

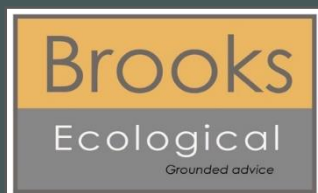
Worsborough Youth Centre, Barnsley



Preliminary Ecological Appraisal Report

Report Ref. ER-6379-01

Barnsley Metropolitan County Council



Report reference	ER-6379-01
Author	Joanna Bertwistle BSc (Hons), Ecologist
Technical Review	Christopher Shaw BSc (Hons) MCIEEM Principal Ecologist
QA	Charlie Foreman BSc (Hons) Assistant Ecologist
Authorised	Christopher Shaw BSc (Hons) MCIEEM Principal Ecologist
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Unit A, 1 Station Road, Guiseley, Leeds, LS20 8BX
Phone: 01943 884451
01943 879129
www.brooks-ecological.co.uk
Registered in England Number 5351418

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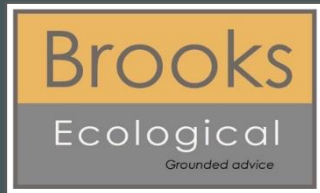
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Summary

This report is produced to inform Barnsley Metropolitan County Council 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 August 2022, an updating survey to include the additional areas to the red line boundary was conducted in October 2022.

Key Findings

The Site consists of common and widespread habitats abundant in the local area.

No further surveys are considered necessary.

Biodiversity Net Gain

The Site has a biodiversity metric score of 0.93 Habitat Units.

Introduction

1. Brooks Ecological Ltd was commissioned by Barnsley Metropolitan County Council to carry out a Preliminary Ecological Appraisal (PEA) of land at Worsborough Youth Centre, Barnsley.
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. Works are for the demolition and reconstruction of the youth centre.

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' encompasses a vacant former youth centre, car park, access road and associated greenspace.
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 (red line boundary).



