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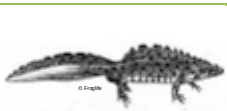
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Preliminary Ecological Appraisal

August 2022

Land off Victoria Avenue
Whitefield
Manchester
M45 8SG

National Grid Reference: SD8119605708



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Executive Summary

As part of a proposed planning application regarding a plot of land off Victoria Avenue in Whitefield, Manchester, a Preliminary Ecological Appraisal (PEA) was undertaken by Tyrer Ecological Consultants Ltd during August 2022, in accordance with the *Guidelines for Preliminary Ecological Appraisal* (CIEEM, 2017) and other best practice guidance. It is understood that proposals entail the clearance of the application site to allow for the creation of a number of new residential houses.

Extensive findings, conclusions and recommendations are presented throughout the report; however, the reader should be aware of the following Key recommendations.

Vegetation: One invasive species, namely Japanese Knotweed (*Reynoutria japonica*), was identified in two locations on the application site. *It is recommended that a precautionary working method statement with appropriate biosecurity protocol is instated prior to commencement of site works as per section 8.2.*

Bats: Based upon the findings of the survey covered throughout Sections 6.0 – 7.0 of this report and supported by the Appendix, the building at Land off Victoria Avenue is determined to offer 'Negligible' bat roost potential in accordance to Bat Conservation Trust – Bat Survey for Professional Ecologists: Good Practice Guidelines, 3rd ed (2016); no further surveys are required in relation to bats and buildings; general lighting recommendations are given in Section 8.0 and enhancement measures are recommended in Appendix II of this report.

A small hole within a mature Horse Chestnut tree (Target Note 2) to the west was identified as pertaining to 'low' potential in accordance with current BCT guidance. *Recommendations in relation to bats have been provided in section 8.6-8.7.*

Breeding Birds: No evidence of breeding birds or breeding bird behaviour was observed during the site visit, notwithstanding, the site possesses numerous potential suitable nesting platforms including trees, scrub and a building. *Any vegetation clearance and or demolition works should occur outside of the breeding bird season of March-August in order to avoid potential disturbance to birds, unless it can be demonstrated by a suitably qualified professional ecologist that birds are absent beforehand.*

Terrestrial Mammals: The site provides suitable habitat for Badger and European Hedgehog. *Recommendations to mitigate risk to hedgehog and badger have been provided in section 8.15.*

Amphibians: Whilst presence of GCN within the site boundary is considered unlikely, the presence of other, more common amphibians is possible. *Recommendations to reduce risk to amphibians during the works have been provided in section 8.16-8.18.*

Invertebrates: The site is considered likely to host a locally important population of invertebrates. *Recommendations to reduce risk of impacts to this population have been provided in section 8.19.*

Biodiversity Enhancement: A series of recommendations have been given within section 8.0 and Appendix III which provide opportunities for biological enhancement at the development site and within the wider area. Enhancement opportunities include recommendations relative to the provision of favourable planting and landscaping, with wildlife boxes.

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1.0 Introduction & Objectives

- 1.1 As part of a proposed planning application regarding a plot of land off Victoria Avenue in Whitefield, Manchester (Figure 1.1), a Preliminary Ecological Appraisal (PEA) was undertaken by Tyrer Ecological Consultants Ltd during August 2022, in accordance with the *Guidelines for Preliminary Ecological Appraisal* (CIEEM, 2017) and other best practice guidance. It is understood that proposals entail the clearance of the application site to allow for the creation of a number of new residential houses.
- 1.2 Ecological surveys, particularly where a specially protected / noteworthy species is or may be present, are generally required as part of the Local Authority's Planning Policies. This survey and report was commissioned by Paddock Johnson Partnership.



Figure 1.1: Existing site layout at the plot of land off Victoria Avenue with red line boundary (left) and proposed site layout (right) (©Paddock Johnson Partnership).

Aims & Objectives

- 1.3 The aim of the survey was to ascertain the nature of the land, and where possible obtain information on any priority wildlife habitats, or species, that may be present and if so determine if they will be affected by the proposals. The survey therefore includes the following objectives:
- Gather baseline ecological information on site/off site (as necessary),
 - Identify any likely ecological constraints associated with the proposals for the site (i.e. the presence of protected/priority habitats or species that exist within the confines of the application boundary, or zone of influence (ZOI),
 - Identify mitigation / compensation measures likely to be required in line with the mitigation hierarchy (i.e. avoidance > impact minimisation > mitigation > compensation),
 - Identify additional survey requirements following on from this preliminary appraisal,

- Identify a series of enhancement opportunities for biodiversity in line with national and local planning policy following '*Biodiversity Net Gain: Good practice principles for development*' (CIEEM *et. al.*, 2019).

1.4 As part of this ecological appraisal:

- Habitats on site were identified, measured and mapped using the UK Habitat Classification – Habitat Definitions Version 1.1 (2020);
- One building and any trees present were assessed for their potential to host roosting bats in line with current Bat Conservation Trust (BCT) guidance.

1.5 As part of the Local Planning Authorities (LPA) planning policies and obligations to the Planning Framework, ecological surveys are generally required prior to planning permission being granted, particularly where protected/priority species are, or may be present, that could be affected by the proposals for which the application seeks consent.

