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Grounded advice

**Preliminary Ecological Appraisal Report
Land at Heaton Grange, Batley**

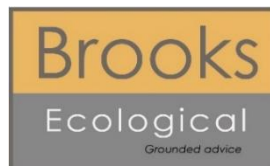
Wharfedale Limited

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Report Title:	Preliminary Ecological Appraisal Report Land at Heaton Grange, Batley
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Summary

This report is produced to inform Wharfedale Limited of potential ecological constraints associated with the proposed development site.

Methodology

The report is based on a desk study of designated wildlife sites and records of protected or notable species, and an extended Phase 1 Habitat Survey carried out in July 2020. An additional area of land to the east was also subject to survey in January 2022.

Findings - Key Points

- The site has been assessed as having a Biodiversity Unit score of 2.96 Habitat Units and 0.12 Hedgerow Units. Proposals will need to consider the NPPF hierarchy of Avoid - Mitigate – Compensate in minimising any loss of biodiversity. The LPA may be seeking gains for biodiversity. Efforts should be made to achieve this on Site but where this is not feasible the LPA could request that a contribution is made to address any residual shortfall in biodiversity gain, off-Site.
- Further survey was recommended for badgers and duly completed; see accompanying report in ER-4856-02.
- Himalayan balsam and rhododendron are present, and an Invasive Species Management Plan is recommended.

Introduction

1. Brooks Ecological Ltd was commissioned by Wharfedale Limited to carry out a Preliminary Ecological Appraisal (PEA) of Land at Heaton Grange, Batley, WF17 6EN (SE 25040 23467).
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.
3. In anticipation of the adoption of DEFRA's Biodiversity Metric 2.0 we have used the UK Habitat Classification descriptions rather than the long established JNCC codes. These habitat classifications and 'the metric' are work in progress and could be subject to future change.

Purpose of a PEA

4. 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.
5. 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.
6. Biodiversity Accounting metrics are used 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.
7. Biodiversity Units can help to inform avoidance, or on-Site mitigation levels required; or as a last resort can translate to a direct monetary value where compensation (off-Site) is required. Please be aware that they can significantly impact on costs and viability.

The Site

8. The application site 'the Site' comprises a previously cleared plot of land and a small park.
9. The assessment uses a 2km area of search around the Site for records of protected and notable species and locally or nationally designated wildlife sites.

Figure 1 The Site boundary - red line



Desk Study

Landscape

10. The Site is located in the south-east of Batley, bound by housing to the south and east, Mill Lane to the west and an industrial estate to the north and east. Past these immediate boundaries, industrial estates and housing extend in all directions, opening up into countryside c.230m east. This is interspersed with pockets of greenspace- woodland associated with the trainline to the west and pockets of grassland and scrub to the east.
11. The Site sits over the Pennine Lower Coal Measures formation giving rise to slowly permeable seasonally wet acid loamy and clayey soils, although it is likely that human activity has affected this over the years.

