1.4.4 ECOLOGY REPORT

Weddle Landscape Design
LANDSCAPE ARCHITECTURE
ENVIRONMENTAL PLANNING
Mews Studio, Charnwood House
8 Kenwood Bank, Sheffield S7 1NU
Tel (0114) 2501181 Fax (0114) 2501188
E-mail mail@weddles.co.uk
Web site http://www.weddles.co.uk

CASL LISBON STREET (LEEDS) PROPERTY OWNER LTD

LISBON STREET, LEEDS – PHASE 1
BIRD AND BAT ENHANCEMENT STRATEGY

Rev A – December 2024

~~Original - May 2022~~

TABLE OF CONTENTS

APPENDICES

1 INTRODUCTION

1.1 Weddles Landscape Design have been invited to discharge a Pre-Commencement Condition in support of a full planning application for erection of one building for residential accommodation (Class C3) with two ground floor commercial units (Class E) and basement car parking; one building for student accommodation (Class Sui Generis); one building for hotel accommodation (Class C1) and co-working office accommodation (Class E); hard and soft landscaping; creation of a new public square; demolition and construction of new stairs and ramp access to existing pedestrian/cycle bridge; new pedestrian and vehicular access; external bike storage, substation, servicing; and modifications to existing vehicular, cycling, and pedestrian infrastructure.

1.2 This Bird and Bat Enhancement Strategy has been prepared in relation to Phase 1 only, comprising the PBSA and surrounding landscape.

1.3 Specifically, this enhancement strategy relates to Condition 47, which states:

> *47) Prior to the commencement of any relevant phase of development, a Plan shall be submitted to and approved in writing by the Local Planning Authority of: integral bat roosting and bird nesting features (for species such as House Sparrow and Swift) within building(s) of that relevant phase. The agreed Plan shall show the number, specification of the bird nesting and bat roosting features and where they will be located, together with a timetable for implementation and commitment to being installed under the instruction of an appropriately qualified bat consultant. All approved features shall be installed prior to first occupation of the dwelling on which they are located and retained thereafter.*
>
> *To maintain and enhance biodiversity in accordance with Core Strategy Policy G9, NPPF, and BS 42020:2013.*

1.4 The below mitigation strategy has been prepared in line with the best available Bat Conservation Trust (BCT) and Royal Society for the Protection of Birds (RSPB) guidance and informed by ongoing discussions with the relevant design and architectural teams.

2 ENHANCEMENT STRATEGY

2.1 *Bird Enhancement*

2.1.1 Three “Double Entry Genesis Built-In Swift Nest Boxes”, (Appendix A) will be integrated behind the external cladding of the northern elevation of the B3 Student Living Building, above the proposed green roof. The boxes will be inset within the wall insulation with an appropriately sized slot cut into the cladding panel for swift access. The boxes will be at a height of approximately 10.5m from the proposed green roof and 15.5m from ground level (Appendix B). The proposed location will allow for a clear flight path, be positioned away from any climbing vegetation and out of reach of domestic animals.

2.1.2 The bird boxes will be positioned within close proximity to one another to encourage a colony of swifts to the area.

2.2 *Bat Enhancement*

2.2.1 Two “Vivara pro Build-in WoodStone Bat Box” (Appendix C) will be integrated into the insulation / thermal barriers of the south-western facing elevation at a height of approximately 5m (Appendix D). An appropriately sized slot will be cut in the cladding panel for the bat entry hole.

2.2.2 Three surface mounted “Eco Crevice Cavity Bat Box” (Appendix C) will be positioned on the southern or western elevation of existing mature trees to the south-west of the application area (Appendix E). All bat roosting features will be positioned at a height of approximately 5m from ground level and in such a way to avoid climbing plants, sources of direct artificial light, or out of reach of domestic animals.

2.3 *Timing and Other Considerations*

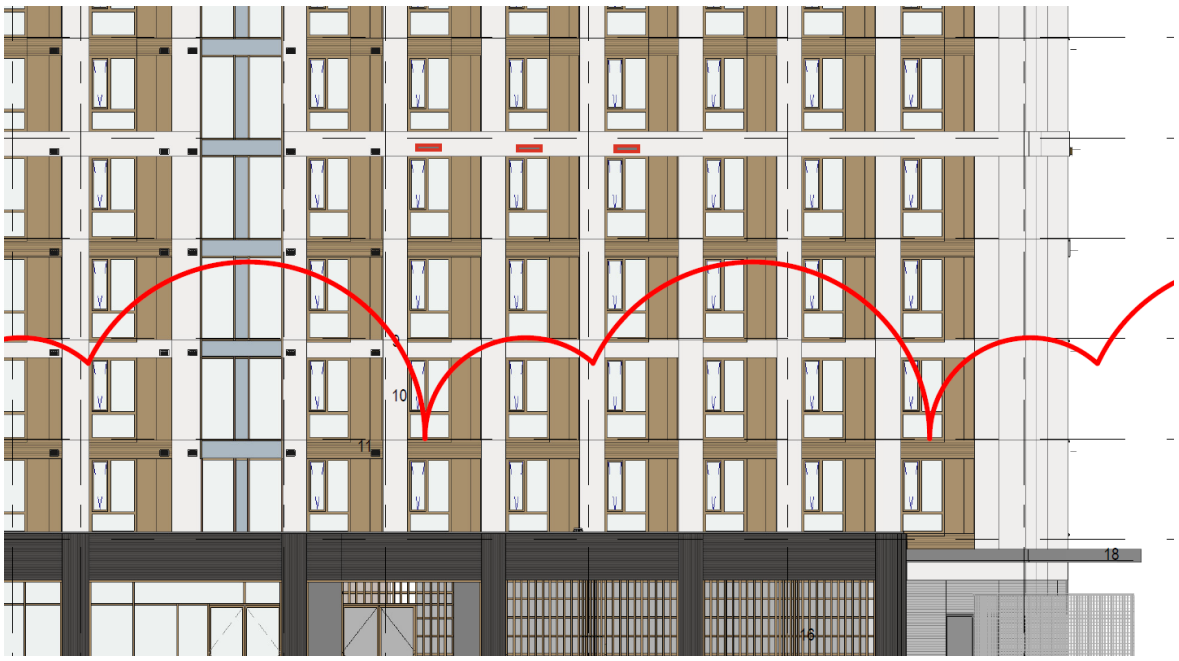
2.3.1 All bat and swift boxes will be erected by, or under the direct supervision of a bat licensed ecologist at the earliest possible point in the construction phase. Each enhancement feature will have their entrance holes blocked by a brightly colored material to discourage uptake of individuals during the construction phase and then being subject to disturbance by the works. Prior to the first resident occupation, each feature will have the blocking material removed by the licensed ecologist, where a check-over and any appropriate repairs will be made.

2.3.2 The bat box locations within Appendix D remains indicative until a suitable location is finalised and marked up on field by the licensed ecologist.

APPENDIX A: SWIFT BOX DESIGN

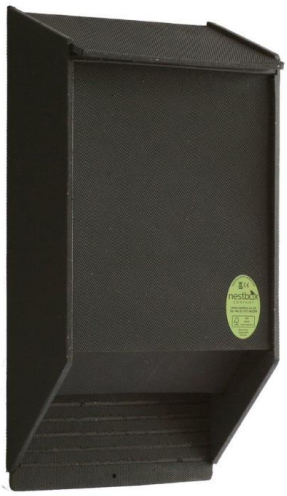
Two hole Integrated “Fire-Safe Non-Combustible Bird Boxes” – available from the following website: https://www.birdbrickhouses.co.uk/products/non-combustible/

APPENDIX B: SWIFT BOX LOCATION



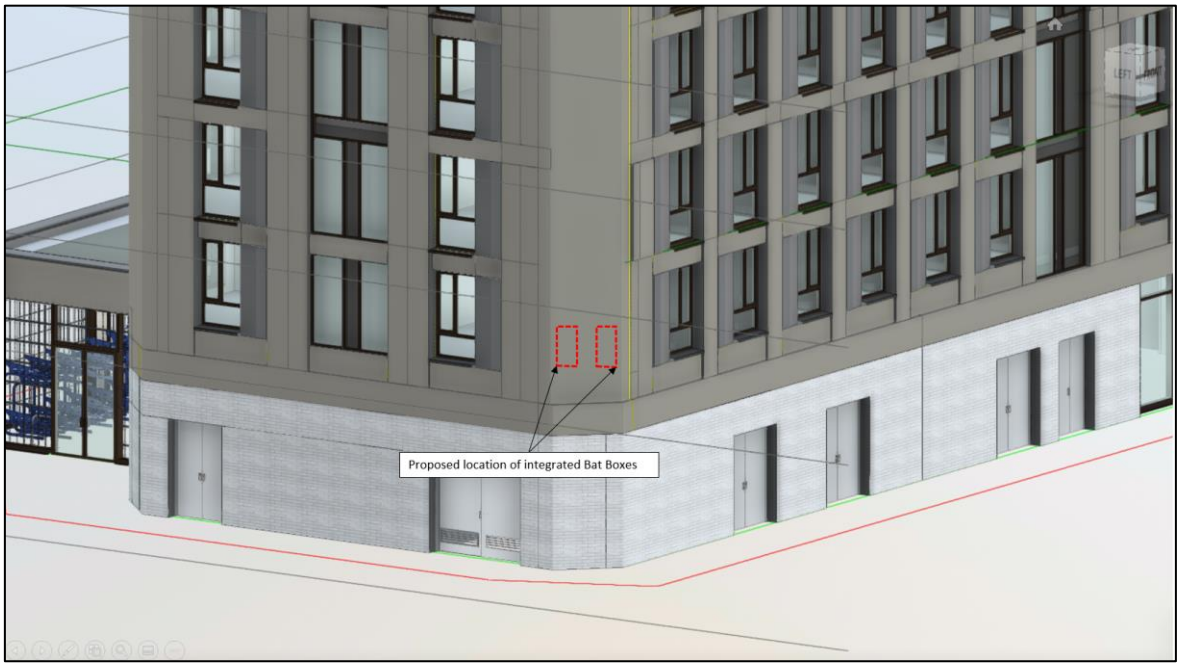
APPENDIX C: BAT BOX DESIGN

x3 Surface Mounted “Eco Crevice Cavity Bat Box” available from numerous vendors such as: https://www.wildcare.co.uk/eco-crevice-cavity-bat-box.html
https://www.nestbox.co.uk/products/eco-bat-box
https://www.nhbs.com/eco-bat-box

