and Guidance 30

Summary

This report is produced to inform Milton Peterborough Estate 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 June 2025.

Key Findings

The Site encompasses a parcel of farmland, with some marginal areas of woodland, of moderate ecological value. Beyond the recommended retention of established woodland parcels, and buffering of off-Site woodland to the north, ecological constraints have not been identified at the Site.

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-8426-02.

Further surveys

Further surveys have been recommended for breeding birds, bats (activity and emergence), and badgers. Updating walkover survey of the areas not accessible to this PEA will be required to establish a complete and accurate baseline.

Introduction

1. Brooks Ecological Ltd was commissioned by Milton Peterborough Estate to carry out a Preliminary Ecological Appraisal (PEA) of land at Warren Lane, Sheffield, grid ref. SK357977. The survey includes land within the red line boundary shown in Figure 1, opposite, with a total area of 16.01ha.
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.

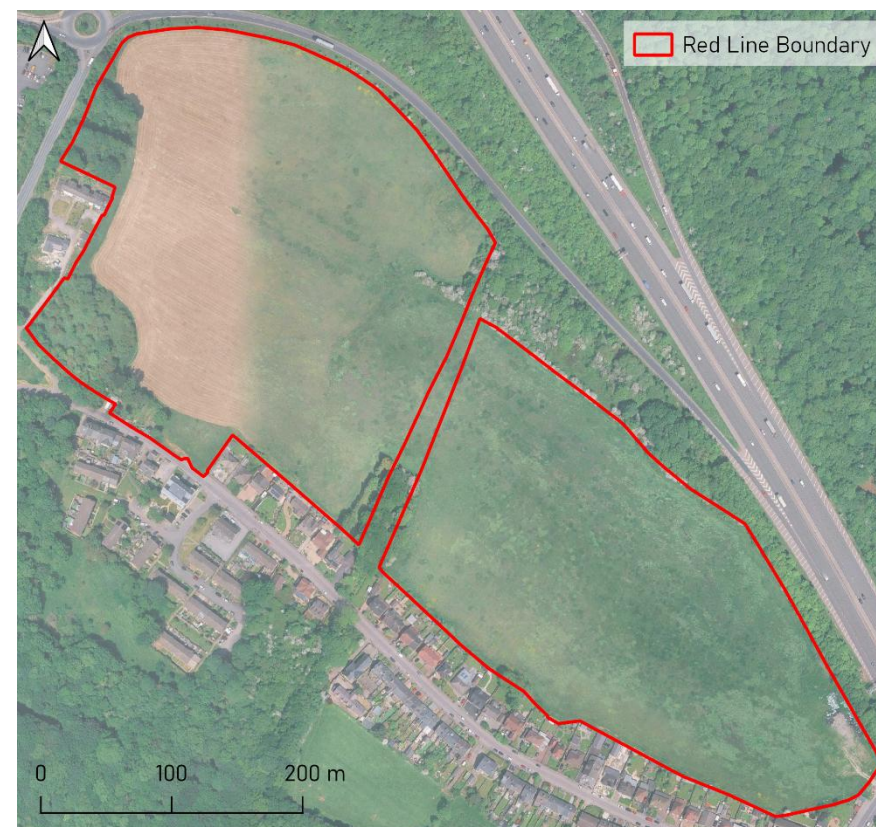
Proposals/Reason for PEA

6. The PEA has been commissioned to inform proposals to develop this Site for general employment use.

The Site

7. The application site 'the Site' comprises two sections of farmland to the northeast of Chapeltown, Sheffield, separated by an underground section of the Hallam Line railway. For the purposes of Metric calculations, the Site area has been measured using GIS against the provided red line boundary as 16.01ha.

Figure 1 The Site (red line boundary).



