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Preliminary Ecological Appraisal Report

Broomfield Farm Zone 2 (Access Road), Whitby

Keyland Developments

Report Reference: ER-5561-01A

27/05/2021

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Report Title:	Preliminary Ecological Appraisal Report Broomfield Farm Zone 2 (Access Road), Whitby
Report Reference:	ER-5561-01A
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Summary

This report is produced to inform Keyland Developments 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 principally occupied by agricultural grassland, though boundary hedges offer some greater ecological interest. Loss of hedges to proposals should be compensated for through new native planting elsewhere on Site. The southern hedge is assessed as Important under the Hedgerow Regs but will remain unaffected.

The Site baseline Biodiversity Metric value has been calculated as providing 7.25 Habitat Units and 11.06 hedgerow Units. Based on outline calculations a slight Net Gain in Habitat Units would be anticipated.

Further survey is not considered necessary in support of a planning application.

Introduction

1. Brooks Ecological Ltd was commissioned by Keyland Developments to carry out a Preliminary Ecological Appraisal (PEA) of land at Broomfield Farm Zone 2 (Access Road), Whitby.

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 single pasture bound by mature field boundary hedgerows. This report informs an application which is limited to the development of a short access road to service the adjacent residential development.

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 within a rural area to the south east of the town of Whitby. It is surrounded to the east and west by similar pasture, though that to the west is allocated for residential development. Urban development and a retail park are present beyond the road to the north. A short distance south-west of the Site is a water treatment works surrounded by an area of broadleaved woodland plantation.

10. Beyond the immediate boundary, the town of Whitby is found to the north-east whilst the landscape is more rural in other directions. The coast of the North Sea lies c. 1.8km to the north-east.

11. The Site is underlain by Long Nab sedimentary rock - sandstone, siltstone and mudstone – which can give rise to a slightly acidic soil type.

