

PRELIMINARY ECOLOGICAL APPRAISAL

APRIL 2022

JD Campus,
Hollins Brook Way,
Bury,
BL9 8RR

U R B A N
G R E E N



QUALITY MANAGEMENT

Project No.:	UG1466				
Project:	JD Campus, Bury				
Location:	Hollins Brook Way, Bury, BL9 8RR				
Title:	Preliminary Ecological Appraisal				
Document Type:	PEA	Issue No.:	01		
Date:	24/02/2022				
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Revision Status:					
Rev:	Date:	Issue/Purpose/Comment:	Prepared:	Checked:	
02	18/03/2022	To reflect comments made by client	Jake Healy	Mark Blacker	
03	12/04/2022	To keep tree numbers consistent throughout reports	Jake Healy	Mark Blacker	

NON-TECHNICAL EXECUTIVE SUMMARY

JD Group Ltd are proposing to develop land at Hollins Brook Way in Bury (hereafter referred to as ‘the site’). The proposals include the development of the site in two phases. Phase 1 is planned to develop a “Kiddy Hub”, comprising a creche, private garden, car park, and one multi-purpose all weather pitch. The second phase would provide a new Hub facility containing spaces for the wider office campus, including eating spaces, meeting and presentation areas, and offices with associated hard and soft landscaping

Urban Green have 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 which may occur on site. Further ecological surveys and mitigation are recommended to aim to minimise potential impacts on ecology, due to the proposed development.

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

Current Site Use and Adjacent Site Use	The site is currently a disused brownfield site surrounded by fencing on an industrial park in Bury. Pilsworth Industrial Estate is present immediately to the north-east and east of the site, comprising office blocks and commercial retail outlets. Hollins Vale Local Nature Reserve is present immediately south of the 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 a couple of buildings. Ephemeral/short perennial vegetation, introduced shrub, scattered scrub, hedgerow, line of trees, and modified grassland were also present on site.
Ecological Constraints	The following potential ecological constraints were identified during the assessment: • T14 and T35 were assessed as having Low bat roosting potential. • T34 was assessed as having Moderate bat roosting potential. • Suitable habitats for nesting notable bird species, hedgehog, and common amphibians. • Non-native invasive species comprising rhododendron, two species of cotoneaster, and montbretia are present on site.
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 common amphibians and hedgehog. • If any vegetation requires removal, it should be completed outside of the breeding bird season (March to September, 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. • Aerial tree survey for T34. • Low potential bat trees to undergo soft felling techniques if required
Recommended Further Surveys and Reports	The following ecological surveys and reports are recommended to further assess the sites suitability for protected/notable fauna and/or flora: • A minimum of two Nocturnal Bat Surveys to be completed on T34 (dependent on updated aerial tree survey). • Production of a CEMP.

Recommended
Ecological
Enhancements

The National Planning Policy Framework (NPPF) (2021) 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.

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1 Introduction

1.1 Background to the Scheme

JD Group Ltd are proposing to develop land at Hollins Brook Way in Bury (hereafter referred to as ‘the site’). The proposals include the development of the site in two phases. Phase 1 is planned to develop a “Kiddy Hub”, comprising a creche, private garden, car park, and one multi-purpose all weather pitch. The second phase would provide a new Hub facility containing spaces for the wider office campus, including eating spaces, meeting and presentation areas, and offices with associated hard and soft landscaping.

Urban Green have been appointed to undertake a Preliminary Ecological Appraisal (PEA) of the site.

The author of the report is Jake Healy, MSc, Qualifying CIEEM, Assistant Ecologist at Urban Green. Jake has experience providing ecological consulting services for a range of development schemes across the UK, including residential and commercial schemes.

1.2 Site Context

The site is located at National Grid Reference SD 81523 08675 and comprises a total area of approximately 0.1ha (see Figure 1).