Desk Study

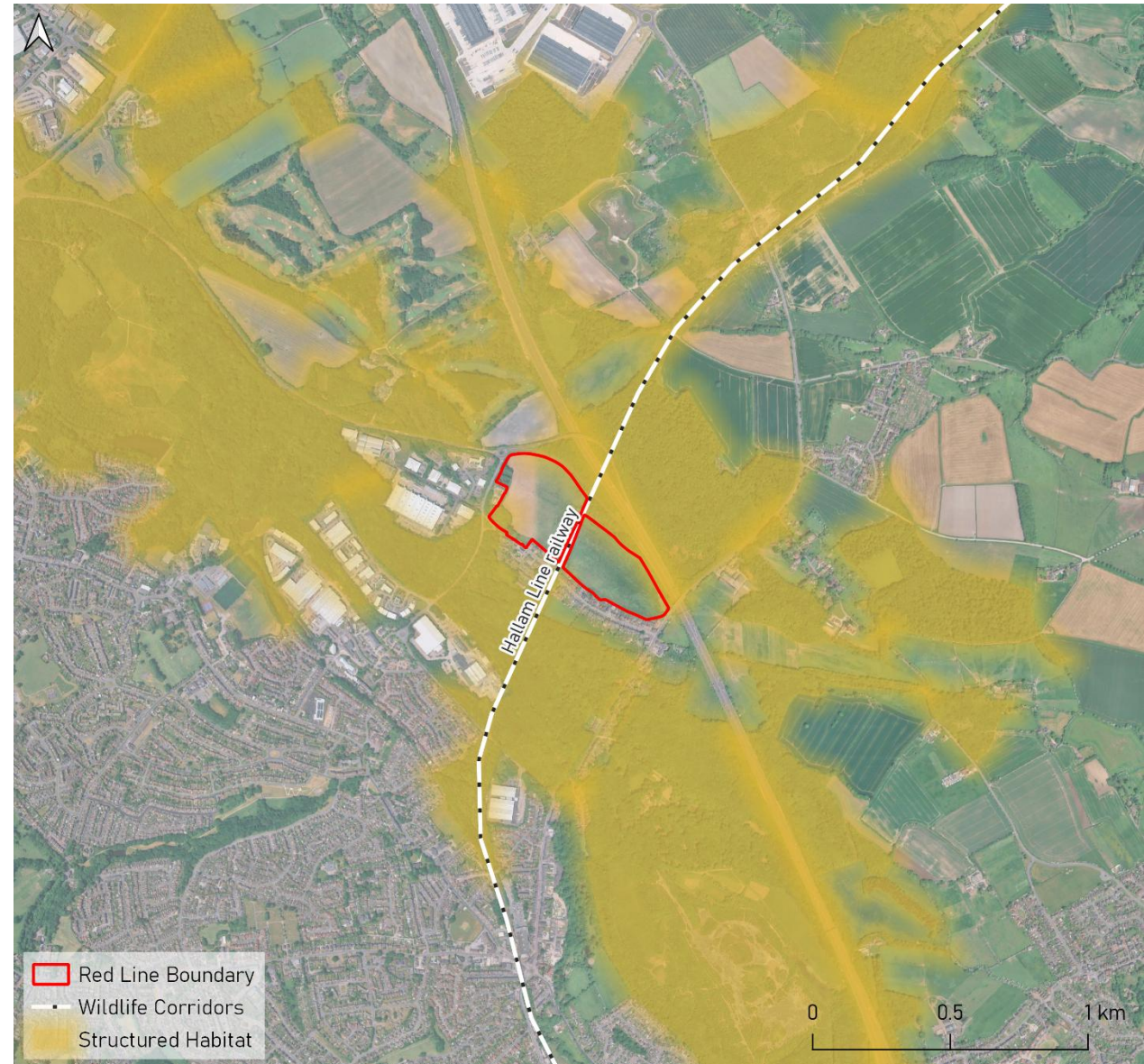
Landscape

8. The Site is located to the northeast of Chapeltown, c. 10.5km north of the centre of Sheffield. It is bound to the north and east by the M1 motorway, to the south by Warren Lane, and to the west by Thorncliffe Road.
9. The Site is separated from the built development of Chapeltown by an extensive tract of woodland running northwest-southeast. To the east, beyond the M1, the landscape is a patchwork of farmland and woodland.
10. The Site overlies mudstones, siltstones and sandstones of the Pennine Lower Coal Measures Formation, which gives rise locally to a variety of slightly acid soils. The Site has a long history of cultivation, being mapped as farm fields from 1850 onwards, which may influence the species and communities present.

Wildlife Corridors

11. The Site is closely linked to Parkin Wood c. 150m south, which forms a broad band of woodland stretching from Smithy Wood, c. 2.6km south, to West Wood c. 2.5km northwest.
12. Additional woodland extends northeast of the Site, along the route of the Hallam Line railway, which forms an additional, albeit low-value, wildlife corridor running to the south.

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



Designations

13. 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

14. A search has been made to identify any nationally designated sites within a 2km radius of the Site, or 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
Potter Holes Plantation	2km NW	Local Nature Reserve (LNR)	Semi-ancient woodland with new woodland on reclaimed colliery site.

15. The Site is separated from the LNR by a wide expanse of farmland and a golf course. While woodland blocks provide some disjointed connectivity to the Site, given its distance, direct and indirect impacts as a result of this development are unlikely.

SSSI Impact Risk Zones (IRZs)

16. The Site lies within two SSSI IRZs, which require the LPA to consult with Natural England in relation to potential impacts if any discharge of water or liquid waste of more than 20m³/day to ground or surface water is planned.

Non-Statutory Designations

17. There are 12 Local Wildlife Sites in the search area. Of these, only one is of potential relevance to the application, this being Parkin Wood c. 40m south. Direct impacts as a result of development are unlikely, given the separation by a road and residential housing, but the development may have indirect impacts on mobile fauna, including bats and birds. These are discussed in the faunal sections of this report.
18. Parkin Wood is connected or closely adjacent to several other LWSs: Thorncliffe Wood and Westwood Country Park to the northwest, Hesley Wood & Chapelton Park and Hesley Tip to the southeast, and Thorncliffe Triangle and

Dam to the southwest. Direct and indirect impacts on these LWSs are less likely due to their separation from the Site.

19. Direct and indirect impacts on all remaining sites as a result of this development are unlikely due to the Site's separation and distance.

Nature Improvement Area

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

Wildlife Habitat Network

21. The Site is not within any mapped Wildlife Habitat Network.

Granted EPSM Licences

22. There are two granted European Protected Species Mitigation (EPSM) licences shown within 2km of the Site:
- 2019-41551-EPS-MIT, permitting the destruction of a breeding site of brown long-eared bat and common pipistrelle c. 520m east, from 2019 to 2029.
 - 2020-48285-EPS-MIT, permitting the damage of a brown long-eared bat, common pipistrelle, and whiskered bat resting place c. 1.75km northwest, from 2020 to 2025.

Mapped Ancient Woodland and Trees

23. There is no mapped ancient woodland (AW) or Plantation on an Ancient Woodland Site (PAWS) within 15m of The Site, the nearest being ancient and semi-natural woodland at Parkin Wood c. 130m south.
24. Records of Ancient Trees have not been returned.

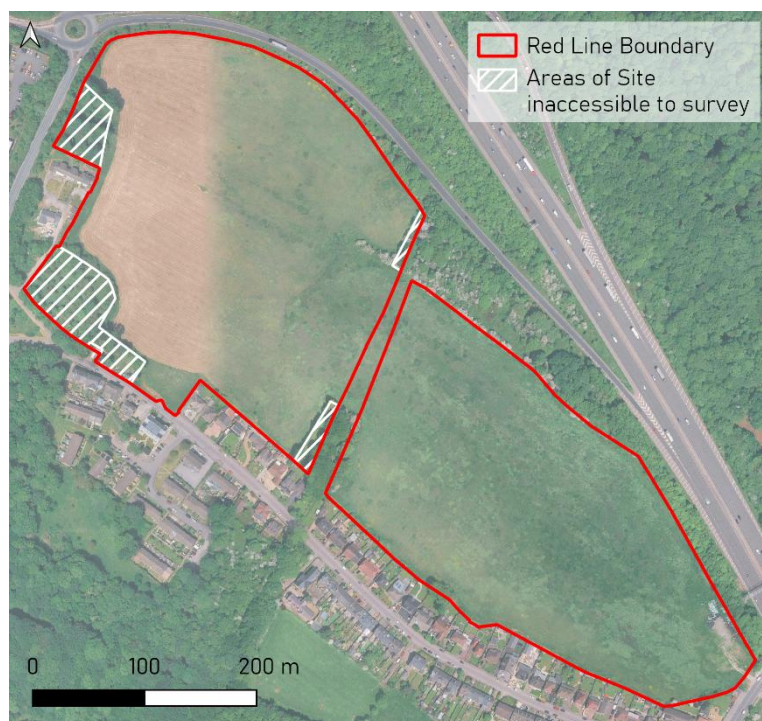
Mapped Priority Habitat

25. Priority deciduous woodland habitat is mapped on-Site, with additional parcels immediately off-Site to the south and north. These are discussed further in the Habitat Appraisal section of this report.

