

The background image shows a demolition site under a cloudy sky. A tall, multi-story brick clock tower stands prominently in the center-right. To its left is a long, low brick building that has been partially demolished, with some sections covered in blue sheeting. To the right of the clock tower is another brick building, also in a state of partial demolition. The foreground is a muddy, uneven area with puddles, likely from recent rain or construction activity. In the far distance, a hill with a small tower or monument is visible.

Brooks

Ecological

Grounded advice

Preliminary Ecological Appraisal Report

ER-4489-01A PEA

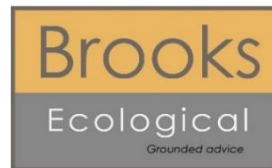
Panorama Living Limited

Report Reference: ER-4489-01A

18/02/2020

Report Title:	Preliminary Ecological Appraisal Report ER-4489-01A PEA
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Summary

This report is produced to inform Panorama Living Limited of potential ecological constraints associated with this proposed redevelopment 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 January 2020.

Findings - Key Points

There do not appear to be any insurmountable ecological issues on this site however;

- The site has been assessed as having a Biodiversity Unit score of 2.56. Proposals will need to consider the NPPF hierarchy of Avoid - Mitigate – Compensate in minimising any loss of biodiversity. The LPA is likely to be seeking a 10% gain in 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,
- Further bat survey is recommended,
- Woodland to the west is mapped as the Kirklees Wildlife Habitat Network (KWHN). A strategy by which the potential value / function of the KWHN can be maintained and enhanced in line with policy is required.

Introduction

1. Brooks Ecological Ltd was commissioned by Panorama Living Limited to carry out a Preliminary Ecological Appraisal (PEA) of ER-4489-01A PEA, HD4 6JF (grid reference SE143148).
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.

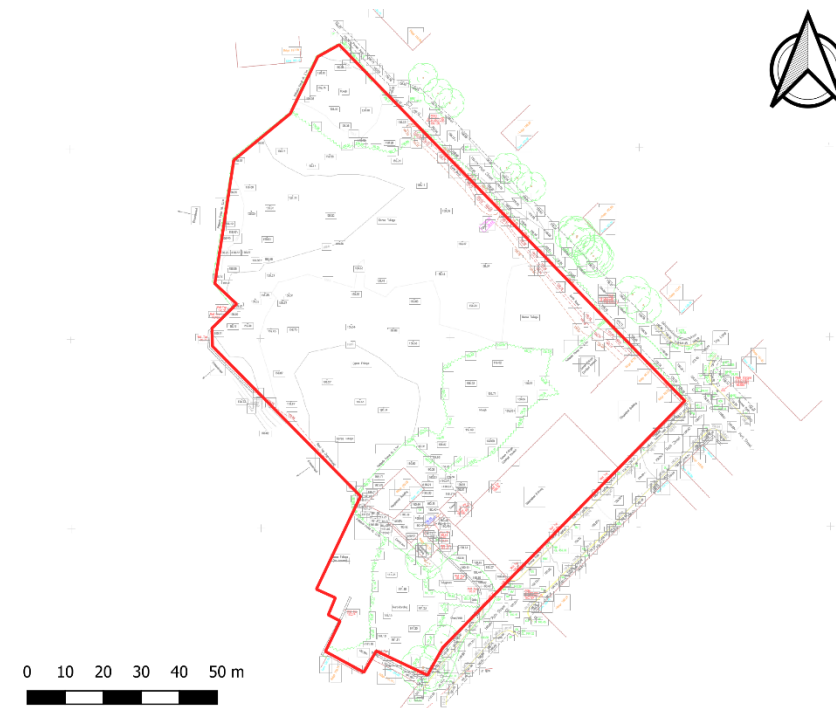
Purpose of a PEA

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 the grounds of a former mill; a small number of the buildings still remain. Land to the north of the buildings has recently been cleared.
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

