

PRELIMINARY ECOLOGICAL APPRAISAL

FEBRUARY 2025

Marled Hey

Stockbridge Village

Knowsley

Liverpool

L28 0QL

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QUALITY MANAGEMENT

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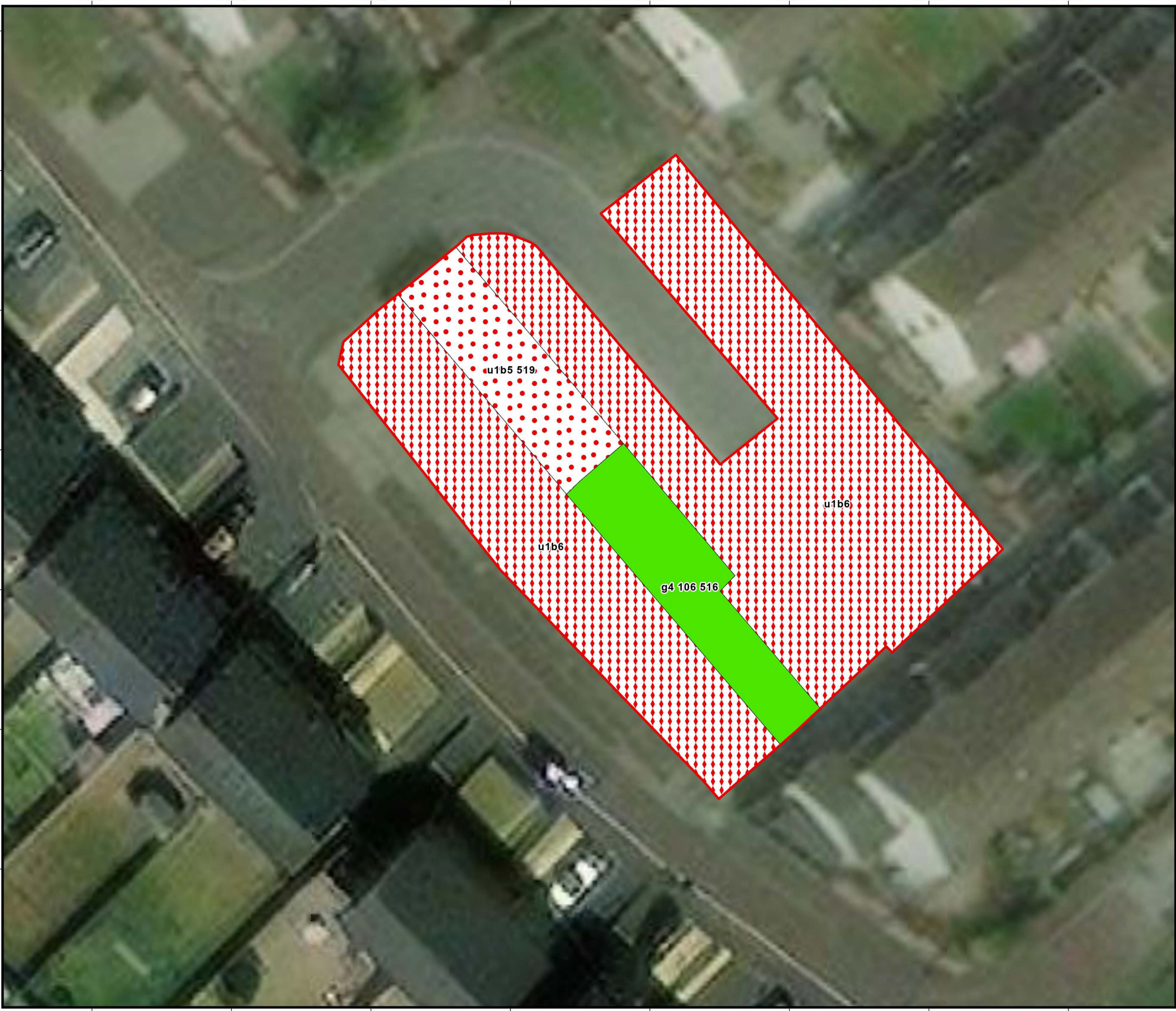
1 Executive Summary

- 1.1.1.1 ForHousing Devo Ltd is proposing to develop land at Marled Hey in Stockbridge (hereafter referred to as 'the site'). The proposals include demolishing an existing small 7-unit garage and redeveloping the adjacent disused land to construct two bungalows and additional car parking.
- 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 to 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	Currently, the site comprises a disused 7-unit garage with associated road, pavement and a neighbouring strip of grassland. The grassland and a section of hardstanding are bordered by metal fencing.
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 ground, a building, and a strip of grassland.
Ecological Constraints	No ecological constraints were identified during the site visit.
Recommended Ecological Mitigation	Reasonable avoidance measures for common amphibians, and hedgehogs.
Recommended Further Surveys and Reports	No further surveys are recommended with respect to ecology. It is recommended development works occur in a timely manner without further ecological considerations.
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	0.4 Kilometers	N
Client: ForHousing Devo Ltd	Issue: 01	Figure: 01
Project: Marled Hay	Scale @ A4 1:5,000	
Title: Site Context	Approved by: CL	Checked by: SB
Drawing Ref: UG_2752_SITE_CONTEXT	Author: CL	Date: 04/10/2024
URBANGREEN A: Ground Floor, The Tower, Deva City Office Park, Trinity Way, Manchester M3 7BF T: +44 (0) 161 312 3131 weareurbangreen.co.uk		