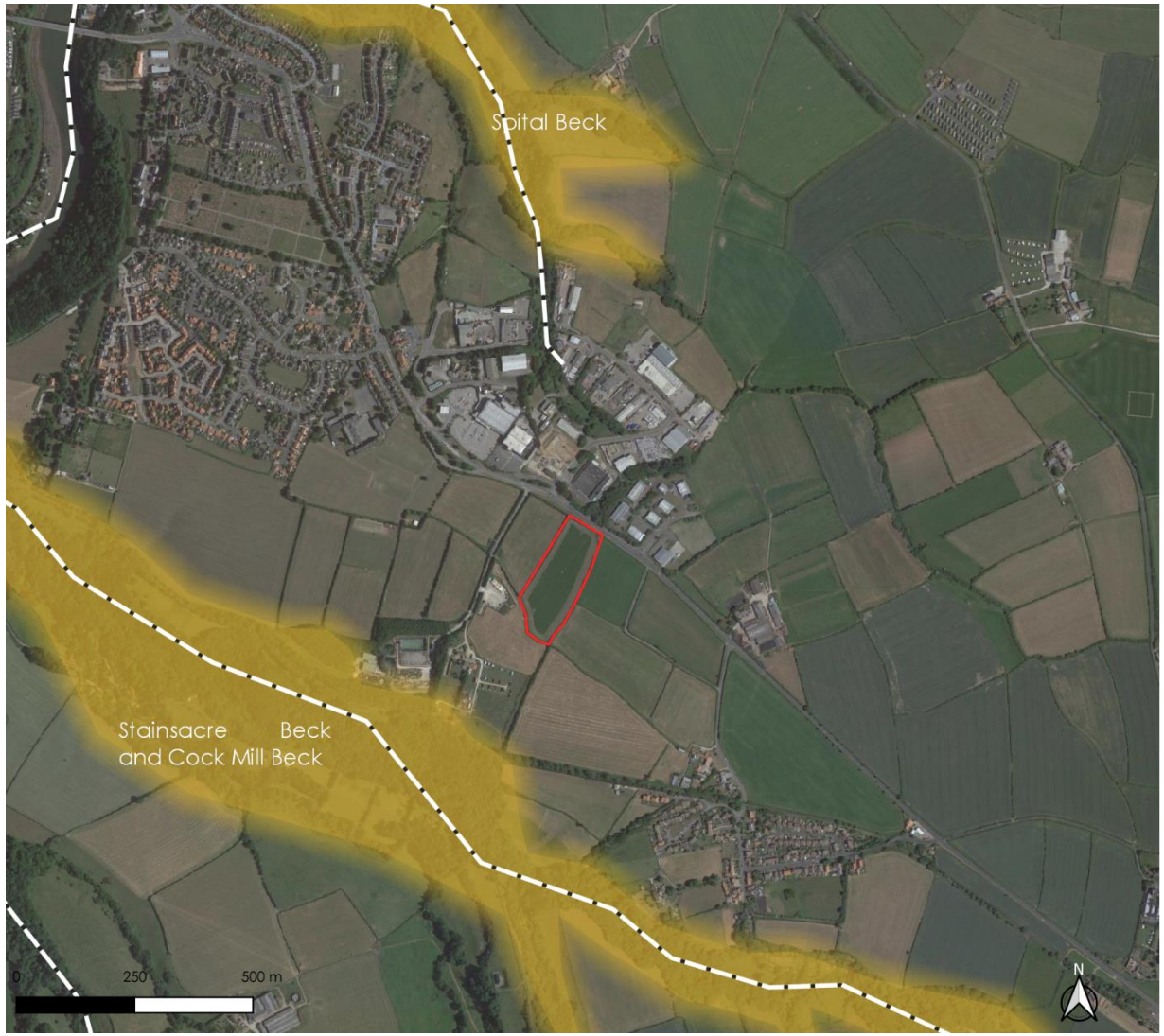
Wildlife Corridors

12. Stainsacre Beck and Cock Mill Beck run south east – north west, flowing through a broadleaved woodland corridor c.375m south of the Site, before feeding the River Esk.

13. Spital Beck provides a similar, but smaller scale corridor c.700m north. The wooded valley corridors associated with these water course provide the most obvious areas of better structured habitat visible on aerial mapping.

14. The River Esk provides the most significant corridor through the landscape and at its closest point this is found just over 1km west of the Site.

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



Designated Sites

Statutory Designations

15. A search has been made to identify any nationally designated sites within a 2km radius of the Site, or internationally designated sites within a 10km radius. The results are shown in the below table.

Table 1 Statutory Designated Sites.

Site Name	Distance from Site	Designation	Summary Interest
North Yorkshire Moors	3km S	Special Areas of Conservation (SAC)/Special Protection Areas (SPA)	Large area of moorland selected for priority habitats: Northern Atlantic wet heaths with Erica tetralix & European dry heaths. Species being the primary reason for SPA selection include merlin & golden plover.
Beast Cliff - Whitby (Robin Hood's Bay)	6km SE	SAC	One of the best examples of vegetated sea cliffs on the north-east coast of England, with varied underlying geology resulting in a diverse flora across the site.
Whitby-Saltwick	1.8km N	Site of Special Scientific Interest (SSSI)	Designated for geological interest covering three areas of interest: Toarcian exposures. vertebrate palaeontology & palaeobotany.

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

Habitat Regulations Assessment

17. The Assessment under the Habitats Regulations - Appropriate Assessment, undertaken by Scarborough Borough Council in 2015 concluded that "Scarborough Borough Council are satisfied that the Scarborough Borough Local Plan will not lead to harm to the integrity of any Natura 2000 Site's".

18. While the land associated with this proposed development was not included within the Local Plan Area when drawn up, and thus was not included within the Appropriate Assessment it is found immediately adjacent to a significant area of land allocated for housing (HA18). Housing allocation area HA18 is located 2.9km north of the closest relevant Natura 2000 Site (North York Moors Sac and SPA), while the application Site is 3km north east at its closest point.

19. Given the similarities in distance to a potentially sensitive designation between this Site and HA18, absence of shared habitat or functional links and the limited scale of proposals associated with this application it can be reasonably concluded that impacts on the SPA/SAC arising from this development will not be felt, and a specific HRA should not be required. Conclusions drawn in the broader Assessment under the Habitats Regulations - Appropriate Assessment can be inferred onto this application.

SSSI Impact Risk Zones (IRZs)

20. The Site lies within the IRZs for the Robin Hood's Bay and North Yorkshire Moors SSSIs but does not fall into one of the highlighted categories which requires consultation between the Local Planning Authority (LPA) and Natural England (NE). The development is of a scale and nature which is unlikely to impact on these SSSIs.

