Croft Street, Birkenshaw

Preliminary Ecological Appraisal Report

Report Ref. ER-7290-01

28/02/2024

Riva Homes

Report reference		**ER-7290-01 – Preliminary Ecological Appraisal Report**
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Amended: 09/01/2025	**Author:** SW	Updated to latest landscape plan
Report duration		In accordance with CIEEM (2019), unless otherwise stated the findings of this report remain valid for a period of 18 months. After this period advice should be sought on the scope of any updating work required.

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Summary

This report is produced to inform Riva Homes of potential ecological constraints associated with their proposed development site and the need for further reporting or output to support a planning application.

This report is based on a desk study of designated wildlife sites and records of protected or notable species, and an extended Phase 1 Habitat Survey carried out in February 2024.

Key Findings

The Site is a small section of unmanaged land, supporting a mixture of woodland and scrub which are heavily disturbed, with Croft Street running through part of the Site.

Further surveys are recommended to appraise bat activity, and a pre-works check is also recommended.

Biodiversity Net Gain

Details on measurement of the Site's biodiversity and the implications of complying with the requirement to provide a net gain for biodiversity are provided in our separate report ER-7290-02.

Introduction

1. Brooks Ecological Ltd was commissioned by Riva Homes to carry out a Preliminary Ecological Appraisal (PEA) of land at Croft Street, Birkenshaw, grid ref. SE 2038 2845.
2. This report is produced with reference to British Standard BS:42020 'Biodiversity Code of Practice for Planning and Development' and the CIEEM (2017) Guidelines for Preliminary Ecological Appraisal.

Purpose of a PEA

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

Proposals/Reason for PEA

6. The PEA has been commissioned to inform proposals to develop this small Site for housing.

The Site

7. The application-Site 'the Site' comprises a small plot of unmanaged land along Croft Street, between Bradford Road and Old Lane, close to the centre of Birkenshaw.

Figure 1 The Site (red line boundary).

Desk Study

Landscape

8. The Site is located within the town of Birkenshaw and is surrounded on all sides by residential land.
9. Developed land extends further to the north and south of the Site, with farmland found to the west and east of the Site.
10. The Site overlies freely draining, lime-rich loamy soils.

Wildlife Corridors

11. The developed areas of Birkenshaw on all sides of the Site limit its connectivity to the wider landscape.
12. The farmland beyond the town edges has scattered features providing corridors for wildlife to move through the landscape.

Figure 2 Analysis of wildlife corridors visible on mapping in relation to the Site.

Designations

13. 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.

Statutory Designations

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

Table 1 Statutory Designated Sites.

Site Name	Distance from Site	Designation	Summary Interest
Tong Moor	Approximately 775m north	Local Nature Reserve (LNR)	Unimproved acid grassland.
Oakwell Park	Approximately 1.5km southeast	LNR	Various trees, plants and fungi. Also insects, butterflies and small mammals.

15. Direct and indirect impacts on the two LNRs listed above, resulting from the Site's development, are unlikely due to the Site's separation and distance.

SSSI Impact Risk Zones (IRZs)

16. The Site does not lie within the IRZ for any Site of Special Scientific Interest (SSSI).

Non-Statutory Designations

17. There are four Local Wildlife Sites (LWSs) in the search area. The closest of these is Tong Moor, which overlaps with the Local Nature Reserve.
18. Direct and indirect impacts on all sites because of this development are unlikely due to the Site's separation and distance.