Survey

26. The survey was carried out during June 2025¹ and followed the principles of Extended Phase 1 Habitat Survey methodology (JNCC, 2010).
27. The timing of the survey meant that it was possible to confidently classify the type and condition of habitats present on this Site.
28. Enough time was afforded the surveyor to carry out the survey. The survey was not constrained by poor weather.
29. Whilst the majority of the Site was accessible, approximately 10% of the Site was inaccessible due to very dense vegetation, uncrossable barbed wire fences, and private ownership. These areas could not be closely inspected and could have concealed invasive species or protected species evidence.

Figure 3 Areas of Site inaccessible to survey (June 2025).



¹ This Report has been prepared during June 2025 following a visit to the Site in June 2025, 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

Habitat Appraisal

30. 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.
31. 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

32. 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

33. 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

34. 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

35. 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

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.

more of the same type of habitat would be required, which (with a few exceptions) is likely to be difficult.

Very High Distinctiveness Habitats

36. 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

37. 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

38. 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.

Habitats of Low/Very Low Distinctiveness

Figure 4 Approximate location and extent of these habitats.

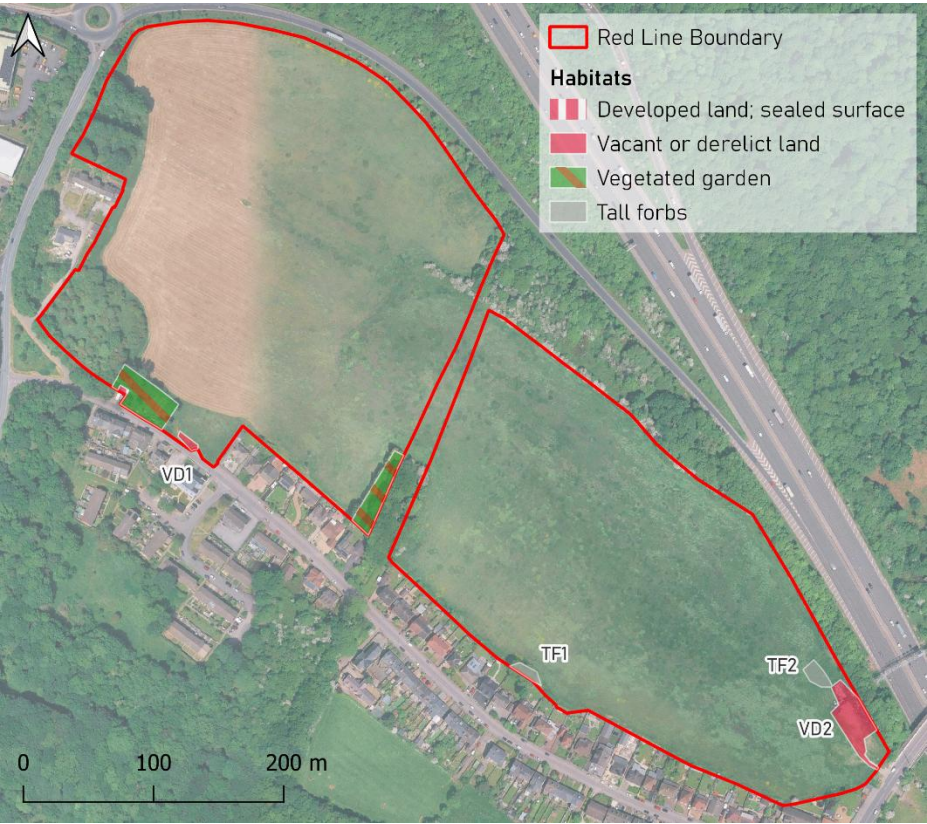


Table 2 Summary – Habitats of Low/Very Low Distinctiveness.

UK Habitats	Label Ref	Summary Description
Developed land; sealed surface	–	A garage near the Site’s western corner, adjacent the walled garden.
Vacant or derelict land	VD1	A section of vacant land in the western corner of the Site off Warren Lane. The concrete surface is heavily damaged, allowing growth of grasses including false oat-grass, cock’s-foot, barley, and Yorkshire-fog, alongside common weeds such as ragwort, ribwort plantain, and curly dock. There is abundant growth of acrocarpous mosses.
	VD2	An abandoned storage area for hay bales and the access track from the A6135, overgrown with a variety of ruderal species including scented mayweed, pineappleweed, greater plantain, creeping thistle, broad-leaved and curly docks, creeping bent, fescue, weld, ground-elder, goosefoot, nettle, sow thistle, cleavers, and rock-cress.
Vegetated garden	–	A walled and hedged garden in the Site’s western corner, and an extension of the garden to the rear of 82 Warren Lane. Neither of these areas could be accessed during the survey.
Tall forbs	TF1	Dense growth of nettle and rosebay willowherb beneath overhanging trees rooted off-Site to the south.
	TF2	Dense growth of nettle and creeping thistle.

Habitats of Low/Very Low Distinctiveness

Figure 5 Developed land; sealed surface.



Figure 6 VD1.



Figure 7 VD2.



Figure 8 TF1.

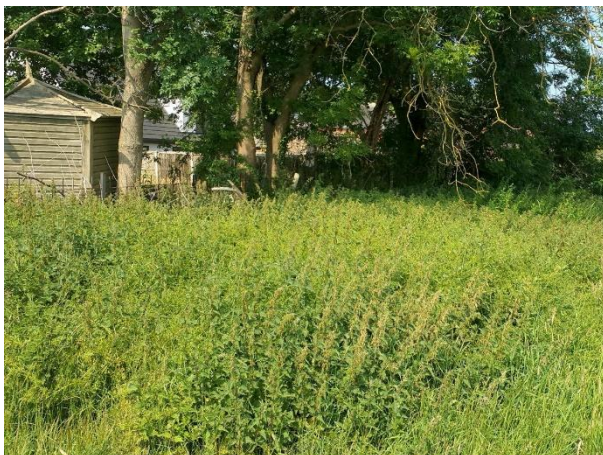


Figure 9 TF2.



Habitats of Medium Distinctiveness

Figure 10 Approximate location and extent of these habitats.



Table 3 Summary of Medium Distinctiveness habitats.