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Legend

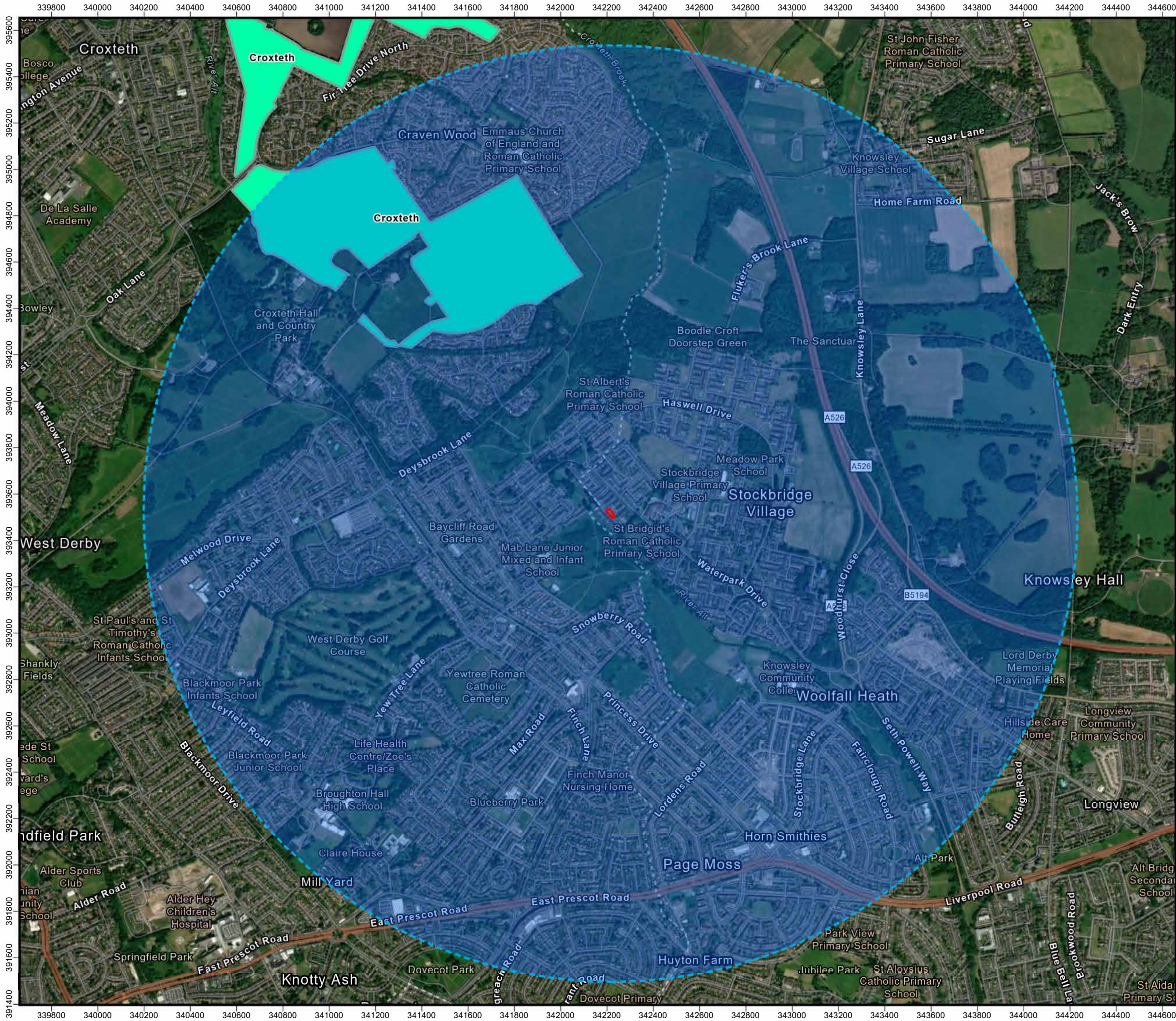
- Red Line Boundary
- Buildings
- Modified grassland
- Other developed land

N



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Client:		ForHousing Devo Ltd	
Project:		Marled Hey	
Title:		UKHAB Habitat Map	
Issue: 01		Figure: 00	
Drawn: CL	Checked: OJ	Approved: OJ	
Project: UG2752	Scale @ A3: 1:250	Date: 30/10/2024	
Dwg No: UG_2752_ECO_HM_01		Revision: 01	



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- Legend**
- Red Line Boundary
 - 2km Buffer
 - Local Nature Reserves (England) © Natural England



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Client: ForHousing Devo Ltd		
Project: Marled Hay		
Title: Designated Sites Results		
Issue: 01	Figure: 03	
Drawn: CL	Checked: SB	Approved: SB
Project: UG2752	Scale @ A3: 1:14,850	Date: 04/10/2024
Dwg No: UG_2752_ECO_DS_01		Revision: 01

Figure 4. Photographs of the Site



Photograph 1: View of the seven-unit garage.