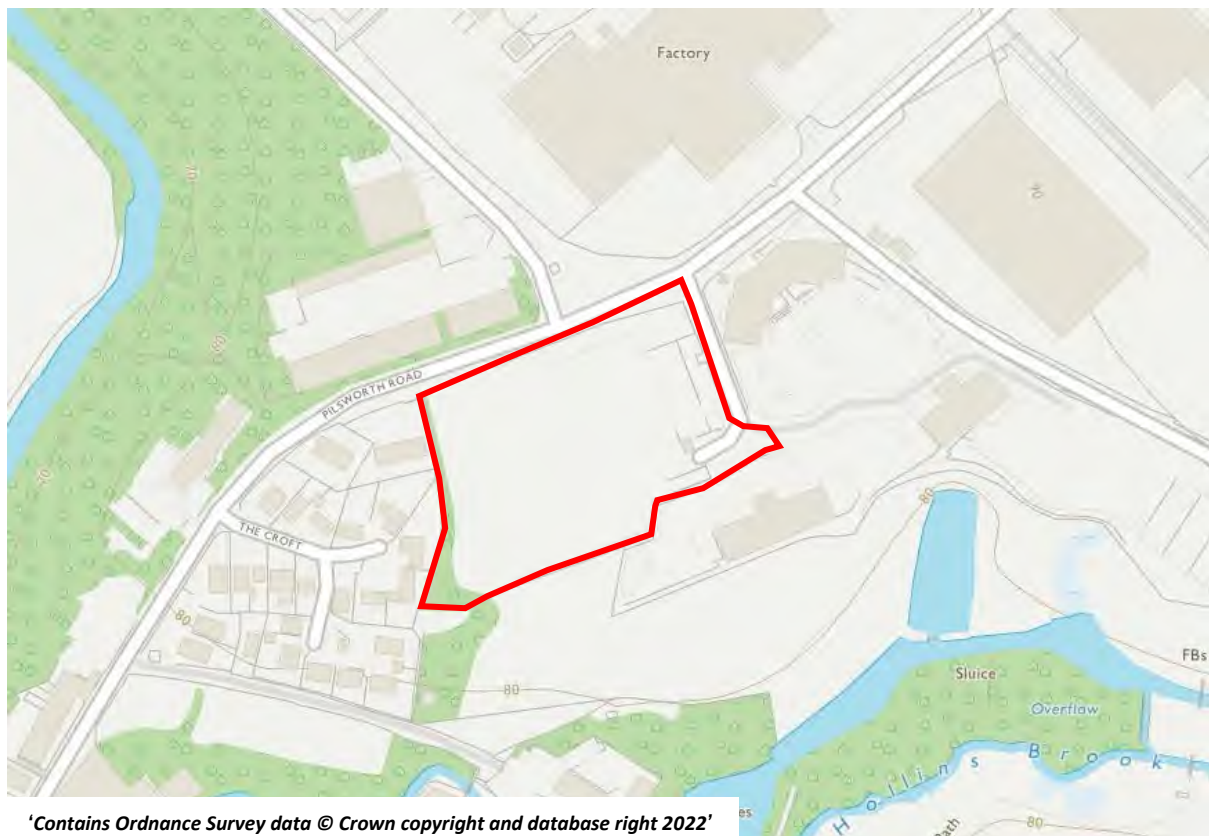


Figure 1 – Site Extent

The site is located on the rural-urban fringe of Bury, which is located approximately 2.5km north-west of the site. Pilsworth Industrial Estate is present immediately to the north-east and east of the site, comprising office blocks and commercial retail outlets. Hollins Vale Local Nature Reserve immediately

borders the south of the site. Hollins Brook and the River Roch are present close to the site, located approximately 100m south and 200m west of the site, respectively.

1.3 Purpose of this Report

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.

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.

The National Planning Policy Framework (NPPF) (2021) and other Local Planning Policies are considered with the PEA. Ecological enhancements are advised to be in line with relevant Planning Policies.

2 Methods

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

2.1 Desk Study

2.1.1 Online Resources and Local Records Centre

Due to the size and low impact of the proposed development and being located on the rural urban fringe of Bury a 1km Local Data Search was conducted as it is deemed an appropriate distance for the Zone of Influence.

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)	06/02/2022	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/nature/naturalengland.org.uk/)	21/02/2022	Relevant statutory designated site citations.
JNCC (https://jncc.defra.gov.uk/)	21/02/2022	Information on European wildlife sites. Details of relevant Section 41 species and habitats.
Greater Manchester Ecology Unit	21/02/2022	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	21/02/2022	Species and habitats which are given special conservation status at the local level.
Catchment Data Explorer	21/02/2022	Summary of data relating to river condition and catchment data, provided The Environment Agency (EA)

2.2 Field Survey

2.2.1 Vegetation

The site was subject to a field survey on the 8th of February 2022 by Assistant Ecologist Jake Healy and Senior Biodiversity Consultant Maisie McKenzie. The weather conditions were 11°C, overcast (8/8 oktas), with a wind speed of 3 on the Beaufort scale, and was dry.