Desk Study

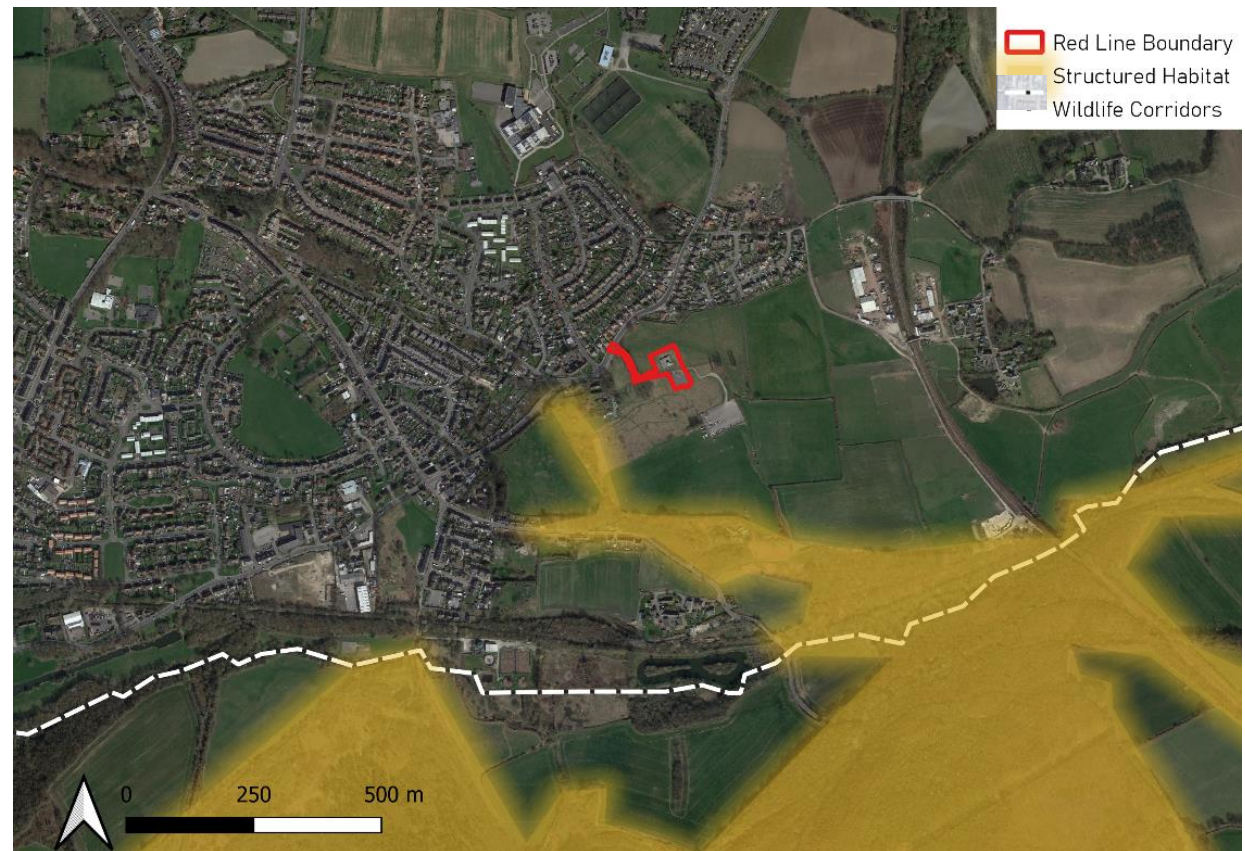
Landscape

10. The Site is located to the south of the town of Worsborough Dale, within the southern outskirts of the town of Barnsley, South Yorkshire.
11. The enclosed Site is bordered to the north and east by a publicly accessible green space, regularly used by dog walkers. The south and west is bordered by privately owned and inaccessible overgrown amenity grassland
12. The immediate area around the Site is of poor-quality amenity grassland. The wider landscape includes residential areas and agricultural fields, with more structured habitat to the south; including pockets of broadleaved and mixed woodland, former colliery land and wetland habitats.

Wildlife Corridors

13. The nearest significant wildlife corridor is the River Dove situated 500m south of Site, connected by limited terrestrial vegetation.
14. Significant areas of structured habitat is present to the south of Site including woodland, wetland, wood pasture, and colliery sites. This is also likely to facilitate the movement of wildlife locally.

Figure 2 Analysis of wildlife corridors and higher value habitat visible on mapping 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
Dearne Valley Wetlands	1km SW	Site of Special Scientific Interest (SSSI)	Breeding assemblages of wetland birds, particularly Shoveler and Gadwall.
Worsborough Country Park	1km W	Local Nature Reserve (LNR)	Large country park with a variety of habitats managed for biodiversity, including reservoir, hay meadows, hedgerows.
Stairfoot Brickworks	2km NE	SSSI	Geological features

16. Of the above, only Dearne Valley Wetland and Worsborough Country Park are designated on the grounds of their ecological interest, with Stairfoot Brickworks being of geological importance.
17. Direct and indirect impacts on Dearne Valley Wetland SSSI and Worsborough Country Park LNR, as a result of the Site redevelopment, are unlikely due to the Site's small size, spatial separation and lack of shared habitat.

SSSI Impact Risk Zones (IRZs)

18. The Site lies within the IRZ for the Dearne Valley Wetlands 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

19. There are 6 Local Wildlife Sites in the search area: Worsbrough reservoir (24), Bell Bank Wood (64), Wombwell Wood (29), Swaithe Flood meadows (57), Barrow Colliery Site (57) and Stairfoot Disused Railway (28).
20. None of these LWS's are considered to fall within the Sites Ecological Zone of Influence, due to their distance and separation. Impacts on these LWS's, as a result of the Sites proposed redevelopment, are therefore considered unlikely.

