

PRELIMINARY ECOLOGICAL APPRAISAL

SEPTEMBER 2024

JD Campus

Hollins Brook Way

Bury

BL9 8RR

U R B A N
G R E E N



QUALITY MANAGEMENT

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CONTENTS

1	Executive Summary.....	1
2	Introduction	5
2.1	Scope	5
2.2	Site Context.....	5
2.3	Purpose of Report	5
3	Previous surveys	6
3.1	Preliminary Ecological Appraisal (Urban Green 2022)	6
3.2	Bat Surveys (Urban Green, 2022b).....	6
3.3	Construction Environment Management Plan (CEMP) (Urban Green, 2023)	6
3.4	Bird and Bat Box Plan (BBBP) (Urban Green, 2023)	6
3.5	Invasive Species Method Statement (Urban Green 2023)	6
4	Methods	7
4.2	Desk Study.....	7
4.3	Field Survey	8
4.4	Bat Assessment.....	9
4.5	Constraints to the Survey	10
4.6	Lifespan of Report	11
4.7	Definitions	11
5	Baseline Ecological Conditions	12
5.1	Site Context.....	12
5.2	Designated Sites	12
5.3	Flora and Fauna.....	13
5.4	Field Survey	14
5.5	Site Suitability for Protected and Notable Species.....	15
5.6	Invasive Species	17
6	Ecological Constraints and Recommended Mitigation.....	18
6.1	Proposed Development.....	18
6.2	Designated Sites	18

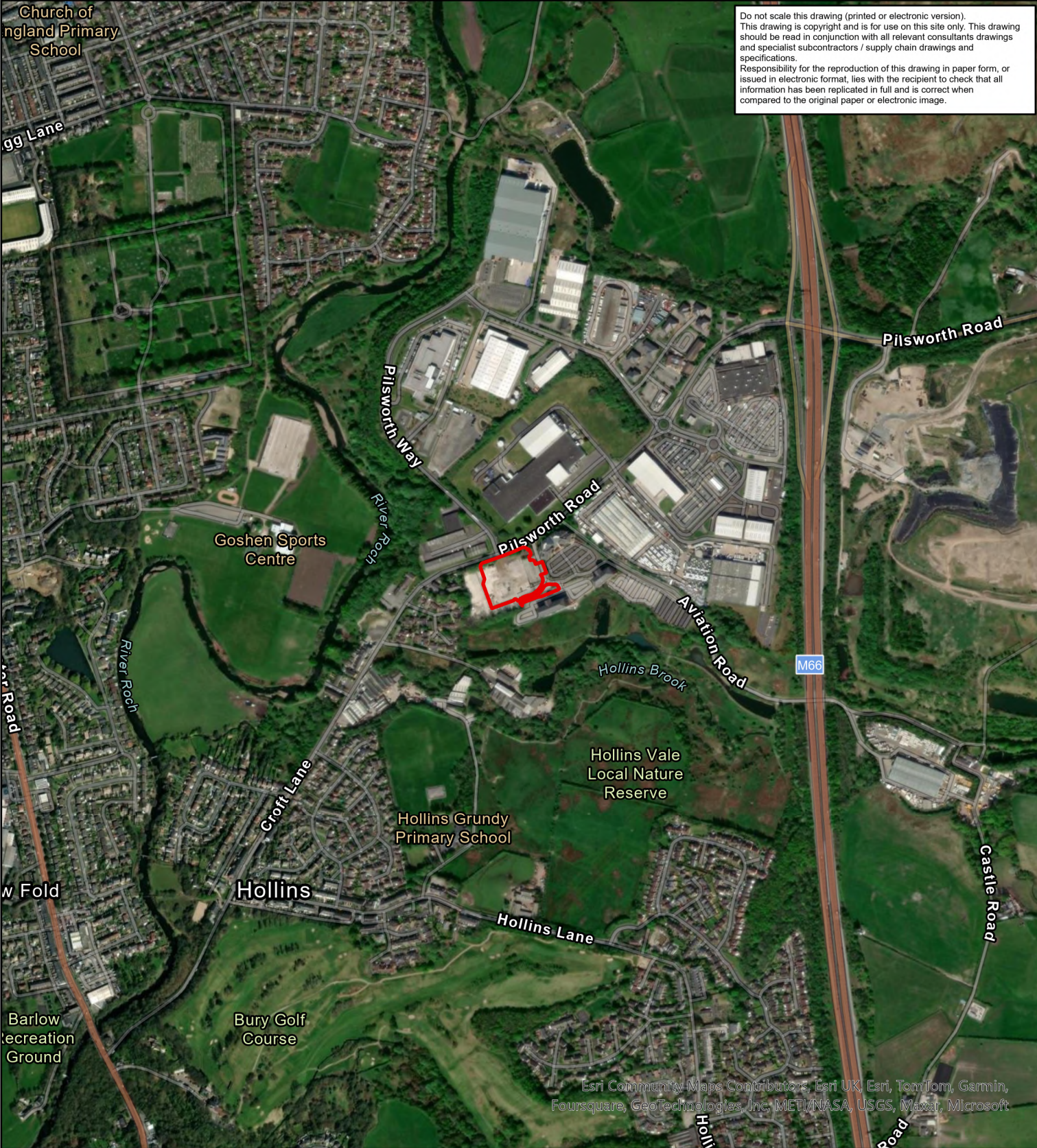
6.3	Fauna	18
6.4	Invasive Species	20
7	Further Surveys	21
8	Opportunities for Enhancement.....	22
9	Conclusion	23
10	References	24
Figure 1:	Site Context	2
Figure 2:	Habitat Map.....	3
Figure 3:	Site Photographs	4
Table 1:	Desk study sources of information	7
Table 2:	Key to species abundance	8
Table 3:	Suitability of buildings for roosting bats (adapted from Collins, 2023)	9
Table 4:	Suitability of site for foraging and commuting bats (adapted from Collins, 2023)	10
Table 5:	Designated sites within the search areas.....	12
Appendix 1:	Relevant Legislation	26
Appendix 2:	Bird Data Search Results	30
Appendix 3:	Habitat Map and Target Notes.....	31
Appendix 4:	Preliminary Roost Assessment Results.....	32