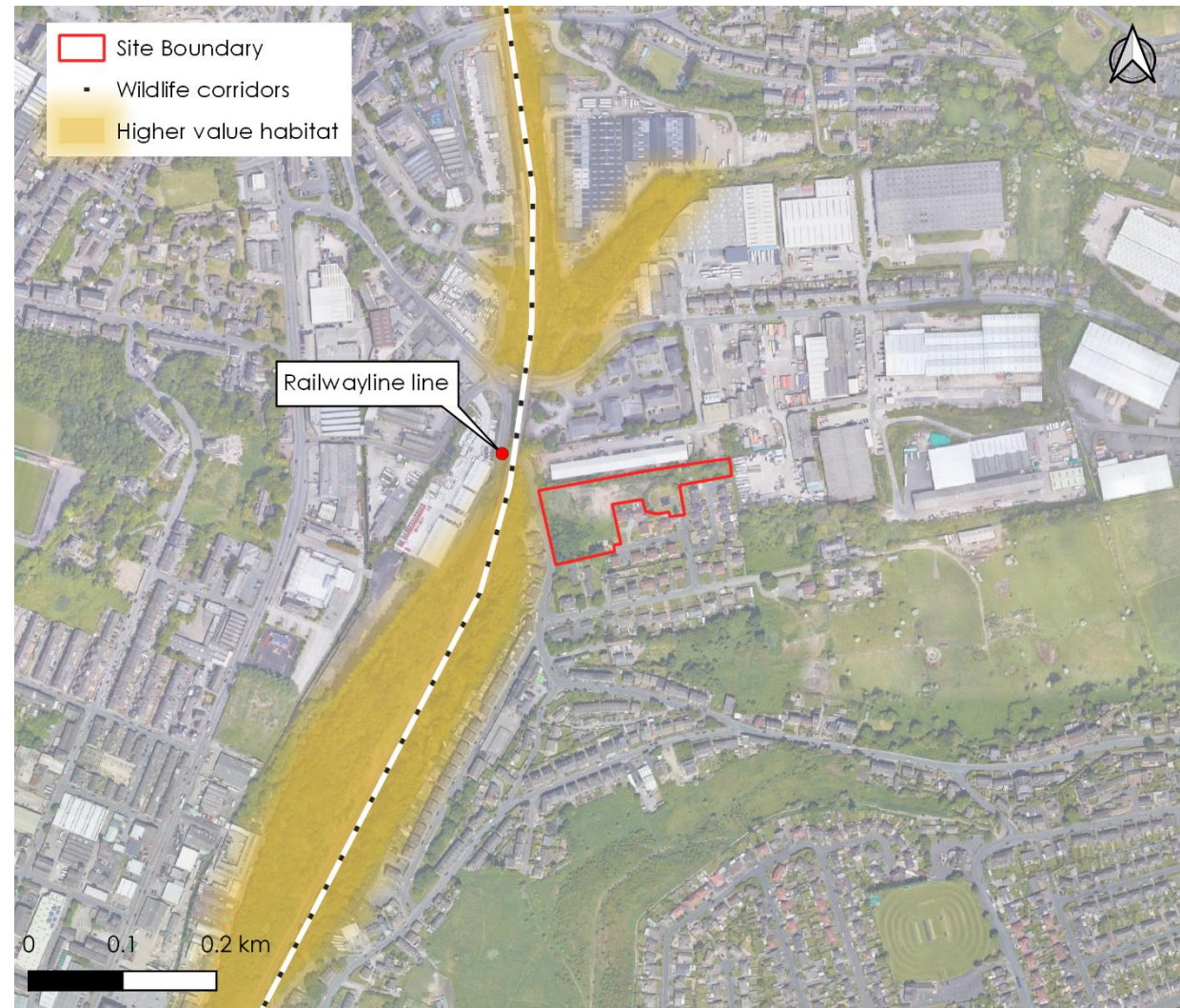
Wildlife Corridors

12. The most significant wildlife corridor in relation to the Site is the working railway line located c.45m west of the Site. In this location, it is surrounded by woodland with Batley Beck flowing to its west. This corridor extends into open countryside c.750m north, although Mill Lane and housing separates it from the Site.
13. Within the wider landscape, blocks of woodland, minor watercourses and the River Calder are all separated from the Site by development.

Waterbodies

14. No standing waterbodies are found on mapping for within a 500m radius of the Site.

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



Designated Sites

Statutory Designations

15. 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
Denby Grange Colliery Ponds	7.9km south	Special Area of Conservation (SAC)	High numbers of great crested newt, surrounded by replanted ancient woodland.

16. Given the distance between and the lack of shared habitats, direct impacts on this SAC as a result of development are considered unlikely.

SSSI Impact Risk Zones (IRZs)

17. The Site lies within the IRZ for the Denby Grange Colliery Ponds SSSI 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

18. There are two locally designated sites in the search area:
- Soothill Wood Local Wildlife Site (LWS)- 1.8km northeast
 - Caulms Wood Quarry Local Geological Site (LGS)- 1km south
19. Direct and indirect impacts as a result of this development are unlikely due to the Sites separation and distance.