Photograph 2: View of the front of the garage with predominantly hardstanding.



Photograph 3: View of behind the garage unit.



Photograph 4: Hardstanding ground behind the unit.

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Photograph 5: View of the surrounding metal fencing.



Photograph 6: View of a raised area of pavement.



Photograph 7: View of the modified grassland on-site.



Photograph 8: View of the southeastern side of the building.

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Photograph 9: Line of modified grassland next to more hardstanding.



Photograph 10: Small entrance from the neighbouring residential parking area to the centre of the site.

2 Introduction

2.1 Scope

- 2.1.1.1 Urban Green has been instructed by ForHousing Devo Ltd to carry out a Preliminary Ecological Appraisal to British Standard 42020:2013 guidelines at Marled Hey, Knowsley and produce our findings in a report.
- 2.1.1.2 The proposals include demolishing an existing small 7-unit garage and redeveloping the adjacent disused land to construct two bungalows and additional car parking.

2.2 Site Context

- 2.2.1.1 The site is located at National Grid Reference SJ 42215 93519 and comprises a total area of approximately 0.1ha (see Figure 1).
- 2.2.1.2 The site is located in a densely populated urban area of Stockbridge Village, Knowsley. The site is encompassed by residential buildings with contiguous urban parks. Habitats in the local environment are limited to areas of woodland such as Little Wood, Finch Wood, River Alt and leisure fields, all of which located within 1km of the site. The M57 lies approximately 1km east, separating the site from Knowsley Park which is located approximately 1.2km east of the site.

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) (2024) and other Local Planning Policies are considered with the PEA. Ecological enhancements are advised to be in line with relevant Planning Policies.

3 Methods

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

3.2 Desk Study

3.2.1 Online Resources and Local Records Centre

- 3.2.1.1 Due to the size and low impact of the proposed development and being located within a predominantly urban area of Knowsley, a 2km Local Data Search was conducted as it is deemed an appropriate distance for the Zone of Influence.
- 3.2.1.2 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)	05/11/2024	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/)	05/11/2024	Relevant statutory designated site citations.
JNCC (https://jncc.defra.gov.uk/)	05/11/2024	Information on European wildlife sites. Details of relevant Section 41 species and habitats.
Merseyside BioBank	17/10/2024	Locally designated wildlife sites within 1km of site boundary. Records of protected and notable species within 1km of the site boundary.
Merseyside Biodiversity Group-Local Biodiversity Action Plans for Merseyside	05/11/2024	Species and habitats which are given special conservation status at the local level.

3.3 Field Survey

3.3.1 Vegetation

- 3.3.1.1 The site was subject to a field survey on 30/10/2024, by Olivia Jones, Assistant Ecologist of Urban Green. The weather conditions were 12°C, overcast (8/8 oktas), wind speed 2 Beaufort scale.
- 3.3.1.2 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.
- 3.3.1.3 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.
- 3.3.1.4 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

Code	Category	Description	Indicative Percentage Ranges
D	Dominant	Covers most of the area	51% or greater
A	Abundant	Very common throughout the area.	31 - 50%
F	Frequent	Common or with many individuals.	16 – 30%
O	Occasional	Occurs in several places but not throughout. Populations are not large.	6– 15%
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			

- 3.3.1.5 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.

3.3.2 Fauna

- 3.3.2.1 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*).

3.4 Bat Assessment

3.4.1 Preliminary Roost Assessment (PRA)

- 3.4.1.1 An external Preliminary Roost Assessment was carried out on the site's building using close-focussing binoculars and high-powered torch to search for roosting bats, as well as signs of bats. Internal access was not possible at the time of survey.
- 3.4.1.2 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.

3.4.2 Commuting and Foraging Bats

- 3.4.2.1 The site was assessed for its suitability for use by commuting and foraging bats.
- 3.4.2.2 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.

3.5 Constraints to the Survey

- 3.5.1.1 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.
- 3.5.1.2 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.
- 3.5.1.3 October is a suboptimal time for carrying out UKHab 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 UKHab Habitat Survey results as the habitats remained consistent with previous surveys, and 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.
- 3.5.1.4 It should not, however, be taken as providing a full and definitive survey of any protected species group.

- 3.5.1.5 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.
- 3.5.1.6 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.
- 3.5.1.7 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.

3.6 Lifespan of Report

- 3.6.1.1 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 **30th April 2026**). After this date, this assessment should be reviewed to determine whether any updated surveys are required.

3.7 Definitions

- 3.7.1.1 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*.

4 Baseline Ecological Conditions

4.1 Site Context

- 4.1.1.1 The site is located in a densely populated urban area of Stockbridge Village, Knowsley. The site is encompassed by residential buildings with contiguous urban parks nearby. Habitats near the site are limited to areas of woodland such as Little Wood, Finch Wood, River Alt and leisure fields all located within 1km of the site. The M57 lies approximately 1km east, separating the site from Knowsley Park which is located approximately 1.2km east of the site.
- 4.1.1.2 Habitats within the surrounding area are limited to urban street planting, leisure fields, woodland and the River Alt.

4.2 Designated Sites

- 4.2.1.1 No sites that form part of the National Site Network were located within 5km of the site boundary. One statutory site and six non-statutory designated sites were located within 1km of the site and are detailed in Table 5.