Nature Improvement Area

19. The Site is not within any Nature Improvement Area.

Wildlife Habitat Network

20. The Site is not within any mapped Wildlife Habitat Network.

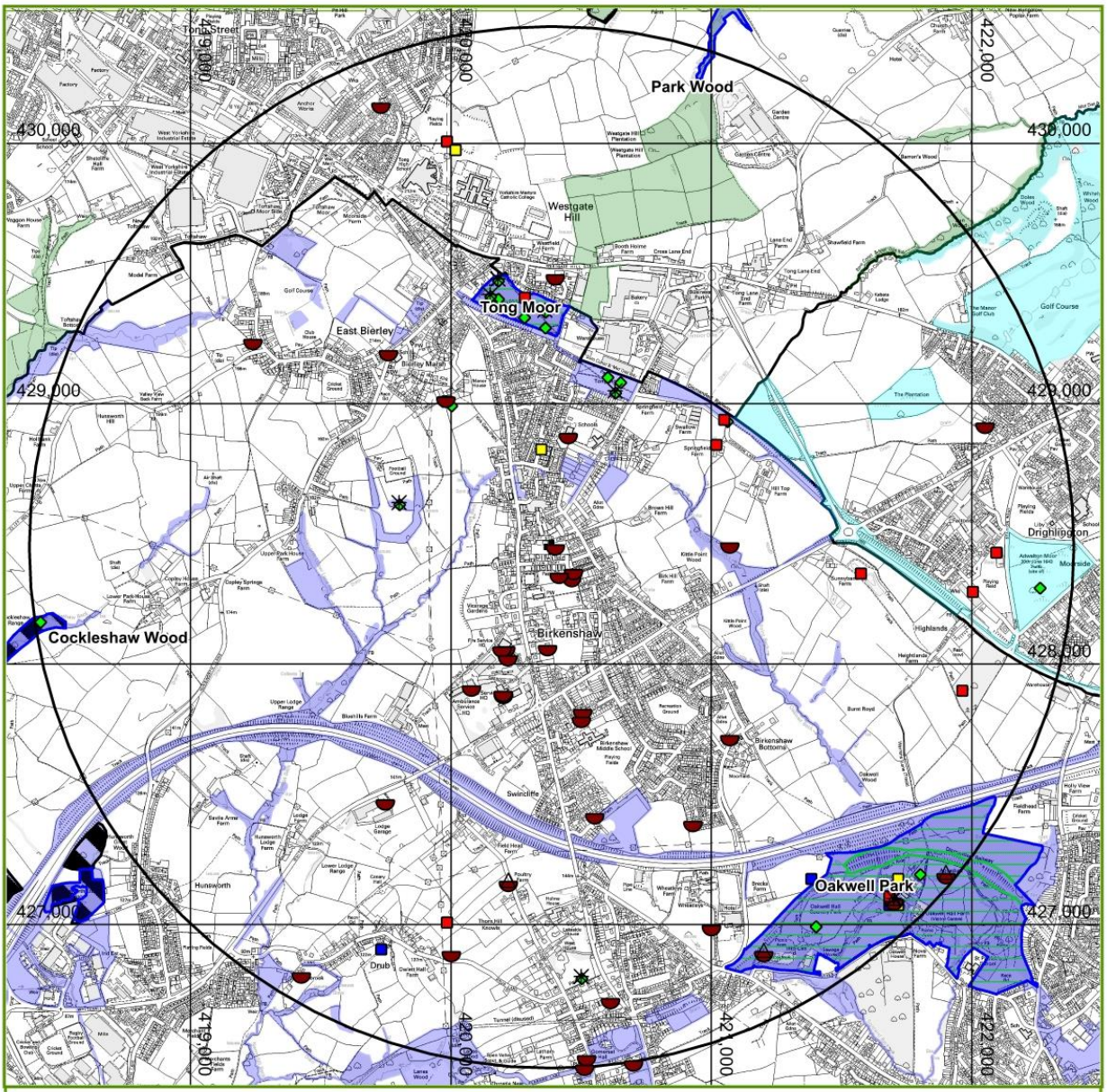
Granted EPSM Licences

21. There are two granted European Protected Species Mitigation (EPSM) licences shown within 1km of the Site.
22. Both relate to bats, permitting the destruction of the resting place of common pipistrelles, with one licence dating from 2012 (930m south of the Site) and one from 2017 (430m south of the Site).

