

An architectural rendering of a modern urban development. On the left is a long, low-rise building with a series of vertical fins and large windows. To its right is a taller, more complex structure with multiple levels and a grid-like window pattern. The foreground shows a street with pedestrians, a dog, and cars. The entire image is overlaid with a semi-transparent blue filter.

June 2023
Preliminary Ecological Appraisal

Upper Brook Street Masterplan

(McLaren / Kadans)

Upper Brook Street, Manchester



Preliminary Ecological Appraisal Report

14/02/2023

Upper Brook Street Masterplan- McLaren/ Kadans



Report reference	ER-6550-01.2
Author	Josh Birchall BSc (Hons), ACIEEM Ecologist
Technical Review	Rob Weston BSc (Hons) MSc MCIEEM Technical Director
QA	James Robinson BSc (Hons) MSc Graduate Ecologist
Authorised	Rob Weston BSc (Hons) MSc MCIEEM Technical Director
Date	14/02/2023 Amended:01/06/23
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.



Brooks Ecological Ltd has prepared this report for the sole use of McLaren (UBS1) Ltd.. The information which we have prepared and provided is in accordance with the CIEEM's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions. This report does not constitute legal advice. The report is in accordance with the agreement under which our services were performed. No warranty, express or implied, is made as to the advice in this report or any other service provided by us. This report may not be relied upon by any other party except the person, company, agent or any third party for whom the report is intended without the prior written permission of Brooks Ecological Ltd. This report presents a snapshot of the site at the date it was surveyed; the conditions and the species recorded present, or likely absent, can change rapidly. Resurvey is recommended to any third-party seeking reliance on this report. The content of this report may, in part, be based upon information provided by others and on the assumption that all relevant information has been provided by those parties from whom it has been requested. Information obtained from any third party has not been independently verified by Brooks unless otherwise stated in the report. This report is the copyright of Brooks Ecological Ltd. Unauthorised reproduction or usage by any person is prohibited.

Unit A, 1 Station Road, Guiseley, Leeds, LS20 8BX
Phone: 01943 884451
01943 879129
www.brooks-ecological.co.uk
Registered in England Number 5351418

Contents

Introduction..... 1

Desk Study 2

Designated Sites..... 3

Survey..... 5

Habitat Appraisal..... 5

DEFRA Metric (Baseline)..... 9

Faunal Appraisal..... 10

Ecological Constraints & Opportunities 15

Conclusions and Recommendations 16

References..... 17

Appendix 1 Habitats and Ecological Features 19

Appendix 2 List of species recorded 20

Appendix 3 Explanatory Notes and Resources Used 21

Appendix 4 Bat Activity Survey Rationale 24

Appendix 5 Wildlife Legislation, Policy and Guidance 25



Summary

This report is produced to inform McLaren (UBS1) Ltd. of potential ecological constraints associated with their proposed development site and the need for further reporting or output to support a planning application.

This report is based on a desk study of designated wildlife sites and records of protected or notable species, and an extended Phase 1 Habitat Survey carried out in January 2023.

Key Findings

The Site is primarily comprised of habitats of limited ecological value. A collection of trees accounts for most habitat units present. Further surveys have been recommended to assess the status of roosting bats in one of the buildings.

Biodiversity Net Gain

The Site has been assessed as having a baseline Biodiversity Units score of 2.07.

Introduction

1. Brooks Ecological Ltd was commissioned by McLaren (UBS1) Ltd. to carry out a Preliminary Ecological Appraisal (PEA) of land at Upper Brook Street, Manchester.
2. This report is produced with reference to British Standard BS:42020 'Biodiversity Code of Practice for Planning and Development' and the CIEEM (2017) Guidelines for Preliminary Ecological Appraisal.

Purpose of a PEA

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

The Site

7. The application site 'the Site' comprises a commercial development and a sheltered accommodation type building with associated amenity landscaping.
8. The assessment uses a 2km area of search around the Site for records of protected and notable species and locally or nationally designated wildlife sites.

Figure 1 The Site (red line boundary).



Desk Study

Landscape

9. The Site is located on the periphery of Manchester city centre - beginning less than 1km to the north. Accordingly, the surrounding area is highly developed with commercial and residential areas, alongside associated infrastructure.
10. To the south and west a road separates the Site from the University of Manchester and Manchester Royal Infirmary, both of which comprise an array of large buildings and smaller formally landscaped gardens. To the north and east residential flats and houses are found, alongside a small park 'Gartside Gardens' just off the northern boundary.

Wildlife Corridors

11. There are no obvious wildlife corridors or areas of better structured semi-natural habitats present. The density of buildings and large A-roads such as the A34 along the western boundary are likely to restrict the movements of many species.
12. Amenity areas and gardens may act as steppingstones for more mobile groups such as birds and bats. Though even amongst these only the species most tolerant of disturbance are likely to be present.

