Brooks Ecological
Grounded advice

Preliminary Ecological Appraisal Report

Land off Leeds Road, Howden Clough

Rosie Carr

Report Reference: ER-4811-01

11/11/2020

Report Title:	Preliminary Ecological Appraisal Report Land off Leeds Road, Howden Clough
Report Reference:	ER-4811-01
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Grounded advice

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Summary

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

Methodology

The report is based on a desk study of designated wildlife sites and records of protected or notable species, and an extended Phase 1 Habitat Survey carried out in October 2020.

Findings - Key Points

- The site has been assessed as having a Biodiversity Unit score of 1.56 Habitat Units.
- Proposals will need to consider the NPPF hierarchy of Avoid - Mitigate – Compensate in minimising any loss of biodiversity. The LPA may be seeking gains for biodiversity. Efforts should be made to achieve this on Site but where this is not feasible the LPA could request that a contribution is made to address any residual shortfall in biodiversity gain, off-Site.
- Buildings on-site have the potential to support bat roosts. Further survey will be required in this respect prior to demolition.
- Invasive non-native species present on-site include Himalayan balsam, wall cotoneaster and Montbretia. A management plan should be produced to show how these will be managed through secure removal and disposal.
- A Biodiversity Management Plan should be produced to outline how the scheme can maximise its value for wildlife.

Introduction

1. Brooks Ecological Ltd was commissioned by Rosie Carr to carry out a Preliminary Ecological Appraisal (PEA) of Land off Leeds Road, Howden Clough near Birstall (grid reference SE 2338 2667).
2. This report is produced with reference to British Standard BS:42020 'Biodiversity Code of Practice for Planning and Development' and the CIEEM (2017) Guidelines for Preliminary Ecological Appraisal.
3. In anticipation of the adoption of DEFRA's Biodiversity Metric 2.0 we have used the UK Habitat Classification descriptions rather than the long established JNCC codes. These habitat classifications and 'the metric' are work in progress and could be subject to future change.

Purpose of a PEA

4. A PEA is an *initial assessment* of the baseline for a proposed development site and establishes whether the Site is likely to be constrained by ecology, and whether more information is needed to identify the ecological baseline.
5. The subsequent Preliminary Ecological Appraisal Report (PEAR) is intended to give guidance to a developer and assist with the early stages of project planning and design. Where a site is not complex or constrained, and no additional ecological input is necessary the PEAR *may* be sufficient, and suitable to support a planning application.
6. Biodiversity Accounting metrics are used to quantify the value of a Site in Biodiversity Units - which helps in the later stage of assessing the ecological impacts of the proposed development.
7. Biodiversity Units can help to inform avoidance, or on-Site mitigation levels required; or as a last resort can translate to a direct monetary value where compensation (off-Site) is required. Please be aware that they *can* significantly impact on costs and viability.

The Site

8. The application site 'the Site' comprises a residential property, outbuildings and grounds known as Clough House.
9. The assessment uses a 2km area of search around the Site for records of protected and notable species and locally or nationally designated wildlife sites.

Figure 1 The Site boundary - red line

Desk Study

Landscape

10. The Site lies on the eastern edge of the village of Birstall, c.8km south west of Leeds. It is bound to the south by Leeds Road, to the east and west by residential development and to the north by a pocket of open greenspace separated from industrial development by hedgerow.

11. Beyond these immediate boundaries, to the north extends industrial development for 1km before reaching the M62 motorway. To the west and south lies residential development associated with Birstall, and to the east this residential development gives way to a pastoral landscape with pockets of woodland.

Wildlife Corridors

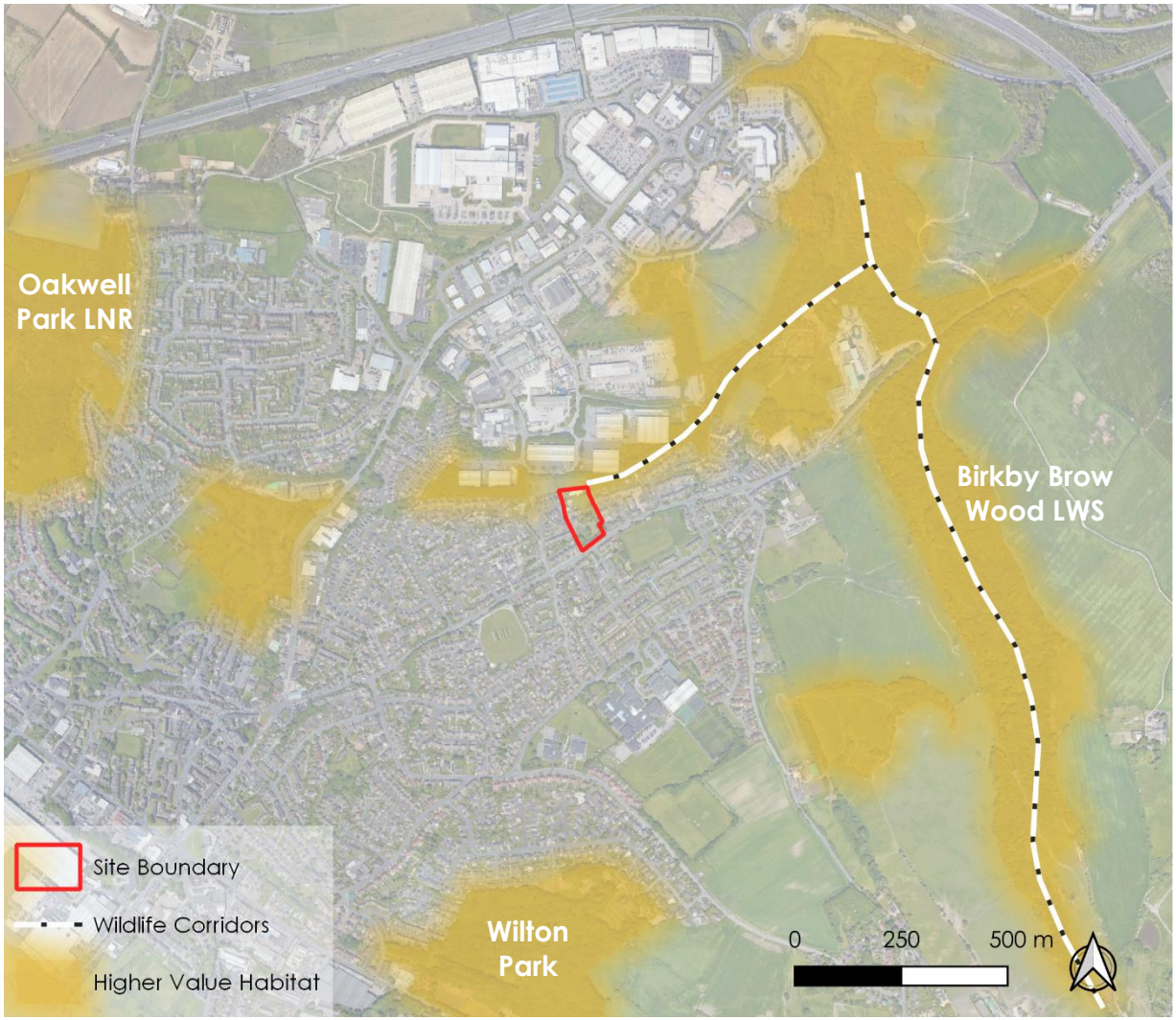
12. Birkby Brow Wood LWS provides a large area of higher value habitat and a major wildlife corridor, running north-south through the landscape c.700m east. The Site shares tenuous links with the LWS via the Kirklees Wildlife Habitat Network which includes a small section of land along the Site's northern boundary.