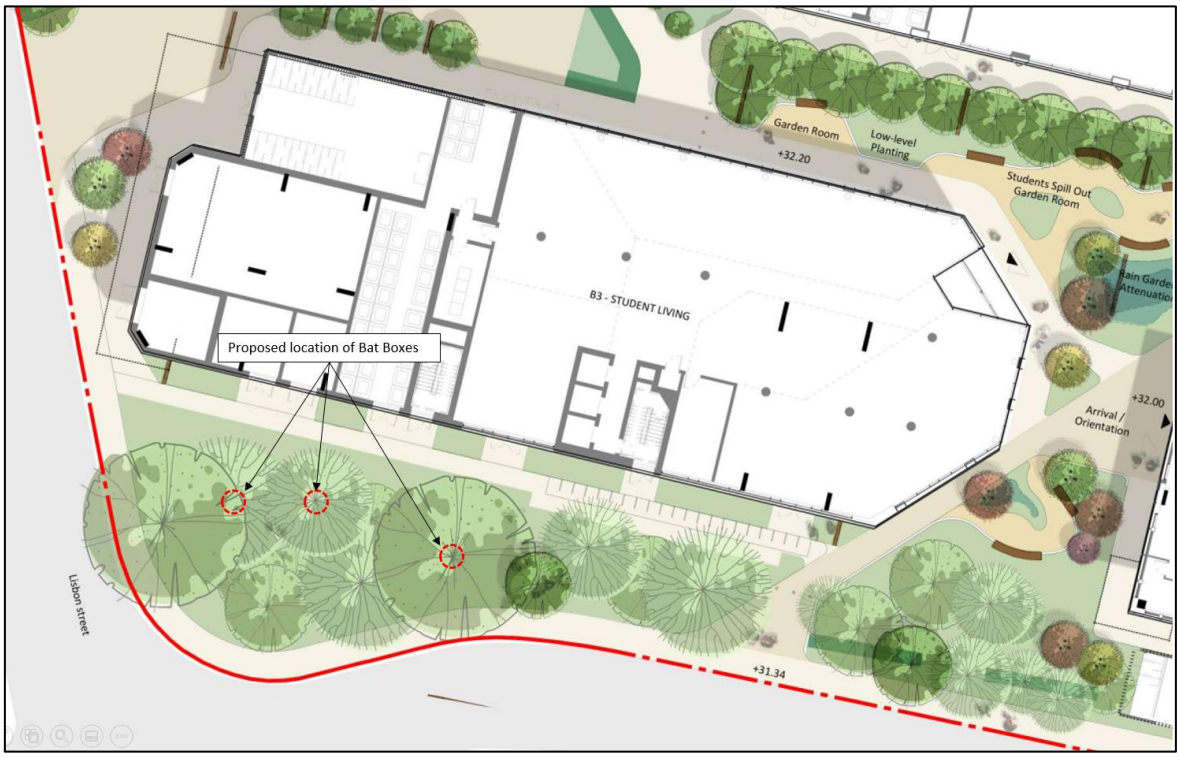


x2 Integrated “Vivara pro Build-in WoodStone Bat Box” available from numerous vendors such as:
http://www.vivarapro.co.uk/Bats
https://www.nhbs.com/vivara-pro-build-in-woodstone-bat-box

APPENDIX D: INTEGRATED BAT BOX LOCATION



APPENDIX E: SURFACE MOUNTED BAT BOX LOCATION



WEDDLES

LANDSCAPE ARCHITECTURE
ARBORICULTURE
GARDEN DESIGN
ECOLOGY

Landscape Institute
Registered practice

LISBON STREET, LEEDS

PBSA PHASE
Landscape and Ecological Management Plan (LEMP)
Rev A - February 2026

TABLE OF CONTENTS

1 INTRODUCTION

1.1 Background

Lisbon Street Development Ltd are developing the former International Pool site, which is now a temporary surfaced long and medium stay carpark, to a mixed-use development consisting of student accommodation, commercial units, offices, apartments and a hotel with associated landscaping. This report will support BREEAM LE05 accreditation and support discharge of planning conditions. Planning application 21/05142/FU has been approved in June 2021 subject to a number of conditions. Condition 9 states:

> *"Hard and soft landscaping works shall not commence for any relevant phase of the development until full details of both hard and soft landscape works, including an implementation programme for that phase and the temporary treatment of any future phases, have been submitted to and approved in writing by the Local Planning Authority. Hard landscape works shall include:*
> *…*
> *n. A scheme for management and maintenance of the publicly accessible areas*
> *o. long term landscape management plan."*

Weddle Landscape Design (WLD) have produced a landscape scheme for the site and Brooks Ecology carried out an Ecological Appraisal in June 2021. WLD have been asked to prepare a 5 Year Landscape and Ecological Management Plan for the ongoing good management of the site landscape.

1.2 Site Description

The site is located on the west side of Leeds city centre, West Yorkshire. The site is currently being used as a medium and long stay carpark.

To the north-west of the site is Leeds Inner Ring Road (A58M), to the west is Lisbon Street, to the south is Castle Street, to the east is Little Queen Street and to the north is St. Paul's Street.

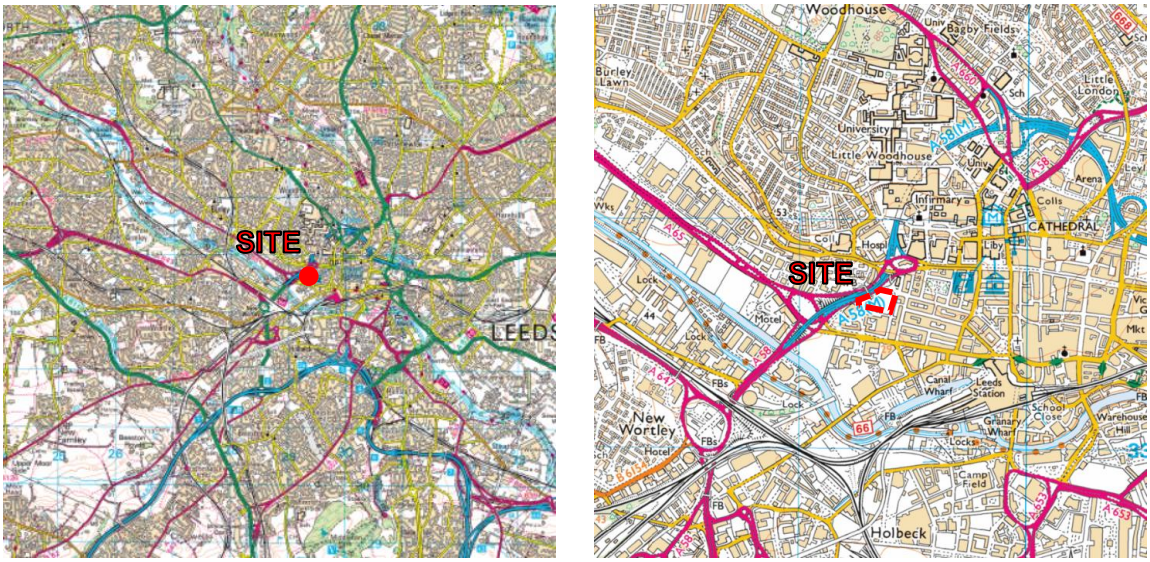


Figure 1 OS Map showing site location

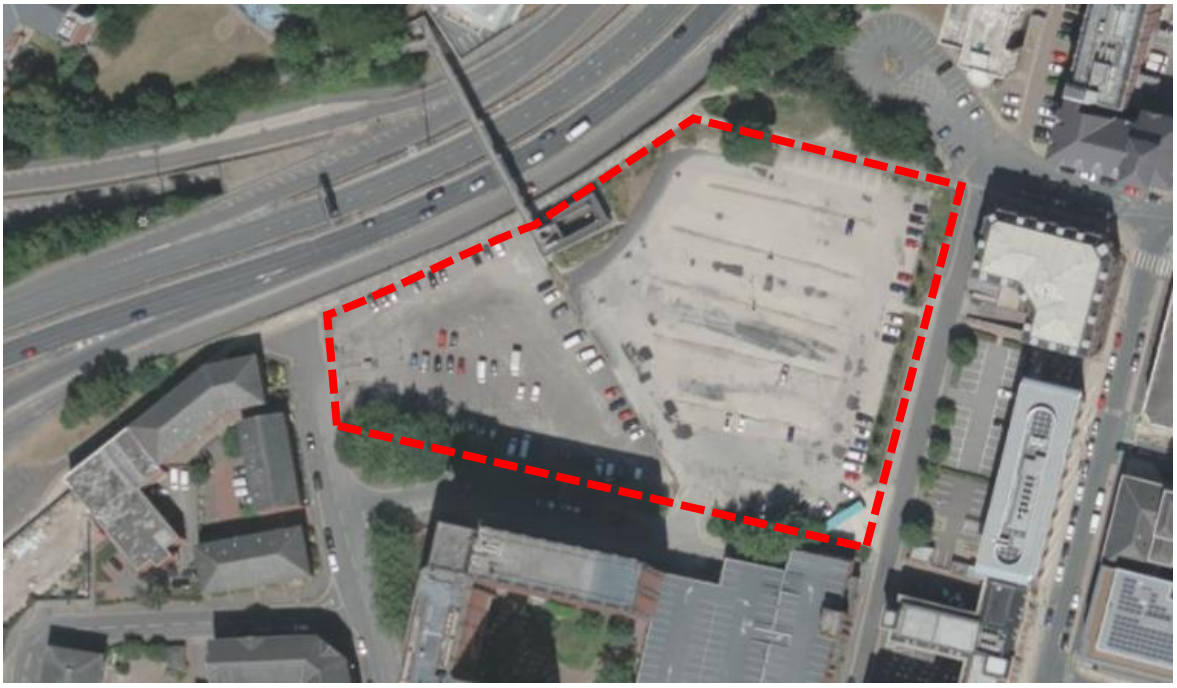


Figure 2 Aerial photograph with wider site boundary

1.3 Landscape and Ecological Baseline

A detailed habitat description of the site can be found in the June 2021 Ecological Appraisal report prepared by Brooks Ecology, which provides a baseline for the current site conditions. This report is included in Appendix B.