UK Habitats	Label Ref	Summary Description
Other neutral grassland	G1-G3	A single large grassland field, split into three parts by access tracks and divisions of the Site boundary. The sward is generally dense and tall, dominated by grasses including Yorkshire-fog, cock's-foot, and false oat-grass; with annual meadow-grass, and common and creeping bents abundant; soft brome and red fescue frequent; perennial rye-grass and timothy occasional, and crested dog's-tail rare. Forbs are never more than occasional, with common weed species including spear and creeping thistles, creeping and meadow buttercups, greater and ribwort plantains, ragwort, dandelion, nettle, and broad-leaved and curly dock the most abundant. Forbs typical of higher-quality grassland, including chickweed and meadow vetchling, occur rarely across the Site. Rosebay willowherb and phacelia are found in the southern part of the Site adjacent private gardens, and there is some minor bramble encroachment from the eastern boundary and edges of woodland parcels.
Bramble scrub	S1, S3-S5	Areas of dense bramble growth around the boundaries of the Site. Bramble dominates, alongside rare occurrences of nettle and false oat-grass.
Blackthorn scrub	S2	A section of outgrown, suckering blackthorn hedge on the Site's northern boundary, where it has significantly encroached onto previous grassland. Blackthorn is the only species present.
Other woodland; broadleaved	W1-W2	Two parcels of woodland on the Site's western boundary. Canopies are composed of a mix of species including oak, sycamore, ash, and poplar, with goat willow, hawthorn and elder forming dense understories, and impenetrable field layers of bramble. Access into these parcels could not be obtained due to barbed wire fencing.
	W3	A small section of woodland to the north of the Site which encroached within the Site boundary. The canopy is composed of oak, sycamore, and ash, with an understorey of hawthorn, elder, sycamore, field maple, blackthorn, and grey willow, and a sparse field layer of bramble, wood dock, nettle, and dog's mercury. While access again could not be secured due to barbed wire fencing, the narrowness of this parcel meant it could be appropriately surveyed without direct access.

Habitats of Medium Distinctiveness

Figure 11 G1.



Figure 12 G2.



Figure 13 Bramble scrub.



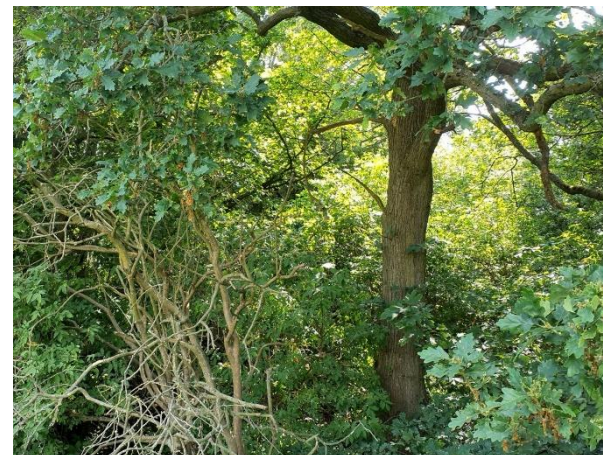
Figure 14 Blackthorn scrub.



Figure 15 W1.



Figure 16 W3.



Hedgerows

Figure 17 Approximate location and extent of these habitats.

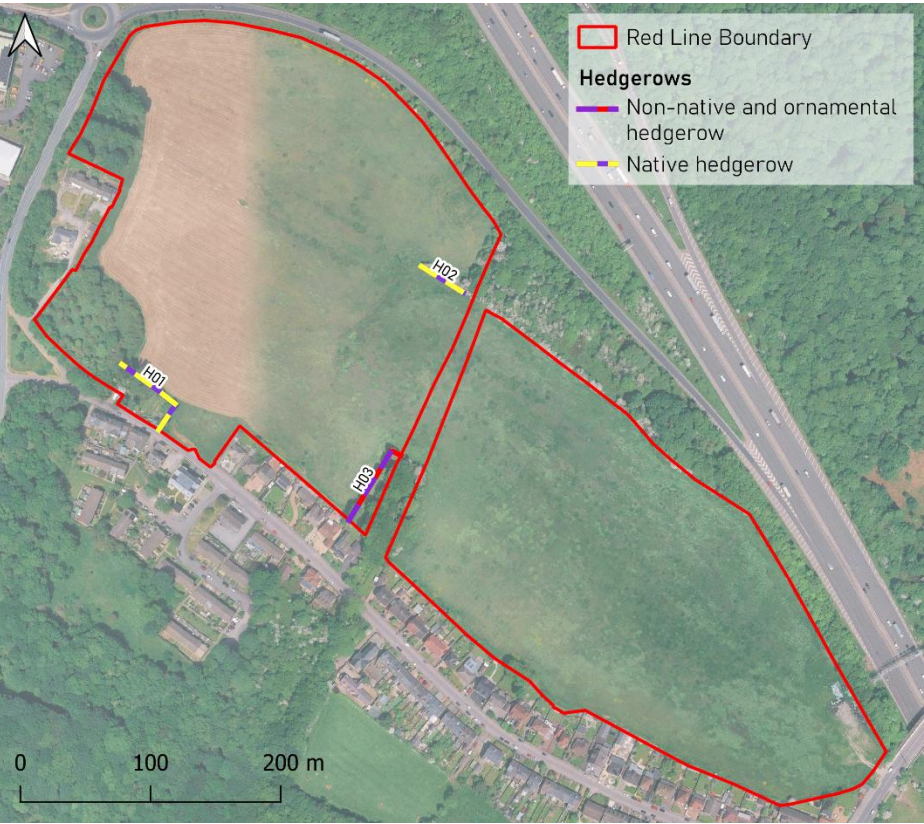


Table 4 Summary – hedgerows.

UK Habitats	Label Ref	Summary Description
Native hedgerow	H01	A hedgerow surrounding the walled garden, dominated by hawthorn, with some blackthorn, elder, and sycamore.
	H02	An outgrown hawthorn and blackthorn hedgerow, likely a remnant field boundary.
Non-native and ornamental hedgerow	H03	An ornamental garden hedgerow dominated by <i>leylandii</i> with occasional sycamore.

Figure 18 H01.



Figure 19 H02.



Figure 20 H03.



Ancient & Veteran trees

39. The Site has not been found to support ancient or veteran trees at this time. However, it should be noted that they may still be present within woodland parcels W1 and W2, which could not be accessed or fully surveyed from their perimeters.