Non-Statutory Designations

21. There are five locally designated Site's, within the search area. These are known in North Yorkshire as Site's of Importance for Nature Conservation (SINC). Given the proposals associated with this application, the risk of this development leading to negative impacts on any are considered to be highly unlikely.

Nature Improvement Area

22. The Site does not fall within any Nature Improvement Area.

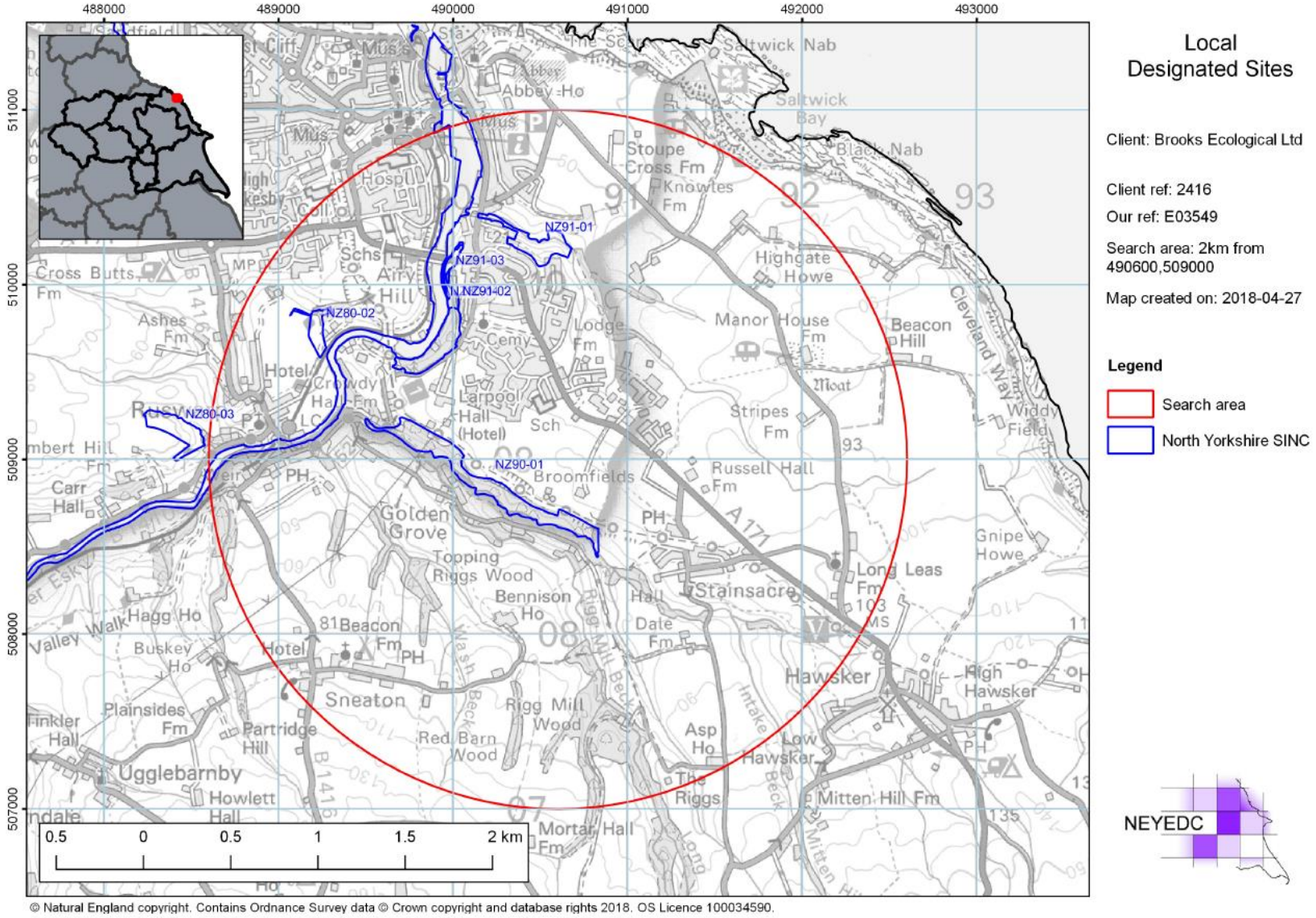
Wildlife Habitat Network

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

Granted EPSM Licenses

24. There are no granted licenses shown on MAGIC within 1km of the application Site.

Figure 3 *North and East Yorkshire Ecological Data Centre: Designated Sites*



Survey

Method

25. The survey was carried out during May 2021[1] and followed the principles of Extended Phase 1 Habitat Survey methodology (JNCC, 2010).