The site is mainly bare compacted gravel aggregate used as a carparking. On the site boundaries are sections of tarmac/concrete hardstanding, shrub beds with a limited range of non-native shrubs and sections of amenity grass. The site is of low ecological value.

The site has been assessed in the BNG 3.1 metric to have 3.65 habitat units. Extracts of BNG assessment 3.1 are included in Appendix A.

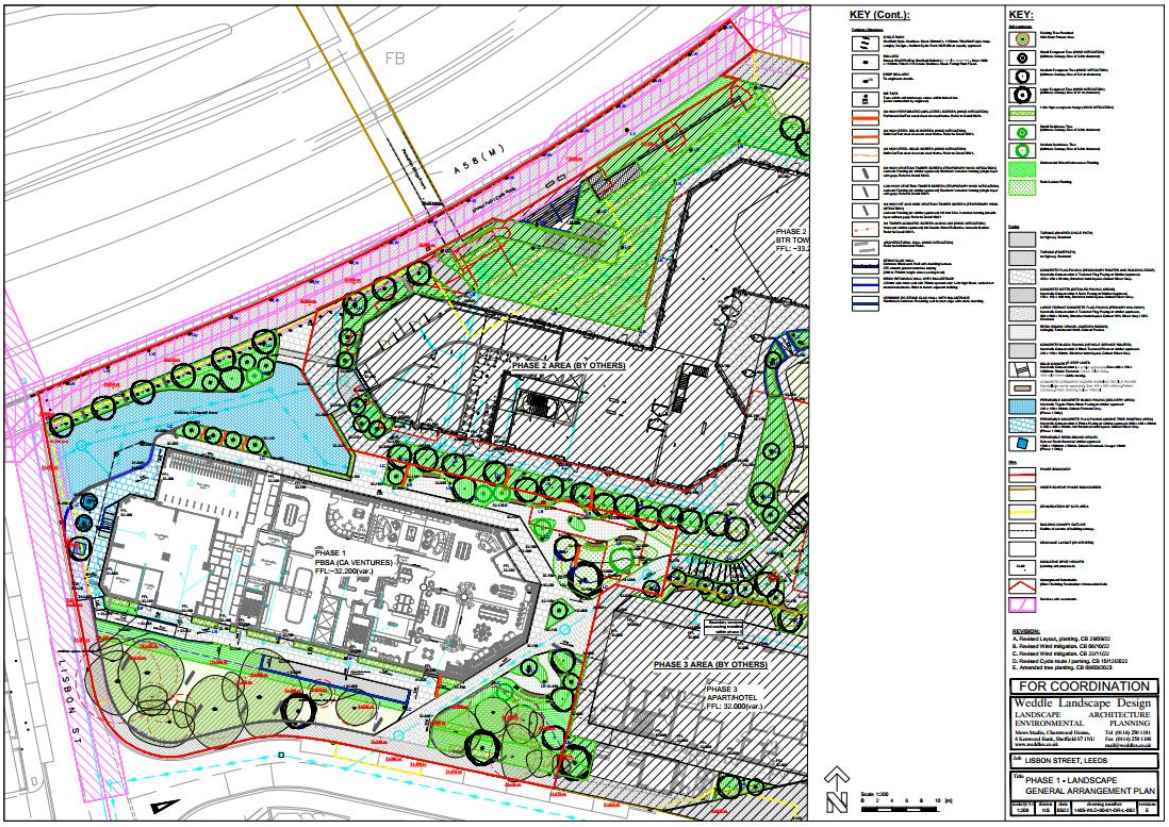
1.4 The Proposals

The new buildings, soft landscaping and hardstanding have a footprint of approximately 1.27ha.

As part of the Lisbon Street development a number of Landscape and Ecological Enhancements are proposed;

- Native plant species or cultivars of native species will be used where possible to provide pollen, nectar and cover for a wide range of fauna species
- Plant stock to be of local provenance where possible
- 'Rain Garden' marginal and wetland planting within swales.
- Invertebrate soil habitat will be improved through an initial layer of composted bark mulch
- Bird and Bat boxes to be provided and fitted externally to the buildings, as detailed in *1423 Lisbon Street, Leeds - Bird and Bat Enhancement Strategy, May 2022*
- Where possible external lighting will be positioned and angled to point downwards to reduce light impact

Extract of drawing '1405 Phase 1 Planting Plan'



Extract of drawing '1405 Phase 1 General Arrangement Plan'

1.5 Change in Ecological Condition

The ecological value of the site at handover is indicated by the extracts from the BNG 3.1 Metric included in Appendix A of this LEMP and the proposal drawings on page 5/6 of this LEMP. The ecological value and condition of the site is expected to improve over time.

1.6 Local Biodiversity Action Plan

The development of the site will support the Biodiversity Action Plan for Leeds;

- The installation of bat boxes will directly support the Pipistrelle Bat SAP.
- Additional boundary tree and shrub planting will directly support the Hedgerow HAP.

1.7 Responsibility and Review

After completion Lisbon Street Development Ltd will manage the site. The site will be managed under the Facilities Management Specification, and the Landscape and Ecological Management Plan will form a supporting document.

2 METHODOLOGY

2.1 Aims

A	**Provide a practical framework for landscape maintenance and management.**
B	**Appropriate management of all planting for amenity and increased wildlife value.**
C	**To ensure that site is healthy, safe and secure.**
D	**To maintain a commercial/residential landscape of high quality.**
E	**Maintain landscape characteristics of the site.**

2.2 Strategies

A: Provide a practical framework for landscape maintenance and management.

- Review and audit the Landscape Management Plan.
- Review efficiency and quality of work produced annually.
- Amendment and adjustments to the Management Plan based on annual review.
- Maintenance Schedule included as Section 4 of this Landscape Management Plan.
- Regular inspections to review overall appearance and maintenance.

B: Appropriate management of all planting for amenity and increased wildlife value.

- Review future revisions of the Biodiversity Action Plan for Leeds.
- Establishment and monitoring of tree and shrub planting.
- Establishment of planting providing pollen and nectar
- Low maintenance regime for tree and shrub planting

C: To ensure that site is healthy, safe and secure.

- Prune shrubs back from pathways.
- All access routes kept clear.
- Ensure that there is adequate access for emergency and maintenance vehicles.
- Maintain pathways by removing debris, leaf litter, moss, algae etc to prevent accidents.
- Grit pathways when required to prevent ice.
- Paving and fencing defects to be repaired as soon as possible.
- Monitor and review Health and Safety Policy
- Identify health and safety issues within the site by regular review and Maintenance Attendance Report submitted at least once monthly.

D: To maintain a commercial/residential landscape of high quality.

- Regularly prune and maintain the shrubs to keep them tidy.
- Maintain shrubs to prevent them growing too large for their locations, thin and replace as necessary, using best horticultural practices.
- Prune back shrubs from all signage, lighting and paths
- Ensure all weeds are removed regularly by hand/approved herbicides.
- Top up of mulch annually until planting closes canopy
- Remove dead plants and replace within following planting season.

- Remove leaf litter
- Repair any damage that may have occurred
- Maintain paths non-slippery, clear of moss, algae and loose gravel

E: Maintain landscape characteristics of the site.

- Replace any dead trees which become apparent within the following planting season (November – March)
- Inspect trees annually and carry out maintenance operations as required to keep trees in safe and healthy condition
- Replace or repair damaged fencing
- Remove litter and debris
- Ensure hard paved areas are kept clean and tidy, contributing to a neat streetscape.

3 IMPLEMENTATION PLAN

3.1 Introduction

The implementation of the strategies will be carried out over two phases. The first phase will be implemented during the construction program by the contractor. The second phase will be implemented once the development has been completed and the site handed over to Lisbon Street Development Ltd.

3.2 Phase 1: Construction Works

3.2.1 Boundary Protection

- Erect Tree Protection Fencing and maintain
- Erect construction site fencing and maintain.
- Remove construction site fencing on completion of all building and hard landscape works.
- Remove Tree Protection Fencing on completion of all building and hard landscape works.

3.2.2 Landscaping

- Implement Landscape Masterplan. This must be done by the first planting and seeding seasons following the occupation of the buildings or the completion of the development, whichever is the sooner
- Install bird and bat boxes

3.3 Phase 2: 5 Year Management Plan Schedule

Maintenance Operation	Frequency	Seasonal
HARDSCAPE / GENERAL SITE		
1. Remove litter and tidy up all planting areas and hard surfaces.	Each Visit	
2. Written Maintenance Attendance Report and recommendations for necessary remedial works (include Health and Safety reports/issues).	Each Visit	
3. Rake-up / sweep fallen leaf litter; remove from site, as required.	As required	Sept-Dec
4. Clear snow from access and emergency routes and grit as necessary during winter.	As required	Nov-Apr
5. Inspect security fencing and gates and repair as necessary.	Annual	
6. Inspect other fencing and gates and repair as necessary.	Annual	
7. inspect pathways / hard surfaces for patch / worn areas; make good.	Annual	
8. Check for graffiti; remove or remediate.	Annual	
9. Inspect external lighting and repair/replace as necessary.	Biannual	
10. Apply folia acting / residual herbicide to hard surfaces to prevent ingress of weed and algae growth.	Annual	Sept-Oct
11. Inspect all site furniture and repair/ adjust any loose fittings as necessary.	Annual	
12. Power washing of all paved surfaces.	Biennial (year 2,4)	