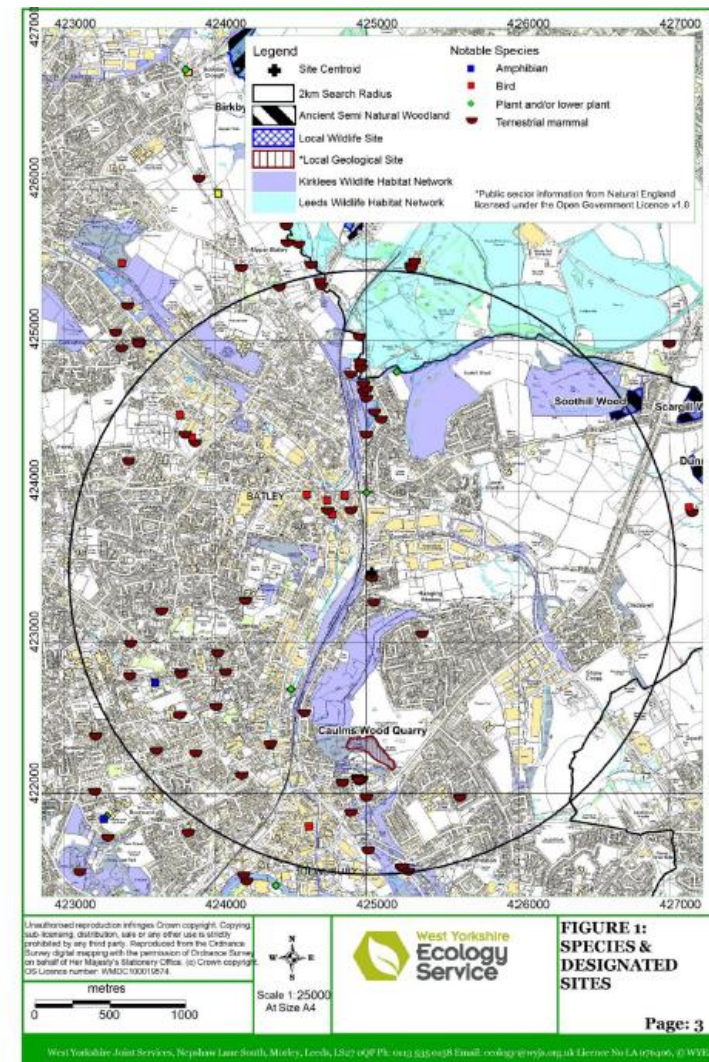
Kirklees Wildlife Habitat Network

20. The Site is not mapped as Kirklees Wildlife Habitat Network, with the closest section being the railway line and bordering woodland c.45m west.

Granted EPSM Licenses

21. No granted licenses show up within 1km of the Site.

Figure 3 West Yorkshire Ecology; Species and Designated Sites



Survey

Method

22. The western part of the Site was subject to survey during July 2020, with an additional parcel of land to the east subject to survey in January 2022¹. Both surveys followed the principles of Extended Phase 1 Habitat Survey methodology (JNCC, 2010).

Limitations

23. Enough time was afforded the surveyor to carry out the survey. The survey was not constrained by poor weather.
24. Whilst the majority 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

Habitats Identified

25. 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 relevant UK Habs guidance referenced at the back of the report in identifying habitats. Habitat descriptions are divided into the 'distinctiveness' categories used in the calculations - with more weight being afforded the more distinctive / important habitats.
26. 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

27. 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 calculation, but mitigation or compensation is not required.

Low Distinctiveness Habitats

28. Habitats which are ubiquitous, often which have been created or modified by man. 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.

Moderate Distinctiveness Habitats

29. 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.

¹ This Report has been prepared during August 2020 and updated in January 2022 following a visit to the site in July 2020 and January 2022 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.

High Distinctiveness Habitats

30. These are habitats which are more natural and by definition contain more important assemblages of plants and potentially species which are rare in their own right. They will provide good supporting 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

31. 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.
32. Each habitat is mapped and an area for each type is provided in the format of the DEFRA Biodiversity Metric 3.0 Calculation Tool. The areas can be used to quantify the impacts of development in an Ecological Impact Assessment if this is required by the Local Planning Authority.

Condition Assessment

33. Our condition assessment for each habitat described references where available the criteria set out in DEFRA (2021) Biodiversity Metric 3.0 Technical Supplement (1).
34. Habitats in the Very Low Distinctiveness tier do not require a condition assessment.
35. Habitats in the Low Distinctiveness tier tend to fall into the poor condition category by default. Where we feel this is not the case, we have explained our reasoning.
36. Habitats within the other higher tiers can fall into a range of conditions. We set out our reasoning based on the given criteria and guidelines.

351- Vacant / derelict / bare ground

Area estimate: 0.4 ha

Figure 4a Approximate location and extent of habitat



37. The majority of the Site has been cleared or trafficked in recent years which has led to heavy compaction and bare soil.
38. Having been cleared some time ago, vegetation has now begun to colonise the western area. This is limited to a few ruderal forbs and grasses dominantly rape (*Brassicaceae* sp.) and scentless mayweed (*Tripleurospermum inodorum*). Lower amounts of creeping thistle (*Cirsium arvense*), common knotgrass (*Polygonum aviculare*), doves foot cranesbill (*Geranium mole*), horsetail (*Equisetum* sp.) tufted vetch (*Vicia cracca*), willowherbs (*Epilobium* spp.) Yorkshire fog (*Holcus lanatus*) and cock's foot

(*Dactylis glomerata*) were recorded, alongside a small amount of Himalayan balsam (*Impatiens glandulifera*).

39. Land to the east has been more recently cleared, and only small amounts of vegetation is present, namely bramble, nettle, garlic mustard and willowherbs. Litter is prevalent here.

Summary Evaluation

40. Cleared ground, beginning to be colonised by a small number of ruderals. Will continue to increase in value with time.
41. Unlikely to support any scarce or notable species.

Figure 4b Western area of 351 (left) and eastern area (right)



Defra Metric Condition Assessment Poor

Urban non-priority		
	Pass/Fail	Condition
1	Fail	3, including requirements for Good in 2 & 3 = Good
2	Fail	
3	Fail	
	= Poor	2, or 3 without requirements for Good in 2 & 3 = Moderate
		0-1 = Poor

g3c,16, 10- Other neutral grassland, tall herb, scattered scrub

Area estimate: 0.33 ha

Figure 5a Approximate location and extent of habitat



42. To the north and west of the Site, grassland has developed, having established over looser substrate than in the east. Tall herbs are present throughout with small patches of scattered bramble scrub.
43. The grassland composition varies throughout, with the ratio of grasses to forbs varying between 50 – 80%. Most commonly encountered grasses are perennial rye (*Lolium perenne*) and bents (*Agrostis* spp.), with smaller amounts of false oat grass (*Arrhenatherum elatius*), sweet vernal-grass (*Anthoxanthum odoratum*) meadow foxtail (*Alopecurus pratensis*), Yorkshire fog and cocksfoot. Forbs include white clover (*Trifolium repens*), red clover (*Trifolium pratense*), tufted vetch, scentless mayweed, foxglove