1.6 This report will therefore provide baseline information as derived from the diurnal appraisal process outlined above and recommend any necessary additional surveys, or work, where applicable, to provide a conclusive ecological impact assessment.

1.7 The Applicant should be aware that if during the appraisal:

- The application site/area was found to be suitable for any European Protected Species (EPS), otherwise protected, or priority habitats/species, or,
- Signs of use by particular protected species were found, or suspected, or,
- Seasonal constraints significantly limit the gathering of ecological information to arrive at an accurate conclusion on which the planning application can proceed,

Then more detailed surveys may be recommended where necessary, to allow the ecologist to arrive at a conclusive impact assessment.

1.8 If any protected species was subsequently found during detailed further surveys and / or may be affected by the development proposals, then a European Protected Species Mitigation Licence (EPSML) may be required to proceed with the development.

1.9 Where more detailed surveys are recommended by the ecologist, following ecological appraisal, then Local Planning Authorities (LPA's) on the advice of their ecological advisors, may not grant permission until such time that all relevant material information is gathered in accordance with their obligations to the legislature.

1.10 Protected/priority species omitted from this report have been discounted due to factors including obvious absence/isolation of suitable habitats, and/or distributional aspects negating the necessity to survey for them, and/or the proposed works were not considered to negatively impact the species or encroach on areas where the species may be present.

2.0 Legislation & Policy

2.1 The legislature considered for the purposes of this report includes the following:

- Conservation of Habitats and Species Regulations (amendment) (2019) (EU Exit)
- Wildlife and Countryside Act (1981) (as amended)
- Countryside Rights of Way (CROW) Act (2000)
- Natural Environment and Rural Communities (NERC) Act 2006
- Protection of Badgers Act (1992)
- The Hedgerow Regulations (1997)
- Town and Country Planning Act (1990)
- Wild Mammals Protection Act (1996)

2.2 These acts entail relevance to both protected and invasive species. The degree of protection offered to taxa provided within existing UK and EU legislature often varies depending on species/group, for example, some species may purely be protected during one of its life stages (e.g. common species of breeding bird whilst nesting/with eggs/young); some species may receive full protection within the EU (e.g. otter), whereas others may be protected solely on a national basis (e.g. grass snake).

2.3 Table 2.1 contains appropriate legislature to each species/group specifically respective to the site, and provides the relevance of said legislation.

Table 2.1 - Relevant Legislation

Species Group/Species	Relevant Legislation	Level of Protection
Badger	Protection of Badgers Act (1992), Wildlife and Countryside Act (1981) (as amended)	Illegal to wilfully kill, injure or take a badger (or attempt to do so). Cruelly ill-treat a badger. Dig for a badger. Intentionally or recklessly damage or destroy a badger sett, or obstruct access to it. Cause a dog to enter a badger sett. Disturb a badger when it is occupying a sett.
Bats	CROW Act (2000) Conservation of Habitats and Species Regulations (2019) (EU Exit) Wildlife and Countryside Act (1981) (as amended)	All British bats and their roosts are afforded full protection from damage/destruction and bats may not be injured/killed/taken at any life stage. Once identified, roosts are protected whether the bat is in occupation or not.

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Birds (Breeding)	CRoW Act (2000) Wildlife and Countryside Act (1981) (as amended)	All wild birds (with only minor exceptions) and their nests whilst being built or containing eggs or dependant young are protected. Birds listed on Schedule 1 Wildlife & Countryside Act (1981) (as amended) are afforded a greater level of protection.
Great Crested Newt (GCN)	CRoW Act (2000) Conservation of Habitats and Species Regulations (2019) (EU Exit) Wildlife and Countryside Act (1981) (as amended)	Great Crested Newts (GCN's) are fully protected from disturbance, killing, injuring or possession at any life stage. Confirmed breeding ponds and resting places are afforded the same protection.
Invasive Plant Species	Wildlife and Countryside Act (1981) (as amended)	Species listed within Schedule 9 Wildlife and Countryside Act (1981) (as amended) as invasive, including Japanese Knotweed (<i>Reynoutria japonica</i>) and Himalayan Balsam (<i>Impatiens glandulifera</i>). The Act makes it an offence for any person to grow or cause to grow in the wild any plants listed as invasive.

Policy

2.4 Paragraph 180 of the National Policy Planning Framework (as revised in July 2021) states:

180. When determining planning applications, local planning authorities should apply the following principles:

a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons⁶³ and a suitable compensation strategy exists; and,

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

2.5 The Core Strategy for Bury borough Policy EN6 states:

The Council will seek to ensure that proposals for new development minimise impacts on the Borough's natural assets including its biodiversity, geology, geomorphology, natural water resources and soils and, in the case of biodiversity, provide net gains where possible. Where there is potential for new development to have an impact on any of the Borough's natural assets, applicants will be expected to apply the sequential approach as outlined in national planning policy on biodiversity and geological conservation and provide evidence that any potential impact has been fully assessed and that, where potential impacts have been identified, measures have been taken to avoid, mitigate or compensate. When assessing the potential impact of a development on natural assets, the Council will take into account the following:

Biodiversity

- a) The effect on habitats and sites of international, national, regional or local importance as identified in relevant national guidance, the Greater Manchester Biodiversity Plan, the Local Sites register for Greater Manchester and Borough Habitat Surveys;*
- b) The effect on land contributing towards and/or enabling the enhancement of the Borough's wildlife corridor network as identified in the Ecological Framework for Greater Manchester and forming part of Bury's Green Infrastructure network;*
- c) Whether the proposal can contribute to development of one of the Borough's identified Ecological Enhancement Areas as identified under Spatial Policy EN5;*
- d) The impact on any priority species;*
- e) The irreplaceable nature of certain habitats such as Ancient Woodland.*

3.0 Priority Habitats & Species

National context

- 3.1** In the United Kingdom, legal protection and otherwise legislative recognition is afforded to particular habitats and species. Certain habitats and species are considered to hold nature conservation importance and are thus protected due to factors such as their ecological functionality, their rarity, their vulnerability, environmental importance or declining population/status. They are referred to as priority habitats and priority species.
- 3.2** The UK Biodiversity Action Plan (UKBAP) provided a statutory basis for lists of habitats and species of national conservation importance - now transposed under section 41 (s.41) of the Natural Environment Rural Communities Act 2006 (NERC Act).
- 3.3** No priority habitats are considered relevant to the survey area; however, the following species are considered relevant to the survey area:

Species:

- Soprano Pipistrelle (*Pipistrellus pygmaeus*),

- Bird species that include: House Sparrow (*Passer domesticus*), Dunnock (*Prunella modularis*), Song Thrush (*Turdus philomelos*),
- Great Crested Newt (GCN) (*Triturus cristatus*),
- Common toad (*Bufo bufo*),
- Flora that includes Purple ramping-fumitory (*Fumaria purpurea*)

District context

- 3.4 Local Biodiversity Action Plans (LBAP's) are a way of encouraging people to work together and deliver a program of continuing action for biodiversity at a local level. LBAPs also embrace the idea of 'local distinctiveness'; habitats and species which are not considered UK conservation priorities can be catered for by LBAPs if they are of particular local significance.

LBAP's set out practical steps that aim to:

- Help protect biodiversity,
- Enhance and improve biodiversity where possible, and,
- Promote biodiversity at a local level

- 3.5 The Local Biodiversity Action Plan (LBAP) lists key local habitats/species considered to be rare or declining in the area; some may be of national concern while others are significant at local level. The following plans are considered of potential relevance to the survey.

- Native Black Poplar (*Populus nigra subsp. betulifolia*)
- Bluebell (*Hyacinthoides non-scripta*)
- Bats (*Chiroptera* sp.)
- Song Thrush (*Turdus philomelos*)
- Tree Sparrow (*Passer montanus*)

4.0 Survey Methods

- 4.1 As part of the Preliminary Ecological Appraisal report, desk-top and field-based studies were conducted. Methods for both components of the appraisal are given below.

Desktop Study

- 4.2 Prior to a site visit a desktop study was conducted using online resources to obtain information pertaining to any sites afforded statutory (e.g. SSSI) and non-statutory (e.g. LWS) designations within 2.0km of the site boundary. To do so, the 'Multi Agency Geographic Information for the Countryside (MAGIC – provided by Defra)' along with data from the 'Natural England Open Data Geoportal' was accessed to gather such information; this interactive mapping service was also used to locate any European Protected Species Mitigation Licenses (EPSML) and species records to further inform conclusions concerning protected species in the context of the study site and its proposed development.
- 4.3 Historic satellite imagery was reviewed using sources such as Google Earth (© 2021/22) to help establish past use of the land and determine the nature of adjoining and extending habitats; such information aids in the understanding of how the site might interact with its surroundings ecologically and its value in that context, and how the development may impact at a wider scale.

4.4 In addition the Council Planning Portal 'Search for planning applications' function was utilised to help inform the desktop study by analysis of existing publicly accessible ecological survey results that have been carried out locally within the previous five years.

4.5 A commercial data request to the Local Environment Records Centre (LERC) serving the area has not been sourced during this preliminary appraisal assessment and is justified through application of the following recent guidance:

1) The Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK (CIEEM, 2020) states: "It is generally expected that a desk study, including a data search, will be a key part of the ecological surveys or reports produced to inform a planning application. **Freely available web-based sources of data and contextual information should always be used**; in some cases, it may be acceptable to not undertake a data search with the LERC or other relevant NSS or local interest groups, for example:

*ii) Situations where the data search would be extremely unlikely to provide information needed to inform the assessment; due to the **scale** and **location** of the proposed development. The appropriateness of excluding a data search will need to be judged on a case-by-case basis as, in most situations, it will be essential to carry out such a search even if the development is very small or is likely to have a low impact. It can be very difficult to demonstrate that a data search would not have provided relevant information without obtaining and reviewing those data.*

iii) In some cases for Preliminary Roost Assessments of buildings in low impact / small-scale scenarios, such as an extension to a residential property, loft conversions (full or partial), installation of Velux/dormer windows, single modern agricultural or similar building conversion or demolition; however, it should not be assumed that data searches are never required for such scenarios and this must be judged on a case by case basis and justified accordingly.