1 Executive Summary

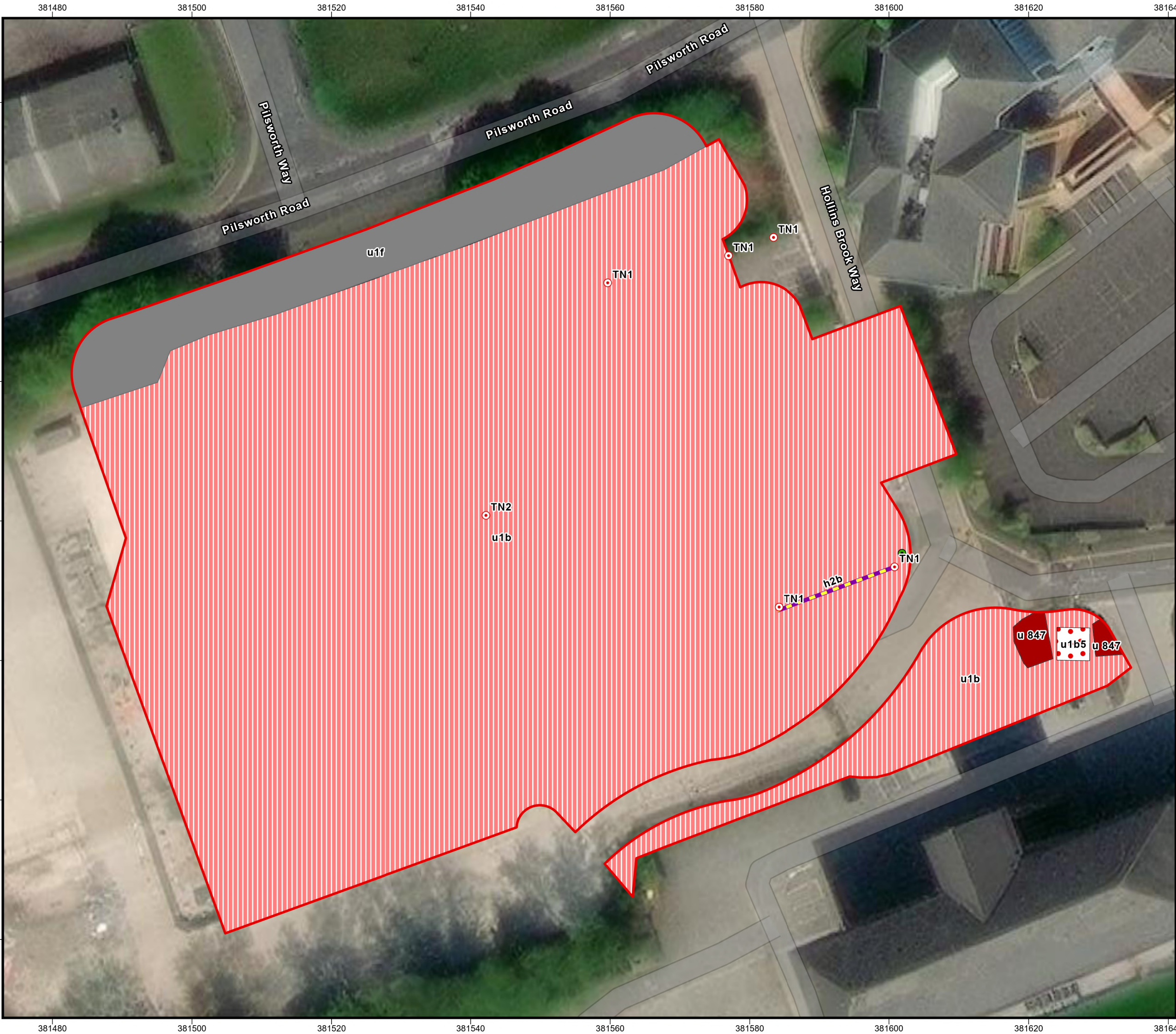
- 1.1.1.1 JD Group Ltd is proposing to develop land at Hollinsbrook Way, Bury (hereafter referred to as ‘the site’). The proposals include the construction of a multi-story hub building, parking, and leisure areas.
- 1.1.1.2 Urban Green has been appointed to complete a Preliminary Ecological Appraisal of the site. The objectives of the assessment are to identify habitats on site and determine the suitability for any ‘protected and/or notable’ species that may occur on site. Further ecological surveys and mitigation are recommended, where appropriate, which aim to minimise potential impacts on ecology, due to the proposed development.

- 1.1.1.3 Following the survey work, the key recommendations are summarised in the following table:

Current Site Use and Adjacent Site Use	The current site is predominantly hardstanding, with sparse vegetation. Phase 1 is currently in development, with construction equipment and personnel on site.
Potential Impacts on Designated Sites	No potential impacts on designated sites nearby to the site are anticipated to occur due to the proposed development. The site is located at a sufficient distance from nearby designated sites, and the proposed development activities have been considered.
Habitats	The site comprised predominantly hardstanding, with sparse vegetation and hedgerow.
Ecological Constraints	The following potential ecological constraints were identified during the assessment: • Suitable foraging/resting habitat with the onsite hedgerow for hedgehog and birds. • Possibility for commuting bats, badger and common amphibians. • Local Nature Reserve immediately to the south of the wider site boundary
Recommended Ecological Mitigation	The following mitigation measures are recommended to minimise potential impacts due to the proposed development: • Precautionary Working Methods during the construction phase for badgers. • Reasonable avoidance measures for common amphibians, and hedgehogs. • Lighting mitigation for bats. • Production of an INNS report detailing removal of cotoneaster. • Vegetation removal should be completed outside of the breeding bird season (March to August, inclusive). If this is not feasible, a Nesting Bird Check is to be completed by a qualified ecologist within 48 hours before removal is completed.
Recommended Further Surveys and Reports	No further surveys are required for the Phase 2 development to progress. It is recommended a second CEMP and BBBP is produced in relation to Phase 2.
Recommended Ecological Enhancements	The National Planning Policy Framework (NPPF) (2023) highlights the requirement for planning policies and decisions to conserve and enhance the natural environment. The proposed development provides the opportunity to enhance the site and ecological enhancements have been recommended.



Legend: Red Line Boundary		0.85 Kilometers		N URBAN GREEN A: Ground Floor, The Tower, Deva City Office Park, Trinity Way, Manchester M3 7BF T: +44 (0) 161 312 3131 weareurbangreen.co.uk
Client: JD Sports		Issue: 01	Figure: 01	
Project: JD Campus		Scale @ A4 1:10,000		
Title: Site Context		Approved by: CL	Checked by: OJ	
Drawing Ref: UG_1466_SITE_CONTEXT		Author: CL	Date: 10/09/2024	



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Legend

- Red Line Boundary
- Non-native and ornamental hedgerow
- Buildings
- Urban
- Developed land sealed surface
- Sparsley vegetated urban land
- Urban Tree
- Invasive species
 - TN1 - Cotoneaster
 - TN2 - Himalayan balsam

N



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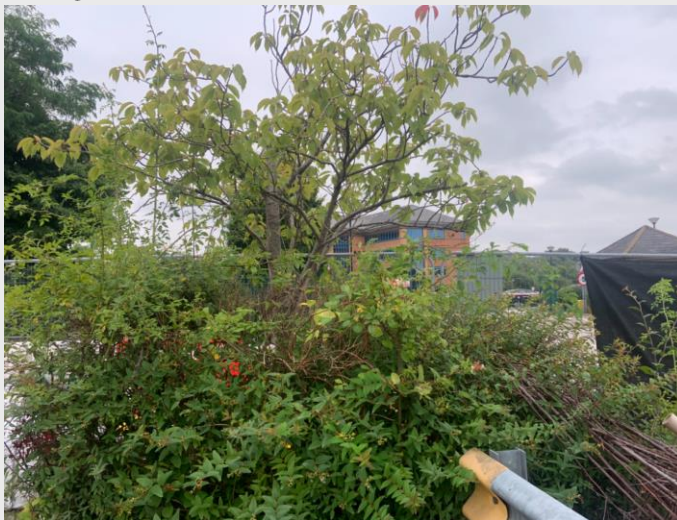
Figure 3. Photographs of the Site



Photograph 1: View of the site from the eastern site entrance



Photograph 2: View of the southeastern hedgerow with construction fencing in front



Photograph 3: Young cherry tree in the southeastern corner



Photograph 4: Southeastern hedgerow

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Photograph 5: Northeastern vegetation



Photograph 6: Northern heightened verge with sparse grassland



Photograph 7: Small Himalayan balsam plant



Photograph 8: Southeastern security building and heavily managed ornamental shrub

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Photograph 9: Southern line of hardstanding pavement with grass



Photograph 10: Southern line of pavement with newly sown grass

2 Introduction

2.1 Scope

- 2.1.1.1 Urban Green has been instructed by JD Group Ltd to carry out a Preliminary Ecological Appraisal to British Standard 42020:2013 guidelines at Hollins Brook Way, Bury and produce our findings in a report.
- 2.1.1.2 The proposals include the development of the site in two phases. Phase 2 proposals include the construction of a multi-story hub building, parking, and leisure areas.