13. Several pockets of woodland and greenspace punctuate Birstall, however these are considered suitably separated from the Site by both distance and unsuitable habitat that impacts are unlikely.

Waterbodies

14. Using mapping tools, a search was made for any standing waterbodies within 500m of the proposed development. None were found.

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



Designated Sites

Statutory Designations

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

Table 1 Statutory Designated Sites.

Site Name	Distance from Site	Designation	Summary Interest
Oakwell Park	1.2km W	Local Nature Reserve (LNR)	Mix of woodland, farmland and a reclaimed colliery, over 110 acres of country park surrounding hall and gardens.

16. Any direct and indirect impacts on Oakwell Park LNR are considered unlikely due to the Site's separation and distance.

SSSI Impact Risk Zones (IRZs)

17. The Site does not lie within the IRZ of an SSSI.

Non-Statutory Designations

18. There are three Local Wildlife Sites (LWS) in the search area. Of these one is of potential relevance to the application:

- Birkby Brow Wood LWS – 17.95 Ha of mostly replanted ancient woodland and a small area of ancient semi-natural woodland. Located c.700m east of the Site. Functionally linked to the Site via the Kirklees Wildlife Habitat Network. Impacts on the LWS are considered unlikely due to the lack of shared habitat with the Site.

19. Direct and indirect impacts on all remaining sites as a result of this development are unlikely due to the Sites separation and distance.

Kirklees and Leeds Wildlife Habitat Networks

20. The Kirklees Wildlife Habitat Network (WHN) runs across the north of the Site from west to east towards Birkby Brow Wood LWS before linking up with the Leeds Wildlife Habitat Network further afield.

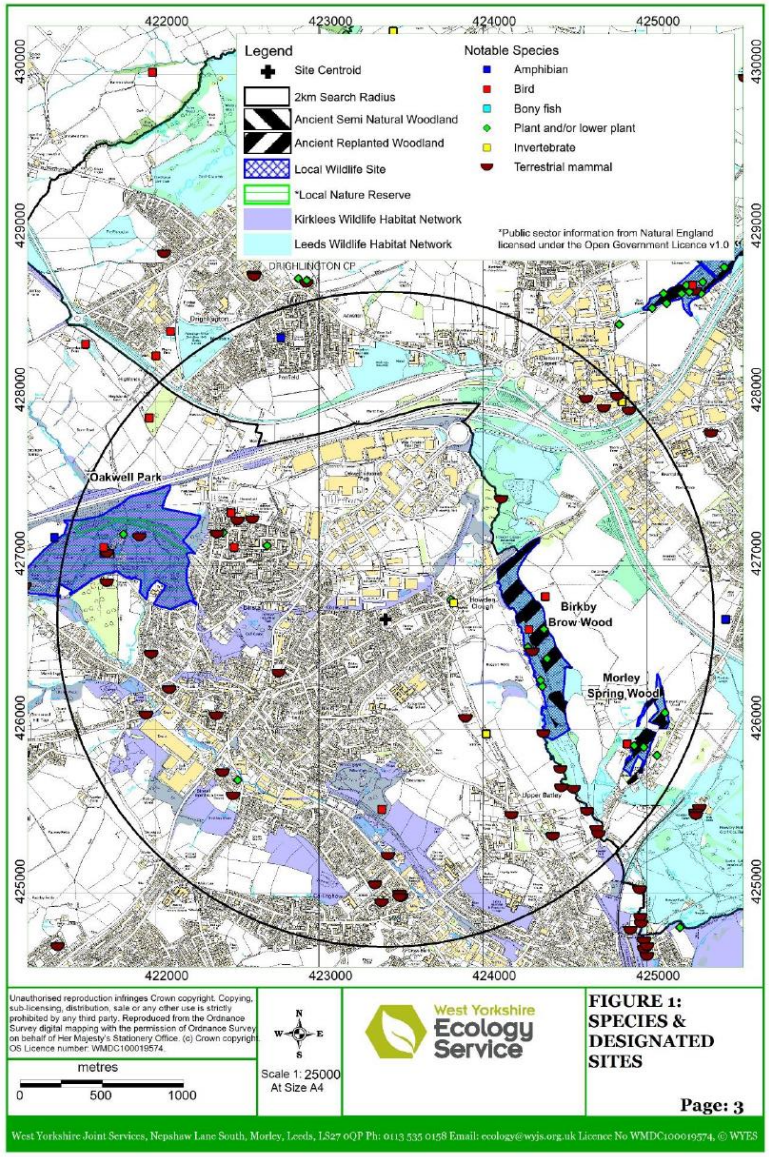
21. Part of the site falls within the WHN, however it is not clear how this provides connectivity to the wider network.