2) The Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017) states: "*Very occasionally it might be possible to carry out a robust PEA without obtaining LERC/NBDC/CEDaR data; this will usually only apply to **low impact or small-scale projects** (e.g. by virtue of size, extent, duration of works, magnitude and locality), and should be determined on a case-by-case basis.*"

As exemptions as made **bold** above can be applied for the proposed development in good practice, it is considered unnecessary to conduct a commercial data request at this time, however, if a data search is considered to be necessary by the Local Authority or advisory body to better inform the appraisal, a proportionate data search should be commissioned with results interpreted into the conclusions and recommendations of a re-issued/updated report.

Field Survey

4.6 A daytime preliminary ecological appraisal was conducted on 17th August 2022 in dry conditions (14°C), wind 1/12 (Beaufort scale), 50% cloud by Miss. K. Judson BSc. MSc. Qualifying CIEEM, a Junior Ecologist of 2 years.

Floristic assessment

- 4.7 The survey followed the UK Habitat Classification Version 1.1 (Butcher, et.al., 2020) being introduced as part of the roll out of Biodiversity Net-gain with reference to the Joint Nature Conservation Committee (JNCC) Phase 1 Habitat Methodology standards (JNCC, 2010) and reference to the Chartered Institute of Ecology and Environmental Management (CIEEM) Technical Guidance Series “*Guidelines for Preliminary Ecological Appraisal, 2nd Edition*” (CIEEM, 2017).
- 4.8 During the survey walkover, botanical assemblages were assessed, and the land was inspected for the presence of red-listed (Stroh *et al*, 2014; Hodgetts, 2011), s.41 and LBAP species alongside specially protected species as listed under Schedule 8 of the Wildlife and Countryside Act (WCA) (1981) (as amended) and / or Schedule 5 The Conservation of Habitats and Species (amendment) (EU exit) Regulations (2019). Species nomenclature follows Stace, C. (2019) – definitive English names for vascular plants, Smith, A. (2004) for mosses, and Dobson, F. (2018) for lichens.
- 4.9 Additional to attributing ecological value to red-listed / BAP species, in accordance with existing CIEEM guidance, a geographic frame of reference is also adopted. Plant species and habitats may be recognised for their ecological notoriety on a geographical scale which is adopted on a site-to-site basis (see Figure 4.1 below).

For a site-relevant species list, see Appendix II.

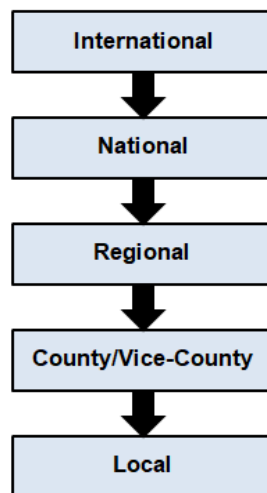


Figure 4.1 - Geographic Frame of Reference entailing degrees of conservation importance

- 4.10 In combination with assessing the area in relation to flora and habitats of conservation importance, the land was also assessed in relation to the presence of invasive non-native species (INNS) as listed under Schedule 9 (Part II) of the Wildlife and Countryside Act (1981) (as amended).

Faunal assessment

- 4.11 The identification and/or evidence of fauna encountered would be documented whilst in tandem the area was assessed for the potential to support the priority species covered in the previous tables. The ‘walkover’ also aimed to identify any ephemeral pools or unmapped waterbodies.

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Bats

- 4.12 The site would be assessed for bats, buildings (where present) would be inspected for potential places that may be of value to bats and to determine evidence of use. This typically involves a search for potential roost features (PRF) both internally (investigation of loft spaces/upper floors/internal elevations) as well as externally, comprising an investigation of features (roof material, building components) using a high-powered torch. Field signs of bats typically comprise bat droppings, incidental animal presence, dead specimens and/or prey items. One building is present on site.
- 4.13 Trees (where present) would be inspected for places that may be of value to bats and to determine if evidence of use was present; this typically involves a search for potential roost features along with an investigation of those features using a high-powered torch or close focus binoculars. Potential roost features can include woodpecker holes, rot holes, hazard beams, other vertical or horizontal cracks or splits in stems and branches, partially decayed lifted bark, knot holes, man-made holes, tear-outs, cankers in which cavities have developed, other hollows or cavities, including butt-rots, double-leaders forming compression forks with included bark, gaps between overlapping stems or branches, partially detached Ivy with stem diameters in excess of 50mm or bat/bird boxes. Several mature trees are present along the survey boundaries; it not yet known whether all these trees will be impacted by the proposed works; trees were investigated in full from ground level.
- 4.14 Criteria for preliminary bat roost assessment are based upon the determinants given in the Bat Conservation Trust - Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd ed. (2016): (see Figure 4.2).

Table 4.1 Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement.

Suitability	Description Roosting habitats	Commuting and foraging habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions ^a and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation ^b). A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential. ^c	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions ^a and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions ^a and surrounding habitat.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

^a For example, in terms of temperature, humidity, height above ground level, light levels or levels of disturbance.

^b Evidence from the Netherlands shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten et al., 2015). This phenomenon requires some research in the UK but ecologists should be aware of the potential for larger numbers of this species to be present during the autumn and winter in large buildings in highly urbanised environments.