Mapped Ancient Woodland

23. No ancient woodland is present within the Site boundary, or within 15m of the Site.

Figure 3 Records of designated sites and notable species within 2km of the Site; West Yorkshire Ecology.



Legend

- Site Centroid
- 2km Search Radius
- Ancient Semi-Natural Woodland
- *Local Nature Reserve
- Local Wildlife Site
- Kirklees Wildlife Habitat Network
- Bradford Wildlife Habitat Network
- Leeds Wildlife Habitat Network

Notable Species

- Amphibian
- Bird
- Plant and/or lower plant
- Invertebrate
- Terrestrial mammal

Invasive Non-Native Species

- Animal
- Plant

*Public sector information from Natural England licensed under the Open Government Licence v1.0

0 1,000 meters

N W E S

West Yorkshire Ecology

Figure 1: Species and Designated Sites

West Yorkshire Joint Services, Nepshaw Lane South, Morley, Leeds, LS27 0QP. Ph: 0113 535 0158. Email: ecology@wyjs.org.uk.
Licence No.: WMDC1000019574. © WYES

Survey

24. The survey was carried out during February 2024[1] and followed the principles of Extended Phase 1 Habitat Survey methodology (JNCC, 2010).

25. Although out of the main growth season, the nature of habitats present here and the expertise and training of the surveyor meant that it was still possible to confidently classify the type and condition of habitats present on this Site.

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

27. Whilst the majority of the Site was accessible, at least 20% 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

28. The Site's habitats are described in order on the following pages. In line with the requirement to provide information on Biodiversity Net Gain (BNG), habitats are named in accordance with the UK Habitats classification system. We have used the UK Habitats v2.01 guidance in identifying habitats. Habitat descriptions are divided into the 'distinctiveness' categories used in the calculations presented in the Biodiversity Gain Assessment, with more weight being afforded the more distinctive/important habitats.

29. Generally, the following apply to each tier of distinctiveness, although some authorities might highlight some lower distinctiveness habitats as having a higher importance locally. Where relevant we have highlighted these.

Very Low Distinctiveness Habitats

30. Habitats of little or no habitat value, i.e., lacking any significant native vegetation, but could still provide supporting habitat for protected or notable fauna such as birds or bats. In the context of BNG, their areas are included in calculations, but mitigation or compensation is not required.

Low Distinctiveness Habitats

31. Habitats which are ubiquitous, often which have been created or modified intentionally. They tend to lack diversity of species and structure. They are unlikely to support notable flora but could still provide supporting habitat for protected or notable fauna. In the context of BNG, they are included in calculations, but compensation/mitigation needs only to provide habitat of similar or higher distinctiveness.

Medium Distinctiveness Habitats

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

High Distinctiveness Habitats

33. Habitats which are more natural and contain more important assemblages of plants and potentially species which are rare in their own right. They will provide good habitat for fauna. These habitats are likely to be targeted as conservation priorities and will be the subject of additional policy guidance or legislation. In the context of BNG, whilst mitigation or compensation for loss or damage is possible, provision of more of the same type of habitat would be required, which (with a few exceptions) is likely to be difficult.

Very High Distinctiveness Habitats

34. These are the UK's rarest/best habitats. They will be present in very particular locations and a range of rare or important plant and animal species will depend on the particular conditions they provide. These habitats will be the subject of restrictive policy guidance or legislation. Whilst the BNG metric does not preclude mitigation or compensation in respect of these habitats, creation of the same habitat type would be required, and this would range between very difficult/expensive and impossible.

Condition Assessment

35. Our condition assessment for each habitat described references where available the criteria set out in DEFRA (2023) Statutory Biodiversity Metric Condition Assessments. A completed version of this spreadsheet is provided digitally with the Biodiversity Gain Report which accompanies this report.

[1] This Report has been prepared during February 2024 following a visit to the Site in February 2024, 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 of Low/Very Low Distinctiveness

Figure 4 Approximate location and extent of these habitats.

