



Brooks

Ecological

Grounded advice

Preliminary Ecological Appraisal Report
Horse and Groom, Barnsley Road

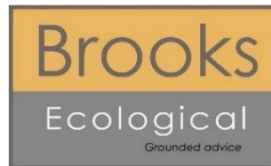
Barnsley Metropolitan Borough Council

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Summary

This report is produced to inform Barnsley Metropolitan Borough 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 May 2021.

Key Findings

The Site is of low ecological value with common and widespread modified habitats present on Site. Accordingly, an Ecological Impact Assessment is not considered necessary.

The Site has been assessed as having a Biodiversity Unit score of 0.1 Habitat 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.

Early calculations in line with current proposals suggest that a net gain in biodiversity would not be achieved on-site.

Proposals should be supported by a Biodiversity Enhancement Management Plan, which may be conditioned, to show how biodiversity on-site will be protected and enhanced.

Further surveys recommended.

Bat surveys are recommended in relation to the building present on the Site. The building is assessed as being of low suitability (in line with Bat Conservation Trust guidelines) and a single emergence survey is therefore recommended to confirm presence / likely absence.

Introduction

1. Brooks Ecological Ltd was commissioned by Barnsley Metropolitan Borough Council to carry out an updating Preliminary Ecological Appraisal (PEA) of land at Horse and Groom, Barnsley Road.
2. This report is produced with reference to British Standard BS:42020 'Biodiversity Code of Practice for Planning and Development' and the CIEEM (2017) Guidelines for Preliminary Ecological Appraisal.

Purpose of a PEA

3. A PEA is an *initial assessment* of the baseline for a proposed development site and establishes whether the Site is likely to be constrained by ecology, and whether more information is needed to identify the ecological baseline.
4. The subsequent Preliminary Ecological Appraisal Report (PEAR) is intended to give guidance to a developer and assist with the early stages of project planning and design. Where a site is not complex or constrained, and no additional ecological input is necessary the PEAR may be sufficient, and suitable to support a planning application.
5. Biodiversity Accounting metrics are used 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.
6. 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

7. The application site, 'the Site', comprises a building previously used as a pub, associated parking and outdoor area as well as a small number of trees and scrub.
8. 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