Limitations

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

27. Whilst the majority of the Site was accessible, a small proportion (<10%) of the Site was inaccessible due to very dense vegetation, which could not be closely inspected. This could have concealed invasive species or protected species evidence.

Habitat Appraisal

Habitats Identified

28. 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.

29. 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

30. 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

31. 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

32. 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 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 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

33. 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

34. 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.

35. 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

36. 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.

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

38. 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.

39. 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*

Table 5a Summary - Habitats of Low / Very Low Distinctiveness

Habitat Code / Name	Summary Description	Condition
g4 Modified Grassland	Pasture occupies the vast majority of the Site area. This is dominated by common fodder grasses including perennial rye grass (Lolium perenne), meadow foxtail (Alopecurus pratensis) and Yorkshire fog (Holcus lanatus). Forbs are present in very low cover, dandelion (Taraxacum vulgare agg.) being the only species noted with any frequency throughout the main sward. Diversity is slightly higher round the field margins, grading into the hedge bottoms, here cow parsley (Anthriscus sylvestris), hogweed (Heracleum sphondylium), cleavers (Galium aparine) and broad leaved dock (Rumex obtusifolius) and noted. A limited range of additional species are also present round the margins and scattered throughout. Isolated stands of greater stitchwort (Cerastium holostea) are present along the southern and eastern hedgerows.	Poor

Figure 5 *Example of modified grassland*

Figure 6 *Example of modified grassland*

Habitats of Moderate Distinctiveness

Figure 7 *Approximate location and extent of these habitats*

h3d Bramble scrub

40. This habitat type occupies only a very small area of the Site in the north east corner. It comprises almost entirely bramble (Rubus fruiticosus agg.) scrub of a relatively uniform age with occasional coarse grasses noted around the margins.

Defra Metric Condition Assessment ***Poor***

41. Meets 1 out of 5 criteria.

	Condition Assessment Criteria: Scrub habitat types	Meets criteria?
1	At least three woody species, with no one species comprising more than 75% of the cover	**No**
2	There is a good age range – a mixture of seedlings, saplings, young shrubs and mature shrubs	**No**
3	Pernicious weeds and invasive species make up less than 5% of the ground cover	**Yes**
4	Well-developed edge with un-grazed tall herbs	**No**
5	Many clearings and glades within the scrub	**No**

Figure 8 *Example/view of ? habitat*

Linear Habitats

Figure 9 *Approximate location and extent of these habitats*

HR8 Native hedgerow

42. H1 fronting the Site comprises primarily hawthorn (Crataegus monogyna), with field maple (Acer campestre), holly (Ilex aquifolium) and wayfaring tree (Viburnum lantana). The adjacent grassland runs right up to the hedge with specific hedgerow ground flora being limited, though the relative abundance of nettle and hogweed was noted to be higher.

43. At the time of survey this hedge stood at approximately 3m high by 2m wide. With the exception of the field entrance there are no gaps though gaps at its base are beginning to develop, these being more noticeable from the offsite side of the hedge.

HR2 Native species rich hedgerow – w/bank

44. H2, H3 and H4 all have slightly greater species diversity, including blackthorn (Prunus spinosa), elder (Sambucus nigra), willow (Salix sp.), gorse (Ulex europaeus) and dog rose (Rosa canina) in vary proportions in addition to the species associated with H1. Of these, only blackthorn ever represents a major component of any hedgerow.

45. Ground flora includes cocksfoot (Dactylis glomerata), false oat grass (Arrhenatherum elatius), nettle, broad leaved dock, hogweed, cow parsley, cleavers, bramble, ivy (Hedera helix) and creeping thistle (Cirsium arvense), all noted frequently. Bush vetch (Vicia sepium) and lords and ladies (Arum maculatum) were noted in very limited cover associated with H3.

46. These hedges range from between 2.5–2m high by 1.5-2m wide. None include greater than 10% gaps or include gaps at the base. All are found associated with a small bank.