22. Plans should seek to maintain the network, ideally providing enhancement where possible.

Granted EPSM Licenses

23. Using DEFRA's MAGIC Maps application, a search was made for granted European Protected Species Mitigation (EPSM) licenses within 1km of the proposed development. None were found.

Figure 3 West Yorkshire Ecology; Species and Designated Sites



Survey

Method

24. The survey was carried out during October 2020[1] and followed the principles of Extended Phase 1 Habitat Survey methodology (JNCC, 2010).

Limitations

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

26. Whilst the majority of the Site was accessible, parts of the Site were inaccessible due to very dense vegetation, which could not be closely inspected. This could have concealed invasive species or protected species evidence.

27. Habitats were surveyed in late autumn when many plant species are starting to die back, however the habitat type could still be identified by the surveyor.

28. Buildings were surveyed from ground level using a high powered torch and binoculars. A limited internal inspection of all buildings except B2 was carried out, for health and safety reasons.

Habitat Appraisal

Habitats identified

29. The Site supports the following habitats:

- Developed land, sealed surface
- Artificial unsealed unvegetated surface
- Vegetated garden
- Amenity grassland
- Modified grassland
- Vacant/derelict land with ruderal vegetation
- Ornamental hedgerow

30. Each habitat is discussed in the following pages and the estimated area of these listed[2]. 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 The Biodiversity Metric 2.0 Auditing And Accounting For Biodiversity Technical Supplement Beta Edition.

Habitats Summary Evaluation

32. The habitats are ascribed our own qualitative value, based on their plant community make up. This evaluation is independent of faunal value which is considered in later sections.

[1] This Report has been prepared during November 2020 following a visit to the site in October 2020 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.

[2] The location and areas of habitats in this report are estimated and should not be relied on as a definite location and extent of any habitat or feature.

u1b Developed land sealed surface

Area estimate: 0.18 ha

Figure 4 Approximate location and extent of habitat

33. Hardstanding comprises a circular driveway leading up to the house, with parking areas/yard space to the rear. This is largely devoid of vegetation, with small amounts of ephemeral vegetation to the edges and a light covering of moss in some places.

34. Buildings on-site comprise former residential properties and associated outbuildings – a barn, garage and folly. These are described in more detail in the appended bat roost suitability assessment.

Summary Evaluation

35. Areas of minimal ecological value, unlikely to support any rare of notable plant species.

Figure 5 Tarmac driveway leading up to main house

Defra Metric Condition Assessment ***N/A***

u1c Artificial unvegetated unsealed surface

Area estimate: 0.01 ha

Figure 6 Approximate location and extent of habitat

36. A small section of the garden is given over to an area of loose gravel.
37. Aside from a small number of potted plants, this area has minimal plant cover.

Summary Evaluation

38. Areas of minimal ecological value, unlikely to support any rare of notable plant species.

Figure 7 Gravel area of garden to rear of house

Defra Metric Condition Assessment ***N/A***

231 Vegetated garden

Area estimate: 0.15 ha

Figure 8 Approximate location and extent of habitat

39. This habitat comprises area of the grounds that were obviously part of landscaped gardens.

40. An area within the circular driveway comprises lawn with integral flower/shrub beds.

41. Directly surrounding the main house is an area of 'rockery' planting, including shrubs such as Montbretia, lavender, hebe, hydrangea and rose.

42. A lawned garden extends to the east with wide flower and shrub borders lining a wall, which includes climbers such as rose and clematis.

43. To the west of the house along the boundary is a narrow border of ornamental planting, including perennial plants, shrubs and small trees. Fuschia, berberis and Oregon grape are among the species present, with small amounts of Cotoneaster and Himalayan balsam. Common ephemeral plants are starting to colonise dug borders such as sun spurge, cleavers, wood avens, dandelion and herb Robert, with small amounts of bramble also present

Summary Evaluation

44. An artificial/man-made habitat that is unlikely to support any rare or notable species.

Figure 9 Showing 'walled garden' area to east of house (left) and area of shrub planting along western boundary (right).

Defra Metric Condition Assessment ***Poor***

45. This habitat is automatically allocated a 'Poor' condition.

310-17 Amenity grassland

Area estimate: 0.23 ha

Figure 10 Approximate location and extent of habitat

46. The area of the south of the buildings comprises outgrown amenity lawn.
47. Fescues and perennial rye grass dominate the sward, with lesser amounts of Yorkshire fog and creeping soft grass.
48. A low proportion of forbs around present, including common species such as dandelion, creeping buttercup, white clover, and buttercup.
49. To the edges, particularly to the east, along the southern boundary, and to the south west corner, ruderal vegetation is developing. This includes such species are broad leaved dock, stinging nettle, creeping and spear thistle, prickly sow thistle, false oat grass and cock's-foot. Very occasional saplings of oak and sycamore are present, particularly along the hedge-line.
50. A small number of other forbs are present, for example in cleared areas, including yarrow, self heal, common chickweed, redshank, willowherbs common vetch, smooth tare and cow parsley.