The methods were based on the standard methodology as detailed by *JNCC Handbook for Phase 1 Habitat Survey* (JNCC, 2010). A Phase 1 Habitat Plan has been produced to demonstrate habitats within the proposed development and the surrounding area. The mapping techniques are based on *the Phase 1 Habitat Survey* (JNCC, 2010) guidance.

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.

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			

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.

2.2.2 Fauna

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*).

2.3 Bat Assessment

2.3.1 Preliminary Roost Assessment

A Preliminary Roost Assessment (PRA) was carried out on the site buildings and trees using a high-powered torch and close-focusing binoculars.

The PRA methodology is based on information contained within the Bat Conservation Trust (BCT) guidelines, 3rd edition (Collins, 2016). 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 and Trees for Roosting Bats (adapted from Collins, 2016)

Category of Suitability	Typical Characteristics	Further Survey Requirements
High Roost Suitability	A structure/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, protection, conditions and surrounding habitat.	Three separate survey visits. At least one dusk emergence and a separate dawn re-entry survey. Surveys can be undertaken between May and September, with at least two surveys between May and August.
Moderate Roost Suitability	A structure/tree 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.	Two separate survey visits. One dusk emergence and a separate dawn re-entry survey. Surveys can be undertaken between May and September with at least one survey between May and August.
Low Roost Suitability	A structure/tree 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.	Structures: one emergence/re-entry survey between May and August. Trees: No further survey required but precautionary methods of felling recommended.
Negligible Suitability	Negligible habitat features on site likely to be used by roosting bats.	No further work required.

2.3.2 Commuting and Foraging Bats

The site was assessed for its suitability for use by commuting and foraging bats.

The commuting and foraging assessment methodology is based on information contained within the Bat Conservation Trust guidelines 3rd edition (Collins, 2016). 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, 2016)

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.

2.4 Constraints to the Survey

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.

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.

February is a suboptimal time for carrying out a Phase 1 Habitat Surveys due to being outside of the optimal plant growing season. Therefore, it is likely that some plants are present on the site but were not evident at the time of the survey and were not recorded. This is not considered to be a significant constraint with regards to the general Phase 1 Habitat Survey results due to the size and location of the site and limited extent of the habitats, it is considered very unlikely that any rare or priority plant species were missed.

It should not, however, be taken as providing a full and definitive survey of any protected species group.

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.

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.

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.

2.5 Lifespan of Report

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 the 8th of August 2023). After this date, this assessment should be reviewed to determine whether any updated surveys are required.

2.6 Definitions

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*.

3 Baseline Ecological Conditions

3.1 Desk Study

3.1.1 Site Location

The site lies within the rural-urban fringe of Bury. Pilsworth Industrial Estate is present immediately to north and north-east of the site comprising industrial, commercial and office outlets. Hollins Vale Local Nature Reserve is present immediately to the south and east of the site. Hollins Brook and the River Roch are present close to the site, located approximately 100m south and 200m west of the site, respectively. Areas of grassland and woodland are associated with these areas, and it is anticipated these habitats will provide suitable foraging, resting, and commuting resources within the local area for a variety of wildlife, such as birds, bats, and other terrestrial and aquatic mammals.

3.1.2 Designated Sites

No sites that form part of the National Site Network were located within 5km of the site boundary. One statutory site was located within 1km of the site boundary; and three non-statutory designated sites were located within 1km 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)	Immediately 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)	Immediately south	As above
Hollins Plantation SBI	700m south-east	As above
Pilsworth SBI	950m east	No information available

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.
- Ashclough 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.

3.1.3 Flora and Fauna

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

Amphibians

One record of great crested newt was returned in the data search relating to a pond located approximately 850m north of the site from 2005.

Another record recorded the absence of great crested newt from a pond located approximately 800m north of the site from 2005.

Great crested newts are listed on the Greater Manchester BAP and are listed on Section 41 of NERC (2006).

A MagicMap search returned no granted EPSL relating to great crested newts present within 1km of the site.