Faunal Appraisal

40. 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

41. There are no ponds visible on mapping within 250m of the Site.
42. There are no records of great crested newt (GCN) returned for the area. Records of common species, namely common toad and common frog, are widely distributed throughout the search area. The closest are records of common toad in Tankersley Pond 1, c. 780m NW of the Site, in 1993.

Field Evidence

43. No waterbodies are present on Site or within a 250m radius; it is therefore unlikely to support breeding populations of any amphibian.
44. While the Site does support suitable terrestrial habitat, namely areas of woodland and scrub, the absence of ponds in the immediate vicinity makes it unlikely that these support significant populations of amphibians.

Summary Evaluation

45. The Site is unlikely to be important to GCN or other amphibians.

Further Surveys and Recommendations

46. No further surveys or precautions are considered necessary.

Birds

Desk Evidence

47. Over 740 records of birds are returned for the search area. These concern a range of species of conservation significance which may make use of habitats on-Site, including barn owl, bullfinch, cuckoo, dunnoek, grey partridge, lapwing, lesser spotted woodpecker, linnet, reed bunting, skylark, spotted flycatcher, tree pipit, tree sparrow, and yellowhammer.
48. Other species of scrub, woodland, and grassland may be present, and the Site may form a foraging area for populations of starling and house sparrow breeding in off-Site residential areas.

Field Evidence

49. The Site provides habitat for scrub- and woodland-nesting bird species. The Site's value to grassland birds, including skylark and grey partridge, is reduced somewhat by the very tall, rank sward, limiting sightlines of ground-nesters.
50. A number of common rural and rural-fringe bird species were noted during the survey, including pheasant, swift, wood pigeon, carrion crow, jackdaw, swallow, house martin, blue tit, great tit, willow warbler, blackcap, wren, starling, blackbird, robin, house sparrow, dunnoek, goldfinch, greenfinch, and chaffinch.

Summary Evaluation

51. Based on its size and habitats, the Site may be important to local bird populations.

Further Surveys and Recommendations

52. Further survey is recommended to assess the Site's baseline use by breeding birds. This should take the form of six surveys between March and June, with at least one being at dusk and the remainder at dawn.
53. Standard precautions apply in respect of restrictions on clearing vegetation during the nesting season.

Bats

Desk evidence

54. Over 45 records of bats are returned, concerning a range of species including common and soprano pipistrelle, Daubenton's, Leisler's and whiskered/Brandt's bats, noctule, and indeterminate myotis and bat species.
55. Thirteen of these records concern roosts of common pipistrelle and indeterminate bats. The closest was at Barley Spring, Hood Hill, c. 615m east of the Site, in 2006.

Field Evidence (Roosting)

56. There is one building on-Site, a garage off Warren Lane.
57. Numerous trees are present within woodland parcels which could not be accessed for close inspection. These may support bat roost features. Any trees which are to be significantly pruned or removed through the course of works should be subject to a Preliminary Roost Assessment (PRA) prior to works commencing.

Table 5 Bat Roost Suitability Assessment.

Ref	Notes	Suitability
B1	Note: only south elevation was accessible at time of survey. Single-storey brick building with corrugated metal pitched roof. Gaps above eaves along southern elevation providing access under roof. Surrounded by mature trees to north and west.	Low
T1	An off-Site birch with a large wound in the trunk, offering potential suitability for individuals or low numbers of bats. Unlikely to be lost through development.	PRF-I.

Field Evidence (foraging and commuting)

58. The Site offers a large area of grassland, with foraging opportunities along woodland edges and over open grass, as well as within woodland blocks. The Site is well-connected to the surrounding landscape, lying on the edge of a significant woodland corridor to the south.

Summary Evaluation

59. The Site's size and location, and the habitats it supports, suggest it will be of Moderate value to foraging and commuting bats.
60. Building B1 supports features of Low bat roost suitability.

Further Surveys and Recommendations

61. Building B1 should be subject to a single dusk emergence survey to confirm the presence or likely absence of roosting bats. This survey should include an assessment of the whole building (access to the northern, eastern and western elevations will need to be secured), to confirm the assessment of roost suitability made here.
62. In line with good practice guidelines, the Site should be subject to bat activity survey, taking the form of monthly static bat detector surveys (April–October inclusive), and seasonal nighttime bat walkovers (spring: April/May; summer: June/July/August; autumn: September/October).
63. Any trees scheduled for removal or pruning during the course of works should be subject to a Preliminary Roost Assessment. If this assessment finds potential roost features, further inspection may be necessary prior to felling/pruning.
64. There would be opportunities to provide new roost sites in buildings at the Site.
65. The value of the woodland and outgrown hedgerows along the Site's northern boundary for commuting bats should be retained where possible. This could include ensuring the area remains unlit through a sensitive lighting plan, and including a strip of higher-value foraging habitat (e.g., including flowering trees, native mixed shrub, wildflower grassland, and ponds) buffering the off-Site woodland from the development.

Figure 21 Building B1.



Figure 22 Tree T1.



Figure 23 Building and tree plan.



Badgers

Desk evidence

66. There are 11 records of badgers in the area, all relating to the woodland corridor to the south of the Site.

Field Evidence

67. The Site provides potential habitat for sett building in the areas of woodland and dense scrub. Neighbouring areas of grassland and residential gardens also provide foraging opportunities for this species.
68. No evidence of badger was found, though it should be noted that access into the woodland blocks and on-Site gardens could not be secured.

Summary Evaluation

69. There is a significant likelihood of badger setts being present at the Site as affected by the proposals.

Further Surveys and Recommendations

70. Given the likelihood of badgers being present, a dedicated badger survey should be conducted. This should take in all suitable sett-building habitat on-Site and, where accessible, within a 30m buffer.
71. Given the habitats present, a precautionary pre-works check for setts is recommended, coordinated with Site clearance. Badgers can construct new setts very rapidly, so this is recommended regardless of the findings of any badger survey.

Hedgehogs (NERC Act 2006/Local BAP)

Desk evidence

72. Hedgehogs are recorded widely within the search area, with the closest relating to a property on Warren Lane, immediately adjacent the Site's southern boundary, in 2016.

Field Evidence

73. No evidence of hedgehogs was found on-Site, although suitable habitat is abundant.

Summary Evaluation

74. The Site provides suitable habitat for hedgehogs, and at least occasional presence should be assumed.

Further Surveys and Recommendations

75. Presence assumed; no further surveys are considered necessary. Measures to allow them continued access to areas of POS should be planned for.