Desk Study

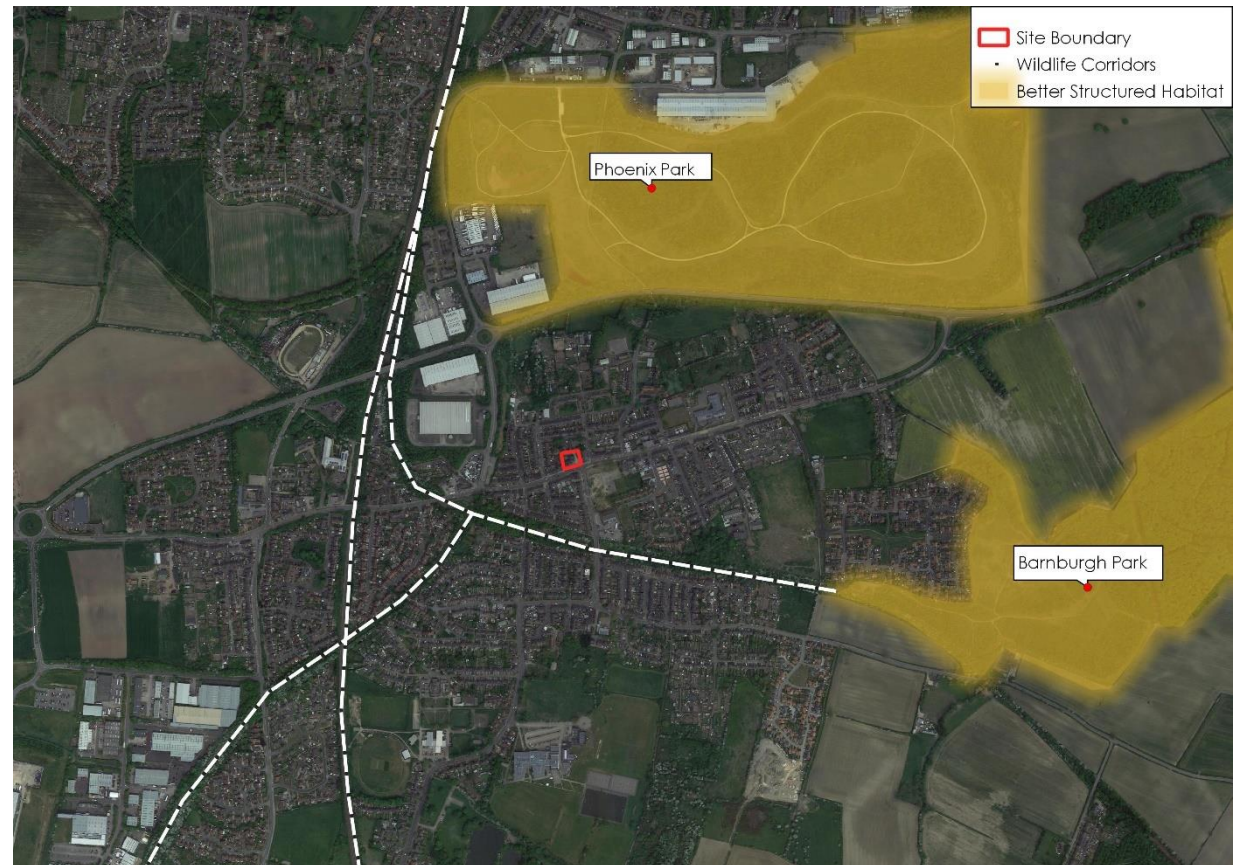
Landscape

9. The Site is located in Goldthorpe, a village located between Barnsley and Doncaster.
10. The Site is surrounded by urban development on all sides, comprising residential properties. The wider landscape includes urban parks and greenspace, changing into farmland and woodland further from the Site.

Wildlife Corridors

11. The Site has very limited links to the wider landscape with roads and buildings providing barriers to dispersal of most faunal groups.
12. The closest wildlife corridors to the Site are former railway lines which are tree lined and link to the current railway.
13. Areas of better structured habitat such as Phoenix Park and Barnburgh Park are not functionally linked to the Site.

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



Designated Sites

Statutory Designations

14. A search has been made to identify any nationally designated sites within a 2km radius of the Site, or internationally designated sites within a 10km radius.
15. There are no statutory designated sites located within these search parameters.

SSSI Impact Risk Zones (IRZs)

16. The Site lies within the IRZ for the Denaby Ings 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

17. There are four Local Wildlife Sites in the search area. Hickleton Park (6.34 in Figure 3 below) is the closest of the four sites and is located approximately 1.1km to the east, separated by large areas of developed urban land.
18. Direct and indirect impacts on all four non-statutory sites as a result of the proposed development are unlikely due to the Sites separation and distance.

Nature Improvement Area

19. The Site is located within the Dearne Valley Green Heart Nature Improvement Area.
20. The aim of this area is to restore the ecological functionality of the river Dearne, its floodplain and its link to habitats on surrounding sandstone and limestone hills.
21. Given the urban nature of the Site and surrounding areas, no impact relating to the Dearne Valley Green Heart Nature Improvement Area is expected.