Figure 2 Analysis of Site in context of surroundings



Designated Sites

Statutory Designations

13. 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
Rochdale Canal	c.5.9km northeast	Site of Special Scientific Interest (SSSI) Special Area of Conservation (SAC)	Designated for supporting the Annex 2 species floating water plantain (<i>Luronium natans</i>). Also supports a botanically diverse water plant community with a wide range of pondweeds, including Potamogeton spp.

14. There are no nationally designated sites shown on mapping within 2km of the Site.
15. Direct and indirect impacts on the Rochdale Canal as a result of this development are unlikely due to the Sites separation and distance.

SSSI Impact Risk Zones (IRZs)

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

Non-Statutory Designations

17. There are two Local Sites of Biological Interest (SBIs) in the search area and four GMRIGS designated for geological interest. The SBIs include 'Ashton Canal West' and Rochdale Canal Stott's Lane to Ducie Street Basin, these join and are nearest the Site to c.1.2km to the north. Impacts upon these areas would not be expected due to the separation from the application Site.

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

Nature Improvement Area

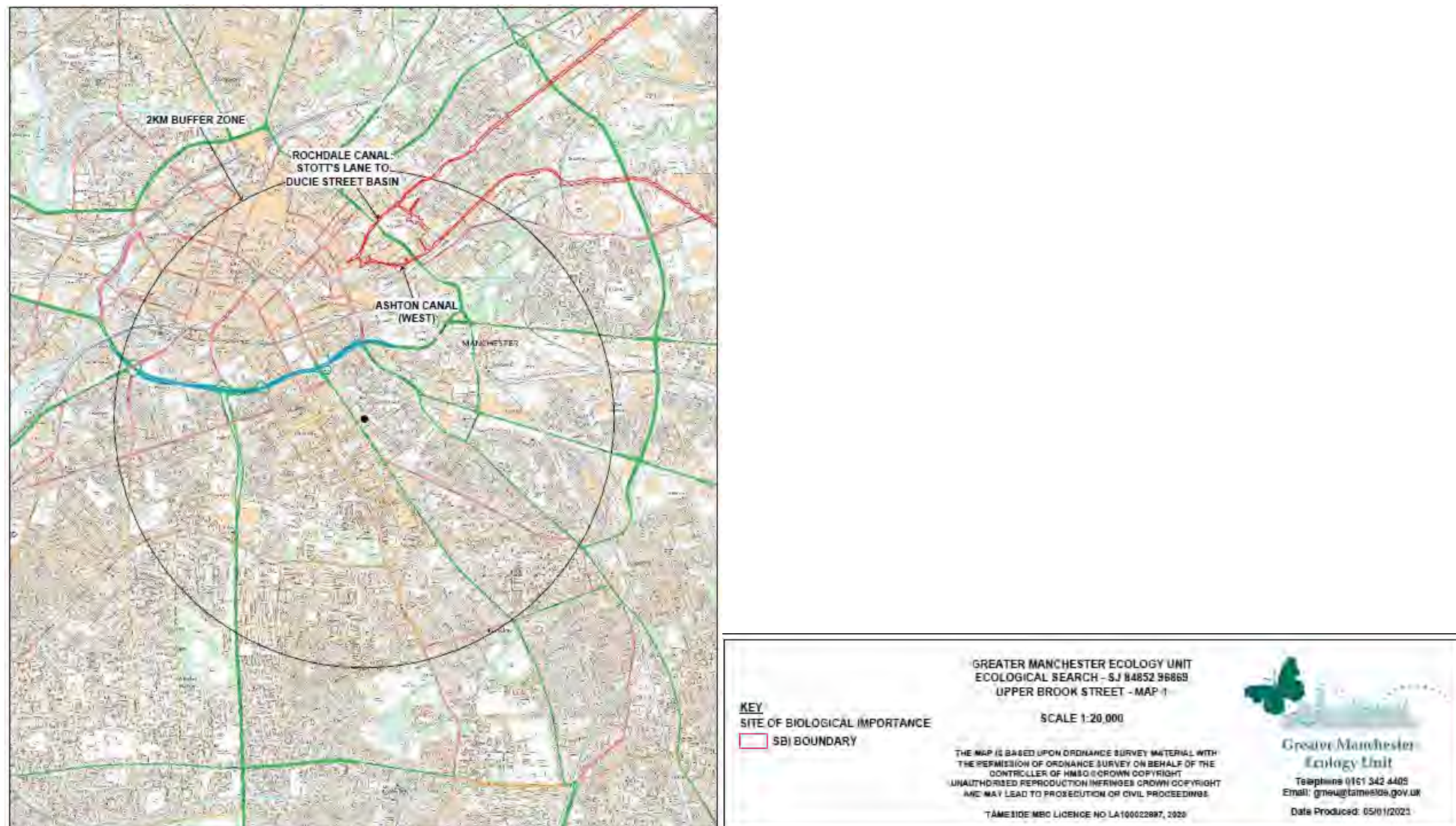
19. The Site is not located within a nature improvement area.