Table 5: Designated sites within the search areas

Designated Site	Approx. Distance from Site	Details
Statutory designated sites		
Croxteth Hall Country Park Local Nature Reserve (LNR)	945m north	The LNR was created from the former Mull Wood plus other woodland areas such as Cocked Hat Wood, Dam Wood, The Wilderness and Ice House Woods together with some agricultural land in the park. The reserve has woodland, rough grassland and pasture, several ponds and is bounded by the River Alt. A variety of birds breed in the woodland and the ponds are good for plants such as water dropwort and dragonflies.
Non-statutory designated sites		
Little Wood SBI	670m north	Predominantly broadleaf woodland with much species diversity and an interesting invertebrate fauna.
River Alt, Seth Powell Way, Huyton SBI	420m northwest	Croxteth Country Park is Liverpool's largest terrestrial Local Wildlife Site, encompassing a diverse habitat mosaic, including plantation woodlands, grasslands, ponds, and the River Alt, both within and beyond the park. It hosts a rich variety of plants, with some of the city's most structurally diverse woodlands dominated by Beech, Oak, and Pine, and supports extensive ground flora along woodland edges and clearings. The park's ponds provide habitats for notable wetland plants and rare dragonflies, while the River Alt supports Water Voles and a range of riparian plants. Nearby Coachman's Wood and Mab Lane Field add to the ecological richness, with Mab Lane featuring floristically rich grassland. The area also supports Liverpool's largest assemblages of woodland and habitat-mosaic breeding birds, including rare species like Willow Tit and Garden Warbler.
The Roughs SBI	1km north	A mature broadleaf woodland with associated ponds and stream, possibly part of a garden in the past.

- 4.2.1.2 The site also falls within the Impact Risk Zone of the following Statutory Site, based on consultation with MAGIC:
- Mersey Estuary Site of Special Scientific Interest (SSSI) - The Mersey Estuary is a crucial habitat for wildfowl and waders, with intertidal flats, salt marshes, brackish marshes, and unique clay cliffs. Key roosting sites are provided by the Manchester Ship Canal's pools and Hale Marsh. The estuary supports vast winter bird populations, feeding on invertebrates and marsh plants, and serves as a vital migratory stopover. Noteworthy species include pintail, teal, shelduck, and dunlin. The diverse salt marsh flora includes glasswort, sea poa, and ungrazed areas rich in sea aster and rare species like yellow-wort on the clay cliffs. This site is located approximately 9km southwest of the site.

4.3 Flora and Fauna

- 4.3.1.1 The following section summarises protected and/or notable species records that have been recorded within 2km of the site.

4.3.1 Invertebrates

- 4.3.1.1 Twenty records of notable invertebrates were returned including lepidoptera comprised of small heath (*Coenonympha pamphilus*), grizzled skipper (*Pyrgus malvae*), shoulder-striped wainscot (*Leucania comma*), buff ermine (*Spilosoma lutea*), and sallow (*Cirrhia icteritia*). Odonata records comprised of azure damselfly (*Coenagrion puella*), blue-tailed damselfly (*Ischnura elegans*), common blue damselfly (*Enallagma cyathigerum*), and common darter (*Sympetrum striolatum*).
- 4.3.1.2 The closest record attributed to common darter located approximately 510m north of the site in 2020.
- 4.3.1.3 All lepidoptera returned are listed on Section 41 of the Natural Environment and Rural Communities Act (NERC) 2006.
- 4.3.1.4 All odonata returned are all listed on the Merseyside Local Biodiversity Action Plan (LBAP).

4.3.2 Vascular Plant

- 4.3.2.1 The data search returned fifty-eight records of notable vascular plant species including bluebell (*Hyacinthoides non-scripta*), coral-necklace (*Illecebrum verticillatum*), cornflower (*Centaurea cyanus*), and grape-hyacinth (*Muscari neglectum*).
- 4.3.2.2 The closest record attributed to a record of cornflower located approximately 500m north in 2019.
- 4.3.2.3 Cornflower, coral-necklace, and grape-hyacinth are listed under Section 41 of the NERC (2006). Bluebell is listed under the LBAP and is protected under Schedule 8 of the Wildlife and Countryside Act (WCA) (1981).

4.3.3 Amphibians

- 4.3.3.1 Forty-five records of notable amphibians were returned in the data search. Species include common toad (*Bufo bufo*), great crested newt (*Triturus cristatus*), and smooth newt (*Lissotriton vulgaris*).
- 4.3.3.2 The closest record attributed to a record of common toad located approximately 430m north of the site in 2016.
- 4.3.3.3 Great crested newt are protected under Schedule 5 of the WCA (1981). Great crested newt and common toad are listed under the LBAP and Section 41 of the NERC (2006). Great crested newt are European Protected Species (EPS) under the Habitats and Species Regulations Act (HabRegs) (2017).
- 4.3.3.4 A MagicMap search returned no granted European Protected Species Licenses (EPSL) relating to great crested newts present within 2km of the site.

4.3.4 Birds

- 4.3.4.1 Three-hundred-and-twenty-six records of notable birds were returned within 2km of the site (Please see Appendix 4 for a complete table of species).