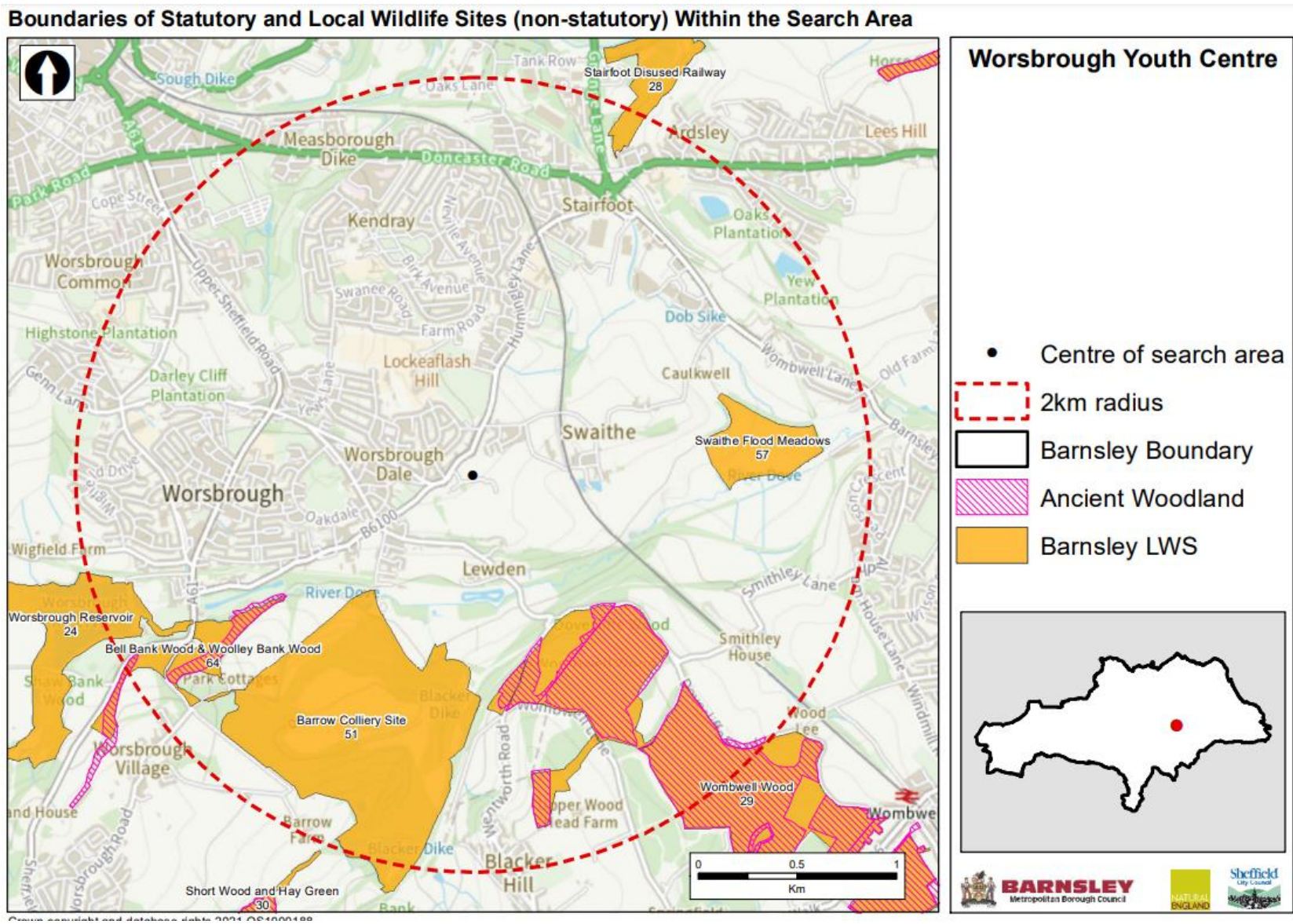
Nature Improvement Area (NIA)

21. The Site is located within the Dearne Valley Green Heart NIA. The aim of the NIA is to link up surrounding woodland, wetland and floodplain habitat and to improve farmland and amenity grassland of poor ecological value. The Site would fall into the category of amenity grassland for improvement. This should be considered during the design and planning phases.