2.2 Site Context

- 2.2.1.1 The site is located at National Grid Reference SD 81523 08675 and comprises two areas with a total area of approximately 0.97ha (see Figure 1).
- 2.2.1.2 The site is located in a densely urban area of Bury, approximately 2.10km from Bury city centre. The wider area comprises of a mixture of residential buildings, fields, parks, and varied waterbodies.

2.3 Purpose of Report

- 2.3.1.1 This report has been produced to set out the methods, results, and conclusions of a PEA. The purpose of the PEA report is to identify habitats on site and determine the sites potential value for protected and/or notable fauna and flora, with the addition of potential impacts on designated sites. This will inform the need for any further ecological surveys and/or mitigation to minimise the potential impacts on ecology on site and within the local area.
- 2.3.1.2 Further information and details of UK legislation for those species which are formally protected is defined in Appendix 1, which are considered throughout the assessment.
- 2.3.1.3 The National Planning Policy Framework (NPPF) (2023) and other Local Planning Policies are considered within the PEA. Ecological enhancements are advised to be in line with relevant Planning Policies.

3 Previous surveys

3.1 Preliminary Ecological Appraisal (Urban Green 2022)

- 3.1.1.1 A Preliminary Ecological Appraisal was carried out for Phase one of the development on 8th February 2022 by Jake Healy and Maisie McKenzie of Urban Green.
- 3.1.1.2 The main findings of the report are as follows:
- Three trees (referenced as T14, T34, and T35) were assessed as having low to moderate bat roosting potential.
 - Suitable habitats for nesting birds, hedgehog, and common amphibians.
 - Identification of non-native invasive species rhododendron (*Rhododendron ponticum*), cotoneaster (*Cotoneaster sp.*), and montbretia (*Crocasmia sp.*).
- 3.1.1.3 Further recommendations included production of a CEMP specifically referencing potential impacts of the neighbouring SBI, and further nocturnal bat surveys for T34.

3.2 Bat Surveys (Urban Green, 2022b)

- 3.2.1.1 Following the findings of the PEA (Urban Green, 2022a) further bat surveys were recommended to be undertaken on site.
- 3.2.1.2 T14 and T35 were assessed as providing low bat roosting potential and soft felling techniques were advised should removal be required as part of the project. T34 was assessed as providing moderate bat roosting potential and two nocturnal emergence /re-entry surveys were undertaken.
- 3.2.1.3 Bat activity was recorded throughout the first survey which constituted a dusk emergence survey, with no activity recorded during the second survey (a dawn re-entry). A peak count of 4 common pipistrelle were recorded during the dusk emergence survey and the level of activity recorded suggested that the site provides valuable foraging opportunities around the treeline at the south-western extent of the site, adjacent Hollins Local Nature Reserve (LNR). No roosts were identified, and all activity comprised solely of common pipistrelle.

3.3 Construction Environment Management Plan (CEMP) (Urban Green, 2023)

- 3.3.1.1 A CEMP was submitted in August 2023 for Phase one based on the recommendations from the associated PEA (Urban Green, 2022) and subsequent discharge of Condition 10 for planning permission reference 68530/FULL. This CEMP was produced to 'protect the Local Nature Reserve from dust, debris, run-off and pollution'.

3.4 Bird and Bat Box Plan (BBBP) (Urban Green, 2023)

- 3.4.1.1 A bird and bat box plan was submitted in August 2023 following the mitigation recommendation for the development of Phase one.

3.5 Invasive Species Method Statement (Urban Green 2023)

- 3.5.1.1 An invasive species method statement was submitted July 2023 in regard to the eradication of montbretia and rhododendron found within the Phase one area of the development.

4 Methods

- 4.1.1.1 The PEA assessment and Report follows the good practice methodology as detailed within the *Guidelines for Preliminary Ecological Appraisal* (CIEEM, 2019).

4.2 Desk Study

4.2.1 Online Resources and Local Records Centre

- 4.2.1.1 Due to the size and low impact of the proposed development and being located within a predominantly urban area of Bury, a 1km Local Data Search was conducted as it is deemed an appropriate distance for the Zone of Influence.
- 4.2.1.2 Sources of information used in the desk study are presented in Table 1.

Table 1: Desk study sources of information

Source	Date Consulted	Information Sought
MAGIC website (www.magic.gov.uk)	05/09/2024	Locations of statutory designated sites within 1km of the site boundary. Locations of Natura 2000 sites (Ramsar, Special Area of Conservation (SAC) and Special Protection Area (SPA)) within 5km of the site boundary. Locations of European Protected Species Licences (EPSL) and Class Licences within 1km.
Natural England (https://designatedsites.naturalengland.org.uk/)	05/09/2024	Relevant statutory designated site citations.
JNCC (https://jncc.defra.gov.uk/)	05/09/2024	Information on European wildlife sites. Details of relevant Section 41 species and habitats.
Greater Manchester Ecology Unit	02/09/2024	Locally designated wildlife sites within 1km of site boundary. Records of protected and notable species within 1km of the site boundary.
Greater Manchester Local Biodiversity Action Plans	05/09/2024	Species and habitats which are given special conservation status at the local level.

4.3 Field Survey

4.3.1 Vegetation

- 4.3.1.1 The site was subject to a field survey on 19th August 2024, by Olivia Jones, Assistant Ecologist and Shannon Brady, Senior Biodiversity Net Gain Consultant at Urban Green. The weather conditions were 17°C, scattered clouds (4/8 oktas), wind speed 3 Beaufort scale.
- 4.3.1.2 The methods were based on the standard methodology as detailed by The UK Habitat Classification User Manual (UKHab Ltd. 2023). A UKHab Habitat Plan has been produced to demonstrate habitats within the proposed development and the surrounding area. The mapping techniques are based on The UK Habitat Classification User Manual (Butcher et al, 2020) guidance.
- 4.3.1.3 Flora species listed as protected in the *Wildlife and Countryside Act 1981* (as amended) and species which are indicators of important and/or uncommon habitats, were searched for during the survey.
- 4.3.1.4 Species abundance is described using the DAFOR scale as shown in Table 2. Percentages are an approximate indication rather than a quantitative measure.

Table 2: Key to species abundance

		Description	Indicative Percentage Ranges
D	Dominant	Covers most of the area	90% or greater
A	Abundant	Very common throughout the area.	50 – 90%
F	Frequent	Common or with many individuals.	20 – 50%
O	Occasional	Occurs in several places but not throughout. Populations are not large.	5 – 20%
R	Rare	Occurs in low numbers in relation to size of area.	Less than 5%
“L” will be used to indicate abundance in a localised area, e.g. LA = Locally abundant			

- 4.3.1.1 Any invasive species, including those listed on the revised (April 2010) Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended) were noted during the field survey when sighted.

4.3.2 Fauna

- 4.3.2.1 A site search for field signs of protected and notable fauna was undertaken, and incidental sightings are detailed. The searches completed were as follows:
- Suitability of any ponds to support notable and protected amphibians, and the suitability of the site’s terrestrial habitats to support amphibians.
 - Suitability of the site to support reptiles by way of habitat structure and refuge piles, as well as links to the wider landscape.
 - Search of any watercourses for signs or suitability for white-clawed crayfish (*Austropotamobius pallipes*), water vole (*Arvicola amphibius*) and otter (*Lutra lutra*) by way of burrows, resting places, holts, and foraging signs.