Summary Evaluation

51. The majority of the grassland is of low species diversity. It is considered unlikely to support any rare or notable species.

Figure 11 Amenity grassland to south of the site

Defra Metric Condition Assessment ***Poor***

52. A 'Poor' condition is given to amenity grasslands, characterised by vegetation dominated by a few fast-growing grasses on fertile, neutral soils, having abundant rye-grass and white clover.

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g4-17-1160 Modified grassland

Area estimate: 0.32 ha

Figure 12 Approximate location and extent of habitat

53. The field to the rear (north) of the Site is more typical of modified grassland.

54. The sward is dominated by rank, outgrown grasses including fescue, Yorkshire fog, perennial rye grass, false oat grass and cock's-foot. A small proportion of forbs are present such as red clover, ragwort, creeping buttercup and ribwort plantain.

55. Along the western boundary, ruderal vegetation is present including broadleaf dock, stinging nettle, bramble and raspberry.

56. A small patch of introduced shrub including box leaved honeysuckle and crocosmia is present.

Summary Evaluation

57. The majority of the grassland is of low species diversity. It is considered unlikely to support any rare or notable species.

Figure 13 Grass field to the north of the Site

Defra Metric Condition Assessment ***Poor***

58. Fails the majority of criteria. Clearly recognisable as an improved grassland sward.

	Condition Assessment Criteria Grassland habitat type	Meets criteria?
1	Clearly and easily recognizable as a good example of this type of habitat.	No
2	Appearance and composition very closely matches the characteristics for the specific Priority Habitat	No
3	Wildflowers, sedges and indicator species for the specific Priority grassland habitat are very clearly and easily visible throughout the sward and occur at high densities in high frequency.	No
4	Undesirable species and physical damage is below 5% cover.	No
5	Cover of bare ground greater than 10%	No
6	Cover of bracken less than 20% & cover of scrub and bramble less than 5%.	Yes

351-17 Vacant/derelict land

Area estimate: 0.03 ha

Figure 14 Approximate location and extent of habitat

59. An area of derelict land is found to the north of the barn, comprising areas of hardstanding, bare earth, rubble and cut logs.

60. Ruderal vegetation covers most of this area, with Himalayan balsam abundant. Other tall ruderal species include stinging nettle, broadleaf dock spear and creeping thistle, rosebay willowherb, smooth sow thistle, with hedge bindweed frequent, and grasses including cock's-foot and false oat grass.

61. Young saplings of sycamore, birch and buddleja are present, with bramble to the edges.

62. A number of other forbs are present in low frequency including broadleaf and ribwort plantain, nipplewort, cleavers, daisy, spotted medick, creeping buttercup, groundsel, shepherd's purse, common vetch, sun spurge and lesser trefoil.

Summary Evaluation

63. Dominated by competitive species, this area is unlikely to support any rare or notable species.

Figure 15 Ruderal vegetation on derelict land behind barn

Defra Metric Condition Assessment ***Poor***

64. Fails all of the criterial under the urban habitat condition assessment.

	Condition Assessment Criteria Urban habitat type	Meets criteria?
1	Known history of disturbance or evidence that soil has been removed or severely modified. Extraneous materials may have been added.	No
2	The Site contains some vegetation; early successional communities consisting of mainly stress-tolerant species.	No
3	The Site contains unvegetated, loose bare substrate and pools may be present and desirable.	No
4	The Site shows spatial variation, forming a mosaic of one or more of the early successional communities (a)-(h) above plus bare substrate or pools.	No

h2b Other hedgerows (HR9 Ornamental non-native)

Linear estimate: 0.29 km

Figure 16 Approximate location and extent of habitat

65. All of the hedgerows on-site comprise less than 80% UK native woody species, and are therefore classed as non-priority hedgerows.

66. H1 is a mature hedge along the roadside frontage of the property (southern boundary). Standing approximately 2.5m high, this is comprised entirely of garden privet.

67. H2 is a mixed species hedgerow, with occasional gaps and of mixed height, running the length of the eastern boundary. It is dominated by garden shrub species such as barberry, leylandii and laurel. Native and ornamental variants of native tree and shrub species are present, though in low quantities. Species include hawthorn, holly, cherry, blackthorn, elder, rowan, yew, field maple and hazel.

68. H3 is similarly comprised and runs up most of the western boundary. A few gaps are present in between lengths dominated by berberis and leylandii. Occasional ornamental birch and apple trees are present, alongside and sycamore saplings and rhododendron.

Summary Evaluation

69. Whilst a number of native species are listed, these occur individually or at low frequency within hedges that are dominated by non-native and/or ornamental hedging species.

Figure 17 Privet hedge (H1) along southern boundary (left), and section of leylandii hedge in H3 on western boundary (right).

Defra Metric Condition Assessment ***N/A***

70. Condition assessment not required – this habitat type scores zero.

DEFRA Metric (Baseline)[3]

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

Habitats:

	Habitats and areas			Habitat distinctiveness	Habitat condition	Ecological connectivity	Strategic significance	Suggested action to address habitat losses	Ecological baseline
Ref	Broad Habitat	Habitat type	Area (hectares)	Distinctiveness	Condition	Ecological connectivity	Strategic significance		Total habitat units
1	Urban	Urban - Developed land; sealed surface	0.18	V.Low	N/A - Other	Low	Area/compensation not in local strategy/ no local strategy	Compensation Not Required	0.00
2	Urban	Urban - Vegetated garden	0.15	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	0.30
3	Urban	Urban - Artificial unvegetated, unsealed surface	0.01	V.Low	N/A - Other	Low	Area/compensation not in local strategy/ no local strategy	Compensation Not Required	0.00
4	Urban	Urban - Amenity grassland	0.23	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	0.46
5	Grassland	Grassland - Modified grassland	0.32	Low	Poor	Low	Within area formally identified in local strategy	Same distinctiveness or better habitat required	0.74
6	Sparsely vegetated land	Sparsely vegetated land - Ruderal/Ephemeral	0.03	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	0.06
7									
8									
9									
10									
		Total site area ha	0.92					Total Site baseline	1.56

[3] 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.