Granted European Protected Species Mitigation Licenses

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

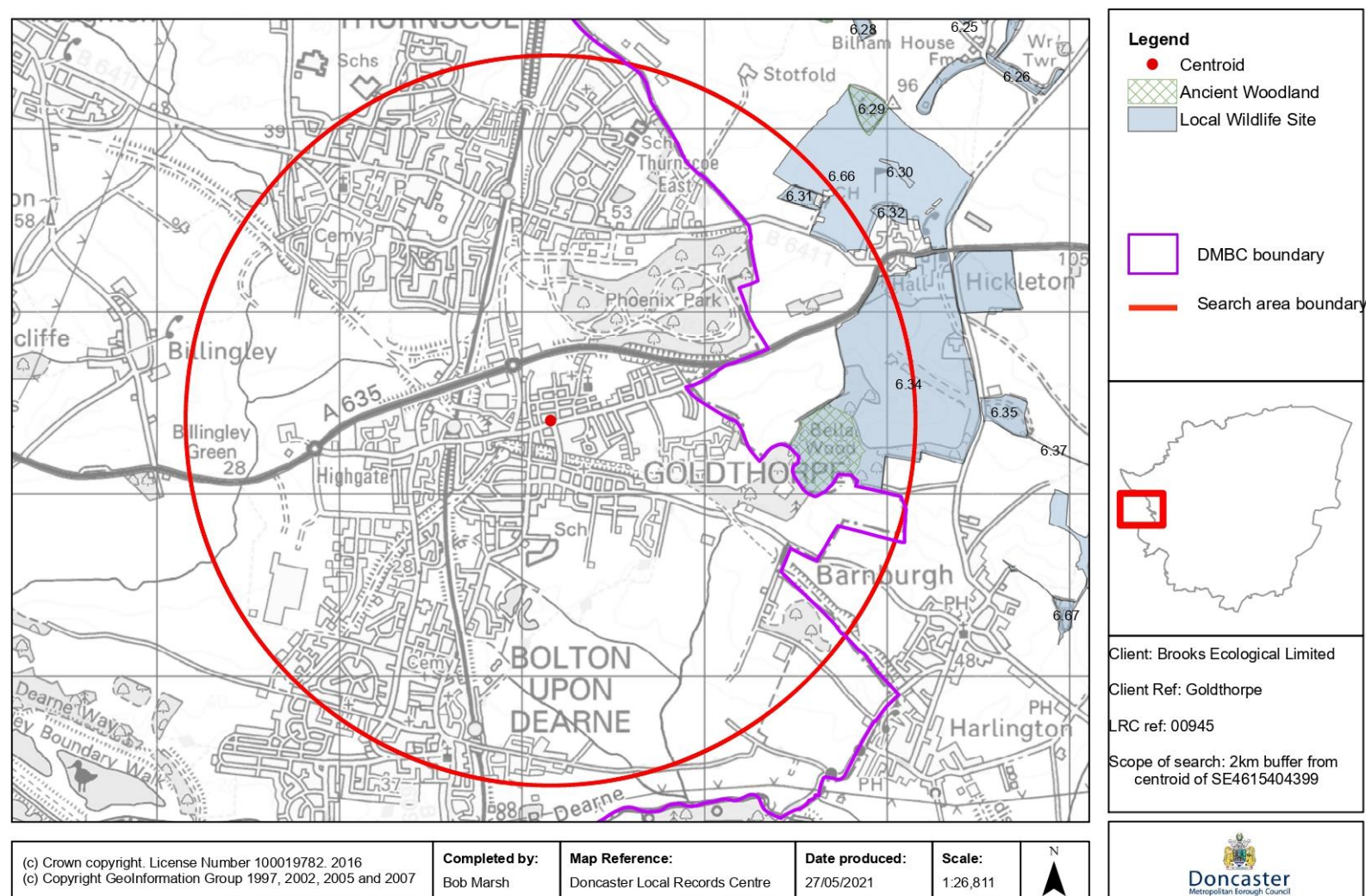