^c This system of categorisation aligns with BS 8596:2015 Surveying for bats in trees and woodland (BSI, 2015).

Figure 4.2 - Bat Conservation Trust (BCT) guidelines extract

4.15 Factors considered during the preliminary roost assessment include:

- Knowledge of bat species relevant to the site location and geographical range,
- Nature of the immediate / surrounding habitat in relation to foraging opportunities,
- Presence and conditions of loft spaces, upper floors, roof linings where present,
- Presence / absence of roost potential,
- Value of roost potential, if present.

Breeding Birds

4.16 Buildings, trees, hedges, and scrub (where present) would be checked for evidence of nesting birds and suitability for relevant species. Bird species observed and heard were recorded on site, and a search was made for nest material, or areas suitable for nesting. Additional to the site's capacity to support generally common species for breeding, the area was also subject to an assessment for the site's capacity to support species especially protected under Schedule 1 of the Wildlife & Countryside Act (1981) (as amended), for example Redstart (*Phoenicurus phoenicurus*) and other priority species.

Other terrestrial mammals

4.17 The walkover included a search for field signs of Badger (*Meles meles*) which includes signs of activity such as digging, setts, 'runs' leading to and from a sett and the existence of latrines or 'snuffle' holes where badgers have foraged in the ground. Any signs indicative of use of the site by European Hedgehogs (*Erinaceus europaeus*), or habitats of value to them, were also recorded.

GCN

4.18 During a desktop assessment a 500m search was undertaken from a site-central grid reference in relation to the presence of ponds, ditches or other water bodies that may support Great Crested Newts (GCN). The information gathered would then be used to aid in establishing if more detailed surveys are required.

NB: *English Nature's (now Natural England) Great Crested Newt Mitigation Guidelines (2001) states ponds within 500m of a proposed development site should be considered for their potential to support GCN, however, in some instances this distance may be reduced to 250m due to the presence of physical barriers and obstructions or based on the likely magnitude of impacts arising from the proposed development.*

4.19 Based on the impact of the proposed development and using best practice guidance, a 500m buffer was used. No ponds were located within the site boundary; nor were any located within 500m of the application site boundary.

Reptiles

4.20 The site and its surroundings were assessed for suitability for use by reptiles, with particular attention paid to features that could be used as basking areas (e.g. south-facing slopes), hibernation sites (e.g. banks, walls, piles of hardcore) and opportunities for foraging (e.g. rough grassland and scrub). Beebee & Griffiths (2000) state specific habitat preferences of common UK reptiles:

- Common Lizards (*Zootoca vivipara*) use a variety of habitats from woodland glades to heaths, walls and pastures, as well as brownfield sites,

- Slow-worms (*Anguis fragilis*) use similar habitats to Common Lizards, and are often found in rank grassland, gardens and derelict land under refugia,
- Grass Snakes (*Natrix natrix*) have broadly similar requirements to Common Lizards but with a greater reliance on ponds and wetlands, where they prey on amphibians.

In assessment of a site for reptiles important habitat characteristics are considered, outlined in Table 4.2, as derived from the Reptile Habitat Management Handbook (Edgar, 2010).

Table 4.2 - Important habitat characteristics for reptiles

1. Location (in respect of species range)	7. Connectivity to good quality habitat
2. Vegetation structure	8. Prey abundance
3. Insolation	9. Refuge opportunity
4. Aspect	10. Hibernation habitat potential
5. Topography	11. Disturbance regime
6. Surface geology	12. Egg-laying site potential

Invertebrates

- 4.21 The application site was assessed for the presence of features that should be considered of high value to invertebrates. A number of importance features were considered, based on the assemblage descriptions provided within the Research Report “Surveying terrestrial and freshwater invertebrates for conservation evaluation” (NERR005, 2007), including but not limited to:
- Wood decay
 - Early successional mosaic habitat
 - Shaded ground layer
 - Still and flowing water
- 4.22 The results, conclusions and recommendations of this report are based on a number of factors i.e.
- Skills and experience of the surveyor,
 - Knowledge of flora and fauna relevant to the site location and geographical range,
 - Nature of the immediate and surrounding habitat in relation to shelter, foraging and commuting opportunities.
- 4.23 All aspects of the field survey were undertaken in line with the current government and CIEEM standing guidance during the COVID-19 ‘Coronavirus’ pandemic.
- 4.24 The results, conclusions and recommendations of this report have been assessed by Mrs. K. Wilding, Director of Tyrer Ecological Consultants Ltd, and her assessment concurs with the findings and recommendations of Miss. K. Judson.

5.0 Limitations

- 5.1 This report does not contain a comprehensive list entailing the totality of botanical taxa on site. Species listed within Appendix II are recorded from a combination of the seasonal timing the survey took place and botanical identification skills of the surveyor. Many plant species are only evident at certain times of the year; consequently, it is possible that some plant species may have gone undetected.
- 5.2 Access to the interior of the building present on the application site could not be achieved at time of survey; nonetheless, an assessment of the exterior with regard its potential to support roosting bats/potential ingress points into the interior of the building was conducted – as this building is to be retained it is not considered a significant constraint. No further access limitations were experienced on site with permission granted to the surveyor to access all important areas. Taking everything into consideration no significant limitations affected the survey effort that would affect the results, conclusions, and recommendations in this report.