Maintenance Operation	Frequency	Seasonal
PLANTING / HEDGES		
13. Remove arisings from maintenance operations.	Each Visit	
14. Ensure all planted areas are kept weed free; no weed cover to exceed greater than 5% in area or 300mm in height.	Each Visit	
15. Trim vegetation back from paths, signage and vehicle sightlines.	As required	May-Sept
16. Monitor site for invasive species such as Japanese Knotweed, Himalayan balsam, Bramble and control as necessary.	As required	May-Sept
17. Dead head flowering shrubs following flowering period.	As required	July-Sept
18. Edge up planting beds to maintain soil level below adjacent hard surfaces.	Quarterly	
19. Undertake watering to ensure healthy establishment of all plant stock.	As required	Mar-Nov
20. Re-cultivate around base of shrubs/ hedge transplants by light hoe to relieve soil compaction.	4 times, (year 1-3)	Apr-Oct
21. Replace any dead, seriously damaged or diseased plants with of a similar size and species in following planting season, until canopies close	As required	Nov-Mar
22. Top up mulch layer to all planting beds; depth 75mm.	Annual	Mar
23. Supply & apply slow release fertiliser to planting areas; 60g/m2.	Annual (year 1-3 only)	Mar/Apr
24. Remove any dead, seriously damaged or diseased plants.	Annual	Sept-Oct
25. Undertake pruning of hedges, to encourage growth, promote good form and achieve desired height/width.	Annual (year 1-lateral growth only)	Sept-Oct
26. Undertake formative pruning of shrubs, to encourage growth and promote good form, as required.	Annual	Sept-Oct
27. Management of dense shrub and hedgerow must be outside of bird nesting season	As required	Sept-Feb
AMENITY GRASS		
28. Apply slow release lawn fertiliser:- Spring: 35g/m2 Autumn: 50g/m2.	Bi-annual	Mar-Apr & Oct- Nov
29. Maintain amenity grass at height of 25mm and trim / re-form edges.	As required	May-Sept
30. Spiking to all amenity grassed areas; to a depth of 75mm.	Bi-annual	Mar-Apr & Oct- Nov
31. Over-seed patchy grass areas.	Annual	Sept-Oct
32. Supply & apply selective herbicide to manufactures recommendations; to all grassed areas.	Annual	Sept-Oct
33. Carry out autumn scarification of all amenity grassed areas; depth 15mm.	Annual	Oct/Nov

Maintenance Operation	Frequency	Seasonal
RAIN GARDENS		
34. Undertake watering during dry spells to ensure healthy establishment of all plant stock	As required (years 1 & 2)	Mar-Nov
35. Inspect following heavy rainfall. Replace any vegetation in eroded areas	As required	
36. Top up mulch layer	Annual	Mar
37. Replace any dead, seriously damaged or diseased plants with of a similar size and species in following planting season, until canopies close	As required	Nov-Mar
38. Ensure basins are free draining by de-silting	Year 1 and then 5 yearly	Winter
39. Monitor vegetation for weeds/ invasive plants and remove by hand as necessary.	As required	May-Sept
TREES		
40. Inspect trees for health and hazards, and implement any recommended works	Quarterly	
41. Management of trees must be outside of bird nesting season	As required	Sept-Feb
42. Inspect tree stakes / ties / guards and replace/remove as required.	Quarterly	
43. Following strong winds, re-firm base and check tree stakes for stability.	As required	
44. Top of mulch layer at base of tree; 1.2m diam. x 75mm depth.	Annual	Mar
45. Supply & apply slow release fertiliser to base of each tree; 50g per new tree.	Annual	Mar-Apr
46. Undertake formative pruning of young trees to encourage good growth and shape, if required.	Biennial (year 1,3,5 only)	Oct-Nov
BIODIVERSE GREEN ROOF		
47. Plug and Wildflower Establishment: water for the first nine weeks to minimise losses.	As required	Mar-Apr & Oct- Nov
48. Undertake watering during dry spells to ensure healthy establishment of all plant stock	As required	May-Sept
49. Clear and clean all perimeter and detailing	Bi-annual	Mar-Apr & Oct- Nov
50. Removal of excessive debris and dead vegetation from the roof surface, drainage outlets, guttering and washed pebbles.	Bi-annual	Mar-Apr & Oct- Nov
51. Weeding and removal of unwanted / invasive species / or over dominant species (no one ecotone should account for more than 80% of the habitat area·	Bi-annual	Mar-Apr & Oct- Nov
52. Reinstate additional habitat features such as sand piles, logs etc.	Bi-annual	Mar-Apr & Oct- Nov

Maintenance Operation	Frequency	Seasonal
53. Review Inspection Chambers and ensure that water outlets are all free draining.	Bi-annual	Mar-Apr & Oct- Nov
54. Replace any dead, seriously damaged or diseased plants with of a similar size and species in following planting season, until canopies close	As required	Nov-Mar
HABITAT BOXES		
55. Lost / damaged bird / boxes should be replaced as necessary (by a suitably qualified individual)	Annual	Sept-Feb
56. Inspect bird boxes installed onto trees to ensure vegetation has not grown over box. Clean of old nesting material and remove un-hatched eggs and throw away. (by suitably competent person)	Biennial (year 2,4 only)	1 Aug-31 January
57. Inspect bat boxes installed onto trees to ensure vegetation has not grown over box. (Bat boxes must only be opened/inspected by a licensed bat worker)	Biennial (year 2,4 only)	Sept-Feb

4 OCCUPANT ECOLOGICAL HANDOVER INFORMATION

4.1 Ecological Value Within the Site

Within the property boundary, ecological value is provided through:

- Newly landscaped areas incorporating native and near-native planting.
- Rain gardens and swales with marginal and wetland planting to support invertebrates and improve surface water management.
- Areas of improved soil condition using organic mulches to encourage invertebrate communities.
- Integrated bird and bat boxes installed on buildings to provide roosting and nesting opportunities.
- Trees, shrubs and planted beds designed to provide seasonal pollen, nectar, berries and shelter.
- Common and publicly accessible areas, including landscaped routes and shared spaces, are designed to function as green infrastructure, improving connectivity for wildlife while enhancing visual amenity and wellbeing for occupants.

4.2 Benefits to Occupants and the Wider Community

The ecological enhancements deliver multiple benefits, including:

- Improved air quality and urban cooling through vegetation.
- Increased opportunities for occupants to experience nature in a city-centre setting, supporting wellbeing and mental health.
- Habitat creation for birds, bats and invertebrates, contributing to local biodiversity recovery.
- Sustainable drainage features that help manage surface water and reduce flood risk.
- Support for Leeds' Biodiversity Action Plan, particularly species and habitats such as pipistrelle bats and hedgerows.

These benefits extend beyond the site, contributing positively to the local environment and community.

4.3 How Occupants Can Support Local Ecology

Occupants can play an important role in protecting and enhancing the site's ecological value by:

- Planting ecologically appropriate, preferably native species in private terraces, balconies or internal planting areas where permitted.
- Reporting damaged planting, bird boxes or bat boxes to site management.
- Respecting landscaped areas and allowing plants to establish and mature.
- Avoid litter or introducing any pollutants into the rain gardens.
- Using outdoor lighting responsibly and avoiding additional lighting that may disturb wildlife, particularly bats.

Actions to avoid:

- Planting invasive or non-native species that could spread and outcompete local vegetation.
- Disturbing nesting birds, bat roosts or other wildlife features.
- Removing or altering planted areas, trees, shrubs or soil without permission.
- Blocking or fragmenting planted corridors that allow wildlife to move through the site.

4.4 Enhancing Ecology Within Owned or Occupied Areas

Where occupants have control over external or semi-external spaces, opportunities to enhance biodiversity include:

- Installing wildlife-friendly planters with nectar-rich plants .
- Providing small water sources for insects and birds, where safe and appropriate.
- Avoiding the use of pesticides and herbicides.
- Incorporating varied planting heights and structures to provide shelter.

Any significant proposed changes should be discussed with site management to ensure consistency with the long-term Landscape and Ecological Management Plan.

4.5 Management, Maintenance and Further Information

The overall management and maintenance of landscaped and ecological features is the responsibility of Lisbon Street Development Ltd, operating through the site Facilities Management team. The Landscape and Ecological Management Plan provides long-term guidance to ensure habitats are protected and enhanced over time.

For further information or to report ecological issues, occupants should contact:

- Site Facilities Management Team (via building management or concierge services)
- Landscape Management Contractor (as appointed by the management company)

Additional sources of local ecological information include:

- Leeds City Council – Biodiversity and Ecology Services
- West Yorkshire Ecology
- Yorkshire Wildlife Trust, which provides guidance on urban biodiversity, native planting and wildlife-friendly living

APPENDIX A - EXTRACTS FROM BNG 3.1 METRIC, MARCH 2023

A-1 Site Habitat Baseline

Condense / Show Columns | Condense / Show Rows | Main Menu | Instructions

Ref	Habitats and areas: Broad Habitat	Habitat Type	Area (hectares)	Distinctiveness: Distinctiveness	Condition: Condition	Strategic significance: Strategic significance	Suggested action to address habitat losses	Ecological baseline: Total habitat units	Retention category biodiversity value: Area retained	Area enhanced	Baseline units retained	Baseline units enhanced	Area habitat lost	Units lost	Bespoke compensation agreed for unacceptable losses
1															
2															
3															
4	Urban	Developed land; sealed surface	0.065	V.Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	Compensation Not Required	0.00			0.00	0.00	0.07	0.00	
5	Urban	Artificial unvegetated, unsealed surface	0.24	V.Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	Compensation Not Required	0.00			0.00	0.00	0.24	0.00	
6	Urban	Urban Tree	0.439	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	Same broad habitat or a higher distinctiveness habitat required [6]	3.51	0.208		1.66	0.00	0.23	1.85	
7	Grassland	Modified grassland	0.071	Low	Poor	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required [4]	0.14	0.029		0.06	0.00	0.04	0.08	
8															
9															
10															
11															
12															
		Total habitat area	0.82					3.65	0.24	0.00	1.72	0.00	0.58	1.93	

Total area lost (excluding area of Urban trees and Green walls): 0.35

A-2 Site Habitat Creation

Condense / Show Columns | Condense / Show Rows | Main Menu | Instructions

Post development/ post intervention habitats

Broad Habitat	Proposed habitat	Area (hectares)	Distinctiveness: Distinctiveness	Condition: Condition	Strategic significance: Strategic significance	Temporal multiplier: Standard or adjusted time to target condition	Final time to target condition/years	Difficulty: Final difficulty of creation	Habitat units delivered
Urban	Developed land; sealed surface	0.27	V.Low	N/A - Other	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	0	Medium	0.00
Urban	Introduced shrub	0.05	Low	Condition Assessment N/A	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.10
Urban	Rain garden	0.009	Low	Moderate	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	3	Low	0.03
Urban	Urban Tree	0.627	Medium	Moderate	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	27	Low	1.92
Urban	Biodiverse green roof	0.018	Medium	Good	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	10	Medium	0.10
	Total habitat area	0.97							2.15
	Site Area (Excluding area of Urban trees and Green walls)	0.35							