Hedgerow Regulations (1997) Assessment

47. Despite similar species diversity across hedges H2, H3 and H4 only H3 is found to be assessed as "Important" under the Hedgerow regulations. This due to the requirement of species diversity to be achieved under dictated length and segment parameters. H3 includes 4 woody species and is found adjacent to a Public Right of Way, given its geographic location this is sufficient to qualify it as important. Detail on Hedgerow Regulations assessment is provided in a separate report (ER-5561-02).

Hedge type			H1 - Native hedge	H2 - Native hedge associated with bank or ditch	H3 - Native hedge associated with bank or ditch	H4 - Native hedge associated with bank or ditch
Favorable condition attributes and criteria						
A1	Height	>1.5m average along length	Yes	Yes	Yes	Yes
A2	Width	>1.5m average along length	Yes	Yes	Yes	Yes
B1	Gap – hedge base	Gap between ground and base of canopy <0.5m for >90% length	No	Yes	Yes	Yes
B2	Gap – hedge canopy continuity	Gaps make up <10% of total length and no canopy gaps >5m	Yes	Yes	Yes	Yes
C1	Undisturbed ground and perennial vegetation	>1m width of undisturbed ground with perennial herbaceous vegetation for >90% of length & present on one side of hedge at least	Yes	Yes	Yes	Yes
C2	Undesirable perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of area of undisturbed ground	No	No	No	No
D1	Invasive and neophyte species	>90% of hedgerow and undisturbed ground is free of invasive non-native and neophyte species	Yes	Yes	Yes	Yes
D2	Current damage	>90% of hedgerow of undisturbed ground is free of damage caused by human activities	Yes	Yes	Yes	Yes
Condition			**Good**	**Good**	**Good**	**Good**

Figure 9 *View of H1(south side)*

Figure 10 *View of H2 (east)*

Figure 112 *view of H3 (north)*

Figure 13 *View of H4 (west)*

DEFRA Metric (Baseline)[2]

48. 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.

	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	Grassland	Grassland - Modified grassland	2.401	Low	Fairly Poor	Low	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	7.20
2	Heathland and shrub	Heathland and shrub - Bramble scrub	0.0122	Medium	Poor	Low	Area/compensation not in local strategy/ no local strategy	Same broad habitat or a higher distinctiveness habitat required	0.05
3									
4									
5									
		Total site area ha	2.41					Total Site baseline	7.25

	UK Habitats - existing habitats			Habitat distinctiveness	Habitat condition	Ecological connectivity	Strategic significance		Ecological baseline
Baseline ref	Hedge number	Hedgerow type	length KM	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Suggested action to address habitat losses	Total hedgerow units
1	H1	Native Hedgerow	0.08	Low	Good	Low	Area/compensation not in local strategy/ no local strategy	Same distinctiveness band or better	0.48
2	H2	Native Species Rich Hedgerow - Associated with bank or ditch	0.201	High	Good	Low	Area/compensation not in local strategy/ no local strategy	Like for like	3.618
3	H3	Native Species Rich Hedgerow - Associated with bank or ditch	0.13	High	Good	Low	Area/compensation not in local strategy/ no local strategy	Like for like	2.34
4	H4	Native Species Rich Hedgerow - Associated with bank or ditch	0.257	High	Good	Low	Area/compensation not in local strategy/ no local strategy	Like for like	4.626
5									
		Total Site length/KM	0.67					Total Site baseline	11.06

[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

49. 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

50. There are just three records of amphibians in the study area, none of which relate to the Site. Two of these records are for great crested newt, both c. 1.6km north-west.

Field Evidence

51. There are no standing water bodies on Site, or apparent on aerial mapping within 500m of the Site boundaries.

52. The hedge bottoms offer some suitable terrestrial habitat to amphibians, though the majority of the site area is of limited value.

Summary Evaluation

53. The lack of suitable breeding and terrestrial habitat, and the separation of the Site from existing records by busy roads and the built environment, mean that amphibians, in particular great crested newt, are very unlikely to be present on the Site. The occasional occurrence of common amphibians cannot be ruled out.

Further Surveys

54. No further surveys or precautions are considered necessary.

Bats

Desk evidence

55. The local records provider (NEYEDC) hold 18 records of bats within the search area. The majority of these are for common and soprano pipistrelle, with Noctule and Daubenton species also present. The majority of the records originate from River Esk corridor, with none relating to roosts and none from the Site itself

Field Evidence

<u>Potential Roost Sites</u>

56. The Site does not include any buildings, structures or trees and thus offers no features of potential roost suitability.