Wildlife Habitat Network

20. The Site has not been highlighted as being within or adjacent to a locally designated wildlife habitat network.

Granted EPSM Licenses

21. Four granted licenses show up within 1km of the Site, these are all for licences to affect common pipistrelles, the nearest of which is located c. 280m east of the Site and dated 2015.

Figure 3 Greater Manchester Ecology Unit; Species and Designated Sites.

Survey

22. The survey was carried out during January 2023¹ and followed the principles of Extended Phase 1 Habitat Survey methodology (JNCC, 2010).
23. Enough time was afforded the surveyor to carry out the survey. The survey was not constrained by poor weather.
24. 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

25. The Site's habitats are described in order on the following pages. In line with the requirement to provide information on **Biodiversity Net Gain (BNG)**, habitats are named in accordance with the UK Habitats classification system - we have used the relevant UK Habs guidance in identifying habitats. Habitat descriptions are divided into the 'distinctiveness' categories used in the calculations - with more weight being afforded the more distinctive / important habitats.
26. 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

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

Low Distinctiveness Habitats

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

Medium Distinctiveness Habitats

29. 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

30. 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

31. These are the UKs rarest / best habitats. They will be present in very particular locations and a range of rare or important plant and animal species will depend on the particular conditions they provide. These habitats will be the subject of restrictive policy guidance or legislation. Whilst the BNG metric does not preclude mitigation or compensation in respect of these habitats, creation of the same habitat type would be required, and this would range between very difficult/expensive and impossible.
32. Each habitat is mapped and an area for each type is provided in the format of the DEFRA Biodiversity Metric 3.1 Calculation Tool. The areas can be used to quantify the impacts of development in an Ecological Impact Assessment if this is required by the Local Planning Authority.

Condition Assessment

33. Our condition assessment for each habitat described references where available the criteria set out in DEFRA (2021) Biodiversity Metric 3.1 Technical Supplement (1).
34. Habitats in the Low Distinctiveness tier tend to fall into the poor condition category by default. Where we feel this is not the case, we have explained our reasoning. Habitats within the other higher tiers can fall into a range of conditions. We set out our reasoning based on the given criteria and guidelines.

¹ This Report has been prepared during February 2023 following a visit to the site in January 2023 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.



g4 Modified Grassland Condition Assessment -Moderate

Criteria	Pass/Fail	Condition
6-8 species? (NB - essential to achieve moderate condition)	Pass	6 or 7 <u>including</u> criterion 1 = Good 4 or 5 <u>including</u> criterion 1 = Moderate 0-3, or 4-6 <u>excluding</u> criterion 1 = Poor
Varied sward height?	Fail	
Scrub <20%	Pass	
Damage <5%	Pass	
Bare ground 1-10%?	Fail	
Bracken <20%	Pass	
Absence of invasives	Pass	
Score	5	

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

Habitat Code/ Name	Summary Description	Condition
g4 Modified Grassland	Separate from grass areas within the gardens, these are roadside verges or otherwise peripheral areas of grass some of which receive frequent management and some appearing recently unmanaged. The most abundant grasses include Yorkshire fog, perennial rye grass, red fescue and bent grasses. Forbs occur frequently and include; creeping buttercup, daisy, ox-eye daisy, white clover, ribwort plantain, chickweed and dandelion. In unmanaged areas broad leaved dock, Canadian fleabane, thistles, doves foot cranesbill and wood avens were also noted.	Moderate
u1b Developed Land: Sealed Surface	Hard standing including buildings and car parking areas. The vast molarity is unvegetated apart from occasional common weeds such as buddleja.	n/a
231 Vegetated Garden	Garden areas include amenity grass, planting beds including vegetable and ornamental areas, shrub borders and some paved footpaths and patio areas. An diverse array of common garden plants was noted such as; viburnums, hellebores, mahonia, dogwood, cotoneasters, wych hazel, Mexican orange, roses and Portuguese laurel amongst others. The invasive species cotoneaster was noted throughout planting, whilst rhododendron and Japanese rose were also noted in parts.	n/a
1160 Introduced Shrub	Includes cherry laurel and some of the species mentioned above, but found in patches outside of garden areas.	n/a

Habitats of Low/Very Low Distinctiveness

Figure 5 Car park and garden area



Figure 6 Garden with buildings in background



Figure 7 Overview of trees in garden



Figure 8 Unused planting beds in garden



Figure 9 Overgrown grass verge and commercial property



Figure 10 Commercial building and car park



Habitats of Medium Distinctiveness

Figure 11 Approximate location and extent of these habitats.



1170 Trees

- 35. Larger young - early mature trees or those which are not surrounded by other vegetation have been included separately, in order to more accurately account for their biodiversity unit value.
- 36. Trees include a mixture of whitebeam, silver birch, sycamore, self-set ash, malus sp. and prunus sp.