Reptiles

Desk evidence

76. Three records of grass snake, and two of adder, have been returned for the search area, all relating to Westwood Country Park c. 1.25km west. The most recent grass snake record dates to 2009, and both adder records are from 1990.

Field Evidence

77. The Site provides some very marginal basking habitat in the area of short-sward growth on the eastern boundary, along the access track from White Lane. Across the remainder of the Site, the sward is too dense and tall to be of significant value to reptiles.
78. No field evidence was found.

Summary Evaluation

79. Given the very limited suitable habitat, and absence of nearby and/or recent records, reptiles are assessed as likely absent from the Site.

Further Surveys and Recommendations

80. No further surveys or precautions are considered necessary.

Invasive Non-Native Species (INNS)

81. 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.
82. No INNS were noted during the survey².

Survey constraints

83. This survey is constrained by the presence of areas that were inaccessible due to the density of vegetation and uncrossable fences.
84. Although no INNS have been identified in this preliminary survey, it is not always possible to conclude absence from preliminary survey alone due to factors such as season, accessibility, third-party attempts to hide evidence, or undisclosed treatment programmes. For this reason, this report should not be relied upon as definitive evidence of absence of INNS.
85. This site presents a high risk of supporting undetected INNS based on the following factors:
- Areas of site inaccessible to survey.
 - Proximity to nearby potential sources of infection (i.e., gardens).
 - Potential for tipping of material.
86. Should further assurances be needed in relations to INNS, a dedicated Invasive Weed Survey should be commissioned.

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

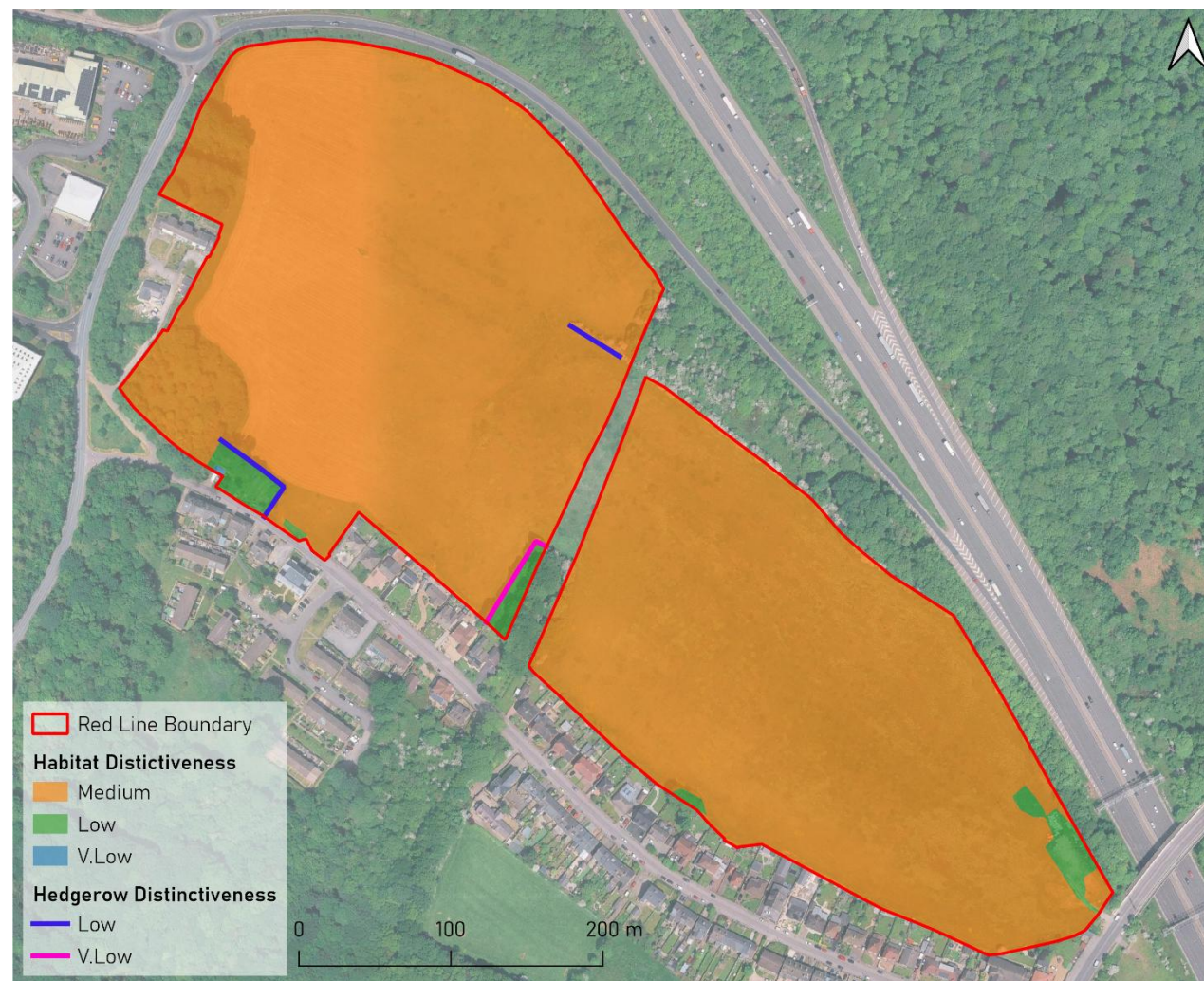
Habitat Value

87. 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.
88. Irrespective of the Biodiversity Gain process, development should still seek to retain what is best about the Site.
89. The plan opposite shows the Site in the context of mapped habitat distinctiveness with the aim of informing the design of any layout. It shows that the Site largely uniform medium distinctiveness habitat; the loss of which should be kept to a minimum.
90. In terms of structure and connectivity, the woodland parcels in the western portion of the Site provide the highest value to wildlife, offering opportunities for foraging, shelter, and moving through the landscape via connections to woodland off-Site to the north. These are of higher value in a local context and should ideally be retained.

Faunal constraints

91. Habitat availability and accessibility for hedgehogs should be considered during the landscape design phase.
92. Surveys have been recommended to establish the Site's baseline use by breeding birds, bats (roosting and activity), and badgers.
93. Pre-works checks for badgers, nesting birds, and roost suitability of any trees to be removed/pruned, have also been recommended.