<u>Foraging and Commuting Habitat</u>

57. The majority of the Site area is of limited value to foraging or commuting bats. The hedges are likely to contribute in part to the foraging resources and commuting routes used by local bat populations. However, it is concluded that, given their limited value and abundance of similar habitat in the wider area local population will have no dependence on them.

58. Bat activity surveys have been undertaken on this Site by Brooks Ecological, , in 2013 and updated in 2019 as part of a wider application. These surveys corroborate the assumptions made here, demonstrating only very low levels of activity by common pipistrelle bats.

Summary Evaluation

59. The Site is restricted to features of limited value which will contribute a small part to the overall resources used by local populations. Surveys undertaken in the past have demonstrated only very low level use by common species. The proposals are highly unlikely to detrimentally impact local bat populations.

Further Surveys

60. Additional updating survey is not considered necessary to support this application.

Birds

Desk Evidence

61. NEYEDC hold a single bird record (house sparrow) from within the search radius. This clearly represents a case of under recording and not an absence of birds.

62. The nearby coastline, and its associated habitats will support various wading and aquatic birds in good numbers.

Field Evidence

63. Hedgerows on Site are likely to support a number of territories of ubiquitous bird species.

64. The relatively small scale of the Site and it being bound on all sides by significant hedges means it is highly unsuited to wading birds for foraging, loafing or nesting.

Summary Evaluation

65. With the exception of the direct loss of hedgerow, proposals are unlikely to impact the nesting potential of the Site.

66. It is considered that the Site is of little importance to local wading bird populations.

Further Surveys and Recommendations

67. No further surveys are considered necessary to demonstrate current baseline in respect of birds.

68. Standard precautions apply in respect of restrictions on clearing vegetation during the nesting season.

Riparian Mammals

Desk evidence

69. There are three dated records of water vole in the search area, two of these being from the area of Stainsacre Beck a short distance south east of the Site. There are 12 records of otter, focused around the River Esk, the most recent of these sightings being from 2008.

Field Evidence

70. The Site does not include habitat suitable for these species, nor does it share close links with any such habitat.

Summary Evaluation

71. The likely absence of riparian mammals from the Site can be concluded.

Further Surveys and Recommendations

72. Further survey is not recommended.

Hedgehogs

Desk evidence

79. Records of hedgehog are not held within the search area, though again, this is likely to represent an under recording, not absence.

Field Evidence

80. No evidence of hedgehogs was found on site.

Summary Evaluation

81. The Site provides suitable habitat for this species though development proposals will have very little impact on their continued occupation or use of the Site.

Further Surveys

82. Presence assumed no further surveys are considered necessary.

Reptiles

Desk evidence

83. There is a single record for slow worm, situated c. 350m from the southern boundary of the Site. This record is 15 years old and originates from the area around Stainsacre Beck.

Field Evidence

84. No field evidence was found.

Summary Evaluation

85. The Site does not present good reptile habitat and their absence from the proposed development site can be reasonably concluded.

Further Surveys

86. No further surveys or precautions are considered necessary.

Invasive Non-Native Species (INNS)

87. 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 such species were noted on Site[3]:

Survey constraints

88. 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.

89. 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

90. The limited scale of the proposals mean that potential constraints are similarly minor.

91. 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. With this in mind, hedges lost to facilitate the access road should be replaced elsewhere on Site.

92. 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 7.25 Habitat Units.

93. The scheme should seek to maximise the Site's biodiversity value post-development, by either creating new high-quality habitats on cleared ground, or by enhancing retained vegetation. Given the nature of the proposals, and assuming these principals are followed, delivering the required net gain on Site should be straightforward.

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

Ecological Opportunities

96. The nature of the proposals means the majority of the Site area remains untouched by development. This opportunity could be taken to put the grassland under a different management regime. Over sowing the grassland with yellow rattle could reduce the vigour of grasses, in time allowing wildflower seed to establish, which alongside proper management would increase species diversity at the Site and offer far greater ecological value.

97. Alongside the planting of replacement hedges, additional hedges, native shrubs and trees could be incorporated into the Site to increase the range of ecological niches available.