Defra Metric Condition Assessment - Poor

Criteria	Pass/Fail	Condition
>70% natives	Fail	5-6 = Good 3-4 = Moderate 0-2 = Poor
Continuous canopy gaps <10%	Fail	
Mature or veteran tree	Fail	
No pruning evidence	Fail	
Deadwood, cavities etc. for birds	Fail	
> 20% canopy oversailing vegetation	Pass	
Score	1	

Figure 12 Larger sycamore



Figure 13 Another larger sycamore.



DEFRA Metric (Baseline)²

37. This metric sets out the baseline for the Site - proposals should seek to **Avoid** areas of higher value, **Mitigating** any loss on-Site through retention and enhancement, or habitat creation.

Habitat and area				Flammability	Condition	Strategic significance	Suggested action to address habitat losses	Ecological baseline
Ref	Broad Habitat	Habitat Type	Area (hectares)	Flammability	Condition	Strategic significance		Total habitat score
1	Grassland	Mixed grassland	1.0933	Low	Good	Area of high strategic importance	Compensation Not Required	1.09
2	Grassland	Improved grassland	0.6815	Low	Good	Area of high strategic importance	Compensation Not Required	1.09
3	Grassland	Improved grassland	0.4904	Low	Good	Area of high strategic importance	Compensation Not Required	1.09
4	Grassland	Improved grassland	0.4421	Low	Good	Area of high strategic importance	Compensation Not Required	1.09
5	Grassland	Improved grassland	0.6668	Low	Good	Area of high strategic importance	Compensation Not Required	1.09
6								
7								
8								
9								
Total habitat area			1.37					1.37

² Our report provides an estimate of the sites value in Biodiversity Units. This is based on thorough assessment at the time of survey and using the information available at this time. In this assessment we have used the latest version of DEFRA's Biodiversity Metric Tool, the UK Habitats Classification and relevant guidance. This assessment requires subjective judgments to be made in terms of habitat type and condition and could be open to other interpretations. Reliance on the Unit Score, or conversion of this into a monetary value, would be at the developer's own risk. Where conversion to monetary value is required, it is always advisable to get calculations checked independently.

Faunal Appraisal

38. 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

39. There are no ponds shown on mapping within 500m of the Site.
40. No records of great crested newt (GCN) or other amphibians have been returned.

Field Evidence

41. Suitable habitats on site are limited for this group, garden areas including grass and planting beds would provision terrestrial habitat but are unlikely to be of use given the lack aquatic breeding habitat in the area.

Summary Evaluation

42. Habitats are unlikely to support GCN or be of any particular importance to other common amphibians.

Further Surveys and Recommendations

43. No further surveys or precautions are considered necessary.

Birds

Desk Evidence

44. A limited number of records of common garden bird's species have been returned as would be expected for the area. This also includes once common but declining species such as house sparrow and starling.
45. Many records of Black Redstart and Peregrine have also been returned, these are focused on Manchester city centre, though no records are centred on the Site and there does not appear to be particularly suitable habitat to support them.

Field Evidence

46. Trees and garden areas will be attractive to small numbers of common garden birds for foraging and potentially nesting.

Summary Evaluation

47. The Site is not considered to be of particularly high value to this group and is unlikely to be attractive to notable species.
48. Starlings and house sparrow may find suitable nest sites in buildings, whilst common garden species are likely to use garden areas.

Further Surveys and Recommendations

49. No further surveys are considered necessary to demonstrate current baseline in respect of birds.
50. Any development should aim to incorporate suitable nesting areas for declining species such as house sparrow and starling.
51. Standard precautions apply in respect of restrictions on clearing vegetation during the nesting season.

Bats

Desk evidence

52. Thirty-seven roost records have been returned all but one of which is for myotis, the remainder being of common pipistrelle and pipistrelle species. Activity records have been returned which are also dominated by pipistrelle species with small numbers of noctule.

Field Evidence (Roosting)

53. Four buildings are present on Site, three commercial type buildings two of which are open sided structures and a sheltered accommodation type building.
54. None of the trees appeared to have any more than Negligible suitability to support roosting bats.

Table 3 Bat Roost Suitability Assessment

Ref:	Notes	Suitability
B1	Brick built accommodation block, likely with cavity walls and shallow pitched roof with concrete tiles in most areas with some smaller flat roofed sections. The walls appear well sealed, as in most areas is the roof of the building with tiles and ridges in place and the verge guards in place. Soffit boxes are also mostly well sealed. The only gaps were noted on the northern elevation where some hip ridges appear open at the ends and a damaged soffit box could allow access, though the likelihood of this being water damage reduces the likelihood of it being of any higher value.	Low
B2	Large warehouse with blockwork walls on the ground floor and metal cladding elsewhere. The building appears well-sealed and the simple construction style is unlikely to result in any suitable crevices.	Negligible
B3	Open sided metal canopy construction. No obvious features.	Negligible
B4	Open sided metal shed type building with plastic cladding. Small brick built and flat roofed building adjacent.	Negligible

Field Evidence (foraging and commuting)

55. The garden areas may attract some occasional low-level foraging but this would be limited to common, disturbance resistant species due to high levels of light pollution.