4.3.5 Bats

- 4.3.5.1 Ninety-one records of bats were returned during the data search, including records of Pipistrelle bat species (*Pipistrellus* sp), records of unidentified bat species (*Chiroptera* spp), brown long-eared (*Plecotus auritus*), common pipistrelle (*Pipistrellus pipistrellus*), daubenton's bat (*Myotis daubentonii*), Leisler's (*Nyctalus leisleri*), an unidentified myotis bat species (*Myotis* sp.), Nathusius's pipistrelle (*Pipistrellus nathusii*), natterer's bat (*Myotis nattereri*), noctule (*Nyctalus noctula*), nyctalus bat species (*Nyctalus* sp.) soprano pipistrelle (*Pipistrellus pygmaeus*), whiskered bat (*Myotis mystacinus*), and Brandt's bat (*Myotis brandtii*).
- 4.3.5.2 Grid references for 36 records were found to have errors. The closest record was two records of unidentified bat species present approximately 120m northwest of the site in 2014.
- 4.3.5.3 All species of bat returned are listed as Priority species on the LBAP and HabRegs (2017). Brown long-eared, noctule, soprano pipistrelle, natterer's bat, whiskered bat, and Brandt's bat are listed under NERC (2006).
- 4.3.5.4 MAGIC also detailed the presence of two granted EPSL within 2km of the site:
 - Ref: EPSM2013-5749- Located approximately 1.7km northwest of the site. Allows destruction of a breeding site and resting place for common pipistrelle, soprano pipistrelle, brown long-eared, and whiskered bat between 2013 and 2016.
 - Ref: EPSM2010-2694- Located approximately 1.9km southwest of the site. Allows the destruction of a resting place for common pipistrelle between 2011 and 2012.

4.3.6 Hedgehog

- 4.3.6.1 Sixty-one records of hedgehog were returned within 2km of the site, with the closest record located approximately 385m northwest of the site from 2021.
- 4.3.6.2 Hedgehogs are listed on Section 41 of the NERC Act (2006).

4.3.7 Harvest Mouse

- 4.3.7.1 Two records of harvest mouse were returned within 1.67km east of the site in 2014.
- 4.3.7.2 Harvest mouse are listed under the NERC (2006).

4.3.8 Brown Hare

- 4.3.8.1 One record of brown hare was returned in the data search located approximately 620m northwest of the site in 2021.
- 4.3.8.2 Brown hare are listed under the LBAP, and NERC (2006).

4.3.9 Water Vole

- 4.3.9.1 One record of water vole was returned in the data search located approximately 1.48km north of the site in 2015.
- 4.3.9.2 Water vole are listed under the WCA (1981) and NERC (2006).

4.3.10 Invasive Non-native Species

- 4.3.10.1 Fauna
- 4.3.10.2 Seventy-five records of invasive non-native fauna species were returned in the data search comprising Australian flatworm (*Australoplana sanguinea*), Canada goose (*Branta canadensis*), ring-necked parakeet (*Psittacula krameri*), mandarin duck (*Aix galericulata*), bar-headed goose (*Anser indicus*) and grey squirrel (*Sciurus carolinensis*).
- 4.3.10.3 The closest record attributed to a record of ring-necked parakeet located approximately 510m north in 2019.
- 4.3.10.4 Flora
- 4.3.10.5 A total of 151 records of invasive non-native species were returned in the data search comprising floating pennywort (*Hydrocotyle ranunculoides*), Himalayan balsam (*Impatiens glandulifera*), Japanese knotweed (*Impatiens glandulifera*), Japanese rose (*Rosa rugosa*), garden yellow archangel (*Lamium galeobdolon* subsp. *argenteum*), montbretia (*Crocodymia x crocosmiiflora*), rhododendron (*Rhododendron ponticum*), three-cornered garlic (*Allium triquetrum*) and water-soldier (*Stratiotes aloides*). The closest record attributed to a record of Japanese rose located approximately 500m north of the site in 2019.
- 4.3.10.6 All species of flora and fauna returned are listed on Schedule 9 invasive species under the Wildlife and Countryside Act (WCA) 1981.

4.3.11 No Records Returned

- 4.3.11.1 The data search returned no records for:
 - Badger
 - Reptiles
 - Hazel dormice (*Muscardinus avellanarius*)
 - Otter
 - Red squirrel (*Sciurus vulgaris*)
 - White-clawed crayfish

4.4 Field Survey

- 4.4.1.1 The site habitats and accompanying Target Notes are presented in the UKHab Habitat Map in Figure 2.
- 4.4.1.2 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.

4.4.2 Buildings (u1b5)

- 4.4.2.1 The centre of the site contains a small disused seven-garage unit. Sterling wood sheets block each garage entrance. This structure is constructed with brick and has a thick concrete slab roof.

4.4.3 Other Developed Land (u1b6)

- 4.4.3.1 Concrete ground covers the entire southern section of the site, comprising road and pavement. The eastern end of the developed land is bordered by metal fencing.