Birds

A total of 43 records of protected or notable birds were returned within 1km of the site as detailed in Table 6.

Table 6 – Protected or notable birds recorded within 1km

Scientific Name	Common Name	Protection	Closest Record to Site	
			Approx. Min. Distance (m)	Date
<i>Pyrrhula pyrrhula</i>	Bullfinch	BoCC5**, S41*****	100m	2013
<i>Prunella modularis</i>	Dunnock	BoCC5**, S41*****	100m	2013
<i>Passer domesticus</i>	House sparrow	BoCC5*, S41*****	500m	2015
<i>Alcedo atthis</i>	Kingfisher	Sch.1****, BoCC5**	500m	2010
<i>Vanellus vanellus</i>	Lapwing	BoCC5*, S41*****	100m	2010
<i>Carduelis cannabina</i>	Linnet	BoCC5*, S41*****	100m	2013
<i>Charadrius dubius</i>	Little Ringed Plover	Sch.1****	100m	2017
<i>Emberiza schoeniclus</i>	Reed bunting	BoCC5**, S41*****	100m	2013
<i>Alauda arvensis</i>	Skylark	BoCC5*, S41*****	800m	2010
<i>Turdus philomelos</i>	Song thrush	BoCC5**, S41*****	200m	2016
<i>Sturnus vulgaris</i>	Starling	BoCC5*, S41*****	100m	2012

Scientific Name	Common Name	Protection	Closest Record to Site	
			Approx. Min. Distance (m)	Date

- * Red list of BoCC5 (2021)
- ** Amber list of BoCC5 (2021)
- *** Black list BoCC5 (2021)
- **** Section 21 of the NERC Act (2009)
- ***** Schedule 1 or 5 of the WCA (1981)

Bats

Twenty-three records relating to bat roosts were returned within the data search including common pipistrelle (*Pipistrellus pipistrellus*) and unidentified pipistrelle species (*Pipistrellus* spp.) The closest record was located approximately 70m west of the site from 2019 related to a common pipistrelle roost.

A further fifty-nine records relating to field signs were returned within the data search including common pipistrelle, soprano pipistrelle (*Pipistrellus pygmaeus*), unidentified pipistrelle species, Daubenton's bat (*Myotis daubentonii*), noctule bat (*Nyctalus noctula*), and unidentified bat species (*Chiroptera* spp.). The closest record was located approximately 60m north-west of the site from 2006 and was related to a soprano pipistrelle.

A MagicMap search returned no granted EPSL relating to bats present within 1km of the site.

Hedgehog

Three records of hedgehog were returned with 1km of the site, with the closest record located approximately 500m south-west of the site from 2018.

Hedgehog are listed on Section 41 of the NERC Act (2006).

Water Vole

Two records of water vole were returned within the data search, both from 2009 with the closest located approximately 400 south-east of the site.

Water vole are protected through Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and through the NERC Act 2006. They are also listed on the Greater Manchester LBAP.

No Records Returned

The data search returned no records for:

- Vascular Plants
- Invasive Non-Native Species
- Invertebrates
- Reptiles
- Hazel dormice (*Muscardinus avellanarius*)
- White-clawed crayfish

- Red squirrel (*Sciurus vulgaris*)
- Badger
- Otter

3.2 Field Survey

The site habitats and accompanying Target Notes are presented in the Phase 1 Habitat Map in Appendix 2.

3.2.1 Hardstanding

Most of the site comprised areas of hardstanding.



Photograph 1 – Area of hardstanding at the north-east of the site



Photograph 2 – Area of hardstanding encompassing the centre and the south of the site

3.2.2 Buildings

Two buildings were present on site. A full description of the buildings can be found in the PRA in Appendix 2.



Photograph 3 – Building 1



Photograph 4 – Building 2

3.2.3 Ephemeral/Short Perennial

Areas of ephemeral/short perennial vegetation are present on site, located in the north-west and centre of the site. These areas were abundant in buddleja (*Buddleja davidii*) and moss species (*Bryophyta spp.*), with springy turf moss (*Rhytidiadelphus squarrosus*) locally abundant. Ribwort plantain (*Plantago lanceolata*) was identified frequently within the area and common soft rush (*Juncus effusus*),

broadleaved dock (*Rumex obtusifolius*), rosebay willowherb (*Chamaenerion angustifolium*), and perennial ryegrass (*Lolium perenne*) occurred occasionally. It was also noted that these areas were extremely wet and showed characteristics of marshy grassland with areas of standing water (TN3), however, this is not anticipated to be an annual feature. A dead wood pile (TN2) was also present within this habitat.