Summary Evaluation

56. The Site is highly unlikely to be of any real value to local bat populations though roosting cannot be ruled out in building 1 at this stage.

Further Surveys and Recommendations

57. A single emergence survey is recommended in order to confirm the presence or absence of roosting bats in building 1.

Figure 14 Building plan.



Bat Roost Suitability Assessment

Figure 15 Overview of building 1



Figure 16 Open ended ridge tile



Figure 17 Damaged soffit box



Figure 18 Overview of building 2



Figure 19 Overview of building 3



Figure 20 Overview of building 4



Badgers

Desk evidence

58. Seventeen records have been returned dated most recently from 2014. All records are centred in 3 areas, the nearest of which is over 1km from the Site.

Field Evidence

59. The Site presents some suitable habitat associated with garden areas.
60. No evidence of badger activity was noted.

Summary Evaluation

61. The Site support some small areas of suitable habitat but this is not considered to be of any high or specific value to badger.

Further Surveys and Recommendations

62. Impacts upon badger are considered highly unlikely and no further survey is recommended in support of this conclusion.

Hedgehogs

Desk evidence

63. Hedgehogs appear relatively well recorded in surrounding areas with 23 records returned, though none are centred on the Site.

Field Evidence

64. No evidence of hedgehogs was found on site.

Summary Evaluation

65. The Site provides suitable habitat for this species and measures to allow them to access any future garden or landscaped areas should be considered in proposals.

Further Surveys and Recommendations

66. Presence assumed no further surveys are considered necessary.

Invasive Non-Native Species (INNS)

67. 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.

68. The following species were noted³:

- Japanese Rose
- Rhododendron species
- Cotoneaster species

Survey constraints

69. While some INNS have been identified in this preliminary survey it is not always possible to conclude full range of species present or their true extent due to factors such as season, accessibility, 3rd party attempts to hide evidence or undisclosed treatment programmes. For this reason, this report should not be relied upon as definitive evidence of the status of INNS.

70. This site presents a medium 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

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

Figure 21 Approximate location of Japanese Rose, Rhododendron and Cotoneaster species locations have not been mapped as they are present in small indistinct amounts throughout out landscaping.



³ Whilst our ecologists are trained in the identification of invasive species this report is not a dedicated invasive species survey. Detectability of invasive plant species can be affected by several factors, and conclusive determination status, or extent, is not

possible through preliminary survey alone. As the presence of invasive species can generate significant costs to development, the client may wish to instruct a dedicated invasive species survey prior to entering into contracts.

Ecological Constraints & Opportunities

72. Most LPAs now require developments to demonstrate a 'no net loss' in biodiversity, or in some cases a 10% net gain. The Site has been assessed as having a Biodiversity Unit score of 2.07 Habitat Units.
73. Any net loss in biodiversity may need to be compensated for, through offsetting, which could require a financial contribution be made to the LPA's Habitat Fund, or a third-party broker.
74. The scheme should seek to minimise biodiversity loss by retaining as much existing vegetation as possible. Existing trees make up a large proportion of the value and measures to retain these will likely yield the most value. Maximising the Site's biodiversity value post-development will be important, by either creating new high-quality habitats on cleared ground, or by enhancing retained vegetation. Incorporating groups of varied native tree species would be valuable in this setting.
75. A suitable Biodiversity Management Plan would be useful in defining these enhancements and can be secured by standard condition.
76. Bat emergence surveys should be carried out in support of a planning application to ascertain the presence of roosts.
77. INNS survey to identify extent and facilitate appropriate removal.
78. Declining urban bird species, chiefly house sparrow and starling, are well recorded in the area. Incorporating several suitable nest boxes to support these species would be a valuable addition to any development.
79. Similarly, hedgehog is recorded locally and creating landscaping or gardens with accessible features for this species will be of value. This could include access gaps in walls or fences and native species rich planting to attract insects and support foraging activity.

Figure 22 Constraints and Opportunities Plan.



Conclusions and Recommendations

Planning considerations		
Recommendation	Rationale	When
R1 Additional Surveys	Bat Emergence Surveys	May – September
R2 Produce a layout which minimises loss of biodiversity.	Engage with the Constraints and Opportunities set out above, involve your ecologist in designs at an early stage. The proposals will need to consider the NPPF hierarchy of Avoid - Mitigate - Compensate in minimising any loss of biodiversity. The LPA is likely to be seeking at least a no-net-loss situation and could request that a contribution is made to address any residual loss here, off-Site. Your layout may need to change to accommodate your findings from R1 surveys.	During the design process
R3 Biodiversity Net Gain Strategy (BNS)	Engage an ecologist to work with the design team to maximise available Biodiversity Units on site.	During the design process
R4 Landscape Design	Make sure your landscape architect follows ecological advice or the BNS to maximise Biodiversity Units on site and make sure there are no design conflicts.	During the design process
R5 Calculate final Biodiversity Impact Score	Using DEFRA metric to quantify net gain/loss of biodiversity.	After a fixed design is agreed.
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 through the Biodiversity Net Gain Strategy be maintained in the condition that the Biodiversity Calculations were based on.	Delivery report Suitable for planning condition.