6.0 Desk Study Results

- 6.1 The Land off Victoria Avenue, Whitefield, Manchester (hereafter referred to in-part as “the application site” or “the site”) is situated in the north of Greater Manchester, approximately 8.0km from north of Manchester city centre (see Figure 6.1 below).



Figure 6.1 - Location of application site within the surrounding landscape (Source: Google 2022)

- 6.2 The application site can be broadly described as a brownfield site containing a mosaic of dense and scattered scrub with scattered trees, lines of trees at the borders, and ephemeral/short perennial vegetation throughout.
- 6.3 The immediate habitat comprises a matrix of residential dwellings with associated gardens, public green spaces and infrastructure in all directions; ecological features are broadly limited to amenity grasslands, scattered trees, introduced shrub and herbaceous species commonly associated with garden environments.
- 6.4 The extending habitat is similar to that of the immediate in that it is characterised by a residential housing developments interspersed by minor roads, commercial premises and occasional green spaces; located approximated 550m southeast of the application site a significant barrier to dispersal of terrestrial fauna in the form of the M60 beyond which is further residential housing and Heaton Park Reservoir. Ecological features of interest present comprise fragments of priority deciduous woodland which are most prevalent at the far north and far southwest of the 2.0km search radius; within these areas of woodland priority lowland fens and priority lowland dry acid grassland also feature. Beyond Heaton Park Reservoir to the southeast is an expanse of woodpasture and parkland BAP priority habitat also featuring further areas of priority deciduous woodland.

- 6.5 In respect to connectivity the site has poor linkages to the aforementioned ecological features owing to the extensive presence of residential roads and infrastructure throughout. Access to the site is however possible for both flying and common terrestrial species, however there are significant barriers to dispersal, as described.
- 6.6 The described ecological frameworks are considered to offer a poor array of habitats with limited inter-connectivity within the surrounding landscape due to the highly urbanised surroundings. However, the site itself may provide foraging habitat for flying animals such as bats and birds associated with garden and rural settings, whilst small mammals and amphibians may also be occasionally present in some capacity.
- 6.7 The protected species most typically associated with the habitats described is the Common Pipistrelle (*Pipistrellus pipistrellus*) bat, frequently associated with buildings in both urban and rural settings, and this species presence in surrounding landscape is likely.
- 6.8 No statutory designated sites are present within the 2.0km search radius.
- 6.9 **Bats:** One European Protected Species Mitigation Licence (EPSML) has been granted in relation to bats within 2.0km of the site boundary (Figure 6.3) at approximately 1.7km to the southwest.

A search of biological records submitted to the local record centre serving the area held by Tyrer Ecological Consultants Ltd revealed the following records pertaining to bats within the 2.0km buffer with their relative distances from the application site described:

- Common Pipistrelle (*Pipistrellus pipistrellus*) commuting and foraging activity, 500m southeast, 2015
- Common Pipistrelle commuting and foraging activity, 1.2km southwest, 2015
- Common Pipistrelle day roost, 1.5km southwest, 2015
- Common Pipistrelle day roost, 1.8km south, 2020

The abovementioned records testify to the presence of Common Pipistrelle bats being present in and using the wider area to roost.

- 6.10 **Great Crested Newt** – Three EPSMLs in relation to GCN have been granted within the 2.0km buffer located 1.3km southeast, 1.5km northeast and 1.6km east relative to the application site; no 'Present' Class Survey Licence Returns or pond survey results occur within the search radius.

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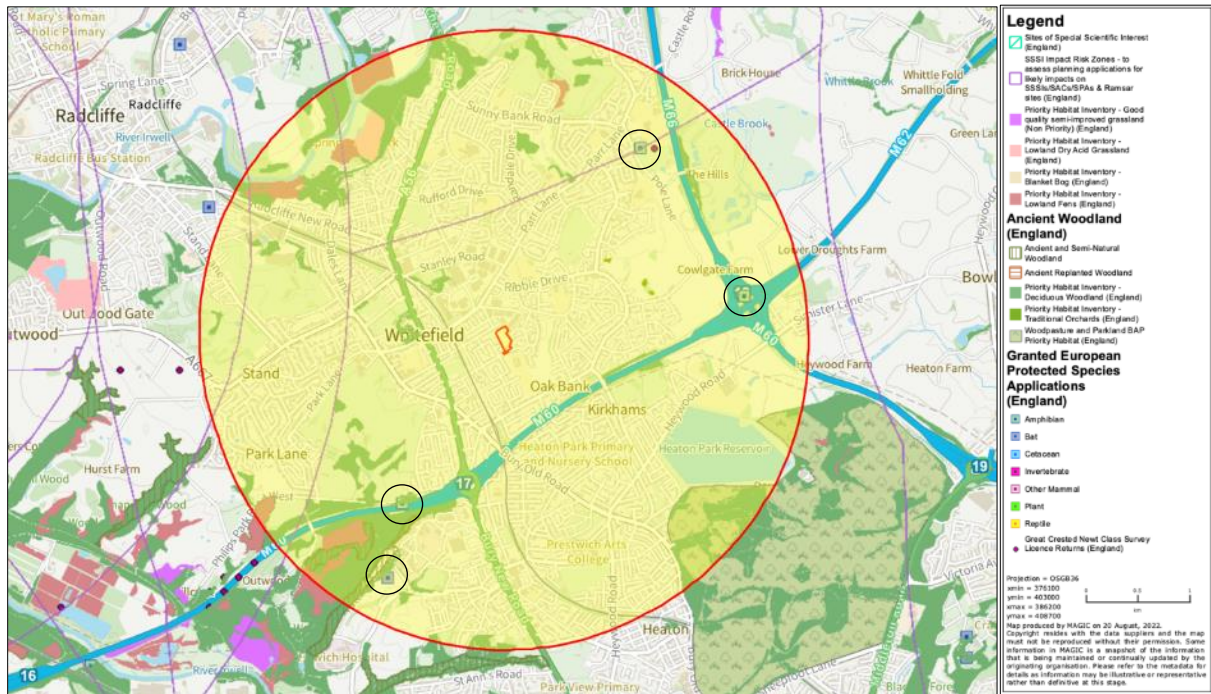