Photograph 5 – Ephemeral/Short Perennial vegetation at the north-west of the site



Photograph 6 - Ephemeral/Short Perennial vegetation in the centre of the site



Photograph 7 – Dead wood pile (TN2)

3.2.4 Introduced Shrub

An area of introduced shrub was present at the west of the site and comprised wall cotoneaster (*Cotoneaster horizontalis*), small leaved cotoneaster (*Cotoneaster microphyllus*), dog rose (*Rosa canina*), laurel (*Laurus nobilis*), and common dog wood (*Cornus sanguinea*). Wall cotoneaster and small leaved cotoneaster are non-native invasive species and are labelled TN1 on the associated habitat map in Appendix 3.



Photograph 8 – Introduced shrub



Photograph 9 – Introduced shrub



Photograph 10 – Introduced shrub



Photograph 11 – wall cotoneaster (TN1)



Photograph 12 – small leaved cotoneaster (TN1)

3.2.5 Scattered Scrub

Scattered scrub was present within the site but was mainly constrained to the boundaries and was dominated by bramble (*Rubus fruticosus* agg.). Common dog wood, herb robert (*Geranium*

robertianum), ribwort plantain and perennial ryegrass were also occasionally occurring. Rhododendron (*Rhododendron ponticum*) (TN6) and montbretia (*Crocasmia aurea x pottsii*) (TN5) were locally abundant along the scrub on the western border. Rhododendron and montbretia are also no-native invasive species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).



Photograph 13 – Scattered scrub along northern border



Photograph 14 – Scattered scrub along north-western boundary



Photograph 15 – Scattered scrub along southern boundary



Photograph 16 – Montbretia (TN5)



Photograph 17 – Rhododendron (TN6)

3.2.6 Hedgerow

A single hedgerow that had been cut to the stumps was present along the western border of the site and the species could not be identified. The land underneath the hedgerow had been classified as bare ground for purposes of the habitat map.



Photograph 18 – Hedgerow cut to the stumps

3.2.7 Line of trees

Multiple lines of trees were present along the northern, western, and southern boundaries of the site. Tree species comprised ash (*Fraxinus excelsior*), alder (*Alnus glutinosa*), and oak (*Quercus* spp.).



Photograph 19 – Line of trees along the northern border



Photograph 20 – Line of trees along the western border



Photograph 21 – Line of trees within the south-west of the site



Photograph 22 – Ash tree (TN4)



Photograph 23 – Dead Ash tree (TN7)



Photograph 24 – Ash tree (TN8)

3.2.8 Modified Grassland

The south-western section of the site comprised an area of modified grassland that was abundant with perennial ryegrass. Creeping thistle (*Cirsium arvense*) herb robert, ribwort plantain, and rosebay willowherb all occurred occasionally.



Photograph 25 – Modified grassland at the south-west of the site

3.3 Site Suitability for Protected and Notable Species

3.3.1 Species Discounted from Assessment

Water vole, otter and white-clawed crayfish (*Austropotamobius pallipes*) have been discounted from assessment as no aquatic habitats are located on site. The closest aquatic habitat is located approximately 100m south of the site boundary, relating to Hollins Brook. However, this watercourse is separated from the site by a fence line and no habitats on site offer any potential to support these species.

Hazel dormouse (*Muscardinus avellanarius*) 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 Greater Manchester 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

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 Greater Manchester 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).

3.3.2 Invertebrates

No aquatic habitats or high floristic diversity was located on site which would provide an important resource for invertebrates during their life cycle. A deadwood pile was present on site, however, it is unlikely that this would attract notable protected species, as no other habitats of value are located on site. It is anticipated common species will be present due to the minimal management on site.

Overall, the presence of notable invertebrates within the site is reasonably discounted

3.3.3 Amphibians

One pond is present approximately 140m south of the site, however this pond is separated from the site by Hollins Brook, a freely flowing watercourse, which would act as a barrier to great crested newt dispersal and prevent the possible migration towards the site. 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), ponds beyond this distanced have not been considered.