Other considerations (managing legal or financial risks)		
Issue	Rationale	When
R7 Nesting bird management. (If not produced and committed to in the CEMP)	As with most sites the standard precaution in relation to birds would apply: To prevent the proposed works impacting on nesting birds, any clearance of vegetation will need to be undertaken outside of the breeding bird season which is 1st March – 31st August inclusive. Any clearance required during the breeding bird season should be preceded by a nesting bird survey to ensure that the law is not contravened through the destruction of nests and that any active nests are identified and adequately protected during the construction phase of the development.	Pre- and during -clearance
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)

Outline Biodiversity Net Gain (BNG) Implications

The NPPF and most aligned local policies require that development achieves a ‘no net loss’ or unquantified ‘net gain’ situation for biodiversity. The Environment Bill now mandates a 10% net gain position, although there is a two-year grace period before this mandate becomes enforced nationally (anticipated November 2023). Many LPA’s have pre-empted this with revised policies and SPG’s, some are providing a means of developers contributing to strategic off off-Site enhancement where BNG can’t be secured on Site. Pre-application discussions with the LPA should aim to identify their approach to BNG from an early stage.

Outline BNG Implications at this Site have been calculated below. This is based on reform landscape architects planting strategy reference: 0967-RFM-XX-00-DR-L-0005 as shown below and additional drawings RF22-0967-AI-10-P02 and 0967-RFM-XX-00-SK-0002.

This is based on the current planting strategy but may not be not considered the final calculation, it provides what is hoped is a useful illustration to work forward from. The scheme currently achieves an 84% gain in habitat units and a gain hedgerow units given there was no hedges present prior, the details can be seen in the biodiversity metric brooks ecological reference: BM-6550-03.

Table 4 BNG outline calculations

Pre-development Baseline Units	Post Development Units *	Units still required to achieve No Net Loss	Units still required to achieve 10% Net Gain
2.07	3.80	0	0

Figure 23 Outline landscaping plan.