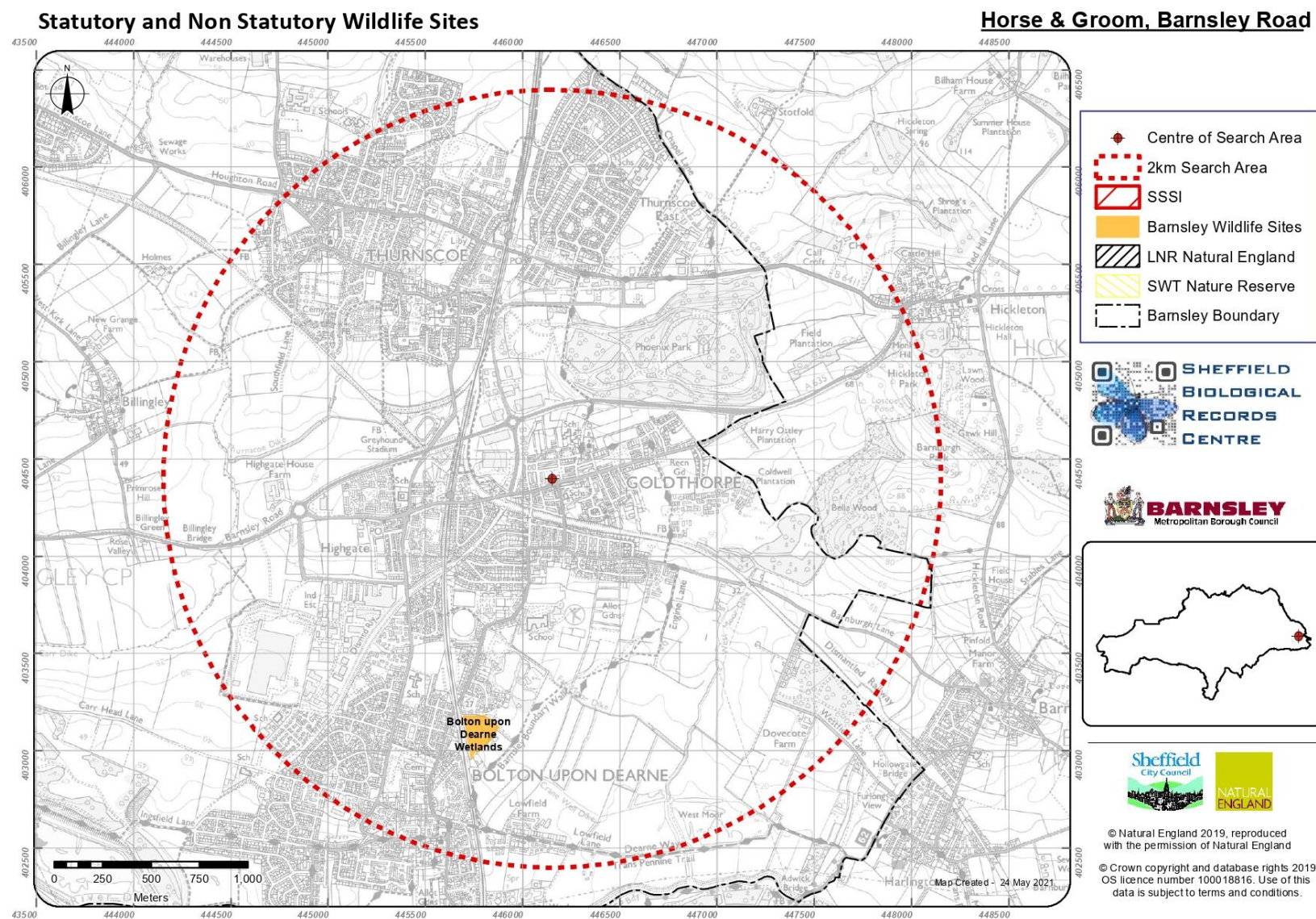
Figure 3 Doncaster Local Records Centre Designated Sites**Appendix 2. Distribution of designated sites within the search area**

