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Grounded advice

## Preliminary Ecological Appraisal Report

# Barnsley Crematorium Gatehouse

**Barnsley Metropolitan Borough Council- Property Services**

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04/02/2022

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|---|---|
| Report Title: | Preliminary Ecological Appraisal Report<br>Barnsley Crematorium Gatehouse |
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# Summary

This report is produced to inform Barnsley Metropolitan Borough Council- Property Services, 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 January 2022.

**Key Findings**

The Site is dominated by man-made habitats of low ecological value – including buildings, hardstanding and amenity grass. Two mature trees represent features of greater ecological value and these should be retained and protected on-site.

The Site is assessed as having a biodiversity metric score of 0.12 Habitat Units.

Further survey for roosting bats is recommended only if work is required to the 2-storey section of the office.

# Introduction

1. Brooks Ecological Ltd was commissioned by Barnsley Metropolitan Borough Council- Property Services to carry out a Preliminary Ecological Appraisal (PEA) of Barnsley Crematorium Gatehouse, off Doncaster Road, S71 5EH (SE 38405 05632).
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 Barnsley Crematorium Gatehouse - an office and associated carparking area.
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 (red line boundary).



# Desk Study

## Landscape

9. The Site is located on the eastern edge of Barnsley, bound by Doncaster Road to the north, housing to the west, an access road for the Crematorium to the east and the landscaped grounds of the Crematorium extending south.

10. Past these immediate boundaries, the local landscape is characterised by housing to the north and west, and the Crematorium grounds and open countryside (large homogenous arable fields) to the south and east.

## Wildlife Corridors

11. The Site is poorly connected to any significant linear wildlife corridors, with roads, housing and intensive agriculture limiting the ability for wildlife to disperse locally.

12. The most notable potential wildlife corridors are shown in the figure opposite and include the Rivers Dove and Dearne (south and north), working railway line (west) and a dismantled railway lines (northwest), all of which are located well over a kilometre from the Site.

13. The grounds of the Crematorium offers blocks of woodland with additional blocks found in the wider landscape, although those in close proximity to the Site are rather small and isolated in nature.

**Figure 2** Analysis of wildlife corridors and higher value 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. The results are shown in the below table.

**Table 1** Statutory Designated Sites.

| Site Name | Distance from Site | Designation | Summary Interest |
|---|---|---|---|
| Dearne Valley Park | 2km northwest | Local Nature Reserve (LNR) | River Dearne, woodland and wetland. |
| Dearne Valley Wetlands | 1.6km south | Site of Special Scientific Interest (SSSI) | Open water, wetland and woodland. Of importance for its non-breeding and breeding birds including willow tit. |
| Stairfoot Brickworks | 830m southeast | Site of Special Scientific Interest (SSSI) | Geological interest. |

15. Direct and indirect impacts on all of the above designations as a result of this development are unlikely due to the Sites separation and distance.

## SSSI Impact Risk Zones (IRZs)

16. 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

17. There are 8 locally designated sites within a 2km radius- all are Barnsley Wildlife Sites and are located >500m from the Site. As such, direct and indirect impacts on all locally designated sites as a result of this development are unlikely due to the Sites separation and distance.

## Nature Improvement Area

18. The Site falls within the Dearne Valley Green Heart Nature Improvement Area. The development must ensure that it complies with the NIA policy.