- Suitability of the site to support notable bird species. Bird nests and droppings of notable and protected bird species.
- Suitability of the site to support notable invertebrates.
- Search of the site for any invasive species.
- Badger (*Meles meles*) field signs such as setts, mammal, paths, snuffle holes and latrines.
- Suitability of the site to support notable terrestrial mammals including harvest mouse (*Micromys minutus*) and brown hare (*Lepus europaeus*).

4.4 Bat Assessment

4.4.1 Preliminary Roost Assessment (PRA)

4.4.1.1 A Preliminary Roost Assessment was carried out on the site building.

4.4.1.2 The PRA methodology is based on information contained within the Bat Conservation Trust (BCT) guidelines, 4th edition (Collins, 2023). The categorisation within this report is based on that set out in Table 3, which is used as a basis for determining the requirement for further surveys.

Table 3: Suitability of buildings for roosting bats (adapted from Collins, 2023)

Category of Suitability	Typical Characteristics
High Roost Suitability	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions, and surrounding habitat.
Moderate Roost Suitability	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions, and surrounding habitat but are unlikely to support a roost of high conservation status.
Low Roost Suitability	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 condition and/or suitable surrounding habitat to be used on a regular basis by larger numbers of bats.
Negligible Suitability	Negligible habitat features on site likely to be used by roosting bats.

4.4.2 Commuting and Foraging Bats

- 4.4.2.1 The site was assessed for its suitability for use by commuting and foraging bats.
- 4.4.2.2 The commuting and foraging assessment methodology is based on information contained within the Bat Conservation Trust guidelines 4th edition (Collins, 2023). The categorisation within this report is based on that set out in Table 4, which is used as a basis for determining the requirement for further surveys.

Table 4: Suitability of site for foraging and commuting bats (adapted from Collins, 2023)

Category of Suitability	Typical Characteristics
High Suitability	Continuous high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting or foraging bats such as; river valleys, streams, hedgerows, lines of trees or woodland edge. Site is close to or connected to known roosts.
Moderate Suitability	Continuous habitat connected to the wider landscape that could be used by commuting bats such as lines of trees, scrub or linked back gardens. Habitat connected to wider landscape that could be used for bats for foraging such as; trees, scrub, grassland or water.
Low Suitability	Habitat that could be used by small number of commuting bats such as; defunct hedgerow, isolated features not well connected to surrounding habitat or isolated habitat that could be used by a small number of foraging bats such as a lone tree or patch of scrub.
Negligible Suitability	No features on site suitable for use by commuting and foraging bats.

4.5 Constraints to the Survey

- 4.5.1.1 Whilst every effort has been made to provide a comprehensive description of the site, no investigation could ensure the complete characterisation and prediction of the natural environment.
- 4.5.1.2 This PEA does not constitute a full botanical survey. The protected species assessment provides a view of the likelihood of protected species occurring on the site based on the known distribution of species in the local area and the suitability of the habitat.
- 4.5.1.3 It should not, however, be taken as providing a full and definitive survey of any protected species group.
- 4.5.1.4 Where a lack of records is found during the desk search for a defined geographical area, it does not necessarily mean that there is a lack of ecological interest; the area may be simply under-recorded.
- 4.5.1.5 The conclusions and recommendations detailed in this report are based upon the site redline boundary and the development proposals as outlined by the client at the time of writing. Should there be any changes to the site redline boundary or development proposals at a later stage, this assessment should be reviewed to determine whether any amendments or additional survey work is required.

- 4.5.1.6 The findings of this report represent the professional opinion of qualified ecologists and do not constitute professional legal advice. The client may wish to seek professional legal interpretation of the relevant wildlife legislation cited within this document.

4.6 Lifespan of Report

- 4.6.1.1 In accordance with CIEEM's Advice Note on the Lifespan of Ecological Reports and Surveys (CIEEM, 2019), the details of this report will remain valid for a period of **18 months** from the date of the survey (i.e. until 19th February 2026). After this date, this assessment should be reviewed to determine whether any updated surveys are required.

4.7 Definitions

- 4.7.1.1 For the purposes of this report, the term 'protected and notable species' relates to:
- Species included on Schedules 2 and 4 of *The Conservation of Habitats and Species Regulations 2017*;
 - Species included on Schedules 1, 5 and 8 of the *Wildlife and Countryside Act 1981* (as amended), excluding species that are only protected in relation to their sale (see section 9[5] and 13[2]);
 - Invasive non-native species included on Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended);
 - Species of principal importance for the conservation of/maintaining and enhancing biodiversity as required under: Section 41 of the *Natural Environment and Rural Communities Act 2006* (England), Section 7 of the *Environment (Wales) Act 2016*, Section 2[4] of the *Nature Conservation (Scotland) Act 2004*;
 - Local species of importance as identified within various local biodiversity action plans; and,
 - Badgers, which are protected under the *Protection of Badgers Act 1992*.

5 Baseline Ecological Conditions

5.1 Site Context

- 5.1.1.1 The site is located in a densely urban area of Bury, approximately 2.10km from Bury city centre. The wider area comprises of a mixture of residential buildings, fields, parks, and varied waterbodies.
- 5.1.1.2 It is anticipated the wider area hosts habitats which will provide suitable foraging, resting, and commuting resources within the local area for a variety of wildlife. Habitats in the wider area include grassland, woodland, waterbodies and linear features such as hedgerows.

5.2 Designated Sites

- 5.2.1.1 No sites that form part of the National Site Network were located within 5km of the site boundary.
- 5.2.1.2 One statutory site and three non-statutory designated sites were located within 2km of the site and are detailed within Table 5.

Table 5: Designated sites within the search areas

Designated Site	Approx. Distance from Site	Details
Statutory designated sites		
Hollins Vale Local Nature Reserve (LNR)	24m south	In contrast to Bury's other Local Nature Reserves (LNR) most of Hollins Vale LNR is grazing land, some of which has been designated as a Site of Biological Importance (SBI). Other habitats include Hollins Brook, Hollins Plantation (approx. 2 hectares of woodland), old and new hedgerows, bramble and gorse scrub, and recently planted woodland.
Non-statutory designated sites		
Hollins Vale Site of Biological Importance (SBI)	24m south	As above
Hollins Plantation SBI	700m south-east	As above
Pilsworth SBI	950m east	No information available

- 5.2.1.3 The site also falls within the Impact Risk Zone of the following Statutory Sites, based on consultation with MAGIC:
- Rochdale Canal Special Area of Conservation (SAC) and Site of Special Scientific Interest (SSSI). This site is located approximately 6.7km east of the site. This site is designated for the significant populations of floating water-plantain (*Luronium natans*) and diversity of pondweed species (*Potamogeton sp.*) supported within the predominantly mesotrophic waters.
 - Ash clough SSSI, located approximately 5.3km south-west of the site. The site comprises two sections of the steep south bank of the River Irwell, representing the

type and best available exposures for showing the Ashclough Marine Band and its associated strata.

- Nob End SSSI, located approximately 6.6km south-west of the site. It is the best example in Greater Manchester and Merseyside of the nationally rare species rich variant of the tall fescue–coltsfoot plant community and is of especial interest because of its development on an unusual and scientifically interesting substrate.

5.3 Flora and Fauna

5.3.1.1 The following section summarises protected and/or notable species records that have been recorded within 1km of the site.