(*Digitalis purpurea*), red poppy (*Papaver rhoeas*), colts foot, male fern (*Dryopteris filix-mas*), broad-leaved dock (*Rumex obtusifolius*), narrow leaved ragwort (*Senecio inaequidens*), common hogweed (*Heracleum sphondylium*), alongside saplings of hawthorn (*Crataegus monogyna*), cherry (*Prunus* sp.), poplar (*Populus* sp.) and rowan (*Sorbus aucuparia*). Locally abundant patches of rosebay willowherb (*Chamaenerion angustifolium*), are present throughout.

44. Towards the north-west the sward composition changes, with common bent, cocksfoot, fox and clubs (*Pilosella aurantiaca*) and red clover most frequently encountered.

Summary Evaluation

45. Rough grassland, with a reasonable diversity of grasses and forbs but no scarce species.

Figure 5b Typical structure and composition of this habitat



Defra Metric Condition Assessment Poor

Grassland (medium, high & very high distinctiveness)		
	Pass/Fail	Condition Poor
1	Fail	5 = Good 3-4 = Moderate 0-2 = Poor
2	Pass	
3	Fail	
4	Fail	
5	Fail	
= Poor		

h3h Mixed scrub

Area estimate: 0.13 ha

Figure 6a Approximate location and extent of habitat



46. The southern and part of the western and northern boundaries are occupied by mixed scrub present over an embankment, sloping upwards to the south and downwards to meet the road to the west.
47. For the area to the west and centre, bramble dominates, intermixed with snowberry (*Symphoricarpos albus*), *cotoneaster*, *rhododendron*, poplar saplings and elder (*Sambucus nigra*). Tall herbs and coarse grasses are also present, comprising rosebay willowherb, great willowherb (*Epilobium hirsutum*), hedge bindweed (*Calystegia sepium*), perennial sow thistle (*Sonchus arvensis*), welsh poppy (*Papaver cambricum*) colts foot (*Tussilago farfara*), rape, common nettle (*Urtica dioica*), thistles, wood avens (*Geum*

urbanum), false oat grass and perennial rye. A small amount of Himalayan balsam is present along the southern boundary.

48. The far eastern section of scrub comprises a group of remnant semi-mature hawthorn, cherry and elders.

Summary Evaluation

49. Small area of scrubs, with invasive weeds- of limited ecological value.
50. Unlikely to support any scarce or notable species.

Figure 6b Western boundary (left) and eastern area of scrub (right)



Defra Metric Condition Assessment Poor

Scrub			
	Western / Central	Eastern	Condition
1	Fail	Pass	5 = Good 3-4 = Moderate 0-2 = Poor
2	Fail	Fail	
3	Fail	Pass	
4	Pass	Fail	
5	Fail	Fail	
	= Poor	= Poor	

11 Scattered trees

Area estimate: 0.03 ha

Figure 7a Approximate location and extent of habitat



51. Aside from the line trees along the southern boundary (detailed overleaf), trees within areas of scrub, and as part of the park landscaping, 7 trees are scattered around the eastern section of the Site. These comprise alder, poplar and ash, either young or semi-mature.

Summary Evaluation

52. Scattered young or semi-mature trees of relatively low ecological value.

Figure 7b Typical structure and composition of this habitat



Defra Metric Condition Assessment Poor

53. The scattered trees have been grouped together and assessed under the 'woodland' condition assessment as per guidance.

Woodland		
	Good/Moderate/Poor	Condition
1	Poor	33-39 = Good 26-32 = Moderate 13-25 = Poor
2	Good	
3	Moderate	
4	Moderate	
5	Good	
6	Good	
7	Poor	
8	Good	
9	Poor	
10	Poor	
11	Poor	
12	Poor	
13	Poor	
23 points = poor		

211 Pocket Park
Including- u1b Developed land, 310 Amenity
grassland & 1170 Introduced shrub

Area estimate: 0.134 ha

Figure 8a Approximate location and extent of habitat



54. A pocket park is located towards the centre of the Site, comprising closely mown amenity grass, tarmacadam hardstanding and landscaping beds planted with non-native shrubs.
55. Species typically recorded here include perennial rye grass, creeping buttercup, white clover, daisy, laurel, cotoneaster, *Elaeagnus*, willow, dogwood and nettle.

Summary Evaluation

56. Small area of managed park of limited ecological value.
57. Unlikely to support any scarce or notable species.

Figure 8b Typical structure and composition of this habitat



Defra Metric Condition Assessment Poor

58. No assessment is required for u1b.
59. 1160 is automatically assigned a score of 'poor'.
60. The amenity grass is assessed to be 'poor'.