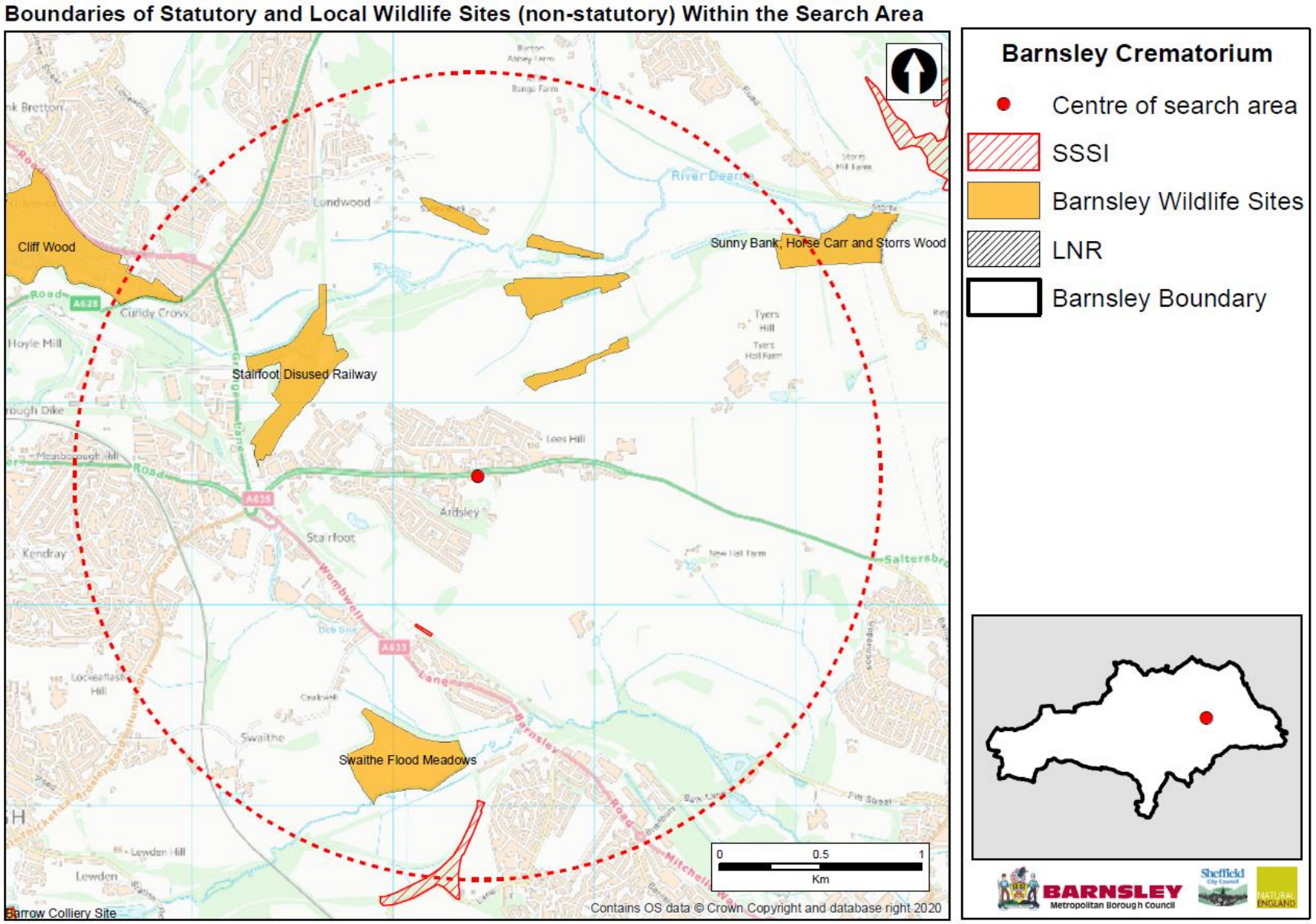
## Wildlife Habitat Network

19. The Site does not fall within a Wildlife Habitat Network.

## Granted EPSM Licenses

20. A single granted license is found within 1km of the Site, relating to the destruction of a soprano pipistrelle breeding roost c.400m south-east of the Site.

**Figure 3** Barnsley Metropolitan Borough Council; Species and Designated Sites.



# Survey

## Method

21. The survey was carried out during January 2022[1] and followed the principles of Extended Phase 1 Habitat Survey methodology (JNCC, 2010).

## Limitations

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

# Habitat Appraisal

## Habitats Identified

23. 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.

24. 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**

25. 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**

26. 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**

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

[1] This Report has been prepared during January 2022 following a visit to the site in January 2022 and our findings are based on the conditions of the site that were reasonably visible and accessible at that date.

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

**High Distinctiveness Habitats**

28. 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**

29. 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.

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

## Condition Assessment

31. Our condition assessment for each habitat described references where available the criteria set out in DEFRA (2021) Biodiversity Metric 3.0 Technical Supplement (1).

32. Habitats in the Very Low Distinctiveness tier do not require a condition assessment.

33. 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.