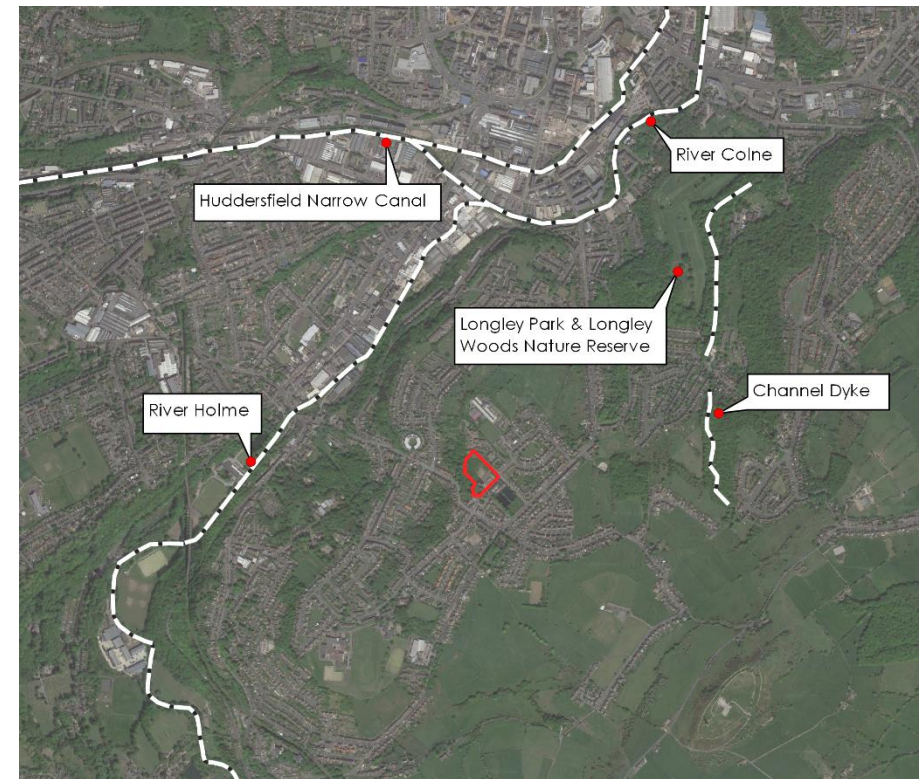
Landscape

10. The Site is located within Newsome village, sitting on the southern edge of Huddersfield. The Site is bound by Ruth Street and Hart Street to the south and east respectively, by housing to the north and by broadleaved woodland to the west.
11. The surrounding area is dominated by residential development interspersed with swathes of woodland, which lead to open countryside c.350m south of the Site.

Wildlife Corridors

12. The most significant wildlife corridors in the area are the various watercourses which pass through Huddersfield. These include the River Holme, Colne and the Huddersfield Narrow Canal although all are considered separated from the Site by distance and do not share any hydrological connectivity.
13. Other areas of higher value habitat include the numerous blocks of woodland including that found to the west of the Site. This block of woodland links around to grassland and scrub habitats associated with Stile Common to the north-east.

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



Water bodies

14. Two waterbodies are found on mapping for within a 500m radius of the Site. These two ponds lie adjacent to each other, being former mill ponds with vertical concrete sides. They are separated from the Site by Ruth Street.

Figure 3 Waterbodies within a 500m radius of 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
Castle Hill	1km southeast	Local Nature Reserve (LNR)	Acid grassland and scrub habitats
Upper Park Wood	1.7km south	LNR	Species-rich acidic woodland
Gledholt Woods	1.8km northwest	LNR	Ancient semi-natural acidic woodland
South Pennine Moors	7.5km southwest	Special Protection Areas (SPA)	The primary qualifying interests being the breeding populations of merlin and golden plover, as well as the general bird assemblage
South Pennine Moors	7.5km southwest	Special Areas of Conservation (SAC)	The primary qualifying habitats being European dry heath, blanket bog and old sessile oak Wood

16. The Site has no habitat links to any of these designated sites and is separated by some distance. As such, direct impacts on any of these sites arising from the proposed development would not be expected.

SSSI Impact Risk Zones (IRZs)

17. The Site lies within the IRZ for the Dark Peak SSSI but does not fall into any of the highlighted categories which require the LPA to consult with Natural England in relation to potential impacts.

Non-Statutory Designations

18. There are nine Local Wildlife Sites in the search area, comprising 7 Local Wildlife Sites (LWS's) and 2 Local Geological Sites (LGS's). All are found >1km from the Site, direct and indirect impacts as a result of this development are unlikely due to the separation and distance.

Granted EPSM Licenses

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

Kirklees Wildlife Habitat Network

20. The band of woodland to the west of the Site is mapped as Kirklees Wildlife Habitat Network (KWHN). Development will need to ensure that the woodland is not directly or indirectly affected by the proposals so that the Network's value and function can be maintained.

Figure 4 West Yorkshire Ecology; Species and Designated Sites

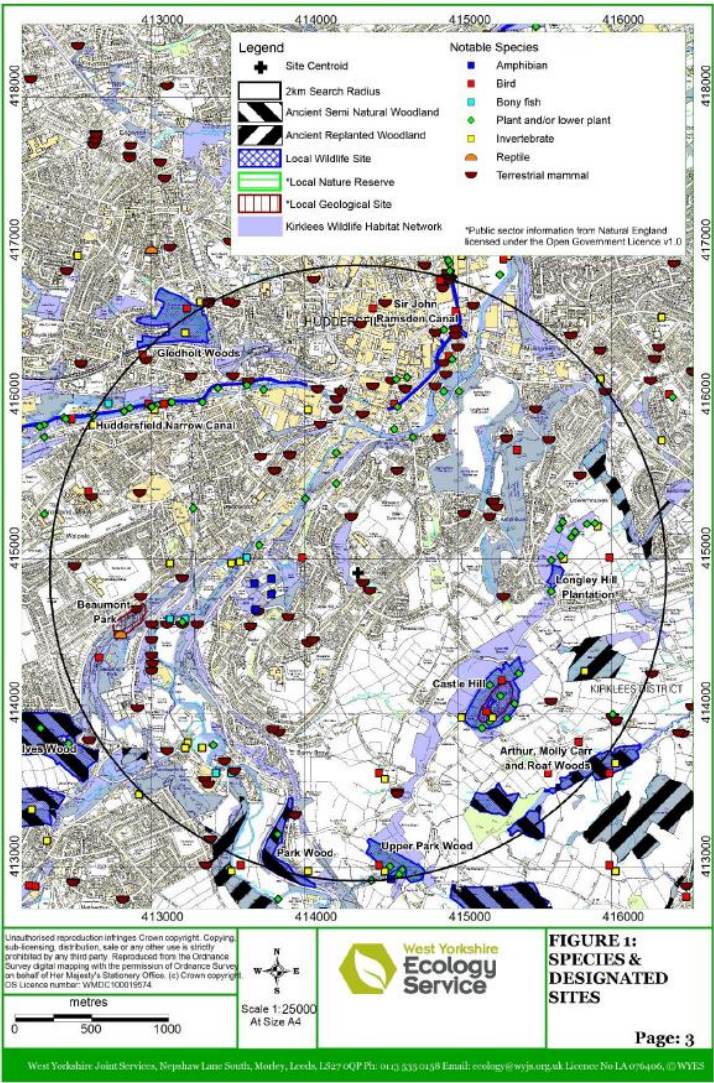


Figure 5 Kirklees Wildlife Habitat Network



Survey

Method

21. The survey was carried out during January 2020¹ and followed the principles of Extended Phase 1 Habitat Survey methodology (JNCC, 2010).