Grassland (low distinctiveness)		
	Pass/Fail	Condition
1	Fail	6-7 including criterion 1 = Good 6 excluding criterion 1 = Moderate 4-5 = Moderate 0-3 = Poor
2	Fail	
3	Pass	
4	Fail	
5	Fail	
6	Pass	
7	Fail	
= Poor		

lt4- Line of trees

Length estimate: 0.06 km

Figure 9a Approximate location and extent of habitat



- 61. A line of semi-mature poplar trees are found along part of the southern and western boundaries.
- 62. None would be classified as ancient or veteran.

Summary Evaluation

- 63. Line of single- species native trees, will have some ecological value.

Figure 9b Typical structure and composition of this habitat



Defra Metric Condition Assessment Poor

Line of trees		
	Pass/Fail	Condition
1	Fail	5 = Good 3-4 = Moderate 0-2 = Poor
2	Pass	
3	Fail	
4	Fail	
5	Pass	
	= Poor	

DEFRA Metric (Baseline)²

64. This metric sets out the baseline for the Site - proposals should seek to achieve at least a 'no net loss' situation through **Avoiding** areas of higher value, **Mitigating** any loss on-Site through retention and enhancement, or habitat creation. The Local Planning Authority may require you to **Compensate** any residual loss elsewhere - either through direct works or an off-setting contribution.

Land at Heaton Grange, Batley								
A-1 Site Habitat Baseline								
Condense / Show Columns			Condense / Show Rows					
Main Menu			Instructions					
Habitats and areas				Distinctiveness	Condition	Strategic significance	Suggested action to address habitat losses	Ecological baseline
Ref	Broad habitat	Habitat type	Area (hectares)	Distinctiveness	Condition	Strategic significance		Total habitat units
1	Urban	Vacant/derelict land/ bareground	0.4	Low	Poor	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	0.80
2	Grassland	Other neutral grassland	0.33	Medium	Poor	Area/compensation not in local strategy/ no local strategy	Same broad habitat or a higher distinctiveness habitat required	1.32
3	Heathland and shrub	Mixed scrub	0.13	Medium	Poor	Area/compensation not in local strategy/ no local strategy	Same broad habitat or a higher distinctiveness habitat required	0.52
4	Woodland and forest	Other woodland; broadleaved	0.03	Medium	Poor	Area/compensation not in local strategy/ no local strategy	Same broad habitat or a higher distinctiveness habitat required	0.12
5	Urban	Developed land; sealed surface	0.03	V.Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	Compensation Not Required	0.00
6	Grassland	Modified grassland	0.07	Low	Poor	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	0.14
7	Urban	Introduced shrub	0.03	Low	Poor	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	0.06
			1.02					2.96

² Our report provides an estimate of the sites value in Biodiversity Units. This is based on thorough assessment at the time of survey and using the information available at this time. In this assessment we have used the latest version of DEFRA's Biodiversity Metric Tool, the UK Habitats Classification and relevant guidance. This assessment requires subjective judgments to be made in terms of habitat type and condition and could be open to other interpretations. Reliance on the Unit Score, or conversion of this into a monetary value, would be at the developer's own risk. Where conversion to monetary value is required, it is always advisable to get calculations checked independently.

B-1 Site Hedge Baseline												
Condense / Show Columns				Condense / Show Rows								
Main Menu				Instructions								
Baseline ref	Hedge number	UK Habitats - existing habitats		Habitat distinctiveness		Habitat condition		Strategic significance			Suggested action to address habitat losses	Ecological baseline Total hedgerow units
		Hedgerow type	Length KM	Distinctiveness	Score	Condition	Score	Strategic significance	Strategic significance	Strategic position multiplier		
1	1	Line of Trees	0.06	Low	2	Poor	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	Same distinctiveness band or better	0.12
2												
3												
4												
5												
			0.06									0.12

Faunal Appraisal

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

Records

65. There is one record of amphibian in the search area, this relating to great crested newt recorded 1.5km southwest of the Site.

Field Evidence

66. No water bodies were recorded on Site and none are found on mapping for within a 500m radius.
67. The Site offers terrestrial habitat in the form of grassland and scrub.

Summary Evaluation

68. No suitable breeding habitat is found within the surrounding 500m and given the separation between the great crested newt record, this protected species is concluded to be likely absent.
69. The Site is unlikely to support any significant amphibian population.

Further Surveys

70. No further surveys or precautions are considered necessary.

Bats

Records

71. Forty-five records of bats have been returned, detailing common pipistrelle, soprano pipistrelle, noctule and indeterminate vesper bat species.
72. One record relates to the Site, this detailing a pipistrelle field record made in 2011.
73. No other significant records exist, instead they indicate a typical urban bat population, being dominantly pipistrelles recorded throughout the area.