Table 2 Summary – Habitats of Low/Very Low Distinctiveness.

UK Habitats	Label Ref	Summary Description
Developed land; sealed surface	-	A small section of tarmacadam road and pavement at the eastern end of the Site, where it joins Old Lane.
Artificial unvegetated, unsealed surface	-	Croft Street itself runs through the Site and is not covered by tarmacadam. A mixture of mud and compacted gravel is present, with the surface kept clear of vegetation as a result of traffic.
Modified grassland	MG1	A lawn area maintained alongside the social club. Perennial ryegrass is the dominant species, with an almost homogeneous sward across the area. Daisy, dandelion and ribwort plantain are scattered amongst the main sward.
	MG2	A small unmanaged verge to Croft Street at the eastern end of the Site. Fewer than nine species per m^2 are found. Grasses of Yorkshire fog and perennial ryegrass are present, but in lower abundance compared to MG1. Broad-leaved dock, creeping buttercup, common nettle and dandelion are present, as well as some bare ground where the soil is thin.

Habitats of Low/Very Low Distinctiveness

Figure 5 Developed land; sealed surface at the edge of the Site.

Figure 6 Artificial unvegetated, unsealed surface of Croft Street.

Figure 7 Modified grassland MG1.

Figure 8 Modified grassland MG2.

Habitats of Medium Distinctiveness – Scrub

Figure 9 Approximate location and extent of these habitats.

Table 3 Summary of Medium Distinctiveness habitats – scrub.

UK Habitats	Label Ref	Summary Description
Bramble scrub	BS1	A large open area of bramble dominated land in the southwest of the Site. Evidence of recent cutting was noted during the survey, which allowed access through the bramble stands. Ivy covers much of the ground, alongside common species such as cleavers, creeping thistle, rosebay willowherb, common nettle, broad-leaved dock and creeping buttercup. Occasional specimens of lords-and-ladies and wood avens are present, mainly in the north of this area.
	BS2	A smaller area of scrub, similar to BS1 with bramble the dominant species and ivy covering much of the ground. Common forbs are again present, but in lower numbers as less of this area of scrub has been recently cut.
	BS3	Another area similar to BS1 and BS2, in a more open area amongst woodland. Again, bramble is dominant over an ivy-covered ground layer, with these competitive species limiting the presence of other species. Cleavers, common nettle and some Yorkshire fog is present at lower density.
	BS4	Similar to BS3, an open area of bramble-dominated land alongside woodland. A limited ground flora is again present.
	BS5	A small area of bramble scrub at the eastern end of the Site. Yorkshire fog is present amongst the bramble, as well as ivy, creeping buttercup, cow parsley, wood avens and common nettle.
Mixed scrub	MS1	An area including a former privet hedgerow, which is now outgrown due to lack of management. Other woody species are present including goat willow, hawthorn, elder, cherry laurel, wild cherry, red flowering currant, and young ash and sycamore trees. Bramble is present in some areas but is not the dominant species as in other parts of the Site. Ground flora is typical of the Site, with ivy covering large areas and outcompeting other species.

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Habitats of Medium Distinctiveness – Scrub

Figure 10 Bramble scrub BS1.

Figure 11 Bramble scrub BS2.

Figure 12 Bramble scrub BS3.

Figure 13 Bramble scrub BS4.

Figure 14 Bramble scrub BS5.

Figure 15 Mixed scrub MS1.

Habitats of Medium Distinctiveness – Woodland

Figure 16 Approximate location and extent of this habitat.

Table 4 Summary of Medium Distinctiveness habitats – woodland.