5.3.2 Birds

5.3.2.1 A total of 76 records of protected or notable birds were returned within 1km of the site as detailed in Appendix 2.

5.3.2.2 Of the species returned, 13 were

5.3.3 Bats

5.3.3.1 Fifty-seven records of bats were returned in the data search, comprising common pipistrelle (*Pipistrellus pipistrellus*), pipistrelle species (*Pipistrellus sp.*), soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared bat (*Plecotus auritus*), noctule bat (*Nyctalus noctula*), daubenton's bat (*Myotis daubentonii*), and myotis species (*Myotis sp.*). The closest record attributed to a record of common pipistrelle located approximately 75m west of the site in 2019.

5.3.3.2 All species returned are listed under Schedule 2 of Habitats and Species Regulations (2017), Section 41 of the Natural Environment and Rural Communities Act (NERC) (2006), Wildlife and Countryside Act (WCA) (1981), and Greater Manchester Local Biodiversity Action Plan (LBAP).

5.3.3.3 No granted EPSL was returned within 1km of the site upon consultation with MAGIC.

5.3.4 Hedgehog

5.3.4.1 Five records of hedgehog were returned with 1km of the site, with the closest record located approximately 520m southwest of the site from 2020. Hedgehog are listed on Section 41 of the NERC Act (2006).

5.3.5 Great Crested Newt

5.3.5.1 No records of great crested newt were returned in the data search within 1km of the site.

5.3.5.2 However, one great crested newt class survey return was identified on MAGIC approximately 570m east of the site. This survey confirmed the presence of great crested newt in 2016.

5.3.6 No Records Returned

5.3.6.1 The data search returned no records for:

- Invertebrates
- Amphibians
- Reptiles
- Badger

- Harvest Mouse
- Brown Hare
- Hazel dormice (*Muscardinus avellanarius*)
- Otter
- Red squirrel (*Sciurus vulgaris*)
- Water vole
- White-clawed crayfish
- Vascular Plant

5.4 Field Survey

- 5.4.1.1 The site habitats and accompanying Target Notes are presented in the UKHab Habitat Map in Appendix 3.
- 5.4.1.2 Secondary codes are added to confirm the identity of a habitat (when necessary), and also to provide information on management and the environment relating to that habitat parcel. The number and type of secondary codes added to a primary habitat will vary depending on the habitats present. There is no limit to the number of secondary codes that can be used for a single parcel. More details regarding the secondary codes used can be found in Appendix 3.

5.4.2 Non-native and ornamental hedgerow (h2b)

- 5.4.2.1 A line of semi-managed hedgerow lines within the southeastern corner of the site with a neighbouring wire fence. Species within this area include Japanese laurel (*Aucuba japonica*), honeysuckle (*Lonicera periclymenum*), Himalayan cotoneaster (*Cotoneaster simonsii*) and golden cup St John's wort (*Hypericum patulum*). A young ornamental cherry tree (*Prunus avium*) is located on the eastern end of the hedgerow.

5.4.3 Building (u1b5)

- 5.4.3.1 A small security booth is located in the southeastern corner of the site. The building was well-sealed and modern, with no visible imperfections.

5.4.4 Urban- introduced shrub(u847)

- 5.4.4.1 An area of well-managed ornamental shrub decorates around the southeastern security booth. Species identified in this area include cherry laurel (*Prunus laurocerasus*), boxleaf honeysuckle (*Lonicera nitida*), herb Robert (*Geranium robertianum*), red flowering current (*Ribes sanguineum*), curlytop knotweed (*Polygonum lapathifolium*), Portuguese laurel (*Prunus lusitanica*) and shrubby cinquefoil (*Dasiphora fruticosa*).

5.4.5 Developed Land Sealed Surface (u1b)

- 5.4.5.1 The majority of the site comprises developed hardstanding land, currently a construction zone with associated fencing and barriers.
- 5.4.5.2 A second small area of phase 2 includes some developed land; sealed land forming a path to the south which is below mmu. A line of recently sown grass verge lines the path. There is also some bare ground which has been reseeded with grass. These areas were below UKHab minimum mapping unit as described within the methodology.

- 5.4.5.3 Species include perennial ryegrass (*Lolium perenne*), red fescue (*Festuca rubra*), peppergrass (*Lepidium sativum*), wild mustard (*Sinapis arvensis*), field horsetail (*Equisetum arvense*), lady's thumb (*Persicaria maculosa*), and common chickweed (*Stellaria media*).

5.4.6 Sparsely Vegetated Urban Land (u1f)

- 5.4.6.1 The northern boundary of the site comprises sparsely vegetated land which, at the time of survey, was under construction conditions. Fences and barricade fencing are erected throughout. A wider area of vegetation lies in the northeastern corner of the site, comprising of hemp agrimony (*Eupatorium cannabinum*), creeping thistle (*Cirsium arvense*), broad-leaved dock (*Rumex obtusifolius*), common nipplewort (*Lapsana communis*), field horsetail (*Equisetum arvense*), mayweed (*Matricaria chamomilla*), coltsfoot (*Tussilago farfara*), lady's thumb (*Persicaria maculosa*), bramble (*Rubus fruticosus*), curly dock (*Rumex crispus*), hairy willowherb (*Epilobium hirsutum*), mare's tail (*Conyza canadensis*), and ragwort (*Senecio jacobaea*). This wider area also measures under minimum mapping unit, therefore is not mapped in the associated habitat map.

5.5 Site Suitability for Protected and Notable Species

5.5.1 Species Discounted from Assessment

- 5.5.1.1 Water vole, otter and white-clawed crayfish have been discounted from assessment as no aquatic habitats are located on site or within proximity. The closest aquatic habitat is located approximately 80m southeast of the site boundary, relating to an unnamed reservoir. However, this watercourse is separated from the site by a fence line and no habitats on site offer any potential to support these species.
- 5.5.1.2 Hazel dormouse mainly occur in southern counties, especially in Devon, Somerset, Sussex and Kent. There are few recorded localities north of the Midlands, though they are present in parts of the Lake District and in scattered Welsh localities (Matthews *et al.*, 2018). The species are not generally known to be present within the area (Wembridge *et al.*, 2016). The habitats on site are of limited value due to limited areas of extensive woodland and scrub. As such, the species are reasonably discounted from site.
- 5.5.1.3 Red squirrel have been discounted from the assessment. Red squirrel populations are limited to small areas of northern England and are not known to be present in the area; with no previous records returned in the data search. It is anticipated that high abundances of grey squirrel (*Sciurus carolinensis*) are present within this region (Shuttleworth/RSST n.d.). This species will displace red squirrel through competition as well as cause increased red squirrel mortality through the spread of squirrel pox (The Mammal Society, 2020).
- 5.5.1.4 Reptiles have been discounted from the assessment. The site comprises dominantly hardstanding land. What habitat remains is very sparse ornamental vegetation, which feature no notable microhabitats to support basking, hunting, or cover, aside minimal ornamental shrubbery. Furthermore, no records of reptiles were returned for the wider area, and the site is situated within a densely urban landscape with abundant dispersal barriers.

5.5.2 Vascular Plants

- 5.5.2.1 The site is almost entirely hardstanding land and sparse ornamental vegetation. No opportunities for notable vascular plants were present
- 5.5.2.2 on site.
- 5.5.2.3 Overall, the presence of notable vascular plants are reasonably discounted.