Field Evidence

Potential Roost sites

Buildings: No buildings are found on Site.

Trees: All trees were inspected and none supported any features that would be classified as having potential roost features.

Foraging and commuting habitat

74. Given the Site's small size, limited habitats, and lack of connectivity to areas of off-site higher value habitat, it is unlikely to be of significant value to the local bat populations for foraging or commuting. Occasional low level activity by common species should be expected and would be maintained beyond redevelopment of the Site.

Summary Evaluation

75. The Site does not offer any roosting features.
76. The Site would not be expected to be of significant use for foraging or commuting bats

Further Surveys

77. No further surveys or precautions are considered necessary.

Birds

Records

78. Swift is the only bird species recorded within the surrounding 2km.

Field Evidence

79. A small number of common bird species were noted during the survey including house sparrow, black bird, wren, magpie and wood pigeon.

Summary Evaluation

80. The site will support a small number of bird territories and displacement of this is inevitable. However, as the site will not support key species the significance of this is low.

Further Surveys

81. No further surveys are considered necessary to demonstrate current baseline in respect of birds.
82. Standard precautions apply in relation to pre-clearance.

Badger

Records

83. There are no badger records within 1km of the site. The site falls within the area of increased probability of badger activity.

Summary Evaluation

86. Potential for badger both on and in close proximity to the Site.

Further Surveys

87. It was recommended that the holes be subject to camera trapping to confirm the presence or likely absence of badger from the Site.
88. Subsequent survey confirmed the absence of badger- see report ER-4856-02.

Hedgehog

Records

89. Hedgehog are recorded within the search area.

Field Evidence

90. No evidence of hedgehog was found on site.

Summary Evaluation

91. The Site provides suitable habitat for this species and measures to allow them to access gardens need to be planned for.

Further Surveys

92. Presence assumed, no further surveys are considered necessary.

Reptiles

Records

93. There are no records of reptiles in the area.

Field Evidence

94. No field evidence was found.

Summary Evaluation

95. The Site is separated from any significant reptile habitat or dispersal corridor. Whilst it does provide some apparently suitable terrestrial habitat, the lack of reptile populations within the area mean the site is very unlikely to support this group.

96. Reptiles are assessed as likely absent from the site.

Further Surveys

97. No further surveys or precautions are considered necessary.

Invasive Non-Native Species (INNS)

98. 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. The following species were noted³:

- Himalayan balsam- small amounts recorded along the southern boundary within scrub and within the 'vacant land' habitat
- Rhododendron- small stand along northern boundary

Horsetail

99. Horsetail was noted in small amounts within the 'vacant land' habitat. Whilst not listed on schedule 9, they can cause damage to roads and paving post development.

Survey constraints

100. Land to the east has been recently cleared, and whilst no INNS were identified in the area in January 2022, there is high potential that this area does support them, specifically Himalayan balsam.

101. Overall, the Site presents a high risk of supporting undetected INNS based on the following factors:

- Areas of site inaccessible to survey
- Potential for recent earthworks or management which may have obscured viable material
- Proximity to nearby potential sources of infection
- Potential for tipping of material

102. Should further assurances be needed in relations to INNS you should commission a dedicated Invasive Weed Survey.

Figure 11a Himalayan balsam along southern boundary



Figure 11b Rhododendron along northern boundary



Figure 11c Horsetail along eastern boundary



³ 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

- 103. No significant ecological constraints have been identified.
- 104. A group of mammal holes are present in the north-east. Subsequent survey found the absence of badger- see report ER-4856-02.
- 105. Invasive weeds are present in low numbers- an Invasive Weed Management Plan is recommended.

Figure 12 Constraints identifiable at the PEA stage*



*(further constraints may be identified by any additional surveys recommended in this or other reports.

Ecological Opportunities

106. The key ecological opportunity here would be to enhance the boundaries through native hedgerow and tree planting. This could also be extended through the Site.
107. In area of public open space, wildflower seeds mixes could be utilised instead of amenity grass such as Emorsgate EL1 or EM1, with any landscaping beds using native or pollinator friendly species instead of non-native varieties.
108. Given the lack of bat roosting features and limited opportunities for bird nesting, installing roosting, nesting and hibernation features will be beneficial.
109. Garden fences should be permeable so that hedgehogs can have access through the Site.