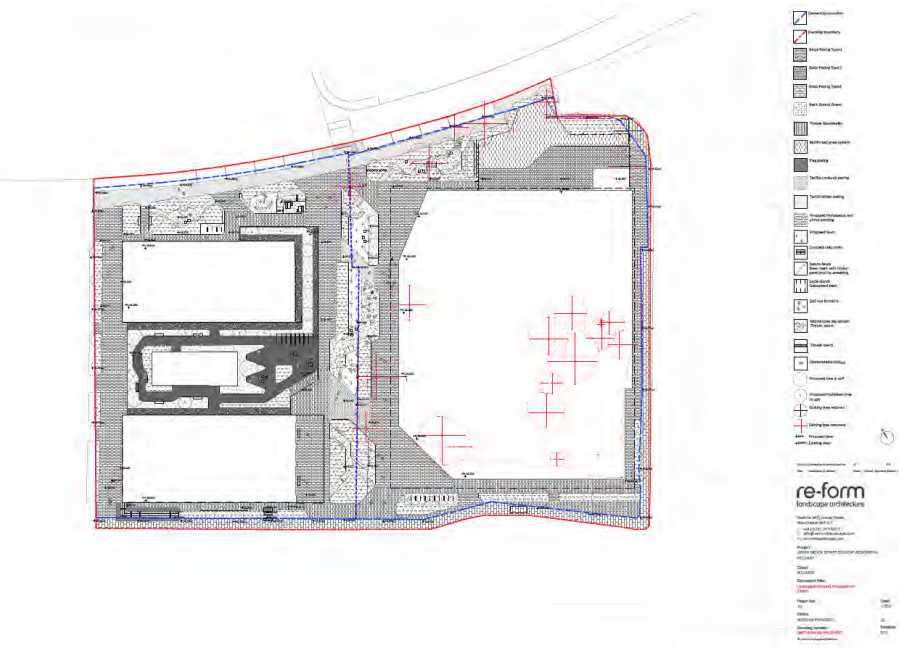


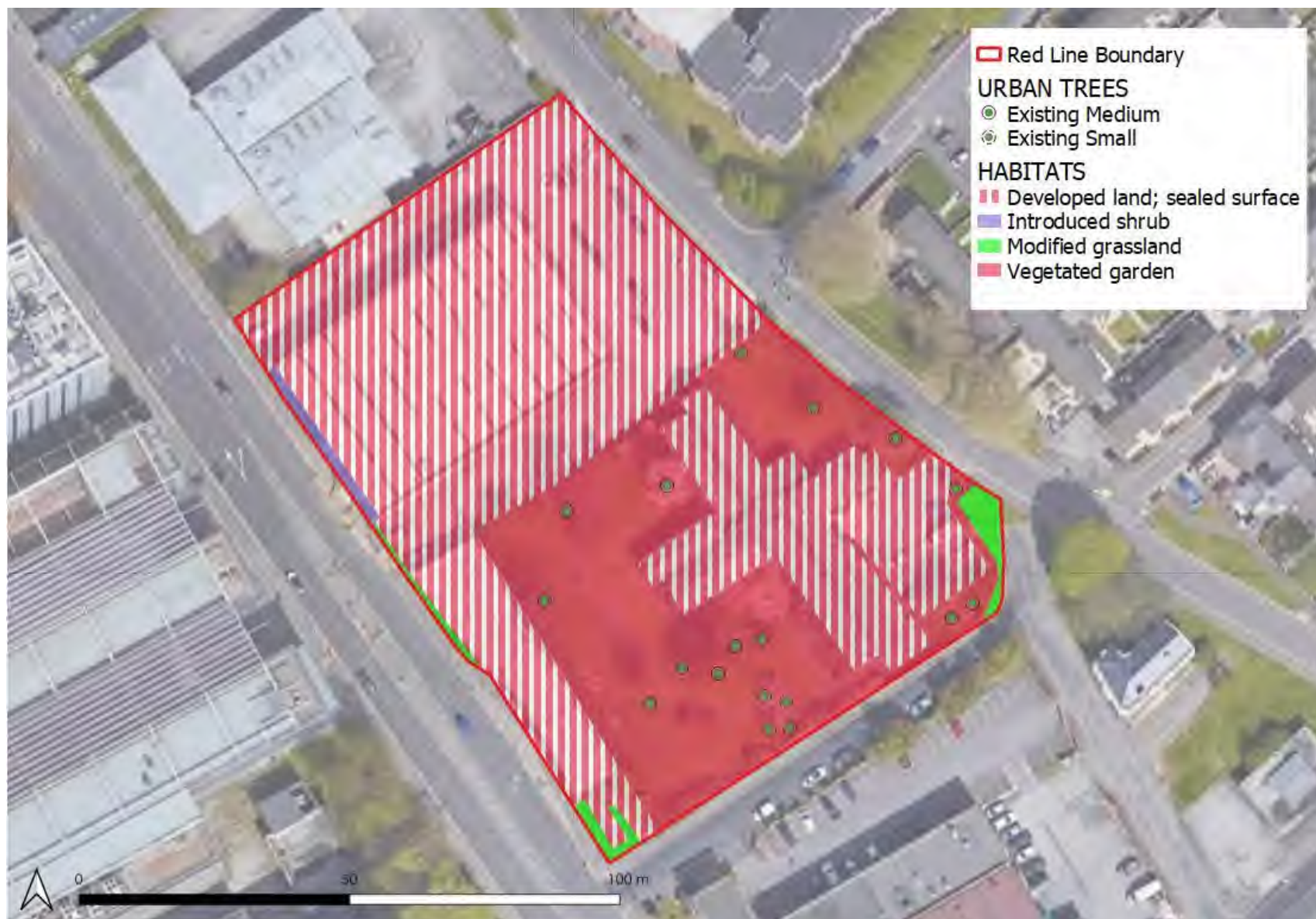
Figure 24 Assumed post development habitat from landscaping plan.



References

- Andrews H. L. (2011) A habitat key for the assessment of potential bat roost features in trees.
- Bat Conservation Trust (2016) Bat Surveys for Professional Ecologists – Good Practice Guidelines.
- BSI (2013) British Standards Institute BS:42020:2013 Biodiversity – Code of Practice for Planning and Development.
- CIEEM (2017) Guidelines for Preliminary Ecological Appraisal.
- CIEEM (2019) Advice Note - On the Lifespan of Ecological Reports and Surveys
- DEFRA (2022) Biodiversity Metric 3.1 Auditing and accounting for biodiversity Calculation tool macro free.
- DEFRA (2022) Biodiversity Metric 3.1 Technical Supplement (1).
- DEFRA (2022) Biodiversity Metric 3.1 User Guide.
- English Nature (2004) *Bat Mitigation Guidelines*. English Nature, Peterborough.
- English Nature (2001) *Great Crested Newt Mitigation Guidelines*. http://www.naturalengland.org.uk/Images/GreatCrestedNewts_tcm6-21705.pdf.
- Fay N. (2007) *Defining and Surveying Veteran and Ancient Trees* <https://www.treeworks.co.uk/about-treework/publications>.
- Gent T and Gibson S, 2003, *Herpetofauna Workers' Manual*, JNCC.
- Hill et al. 2005, *Handbook of Biodiversity Methods*. Cambridge.
- JNCC (2004) *The Bat Workers Manual*. 3rd Edition.
- Ministry of Housing, Communities and Local Government (July 2018) *National Planning Policy Framework*.
- Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). *Evaluating the suitability of habitat for the Great Crested Newt (Triturus cristatus)*. Herpetological Journal 10(4), 143-155.
- Ratcliffe, D.A. (1977) *A Nature Conservation Review*, Cambridge University Press.
- UK Habitats (2020) *The UK Habitat Classification Habitat Definitions Version 1.1* UK Habitat Classification Working Group.