B-2 Site Hedge Creation

Condense / Show Columns | Condense / Show Rows | Main Menu | Instructions

Baseline ref	New hedge number	Proposed habitats: Habitat type	Length (km)	Habitat distinctiveness: Distinctiveness	Habitat condition: Condition	Strategic significance: Strategic significance	Temporal multiplier: Standard or adjusted time to target condition	Final time to target condition/years	Difficulty risk multiplier: Final difficulty of creation	Hedge units delivered
1	H1	Native Hedgerow	0.021	Low	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.04
2	H2/3	Hedge Ornamental Non Native	0.069	V.Low	Poor	Area/compensation not in local strategy/ no local strategy	Standard time to target condition applied	1	Low	0.07
3										
4										
5										
6										
7										
			0.09							0.11

On-site baseline	*Habitat units*	3.65
	Hedgerow units	0.00
	River units	0.00
On-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	3.87
	Hedgerow units	0.11
	River units	0.00
On-site net % change (Including habitat retention, creation & enhancement)	*Habitat units*	5.89%
	Hedgerow units	0.00%
	River units	0.00%
Off-site baseline	*Habitat units*	0.00
	Hedgerow units	0.00
	River units	0.00
Off-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	0.00
	Hedgerow units	0.00
	River units	0.00
Total net unit change (including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	0.22
	Hedgerow units	0.11
	River units	0.00
Total on-site net % change plus off-site surplus (including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	5.89%
	Hedgerow units	100.00%
	River units	0.00%
Trading rules Satisfied?		Yes ✓

APPENDIX B - ECOLOGICAL APPRAISAL REPORT BY BROOKS ECOLOGY, JUNE 2021

LISBON STREET
LEEDS

ECOLOGICAL APPRAISAL REPORT
BROOKS ECOLOGICAL

LISBON STREET
DEVELOPMENTS LIMITED

JUNE 2021

Report Title:	Ecological Appraisal Report Lisbon Street, Leeds
Report Reference:	ER-5506-01-C
Written by:	Christopher Shaw BSc (Hons) MCIEEM Senior Ecologist
Technical Review:	Peter Brooks BSc (Hons), MA, MCIEEM, CEnv Managing Director
QA:	Josh Birchall BSc (Hons) ACIEEM Ecologist
Approved for Issue:	Peter Brooks BSc (Hons), MA, MCIEEM, CEnv Managing Director
Date:	Written 04/05/2021 Amended 03/06/2021 Amended 04/06/2021

Brooks Ecological
Grounded advice

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

Contents

Summary

This report is produced to inform Lisbon Street Development 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 April 2021.

Key Findings

The Site is of low ecological value and has a baseline biodiversity score of 1.19 habitat units.

No further ecological surveys have been recommended.

The proposals present an opportunity to deliver a measurable net gain for biodiversity at the Site. Based on the final landscaping strategy, the scheme will deliver an overall net gain of 0.21 habitat units (+17.28%), well above the LCC policy requirement for 10%.

Introduction

1. Brooks Ecological Ltd was commissioned by Lisbon Street Development Ltd. to carry out an updating Preliminary Ecological Appraisal (PEA) of land at Lisbon Street, Leeds.
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', known as Land at Lisbon Street, was formerly occupied by the International Swimming Pool (ISP). It is currently used for temporary (long and medium stay) surface car parking, and bound by Little Queen Street to the east, Castle Street to the south, Lisbon Street to the west and to the north and west by a signed cycleway, with the Leeds Inner Ring Road (A58) situated beyond the cycleway, to the north west.
8. The assessment uses a 2km area of search around the Site for records of protected and notable species and locally or nationally designated wildlife sites.

Figure 1*the Site*

Desk Study

Landscape

9. The Site is located within the centre of Leeds City, with dense urban development surrounding it in all directions; see Figure 2, opposite.
10. Several small urban parks are present to the north, whilst the River Aire and the Leeds-Liverpool canal are present to the south.
11. To the southwest are several sections of disused railway line, which have now been colonised by a typical array of brownfield vegetation.
12. Together these parks, watercourses and brownfield sites provide a fragmented network of urban greenspaces, which are likely to be of high value to urban wildlife.

Wildlife Corridors

13. The River Aire and Leeds-Liverpool canal, together with several sections of active and dismantled railway line to the south and southwest, provide large-scale corridors through the urban landscape. However, all of these features are separated from the Site by built development.

Figure 2 *Analysis of wildlife corridors (white dashed lines) in relation to the Site*

Designated 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.

15. No statutory designated sites are present within the search parameters.

SSSI Impact Risk Zones (IRZs)

16. The Site lies within the IRZ for the Leeds-Liverpool 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 five locally designated sites within the search area, including four Leeds Nature Areas (LNAs) and one Local Wildlife Site (LWS); see Figure 4, overleaf.

18. All of these are sufficiently distant and unconnected to the Site to remain unaffected by the proposed development. Impacts are therefore not considered likely.

Granted EPSM Licenses

19. Two granted EPSM licenses show up within 1km of the Site, these being EPSM2009-1060 (destruction of a Common Pipistrelle resting place – 2009-2011) and 2014-4467-EPS-MIT (destruction of a Common Pipistrelle resting place – 2015-2020). Both licences are well-separated from the Site by dense urban development and fall outside of the Sites Ecological Zone of Influence.

Nature Improvement Area

20. The Site does not fall within a Nature Improvement Area.

Wildlife Habitat Network

21. Part of the Site's soft landscaping falls within the Leeds Wildlife Habitat Network (LWHN); see Figure 3 below.

22. The LWHN appears to encompass all areas of ornamental landscaping to the southwest but does not take in greenspace to the north or east. These sections of the network are likely to function more as potential stepping-stones, i.e. for invertebrates and birds, rather than direct corridors.

Figure 3 Leeds Wildlife Habitat Network (LWHN)

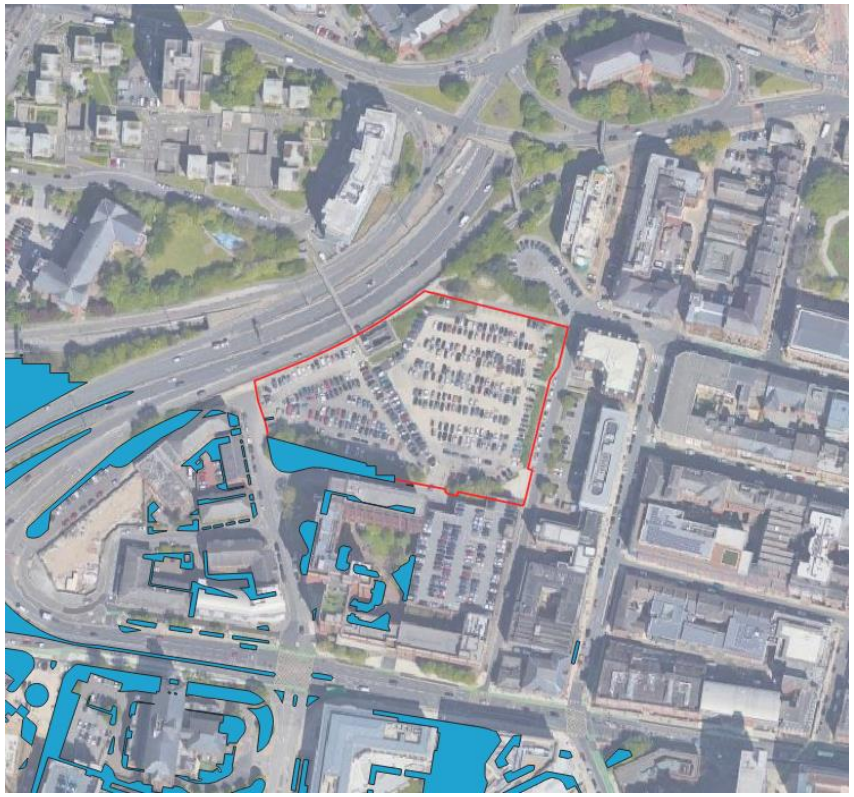
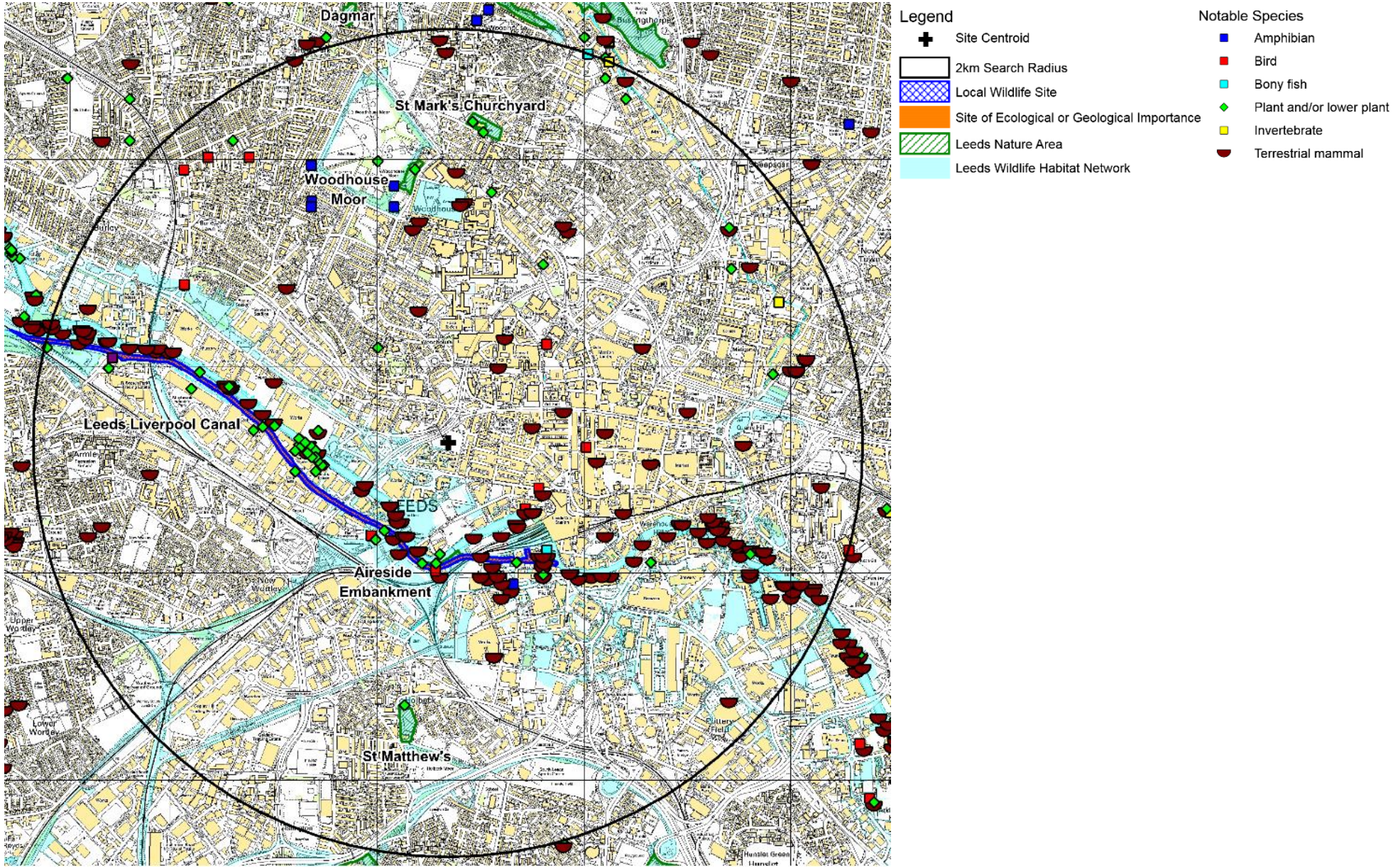