The site comprised a mosaic of unmanaged habitats which may provide suitable foraging resources and cover for common amphibians such as common toads. Ornamental water bodies may be located within nearby residential gardens which may provide suitable conditions for breeding common amphibians.

The presence of great crested newts within the site is reasonably discounted, though common amphibians may occur on site.

3.3.4 Reptiles

The site was found to provide limited value for reptiles, given the majority of the site comprised buildings and hardstanding areas, which lack the structure and habitat quality to support the species group. The scrub habitats could provide some terrestrial cover for the species, though these are generally confined to the boundaries.

Overall, the habitats on site were of limited value and no records of the species group were identified. Reptiles are not considered to be present on site.

3.3.5 Birds

Ground Nesting

The site offers limited suitability for ground nesting bird species as the site predominantly comprises hardstanding. The scattered scrub offers the most valuable habitat, however, this was limited to the boundaries and was not dense, therefore, offering no protection for such species.

As such, ground nesting birds are reasonably discounted from the site.

Passerine

The site offers suitable nesting potential for passerine birds. The lines of trees on site offer the highest value on site, although the scattered scrub and introduced shrub also offer potential for nest building. The data search returned numerous records for notable passerine birds such as dunnock, linnet and reed bunting. During the field survey a variety of bird species were identified on site, including feral pigeon (*Columba livia domestica*), wren (*Troglodytes troglodytes*), blue tit (*Cyanistes caeruleus*), and magpie (*Pica pica*). The Hollins Vale Local Nature Reserve bounding the south of the site also harbours a wide variety of birds which may opportunistically use the site.

As such, the site has the potential to support passerine species.

3.3.6 Bats

Preliminary Roost Assessment

A PRA was completed on all structures and trees located on site and adjacent. Please refer to Appendix 2 for the results of the PRA and imagery of Potential Roosting Features (PRF) identified during the survey.

Tree reference numbers used throughout this report are consistent with those given within the Arboricultural report (Urban Green, 2022)

In summary, the following features and trees were assessed as having bat roosting potential:

- B1 and B2 were assessed as having **negligible** bat roosting potential.
- T14 and T35 was assessed as having **low** bat roosting potential.
- T34 was assessed as having **moderate** bat roosting potential.

Commuting and Foraging Bats

The habitats on site are anticipated to provide limited value for foraging and commuting bats due to comprising predominantly of hard standing. Some linear features were present in the form of lines of trees at the north, west, and south-west of the site. The ephemeral/short perennial vegetation and dead wood pile identified may attract common invertebrate species. However, more optimal habitats are present within the wider area, associated with the Hollins Vale Local Nature Reserve, and Hollins Brook, which are more likely to be utilised by bats.

The site has the potential to support roosting bats whilst the unmanaged habitats and linear trees provide low foraging and commuting value.

3.3.7 Hedgehog

The scrub and dead wood pile habitats will provide suitable cover and foraging habitats for the species, and there is connectivity present with residential gardens and other suitable habitat to the west and the south.

Hedgehog are potentially present within the site.

3.3.8 Badger

No evidence of badger was present on site during the field survey.

The site offers limited potential for sett construction as the majority of the site is comprised of artificially sealed surface which also limits the foraging potential the site offers. The site is also bound by fencing on all aspects that may limit the potential of the site for commuting purposes.

However, valuable habitat to badgers is present within the surrounding areas relating to Hollins Vale LNR and SBI, and Hollins Plantation SBI, as well as areas of woodland to the north and north-west. Although no records of badger were returned within the data search.

As such Badger were reasonably discounted from the site, although may be in the surrounding area.

3.4 Invasive Species

3.4.1 Flora

Four species of non-native invasive species were present on the site during the field survey comprising cotoneaster (TN1), montbretia (TN5), and rhododendron (TN6). These species are listed under Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended) as invasive non-native species.

4 Ecological Constraints and Recommended Mitigation

4.1 Proposed Development

JD Group Ltd are proposing to develop land at Hollins Brook Way in Bury (hereafter referred to as ‘the site’). The proposals include the development of the site in two phases. Phase 1 is planned to develop a “Kiddy Hub”, comprising a creche, private garden, car park, and one multi-purpose all weather pitch. The second phase would provide a new Hub facility containing spaces for the wider office campus, including eating spaces, meeting and presentation areas, and offices with associated hard and soft landscaping.