Limitations

22. Enough time was afforded the surveyor to carry out the survey. The survey was not constrained by poor weather.
23. Whilst the majority of the Site was accessible, at least [10%] of the Site was inaccessible due to very dense vegetation, which could not be closely inspected. This could have concealed invasive species or protected species evidence.

Habitat Appraisal

24. The Site used to house a mill, with the majority of its structures demolished c.10 years ago, leaving behind only the southern most buildings which overlook Ruth Street and an area of hardstanding to the south-west.
25. Since that time, satellite imagery and mapping show the Site was left unmanaged, with the northern area being colonised by scrub habitats.
26. As of 2019, the Site has been cleared again, and at the time of the January 2020 visit, the majority of the Site is now occupied by bare earth.

¹ This Report has been prepared during February 2020 following a visit to the site in January 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.

Habitats identified

27. The Site supports the following habitats:
- 351- bare ground
 - H3h- mixed scrub
 - 1170- street tree
 - U1b- developed land; sealed surface
28. Each habitat is discussed in the following pages and the estimated area of these listed². 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

29. 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

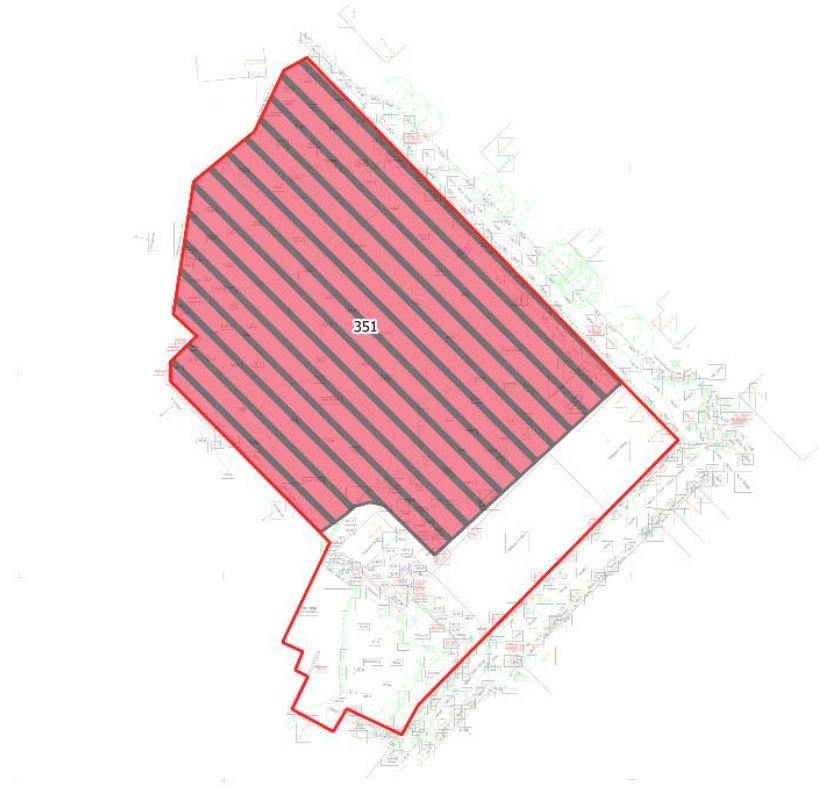
30. The habitats are ascribed our own qualitative value, based on their plant community make up. This evaluation is independent of faunal value which is considered in later sections.

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.

351 bare ground

Area estimate: 0.75 ha

Figure 6a Approximate location and extent of habitat



31. This area has been recently cleared and now comprises bare earth which is devoid of any significant vegetation.



Figure 6b Typical structure and composition of this habitat

Defra Metric Condition Assessment Poor

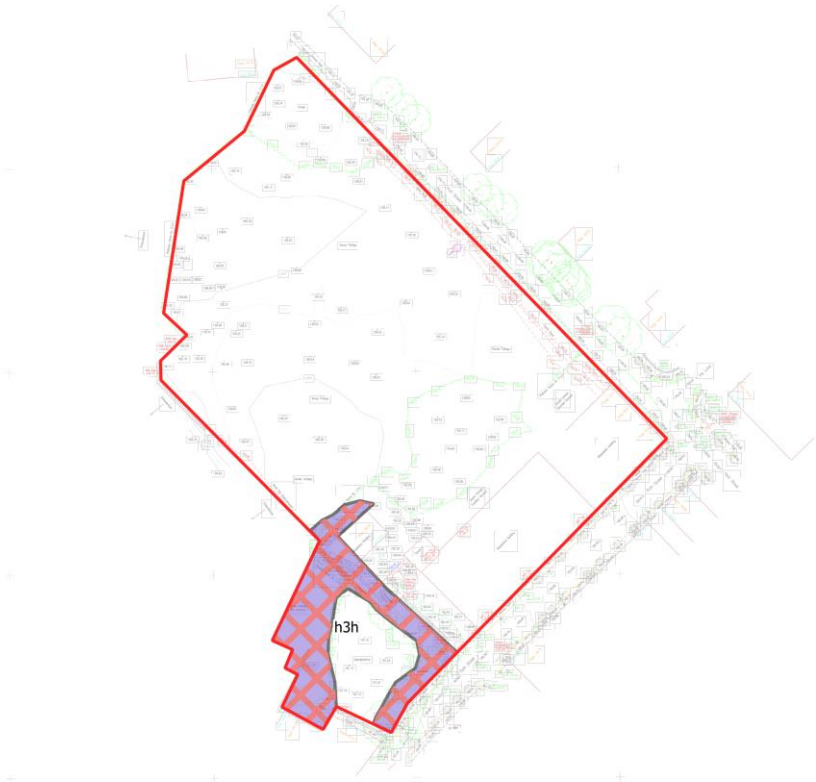
32. Most of the condition criteria are being failed.