Figure 13 Ecological Opportunities



Conclusions and Recommendations

Planning considerations		
Recommendation	Rationale	When
R1 Further survey	Further detailed survey will be required into the following species/ groups, to confirm presence or likely absence and collect an accurate baseline for the Site. Badger- camera trapping of mammal holes and dense scrub area just off-site. This has been completed- see report ER-4856-02. The presence of badger both on Site or within close proximity could represent a constraint to development and could have a bearing on the layout. A Natural England Mitigation Licence may be required prior to works commencing, in order to derogate offences that might otherwise be committed.	Year round
R2 Produce a layout which minimises loss of biodiversity	The site has been assessed as having an Ecological Baseline score of 2.85 Habitat Units and 0.23 Hedgerow Units. Proposals will need to consider the NPPF hierarchy of Avoid - Mitigate – Compensate in minimising any loss of biodiversity. Engage with the Constraints and Opportunities set out above, involve your ecologist in designs at an early stage. It may be of benefit to produce a Green Infrastructure Plan or an ecologically led Landscape Concept Design* to submit with the application – given sufficient detail this could remove the need for a separate Landscape Master Plan and would help show how this process had been engaged with.	During the design process
R3 Ecological Impact Assessment (EclA)	Once the layout has been fixed and all ecological surveys completed, an EclA can then be produced which summarises the potential impacts of the proposed development on the Site's baseline. As part of this assessment, the Biodiversity Net Gain calculations will be completed, with post development metrics being based on the Site Layout and Landscape Masterplan; with measurements provided by the client/ architect.	Prior to submission.
R4 Produce a Biodiversity Management Plan	To specify in detail how the development will cater for biodiversity on site and to show how habitats will be maintained in the condition that the Biodiversity Calculations were based on.	Suitable for planning condition.

* Due to the increasing adoption of biodiversity net gain Brooks Ecological has taken the step of providing our own in-house landscape design team, we are in a position to help you produce any of the landscape plans needed for submission. Please contact our team for further details.

Other considerations (managing legal or financial risks)		
Issue	Rationale	When
R5 Nesting bird management	As with most sites the standard precaution in relation to birds would apply: To prevent the proposed works impacting on nesting birds, any clearance of vegetation will need to be undertaken outside of the breeding bird season which is 1st March – 31st August inclusive. Any clearance required during the breeding bird season should be preceded by a nesting bird survey to ensure that the law is not contravened through the destruction of nests and that any active nests are identified and adequately protected during the construction phase of the development. Nesting management can be set out in the CEMP if one is produced.	Pre- and during - clearance
R6 INNS Management Plan	Himalayan balsam, rhododendron and horsetail are present. 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)

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Appendix 1 Habitats and Ecological Features



Appendix 2 List of species recorded

Common Name	Scientific Name
Ash	<i>Fraxinus excelsior</i>
Bent	<i>Agrostis</i> sp.
Birch	<i>Betula</i> sp.
Bird's-foot trefoil	<i>Lotus corniculatus</i>
Bracken	<i>Pteridium aquilinum</i>
Bramble	<i>Rubus fruticosus</i>
Bristly oxtongue	<i>Helminthotheca echioides</i>
Broad leaved dock	<i>Rumex obtusifolius</i>
Broadleaved willowherb	<i>Epilobium montanum</i>
Bush vetch/tare	<i>Vicia sepium</i>
Butterfly bush/buddleia	<i>Buddleia davidii</i>
Catsear	<i>Hypochaeris radicata</i>
Cherry	<i>Prunus</i> sp.
Cherry laurel	<i>Prunus laurocerasus</i>
Chickweed	<i>Stellaria media</i>
Cleavers	<i>Galium aparine</i>
Clover	<i>Trifolium</i> sp.
Cock's-foot	<i>Dactylis glomerata</i>
Coltsfoot	<i>Tussilago farfara</i>
Common alder	<i>Alnus glutinosa</i>
Common bent	<i>Agrostis capillaris</i>
Common feather moss	<i>Kindbergia praelonga</i>
Common fumitory	<i>Fumaria officinalis</i>
Common mallow	<i>Malva sylvestris</i>
Common moss	<i>Rhytidiadelphus squarrosus</i>
Cotoneaster	<i>Cotoneaster</i> sp.
Creeping buttercup	<i>Ranunculus repens</i>
Creeping cinquefoil	<i>Potentilla reptans</i>
Creeping thistle	<i>Cirsium arvense</i>
Cut leaved cranesbill	<i>Geranium dissectum</i>
Daisy	<i>Bellis perennis</i>
Dandelion	<i>Taraxacum officinale</i> agg.
Dogwood	<i>Cornus sanguinea</i>
Dove's-foot cranesbill	<i>Geranium molle</i>
Elaeagnus	<i>Elaeagnus</i> sp.
False oat grass	<i>Arrhenatherum elatius</i>
Fescues	<i>Festuca</i> spp.
Fox and cubs	<i>Pilosella aurantiaca</i>
Foxglove	<i>Digitalis purpurea</i>
Garlic mustard	<i>Alliaria petiolata</i>
Germander speedwell	<i>Veronica chamgedrys</i>