UK Habitats	Label Ref	Summary Description
Other woodland; broadleaved	W1	An area of woodland that extends off-Site to the north, and borders Croft Street on-Site. Trees here include sycamore, ash and goat willow, with an understorey of scattered holly, elder, cherry laurel and bramble. The ground flora is typical of the Site, with ground elder, dog rose, mugwort and red fescue noted in this area.
	W2	A larger area of woodland, which does have some gaps between the trees, but overall canopy cover greater than 25%. Tree species are limited, with sycamore, ash, poplar and goat willow recorded. Several informal paths are present through the woodland and the compacted ground here is bare. As with other areas on-Site, bramble and ivy cover much of the ground and outcompete other species, creating a very limited ground flora of species typical of the Site.

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Habitats of Medium Distinctiveness – Woodland

Figure 17 Woodland W1.

Figure 18 Woodland W2.

Individual Trees

Figure 19 Approximate location and extent of this habitat.

Table 5 Summary – individual trees.

UK Habitats	Label Ref	Summary Description
Individual tree	T1	A group of 11 goat willows, growing over bramble scrub. Classed as small trees.
	T2	A group of three sycamores and one elder growing over bramble scrub. Classed as small trees.
	T3	A single sycamore growing over bramble scrub. Classed as a small tree.
	T4	A group of three goat willow and two ash trees growing over mixed scrub. Classed as small trees.
	T5	Two ash trees growing over bramble scrub. Classed as small trees.

Habitats of Medium Distinctiveness – Individual Trees

Figure 20 Group of willows T1.

Figure 21 Sycamore and elders T2.

Figure 22 Single sycamore (top-left) T3.

Figure 23 Ash and goat willow T4.

Figure 24 Ash trees T5.

Hedgerows

Figure 25 Approximate location and extent of this habitat.

Table 6 Summary – hedgerow habitat types.

UK Habitats	Label Ref	Summary Description
Line of trees	-	A single line of trees is present along the northwestern edge of the Site, bound by a stone wall on the northern side. The feature is made up of small sycamore and ash trees, with a cherry laurel at the eastern end of the line. The trees are growing over bramble scrub to the south, with the artificial unvegetated, unsealed surface of Croft Street to the north.

Figure 26 Line of sycamore trees.

Faunal Appraisal

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

Amphibians

Desk evidence

37. Two records of great crested newt (GCN) have been returned for the search area, both of which are located to the south of the Site, over 1.5km away and separated from the Site by the M62 motorway.

38. Records of common frog, common toad and smooth newt have also been returned, with all these also over 1.5 km away from the Site.

Field Evidence

39. There are no ponds within the Site boundary and none are visible on mapping within 500m of the Site.

40. The Site offers suitable terrestrial habitat for amphibians, with scrub and woodland.

Summary Evaluation

41. The risk of important or protected amphibians being present on-Site is considered to be very low due to the absence of suitable breeding habitat close to the Site.

Further Surveys and Recommendations

42. No further surveys or precautions are considered necessary.

Bats

Desk evidence

43. A total of 45 records have been returned for bats within the search area, with records of common pipistrelle, soprano pipistrelle, Daubenton's, Leisler's and noctule, as well indeterminate pipistrelle and bat species. Seventeen of these records relate to roosts, with the closest being a possible roost of common pipistrelle, approximately 60m south of the Site, dating from 2023.

Field Evidence (Roosting)

44. There are no buildings on-Site. A single exposed retaining wall is present close to the centre of the Site, with exposed stonework. Some gaps are present within the wall, but close inspection found these to be shallow and not suitable for use by roosting bats.

45. A large number of trees are present on-Site. The majority are relatively young and of a small size, with no potential roost features (PRFs) found.

46. Some larger trees are present within the woodland on-Site, but despite their size, they were found to be in good health with no PRFs noted.

47. Several trees are covered by ivy. For this feature to provide an environment suitable for occupation by roosting bats, the ivy stems should be a minimum of 50mm in diameter and have sections to have formed pockets. The ivy growing over trees present on-Site was not of a size that it is likely to be used by roosting bats.