34. 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 4** Approximate location and extent of these habitats.




## u1b- Developed land, sealed surface

35. The majority of the Site consists of this habitat being either tarmacadam hardstanding, paving or buildings. These areas are devoid of any significant vegetation.

## Defra Metric Condition Assessment – N/A

## g4- Modified grassland

36. A small area of amenity grass falls within the red line boundary, extending further south into the wider Crematorium grounds. A typical species mix is observed comprising perennial rye, meadow grass, creeping buttercup, white clover, daisy, common mouse ear, yarrow and dandelion.

## Defra Metric Condition Assessment - Moderate

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

**Figure 5** View of u1b habitat.



**Figure 6** View of g4 habitat.



# Habitats of Medium Distinctiveness

**Figure 7** Approximate location and extent of these habitats.




## 1170- Tree

37. Two broadleaf trees fall within the Site boundary, with a third just off-site to the north. These comprise a semi-mature sycamore to the south-west and north, and a mature weeping willow to the south-east.

## Defra Metric Condition Assessment – Poor

38. The assessment only includes the two trees within the Site boundary.

| Urban trees (including street trees) | | |
|---|---|---|
| | **Pass/Fail** | **Condition** |
| 1 | Fail | 5-6 = Good |
| 2 | Pass | 3-4 = Moderate |
| 3 | Fail | 0-2 = Poor |
| 4 | Fail | |
| 5 | Fail | |
| 6 | Pass | |
| | = Poor | |

**Figure 8** Weeping willow



**Figure 9** Sycamore



# DEFRA Metric (Baseline)[2]

39. 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.

Barnsley Crematorium Gatehouse

A-1 Site Habitat Baseline

Condense / Show Columns | Condense / Show Rows | Main Menu | Instructions

| | Habitats and areas | | | Distinctiveness | Condition | Strategic significance | Suggested action to address habitat losses | Ecological baseline |
|---|---|---|---|---|---|---|---|---|
| Ref | Broad habitat | Habitat type | Area (hectares) | Distinctiveness | Condition | Strategic significance | | Total habitat units |
| 1 | Urban | Developed land; sealed surface | 0.06 | V Low | N/A - Other | Area/compensation not in local strategy/ no local strategy | Compensation Not Required | 0.00 |
| 2 | Grassland | Modified grassland | 0.01 | Low | Moderate | Area/compensation not in local strategy/ no local strategy | Same distinctiveness or better habitat required | 0.04 |
| 3 | Urban | Urban Tree | 0.02 | Medium | Poor | Area/compensation not in local strategy/ no local strategy | Same broad habitat or a higher distinctiveness habitat required | 0.08 |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| | | | 0.07 | | | | | 0.12 |

[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

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

## Amphibians

### *Desk evidence*

41. Only a single standing waterbody is found on mapping within a 500m search radius of the Site, with a second located just outside of the search area. Both are considered to fall outside of the Sites Ecological Zone of Influence, given their separation from the Site, both by distance and by barriers to movement (dense housing development).

42. No records of amphibians have been returned.

### *Field Evidence*

43. The Site does not support any standing water and is assessed to be of negligible value as terrestrial habitat.

### *Summary Evaluation*

44. The Site is separated from any potential breeding habitat and given the lack of records, the protected great crested newt is concluded to be likely absent. The Site is unlikely to support any significant amphibian population.

### *Further Surveys and Recommendations*

45. No further surveys or precautions are considered necessary.

**Figure 10** Ponds mapped in relation to the Site.



# Bats

### *Desk evidence*

46. Records of common pipistrelle, soprano pipistrelle, Daubenton's, Natterer's, and noctule have been returned. The closest record relates to a common pipistrelle roost within housing >200m south of the Site. No significant roosts have been recorded.