Figure 6.2 – Location of granted EPSMLs (circled) and designated sites relative to the application site (Source: adapted from MAGIC Maps, 2022)

7.0 Field Survey Results

7.1 Habitat Survey

- 7.1.1 See Table 7.1 (below) for habitat descriptions. Refer to Appendix IV - UK Habitats Map for the location of all described habitats & Target Notes (TN). Species nomenclature follows Stace, C. (2019) – definitive English names.

Table 7.1 - UKHabs habitat types within the survey area with target notes

Habitat	Description
Dense scrub – h3	At the north of the application site an area of dense scrub is present which is encroaching further south through the site; species present in this area comprise Bramble (<i>Rubus fruticosus</i> agg.), Common Bent (<i>Agrostis capillaris</i>), Yorkshire Fog (<i>Holcus lanatus</i>), Cock's-foot (<i>Dactylus glomerata</i>), Spear Thistle (<i>Cirsium vulgare</i>), Creeping Thistle (<i>Cirsium arvense</i>), and False Oat-grass (<i>Arrhenatherum elatius</i>) with occasional White Poplar (<i>Populus alba</i>) and few Goat Willow (<i>Salix caprea</i>) and Grey Willow (<i>Salix cinerea</i>) trees. Secondary habitat code: 11 scattered trees
Developed land, sealed surface – u1b	A tarmacked road/drive provides access into the site from the south.
Other neutral grassland – g3c	Much of the south of the application site comprises an unmanaged grassland rich in tall ruderal species; it is likely the grassland was once an amenity space but has undergone succession into a ruderal neutral grassland and features scrub encroachment in areas. At the northeast of the application site an area of this grassland features seemingly planted lines of White Poplar; also present at the north and south are areas of bare ground and paths formed as a result of recreational use and burn patches. Species present in these areas include Yorkshire Fog, Cock's-foot, Rosebay Willowherb (<i>Chamaenerion angustifolium</i>), Tufted Hair Grass (<i>Deschampsia cespitosa</i>), Sweet Vernal-Grass (<i>Anthoxanthum odoratum</i>), False Oat-grass, Broad-leaved Dock (<i>Rumex obtusifolius</i>), Common Ragwort (<i>Senecio jacobaea</i>) and Bramble. Secondary habitat codes: 10 scattered scrub, 11 scattered trees, 16 tall herb, 80 unmanaged At the centre of the application site is an area of land with large areas of bare ground where the vegetation composition is markedly different to that of surrounding other neutral grassland. Species present are more characteristic of ruderal and ephemeral habitats though grass species typical of other neutral grassland occur frequently. Species present include Soft Rush (<i>Juncus effusus</i>), Hard Rush (<i>Juncus inflexus</i>), Creeping Buttercup (<i>Ranunculus repens</i>), Ribwort Plantain (<i>Plantago lanceolata</i>), Annual Meadow-Grass (<i>Poa annua</i>), Yorkshire Fog, Common Bent, Broadleaved Dock and occasional tree saplings of a variety of species. Secondary habitat codes: 14 scattered rushes, 17 ruderal/ephemeral, 80 unmanaged

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Lines of trees – w1g6	Along the northern and western boundaries of the application are lines of mature trees, species present include Horse Chestnut (<i>Aesculus hippocastanum</i>), Sycamore (<i>Acer pseudoplatanus</i>), Pedunculate Oak (<i>Quercus robur</i>), White Poplar, Goat Willow, Grey Willow, Rowan (<i>Sorbus aucuparia</i>) and Ash (<i>Fraxinus excelsior</i>).
Building – u1b5	A small single storey building is present at the south of the application site (see section 7.3)
Built linear feature - u1e	A fence encompasses much of the application site.
	Secondary habitat code: 69 fence
Target Note(s)	1 – Japanese Knotweed (INNS)
	2 – Horse Chestnut with PRF (Potential Roost Feature).