Hedgerows:

	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	1	Hedge Ornamental Non Native	0.06	V.Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	Same distinctiveness band or better	0
2	2	Hedge Ornamental Non Native	0.127	V.Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	Same distinctiveness band or better	0
3	3	Hedge Ornamental Non Native	0.103	V.Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	Same distinctiveness band or better	0
4									
5									
6									
7									
8									
		Total Site length/KM	0.29					Total Site baseline	0.00

Faunal Appraisal

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

Amphibians

Records

72. Records show common toad, common frog and smooth newt within the search area, all recorded over 1.5km from the Site. No records have been returned for great crested newt (GCN).

Field Evidence

73. No ponds are present on the Site, and none have been identified within 500m of it.
74. The Site provides suitable terrestrial habitat for amphibians in the form of rank tussocky grassland and areas of shrub/hedge bottoms.

Summary Evaluation

75. Whilst small numbers of amphibians may be present, given the absence of breeding ponds the site is unlikely to support significant populations.
76. Great crested newt is considered likely absent from the Site.

Further Surveys

77. No further surveys or precautions are considered necessary.

Birds

Records

78. No significant bird records exist for the site or the developments sphere of influence.

Field Evidence

79. A small number of common bird species were noted during the survey including robin and blackbird.
80. An abandoned birds' nest was noted within the roof of the folly (Building 5).

Summary Evaluation

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

Further Surveys

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

Bats

Records

84. Records show common pipistrelle, soprano pipistrelle, noctule, Leisler's, Daubenton's and unidentified vesper species are active within the search area. All records originate over 700m from the Site with the only notable roost being of a single common pipistrelle located c.1.4km from the Site, recorded in 2016.

Field Evidence

Potential Roost sites

Buildings: Four of the five buildings on the site have the potential to support roosting bats. See bat roost suitability assessment in Appendix 4.

Trees: No trees on site have the potential to support roosting bats.

Foraging and Commuting Habitat

85. The site is considered to be of low value for foraging bats, being dominated by areas of built environment and amenity/modified grassland.

Summary Evaluation

86. The Site is located within an urban environment with industrial units to the north. Whilst it may to support low numbers of common species of bat, it is considered unlikely to be of importance to local bat populations.

Further Surveys

87. Further survey in the form of evening emergence/dawn re-entry survey is required prior to any works on the buildings, to assess the presence of bat roosts.

Water Vole

Records

88. Eight records have been returned for water vole within the search area. Most originate from varying locations along Howley Beck c.1.5km south east, with a single record of a burrow located c.1km north east.

Field Evidence

89. No water bodies, channels or ditches present on site. No evidence was found.

Summary Evaluation

90. Water voles will not make use of the application site or be at risk of impact from development.

Further Surveys

91. No further surveys are considered necessary to demonstrate current baseline in respect of water voles.

Badger

Records

92. There are no badger records within 200m of the site though the site falls within the area of 'increased probability of badger activity'.

Field Evidence

93. No signs were noted during the walkover survey however some areas the areas were as not directly accessible.

94. A small number of animal runs were noted in the land immediately north of the Site, leading through hedgerow boundaries. A burrow typical of rabbit was found close to this location.

Summary Evaluation

95. Badgers setts or other signs have not been identified on the Site or on adjacent land. The presence of badgers is considered to be unlikely.

Further Surveys

96. Further surveys are not considered necessary, however should any signs of badger be seen or suspected, work should stop and advice be sought.

Figure 18 Animal runs and rabbit hole north of the Site.

Hedgehog

Records

97. Hedgehogs are recorded within the search area.

Field Evidence

98. No evidence of hedgehogs was found on site.

Summary Evaluation

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

Further Surveys

100. Presence assumed no further surveys are considered necessary.

Reptiles

Records

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

Field Evidence

102. No field evidence was found.

Summary Evaluation

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

Further Surveys

104. No further surveys or precautions are considered necessary.

Invasive Non-Native Species (INNS)

105. INNS are species listed on Schedule 9 of the Wildlife and Countryside Act (1981), for which it is an offence to cause or allow it to grow in the wild. The following species were noted[4]:

- Himalayan balsam
- Cotoneaster species
- Montbretia (Crocosmia)

Survey constraints

106. This survey is constrained by areas that were inaccessible due to the density of vegetation.

107. Although some INNS have been identified in this preliminary survey it is not always possible to conclude full extent or range of species present 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.

108. This site presents a 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

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

Figure 19 Invasive weeds noted during the survey

[4] 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

110. Part of the Kirklees Wildlife Habitat Network overlaps a small section of the Site at its northern extent. This area forms a weak wildlife corridor leading to higher value habitat to the east. Proposals should take into account the function of the WHN and maintain east-west connectivity along this route.

111. In developing a site layout, proposals should minimise the loss of diversity and strive to achieve a net gain on site.

112. Four buildings on the Site have the potential to support roosting bats. Further survey is required to assess the status of roosting.

113. Small amounts of invasive non-native plant species are present on site including Himalayan balsam. Their removal should be detailed in a CEMP or Invasive Weed Management Plan.