Field Evidence (foraging and commuting)

48. Although the Site presents a relatively small parcel of land, it offers suitable habitat for foraging bats, with a mosaic of woodland and scrub edges. The Site has very loose links to the local network of habitat through connections to gardens and woodland to the north. Bats may use the Site to move through the village of Birkenshaw to access habitat to the east or west.

Summary Evaluation

49. No potential roost features were noted during the Site walkover.

50. The habitats present on-Site may be of value to foraging and commuting bats.

Further Surveys and Recommendations

51. Seasonal activity surveys are recommended to establish how bats currently use the Site.

Bat Roost Suitability Assessment

View of retaining wall with negligible bat roost potential.

Example of young trees on-Site with negligible bat roost potential.

Example of larger trees with negligible bat roost potential.

Example of small ivy stems growing over trees.

Birds

Desk Evidence

52. A number of bird records have been returned for the search area, with a mix of urban and farmland species included.

Field Evidence

53. The habitats present on-Site offer nesting opportunities for a mix of species that utilise scrub and trees.

54. A number of bird species were noted during the survey including bullfinch, blue tit, great tit, robin, blackbird and house sparrow.

Summary Evaluation

55. Based on its size and habitats the Site will not be important to local bird populations.

Further Surveys and Recommendations

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

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

Hedgehogs (NERC Act 2006/Local BAP)

Desk evidence

64. Hedgehogs are recorded within the search area.

Field Evidence

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

Summary Evaluation

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

Further Surveys and Recommendations

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

Reptiles

Desk evidence

68. No records of reptiles have been returned for the search area.

Field Evidence

69. The Site provides some small areas of marginal basking and cover habitat.

70. No field evidence was found.

Summary Evaluation

71. Small scrub margins and woodland edges offer low value habitat for reptiles, although the majority of the Site is of very low value to this group.

72. Reptiles are assessed as likely absent from the Site.

Further Surveys and Recommendations

73. No further surveys or precautions are considered necessary.

Invasive Non-Native Species (INNS)

74. 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.

75. A small area with a number of Japanese knotweed stands was noted in the south of the Site, with cotoneaster noted along the northern boundary wall during the survey[2].

Survey constraints

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

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

- Areas of site inaccessible to survey
- Potential for tipping of material

78. Should further assurances be needed in relations to INNS, a dedicated Invasive Weed Survey should be commissioned.

Figure 27 Japanese knotweed in the south of the Site.

Figure 28 Approximate location of INNS on-Site.

[2] Whilst our ecologists are trained in the identification of invasive species, this report is not a dedicated invasive species survey. Detectability of invasive plant species can be affected by several factors, and conclusive determination status, or extent, is not possible through preliminary survey alone. As the presence of invasive species can generate significant costs to development, the client may wish to instruct a dedicated invasive species survey prior to entering into contracts.

Ecological Constraints

Habitat Value

79. The usual approach to development is to minimise any net loss of biodiversity towards a gain in biodiversity value where this is possible on-Site. Our separate report on Biodiversity Gain sets out the position of the Site in terms of measured biodiversity.

80. Irrespective of the Biodiversity Gain process, development should still seek to retain what is best about the Site.

81. The plan opposite shows the Site in the context of mapped habitat distinctiveness with the aim of informing the design of any layout. It shows that there are no targets of higher distinctiveness or irreplaceable habitat which would need to be avoided by the proposals and that the Site is relatively uniform in terms of potential impact.

82. The woodland, scattered trees and mixed scrub on-Site present a constraint to development and the loss of these habitats should be kept to a minimum as compensation will be required for any loss.

83. The other habitats on-Site do not impose any particular design constraints. Loss of habitat of this nature are not of the order which (outside of Biodiversity Net Gain) would require specific mitigation or compensation as they are common locally.

84. In terms of structure and connectivity, the habitats on-Site will contribute to the local network. Areas of habitat could be retained as part of the proposals, particularly around the Site edges where there are direct links to off-Site habitats.