Appendix 1 Habitats and Ecological Features



Appendix 2 List of species recorded

Annual meadow grass	<i>Poa annua</i>
Apple	<i>Malus domestica</i>
Ash	<i>Fraxinus excelsior</i>
Barberry	<i>Berberis</i> sp.
Bent	<i>Agrostis</i> sp.
Bittercresses	<i>Cardamine</i> spp.
Box-leaved/ privet honeysuckle	<i>Lonicera pileata</i>
Brachyglottis	<i>Brachyglottis</i> sp.
Bramble	<i>Rubus fruticosus</i>
Butterfly bush/buddleia	<i>Buddleia davidii</i>
Canadian fleabane	<i>Erigeron canadensis</i>
Cherry	<i>Prunus</i> sp.
Chickweed	<i>Stellaria media</i>
Cleavers	<i>Galium aparine</i>
Common honeysuckle	<i>Lonicera periclymenum</i>
Common ivy	<i>Hedera helix</i>
Common moss	<i>Rhytidiadelphus squarrosus</i>
Common Ragwort	<i>Jacobaea vulgaris</i>
Cotoneaster	<i>Cotoneaster</i> sp.
Daisy	<i>Bellis perennis</i>
Dandelion	<i>Taraxacum officinale</i> agg.
Dove's-foot cranesbill	<i>Geranium molle</i>
Hawthorn	<i>Crataegus monogyna</i>
Herb Robert	<i>Geranium robertianum</i>
Japanese cherry	<i>Prunus serrulata</i>
Japanese rose	<i>Rosa rugosa</i>
Leyland cypress	<i>Cupressus</i> × <i>leylandii</i>
Maple	<i>Acer</i> sp.
Mexican orange blossom	<i>Choisya ternata</i>
Nettle	<i>Urtica dioica</i>
Oregon grape	<i>Mahonia aquifolium</i>

Ornamental Euphorbia sp	<i>Euphorbia mellifera</i>
Ornamental rose species	<i>Rosa</i> sp.
Pampas grass	<i>Cortaderia selloana</i>
Perennial rye grass	<i>Lolium perenne</i>
Red fescue	<i>Festuca rubra</i> agg.
Rhododendron	<i>Rhododendron ponticum</i>
Silver birch	<i>Betula pendula</i>
Sycamore	<i>Acer pseudoplatanus</i>
Thistle	<i>Cirsium</i> sp.
Variegated holly	<i>Ilex</i> sp.
Willowherb	<i>Epilobium</i> sp.
Wood avens	<i>Geum urbanum</i>
Wych elm	<i>Ulmus glabra</i>
Yorkshire fog	<i>Holcus lanatus</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 'steppingstones 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 habitats 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 Greater Manchester Ecology Unit 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 'Greater Manchester Local BAP'.

Priority Species	Priority Habitats
Hare	Grassland
Great Crested Newt	Hedgerow
Willow Tit	Native Woodland
Water Vole	Ponds and Lodges
Bittern	Reedbeds
Black Redstart	Canals
Native Black Poplar	Urban Managed Greenspace
Twite	Uplands
Bats	
Floating Water Plantain	

Bats

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

Bat Roosting Suitability of Buildings and Trees

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

Evaluation

In evaluating the Site, the ecologist considers 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 decide 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.

The Site is considered highly unlikely to be of any particular or high value to bat activity due to the low value of habitats and highly disturbed urban location, as such further activity surveys of the Site are not recommended in support of a planning application.

This assessment has been made by Joshua Birchall BSc (Hons) ACIEEM. Josh has over 8 years of professional bat survey experience, is a member of the South Lancashire Bat Group and is also registered to use the Class Survey Licence WML CL17 (Level 1).

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 2021. The most relevant paragraphs from the NPPF are set out below.

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

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

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

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

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

Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services

This strategy builds on the Natural Environment White Paper (June 2011) - Setting out the current UK Government's approach to nature conservation. It promotes a more coherent and inclusive approach to conservation and the valuing in economic and social terms of economic resources.

The strategy promotes initiatives such as Biodiversity Offsetting, Nature Improvement Areas and a focus on well-connected natural networks and introduces the concept of securing a 'no net loss' situation with regard to UKBAP / Section 41 habitats and species.

ODPM circular 06/05 (2005) Biodiversity and Geological Conservation - Statutory Obligations and Their Impact Within the Planning System

Provides guidance to Local Authorities on their obligations to biodiversity – particularly in relation to assessing planning applications and ensuring the adequacy of information.

BSI (2013) British Standards Institute BS 42020:2013 Biodiversity – Code of Practice for Planning and Development

Provides a standard for the biodiversity assessment and development industries and decision makers such as Local Planning Authorities to work to.