Figure 4 Sheffield Biological Records Centre Designated Sites

Survey

Method

23. The survey was carried out during May 2021¹ and followed the principles of Extended Phase 1 Habitat Survey methodology (JNCC, 2010).

Limitations

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, 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.

¹ This Report has been prepared during May 2021 following a visit to the site in May 2021 and our findings are based on the conditions of the site that were reasonably visible and accessible at that date. We

Habitat Appraisal

Habitats Identified

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 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.
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.

Moderate 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.

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

31. 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

32. 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.
33. Each habitat is mapped and an area for each type is provided in the format of the DEFRA Biodiversity Metric 2.0 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

34. Our condition assessment for each habitat described references where available the criteria set out in The Biodiversity Metric 2.0 Auditing And Accounting For Biodiversity Technical Supplement Beta Edition.
35. Habitats in the Very Low Distinctiveness tier do not require a condition assessment.
36. 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.
37. 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.

Habitats of Low/Very Low Distinctiveness

Figure 5 Approximate location and extent of these habitats



Table 1 Summary - Habitats of Low / Very Low Distinctiveness

Habitat Code / Name	Summary Description	Condition
u1b – developed land; sealed surface	Former pub and associated car park/pavements. Some hardy plants such as dandelion, nettles and ivy have colonised areas.	n/a
c1f – introduced shrub	Non-native plants bordering the front of the former pub	Poor
g4 – modified grassland	Areas of a former lawn, now unmanaged with vegetation including grasses and forbs such as Yorkshire fog and common bent, creeping buttercup, broadleaf dock and red valerian.	Poor
1170 – tree	A small number of trees border the Site; three hornbeam along the eastern edge and two silver maple along the western edge.	Moderate

Figure 6 Example of developed land;
sealed surface habitat



Figure 7 Example of introduced
shrub habitat



Figure 8 Example of modified
grassland habitat



Figure 9 Example of trees on-site



DEFRA Metric (Baseline)²

38. 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.

Horse and Groom, Barnsley Road									
A-1 Site Habitat Baseline									
Condense / Show Columns				Condense / Show Rows					
Main Menu				Instructions					
Habitats and areas				Habitat distinctiveness	Habitat condition	Ecological connectivity	Strategic significance	Suggested action to address habitat losses	Ecological baseline
Ref	Broad Habitat	Habitat type	Area (hectares)	Distinctiveness	Condition	Ecological connectivity	Strategic significance		Total habitat units
1	Urban	Urban - Developed land; sealed surface	0.145	V.Low	N/A - Other	N/A	Area/compensation not in local strategy/ no local strategy	Compensation Not Required	0.00
2	Urban	Urban - Introduced shrub	0.002	Low	Poor	N/A	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	0.00
3	Grassland	Grassland - Modified grassland	0.01	Low	Poor	N/A	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	0.02
4	Urban	Urban - Street Tree	0.02	Low	Moderate	Low	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	0.08
5									
Total site area ha			0.16					Total Site baseline	0.10

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.

Faunal Appraisal

39. 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

40. A single pond is present within 500m of the Site, separated by developed areas of housing and roads.
41. There are five records of great crested newt (GCN) returned for the area, the closest of which is approximately 700m south-east of the Site. These are also separated from the Site by developed areas.
42. Records have also been returned for common frog, common toad and smooth newt.

Field Evidence

43. There are no ponds within the Site, and only a single pond is present within 500m of the Site, however it is separated by major barriers to dispersal including roads and built-up areas.
44. The Site is generally unsuitable for amphibians, with the land covered by built surfaces. A small area of grassland at the western edge of the Site has limited suitability for amphibians but is separated from ponds and other suitable terrestrial habitat by built areas.