Figure 4 *Figure 3West Yorkshire Ecology; Species and Designated Sites*



Survey

Method

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

Limitations

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

Habitat Appraisal

Habitats Identified

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 referenced at the back of the report in identifying habitats. Habitat descriptions are divided into the 'distinctiveness' categories used in the calculations - with more weight being afforded the more distinctive / important habitats.

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.

Moderate 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.

[1] This Report has been prepared during May 2021 following a visit to the site in April 2021 and our findings are based on the conditions of the site that were reasonably visible and accessible at that date. We accept no liability for any areas that were not reasonably visible or accessible, nor for any subsequent alteration, variation or deviation from the site conditions which affect the conclusions set out in this report.

High Distinctiveness Habitats

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

Very High Distinctiveness Habitats

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 2.0 Calculation Tool. The areas can be used to quantify the impacts of development in an Ecological Impact Assessment if this is required by the Local Planning Authority.

Condition Assessment

33. Our condition assessment for each habitat described references where available the criteria set out in The Biodiversity Metric 2.0 Auditing And Accounting For Biodiversity Technical Supplement Beta Edition.

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

35. 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.

36. Habitats within the other higher tiers can fall into a range of conditions. We set out our reasoning based on the given criteria and guidelines.

Habitats of Low/Very Low Distinctiveness

Figure 5 *Approximate location and extent of these habitats*

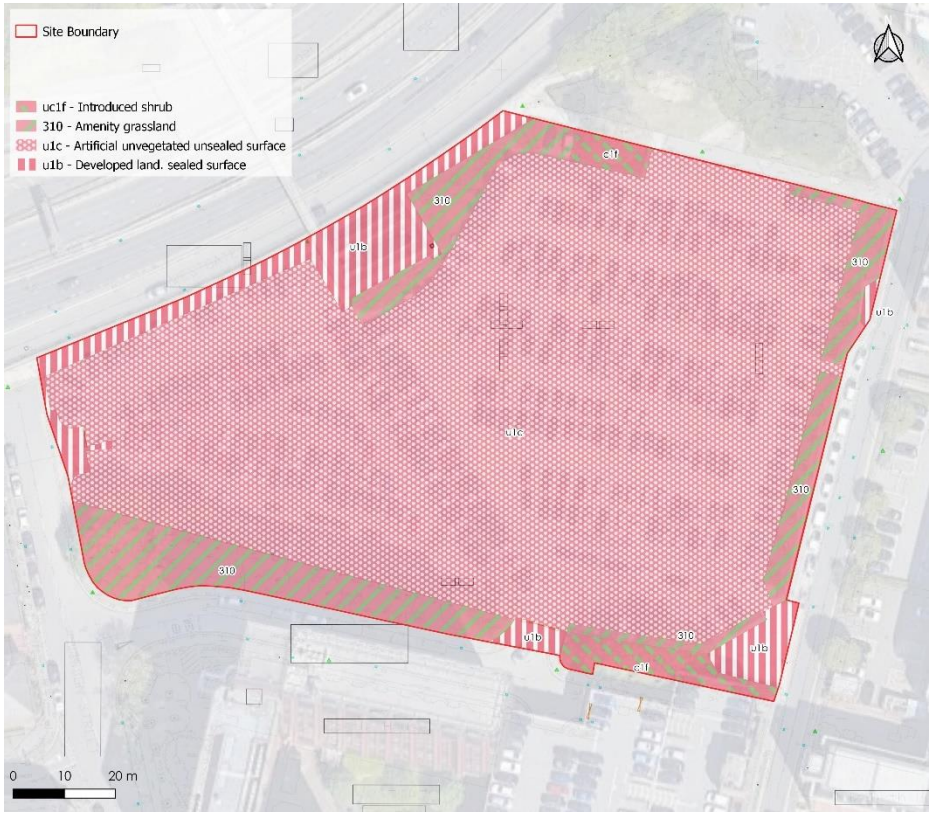


Table 1 Summary - Habitats of Low / Very Low Distinctiveness

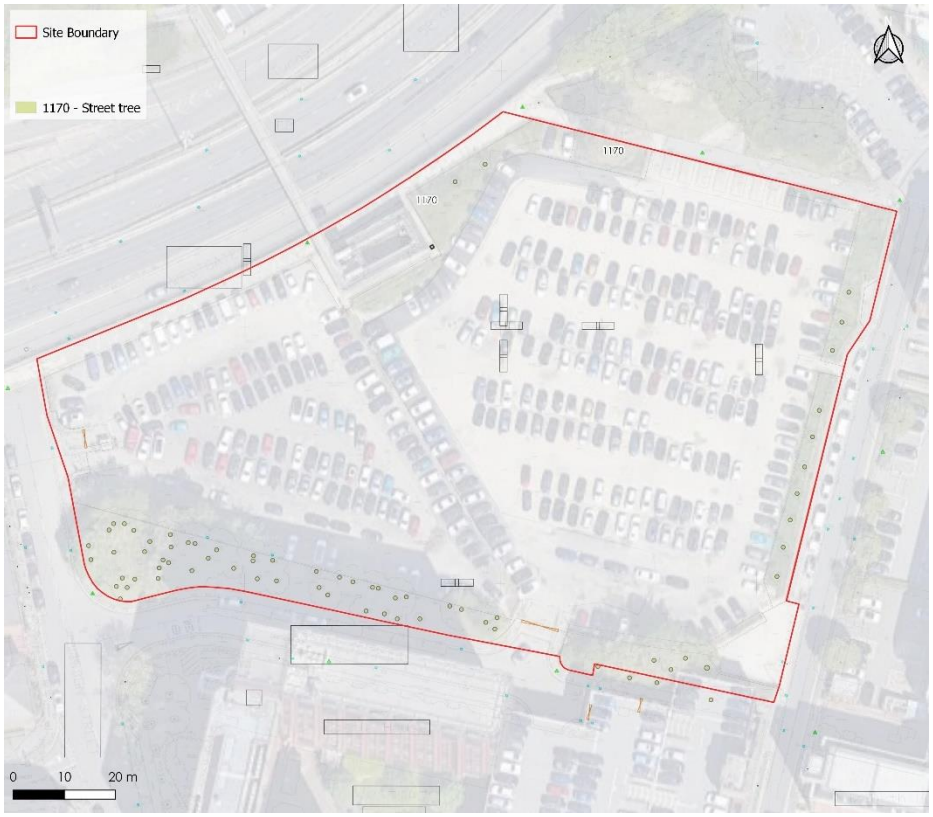
Habitat Code / Name	Summary Description	Condition
u1c Artificial unvegetated; unsealed surface	Most of the Site comprises of bare, compacted gravel aggregate, used as 'pay and display' city centre parking.	n/a
u1b Developed land; sealed surface	Along the Site peripheries are several sections of tarmac / concrete hardstanding, including roads, footpaths and a stairway providing pedestrian access over the inner ring-road to the northwest.	n/a
uc1f Introduced shrubs	Soft landscaping along Site peripheries. Typical ornamental shrub beds, planted up with a limited range of non-native shrubs. Much of this vegetation had been heavily pruned to ground level.	Poor
310 Amenity grass	Soft landscaping along Site peripheries. Typical species-poor amenity grass.	Poor

Figure 5a *Artificial surface*

Figure 5b *Amenity grass*

Habitats of Moderate Distinctiveness

Figure 6 *Approximate location and extent of these habitats*



1170 Trees

37. A large number of broadleaf trees have been planted within the soft landscaping along the Site peripheries.

38. To the north and east this planting includes a well-spaced row of young Italian alder trees, whilst to the south is an extensive group of semi-mature trees, including silver birch, hawthorn, beech, ash, rowan, willow, London plane, whitebeam and poplar.

39. All onsite trees have been subject to a separate Arboricultural Assessment, see Brooks Ecological Tree Report Ref. AR-.