4.4.4 Modified Grassland (g4)

- 4.4.4.1 East of the building comprises a small strip of modified grassland, which appeared to have been recently mown at the time of the survey. A small area of grassland of similar species is located next to a parking area northeast of the building.
- 4.4.4.2 Species within the grassland comprised black nightshade (*Solanum nigrum*), greater plantain (*Plantago major*), lesser swine-cress (*Lepidium didymium*), common ragwort (*Jacobaea vulgaris*), cuckooflower (*Cardamine pratensis*), creeping buttercup (*Ranunculus repens*), common field-speedwell (*Veronica persica*), hoary plantain (*Plantago media*), white clover (*Trifolium repens*), dandelions (*Taraxacum spp.*), spear thistle (*Cirsium vulgare*), hairy bitter-cress (*Cardamine hirsute*), groundsel (*Senecio vulgaris*), cock's-foot (*Dactylis glomerata*), common mouse-ear (*Cerastium fontanum*), thale cress (*Arabidopsis thaliana*), yarrow (*Achillea millefolium*), creeping bent (*Agrostis stolonifera*) and daisy (*Bellis perennis*).

4.5 Site Suitability for Protected and Notable Species

4.5.1 Species Discounted from Assessment

Fauna

- 4.5.1.1 Water vole, otter and white-clawed crayfish have been discounted from assessment as no aquatic habitats are located on site or within proximity. The nearest aquatic habitat, the River Alt, is located approximately 420m northwest. The site lacks suitable habitats to support these species, with anthropogenic barriers separating the site and the river.
- 4.5.1.2 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 (Wembrige *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.
- 4.5.1.3 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).
- 4.5.1.4 Reptiles have been discounted from the assessment. The site comprises dominantly hardstanding land with no neighbouring suitable habitat to commute from, What habitat remains is managed grassland, which feature no notable microhabitats to support basking, hunting, or cover. 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.
- 4.5.1.5 Notable invertebrates have been discounted as the site holds no deadwood, aquatic habitats or floristic diversity which would provide an important resource for invertebrates during their life cycle. Common species may occasionally traverse the site during the summer months when some of the grassland species are in flower, however, this is limited to the level of management taking place.
- 4.5.1.6 Great crested newt have been discounted from the assessment. No ponds were located within the site or within 250m of the site boundary. 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).
- 4.5.1.7 Notable birds have been discounted from the assessment. The building may provide a temporary resting place, while the grassland may provide foraging opportunities for common bird species such as feral pigeon (*Columbia livia domestica*). However, the overall lack of vegetative diversity and the size of the site does not support notable birds.

Flora

- 4.5.1.8 Notable vascular plants are discounted from the assessment. The site is predominantly hardstanding, and what vegetation remains is regularly managed grassland. The site is also situated within a heavily urban area with high disturbance, which was shown by small amounts of fly-tipping and dog walkers utilising the site.

4.5.2 Bats

Preliminary Roost Assessment

- 4.5.2.1 A PRA was completed on the building. Please refer to Appendix 2 for the results of the PRA and imagery of Potential Roosting Features (PRF) identified during the survey.
- 4.5.2.2 In summary, the building was found to have negligible opportunity for roosting bats. The building was found to have generally well-sealed mortar. Some gaps were found around the building, however through closer inspection, the gaps were either filled with spiderwebs, inaccessible or did not lead into the building's cavities.

Commuting and Foraging Bats

- 4.5.2.3 Any potentially suitable habitat on site is limited to a strip of modified grassland. Surrounding habitats, such as an urban park located 60m south and Little Wood located 670m north of the site, are expected to provide suitable habitat for bats. Commuting bats may occasionally traverse the site while commuting between these areas.

4.5.3 Hedgehog

- 4.5.3.1 Although the site's habitats are limited, the surrounding habitats (mentioned in Section 4.5.2.3) and neighbouring residential gardens are expected to provide suitable habitats for hedgehogs.
- 4.5.3.2 Hedgehogs may occasionally traverse the site when commuting between these habitats.

4.5.4 Common Amphibians

- 4.5.4.1 Ornamental water bodies may be located within nearby residential gardens which may provide suitable conditions for breeding common amphibians.
- 4.5.4.2 Common amphibians such as common toad may occasionally traverse the site.

5 Ecological Constraints and Recommended Mitigation

5.1 Proposed Development

- 5.1.1.1 The proposals include demolishing an existing small 7-unit garage and redeveloping the adjacent disused land to construct two bungalows and additional carparking.

5.2 Designated Sites

SSSIs

- 5.2.1.1 The site is located within the impact risk zone for the River Mersey SSSI. It is anticipated that the designated site is a sufficient distance away and is separated by anthropogenic barriers such as the residential areas, such that no impacts as a result of development are anticipated.

Former European Sites

- 5.2.1.2 One statutory site is located within 1km of the site boundary. This relates to Croxteth Hall Country Park Local Nature Reserve (LNR) located approximately 945m north of the site.
- 5.2.1.3 The development includes the demolition of an existing 7-unit garage and redeveloping the adjacent disused land to construct two bungalows.
- 5.2.1.4 It is anticipated that the designated site is a sufficient distance away and separated by anthropogenic barriers such as the residential areas, such that no impacts as a result of the development are anticipated.

Locally Designated Sites

- 5.2.1.5 Numerous non-statutory sites are located within 2km of the site boundary. Based on the size of the scheme, it is anticipated the potential impacts will not be of significance.