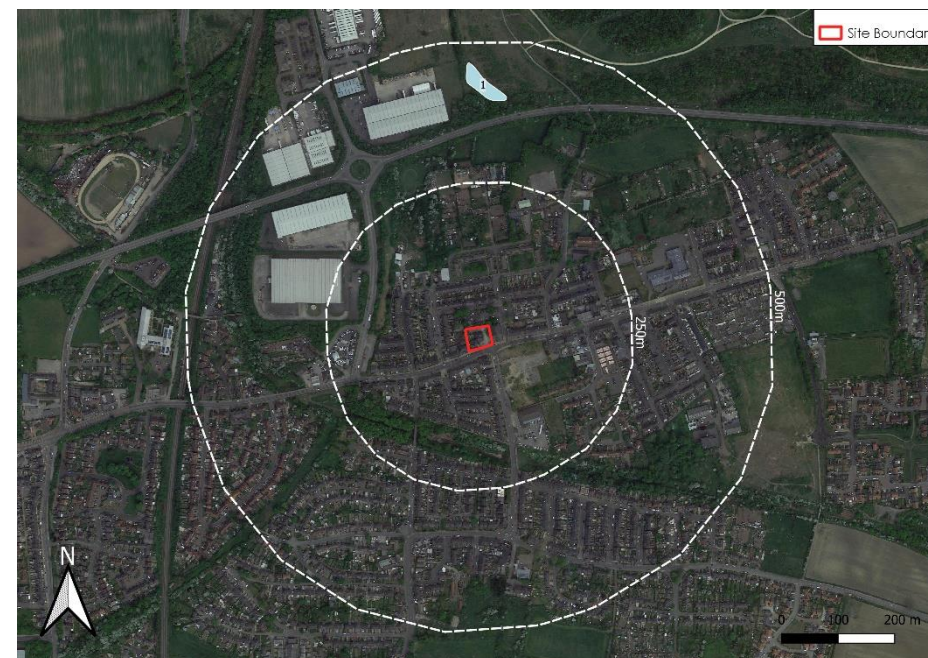
Summary Evaluation

45. The Site provides very low value terrestrial habitat for this group and has no potential breeding ponds. The Site is unlikely to be of importance to local amphibian populations, and in the case of the protected great crested newt – likely absence can be assumed.

Further Surveys

46. No further surveys or precautions are considered necessary.

Figure 10 Ponds in relation to the Site.



Bats

Desk evidence

47. A total of 29 records of bats were returned for the search area, with common pipistrelle, soprano pipistrelle, noctule, lesser noctule, whiskered and unidentified bats all recorded.
48. Nine records relating to roosts are included, eight of common pipistrelle and one noctule. The closest record is of both pipistrelle and noctule roosting at a now demolished school, within 100m of the Site.

Field Evidence

Potential Roost Sites

Buildings: A single building is present on Site; this being a former pub of brick and render construction with slate tile roof coverings. The building is not used or occupied, with windows and doors boarded up.

The building is beginning to show signs of disrepair, in particular with an area of missing tiles allowing access into the roof void. Some tiles are lifted across the roof and there are gaps along the ridge.

A length of guttering is missing on the northern side of the building with gaps present as a result.

Small gaps are present behind the soffit around the building, in particular at the ends of the walls

Trees: Five trees are present within the Site. None have features that could be used by roosting bats.

Foraging and Commuting Habitat

49. The Site is of limited value for foraging and commuting bats, though the presence of some vegetation on Site and in the surrounding area increases the suitability for urban tolerant species such as pipistrelle bats.

Summary Evaluation

50. The building on Site is assessed as having low bat roost potential.

Further Surveys

51. A single emergence survey is recommended on the former pub, to confirm the presence or likely absence of roosting.

Bat Roost Suitability Assessment

Gap at wall end



Area with missing guttering



A smaller area of missing tile and gaps along the roof ridge



Gap at wall end



Area of missing tiles in the roof



View of the single building on-site



Birds

Desk Evidence

52. A wide variety of bird species records were returned for the search area. Many of the records relate to habitats found on RSPB reserves at Old Moor, Wath Ings and Adwick Washland. The Site does not provide similar habitat to these areas and the vast majority of species records returned will not make use of the Site.

Field Evidence

53. The habitats present on Site are of low value for birds but do provide nesting and foraging opportunities for common species.
54. A disused nest was noted on a ledge of the building on-site.
55. A small number of common bird species were noted during the survey including robin, woodpigeon, goldfinch and blackbird.