Defra Metric Condition Assessment – Moderate

40. No assessment required; automatically assigned a score of 2 (moderate).

Figure 6a *Semi-mature tree planting along southern boundary*

Figure 6b *Young tree planting along eastern boundary.*

DEFRA Metric (Baseline)[2]

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

	Habitats and areas			Habitat distinctiveness	Habitat condition	Ecological connectivity	Strategic significance	Suggested action to address habitat losses	Ecological baseline
Ref	Broad Habitat	Habitat type	Area (hectares)	Distinctiveness	Condition	Ecological connectivity	Strategic significance		Total habitat units
1	Urban	Urban - Artificial unvegetated, unsealed surface	0.98	V.Low	N/A - Other	Low	Area/compensation not in local strategy/ no local strategy	Compensation Not Required	0.00
2	Urban	Urban - Developed land; sealed surface	0.09	V.Low	N/A - Other	Low	Area/compensation not in local strategy/ no local strategy	Compensation Not Required	0.00
3	Urban	Urban - Amenity grassland	0.09	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	0.18
4	Urban	Urban - Introduced shrub	0.03	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	0.06
5	Urban	Urban - Street Tree	0.02	Low	Moderate	Low	Area/compensation not in local strategy/ no local strategy	Same distinctiveness or better habitat required	0.08
6	Urban	Urban - Amenity grassland	0.08	Low	Poor	Low	Within area formally identified in local strategy	Same distinctiveness or better habitat required	0.18
7	Urban	Urban - Street Tree	0.15	Low	Moderate	Low	Within area formally identified in local strategy	Same distinctiveness or better habitat required	0.69
8									
9									
10									
		Total site area ha	1.27					Total Site baseline	1.19

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

Faunal Appraisal

42. 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

43. Only a small number of historic records has been returned for this group, with all entries being for common frog and common toad. None relate to the Site, with the closest being over 700m away.

Field Evidence

44. No ponds are present on Site, or within the Site's sphere of influence.

45. Most of the Site contains habitat of negligible value to this group (hardstanding), with the soft landscape along the Site peripheries offering small, isolated areas of sub-optimal amphibian habitat.

Summary Evaluation

46. The Site occupies an inner-city location, which is isolated from any potential amphibian breeding sites, and supports only small, fragmented areas of sub-optimal terrestrial habitat. A likely absence of great crested newt, or significant numbers of common amphibians, can be reasonably concluded.

Further Surveys

47. No further surveys or precautions are considered necessary.

Bats

Desk evidence

48. A large number of records has been returned for this group, most of which relate to common pipistrelle, with the occasional soprano pipistrelle and noctule bat. None of these records relate to the Site.

Field Evidence

Potential Roost Sites

Buildings: There are no buildings present on Site.

Trees: No potential roost features (PRFs) were identified within any of the on-site trees.

Foraging and Commuting Habitat

49. The Site occupies an inner-city location, which is subject to high levels of light pollution, and which is isolated from any areas of higher value bat habitat. The Site itself contains only a very small area of low value foraging and commuting habitat for this group.

Summary Evaluation

50. The Site is very unlikely to be of significant value to any local bat populations.

Further Surveys

51. No further surveys or precautions are considered necessary.

Birds

Desk Evidence

52. Records have been returned for Kingfisher, Peregrine, Red Kite, Mistle thrush and Redwing.

53. Of these, Mistle thrush could be expected to nest on Site in very low numbers, whilst Redwing could forage on rowan and whitebeam trees over the winter months. Neither would have any significant dependence on the Site.

Field Evidence

54. During the breeding season, the more established tree planting to the southwest of the Site could provide suitable nesting habitat to a limited range of birds, namely wood pigeon.

55. Fruit bearing trees, such as hawthorn, rowan and whitebeam are likely to provide an important food resource for local birds in an urban landscape which is otherwise devoid of natural food sources.

56. During the winter months, urban tree planting, such as that along the Site's southern boundary, can provide important roost sites for birds.

Summary Evaluation

57. Urban tree planting can be of relatively high importance to this group and should be retained, protected and enhanced wherever possible.

Further Surveys and Recommendations

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

59. Standard precautions apply in relation to pre-works clearance. Depending on the timing of works to the plot pre-emptive measures may be worthwhile in limiting the potential of the Site to support nesting.

60. Any tree loss should be suitability mitigated and compensated.

Badgers

Desk evidence

61. There are no records of badger activity within 2km of the Site.

62. The Site does not fall within a badger alert zone.

Field Evidence

63. No evidence of badger activity was identified on Site.

Summary Evaluation

64. The Site offers few opportunities for this species, and is considered largely unsuitable, due to its isolation from any areas of better habitat, together with the high levels of disturbance and small areas of landscaping.

65. A likely absence of this species can be reasonably concluded.

Further Surveys

66. No further survey or precaution is recommended.

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. The following species were noted[3]:

    - None

Survey constraints

68. Although no INNS have been identified in this preliminary survey it is not always possible to conclude absence from preliminary survey alone due to factors such as season, accessibility, 3rd party attempts to hide evidence or undisclosed treatment programmes. For this reason, this report should not be relied upon as definitive evidence of absence of INNS.

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

    - Suboptimal survey season
    - Potential for tipping of material

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

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

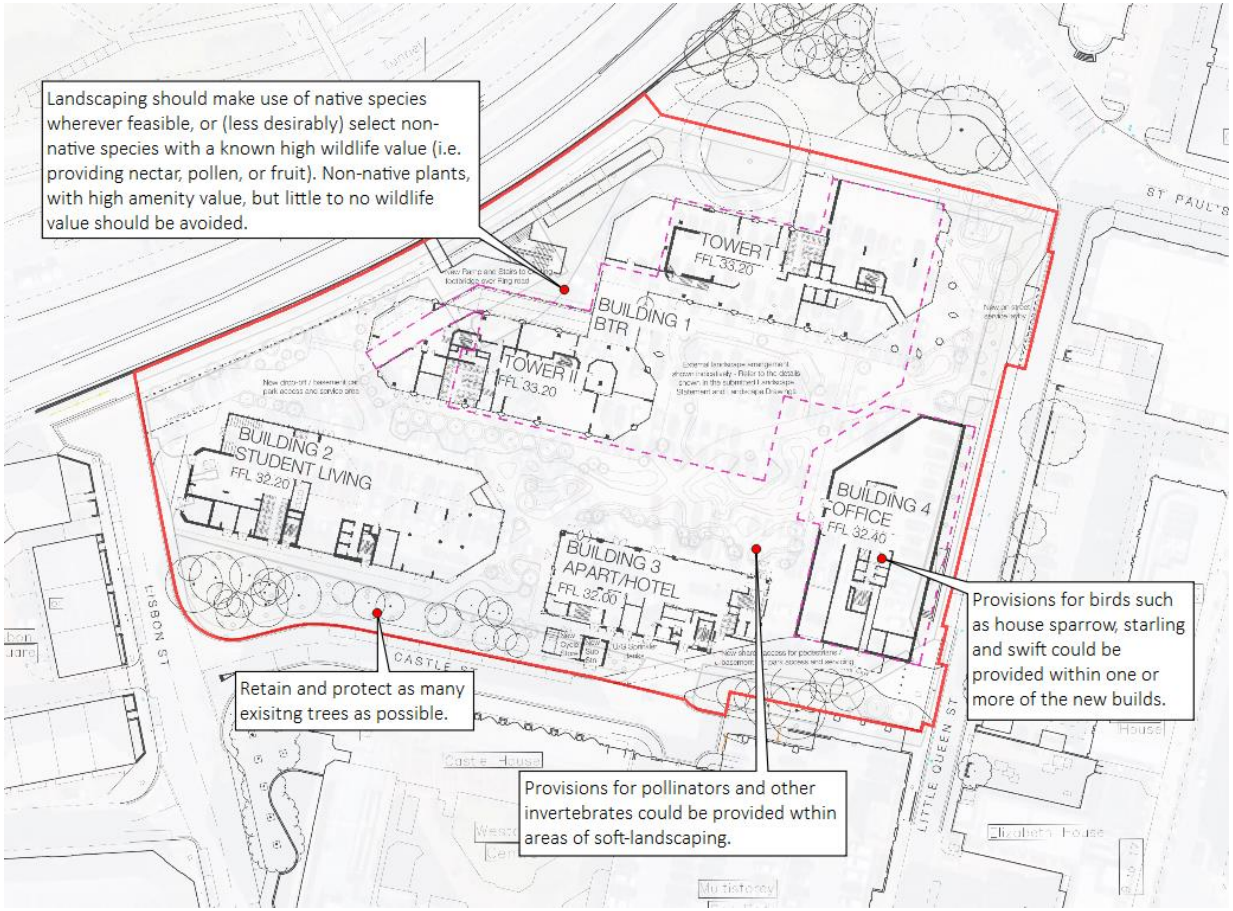
Ecological Constraints & Opportunities

71. Leeds City Council (LCC) now require all developments to demonstrate a 10% net gain in biodiversity, using the Biodiversity Metric 2.0 Calculation tool. The Site has very low baseline score due to the extent of hard-surface and low value, man-made habitats, and a net gain here is wholly achievable.

72. The scheme should seek to minimise biodiversity loss by retaining as much existing vegetation as possible. The Site Layout shows much of the established tree planting to the south west (within the LWHN) as being retained. This will help to maintain the network's function, whilst additional landscaping will in time help to strengthen and extend the network further.

73. Post-development, the Site's biodiversity value could be further increased by providing provisions for groups such as nesting birds and invertebrates.

Figure 7 *Constraints and Opportunities Plan*



Conclusions & Recommendations

Planning considerations		
Recommendation	**Rationale**	**When**
R1 Additional Surveys to establish baseline	**Not required**	N/A
R2 Calculate final Biodiversity Impact Score	Using DEFRA metric to quantity net gain/loss of biodiversity.	Final calculations have been completed and are presented in the following section. .
R3 Biodiversity Enhancement Plan	A plan showing the provision of faunal boxes should be produced, aimed at attracting declining urban bird species, such as swift and house sparrow.	Suitable for Condition of Planning

Other considerations (managing legal or financial risks)		
Issue	**Rationale**	**When**
R4 Nesting bird management	As with most sites the standard precaution in relation to birds would apply: To prevent the proposed works impacting on nesting birds, any clearance of vegetation will need to be undertaken outside of the breeding bird season which is 1st March – 31st August inclusive. Any clearance required during the breeding bird season should be preceded by a nesting bird survey to ensure that the law is not contravened through the destruction of nests and that any active nests are identified and adequately protected during the construction phase of the development.	Pre- and during -clearance

Biodiversity Net Gain Calculations

Post-development Baseline

Proposed Habitat

92. Habitat present on Site post-development have been based on the DLA Architecture Site Plan GA drawing 2017-116-120 Rev. C, and the Illustrative Landscape Masterplan produced by re-form landscape architecture.