	Condition Assessment Criteria: Urban habitat type	Meets criteria?
1	Known history of disturbance at the site	Yes
2	The site contains some vegetation. This will comprise of early successional communities consisting mainly of stress-tolerant species (e.g. indicative of low nutrient status or drought)	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 plus bare substrate or pools	No

h3h Mixed scrub

Area estimate: 0.08 ha

Figure 7a Approximate location and extent of habitat



33. This area of mixed scrub is likely former landscape planting which surrounds the remnant hardstanding. Relic landscape species are present namely snowberry and holly which have been colonised by bramble, buddleia, elder, ash and sycamore.

34. Three mature trees are also present as detailed in the 'street tree' habitat on the following page.

Figure 7b Typical structure and composition of this habitat



Defra Metric Condition Assessment Moderate

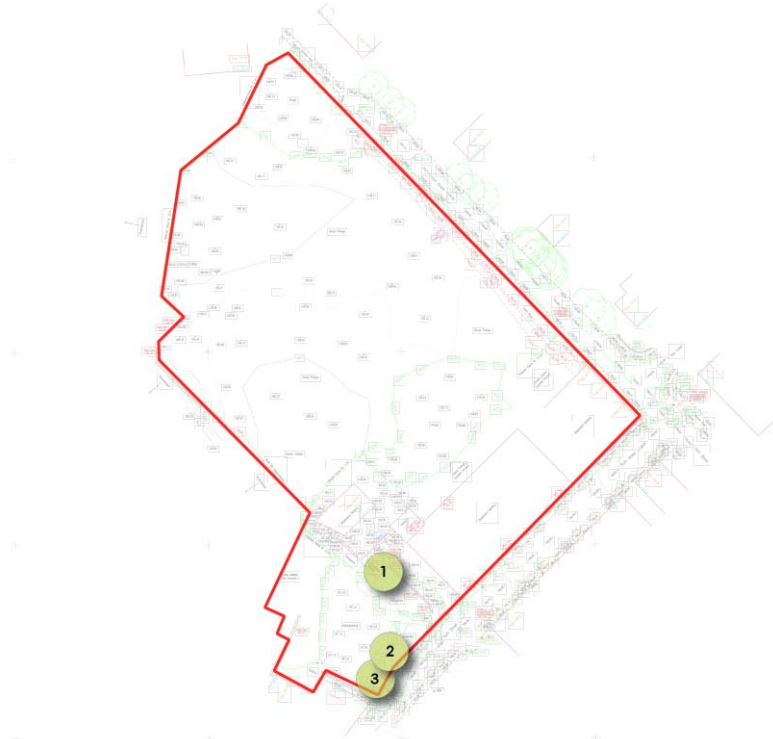
35. Meets 4 out of the 5 criteria.

	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	Yes
2	There is a good age range – a mixture of seedlings, saplings, young shrubs and mature shrubs	Yes
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	Yes
5	Many clearings and glades within the scrub	No

1170 Street Tree

Area estimate: 0.03 ha

Figure 8a Approximate location and extent of habitat



36. Three mature trees are present in the south-west, likely remnants of landscape planting as part of the former mill. These comprise a lime (tree 1), ash (tree 2) and sycamore (tree 3).



Figure 8b Typical structure and composition of this habitat- Tree 2 and 3

Defra Metric Condition Assessment Moderate

37. No assessment required.

U1b Developed land; sealed surface

Area estimate: 0.23 ha

Figure 9a Approximate location and extent of habitat

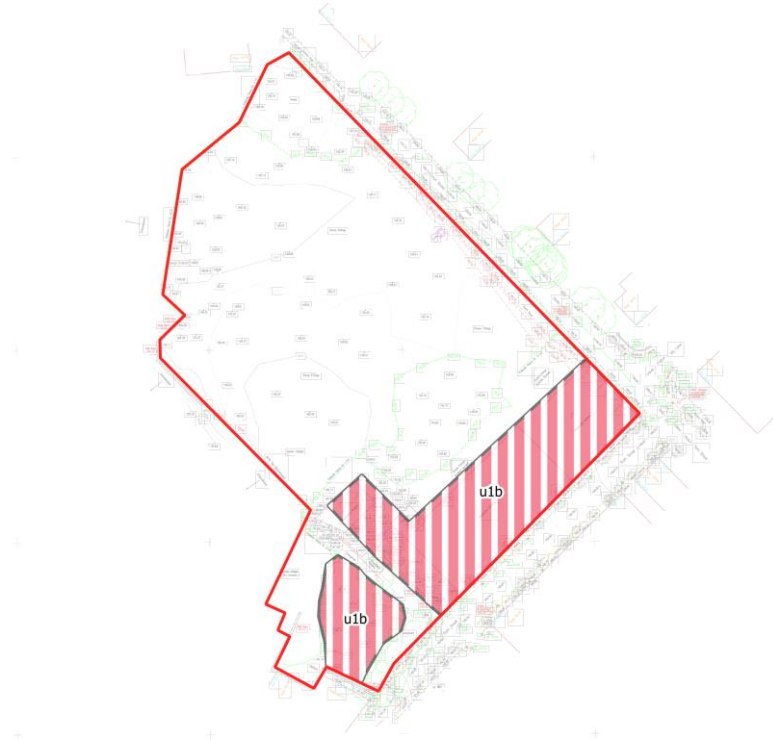


Figure 9b Typical structure and composition of this habitat



Defra Metric Condition Assessment Poor

39. No assessment required.

38. This area comprises buildings and tarmacadam hardstanding which are largely devoid of any vegetation. Where present, ruderal species such as, rosebay willowherb, white stonecrop and buddleia have colonised along with ivy.