Granted EPSM Licenses

22. A single granted bat license shows up within 1km of the Site, pertaining to the destruction of a soprano pipistrelle breeding site 500m south of the Site.

Figure 3 Sheffield City Council; Species and Designated Sites.



Survey

23. The survey was carried out during August 2022 and updated in October 2022¹ and followed the principles of Extended Phase 1 Habitat Survey methodology (JNCC, 2010).
24. Enough time was afforded the surveyor to carry out the survey. The survey was not constrained by poor weather.
25. Whilst the majority of the Site was accessible, very small areas were inaccessible due to dense vegetation, these areas could be hiding protected or invasive species.

Habitat Appraisal

26. 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 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.
27. 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

28. 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

29. 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.

Medium Distinctiveness Habitats

30. 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

31. These are 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 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

32. These are the UKs 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.
33. Each habitat is mapped and an area for each type is provided in the format of the DEFRA Biodiversity Metric 3.1 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

34. Our condition assessment for each habitat described references where available the criteria set out in DEFRA (2021) Biodiversity Metric 3.1 Technical Supplement.
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. 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.

¹ This Report has been prepared during October 2022 following an initial visit to the site in August 2022 and updating visit in October 2022. Our findings are based on the conditions of the site that were reasonably visible and accessible at that date. We

accept no liability for any areas that were not reasonably visible or accessible, nor for any subsequent alteration, variation or deviation from the site conditions which affect the conclusions set out in this report.

Habitats of Low/Very Low Distinctiveness

Figure 4 Approximate location and extent of these habitats.



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

Habitat Code/ Name	Summary Description	Condition
Developed Land; sealed surface	Developed land occupies a large proportion of the Site and occurs in the form of the former youth centre, car park and access road. This habitat is devoid of vegetation.	N/A
Modified Grassland	A small area of grass to the front entrance of the former youth centre continues to be managed as amenity grass. The sward here is dominated by perennial rye grass with smaller components of Yorkshire fog, hawkbit sp., dandelion, broad leaved dock, creeping thistle and creeping buttercup.	Poor

Defra Metric Condition Assessment - Modified Grassland

Grassland (low distinctiveness)		
	Pass/Fail	Condition
6-8 species?	F	6-7 <u>including</u> criterion 1 = Good 6 <u>excluding</u> criterion 1 = Moderate 4-5 <u>including</u> criterion 1 = Moderate 0-3 = Poor
Varied sward height?	F	
Scrub <20%	P	
Damage <5%	P	
Bare ground 1-10%?	P	
Bracken <20%	P	
Absence of invasives	P	
	Poor	

Habitats of Low/Very Low Distinctiveness

Figure 5 View of modified grassland



Figure 6 View of modified grassland



Figure 7 View of modified grassland



Figure 8 Example of developed land; sealed surface car park



Figure 9 Example of developed land; sealed surface (youth centre)



Figure 10 Example of developed land; sealed surface access road



Habitats of Medium Distinctiveness

Figure 11 Approximate location and extent of these habitats.



Other Neutral Grassland (*Arrhenatherum elatius* dominated)

- This habitat covers a large portion of the Site, and represents former amenity grassland, that has been left unmanaged and allowed to grow rank. The sward is dominated by false oat grass, with smaller components of cock's-foot, creeping bent and Timothy. Scattered through the sward is a typical suite of competitive forbs, including broad-leaved dock, cow parsley, ribwort plantain, common ragwort, creeping thistle, creeping buttercup and dandelion. Occasional young ash saplings are also present.
- A small courtyard in the centre of the building has also been colonised by small patches of false oat dominated grassland with a similar species composition but shorter grass overall. Some small rowan saplings were also present.