Figure 20 Constraints identifiable at the PEA stage

Ecological Opportunities

114. The key ecological opportunity here would be to provide planting which can strengthen the corridor function of WHN. This might comprise of a strip of native planting to delineate the Site and the WHN.
115. The development will include gardens including a mix of lawn and shrub planting.
116. There is the opportunity to replace and/or enhance existing hedgerows, by increasing the proportion of native species to add value for local wildlife.
117. Tree planting around the Site will also be beneficial.
118. Installing roosting, nesting or hibernation features for fauna will provide new homes for wildlife.
119. Garden fences should be permeable so that hedgehogs can have access through the Site.

Figure 21 Ecological Opportunities

Conclusions and Recommendations

Planning Considerations		
Recommendation	**Rationale**	**When**
R1 Further survey	Further detailed survey will be required into the following species/ groups, to confirm presence or likely absence and collect an accurate baseline for the Site. • Bats The presence of bat roosts could represent a constraint to development. A Natural England Mitigation Licence may be required prior to works commencing, in order to derogate offences that might otherwise be committed.	May to August
R2 Produce a layout which minimises loss of biodiversity	The site has been assessed as having an Ecological Baseline score of 1.56 Habitat Units. Proposals will need to consider the NPPF hierarchy of Avoid - Mitigate – Compensate in minimising any loss of biodiversity. Engage with the Constraints and Opportunities set out above, involve your ecologist in designs at an early stage. It may be of benefit to produce a Green Infrastructure Plan or an ecologically led Landscape Concept Design* to submit with the application – given sufficient detail this could remove the need for a separate Landscape Master Plan and would help show how this process had been engaged with.	During the design process
R3 Ecological Impact Assessment (EcIA)	Once the layout has been fixed and all ecological surveys completed, an EcIA can then be produced which summarises the potential impacts of the proposed development on the Site's baseline. At this Site, standalone Biodiversity Net Gain calculations may be sufficient. Post development metrics will be based on the Site Layout and Landscape Masterplan; with measurements provided by the client/ architect.	Prior to submission.
R4 Produce a Biodiversity Management Plan	To specify in detail how the development will cater for biodiversity on site and to show how habitats will be maintained in the condition that the Biodiversity Calculations were based on. For this Site, this is likely to include a bat and bird box plan, and details of boundary treatments including hedgehog access and hedgerow composition.	Suitable for planning condition.

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Other considerations (managing legal or financial risks)		
Issue	**Rationale**	**When**
R5 Nesting bird management	As with most sites the standard precaution in relation to birds would apply: To prevent the proposed works impacting on nesting birds, any clearance of vegetation will need to be undertaken outside of the breeding bird season which is 1st March – 31st August inclusive. Any clearance required during the breeding bird season should be preceded by a nesting bird survey to ensure that the law is not contravened through the destruction of nests and that any active nests are identified and adequately protected during the construction phase of the development.	Pre- and during -clearance
R6 INNS Management Plan	This provides a formal INNS Survey and sets out management prescriptions and timings in detail. It can provide security for the Main Contractor and assurance for future Site operators / purchasers / owners.	Best initiated at an early stage (INNS Survey would ideally be complete April - October)

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Appendix 1 Habitats and Ecological Features

Site Boundary

On-site habitats

- g4 - modified grassland
- 310 - amenity grassland
- 351 - vacant derelict ground bare ground
- 231 - vegetated garden
- u1c - artificial unvegetated unsealed surface
- u1b - developed land. sealed surface

Linear features

- XXXXX Hedge Ornamental Non Native

Secondary habitat

- 17 Ruderal/ ephemeral
- 1160 Introduced shrub

Project: 4811 Clough House
Title: Extended Phase 1 Habitat Plan

Drawing Number: D-4811-01
Date: November 2020
Revision: -

Brooks Ecological

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smas WORKSAFE

Appendix 2 Species recorded

Common Name	Scientific Name
Apple	*Malus domestica*
Barberry sp.	*Berberis thunbergii*
Barberry sp.	*Berberis ottawensis*
Barberry sp.	*Berberis stenophylla*
Bindweed	*Calystegia sepium*
Birch	*Betula sp.*
Blackthorn	*Prunus spinosa*
Box-leaved/ privet honeysuckle	*Lonicera pileata*
Bramble	*Rubus fruticosus*
Broad leaved dock	*Rumex obtusifolius*
Butterfly bush/buddleia	*Buddleia davidii*
Cherry	*Prunus sp.*
Chickweed	*Stellaria media*
Cleavers	*Galium aparine*
Clematis sp.	*Clematis sp.*
Cock's-foot	*Dactylis glomerata*
Common vetch/tare	*Vicia sativa*
Cotoneaster	*Cotoneaster sp.*
Cow parsley	*Anthriscus sylvestris*
Creeping buttercup	*Ranunculus repens*
Creeping soft grass	*Holcus mollis*
Creeping thistle	*Cirsium arvense*
Curry plant	*Helichrysum italicum*
Daisy	*Bellis perennis*
Dandelion	*Taraxacum officinale agg.*
Darwin's barberry	*Berberis darwinii*
Dog rose	*Rosa canina*
Elder	*Sambucus nigra*
False oat grass	*Arrhenatherum elatius*
Fescues	*Festuca spp.*
Forget-me-not	*Myosotis sp.*
Fuchsia	*Fuchsia sp.*
Garden privet	*Ligustrum ovalifolium*
Geranium (ornamental)	*Geranium sp.*
Greater plantain	*Plantago major*
Groundsel	*Senecio vulgaris*
Hawthorn	*Crataegus monogyna*
Hazel	*Corylus avellana*
Hebe sp.	*Hebe sp.*
Herb robert	*Geranium robertianum*
Himalayan balsam	*Impatiens glandulifera*
Holly	*Ilex aquifolium*
Hydrangea	*Hydrangea sp.*
Laurel	*Laurus sp.*
Lavender	Lavandula sp.
Lesser trefoil	*Trifolium dubium*
Leyland cypress	*Cupressus × leylandii*
Maple	*Acer sp.*
Montbretia	*Monbretia × Crocosmia*
Nettle	*Urtica dioica*
Nipplewort	*Lapsana communis*
Oak	*Quercus sp.*
Oregon grape	*Mahonia aquifolium*
Ornamental rose species	*Rosa sp.*
Perennial rye grass	*Lolium perenne*
Pineapple weed	*Matricaria discoidea*
Prickly sowthistle	*Sonchus asper*
Purple toadflax	*Linaria purpurea*
Ragwort	*Jacobaea vulgaris*
Raspberry	*Rubus idaeus*
Red clover	*Trifolium pratense*
Redshank	*Persicaria maculosa*
Rhododendron	*Rhododendron ponticum*
Ribwort plantain	*Plantago lanceolata*
Rosebay willowherb	*Chamerion angustifolium*
Rowan/mountain ash	*Sorbus aucuparia*
Selfheal	*Prunella vulgaris*
Shepherd's purse	*Capsella bursa-pastoris*
Smooth sowthistle	*Sonchus oleraceus*
Spear thistle	*Cirsium vulgare*
Spotted medick	*Medicago arabica*
Sun spurge	*Euphorbia helioscopia*
Sycamore	*Acer pseudoplatanus*
Wal cotoneaster	*Cotoneaster horizontalis*
White clover	*Trifolium repens*
Willowherb	*Epilobium sp.*
Wood avens	*Geum urbanum*
Yarrow	*Achillea millefolium*
Yew	*Taxus baccata*
Yorkshire fog	*Holcus lanatus*