5.5.3 Invertebrates

- 5.5.3.1 No deadwood, aquatic habitats or high floristic diversity was located on-site which would provide an important resource for invertebrates during their life cycle. It is anticipated common species will be present due to the minimal management on site.
- 5.5.3.2 Overall, the presence of notable invertebrates within the site is reasonably discounted.

5.5.4 Amphibians

- 5.5.4.1 No ponds were located on site. The unnamed reservoir located approximately 80m southeast of the site may attract common amphibians.
- 5.5.4.2 Great crested newt are unlikely to utilise a reservoir due to water fluctuations, water quality, predators, human activity, and habitat complexity. As great crested newts' upper dispersal limit is generally considered to be up to 250m from a waterbody (though occurrence of greater distances does exist), great crested newts are not anticipated to be present on site (English Nature, 2001).
- 5.5.4.3 Ornamental water bodies may be located within nearby residential gardens which may provide suitable conditions for breeding common amphibians.
- 5.5.4.4 The presence of great crested newts within the site is reasonably discounted, however common amphibians may be on-site.

5.5.5 Birds

- 5.5.5.1 The site offers a temporary resting/foraging place for nesting birds within the ornamental hedgerow south of the site.
- 5.5.5.2 Robin (*Erithacus rubecula*) was identified on the hedgerow during the site visit. As a result, it is likely that birds use these habitats to rest/forage.

5.5.6 Bats

Preliminary Roost Assessment

- 5.5.6.1 A PRA was completed on the security booth building located on site. The building was small with no internal roof space and well-sealed throughout. The building was assessed as negligible. The full PRA assessment can be found in Appendix 4.

Commuting and Foraging Bats

- 5.5.6.2 The site does not have suitable habitat for roosting or foraging bats, whereas the wider environment offers fields, waterbodies, linear features and woodland which offer suitable commuting and foraging resources, suitable for bats.
- 5.5.6.3 It is likely that bats will commute through the site from one habitat to another, giving the site low suitability for foraging bats.

5.5.7 Hedgehog

- 5.5.7.1 The surrounding habitats provide suitable habitat for hedgehog. The onsite hedgerow may occasionally attract foraging/commuting hedgehog.

5.5.8 Badger

- 5.5.8.1 The wider landscape has suitability for badger based on the areas of woodland along the fields which may support foraging, commuting and sett building.
- 5.5.8.2 The site does not offer suitable habitat and is surrounded by fencing which likely prevents access through the site.

5.6 Invasive Species

5.6.1 Flora

- 5.6.1.1 Himalayan cotoneaster (TN1) and Himalayan balsam (*Impatiens glandulifera*) (TN2) was present on the site during the field survey. These species are listed under Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended) as invasive non-native species.
- 5.6.1.2 Rhododendron and montbretia were identified during the PEA in 2022 and further described within the invasive species method statement (Urban Green, 2023). These were not identified during the site visit and therefore assumed to have been eradicated from site.

6 Ecological Constraints and Recommended Mitigation

6.1 Proposed Development

- 6.1.1.1 The proposals include the development of the site in two phases. Phase 2 proposals include the construction of a multi-story hub building, parking, and leisure areas.

6.2 Designated Sites

- 6.2.1.1 The site is located within the impact risk zone for several SSSIs within the local area. It is anticipated that the designated sites are a sufficient distance away and are separated by anthropogenic barriers such as the residential areas, such that no impacts as a result of development are anticipated.
- 6.2.1.2 Numerous non-statutory LWSs are located within 1 km of the site boundary. There may be small increase of visitors to the nearby sites. However, based on the size of the scheme and the urban-on-urban construction, it is anticipated the potential impacts will not be of significance.
- 6.2.1.3 However, a statutory designated site relating to Hollins Vale Local Nature Reserve is present immediately south of the site and as such adverse impacts may occur to this site without suitable mitigation being implemented.
- 6.2.1.4 Therefore, it is recommended that the Construction and Environment Management Plan (CEMP) previously produced for Phase 1 should be updated to include Phase 2.
- 6.2.1.5 The CEMP should be specific to the proposed development (and adhered to throughout the course of construction works) to avoid, minimise and mitigate for negative impacts resulting from construction practices on all habitats surrounding the site. This will be relevant for Phase 2 of the development.
- 6.2.1.6 This plan will detail measures to avoid, minimise or mitigate any potential negative effects caused by construction practices on the environment on and surrounding the site including:
- The control of run-off from areas of arisings to prevent any pollutants/contaminants entering nearby waterbodies.
 - Appropriate measures to suppress dust during hot, dry and/or windy conditions.
 - Excavations should be sealed overnight or should have at least one shallow-sloping side to allow any animals that may fall in to escape.
 - An ecologist should be contacted for advice should any protected species be discovered during construction.

6.3 Fauna

6.3.1 Amphibians

- 6.3.1.1 Great crested newts were deemed unlikely to be present on site and no further consideration for the species is required. However, there is a possibility that common amphibians such as common toad may be present on site.
- 6.3.1.2 It is recommended that Reasonable Avoidance Measures are to be followed during site clearance. All site contractors are to be inducted to the potential presence of the species. Any debris is to be cleared by hand, and any common amphibians located moved carefully, by hand, to outside of the development area.

6.3.2 Birds

- 6.3.2.1 Hedgerow and tree removal should be undertaken outside of the breeding bird season (March to August, inclusive). If this is not possible, a suitably experienced ecologist should check the habitat for breeding bird activity no more than 48 hours before clearance. If nesting activity is found, nests must be left in situ until the young have fledged.
- 6.3.2.2 The site has been assessed to provide some suitable habitat for nesting birds, therefore it is recommended that the landscape scheme for this site contains a range of habitats such as scrub and trees, which will provide suitable shelter and nesting habitat for a range of bird species which are likely to be present in the surrounding area.

6.3.3 Bats

Foraging and Commuting Bats

- 6.3.3.1 The site was assessed as being of low value to commuting and foraging bats. It is recommended that the landscape designs for this site contain a mix of native plant species and those known to be of value to native invertebrate species, providing additional value to local bat populations as a foraging resource.
- 6.3.3.2 Slow-flying species such as brown long-eared and Myotis species, which are known to be in the local area, are sensitive to lighting and may be impacted by the proposed development, should no mitigation for lighting be considered.
- 6.3.3.3 Lighting mitigation should follow the guidance outlined in the Institute for Lighting Engineers document “Guidance for the Reduction of Obtrusive Lighting” (2005) and BCT’s “Bats and Artificial Lighting in the UK” (2018).
- 6.3.3.4 Construction lighting should not be directed towards surrounding habitats, specifically nearby trees. The construction lighting may impact bats which are sensitive to light. Directional lighting will be achieved by angle and orientation of beam, use of a cowl, louvre or other light shield, or a combination of these.
- 6.3.3.5 An External Lighting Scheme had not been produced on the writing of this report. As such, the following recommendations are to be considered within the scheme during its condition, to minimise impacts of lighting. The recommendations are as follows:
- Keep site lighting to minimum levels.
 - Luminaries should lack UV elements and preferably LED lighting with a warm white light should be used over cool white light (ideally <2700Kelvin).
 - Lighting should feature peak wavelengths greater than 550nm.
 - Internal lighting should be positioned away from windows to minimise light spill, where appropriate.
 - Light placement should be downward facing to prevent excess horizontal or vertical light spill.
 - The use of integrated fittings such as cowls, shields, louvres, and hoods, that effectively contain light spill from unintended areas, where appropriate.
 - The use of hard landscaping features to block light and create dark corridors.
 - Use of timed security lights should be set on motion-sensors and using short, 1-minute timers, to minimise light use, where appropriate.