Defra Metric Condition Assessment - Poor

Criteria	Pass/Fail	Condition Poor
Close match	Fail	5 out of 6 = including criterion 6 - Good 3 -4 = Moderate, 1-2 = Poor
Varied sward	Fail	
Bare ground 1-5%	Fail	
Bracken < 20% and scrub <5%	Pass	*Criterion 6 is essential to meet <u>Good</u> condition (only applies to non acid grassland)
Absence of invasives or undesirables	Fail	
>9 species per square meter	Fail	
	Poor	

Figure 12 View of other neutral grassland



Figure 13 View of other neutral grassland



Mixed Scrub

38. A patch of cherry scrub is present along the western Site boundary, which appears to have spread over the fence from a wider patch of cherry scrub to the east. The scrub is dominated by wild cherry with other species including bramble and nettle.

Defra Metric Condition Assessment - Poor

Criteria	Pass/Fail	Condition
Representative and 3 plus woody spp.	Fail	5 = Good 3-4 = Moderate 0-2 = Poor
Good age range	Fail	
Absence of invasives	Pass	
Well-developed edge	Pass	
Clearings and glades present	Fail	
	Poor	

Figure 14 View of scrub edge



Figure 15 View of scrub



Bramble Scrub

39. Two patches of bramble scrub are present around the car park and access road. These are dominated by bramble with other species including nettle, cocksfoot, hedge bindweed and cleavers.

Defra Metric Condition Assessment - Poor (automatically assigned)

Figure 16 View of scrub on access road



Figure 17 View of scrub in car park



Urban trees

40. Within the red line boundary there is one young ash tree.

Figure 18 Small urban tree to north



41. Lining the access road, adjacent to the red line boundary are two rows of mature trees. These treelines are dominated by cherry and also include sycamore and downy birch. Currently proposals at the Site do not affect these trees and they are excluded from the red line boundary. However, given their proximity to the Site, they should be protected through the construction phase with the use of Root Protection Fencing.

Figure 19 View of tree on access road



Figure 20 View of treeline on access road



Defra Metric Condition Assessment -Poor to Moderate

Criteria	Small trees	Medium trees	Condition
>70% natives	Pass	Pass	5-6 = Good 3-4 = Moderate 0-2 = Poor
Continuous canopy gaps <10%	Fail	Pass	
Mature or veteran tree or 50% of block is	Fail	Fail	
No pruning evidence	Pass	Pass	
Deadwood, cavities etc. for birds	Fail	Fail	
> 20% canopy oversailing vegetation	Fail	Pass	
Score	Poor	Moderate	

DEFRA Metric (Baseline)²

42. This metric sets out the baseline for the Site - proposals should seek to **Avoid** areas of higher value, **Mitigating** any loss on-Site through retention and enhancement, or habitat creation.

Worsborough Youth Centre								
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	Grassland	Modified grassland	0.0273	Low	Poor	Formally identified in local strategy	Same distinctiveness or better habitat required ≥	0.06
2	Urban	Urban Tree	0.0041	Medium	Poor	Formally identified in local strategy	Same broad habitat or a higher distinctiveness habitat required	0.02
3	Grassland	Other neutral grassland	0.1521	Medium	Poor	Formally identified in local strategy	Same broad habitat or a higher distinctiveness habitat required	0.70
4	Heathland and shrub	Bramble scrub	0.0156	Medium	Condition Assessment N/A	Formally identified in local strategy	Same broad habitat or a higher distinctiveness habitat required	0.07
5	Heathland and shrub	Mixed scrub	0.0084	Medium	Moderate	Formally identified in local strategy	Same broad habitat or a higher distinctiveness habitat required	0.08
6	Urban	Developed land, sealed surface	0.2496	V.Low	N/A - Other	Formally identified in local strategy	Compensation Not Required	0.00
7								
8								
9								
10								
11								
12								
Total habitat area			0.46					0.93

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.