Greater willowherb	<i>Epilobium hirsutum</i>
Hawthorn	<i>Crataegus monogyna</i>
Herb robert	<i>Geranium robertianum</i>
Himalayan balsam	<i>Impatiens glandulifera</i>
Hogweed	<i>Heracleum sphondylium</i>
Horsetail	<i>Equisetum</i> sp.
Ivy-leaved speedwell	<i>Veronica hederifolia</i>
Knotgrass	<i>Polygonum aviculare</i>
Lesser celandine	<i>Ficaria verna</i>
Male fern	<i>Dryopteris filix-mas</i>
Mallow	<i>Malva</i> sp.
Meadow bindweed	<i>Convolvulus arvensis</i>
Meadow buttercup	<i>Ranunculus acris</i>
Meadow foxtail	<i>Alopecurus pratensis</i>
Meadow grass	<i>Poa</i> sp.
Meadow vetchling	<i>Lathyrus pratensis</i>
Narrow-leaved ragwort	<i>Senecio inaequidens</i>
Oil seed rape	<i>Brassica napus</i>
Perennial rye grass	<i>Lolium perenne</i>
Perennial sow thistle	<i>Sonchus arvensis</i>
Pointed spear moss	<i>Calliergonella cuspidata</i>
Poplar	<i>Populus</i> sp.
Poppy	<i>Papaver rhoeas</i>
Ragwort	<i>Jacobaea vulgaris</i>
Rat's tail/ greater plantain	<i>Plantago major</i>
Red clover	<i>Trifolium pratense</i>
Red deadnettle	<i>Lamium purpureum</i>
Red fescue	<i>Festuca rubra</i> agg.
Rhododendron	<i>Rhododendron ponticum</i>
Ribwort plantain	<i>Plantago lanceolata</i>
Rosebay willowherb	<i>Chamerion angustifolium</i>
Rowan/mountain ash	<i>Sorbus aucuparia</i>
Scentless mayweed	<i>Tripleurospermum inodorum</i>
Selfheal	<i>Prunella vulgaris</i>
Snowberry	<i>Symphoricarpos albus</i>
Spear thistle	<i>Cirsium vulgare</i>
Sun spurge	<i>Euphorbia helioscopia</i>
Welsh poppy	<i>Meconopsis cambrica</i>
Willowherb	<i>Epilobium</i> sp.
Wood avens	<i>Geum urbanum</i>
Yarrow	<i>Achillea millefolium</i>
Yellow oat grass	<i>Trisetum flavescens</i>
Yorkshire fog	<i>Holcus lanatus</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 [SSSI's]) as well as many non-statutory listed habitats (e.g. ancient woodlands and grassland inventory sites). It is a valuable tool when considering the relationship of a potential development site with nearby important habitats. In addition, information from the local record holders was referred to on locally designated sites.

Functional linkage with off-Site habitats

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

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

Method

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

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

Priority Species		Priority Habitats
Floating water plantain		Semi-natural pasture
Great-crested newt		Lowland and upland meadows
Marsh helleborine		Lowland dry acid grassland
Northern wood ant		Blanket bog
Twite		Upland heathland
Watervole		Upland flushes
White-clawed crayfish		Lowland heathland
		Upland oak woodland
		Lowland deciduous and other woodland
		Upland mixed ashwoods
		Wet woodland
		Arable field margins
		Hedgerows
		Rivers, riverine corridors and associated habitats
		Reedbeds
		Scrub and habitat mosaics on previously developed land

Bats

Bat roosting potential is classified according to the following criteria set out below, taken from the Bat Conservation Trust Good Practice Guidelines (2016).

Bat Roosting Suitability of Buildings and Trees

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

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

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.

Bat activity is easy to predict at this Site, given the Site's small size, simple habitats and lack of connectivity to higher value habitat off-site. It will be used by low numbers of urban common species of bat. This value can be retained beyond development and it is not considered necessary to undertake further survey to support this.

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

The Wildlife and Countryside Act (1981) as amended

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

The Countryside and Rights of Way Act 2000 (CRoW)

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

Natural Environment and Rural Communities Act 2006 (NERC)

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

Hedgerows Regulations (1997)

Define and provide protection for Important Hedgerows.

Protection of Badgers Act (1992)

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

Protected Sites

Statutory EU / International Protected Sites

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

Statutory UK Protected Sites

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

Locally Protected Sites

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

Protected Species

European Protected Species

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

UK Protected Species

A number of species (including bats, GCN, 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 species

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

Planning Policy / Guidance

The National Planning Policy Framework (NPPF):

The National Planning Policy Framework was updated in February 2019. 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 “*contribute to protecting and enhancing our natural environment*” and “*help to improve 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 functions for wildlife*” (P118).

Section 15 details conserving and enhancing the natural environment; policies and decisions should be “*protecting and enhancing 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 (P170). Allocations of land for development should, “*prefer land of lesser environmental value, where consistent with other policies in this Framework and take a strategic approach to maintaining and enhancing networks of habitats*” (P171).

The Framework sets out ways to minimise the impacts on biodiversity through “*identifying, mapping and safeguarding 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 the “*conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and (the need to) identify and pursue opportunities for securing measurable net gains for biodiversity*” (P174).

It is made clear in P175 that local planning authorities should apply principles when determining planning applications. Planning permission should be refused “*if significant harm to biodiversity resulting in 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 incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity*”.

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

This strategy 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.