- Column heights of lighting can be considered to minimise light spill.

6.3.4 Hedgehog

- 6.3.4.1 Hedgehog may be present on site, as such checks for hedgehogs should be carried out prior to hedgerow removal to avoid harming this species during works.

6.3.5 Badgers

- 6.3.5.1 It is not anticipated the proposed development will impact the species due to the majority of habitat of highest value for the species (i.e. broadleaved woodland) will be retained as part of the development. It is considered that the badgers located within the local area and on site are generally tolerate to anthropogenic disturbance as the site is located within a residential area.
- 6.3.5.2 The following Precautionary Working Methods will be adhered to during construction phase to ensure that no badgers are impacted by the proposed development:
- All site operatives will be inducted to the potential presence of the species and the species legal protection.
 - All site operatives will be inducted as to identifying potential badger setts and should be vigilant if they suspect they locate a new sett during works and inform the site manager immediately. A minimum 20m buffer will be maintained from the potential sett until an ecologist has been to site.
 - All excavations will be battened at a 45-degree angle or ramps to be positioned to allow escape should animals become trapped.
 - All site machinery and materials will be appropriately stored to avoid harm to the species, notably between July and November each year when extra care is needed to avoid potential impacts on pregnant females.

6.4 Invasive Species

- 6.4.1.1 Non-native invasive flora species (Himalayan cotoneaster and Himalayan balsam) were identified during the site walkover. As such, it is recommended, prior to the development, that an invasive species specialist should be contracted to map the extent of invasive species present within the site and produce a detailed management plan for the removal and eradication of such species onsite.

7 Further Surveys

- 7.1.1.1 No further surveys have been deemed required for any development activities that may occur on site. This is based on the red line boundary of the site provided to Urban Green at the time of writing. Should the red line boundary change or more detailed plans for the site be available an ecologist should be consulted to reassess.

8 Opportunities for Enhancement

8.1.1.1 The National Planning Policy Framework (NPPF) (2023) highlights the requirement for planning policies and decisions to conserve and enhance the natural environment.

8.1.1.2 Paragraph 180 states that this should be achieved by (in terms of this assessment only):

- a) *protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);*
- d) *minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;*

8.1.1.3 Specific enhancement recommendations for the site include the following:

- Bat and bird boxes could be placed on the new buildings in Phase 2. A plan to show the locations of these boxes and the specifications should be produced by a suitably qualified ecologist once the layout is finalised.
- Planting of linear features such as hedgerows and trees where possible, to add commuting features withing the site.
- An ecologically sensitive planting scheme could be incorporated on the site to promote invertebrate use of the site, which could benefit local bat and bird species.

9 Conclusion

- 9.1.1.1 The PEA has met the objectives of the report, by demonstrating the following:
- The major habitats identified on site included hardstanding, building, non-native ornamental hedgerow, and sparsely vegetated land and are detailed in Section 5.4.
 - Potential ecological constraints and subsequent mitigation recommendations to be completed prior and during the construction phase for phase 2 are detailed in Section 6.
 - No further surveys are required to progress with the development of phase 2.
 - General ecological enhancements are listed within Section 8.

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Appendix 1: Relevant Legislation

Legislation relating to European Protected Species (e.g. bats, otter, great crested newt)

European Protected Species and their resting places (e.g. bat roosts) are protected under the Wildlife and Countryside Act 1981 (as amended), the Countryside and Rights of Way (CROW) Act 2000, and the Conservation of Habitats and Species Regulations 2017.

The Conservation of Habitats and Species Regulations 2017 transpose the European Union's 'Habitats Directive' (Council Directive 92/43/EEC) on the Conservation of Natural Habitats and of Wild Fauna and Flora (EC Habitats Directive) into UK law. The Regulations provide for the designation and protection of 'European Sites', the protection of 'European Protected Species' (EPS), and the adaptation of planning and other controls for the protection of European Sites. EPS are listed on Schedule 2 of the Conservation of Habitats and Species Regulations 2017.

Under the Wildlife and Countryside Act 1981 (as amended) it is an offence to:

- Intentionally kill, injure or take certain animals listed in Schedule 5;
- Intentionally or recklessly damage or destroy any structure or place which any wild animal specified in Schedule 5 uses for shelter or protection;
- Intentionally or recklessly disturb any such animal while it is occupying a structure or place which it uses for shelter or protection; or
- Intentionally or recklessly obstruct access to any structure or place which any such animal uses for shelter or protection.

In addition, under this legislation there are offences relating to sale, possession and control of wild animals listed in Schedule 5.

Under the Conservation of Habitats and Species Regulations 2017 it is an offence to:

- Deliberately capture, injure or kill any wild animal listed as a European Protected Species;
- Deliberately disturb wild animals of any such species in such a way as to be likely:
- to impair their ability:
 - to survive, to breed or reproduce, or to rear or nurture their young, or;
 - in the case of animals of a hibernating or migratory species, to hibernate or migrate, or;
- to affect significantly the local distribution or abundance of the species to which they belong.
- Deliberately take or destroy the eggs of such an animal, or;
- Damage or destroy a breeding site or resting place of such an animal.

In addition, under this legislation there are offences relating to possession, control sale and exchange of an EPS.

Great crested newt, otter and several species of bat are listed as a SoPI under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

Legislation for white-clawed crayfish

White-clawed crayfish are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Under this act it is an offence to:

- Intentionally take white-clawed crayfish from the wild; and,
- Sell or attempt to sell, any part of a white-clawed crayfish, alive or dead, or advertise that one buys or sells, or intends to buy or sell any part of a white-clawed crayfish.

The white-clawed crayfish is listed under Annex II and V of the EC Habitats Directive. The Conservation of Habitats and Species Regulations 2010 implements the European Union's 'Habitats Directive' (Council Directive 92/43/EEC (a) on the Conservation of Natural Habitats and of Wild Fauna and Flora) in Great Britain. Annex II requires that Special Areas of Conservation (SAC) are established specifically to conserve this and other listed species. In a SAC designated for white-clawed crayfish a precautionary principle must be applied when considering the potential impacts of any operations that may affect white-clawed crayfish and their habitat.

White clawed crayfish are listed as a SoPI under Section 41 of NERC Act 2006.

Legislation for amphibians (other than great crested newt)

Under the Wildlife and Countryside Act 1981 (as amended) the four widespread amphibian species, smooth newt (*Triturus vulgaris*), palmate newt (*Triturus helveticus*), common toad (*Bufo bufo*) and common frog (*Rana temporaria*) receive limited protection through section 9(5) only which makes selling, offering for sale, possessing or transporting for the purpose of sale (live or dead animal, part or derivative) an offence.

Common toad is listed as a SoPI under Section 41 of the NERC Act 2006.

Legislation relating to breeding birds

All birds, their nests and eggs are protected by the Wildlife and Countryside Act 1981 (as amended) and it is an offence, with certain exceptions, to:

- Intentionally kill, injure or take any wild bird;
- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built;
- Intentionally take or destroy the egg of any wild bird; and
- Intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building or is in, on or near a nest with eggs or young; or disturb the dependent young of such a bird.

Schedule 1 of the Wildlife and Countryside Act 1981 provides further protection for selected species (including peregrine falcon (*Falco peregrinus*), barn owl (*Tyto alba*), little ringed plover (*Charadrius dubius*) and black redstart (*Phoenicurus ochruros*) during the breeding season. If any person intentionally or recklessly disturbs any wild bird included in Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young; or disturb dependent young of such a bird. That person shall be guilty of an offence.