Faunal Appraisal

43. 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

44. Two ponds are located (just) within 500m of Site; shown on the plan opposite. Neither pond could be accessed on the day of survey. P1 to the east appears to be a manmade fishing pond, unlikely to be suitable for GCN; the pond is separated by a railway track and low suitability grassland. P2 to the south is separated by a road and agricultural grassland. Both ponds are therefore considered to fall outside of the Sites Ecological Zone of Influence.
45. There are no records of great crested newt (GCN) returned for the area. Multiple records of common frog and one record of smooth newt were returned for the search area, with the nearest records being 1.25km southwest of Site.

Field Evidence

46. The Site has some terrestrial areas of suitable habitat for amphibians; however, an expanse of unsuitable amenity grassland separates the Site from surrounding breeding habitat.

Summary Evaluation

47. The Site is not expected to be important to local amphibian populations. GCN are concluded likely absent from the Site.

Further Surveys and Recommendations

48. No further surveys or precautions are considered necessary.

Figure 21 Ponds mapped in relation to the Site.



Bats

Desk evidence

49. Multiple records of passing and foraging bats were returned for the search area, with the nearest record being 0.98km east. No records of roosts were returned within a 2km radius. The species recorded consisted of common pipistrelle, soprano pipistrelle, noctule, brown long-eared, Daubenton's bat and Leisler's bat.

Field Evidence (Roosting)

50. There are no trees on Site with bat roost suitability.
51. One building is present on Site, this being the youth centre; see table below:

Table 3 Bat Roost Suitability Assessment

Ref:	Notes	Suitability
B1	A square, single storey, flat-roofed building, with small central courtyard. The walls are constructed of brick and PVC panelling. The boxed roof is constructed of bitumen roofing felt. The eaves are all fully sealed, no areas of ingress are present on the building suitable for bats to enter. A large amount of rodent droppings were found in the kitchen area.	Negligible

Field Evidence (foraging and commuting)

52. The Site is occupied primarily by habitats of low suitability for bats, with only the trees lining the access road likely to attract foraging activity.

Summary Evaluation

53. The Site is not expected to be of importance to local bat populations.

Further Surveys and Recommendations

54. No further survey is recommended.

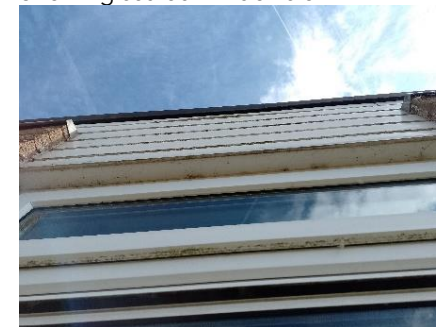
Figure 22 Bat roost suitability assessment.



View of B1



Showing sealed windows of B1



Birds

Desk Evidence

55. Nearly 2000 records of birds were returned for the area comprising of expected garden birds, urban fringe species, with the nearest pertaining to a wren and warbler 500m south of Site within a patch of woodland.
56. Woodland and farm specialists were returned for the area, associated with their relevant habitat types. A large number of wetland specialist records were returned, located within the Dearne Valley Wetlands SSSI to the south.
57. The habitats on Site are unsuitable to support the important assemblages of birds returned in the data search (woodland, farm and wetland assemblages).

Field Evidence

58. The Site is overgrown, leaving long grassland and scrub covering much of the Site, suitable for small numbers of common nesting birds.
59. A small number of common bird species were noted during the survey including wood pigeon and blackbird.

Summary Evaluation

60. Due to the size and habitats present, the Site is not expected to be of importance to any local bird populations, being frequented by only a small number of common garden and urban fringe species.

Further Surveys and Recommendations

61. No further surveys are considered necessary to demonstrate current baseline in respect of birds.
62. Standard precautions apply in respect of restrictions on clearing vegetation during the nesting season.

Badgers

Desk evidence

63. Multiple badger records and setts were returned for the area, all located in more suitable habitat in the wider landscape (woodland and disused railway). The nearest record was situated nearly 2km from the Site.