Faunal constraints

85. Further survey is recommended for bat activity.

86. The Site provides good habitat for common nesting birds. It is recommended that any clearance work is undertaken outside of the nesting bird season (March to August inclusive) to avoid disturbance. If clearance is required during the nesting season, any areas should be checked by a suitably qualified ecologist to determine if nests are present prior to works commencing.

Figure 29 Distinctiveness of habitat.

Ecological Opportunities

87. Ecological opportunities at the Site relate to:
    - Retained areas of woodland and scrub could be enhanced through planting and better management to improve their condition, diversity and structure.
    - New areas of amenity grassland could be sown with a native seed mix containing a higher proportion of wildflowers.
    - New street trees should be native species.
    - Installing roosting or nesting features on new buildings.
88. A Biodiversity Management Plan would be useful in defining these enhancements and can be secured by standard condition.

Figure 30 Ecological Opportunities.

Conclusions and Recommendations

Planning considerations		
Recommendation	**Rationale**	**When**
R1 Additional Surveys		
R1.1 Fauna	Seasonal bat activity surveys.	Single visit each in spring (Apr.-May), summer (Jun.-Aug.) and autumn (Sep.-Oct.)
R2 Produce a layout which minimises loss of biodiversity	Engage with the Constraints and Opportunities set out above, involve your ecologist in designs at an early stage. The proposals will need to consider the NPPF hierarchy of Avoid–Mitigate–Compensate in minimising any loss of biodiversity. Biodiversity Net Gain policy mandates a minimum 10% Net Gain in Biodiversity Units, and the LPA may request additional gains. Your layout may need to change to accommodate your findings from R1 surveys.	During the design process
R3 Design	Make sure your design team follows ecological advice to and make sure there are no design conflicts.	During the design process
R4 Biodiversity Net Gain (BNG)	Carry out a BNG Assessment using the Statutory Biodiversity Metric Calculation Tool and accompanying Condition sheets produced by Defra.	During the design process
R5 Ecological Impact Assessment (EcIA)	This report summarises all survey findings and assesses the impacts of the scheme in respect of these. Due to the scale of this development and the potential issues at hand it would seem an unlikely requirement but may be requested by the LPA.	Prior to submission, after a fixed design is agreed and all key additional surveys are completed
R6 Produce a Biodiversity Management Plan	To specify in detail how the development will cater for biodiversity on-Site and to show how habitats incorporated will be managed.	Delivery report Suitable for planning condition
R7 Produce a CEMP (Biodiversity)	To show how the Site will be built without affecting surrounding habitats and minimising risk of affecting protected or notable fauna. The CEMP will detail the following protection measures: • Location of Biodiversity Protection zones or fences • Pre- or during-clearance ecology checks for protected species, at this Site • Protected/notable species method statements where licensing is not needed • Nesting bird management	Delivery report Suitable for planning condition
R8 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

Appendix 2 List of species recorded

Ash	*Fraxinus excelsior*
Bramble	*Rubus fruticosus agg.*
Broad-leaved dock	*Rumex obtusifolius*
Cherry laurel	*Prunus laurocerasus*
Cleavers	*Galium aparine*
Common nettle	*Urtica dioica*
Cow parsley	*Anthriscus sylvestris*
Creeping buttercup	*Ranunculus repens*
Creeping thistle	*Cirsium arvense*
Lords-and-ladies	*Arum maculatum*
Dandelion	*Taraxacum officinale* agg.
Dog rose	*Rosa canina*
Elder	*Sambucus nigra*
Goat willow	*Salix caprea*
Ground elder	*Aegopodium podagraria*
Hawthorn	*Crataegus monogyna*
Himalayan honeysuckle	*Leycesteria formosa*
Holly	*Ilex aquifolium*
Horse chestnut	*Aesculus hippocastanum*
Ivy	*Hedera helix*
Japanese knotweed	*Reynoutria japonica*
Mugwort	*Artemisia vulgaris*
Perennial ryegrass	*Lolium perenne*
Poplar	*Populus* sp.
Garden privet	*Ligustrum ovalifolium*
Red fescue	*Festuca rubra*
Red flowering currant	*Ribes sanguineum*
Rosebay willowherb	*Chamaenerion angustifolium*
Sycamore	*Acer pseudoplatanus*
Wild cherry	*Prunus avium*
Wood avens	*Geum urbanum*
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 [SSSIs]) 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 Service 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 Action Plan'.