DEFRA Metric (Baseline)³

40. 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.

Newsome Mills, Huddersfield									
A-1 Site Habitat Baseline									
Condense / Show Columns		Condense / Show Rows							
Main Menu		Instructions							
Habitats and areas				Habitat distinctiveness	Habitat condition	Ecological connectivity	Strategic significance	Suggested action to address habitat losses	Ecological baseline
Ref	Broad Habitat	Habitat type	Area (hectares)	Distinctiveness	Condition	Ecological connectivity	Strategic significance		Total habitat units
1	Urban	Urban - Vacant/derelict land/ bareground	0.75	Low	Poor	Low	Location ecologically desirable but not in local strategy	Same distinctiveness or better habitat required	1.65
2	Heathland and shrub	Heathland and shrub - Mixed scrub	0.08	Medium	Moderate	Medium	Location ecologically desirable but not in local strategy	Same broad habitat or a higher distinctiveness habitat required	0.77
3	Urban	Urban - Street Tree	0.03	Low	Moderate	Medium	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	0.13
4	Urban	Urban - Developed land; sealed surface	0.23	V.Low	N/A - Other	Medium	Area/compensation not in local strategy/ no local strategy	Compensation Not Required	0.00
5									
6									
7									
8									
Total site area ha			1.06					Total Site baseline	2.56

³ Our report provides an estimate of the Site's 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

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

41. There are 11 records of amphibians, relating to common toad, common frog, palmate newt, smooth newt and great crested newt (GCN). The three relating to GCN are located within the grounds of Kirklees College c.550m west and separated from Site by housing and roads. The other amphibian records relate to locations further afield.

Field Evidence

42. No waterbodies were found on Site.
43. Two are found on mapping for within a 500m radius, as shown in figure 3. These are found c.30m south being two large rectangular mill ponds, with vertical concrete sides.
44. The ponds offer low suitability for amphibian breeding and should any populations be present within, the ponds margins, adjacent housing and Ruth Street would create significant barriers to their movement to the Site.

Summary Evaluation

45. The Site offers low value habitat for amphibians. Whilst two ponds are found in close proximity, these are separated from Site by significant barriers to amphibian movement. The absence of significant amphibian populations being found on Site is reasonably concluded, as is the presence of the protected GCN.

Further Surveys

46. No further surveys or precautions are considered necessary.

Figure 10 View of off-Site mill ponds



Bats

Records

47. Eighty-eight records of bats have been returned, relating to common pipistrelle, soprano pipistrelle, noctule, Daubenton's, Whiskered, and indeterminate vesper bat species.
48. Two of the records concern the Site, detailing noctule and pipistrelle recorded during bat emergence surveys of the buildings in 2010. No roosts were identified during these surveys.
49. No other significant records are noted, with those in closest proximity referring to bats recorded in flight and any large or more noteworthy roosts found >500m away.

Field Evidence

Potential Roost sites

Buildings: The remains of five buildings are present, all have suffered either substantial, weather, vandal or fire damage. The buildings are identified in figure 11 with their suitability described in table 2 opposite.

Overall, the buildings offer a limited number of roosting opportunities, reduced significantly by their damaged nature. However, it is impossible to rule out the presence of roosting without further survey.

Trees: Of the trees found on Site, one (Tree 3 in Figure 7a) supported a potential roosting feature.

Table 2 Roosting suitability of buildings and trees

Building/ Tree	Building description	Features suited to roosting	Roosting suitability
1 Figure 12	Single storey, northern lights building heavily damaged by fire. Cavity stone walls remain on the southern and eastern elevation with breezeblock walls on the northern. Roof now comprises bare timber rafters and purlins supported by metal poles.	Occasional gaps into stone cavity walls and small gaps between timber rafters. All features likely to suffer from water ingress and draughts.	Low
2 Figure 13	Only three single storey exterior walls remain consisting of a mix of cavity stone, breezeblock, brick and metal sections.	Occasional gaps into damaged walls- all features likely to suffer from water ingress and draughts.	Low
3 Figure 14	Stone clocktower adjoined to Building 2 with stone sills and lintels around unglazed timber-framed windows.	From inspection, stonework is generally sealed. Likely occasional gaps around lintels and sills, with access into window frame cavity. Potentially features within its interior.	Low
4 Figure 15	Two-storey former mill office with cavity stone walls and the roof structure largely absent. Stone sills and lintels around windows.	Gaps into cavity wall and around lintels, although all features likely to suffer from water ingress and draughts.	Low
5 Figure 16	Single-storey, small stone gatehouse with roof structure largely absent. Stone sills and lintels around windows.	Gaps into cavity wall and around lintels, although all features likely to suffer from water ingress and draughts.	Low
Tree 3 Figure 17	Mature Sycamore	Rot hole on its south facing side.	Low

Figure 11 Buildings**Figure 12a** View of Building 1 from east**Figure 12b** View of Building 1 from west**Figure 12c** Gap between rafters and wall top**Figure 13a** View of Building 2 from west**Figure 12d** Gap into cavity wall on northern elevation**Figure 13b** Shallow gap into wall cavity

Figure 14a View of Building 3**Figure 14b** Window area which could support roosting feature**Figure 15a** View of Building 4 from east**Figure 15b** View of Building 4 from north**Figure 16** View of Building 5**Figure 17** Rot hole on Tree 3

Foraging and commuting habitat

50. The Site offers very limited foraging and commuting habitat for bats, dominated by cleared ground.

Summary Evaluation

51. The Site offers some limited potential for roosting across its buildings and trees.
52. The Site offers limited foraging and commuting habitat, with activity likely to relate to its interaction with off-Site woodland to the west.