Field Evidence

64. Some scrub and long grassland is present on Site suitable for badgers, however the Site is isolated from any more suitable habitat in the wider landscape.
65. No evidence of badger activity was found during the walkover, and the Site is surrounded by a tall dug-in metal palisade fence with no signs of ingress.

Summary Evaluation

66. The likely absence of badger from the Site can be reasonably concluded.

Further Surveys and Recommendations

67. Further survey is not recommended.

Hedgehogs, NERC Act 2006

Desk evidence

68. Hedgehogs are recorded within the search area.

Field Evidence

69. No evidence of hedgehogs was found on site.

Summary Evaluation

70. The Site provides suitable habitat for this species and measures to allow them to access the Site needs to be planned for.

Further Surveys and Recommendations

71. Presence assumed no further surveys are considered necessary.

Reptiles

Desk evidence

72. Multiple records of grass snake, common lizard and adder were returned for the area, all located in more suitable habitats to the south and west of Site. The nearest record pertained to a common lizard 600m south.

Field Evidence

73. Some scrub and long grassland is present on Site suitable for reptiles, however the Site is isolated from any suitable wider habitat by public open green space and arable fields.
74. No field evidence was found.

Summary Evaluation

75. Reptiles are assessed as likely absent from the Site.

Further Surveys and Recommendations

76. No further surveys or precautions are considered necessary.

Invasive Non-Native Species (INNS)

77. 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.

78. The following species were noted³:

- None

Survey constraints

79. 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, 3rd 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.

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

- Proximity to nearby potential sources of infection
- Potential for tipping of material

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

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 & Opportunities

82. Most LPAs now require developments to demonstrate a 'no net loss' in biodiversity, or in some cases a 10% net gain. The Site has been assessed as having a Biodiversity Metric score of 0.93 Habitat Units.
83. Any net loss in biodiversity may need to be compensated for, through offsetting, which could require a financial contribution be made to the LPA's Habitat Fund, or a third-party broker.
84. The scheme should seek to minimise biodiversity loss by retaining as much existing vegetation as possible, and maximising the Site's biodiversity value post-development, by either creating new high-quality habitats on cleared ground, or by enhancing retained vegetation.
85. The Site is in the Dearne Valley Green Heart Nature Improvement Area, as part of the aims for the area the low ecologically valuable habitats should be improved where possible.
86. The adjacent mature urban treelines bordering the access road will need to be protected through the construction phase. This would typically be specified in an Arboricultural Method Statement.

Figure 23 Constraints and Opportunities Plan.



Conclusions and Recommendations

Planning considerations		
Recommendation	Rationale	When
R1 Additional Surveys	Not required	N/A
R2 Produce a layout which minimises loss of biodiversity.	Engage with the Constraints and Opportunities set out above, involve your ecologist in designs at an early stage. The proposals will need to consider the NPPF hierarchy of Avoid - Mitigate - Compensate in minimising any loss of biodiversity. The LPA is likely to be seeking at least a no-net-loss situation and could request that a contribution is made to address any residual loss here, off-Site. Your layout may need to change to accommodate your findings from R1 surveys.	During the design process
R3 Biodiversity Net Gain Strategy (BNS)	Engage an ecologist to work with the design team to maximise available Biodiversity Units on site.	During the design process
R4 Landscape Design	Make sure your landscape architect follows ecological advice or the BNS to maximise Biodiversity Units on site and make sure there are no design conflicts.	During the design process
R5 Calculate final Biodiversity Impact Score	Using DEFRA metric to quantity net gain/loss of biodiversity.	After a fixed design is agreed.