Species/group	Habitat
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
Water vole	Upland flushes
White clawed crayfish	Lowland heathland
	Upland oak woodland
	Lowland deciduous and other woodlands
	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 (2023).

Bat Roosting Suitability of Buildings

Suitability	Criteria
None	No habitat features on-Site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).
Negligible	No obvious habitat features on-Site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation-Site, but could be used by individual hibernating bats).
Moderate	A structure with one or more potential roost sites that could be used by bats 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, such as maternity and hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure 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, protection, conditions and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation-Site.

Bat Roosting Suitability of Trees

Suitability	Criteria
None	Either no PRFs in the tree, or highly unlikely to be any.
FAR	Further assessment required to establish if PRFs are present within the tree.
PRF	A tree with at least one PRF present.

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 2023) 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, whilst small, does contain potential habitat features for bats, with woodland and scrub edges. As a result of the presence of these habitats, seasonal activity surveys are recommended to establish how bats currently make use of the Site.

This assessment was made by David Lovett MBiolSci (Hons) ACIEEM. David has 10 years' experience of scoping and delivering bat surveys and has carried out many activity surveys.

Appendix 5 Wildlife Legislation, Policy and Guidance

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

Legislation

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

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

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

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

The Conservation of Habitats and Species Regulations (2010)

This transposes the EC Habitats Directive 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 (*Reynoutria japonica*), and giant hogweed *(Heracleum mantegazzianum*).

Planning Policy/Guidance

The National Planning Policy Framework (NPPF)

The National Planning Policy Framework was updated in July 2021. The most relevant paragraphs from the NPPF are set out below.

The approach to assessing the natural environment is now embedded within the definition of what 'sustainable development' is and this falls under one of three objectives of the planning system – the 'environmental objective' applying in this case. Paragraph 8c (P8c) of the NPPF states that sustainable development should "protect and enhance our natural, built and historic environment", including "improving biodiversity". P10 sets out the Framework's presumption in favour of sustainable development.

Section 11 of the NPPF details making effective use of land. The Framework states that planning policies and decisions should "take opportunities to achieve net environmental gains – such as developments that would enable new habitat creation" and should "recognise that some undeveloped land can perform many functions, such as for wildlife" (P120).

Section 15 details conserving and enhancing the natural environment; policies and decisions should be "protecting and enhancing valued landscape [and] sites of biodiversity […] value", "recognise the intrinsic character and beauty of the countryside" and contribute to conserving and enhancing the natural environment and reducing pollution (P174). Allocations of land for development should, "allocate land with the least environmental or amenity value, where consistent with other policies in this Framework" and "take a strategic approach to maintaining and enhancing networks of habitats" (P175).

The Framework sets out ways to minimise the impacts on biodiversity through plans which "identify, map and safeguard components of local wildlife rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity" and promote the "conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity" (P179).

It is made clear in P180 that local planning authorities should apply a set of principles when determining planning applications. Planning permission should be refused "if significant harm to biodiversity resulting from development cannot be avoided […], adequately mitigated, or, as a last resort, compensated for". Development should not normally be permitted where an adverse effect on a SSSI is likely, and "opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity".

UK Biodiversity Indicators 2023; update to Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services

The UK Biodiversity Indicators 2023 provide updates to the indicators set out in Biodiversity 2020 including new species abundance targets as set out in the Environment Act 2021. Biodiversity 2020 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.