Further Surveys

53. Further emergence / re-entry survey is recommended for all buildings to confirm the presence or likely absence of roosting bats.
54. Should Tree 3 be required for removal, further survey for roosting is recommended.
55. Bat activity surveys are not considered necessary.

Birds

Records

56. No significant bird records exist for the site or the development's sphere of influence.

Field Evidence

57. A small number of common bird species were noted during the survey, observed roosting within buildings and their surrounding scrub habitats.

Evaluation

58. 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

59. No further surveys are considered necessary to demonstrate current baseline in respect of birds.
60. Standard precautions apply in relation to clearance.

Badger

Records

61. No records of badger have been returned within a 1.9km radius.
62. The site does not fall within the area of 'increased probability' of badger activity.

Field Evidence

63. No field signs within the Site or just off-Site to the west were noted during the walkover survey however not all land was accessible due to dense vegetation.

Summary Evaluation

64. Whilst small amounts of land could not be thoroughly surveyed, given the lack of field evidence and records, it is thought unlikely that badgers are present in the area.
65. The Site and the adjacent woodland sits within a relatively isolated area, surrounded by housing and roads and it is therefore thought unlikely that if badgers are present locally, they would either go unrecorded or would be able to move into the area.

Further Surveys

66. Further surveys are not considered necessary.

Hedgehog

Records

67. Hedgehogs are not recorded within the search area, although are likely to be present.

Field Evidence

68. No evidence of hedgehogs was found on site.

Summary Evaluation

69. At its current state, the Site provides a small amount of habitat for this species, although they are likely to use the adjacent woodland. Measures to allow them to access gardens needs to be planned for.

Further Surveys

70. Presence assumed; no further surveys are considered necessary.

Reptiles

Records

71. Four historic records (1960's – 80's) of reptiles have been returned, all located c.1.5km from the Site.

Field Evidence

72. No field evidence was found.

Summary Evaluation

73. The Site's adjoining woodland forms a corridor north, linking to suitable reptile habitats of grassland and scrub. However, these areas are considered isolated, surrounded by development and given the lack of recent reptile records, it is considered unlikely that populations are present in the area.

74. Despite the site providing some apparently suitable terrestrial habitat and corridors to other areas, the lack of known reptile populations means the site is very unlikely to support this group.

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

Further Surveys

76. No further surveys or precautions are considered necessary.

Invasive Non-Native Species (INNS)

77. INNS are species listed on Schedule 9 of the Wildlife and Countryside Act (1981), for which it is an offence to cause or allow it to grow in the wild. No INNS were found⁴.

Survey constraints

78. This survey is highly constrained by the recent earthworks which may have obscured viable material. For this reason, this report should not be relied upon as definitive evidence of absence of INNS.
79. This site presents a high risk of supporting undetected INNS based on the following factors:
- Areas of site inaccessible to survey
 - Suboptimal survey season
 - Potential for recent earthworks or management which may have obscured viable material
 - Proximity to nearby potential sources of infection
 - Potential for tipping of material
80. Should further assurances be needed in relations to INNS you should commission a dedicated Invasive Weed Survey.

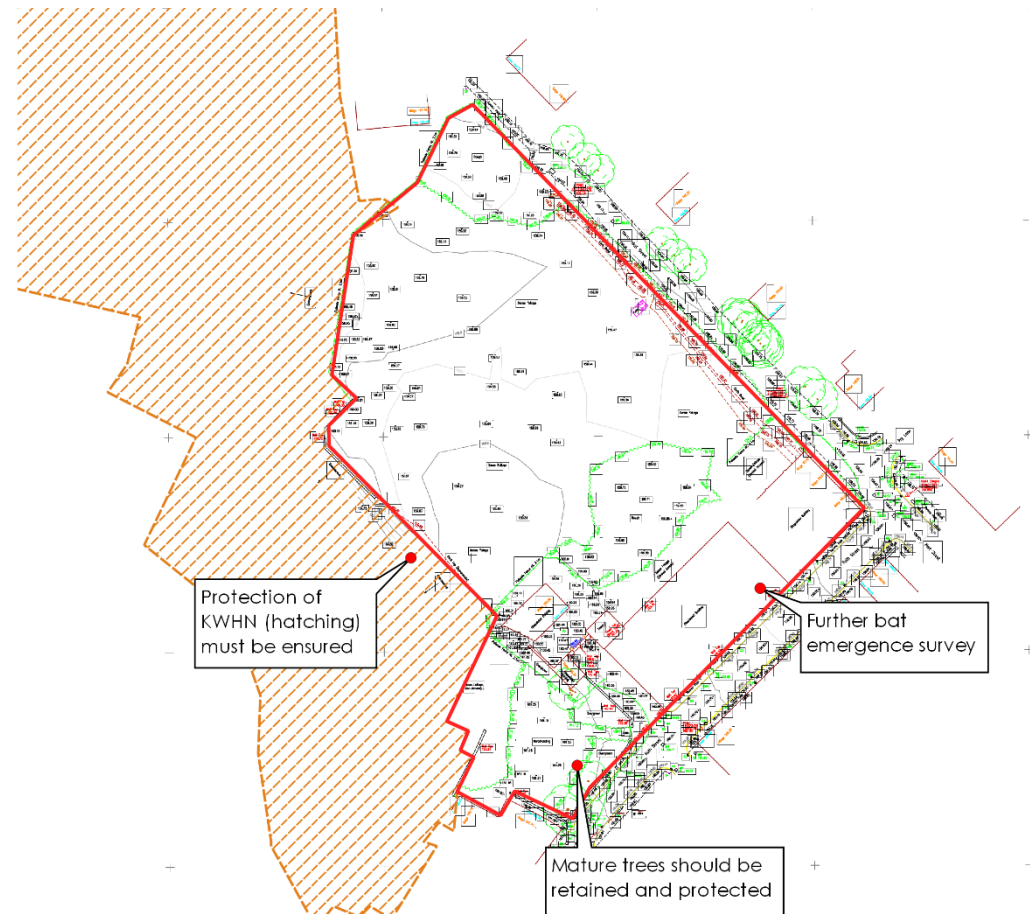
⁴ Whilst our ecologists are trained in the identification of invasive species this report is not a dedicated invasive species survey. Detectability of invasive plant species can be affected by several factors, and conclusive determination status, or extent, is not possible through preliminary survey 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