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

Figure 17 *Constraints and Opportunities*

Conclusions and Recommendations

Planning considerations		
Recommendation	**Rationale**	**When**
R1 Additional Surveys	**Not required** to inform planning.	N/A
R2 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
R3 Ecological Impact Assessment (EcIA) to include Calculated final Biodiversity Impact Score.	Summarises all survey findings and assesses the impacts of the scheme in respect of these. Uses DEFRA metric to quantity net gain/loss of biodiversity.	Prior to submission. After a fixed design is agreed and all key additional survey are completed.
R4 Produce a CEMP (Biodiversity)	To show how the site will be built without affecting surrounding habitats and minimising risk of affecting protected or notable fauna. The CEMP will detail the following protection measures: • Location of Biodiversity Protection zones or fences • Pre- or during- clearance ecology checks for protected species (badger and nesting bird). • Protected/notable species method statements where licensing in not needed.	**Delivery report** Suitable for planning condition.
R5 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.

Outline Biodiversity Net Gain (BNG) Implications

118. 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.

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

120. Outline BNG Implications at this Site have been calculated below. This is based on outline calculation assuming clearance of the corner of the site where the road is to be built, and replacement with sealed development and grassland verges. Figures are provided for habitat area units only.

121. **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 still required to achieve No Net Loss	Units still required to achieve 10% Net Gain
7.25	7.3	0	0.68

122. 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

Blackthorn	*Prunus spinosa*
Bramble	*Rubus fruticosus*
Broad leaved dock	*Rumex obtusifolius*
Chickweed	*Stellaria media*
Cleavers	*Galium aparine*
Common ivy	*Hedera helix*
Cow parsley	*Anthriscus sylvestris*
Creeping buttercup	*Ranunculus repens*
Creeping thistle	*Cirsium arvense*
Dandelion	*Taraxacum officinale agg.*
Dog rose	*Rosa canina*
Elder	*Sambucus nigra*
False oat grass	*Arrhenatherum elatius*
Field maple	*Acer campestre*
Field wood-rush	*Luzula campestris*
Gorse	*Ulex europaeus*
Hawthorn	*Crataegus monogyna*
Hogweed	*Heracleum sphondylium*
Holly	*Ilex aquifolium*
Meadow buttercup	*Ranunculus acris*
Meadow foxtail	*Alopecurus pratensis*
Nettle	*Urtica dioica*
Perennial rye grass	*Lolium perenne*
Ribwort plantain	*Plantago lanceolata*
Sweet vernal grass	*Anthoxanthum odoratum*
Willow	*Salix sp.*
Yorkshire fog	*Holcus lanatus*
Bush vetch/tare	*Vicia sepium*
Cock's-foot	*Dactylis glomerata*
Greater stitchwort	*Stellaria holostea*
Lords and ladies	*Arum maculatum*
Wayfaring tree	*Viburnum lantana*

Appendix 3 Explanatory Notes and Resources Used

Site Context

Aerial photographs published on commonly used websites were studied to place the site in its wider context and to look for ecological features that would not be evident on the ground during the walkover survey. This approach can be very useful in determining if a site is potentially a key part of a wider wildlife corridor or an important node of habitat in an otherwise ecologically poor landscape. It can also identify potentially important faunal habitat (in particular ponds) which could have a bearing on the ecology of the application site. Ponds may sometimes not be apparent on aerial photographs so we also refer to close detailed maps that identify all ponds issues and drains.

Designated Sites

A search of the MAGIC (Multi-Agency Geographic Information for the Countryside) website was undertaken. The MAGIC site is a Geographical Information System that contains all statutory (e.g. Sites of Special Scientific Interest [SSSI's]) as well as many non-statutory listed habitats (e.g. ancient woodlands and grassland inventory sites). It is a valuable tool when considering the relationship of a potential development site with nearby important habitats. In addition, information from the local record holders was referred to on locally designated sites.

Functional linkage with off-Site habitats

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

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

Method

Phase 1 habitat survey methodology (JNCC, 2010). This involves walking the site, mapping and describing different habitats (for example: woodland, grassland, scrub). The survey method was "Extended" in that evidence of fauna and faunal habitat was also recorded (for example droppings, tracks or specialist habitat such as ponds for breeding amphibians). This modified approach to the Phase 1 survey is in accordance with the approach recommended by the Guidelines for Baseline Ecological Assessment (IEA, 1995) and Guidelines for Preliminary Ecological Appraisal (CIEEM 2017).