Summary Evaluation

56. The Site will support a very low 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 and Recommendations

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

Badgers

Desk evidence

59. No records of badgers were returned for the search area.

Field Evidence

60. The majority of the Site is unsuitable for badgers being covered by built surfaces. A small area of grassland on-site does provide some suitability for badgers, but is highly disturbed by the surrounding land use and has low connectivity to the surrounding landscape.
61. No field evidence was found of this species.

Summary Evaluation

62. No evidence of badgers was found during the Site walkover.

Further Surveys and Recommendations

63. No further surveys are considered necessary to demonstrate current baseline in respect of badgers.

Hedgehog

Desk evidence

64. Hedgehogs are recorded within the search area.

Field Evidence

65. No evidence of hedgehogs was found on the Site.

Summary Evaluation

66. The Site provides a small area of suitable habitat for this species and measures to allow them to pass through the Site should be included.

Further Surveys

67. Presence assumed no further surveys are considered necessary.

Invasive Non-Native Species (INNS)

68. 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:

- None

Survey constraints

69. 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.
70. This site presents a small risk of supporting undetected INNS based on the following factors:
- Areas of site inaccessible to survey
 - Proximity to nearby potential sources of infection
 - Potential for tipping of material
71. Should further assurances be needed in relations to INNS you should commission a dedicated Invasive Weed Survey.

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

Habitat Value

72. The usual approach to development is to minimise any net loss of biodiversity – ideally working towards a gain in biodiversity value where this is possible on-Site.
73. The plan opposite shows the Site in the context of mapped habitat distinctiveness with the aim of informing the design of a layout. It shows that there are no targets of higher distinctiveness which would need to be avoided by the proposals and that the Site is relatively uniform in terms of potential impact. Habitats do not impose any particular design constraints. Loss of habitat of this nature are not of the order which (outside of Biodiversity Net Gain) would require specific mitigation or compensation as they are common locally.
74. Measures to protect trees close to the borders of the Site should be in place. This would include the use of screened tree protection fence during demolition.

Faunal constraints

75. Further survey is recommended to establish the presence/likely absence of roost bats on the Site.
76. Any clearance of vegetation and demolition of buildings on Site should be undertaken outside of the bird breeding season (March to August inclusive) or after the area has been checked by a suitability qualified ecologist to determine that nests are absent.

Figure 11 Distinctiveness of habitat



Ecological Opportunities

77. Current proposals for the Site involve the demolition of the building present, retaining current areas of existing tarmac and covering other areas with hardcore and raised plantings, creating an open area of public space.
78. Whilst the proposals limit the ecological opportunities for the Site, the low baseline currently allows for improvements to be possible.
79. As part of the new public space, planters containing native plant species with high value to pollinators and foraging birds could be included.
80. Installing roosting or nesting features on existing trees or by creating new structures will also be beneficial – particularly for urban species such as house sparrow.
81. A suitable Biodiversity Management Plan would be useful in defining these enhancements and can be secured by standard condition.

Figure 12 Ecological Opportunities



Conclusions and Recommendations

Planning considerations		
Recommendation	Rationale	When
R1 Additional Surveys	Roosting bats – low bat roost potential, one emergence survey required.	May-August/September
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 quantify net gain/loss of biodiversity.	After a fixed design is agreed.
R6 Produce a Biodiversity Management Plan	To specify in detail how the development will cater for biodiversity on site and to show how habitats incorporated through the Biodiversity Net Gain Strategy be maintained in the condition that the Biodiversity Calculations were based on.	Delivery report Suitable for planning condition.