4.2 Designated Sites

The site is located within the impact risk zone for three SSSIs within the local area. It is anticipated that these designated sites are a sufficient distance away and are separated by anthropogenic barriers such as the residential areas, that no impacts as a result of development are anticipated.

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.

Numerous non-statutory LWSs are located within 1km of the site boundary. There may be small increase of visitors to the nearby sites. However, based on the size, and commercial nature of the scheme and the proposed retention of green space on site, it is anticipated the potential impacts will not be of significance.

Therefore, it is recommended that a detailed Construction and Environment Management Plan (CEMP) specific to the proposed development is created (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 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

4.3 Habitats

The site comprised habitats that were found to be widespread within the local area; however, they did contain value for wildlife such as bats, birds, and terrestrial mammals. The lines of trees are of highest value.

4.3.1 Scattered Trees

Generally, the protection measures of retained trees will be through used of temporary protective demarcation fencing to protect the trees and shrubs. The fencing must extend outside the canopy of the retained trees and must remain in position until all plots have been developed to ensure protection is provided throughout the construction phase.

The fencing will be in accordance with BS 5837:2012 Trees in Relation to Design, Demolition and Construction: Recommendations.

It is recommended that replacement tree planting at a 1:3 ratio is required to compensate for loss of any trees. It is recommended that the planting comprises native species and species known to be of value for the attraction of wildlife. This will include fruiting and flowering species.

4.4 Fauna

4.4.1 Amphibians

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.

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.

4.4.2 Birds

Vegetation removal should be undertaken outside of the breeding bird season (March to September, 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.

4.4.3 Bats

Roosting Bats

As stated in Section 3.3.6, T14, T34, and T35 were assessed as having bat roosting potential. Further bat surveys are recommended to confirm presence or absence of roosting bats within the trees, as detailed in 5.1.

It is recommended that T34 (Moderate roosting potential) undergoes an aerial tree survey to further assess the PRFs identified for roosting bats and potential re-categorisation of bat roosting potential.

Trees with Low roosting potential should undergo reasonable avoidance measures. This would involve being inspected by a licensed bat worker with an endoscope before felling or utilising a soft felling technique (which involves practises like removing limbs separately and lowering them to the ground and then leaving for 24 hours before clearing).

Any tree categorised as Moderate or High roost suitability after the updated aerial survey will require further bat surveys as detailed in Section 5.1.

Foraging and Commuting Bats

No further surveys for commuting and foraging bats are required, as the site is of low quality offering poor opportunities and is predominantly industrial. Higher quality habitats are present off site that would be used preferentially over this site.

Bats are sensitive to lighting and may be impacted by the proposed development, should no mitigation for lighting be considered.

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).

Construction lighting should not be directed towards retained and surrounding habitats including the lines of trees and the nature reserve to the south of the site. 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.

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.
- Avoid illuminating any suitable retained bat habitats, particularly the hedgerows and trees, that are potential commuting and foraging habitat for bats.
- 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.

4.4.4 Hedgehog

Hedgehog may be present on site, as such checks for hedgehogs should be carried out prior to scrub and dead wood pile removal to avoid harming this species during works.

4.5 Invasive Species

Non-native invasive flora species including rhododendron, two species of cotoneaster, and montbretia 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.

5 Further Surveys

5.1 Bats

T34 was identified as having **Moderate** bat roosting potential, if this tree is identified as requiring removal to facilitate the scheme, it is recommended that this tree is subject to further inspection with an endoscope to fully inspect the identified features and to determine the presence/likely absence of roosting bats. The surveys can be completed during anytime of the year. If the survey supports the original assessment of moderate potential, increased to high potential, or identification of roosting bats, further nocturnal surveys may be required. If the tree is downgraded to low potential then no further survey for the presence of roosting bats is required.

The surveys would involve situating a number of suitably qualified surveyors around the tree to monitor for bats emerging from potential roost locations (dusk emergence survey) or entering potential roost locations (dawn re-entry survey) for a specified amount of time. The surveys should be completed between May – September (inclusive). It is recommended at least one survey is completed during the bat maternity season which is generally defined as June to July. It is anticipated 2 surveyors will be required.

It should be noted that low potential trees do not require further surveys as long as the recommended soft felling techniques are adhered to.