### *Field Evidence*

Potential Roost Sites

47. The Site includes the Gatehouse used as an office for the Crematorium alongside a portacabin, outhouse, substation and two trees. These are described in the table below.

| Ref: | Notes | Suitability |
|---|---|---|
| Office | This building comprises a two-storey pitched section to the west, a single-storey flat roof section to the east and a conservatory to the south-east.<br><br>The two-storey section is cavity brick with decorative stone quoins, window and ventilation mullions. The windows are uPVC. Masonry is in generally good condition with only a single brick damaged on the northern elevation. The ventilation slit is sealed with mesh. The soffits are found to be very well sealed to the wall tops. A small amount of mortar was missing along the exposed verge on both the front and rear of the building, which could lead to a cavity behind. | Low |
| | The flat-storey section is of cavity brick which is in good repair. The northern elevation has been recently modernised and extended with plastic cladding and metal soffits but all was found to be very well sealed.<br><br>The conservatory section is very well sealed. | Negligible |
| Outbuilding | Single-storey, small building with cavity brick walls. The flat roof is fitted with bitumen and timber bargeboards which are well sealed. The building does not support any PRF's. | Negligible |
| Portacabin | Simple construction with no PRF's. | Negligible |
| Substation | Single-storey brick building of simple construction with no PRF's. | Negligible |
| Trees | The Site supports two trees with a third tree just off-site to the north. Only one supported any features of potential roost suitability, this being the weeping willow which featured a small number of rot holes. From the ground these appeared to be blind features and as such the tree is assessed to have low bat roosting suitability. | Low |

Foraging and Commuting Habitat

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

### *Summary Evaluation*

49. Part of the office building and the weeping willow offer low bat roost suitability.

50. The Site is of very limited value to foraging and commuting bats.

### *Further Surveys and Recommendations*

51. Should work be proposed to the two-storey element of the office building (see figure overleaf), then further survey would be recommended to assess the status of roosting bats here.

52. A precautionary method for felling or major pruning is recommended should the willow require removal.

**Figure 11** Bat Roost Suitability Assessment of buildings



# Bat Roost Suitability Assessment

View of the office from the south



View of the office from the north-west



View of 2-storey section from the south-west



View of outbuilding / portacabin from the north



Damaged brickwork on the north



Sealed soffits on the 2-storey section



Missing pointing on the south



Sealed soffits on the outbuilding



Rot holes on willow



## Birds

### *Desk Evidence*

53. A very large number of bird records have been returned, detailing a range of farmland and garden species.

### *Field Evidence*

54. The trees and building could be used by nesting birds.

55. A small number of common bird species were noted during the survey including wood pigeon and blackbird.

### *Summary Evaluation*

56. The site could support a very small number of bird territories and displacement of these 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 any building demolition or tree removal during the nesting season.

## Badgers

### *Desk evidence*

59. Records of badger have been returned but all are over 500m from the Site.

### *Field Evidence*

60. No evidence was identified and the Site is of negligible value to this species.

### *Summary Evaluation*

61. The likely absence of badger is reasonably concluded.

### *Further Surveys and Recommendations*

62. No further surveys or precautions are considered necessary.

## Invasive Non-Native Species (INNS)

63. 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. No species were identified[3].

64. 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.

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

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

66. 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

67. The Site is dominated by hardstanding and buildings which are of negligible ecological value.

68. The two trees are features of greater ecological value and it is recommended that these are retained and protected.

69. 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 0.12 Habitat Units. Based on the proposals, a net loss is not anticipated, although a 10% net gain is unlikely.

70. Based on the proposals, opportunities for ecological enhancements are limited. The most useful theme would be to incorporate faunal features into the new building such as Manthrope Swift Bricks (found to be used by Swift, House Sparrow, Starling & House Martin) or bat boxes.

71. Further survey is recommended for roosting bats, only if work is required to the 2-storey section of the office.

**Figure 12** Constraints and Opportunities Plan.



# Conclusions and Recommendations

| **Planning considerations** | | |
|---|---|---|
| **Recommendation** | **Rationale** | **When** |
| **R1** Additional Surveys | Bat emergence / re-entry survey- ONLY if the two-storey section of the office is to be impacted. | May – August |
| **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 or potentially the building 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 |
| **R7** Precautionary method to felling or major pruning of willow tree | Should the willow tree need to be removed or be subject to major pruning, a precautionary method is recommended comprising endoscopic inspection by a suitably experienced and licensed ecologist, delivery of a tool-box talk to tree contractors, and oversee the felling or pruning works. | During clearance |

# Outline Biodiversity Net Gain (BNG) Implications

72. 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 off-Site enhancement where BNG can't be secured on Site.