Figure 24 Habitat distinctiveness.



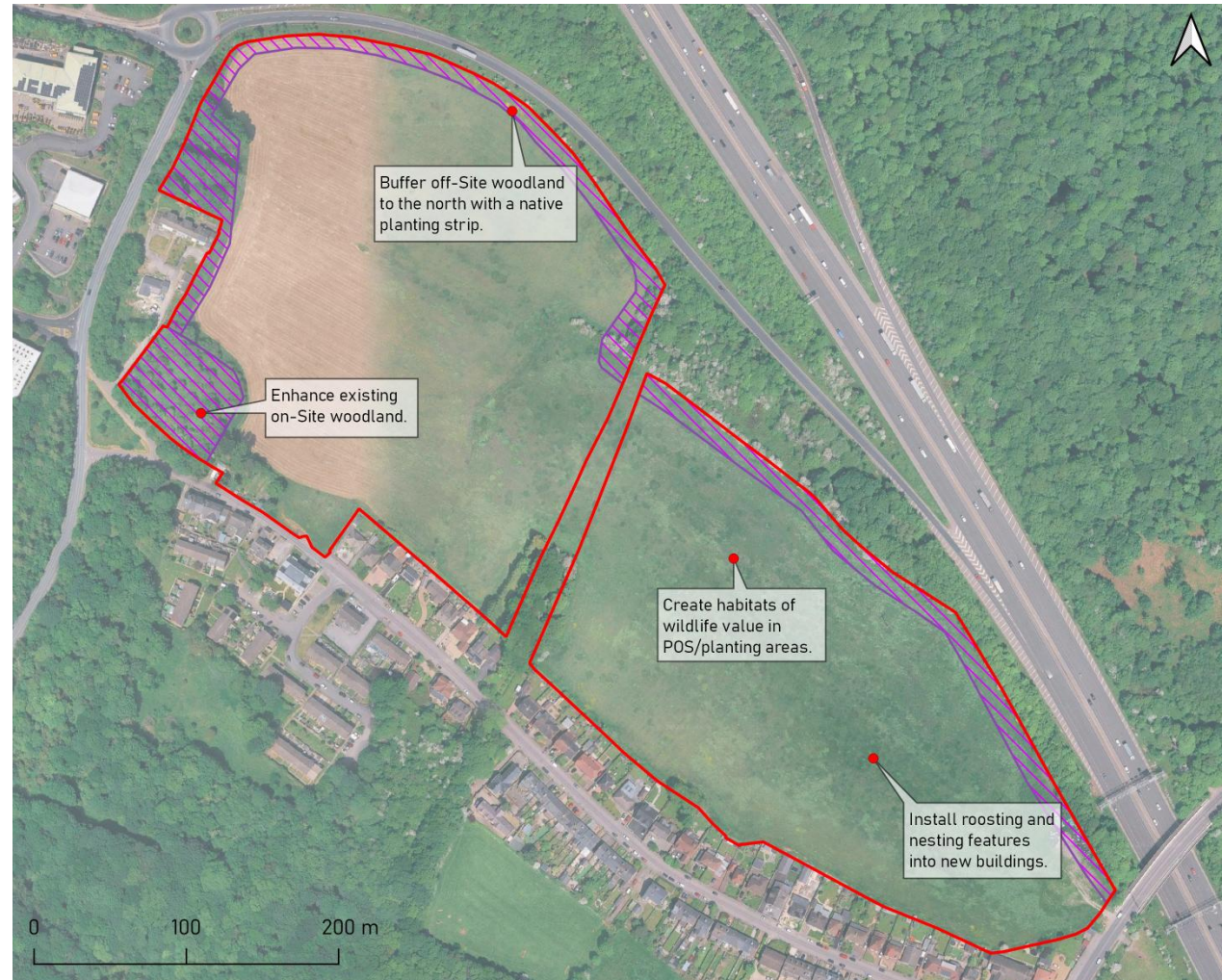
Ecological Opportunities

94. Ecological opportunities at the Site relate to:

- Potential to enhance connectivity locally by buffering the on-Site and off-Site woodland to the north with a range of habitats of value to wildlife.
- Potential to enhance the on-Site woodland parcels as a key source of Habitat Units post-development.
- Creating a range of habitats of value to wildlife in POS areas, such as flowering lawn, wildflower grassland, native mixed scrub, ponds, and native street trees.
- Installing roosting and nesting features integrally within new buildings.

95. A Biodiversity Management Plan would be useful in defining these enhancements and can be secured by standard condition.

Figure 25 Ecological Opportunities.



Conclusions and Recommendations

Planning considerations		
Recommendation	Rationale	When
R1 Additional Surveys		
R1.1 Full site survey	Areas of the Site which could not be accessed during the PEA – namely the three woodland parcels, two areas of private garden, and building B1 – should be subject to a walkover survey to confirm or update the assumptions made in this report.	Any time (May–August best).
R1.2 Fauna	Breeding bird survey (six visits, including one dusk visit)	March–June.
	Bat emergence survey of building B1.	May–August.
	Bat activity survey – static monitoring (monthly).	Once monthly, April–October.
	Bat activity survey – nighttime bat walkover (seasonal).	Spring: April/May, Summer: June/July/August, Autumn: September/October.
	Badger survey.	Any time (December–February optimal).
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 Biodiversity Gain hierarchy of Avoid-Enhance-Create-Offset 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 <u>habitat retention plan at an early stage</u> 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. <u>Decide on the extent of red-line vs blue/black-line land.</u> Minimising the extent of your red line can limit exposure to BNG, but can also leave you needing separate legal agreements to use off-Site land for BNG delivery. Work out at an early stage what is right for your project. Your planning consultant should be able to help with this decision.	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 Ecological Impact Assessment (EclA)	This report summarises all survey findings and assesses the impacts of the scheme in respect of these. Due to the scale of this development and the potential issues at hand it would seem an unlikely requirement, but may be requested by the LPA.	Prior to submission, after a fixed design is agreed and all key additional surveys are completed.
R6 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.

Planning considerations		
Recommendation	Rationale	When
R7 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. • Dealing with known or discovered invasive species. • Pre- or during- clearance ecology checks for protected species, including badgers. • Pre-clearance roost assessments of any trees to be felled/pruned. • Protected/notable species method statements where licensing is not needed. • Nesting bird management.	Delivery report. Suitable for planning condition.