If bats are identified roosting within the trees on site, a minimum of three surveys will be required to inform a Natural England EPSL. The surveys will identify what bat roosts are present and will in turn clarify what mitigation will be required as part of the ESPL. Roost provision, lighting and timescales will be considered as part of the licence.

An EPSL can only be submitted once full planning permission has been granted and all wildlife conditions have been discharged.

6 Opportunities for Enhancement

The National Planning Policy Framework (NPPF) (2021) highlights the requirement for planning policies and decisions to conserve and enhance the natural environment.

Paragraph 174 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 d future pressures;*

Specific enhancement recommendations for the site include the following:

- Bat and bird boxes could be placed on the new buildings / retained trees. 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 to add commuting features within 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.

7 Conclusion

The PEA has met the objectives of the report, by demonstrating the following:

- The major habitats identified on site included hardstanding, buildings, ephemeral/short perennial vegetation, introduced shrub, scattered scrub, hedgerow, line of trees, and modified grassland.
- Potential ecological constraints identified included common amphibians, nesting birds, bats, and hedgehogs and are detailed in Section 4.
- Mitigation recommendations to be completed prior and during the construction phase for common amphibians, nesting birds, bats, and hedgehogs have been detailed in Section 4.
- Further bat surveys are required to determine presence or absence of roosting bats within T34 and inform relevant mitigation requirements.
- General ecological enhancements are listed within Section 6.

8 References

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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 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 invasive plant species

Several non-native invasive plant species such as Himalayan balsam (*Impatiens glandulifera*), 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 – Preliminary Roost Assessment

Building Reference	Description	Evidence	Category of Suitability
B1	<u>External</u> Building 1 comprised a single-storey brick building that was abandoned. The external walls were in good condition and were well sealed offering no PRFs for bats to utilise. The building had a flat roof that was also well sealed and offered no PRFs. Multiple windows were well sealed from the outside offering no cracks or crevices for bats to utilise. <u>Internal</u> Internally the building was in poor condition due to significant water damage. Ceiling tiles were absent and loft insulation material; was exposed as were wooden beams within the false ceiling. The building was split into 4 compartments comprising 3 rooms and a hallway. No cracks or crevices were identified however peeling wallpaper was present. This was extremely damp due to water damage.	    	Negligible

Building Reference	Description	Evidence	Category of Suitability
B2	<u>External</u> Building 2 comprised a single storey building that was built of brick and had metal cladding on the northern, eastern, and western aspects. The building looked to be the remains of a larger building that had been demolished. A flat roof was present that offered no PRFs. The exposed brickwork on the south aspect offered some cracks, however, they offered no access to PRFs. <u>Internal</u> Internally the building was comprised of brick which was well sealed and offered no PRFs. A generator was present within.		Negligible

Building Reference	Description	Evidence	Category of Suitability
T14	T14 (TN4) was a beech tree that had small knot wound present on its southern aspect that led into a cavity. Underneath the knot wound on the trunk was an area of discolouring.		Low

Building Reference	Description	Evidence	Category of Suitability
T34	T34 (TN7) was a dead beech tree. Multiple holes were present at the top of the limbs that led into cavities offering PRfs.		Moderate

Building Reference	Description	Evidence	Category of Suitability
T35	T35 (TN8) was a beech tree that had damage at its base and led into a cavity that extended into the stem of the tree, offering a PRF.		Low

Appendix 3 – Habitat Map and Target Notes

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- Red Line Boundary
- Hardstanding
- Ephemeral/Short Perennial
- Poor Semi-Improved Grassland
- Scattered Scrub
- Building
- Introduced Shrub
- Bareground
- Defunct Hedge
- Line of Trees



- TN1 - Invasive Species (Cotoneaster)
- TN2 - Deadwood Pile
- TN3 - Marshy Grassland
- TN4 - Ash Tree (Low Bat Roost Suitability)
- TN5 - Invasive Species (Montbretia)
- TN6 - Invasive Species (Rhododendron)
- TN7 - Dead Tree (Moderate Bat Roost Suitability)
- TN8 - Scattered Tree (Low Bat Roost Suitability)

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Phase One Habitat Map

Issue:

02

Drawn:

AB

Checked:

JH

Approved:

JH

Project:

UG1466

Scale @ A3:

1:750

Date:

24/02/2022

Dwg No:

UG_1466_ECO_HM_02

Revision:

02