73. Pre-application discussions with the LPA should aim to identify their approach to BNG from an early stage.

74. Outline BNG Implications at this Site have been calculated below. This is based on *outline calculation from the 'Existing + Proposed Sketch Plans + Elevations' plan provided which shows the new extension to have the same footprint as the existing building. Figures are provided for habitat area units only.

75. **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 NPPFs 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 required to achieve No Net Loss | Units required to achieve 10% Net Gain |
|---|---|---|---|
| 0.12 | 0.12 | 0 | 0.01 |

76. 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




Developed land; sealed surface
Modified grassland
Large tree
Medium tree

Project: Barnsley Crematorium Gatehouse
Title: Extended Phase 1 Habitat Plan

Drawing Number: D-5937-01.1
Date: January 2022
Revision: -

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# Appendix 2 Condition Assessment Criteria

## Grassland

| Condition Sheet: GRASSLAND Habitat Type (low distinctiveness) | |
|---|---|
| **UKHab Habitat Type(s)** | |
| **Grassland - Modified grassland** | |
| **Habitat Description** | |
| See UKHab | |
| **Condition Assessment Criteria** | |
| 1 | There must be 6-8 species per $m^2$. Note - if a grassland has 9 or more species per $m^2$ it should be classified as a moderate distinctiveness grassland habitat type. **NB - this criterion is non-negotiable for achieving good condition.** |
| 2 | Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20 per cent is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed. |
| 3 | Some scattered scrub (including bramble) may be present, but scrub accounts for less than 20% of total grassland area. Note - patches of shrubs with continuous (more than 90%) cover should be classified as the relevant scrub habitat type. |
| 4 | Physical damage evident in less than 5% of total grassland area, such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities. |
| 5 | Cover of bare ground between 1% and 5%, including localised areas, for example, rabbit warrens. |
| 6 | Cover of bracken less than 20%. |
| 7 | There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981) and undesirable species[1] make up less than 5% of ground cover. |
| **Condition Assessment Result** | **Condition Assessment Score** |
| Passes 6 or 7 of 7 criteria including non-negotiable criterion 7 | Good (3) |
| Passes 4 or 5 of 7 criteria; OR Passes 6 of 7 criteria excluding non-negotiable criterion 7 | Moderate (2) |
| Passes 0, 1, 2 or 3 of 7 criteria | Poor (1) |
| **Notes** | |
| **Footnote 1** - Species considered undesirable for this habitat type include: Creeping thistle *Cirsium arvense*, spear thistle *Cirsium vulgare*, curled dock *Rumex crispus*, broad-leaved dock *Rumex obtusifolius*, common nettle *Urtica dioica*, greater plantain Plantago major, white clover *Trifolium repens*, cow parsley *Anthriscus sylvestris*. | |

## Urban trees

**Footnote 1** - This covers all trees in artificial urban habitats such as private gardens, private land, institutional land and land used for transport functions; roads, streets, canals, rail, footpaths etc. Trees in urban areas can under the right conditions provide a large range of habitat opportunities, supporting lichens, invertebrates and birds. Tree planting in urban areas has for over two hundred years also introduced non-native species into towns and cities. In the context of biodiversity native species are the preferred option. However, non-native tree species can contribute positively to biodiversity richness particularly in relation to providing a seasonal food source for nectar feeders and other invertebrates as well as supporting vertebrates that feed on species that are hosted by non-native trees. Examples are early and late flowering species of *Prunus* and aphids on varieties of *Acer* providing food for species higher up the food chain. The species of trees [native or non-native] together with the intensity and type of management they are subject to will determine the biodiversity value of the trees in question. Trees in urban areas provide opportunistic sites for biodiversity to colonise and re-colonise, increasing connectivity and contributing to biodiversity critical mass between already established patches or sites. This is especially so where transport corridors are populated with mixed native species

**Footnote 2** - A mature tree in this context is one that is at least 2/3 expected fully mature height for the species.

**Footnote 3** - All ancient trees are veteran trees, but not all veteran trees are ancient. A veteran tree may not be very old, but it has decay features, such as branch death and hollowing. These features contribute to its biodiversity, cultural and heritage value. Veteran trees can be classified if they have four out of the five following features:

1. Rot sites associated with wounds which are decaying >400cm2;
2. Holes and water pockets in the trunk and mature crown >5 cm diameter;
3. Dead branches or stems >15 cm diameter;
4. Any hollowing in the trunk or major limbs;
5. Fruit bodies of fungi known to cause wood decay.

| Condition Sheet: URBAN TREES (INCLUDING STREET TREES) Habitat Type | |
|---|---|
| **UKHab Habitat Type(s)** | |
| **Urban - Urban tree** | |
| **Habitat Description** | |
| Covers the following topographical formations most commonly found in urban areas[1]:<br>**Individual Trees:** Young trees over 75mm in diameter measured at 1.5m from ground level and individual semi-mature and mature trees of significant stature and size that dominant their surroundings whose canopies are not touching but that are in close proximity to other trees.**Perimeter Blocks:** Groups or stands of trees within and around boundaries of land, former field boundary trees incorporated into developments, individual trees in gardens whose canopies overlap continuously<br>**Linear Blocks:** Lines of trees along streets, highways, railways and canals whose canopies may or may not overlap continuously. | |
| **Condition Assessment Criteria** | |
| 1 | More than 70% of trees are native species. |
| 2 | Tree canopy is predominantly continuous with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide. |
| 3 | More than 50% of trees are mature[2] or veteran[3]. |
| 4 | There is little or no evidence of an adverse impact on tree health by anthropogenic activities such as vandalism or herbicide use. There is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height. |
| 5 | Management regime has encouraged micro habitat sites for birds, mammals and insects e.g. presence of deadwood, cavities or loose bark etc. |
| 6 | Trees are immediately adjacent to other vegetation, and tree canopies are oversailing vegetation beneath. |
| **FC** | **Condition Assessment Score** |
| Passes 5 or 6 of 6 criteria | Good (3) |
| Passes 3 or 4 of 6 criteria | Moderate (2) |
| Passes 0, 1 or 2 of 6 criteria | Poor (1) |
| **Notes** | |

# Appendix 3 List of species recorded

| | |
|---|---|
| Creeping bent | *Agrostis stolonifera* |
| Daisy | *Bellis perennis* |
| Common mouse-ear | *Cerastium fontanum* |
| Yorkshire fog | *Holcus lanatus* |
| Perennial rye grass | *Lolium perenne* |
| Meadow grass | *Poa sp.* |
| Creeping buttercup | *Ranunculus repens* |
| Dandelion | *Taraxacum officinale agg.* |
| White clover | *Trifolium repens* |
| Sycamore | *Acer pseudoplatanus* |
| Yarrow | *Achillea millefolium* |
| Weeping willow | *Salix babylonica* |
| Common dog-violet | *Viola rivinana* |

# Appendix 4 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 Barnsley Metropolitan Borough 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 Biodiversity Action Plan'.

| **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 5 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 of replace knowledge and experience. It is accepted that departures from the guidelines (e.g. either decreasing or increasing the number of surveys carried out or using alternative methods) are often appropriate. However, in this scenario an ecologist should provide documentary evidence of (a) their expertise in making this judgement and (b) the ecological rationale behind the judgement. '*

Such decisions require a consideration of the potential of the project to impact on bat habitat, alongside analysis of the value of habitat on and around the site and of local records and the likelihood that bats might occur in significant numbers. Our reports aim to present information on how we have arrived at our decision on the Site, what assumptions we have based this on, and where further survey is recommended we indicate what the objective of this survey should be and how best this would be achieved.

The Site is dominated by habitats of very low value to foraging and commuting bats and is highly unlikely to be of any importance to the local bat populations given the presence of higher value habitat in close proximity. Further survey is not considered necessary.

# Appendix 6 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, watervole and white clawed crayfish) are strictly protected under The Wildlife and Countryside Act (1981) as amended, from killing, injury, disturbance and damage or destruction of their resting places etc. Certain species (such as reptiles) and some birds (such as barn owl) receive partial protection e.g. at certain times of the year or form certain activities only. All nesting bird species are protected from damage or destruction of their nests - whilst active.

***Invasive species***

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