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Appendix 1 Habitats and Ecological Features



Appendix 2 List of species recorded

Common name	Scientific name		
Field maple	<i>Acer campestre</i>	Scented mayweed	<i>Matricaria chamomilla</i>
Sycamore	<i>Acer pseudoplatanus</i>	Pineappleweed	<i>Matricaria discoidea</i>
Ground-elder	<i>Aegopodium podagraria</i>	Dog's mercury	<i>Mercurialis perennis</i>
Common bent	<i>Agrostis capillaris</i>	Phacelia	<i>Phacelia</i> sp.
Creeping bent	<i>Agrostis stolonifera</i>	Timothy	<i>Phleum pratense</i>
Rock-cress	<i>Arabis</i> sp.	Ribwort plantain	<i>Plantago lanceolata</i>
False oat-grass	<i>Arrhenatherum elatius</i>	Greater plantain	<i>Plantago major</i>
Daisy	<i>Bellis perennis</i>	Annual meadow-grass	<i>Poa annua</i>
Soft brome	<i>Bromus hordeaceus</i>	Creeping cinquefoil	<i>Potentilla reptans</i>
Rosebay willowherb	<i>Chamaenerion angustifolium</i>	Cherry	<i>Prunus</i> sp.
Goosefoot	<i>Chenopodium</i> sp.	Blackthorn	<i>Prunus spinosa</i>
Creeping thistle	<i>Cirsium arvense</i>	Oak	<i>Quercus</i> sp.
Spear thistle	<i>Cirsium vulgare</i>	Meadow buttercup	<i>Ranunculus acris</i>
Hawthorn	<i>Crataegus monogyna</i>	Creeping buttercup	<i>Ranunculus repens</i>
Leyland cypress	<i>Cupressus</i> × <i>leylandii</i>	Weld	<i>Reseda luteola</i>
Crested dog's-tail	<i>Cynosurus cristatus</i>	Field rose	<i>Rosa arvensis</i>
Cock's-foot	<i>Dactylis glomerata</i>	Bramble	<i>Rubus fruticosus</i> agg.
Willowherb	<i>Epilobium</i> sp.	Curly dock	<i>Rumex crispus</i>
Red fescue	<i>Festuca rubra</i> s.l.	Broad-leaved dock	<i>Rumex obtusifolius</i>
Ash	<i>Fraxinus excelsior</i>	Wood dock	<i>Rumex sanguineus</i>
Cleavers	<i>Galium aparine</i>	Goat willow	<i>Salix caprea</i>
Ivy	<i>Hedera helix</i>	Grey willow	<i>Salix cinerea</i>
Common hogweed	<i>Heracleum sphondylium</i>	Elder	<i>Sambucus nigra</i>
Yorkshire fog	<i>Holcus lanatus</i>	Sow thistle	<i>Sonchus</i> sp.
Barley	<i>Hordeum</i> sp.	Chickweed	<i>Stellaria media</i>
Common ragwort	<i>Jacobaea vulgaris</i>	Dandelion	<i>Taraxacum officinale</i> agg.
Meadow vetchling	<i>Lathyrus pratensis</i>	Goatsbeard	<i>Tragopogon pratensis</i>
Perennial rye-grass	<i>Lolium perenne</i>	White clover	<i>Trifolium repens</i>
Honeysuckle	<i>Lonicera periclymenum</i>	Coltsfoot	<i>Tussilago farfara</i>
Apple	<i>Malus</i> sp.	Wych elm	<i>Ulmus glabra</i>
		Nettle	<i>Urtica dioica</i>

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 Rotherham Biological Records Centre and Sheffield Biological Records Centre 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.

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

Species/group	Habitat
Adder	Alder woodland
Bats	Ancient woodland
Common pipistrelle	Ancient semi-natural woodland
Leisler's bat	Bogs and mires
Noctule	Canals
Soprano pipistrelle	Ditches
Birds inc. but not limited to:	Fens, marshes and swamps
Black restart	Green roofs and roof gardens
House martin	Heathland (lowland, intermediate and upland)
House sparrow	Lowland calcareous grassland
Kestrel	Lowland dry acid grassland
Lesser redpoll	Lowland mixed deciduous woodland
Linnet	Lowland dry neutral grassland
Meadow pipit	Lowland wet acid grassland
Nightjar	Lowland wet neutral grassland
Peregrine falcon	Mixed ash dominated woodland
Pied wagtail	Mixed beech dominated woodland
Song thrush	Mixed oak dominated woodland
Starling	Open mosaic habitats on previously developed land
Swallow	Over-mature ancient woodland
Red grouse	Planted ancient woodland
Reed bunting	Ponds
Bryophytes, lichens and fungi	Reedbed
Common frog	Reservoirs
Common lizard	Rivers, streams and brooks
Common toad	Scrub or woodland edge habitats
Fish spp.	Wet woodland
Great crested newt	Willow-carr woodland
Higher plants	
Invertebrates inc.	
Bees and wasps	
Beetles	
Dragonflies	
Flies	
Moths	
Spiders	
Otter	
Toads	
Water vole	
White-clawed crayfish	

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
<i>None</i>	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).
<i>Negligible</i>	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.
<i>Low</i>	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).
<i>Moderate</i>	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).
<i>High</i>	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
<i>None</i>	Either no PRFs in the tree, or highly unlikely to be any.
<i>FAR</i>	Further assessment required to establish if PRFs are present within the tree.
<i>PRF-I</i>	Potential roost feature suitable to support individual or low numbers of bats
<i>PRF-M</i>	Potential roost feature suitable to support multiple bats and possibly be used by a maternity colony

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 Bat Activity Survey Rationale

The Bat Conservation Trust Guidelines (BCTG) (Collins 2023) 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.

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.

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 or 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.’

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.

The Site is moderately-sized, well-located along a large-scale woodland corridor, and contains areas of grassland, scrub, woodland, and woodland edge suitable for foraging and commuting bats. Given this, it is recommended the Site be subject to additional bat activity survey.

This assessment was made by Jon Roberts MSci (Hons) ACIEEM. Jon has five years' experience conducting bat surveys in a professional capacity.

Appendix 5 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 SitesStatutory 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 SpeciesEuropean 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, water vole 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 from certain activities only. All

nesting bird species are protected from damage or destruction of their nests – whilst active.

Invasive speciesSchedule 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 2024. 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" (P125).

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 (P187). 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" (P188).

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" (P192).

It is made clear in P193 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.