5.3 Habitats

- 5.3.1.1 The site consisted of a building, hardstanding areas, and heavily modified grassland, with no valuable habitats present.

5.4 Flora and Fauna

5.4.1 Amphibians

- 5.4.1.1 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.
- 5.4.1.2 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.

Foraging and Commuting Bats

- 5.4.1.3 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.

5.4.2 Hedgehog

- 5.4.2.1 As mentioned in section 4.5.3, there is potential for hedgehogs to occasionally traverse the site.
- 5.4.2.2 It is recommended that checks are carried out prior to grassland removal to avoid harming the species during works.

6 Further Surveys

- 6.1.1.1 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.

7 Opportunities for Enhancement

- 7.1.1.1 The National Planning Policy Framework (NPPF) (2024) highlights the requirement for planning policies and decisions to conserve and enhance the natural environment.
- 7.1.1.2 Paragraph 187 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 and incorporating features which support priority or threatened species such as swifts, bats and hedgehogs;*
- 7.1.1.3 Specific enhancement recommendations for the site include the following:
- Bat and bird boxes could be placed on the new buildings. 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 between garden plots where possible, to add commuting features within the site.
 - The inclusion of 'hedgehog highways' to facilitate movement across the site. This includes holes of 13 x 13cm at the bases of fence panels, leaving a sufficient gap beneath gates and/or leaving brick spaces at the bases of brick walls.
 - 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.

8 References

- Bat Conservation Trust and Institute of Lighting Professionals (2018). Bats and artificial lighting in the UK – Bats and the Built Environment Series.
- British Hedgehog Preservation Society / People's Trust for Endangered Species (2019). Hedgehogs and Development. BHPS / PTES.
- Chanin P (2003). Ecology of the European Otter. Conserving Natura 2000
- CIEEM (2019). Advice Note on the Lifespan of Ecological Reports and Surveys. CIEEM.
- CIEEM (2019). Guidelines for Preliminary Ecological Appraisal. CIEEM. Rivers Ecology Series No. 10. English Nature, Peterborough.
- Collins (2023). Bat Surveys for Professional Ecologists: Good Practice Guidelines (Fourth Edition). The Bat Conservation Trust, London.
- Dean M., Strachan R., Gow D., Andrews R. (2016). *The Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series)*. Eds Fiona Mathews and Paul Chanin. The Mammal Society, London.
- Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. 2021. The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. *British Birds* 114: 723-747. Available online at <https://britishbirds.co.uk/content/status-our-bird-populations>.
- English Nature (2004). Bat Mitigation Guidelines. English Nature, Peterborough.
- Environment Agency. (2020). Catchment Data Explorer. Available: <https://environment.data.gov.uk/catchment-planning/WaterBody/GB104027062880>.
- Froglife (1999) Reptile Survey: An Introduction to Planning, Conducting and Interpreting Surveys for Snake and Lizard Conservation. Froglife Advice Sheet 10. Froglife, Halesworth.
- Gent, A.H & Gibson, S.D. (2003) Herpetofauna Workers' Manual. Joint Nature Conservation Committee, Peterborough.
- Google Earth (2002). Historical aerial imagery of the site.
- Gov.uk (2020). Guidance Otters: surveys and mitigation for development projects. Available: <https://www.gov.uk/guidance/otters-protection-surveys-and-licences>.
- Harris S., Cresswell P., Jefferies D. (1989). *Surveying Badgers*. The Mammal Society.
- IEA (1995). Guidelines for Baseline Ecological Assessment. E & F Spon.
- JNCC (2004). Bat Workers Manual. JNCC, Peterborough.
- Liles, G. (2003). Otter Breeding Sites. *Conservation and Management*. Conserving Natura 2000 Rivers Conservation Techniques Series No. 5. English Nature, Peterborough.
- Maddock, A. (2008). UK biodiversity action plan; priority habitat descriptions. UK Biodiversity Action Plan.

Mathews, F., Kubasiewicz, L.M., Gurnell, J., Harrower, C.A., McDonald, R.A., and Shore, R.F. (2018). A review of the population and conservation status of British mammals.

Merseyside Local Biodiversity Action Plan (n.d.) Merseyside Biodiversity Group Species Action Plan. Available from: <https://www.merseysidebiodiversity.org.uk/species-plans/>

Langton, T.E.S., Beckett, C.L., and Foster, J.P. (2001), Great crested newt conservation handbook, Froglife, Halesworth.

Oldham, R.S., Keeble, J., Swan, M.J.S., and Jeffcote, M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). Herpetology Journal 10 (4), 143-155.

Peay, S. (2002). Guidance on Habitat for White-clawed Crayfish and its Restoration. Environment Agency.

Shuttleworth, C., RSST (n.d.). Red and grey squirrels distribution in the British Isles in 1945 and 2010.

The Mammal Society (2020). Species Factsheet: Red Squirrel. Available: <https://www.mammal.org.uk/species-hub/full-species-hub/discover-mammals/species-red-squirrel/>.

UKHab Ltd (2023). UK Habitat Classification Version 2.0 (at: <https://www.ukhab.org>).

Wembridge, D., Al-Fulaij, N. and Langton, S. (2016). The State of Britain's Dormice 2016. Population index, p.100.