Other considerations (managing legal or financial risks)		
Issue	Rationale	When
R7 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 and demolition of buildings 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

Outline Biodiversity Net Gain (BNG) Implications

109. The NPPF and most aligned local policies require that development achieves a 'no net loss' or unquantified 'net gain' situation for biodiversity. The forthcoming (2020/21) Environment Bill is likely to mandate a 10% net gain position and many LPA's have pre-empted this with revised policies and SPG's, some are providing a means of developers contributing to strategic off-site enhancement where BNG can't be secured on Site.
110. Pre-application discussions with the LPA should aim to identify their approach to BNG from an early stage.
111. Outline BNG Implications at this Site have been calculated below. This is based on an outline calculation from the assumption that the Site will all fall into the category 'developed land sealed surface', with trees remaining. Figures are provided for habitat area units only.
112. **This is not the final calculation** but provides what is hoped is a useful illustration to work forward from. Proposals will still be required to work within the NPPF's mitigation hierarchy of Avoid, Mitigate, Compensate and by doing so losses are likely to reduce. Similarly, high quality landscaping proposals and provision of natural green space would also help to reduce any deficit.

Pre-development Baseline Units	Post Development Units *	Units still required to achieve No Net Loss	Units still required to achieve 10% Net Gain
0.1	0.08	0.02	0.03

113. BNG is very much an evolving situation and the importance of pre-application discussions is again emphasised. For purely illustrative purposes if this project was in our home district of Leeds the 'backstop' position of achieving BNG through the LPA's contribution scheme would incur a cost of £20,000 /unit plus 20% facilitation and monitoring fees <https://www.leeds.gov.uk/planning/conservation-protection-and-heritage/achieving-net-gain-in-biodiversity-guidance-for-developers>

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Appendix 1 Habitats and Ecological Features



Appendix 2 List of species recorded

ash	<i>Fraxinus excelsior</i>
broad-leaved dock	<i>Rumex obtusifolius</i>
buddleja	<i>Buddleja davidii</i>
bugle	<i>Ajuga reptans</i>
cherry	<i>Prunus avium</i>
cleavers	<i>Galium aparine</i>
coltsfoot	<i>Tussilago farfara</i>
common nettle	<i>Urtica dioica</i>
common vetch	<i>Vicia sativa</i>
creeping bent	<i>Agrostis stolonifera</i>
creeping buttercup	<i>Ranunculus repens</i>
dandelion	<i>Taraxacum officinale</i>
elder	<i>Sambucus nigra</i>
evergreen spindle	<i>Euonymus japonicus</i>
foxglove	<i>Digitalis purpurea</i>
greater periwinkle	<i>Vinca major</i>
hart`s-tongue fern	<i>Asplenium scolopendrium</i>
hedge mustard	<i>Sisymbrium officinale</i>
ivy	<i>Hedera helix</i>
ivy-leaved speedwell	<i>Veronica hederifolia</i>
laurel	<i>Prunus sp.</i>
mugwort	<i>Artemisia vulgaris</i>
New Zealand flax	<i>Phormium tenax</i>
perennial ryegrass	<i>Lolium perenne</i>
privet	<i>Ligustrum ovalifolium</i>
ragwort	<i>Jacobaea vulgaris</i>
red valerian	<i>Centranthus ruber</i>
rosebay willowherb	<i>Chamerion angustifolium</i>
Silver maple	<i>Acer saccharinum</i>

spear thistle	<i>Cirsium vulgare</i>
sycamore	<i>Acer pseudoplatanus</i>
wall-rue	<i>Asplenium ruta-muraria</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 to 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 Biological Records Centre and Doncaster Local Records Centre are used to inform this appraisal.

We discuss further only notable species or groups which could be a potential constraint due to the presence of suitable habitat and their presence (or potential presence) in the wider area. We screen out and do not present accounts of notable species or groups which do not meet these criteria – in some cases it may be necessary to explain this reasoning.

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

Priority Species	Priority Habitats
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
<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 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.

At this Site, with the majority of the Site being covered by bare ground and sealed surfaces, it is predicted that the Site will not be of high value to foraging bats. The species likely to use the Site would be confined to low numbers of common species, tolerant of an urban environment (e.g., common pipistrelle). Accordingly, bat activity surveys are not recommended in this instance.

This assessment was made by David Lovett MBiolSci (Hons) ACIEEM who has 8 years' experience of scoping and delivering bat surveys and has carried out many activity surveys.

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.