Faunal Appraisal

This section first looks at the types of habitat found on Site or within the sphere of influence of potential development, then considers whether these could support protected, scarce or NERC Act 2006 Section 41 species (referred to collectively as 'notable species').

Records of notable species supplied from a 2km area of search by North and East Yorkshire Ecological Data 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 'Scarborough Local BAP'.

Priority Species	Priority Habitats
Species in Buildings	Woodland
Water Vole	Lowland Wood Pasture, Parklland / Veteran Trees
Otter	Ancient and/or Species-rich Hedgerows
Bats	Unimproved Neutral Grassland
Harbour Porpoise	Calcareous Grassland
Tree and House Sparrow	Acidic Grassland
Reptiles	Wetland
Great Crested Newt	Open Water
White-clawed Crayfish	Coastal Wetlands
Golden-shelled Slug	Coastal Cliff Mosaics
Water Violet	Rivers and Streams
Rare Flowers	

Bats

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

Bat Roosting Suitability of Buildings and Trees

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

Evaluation

In evaluating the Site, the ecologist will take into account a number of factors in combination, such as:

- the baseline presented above,
- the site's position in the local landscape,
- its current management and
- its size, rarity or threats to its integrity.

There are a number of tools available to aid this consideration, including established frameworks such as Ratcliffe Criteria or concepts such as Favourable Conservation Status. Also of help is reference to Biodiversity Action Plans in the form of the Local BAP and Section 41 of the NERC Act (2006) to determine if the site supports any Priority habitats or presents any opportunities in this respect.

The assessment of impacts considers the generic development proposals from which potential effects include:

- Vegetation and habitat removal
- Direct effects on significant faunal groups or protected species
- Effects on adjacent habitats or species such as disturbance, pollution and severance
- Operation effects on wildlife such as noise and light disturbance

Appendix 4 Bat Activity Survey Rationale

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

Taking the BCTG document as a whole, Chapter 2 helps the reader understand whether or not surveys are required, and that in the context of planning and development survey is required in relation to ensure;

- the avoidance of legal offences, and;

- the provision of a sufficient level of information - such that will allow the Local Planning Authority to make an informed decision on the proposals and their potential impacts on the Favourable Conservation Status (FCS) of bats.

Attendance at seminars presented by, and discussions with, those involved in production of the BCTG document has emphasised the point that it is within the remit of the consultant ecologist to make a decision on the necessity and scope of surveys - they will use the guidelines in doing so but are not in any way bound by them: this is reflected in Section 1.1 of the guidelines -

> *'The Guidelines do not aim to either override 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.

Brooks Ecological has prior knowledge of bat activity on this site and the current conditions do not suggest that patterns observed in the past would have changed, the Site is not likely to be of any significant value to local bat populations.

This assessment was made by Sam Kitching BSc (Hons) MCIEEM. Sam has been assessing Site's and undertaking surveys in a professional capacity for 9 years. He is registered to use the Class Survey Licence WML CL18 (Level 2).

Appendix 5 Wildlife Legislation, Policy and Guidance

This is not an exhaustive list but sets out briefly the relevance of Legislation, Policy and Guidance in terms of planning applications and this assessment.

Legislation

Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (EC Habitats Directive).

Provides framework at an international (EU) level for the consideration / protection of European Protected Species (EPS), and habitats through the designation of sites.

Council Directive 79/409/EEC on the Conservation of wild birds (EC Birds Directive) and The Ramsar Convention on Wetlands of International Importance (1971)

Provides framework at an international (EU) level for the consideration / protection of important bird populations and the sites on which they are dependant.

The Conservation of Habitats and Species Regulations (2010)

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

The Wildlife and Countryside Act (1981) as amended

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

The Countryside and Rights of Way Act 2000 (CRoW)

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

Natural Environment and Rural Communities Act 2006 (NERC)

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

Hedgerows Regulations (1997)

Define and provide protection for Important Hedgerows.

Protection of Badgers Act (1992)

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

Protected Sites

Statutory EU / International Protected Sites

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

Statutory UK Protected Sites

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

Locally Protected Sites

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

Protected Species

European Protected Species

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

UK Protected Species

A number of species (including bats, GCN, 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 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.