93. Planting types specified in the Landscape proposal have been assigned a UK Habitat Classification description that best fits the target habitat.

94. Area measurements for each of the planting types has been estimated using qGIS mapping software.

Condition Assessment

95. The condition assessment for each proposed habitat is based on what is realistic and achievable for the Site, based on the Landscape plans.

Habitat Unit Score

96. The Site has been assessed as having a post development score of 1.40 Habitat Units.

97. This is based on 0.94 Habitat units being generated through new planting (see table overleaf), and 0.46 baseline Habitat Units being retained through protecting existing trees (mostly along the southern boundary.

Figure 8 Post development baseline.

DEFRA Metric (Post-development)

98. This metric sets out the predicted baseline for the Site following the completion of development. This is based on the Site Layout and Landscape Masterplan – provided by the client.

Post development/ post intervention habitats								
Proposed habitat	Area (hectares)	Distinctiveness	Condition	Ecological	Strategic significance	Temporal	Difficulty	Habitat units delivered
				Ecological connectivity	Strategic significance	Time to target condition/years	Difficulty of creation category	
Urban - Developed land; sealed surface	0.92	V.Low	N/A - Other	Low	Area/compensation not in local strategy/ no local strategy	0	Low	0.00
Urban - Amenity grassland	0.07	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	1	Low	0.14
Urban - Introduced shrub	0.18	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	1	Low	0.35
Urban - Rain garden	0.03	Low	Poor	Low	Area/compensation not in local strategy/ no local strategy	1	Low	0.06
Urban - Street Tree	0.16	Low	Moderate	Low	Area/compensation not in local strategy/ no local strategy	27	Low	0.24
Urban - Introduced shrub	0.07	Low	Poor	Low	Within area formally identified in local strategy	1	Low	0.16
Totals	1.27							0.94

Final BNG Assessment

99. This exercise predicts an overall Net Gain of 0.21 Habitat Units (+17.28%).

100. As a measurable net gain can be achieved through on-Site mitigation and compensation measures, biodiversity offsetting will not be required.

On-site baseline	*Habitat units*	1.19
	Hedgerow units	0.00
	River units	0.00
On-site post-intervention (Including habitat retention, creation, enhancement & succession)	*Habitat units*	1.40
	Hedgerow units	0.00
	River units	0.00
Off-site baseline	*Habitat units*	0.00
	Hedgerow units	0.00
	River units	0.00
Off-site post-intervention (Including habitat retention, creation, enhancement &	*Habitat units*	0.00
	Hedgerow units	0.00
	River units	0.00
Total net unit change (including all on-site & off-site habitat retention/creation)	*Habitat units*	0.21
	Hedgerow units	0.00
	River units	0.00
Total net % change (including all on-site & off-site habitat creation + retained habitats)	*Habitat units*	17.28%
	Hedgerow units	0.00%
	River units	0.00%

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*.

DEFRA (2019) The Biodiversity Metric 2.0 Auditing and Accounting for Biodiversity Technical Supplement, Beta Edition 29th July 2019

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*

Natural England (2019) The Biodiversity Metric 2.0 Auditing and Accounting For Biodiversity Technical Supplement, Beta Edition 29th July 2019

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 Habs (2018) The UK Habitat Classification Habitat Definitions Version 1.0 UK Habitat Classification Working Group May 2018

Appendix 1 Habitats and Ecological Features

Appendix 2 List of species recorded

Annual meadow grass	*Poa annua*
Birch	*Betula sp.*
Black medick	*Medicago lupulina*
Bramble	*Rubus fruticosus*
Broad leaved dock	*Rumex obtusifolius*
Cock's-foot	*Dactylis glomerata*
Creeping bent	*Agrostis stolonifera*
Creeping buttercup	*Ranunculus repens*
Daisy	*Bellis perennis*
Dandelion	*Taraxacum officinale agg.*
Red Fescues	*Festuca rubra.*
Goat willow	*Salix caprea*
Groundsel	*Senecio vulgaris*
Herb robert	*Geranium robertianum*
Meadow grass	*Poa sp.*
Nettle	*Urtica dioica*
Perennial rye grass	*Lolium perenne*
Ribwort plantain	*Plantago lanceolata*
Yorkshire fog	*Holcus lanatus*
Butterfly bush	*Buddleia davidi*
Rat's tail/ greater plantain	*Plantago major*
Red clover	*Trifolium pratense*
Mugwort	*Artemisia vulgaris*
White clover	*Trifolium repens*
Creeping buttercup	*Ranunculus repens*
False oat grass	*Arrhenatherum elatius*
Creeping thistle	*Creeping thishle*
Perforated st.johns wort	*Hypericum perforatum*
Cleavers	*Galium aparine*
Elm	*Ulmus sp.*
Red valerian	*Centranthus ruber*
Cherry	*Prunus avium*
Poplar	*Populus sp.*
London plane	*Platanus × acerifolia*
Beech	*Fagus sylvatica*
Hawthorn	*Crataegus monogyna*
rowan	*Sorbus aucuparia*
mahonia	Mahonia sp.
Dogwood	*Cornus sanguinea*
elder	*Sambucus nigra*
snowberry	*Symphoricarpos albus*
Italian alder	*Alnus cordata*

Appendix 3 Explanatory Notes and Resources Used

Site Context

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

Designated Sites

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

Functional linkage with off-Site habitats

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

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

Method

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

Faunal Appraisal

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

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

We discuss further only notable species or groups which could be a potential constraint due to the presence of suitable habitat and their presence (or potential presence) in the wider area. We screen out and do not present accounts of notable species or groups which do not meet these criteria – in some cases it may be necessary to explain this reasoning.

Consideration is given to the Local Biodiversity Action Plan (LBAP), which for this site is the 'Leeds Biodiversity Action Plan'.

Species/group	Habitat
Great-crested newt	Lowland wet grassland
Harvest Mouse	Magnesian Limestone grassland
Thistle Broomrape	Hedgerow and field margins
Pasqueflower	Reedbeds
Pipistrelle Bat	
White-clawed Crayfish	

Bats

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

Bat Roosting Suitability of Buildings and Trees

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

Evaluation

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

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

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

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

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

Appendix 4 Bat Activity Survey Rationale

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

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

- the avoidance of legal offences, and;

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

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

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

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

Bat activity is easy to predict on Site, given the simple nature of the habitats present, combined with an assessment of the local landscape and a review of local records. Mitigation is therefore straight forward to design, and is unlikely to change following further detailed surveys. As such, further survey is not considered necessary.

This assessment is made by Christopher Shaw BSc (Hons) MCIEEM. Chris has over 10 years' experience of carrying out bat surveys in a professional capacity and is registered to use the Class Survey Licence WML CL18 (Bat Survey Level 2) and Bat Mitigation Class Licence WML CL21 Annex B. He is an active member of the West Yorkshire Bat Group and West Yorkshire Bat Care Scheme.

Appendix 5 Wildlife Legislation, Policy and Guidance

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

Legislation

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

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

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

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

The Conservation of Habitats and Species Regulations (2010)

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

The Wildlife and Countryside Act (1981) as amended

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

The Countryside and Rights of Way Act 2000 (CRoW)

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

Natural Environment and Rural Communities Act 2006 (NERC)

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

Hedgerows Regulations (1997)

Define and provide protection for Important Hedgerows.

Protection of Badgers Act (1992)

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

Protected Sites

Statutory EU / International Protected Sites

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

Statutory UK Protected Sites

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

Locally Protected Sites

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

Protected Species

European Protected Species

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

UK Protected Species

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

Invasive species

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

Planning Policy / Guidance

The National Planning Policy Framework (NPPF):
The National Planning Policy Framework was updated in February 2019. The most relevant paragraphs from the NPPF are set out below.

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

Section 11 of the NPPF details making effective use of land. The Framework states that planning policies and decisions should "*take opportunities to achieve net environmental gains – such as developments that would enable new habitat creation*" and should "*recognise that some undeveloped land can perform functions for wildlife*" (P118).

Section 15 details conserving and enhancing the natural environment; policies and decisions should be "*protecting and enhancing sites of biodiversity value*", "*recognise the intrinsic character and beauty of the countryside*" and contribute to conserving and enhancing the natural environment and reducing pollution (P170). Allocations of land for development should, "*prefer land of lesser environmental value, where consistent with other policies in this Framework and take a strategic approach to maintaining and enhancing networks of habitats*" (P171).

The Framework sets out ways to minimise the impacts on biodiversity through "*identifying, mapping and safeguarding components of local wildlife rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity*" and the "*conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and (the need to) identify and pursue opportunities for securing measurable net gains for biodiversity*" (P174).

It is made clear in P175 that local planning authorities should apply principles when determining planning applications. Planning permission should be refused "*if significant harm to biodiversity resulting in development cannot be avoided, adequately mitigated, or, as a last resort, compensated for*". Development should not normally be permitted where an adverse effect on a SSSI is likely and "*opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity*".

Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services.
This strategy builds on the Natural Environment White Paper (June 2011) - Setting out the current UK Government's approach to nature conservation. It promotes a more coherent and inclusive approach to conservation and the valuing in economic and social terms of economic resources.

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

ODPM circular 06/05 (2005) Biodiversity and Geological Conservation - Statutory Obligations and Their Impact Within the Planning System
Provides guidance to Local Authorities on their obligations to biodiversity – particularly in relation to assessing planning applications and ensuring the adequacy of information.

BSI (2013) British Standards Institute BS 42020:2013 Biodiversity — Code of Practice for Planning and Development.
Provides a standard for the biodiversity assessment and development industries and decision makers such as Local Planning Authorities to work to.


Site Boundary
uc1f - Introduced shrub
310 - Amenity grassland
u1c - Artificial unvegetated unsealed surface
u1b - Developed land. sealed surface
c1f
310
u1b
310
u1b
u1c
310
u1b
310
u1b
c1f
0
10
20 m