Appendix 3 Explanatory Notes and Resources Used

Site Context

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

Designated Sites

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

Functional linkage with off-Site habitats

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

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

Method

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

Faunal Appraisal

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

Records of notable species supplied from a 2km area of search by West Yorkshire Ecology are used to inform this appraisal.

We discuss further only notable species or groups which could be a potential constraint due to the presence of suitable habitat and their presence (or potential presence) in the wider area. We screen out and do not present accounts of notable species or groups which do not meet these criteria – in some cases it may be necessary to explain this reasoning. Consideration is given to the Local Biodiversity Action Plan (LBAP), which for this site is the 'Kirklees Biodiversity Project'.

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

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 Roost Suitability Assessment

Method

A thorough daytime inspection of the site was made in October 2020 to look for evidence of bats and assess suitability for roosting. Evidence of bats may take the form of droppings, feeding remains, live bats, dead bats, stains on masonry or timber from the oils in bats' fur and claw marks made by bats regularly roosting in the same location.

Bat roosting potential of the building was classified according to the following criteria set out in Table 1, taken from the Bat Conservation Trust Good Practice Guidelines (2016).

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.

Survey and assessment was directed by Kate Wright BSc (Hons) MSc ACIEEM. Kate has 5 years' experience of carrying out bat surveys in a professional capacity and is registered to use the Class Survey Licence CL17 (Bat Survey Level 1). She is an active member of the West Yorkshire Bat Group and the national bat care network.

National, regional and local Status

The application Site lies within the natural range of 10 species of bat. These are summarised in the table below, together with a note on each species national status, relative abundance and status within the 1km search area.

List of bat species known to occur in West Yorkshire, ordered in increasing level of significance to their national proportion.

Species	National Status	Within 1km radius	
		Recorded	Roosts known
Common pipistrelle, *Pipistrellus pipistrellus*	Common and increasing	Yes	Yes
Soprano pipistrelle, *P. pygmaeus*	Common and stable	Yes	-
Daubenton's, *Myotis daubentonii*	Common and increasing	Yes	-
Brown long-eared, *Plecotus auritus*	Common and stable	-	-
Natterer's, *M. nattereri*	Common and increasing	-	-
Whiskered, *M. mystacinus*	Uncommon but stable	-	-
Noctule, *Nyctalus noctula*	Uncommon but stable	Yes	-
Brandt's, *M. brandtii*	Uncommon but stable	-	-
Leisler's, *Nyctalus leisleri*	Uncommon, trend unknown	Yes	-
Nathusius' Pipistrelle, *P. nathusii*	Uncommon but stable	-	-

Survey Results

Building 1

A two-storey residential house, external stonework is in a sound condition with few gaps noted. Glazing from many of the doors and windows has been removed. The roof is in a good condition with tiles and lining replaced c. 12 years ago. Stone capping stone seal the verge, and the ridge is intact. A parapet wall to the front will deter access by bats at the wall top. Internal inspection of the loft space, which was converted and previously occupied, revealed no evidence of bats.

To the rear, a wooden barge board sits atop stone dentils. Gaps were evident behind this, with loose bricks visible at the wall top, offering a potential roost feature and access into the roof structure or wall cavity.

A cellar is present but there is no external access for bats.

Building 1. Front elevation with parapet wall (top left); side elevation showing stone capping stones and minor gaps in masonry (top right); rear elevation and condition of roof (bottom left); gaps at wall top behind rear barge board (bottom right).

Building 2

A two-storey residential house, more numerous gaps were noted within the stonework, particularly to the eastern elevation. Numerous gaps are also present around the windows where glazing has been removed, providing access to the wall cavity.

The roof was again renovated relatively recently, with tiles hip and ridge all intact. Loose lining and uneven brickwork at the wall top of the northern elevation could provide access to the roof space, though this forms an unlikely roost feature given the area is open to the elements with internal floor and ceilings removed.