81. The principal ecological constraint relates to the proximity of the Kirklees Wildlife Habitat Network to the west of the Site. Measures to protect this from construction and operation should be in place. These would comprise of:
 - Screened tree protection fencing defining the Site boundary during construction;
 - Creation of a planted native species buffer along this side of the Site;
 - Ensuring a sensitive lighting strategy is maintained during and post development.
82. Further survey is recommended for roosting bats within the buildings and for Tree 3 if its removal is required.
83. Retention of the mature trees should be aimed for with any loss overcompensated for through native tree planting.

Figure 18 Constraints identifiable at the PEA stage*

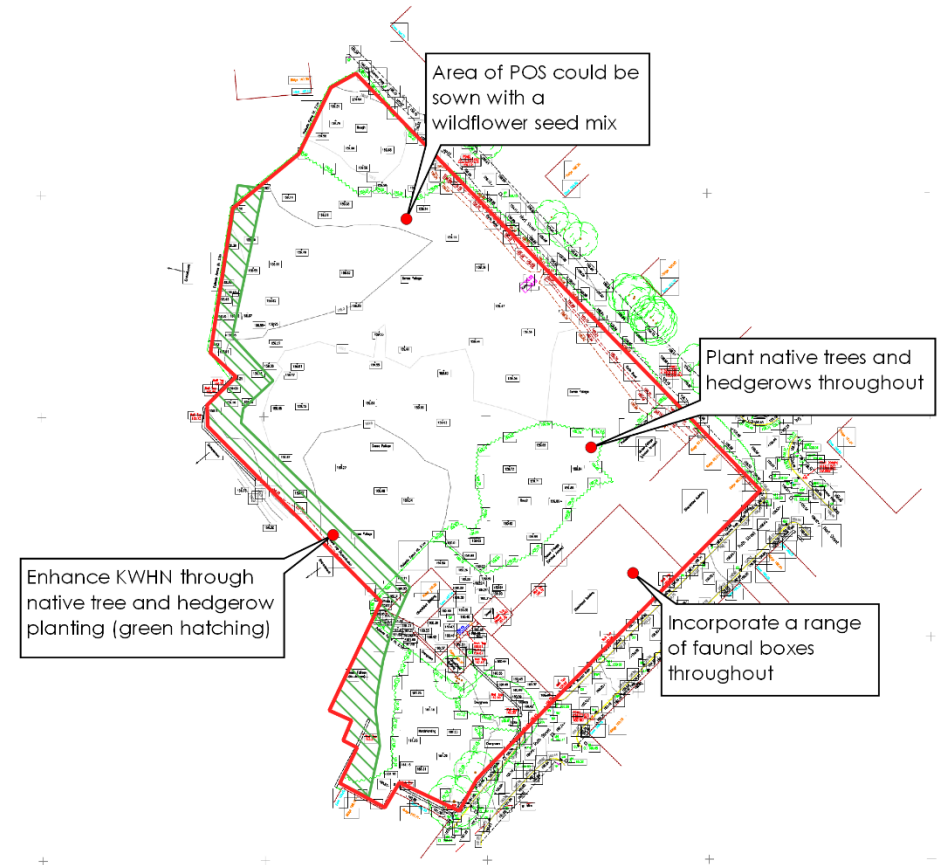


*further constraints may be identified by any additional surveys recommended in this or other reports.

Ecological Opportunities

84. The key ecological opportunity here would be to provide planting which can strengthen the corridor function of the adjacent KWHN. This would comprise of a band of native planting which compliments the adjacent woodland.
85. Areas of public open space could be made attractive to wildlife through sowing wildflower seed mixes instead of amenity grass, using native shrub planting and incorporating native trees and hedgerows throughout.
86. Installing roosting, nesting or hibernation features for fauna will also be beneficial.
87. Garden fences should be permeable so that hedgehogs can have access through the Site.

Figure 19 Ecological Opportunities



Conclusions and Recommendations

88. Further survey is recommended to support a planning submission, with additional information and output likely to be needed to fix a layout or help manage legal and financial risks.