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 reptiles

All native reptile species have some degree of protection in the UK, through section 9(1) and (5) (specified in Schedule 5) of the Wildlife and Countryside Act 1981 (as amended). There are two different levels of protection afforded to reptiles through this legislation according to species and this is described in more detail below.

Full Protection

Sand lizard (*Lacerta agilis*) and smooth snake (*Coronella austriaca*) are afforded protection under The Conservation of Habitats and Species Regulations 2010 (are species of European importance) and are fully protected under the Wildlife and Countryside Act 1981 (as amended) and the CRow Act (2000). 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. The relevant sections of this legislation make it an offence to:

- Intentionally kill, injure or capture or take a reptile;
- Possess or control (live or dead animal, part or derivative);
- Deliberately (intentionally) or recklessly damage, destroy or obstruct access to a breeding site or any structure or place used for shelter or protection by a reptile;
- Disturb whilst the reptile is occupying such a structure or place; and

- Sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative).

Sand lizard and smooth snake are listed as a SoPI under Section 41 of the NERC Act 2006.

Protection against killing, injuring and trade

This level of protection under section 9 (parts 1 and 5) applies to the four widespread species of reptile, namely the common lizard (*Zootoca vivipara*), slow-worm (*Anguis fragilis*), grass snake (*Natrix natrix*) and adder (*Viper berus*). Only part of sub-section 9(1) applies, which make it an offence to:

- Intentionally kill or injure, and
- Sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative).

Grass snake, slow-worm and adder are all listed as 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 water vole

The water vole is fully protected under Section 9 of the Wildlife & Countryside Act 1981 (as amended) through its inclusion in Schedule 5. The legal protection makes it an offence to:

- Intentionally kill, injure or capture or take a water vole;
- Possess or control (live or dead animal, part or derivative);
- Deliberately (intentionally) or recklessly damage, destroy or obstruct access to a breeding site or any structure or place used for shelter or protection by a water vole;
- Deliberately (intentionally) or recklessly disturb a water vole whilst occupying such as structure or place, and
- Sell, offer for sale, possess or transport for the purpose of sale (live or dead animal, part or derivative).

Water vole is listed as a SoPI under Section 41 of the NERC Act 2006.

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, rhododendron

(*Rhododendron ponticum*) 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 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	Small holes, and gaps in the building, lead into the garage space between the brick wall and plyboard. Cobwebs are present within the gap.			Negligible
				

Building Reference	Description	Evidence	Category of Suitability
			
			

Appendix 3 – Habitat Map and Target Notes

Hierarchical code	Code	Meaning
Primary Code	G4	Modified Grassland
	U1b5	Buildings
	U1b6	Other Developed Land
Secondary Code	106	Mown
	516	Active Management
	519	Abandoned

Appendix 4- Notable Bird Species Returned

Scientific Name	Common Name	Protection
<i>Tyto alba</i>	Barn owl	Sch.1****
<i>Chlidonias niger</i>	Black Tern	Sch.1****, BoCC5**
<i>Limosa limosa</i>	Black-tailed godwit	Sch.1****, BoCC5*, S41*****
<i>Fringilla montifringilla</i>	Brambling	Sch.1****
<i>Pyrrhula pyrrhula</i>	Bullfinch	BoCC5**, S41*****
<i>Cuculus canorus</i>	Cuckoo	BoCC5*, S41*****
<i>Numenius arquata</i>	Curlew	BoCC5*, S41*****
<i>Prunella modularis</i>	Dunnock	BoCC5**, S41*****
<i>Turdus pilaris</i>	Fieldfare	Sch.1****, BoCC5*
<i>Accipiter gentilis</i>	Goshawk	Sch.1****
<i>Larus argentatus</i>	Herring gull	BoCC5*, S41*****
<i>Delichon urbicum</i>	House martin	BoCC5*
<i>Passer domesticus</i>	House sparrow	BoCC5*, S41*****
<i>Alcedo atthis</i>	Kingfisher	Sch.1****, BoCC5**
<i>Vanellus vanellus</i>	Lapwing	BoCC5*, S41*****
<i>Acanthis cabaret</i>	Lesser redpoll	BoCC5*, S41*****
<i>Carduelis cannabina</i>	Linnet	BoCC5*, S41*****
<i>Clangula hyemalis</i>	Long-tailed duck	Sch.1****, BoCC5*
<i>Falco peregrinus</i>	Peregrine	Sch.1****
<i>Milvus milvus</i>	Red kite	Sch.1****
<i>Turdus iliacus</i>	Redwing	Sch.1****, BoCC5**
<i>Emberiza schoeniclus</i>	Reed bunting	BoCC5**, S41*****
<i>Alauda arvensis</i>	Skylark	BoCC5*, S41*****
<i>Turdus philomelos</i>	Song thrush	BoCC5**, S41*****
<i>Muscicapa striata</i>	Spotted flycatcher	BoCC5*, S41*****
<i>Sturnus vulgaris</i>	Starling	BoCC5*, S41*****
<i>Apus apus</i>	Swift	BoCC5*
<i>Anthus trivialis</i>	Tree Pipit	BoCC5*, S41*****
<i>Emberiza citrinella</i>	Yellowhammer	BoCC5*, S41*****