The barge board sits off the wall to the corners, providing a more likely potential roost feature for crevice dwelling species.

Two brick extensions are adjoined to the north. The first has a single pitched roof which has been removed, leaving voids into the walls where joists have been removed.

The second is a smaller flat roof extension. The barge board is tight fitting across most of the length, though wider access at the internal corner offers potential access to the ceiling void.

Building 3

A two-storey barn has a timber slat wall to the ground floor frontage, with corrugated metal to the remaining walls and roof. Whilst there is potential access into the wall structure at the corners, the thermal properties of metal mean this building is very unlikely to be used as a bat roost.

Building 2. Southern elevation showing roof, hip and ridge intact (top left); loft space open with ceilings and floors removed internally (top right); multiple access points to wall cavity via gaps at windows frames (centre left) and in stonework (centre right); gaps in internal walls where lean-to extension roof removed (bottom left) and under barge board of flat roofed extension (bottom right).






Building 3. Southern elevation showing roof, hip and ridge intact (top left); loft space open with ceilings and floors removed internally (top right); multiple access points to wall cavity via gaps at windows frames (centre left) and in stonework (centre right); gaps in internal walls where lean-to extension roof removed (bottom left) and under barge board of flat roofed extension (bottom right).


Building 4

A triple garage is constructed of breezeblock and brick. To the front, walls are rendered and painted, with timber doors intact. Internally, the walls and ceiling have been plastered and are intact, as is the flat corrugated roof.

To the eastern elevation, walls have been part rendered; this is coming away from the wall leaving a potential roost features, though access would be obscured by tall growing vegetation (such as raspberry).

The rear is unrendered, though several holes are present in the brickwork at the wall top around roof rafters, with occasional narrow gaps behind the barge board.

More significant damage is evident to the western elevation, where there are multiple gaps within the wall structure leading to potential roost features in the cavity.

Building 4. Overview of buildings front (top left) and internal view (top right); damage to rendering on eastern elevation (bottom left) and multiple gaps in walls on western elevation (bottom right).




Building 5

A small open fronted 'folly' is found in the grounds. This is stone built with a low pitched tiled roof. Both the brickwork and roof are intact, with the verge well sealed with mortar and stone capping stone to the front.

There is some damage to the internal roof lining, providing a potential roost feature for bats within the roof structure. A birds nest's was noted here.

Building 5. Open fronted brick structure with stone capping stones (top left); side view showing roof slates and well sealed verge (top right); damage to internal roof structure and birds' nest (bottom).



Summary

Building	Potential Roost Features	Rating
1 – House	Gap/loose brickwork behind rear barge board.	Low
2 – House	Multiple access points to wall cavity via missing window jambs and casing, holes in brickwork, missing mortar, etc. Gaps under barge board provide access to ceiling void (extension).	Moderate
3 – Barn	N/A	Negligible
4 – Garage	Gaps in brickwork and under loose render, particularly to western elevation.	Low
5 – Folly	Access via open front into roof structure via damaged lining.	Low

Box 1 *Legal background*

Bats are afforded full protection under The Wildlife and Countryside Act (1981) plus amendments, and the Conservation of Habitats and Species Regulations 2010. Under these Acts it is an offence among others, to recklessly kill, injure or disturb bats. It is also an offence to destroy or obstruct a roost even if bats are not in occupancy at the time of the action.

There are no defences against contravention of the Conservation of Habitats and Species Regulations 2010 which means that it is important for detailed and well-designed bat surveys to be carried out, prior to carrying out activities that may impact upon bat roosts such as demolition of buildings or removal of trees.

Where bats are found within a potential development site, a license from Natural England may need to be secured if works that could otherwise contravene legislation are to be carried out. These licences are only issued where Natural England is satisfied that works are unavoidable and would not have a negative impact on the favourable conservation status of bats. A Natural England license requires that the potential development site has full planning permission and that bats were a material consideration of the planning permission.

Box 2 *Bat roosts*

Bats roost in buildings and trees in different locations depending upon time of year and environmental factors such as position of the sun, proximity to heat sources and feeding grounds. The following types are commonly referred to:

Transitional roosts

Bats frequently gather early in the season (March to April) before dispersing to summer roosts. Bats can be found in high numbers in these roosts for a very short period. Transitional roosts can also be found shortly before hibernation in August to October when bats (depending upon species) can gather in roosts not used earlier in the season.

Maternity roosts

These are among the most important roosts and are normally occupied from May to August. Depending on the species involved, some maternity roosts can contain a very significant proportion of the local population.

Summer (non-breeding) roosts

Small groups of non-breeding female and male bats can gather in these roosts or bats from a local population may choose to roost individually. There are normally a large number of suitable locations for summer non-breeding roosts and these may be routinely used or used only on an occasional basis. Irregularly used summer roosts can be very hard to find without unreasonable survey effort.

Mating roosts

Around September bats will gather in roost to mate; these are often in different locations than summer or breeding roosts.

Hibernation roosts

As bats in hibernation roosts are highly vulnerable to disturbance and bats can be present in large numbers these are considered to be among the most important bat roosts. Many species of bats roost in large and nationally important hibernation roosts associated with underground sites, many of which are well known and protected. However, the most common bat in the UK (the common pipistrelle) is largely unaccounted for in winter but thought to disperse and roost individually or in small groups in thermally stable cracks and crevices in thick walls or trees.

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 presents a relatively small footprint within a landscape that is dominated by built urban environment and industrial units. Habitats present on site are of low value to foraging bats. Small numbers of common, light tolerant species such as Pipistrelle would be expected to be found using the Site, however it is considered unlikely that local bat populations will have any significant reliance on this area. Further surveys/monitoring would be disproportion to the risk of impacting upon bats, which is very low.

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 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.