Planning considerations		
Recommendation	Rationale	When
R1 Further survey	Further detailed bat survey will be required, to confirm presence or likely absence of roosting and collect an accurate baseline for the Site. The presence of bats on Site could represent a constraint to development and could have a bearing on the layout. A Natural England Mitigation Licence may be required prior to works commencing, in order to derogate offences that might otherwise be committed.	May – August 2020
R2 Produce a layout which minimises loss of biodiversity	The site has been assessed as having an Ecological Baseline score of 2.56 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) to include Calculated final biodiversity impact score.	Using DEFRA metric to quantify net gain/loss of biodiversity.	Prior to submission.

* Due to the increasing adoption of biodiversity net gain Brooks Ecological has taken the step of providing our own in-house landscape design team, we are in a position to help you produce any of the landscape plans needed for submission. Please contact our team for further details.

Planning considerations		
Recommendation	Rationale	When
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.	Suitable for planning condition.


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 or buildings will need to be undertaken outside of the breeding bird season which is 1st March – 31st August inclusive. Any clearance required during the breeding bird season should be preceded by a nesting bird survey to ensure that the law is not contravened through the destruction of nests and that any active nests are identified and adequately protected during the construction phase of the development. Nesting management can be set out in the CEMP if one is produced.	Pre- and during -clearance

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Appendix 1 Habitats and Ecological Features



-  h3h - Mixed scrub
-  351 - Vacant derelict ground bare ground
-  u1b - Developed land, sealed surface
-  1170 Street tree

Project: Newsome Mills, Huddersfield
Title: Extended Phase 1 Habitat Plan

Drawing Number: D-4489-01.1
Date: February 2020
Revision: -



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Appendix 2 List of species recorded

Ash	<i>Fraxinus excelsior</i>
Bent	<i>Agrostis</i> sp.
Birch	<i>Betula</i> sp.
Bramble	<i>Rubus fruticosus</i>
Broad leaved dock	<i>Rumex obtusifolius</i>
Broadleaved willowherb	<i>Epilobium montanum</i>
Butterfly bush/buddleia	<i>Buddleia davidii</i>
Cock's-foot	<i>Dactylis glomerata</i>
Common feather moss	<i>Kindbergia praelonga</i>
Common ivy	<i>Hedera helix</i>
Common lime	<i>Tilia x europaea</i>
Common moss	<i>Rhytidiadelphus squarrosus</i>
Common mouse-ear	<i>Cerastium fontanum</i>
Common ragwort	<i>Senecio jacobaea</i>
Common sorrel	<i>Rumex acetosa</i>
Creeping buttercup	<i>Ranunculus repens</i>
Dandelion	<i>Taraxacum officinale</i> agg.
Elder	<i>Sambucus nigra</i>
Goat willow	<i>Salix caprea</i>
Greater willowherb	<i>Epilobium hirsutum</i>
Hart's-tongue fern	<i>Asplenium scolopendrium</i>
Hazel	<i>Corylus avellana</i>
Holly	<i>Ilex aquifolium</i>
Male fern	<i>Dryopteris filix-mas</i>
Nettle	<i>Urtica dioica</i>
Oak	<i>Quercus</i> sp.
Perennial rye grass	<i>Lolium perenne</i>
Perennial sow thistle	<i>Sonchus arvensis</i>
Red clover	<i>Trifolium pratense</i>
Rosebay willowherb	<i>Chamerion angustifolium</i>
Snowberry	<i>Symphoricarpos albus</i>
Spear thistle	<i>Cirsium vulgare</i>
Sycamore	<i>Acer pseudoplatanus</i>
Thale cress	<i>Arabidopsis thaliana</i>
White clover	<i>Trifolium repens</i>
White stonecrop	<i>Sedum album</i>
Willow	<i>Salix</i> sp.
Wych elm	<i>Ulmus glabra</i>

Appendix 3 Explanatory Notes and Resources Used

Site Context

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

Designated Sites

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

Functional linkage with off-Site habitats

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

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

Method

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

Faunal Appraisal

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

Records of notable species supplied from a 2km area of search by 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
Wolverine	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

Bats

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

Bat Roosting Suitability of Buildings and Trees

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

Evaluation

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

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

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

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

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

Appendix 4 Bat Activity Survey Rationale

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

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

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

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

'The Guidelines do not aim to either override or replace knowledge and experience. It is accepted that departures from the guidelines (e.g. either decreasing or increasing the number of surveys carried out or using alternative methods) are often appropriate. However, in this scenario an ecologist should provide documentary evidence of (a) their expertise in making this judgement and (b) the ecological rationale behind the judgement.'

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

Bat activity is easy to predict at this Site, given the very simple habitats on Site and the adjacent high value woodland. Suitable mitigation can be designed without the need for detailed survey.

Appendix 5 Wildlife Legislation, Policy and Guidance

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

Legislation

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

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

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

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

The Conservation of Habitats and Species Regulations (2010)

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

The Wildlife and Countryside Act (1981) as amended

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

The Countryside and Rights of Way Act 2000 (CRoW)

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

Natural Environment and Rural Communities Act 2006 (NERC)

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

Hedgerows Regulations (1997)

Define and provide protection for Important Hedgerows.

Protection of Badgers Act (1992)

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

Protected Sites

Statutory EU / International Protected Sites

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

Statutory UK Protected Sites

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

Locally Protected Sites

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

Protected Species

European Protected Species

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

UK Protected Species

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

Invasive species

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

Planning Policy / Guidance

The National Planning Policy Framework (NPPF):

The National Planning Policy Framework was updated in July 2018. 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.