Other considerations (managing legal or financial risks)		
Issue	Rationale	When
R6 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.	Pre- and during -clearance

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Appendix 1 Habitats and Ecological Features



Appendix 2 List of species recorded

Ash	<i>Fraxinus excelsior</i>	Pineapple weed	<i>Matricaria discoidea</i>
Bent	<i>Agrostis sp.</i>	Red clover	<i>Trifolium pratense</i>
Bindweed	<i>Calystegia sepium</i>	Red fescue	<i>Festuca rubra agg.</i>
Black medick	<i>Medicago lupulina</i>	Ribwort plantain	<i>Plantago lanceolata</i>
Bramble	<i>Rubus fruticosus</i>	Rowan/mountain ash	<i>Sorbus aucuparia</i>
Broad leaved dock	<i>Rumex obtusifolius</i>	Timothy grass	<i>Phleum pratense</i>
Broadleaved willowherb	<i>Epilobium montanum</i>	Wild cherry	<i>Prunus avium</i>
Burdock	<i>Arctium sp.</i>	Yorkshire fog	<i>Holcus lanatus</i>
Cherry	<i>Prunus sp.</i>	Common fumitory	<i>Fumaria officinalis</i>
Cleavers	<i>Galium aparine</i>	Common mouse-ear	<i>Cerastium fontanum</i>
Cock's-foot	<i>Dactylis glomerata</i>	Fescues	<i>Festuca spp.</i>
Common bent	<i>Agrostis capillaris</i>	Perennial sow thistle	<i>Sonchus arvensis</i>
Common ivy	<i>Hedera helix</i>	Scentless mayweed	<i>Tripleurospermum inodorum</i>
Common moss	<i>Rhytidiadelphus squarrosus</i>	Shepherd's purse	<i>Capsella bursa-pastoris</i>
Common ragwort	<i>Senecio jacobaea</i>	Thistle	<i>Cirsium sp.</i>
Cow parsley	<i>Anthriscus sylvestris</i>		
Creeping bent	<i>Agrostis stolonifera</i>		
Creeping buttercup	<i>Ranunculus repens</i>		
Creeping thistle	<i>Cirsium arvense</i>		
Daisy	<i>Bellis perennis</i>		
Dandelion	<i>Taraxacum officinale agg.</i>		
False oat grass	<i>Arrhenatherum elatius</i>		
Groundsel	<i>Senecio vulgaris</i>		
Herb robert	<i>Geranium robertianum</i>		
Nettle	<i>Urtica dioica</i>		
Nipplewort	<i>Lapsana communis</i>		
Perennial rye grass	<i>Lolium perenne</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 Sheffield City Council 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 'Barnsley Local BAP'.

Species/Group	Habitat
Hedgehog	Mixed deciduous woodland
Bats	Upland oakwood
Water Vole	Wet woodland
Otter	Parkland and veteran trees
Grey Partridge	Traditional orchard
Bittern	Scrub
Kestrel	Coniferous woodland
Little Ringed Plover	Hedgerows
Lapwing	Arable field margins
Barn Owl	Acid grassland
Skylark	Neutral grassland
Tree Sparrow	Floodplain grazing marsh
Twite	Amenity grassland
Great Crested Newt	Upland heathland
Salmon	Lowland heath
Bullhead	Reedbeds
White-clawed Crayfish	Lowland fen
Glow Worm	Upland flushes, fens and swamps
Dingy Skipper	Rush pasture
Bluebell	Blanket bog
	Standing water and ponds
	Running water, rivers & streams
	Open Mosaic Habitats on Previously Developed Land
	Built environment and gardens

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
Negligible	Negligible habitat features on site likely to be used by roosting bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions, and/or suitable surrounding habitat to be used on a regular basis or by a larger 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.
Moderate	A structure or tree with one or more potential roost sites that could be used due to their size, shelter, protection, conditions, and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only - the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protections, conditions and surrounding habitats.

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.

This assessment was made by Rob Weston BSc (Hons) MSc MIEEM. Rob is a Registered Consultant (RC065) under the Bats Low Impact Class License and is registered to use the Class Survey Licence WML CL18 (Level 2).

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 July 2021. 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"* (P120).

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 (P174). 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"* (P175).

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"* (P179).

It is made clear in P180 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"*.

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.