A number of bird species are listed as SoPI under Section 41 of the NERC Act 2006.

Conservation status - Birds of Conservation Concern (Eaton et al. 2015)

The UK's leading bird conservation organisations have worked together on the third quantitative review of the status of the birds that occur regularly in the UK, updating the last review in 2011. The status of birds within the UK have been regularly monitored through a series of surveys, including the national Breeding Bird Survey, Common Bird Census, sea bird monitoring programs and wetland monitoring programs. The result of this review and continued monitoring is The Population Status of Birds in the UK, Birds of Conservation Concern 4: 2015.

Birds are assessed against criteria to place each species on one of three alert lists, red, amber or green. Red list species are considered to be of high conservation concern, being either globally threatened, having historical UK population declines, having a rapid population decline or breeding range contraction of 50% or more in the last 25 years.

Amber list species are considered to be of medium conservation concern as they meet one or more of the following criteria (but none of the red list criteria): Red listed for historical decline in a previous review but with substantial recent recovery (more than doubled in the last 25 years), a UK breeding range contraction of between 25% and 49%, a reduction of breeding or non-breeding population of 25-49% in the last 25 years, a 5-year mean of 1-300 breeding pairs in the UK, an unfavourable European conservation status, at least 50% of the UK breeding population found in 10 or fewer sites, or where the breeding population in the UK represents 20% or more of the European breeding populations.

Green list species are considered to be of low conservation concern. They include all regularly occurring species that do not qualify under any of the red or amber criteria are green listed. The green list also includes those species listed as recovering from Historical Decline in the last review that have continued to recover and do not qualify under any of the other criteria.

Legislation relating to badger

Badgers are protected under the Protection of Badgers Act 1992 (as amended) which makes it an offence to:

- wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so;
- intentionally or recklessly damage, destroy or obstruct access to a badger sett; and
- disturb a badger when it is occupying a sett.

These provisions have implications for construction or preparation works undertaken in the vicinity of an active sett and may be confounded by distance from the sett entrance. Any works resulting in ground penetration, vibration or noise near an identified badger sett entrance/s have the potential to disturb badgers and advice should be sought from a suitably experienced ecologist under such circumstances. If disturbance to an active sett is probable, then a licence may need to be obtained from Natural England before any works commence.

Legislation relating to invasive plant species

Several non-native invasive plant species such as Himalayan balsam, giant hogweed (*Heracleum mantegazzianum*), Japanese rose (*Rosa rugosa*), variegated yellow archangel (*Lamium galeobdolon*), rhododendron and Japanese knotweed (*Reynoutria japonica*) are listed under Schedule 9 of the Wildlife and Countryside Act, 1981 (as amended), which makes it an offence to '...plant or otherwise cause the species to grow in the wild'. This includes spreading or transferring contaminated soil from one area to another.

Estate Managers and landowners have a duty to pro-actively treat knotweed outbreaks. Under the Natural Environment and Rural Communities Act 2006 (NERC), subsection 14ZA (1), makes it is an offence to sell, offer or expose for sale, or to have in one's possession or transport for the purpose of sale, any Schedule 9 animal or plant or anything from which such an animal or plant can be propagated, including rhizomes of Japanese knotweed. Under subsection 14ZA (2) it is also an offence to publish or cause to be published any advertisement for the purchase or sale of these animals and plants.

The Environmental Protection Act 1990 (EPA 1990) contains a number of legal provisions concerning controlled waste. Any Japanese knotweed contaminated soil or plant material that is intended for discard is likely to be classified as controlled waste.

The Environmental Protection (Duty of Care) regulations 1991 also imposes a 'duty of care' on persons concerned with controlled waste, which includes any materials incorporating Japanese knotweed including soil, grass cuttings, general wastes and ash arising from the burning of knotweed. The duty applies to any person, who produces, imports, carries, keeps, treats or disposes of controlled waste. Failure to appropriately dispose of any material containing Japanese knotweed may lead to prosecution under Section 33 and 34 of the EPA 1990 and Section 14 (2) of the Wildlife & Countryside Act 1981 (as amended).

If knotweed stands are to be treated with herbicides, The Control of Pesticides Regulations (1986) applies. These regulations require any person who uses a pesticide to take all reasonable precautions to protect the health of human beings, creatures and plants, safeguard the environment and in particular avoid the pollution of water. If pesticides are to be used in or near to a watercourse, the Environment Agency should be contacted, and approval must be sought (application to use herbicides in or near water).

Waste leaving the site must be handled responsibly and in accordance with the law at all stages between its production and final recovery or disposal. Waste must be transferred to an authorised person, who is either a registered waste carrier or exempted from registration by the Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations 1991.

Additional legislation regarding the transport of Japanese knotweed contaminated materials is covered by the Hazardous Waste Regulations 2005 (HWR 2005). This contains provisions about the handling and movement of hazardous waste. Consignment notes must be completed when any hazardous waste is transferred, which includes details about the hazardous waste properties and any handling requirements. Untreated Japanese knotweed is not classed as hazardous waste, but material containing knotweed which has been treated with certain herbicides, may be classified as hazardous waste.

If any waste soil or knotweed is sent for landfill either before or after treatment, it must go to a landfill that is authorised to receive it.

Appendix 2: Bird Data Search Results

Scientific Name	Common Name	Protection (excluding LBAP)	Closest Distance to site (m)	Year
<i>Pyrrhula pyrrhula</i>	Bullfinch	BoCC5**, S41*****	250	2016
<i>Prunella modularis</i>	Dunnock	BoCC5**, S41*****	570	2021
<i>Larus argentatus</i>	Herring Gull	BoCC5**, S41*****	450	2021
<i>Passer domesticus</i>	House Sparrow	BoCC5**, S41*****	490	2015
<i>Alcedo atthis</i>	Kingfisher	Sch.1****, BoCC5**	635	2019
<i>Vanellus vanellus</i>	Lapwing	BoCC5*, S41*****	115	2015
<i>Acanthis cabaret</i>	Lesser Redpoll	BoCC5*, S41*****	890	2015
<i>Carduelis cannabina</i>	Linnet	BoCC5*, S41*****	895	2015 and 2016
<i>Charadrius dubius</i>	Little Ringed Plover	Sch.1****	145	2017
<i>Falco peregrinus</i>	Peregrine	Sch.1****	990	2016
<i>Emberiza schoeniclus</i>	Reed Bunting	BoCC5**, S41*****	880	2015 and 2016
<i>Turdus philomelos</i>	Song Thrush	BoCC5**, S41*****	230	2016
<i>Sturnus vulgaris</i>	Starling	BoCC5**, S41*****	400	2021

* Listed Red on the Bird of Conservation Concern 5 (2021)
 ** Listed Amber on the Bird of Conservation Concern 5 (2021)
 *** Listed black on the Bird of Conservation Concern 5 (2021)
 **** Wildlife & Countryside Act (Sch 1, 5 & 8)
 ***** Listed on Section 41 (NERC Act, 2009).

Appendix 3: Habitat Map and Target Notes

Hierarchical code	Code	Meaning
Primary Code	H2b	Non-native and ornamental hedgerow
	U	Urban
	U1b	Developed land-sealed surface
	U1b5	Building
	U1f	Sparsely vegetated urban land
Secondary Code	847	Introduced shrub

Appendix 4: Preliminary Roost Assessment Results

Building Reference	Description	Evidence	Category of Suitability
Security Booth	A well-sealed brick building with slate roofing. No gaps or breaks were seen throughout the building.		Negligible