7.2 Vegetation

- 7.2.1 No species or habitats of conservation importance were identified anywhere within the site boundary.
- 7.2.2 One species listed under Schedule 9 of the WCA, namely Japanese Knotweed (*Reynoutria japonica*) was identified during the site visit.

7.3 Bats

- 7.3.1 The building at Land off Victoria Avenue comprises a single-storey, rendered red-brick built structure with a pitched tiled roof and is to the approximate maximum dimensions of 10m x 6m x 3m (Length x Width x Height). The building is absent of windows and possess two entrance doors on the south-western elevation which appear well shut/sealed. Whilst the surveyor is not qualified to assess the structural integrity of the building the building is adjudged to be in aesthetically good condition given an absence of any significant signs of damage or dilapidation excepting some missing render on the south-western elevation wall.
- 7.3.2 No internal access was possible therefore it could not be discerned whether the building possesses a loft space, nor could the internal climatic qualities of the building be ascertained; as such neither the suitability of the building with regard to breeding populations of Brown Long-eared Bats, nor the presence/absence of internal crevice dwelling opportunities for crevice dwelling bats of the *Pipistrellus* genus could be ascertained. Equally it is not known whether the building has a bitumastic underfelt beneath the roofing materials; where present a bitumen 1F or other such roof linings typically improve a buildings value to bats notably for crevice-dwelling bats of the *Pipistrellus* genus, whereby the bats roost between the lining and the roof cover material provided external access opportunities exist.

NB: *The breeding roosts of Pipistrelle bats are proportionally higher in occupied residential dwellings where the warm, dry conditions favour the requirements of a maternity colony, but other structures are also used, especially for hibernation or by male bats which do not need the same conditions as a maternity colony.*

- 7.3.3 Externally the building is well sealed with no visible viable ingress opportunities present; the roofing is in good condition with no slipped tiles and soffits are flush to the building. Due to the absence of any suitable ingress points for bats and despite no access being gained into the interior of the building, the building is duly categorised as pertaining to '**Negligible**' bat roost potential.

On-site Trees

- 7.3.4 Numerous trees are present on the application site, most of which are adjudged to be absent of any suitable features for bat roosting activity such as holes, cracks, splits, deep fissures etc, and no evidence of bats was found; however, one mature Horse Chestnut (*Aesculus hippocastanum*) tree at the western site boundary has been identified as offering a singular, Minor Potential Roost Feature (PRF). The feature is an east facing hole in a southernly extending branch approximately 4.5m from the ground; on the basis of the character of the tree as described it is preliminarily categorised as pertaining to 'low' bat roost potential in line existing bat conservation trust (BCT) guidelines.
- 7.3.5 All of the trees present offer high value to bats in that they provide local landmarks which aid commuting, whilst also supporting the flying insects that form the staple component of a bats diet - thus, offer foraging value.

7.4 Breeding Birds

- 7.4.1 In relation to Schedule 1 (WCA) specially protected bird species such as Black Redstart, whilst this species may be present in the wider area in the more urbanised regions of Greater Manchester, no suitable habitat is present within the site boundary.
- 7.4.2 No evidence of breeding bird activity was observed whilst on the application site; however, suitable nesting platforms for species associated with garden and urban environments are provided within the dense scrub present across the site. Additionally, a number of common bird species were observed during the site survey including those described in Table 7.2.

Species	Scientific Name	BoCC 4 Conservation Status
Blackbird	<i>Turdus merula</i>	Green
Collared Dove	<i>Streptopelia decaocto</i>	Green
Carrion Crow	<i>Corvus corone</i>	Green
House Sparrow	<i>Passer domesticus</i>	Red
Wood Pigeon	<i>Columba palumbus</i>	Amber
BoCC 4 - a bird of conservation concern, Green, Amber or Red, Red being the highest conservation priority		

Magpie (*Pica pica*), Wren (*Troglodytes troglodytes*) and Carrion crow (*Corvus corone*).

7.5 Other Terrestrial Mammals

Badger

- 7.5.1 Field signs were located to suggest the presence of Badgers in the form of suspected Badger faeces; no Badger sett was subsequently found to be present nor were any formal latrines, hairs, footprints or feeding signs such as snuffle holes and scratched trees/logs. As the faecal matter found was not in a latrine and no further significant evidence of badger was found it is determined that the application site is used as commuting and foraging habitat though the use of the application site for future sett creation and hence breeding is considered possible and the transient presence of Badger on the application site is considered likely.

European Hedgehog

- 7.5.2 Areas that constitute suitable habitat for hedgehog (*Erinaceus europaeus*) refuge, foraging, and commuting are present across the site in the form of scrub, dense vegetation, hedgerow/trees adjacent to the site. Their presence at the site is therefore considered to be possible.

7.6 Herptiles

Great Crested Newt (GCN)

- 7.6.1 In order to assess risk to GCN, a number of factors need to be considered. These include:
- Site proximity to a potential breeding pond and to any additional ponds,
 - Habitat linkage / barriers between potential breeding ponds and the site,
 - Nature and extent of available terrestrial habitat (50-100m) around the pond(s),
 - Area of site habitat loss and permanence of that loss,
 - Nature of habitat to be lost and its potential value to GCN as refuge/overwintering habitat
- 7.6.2 As derived from the desktop assessment evidence of GCN in the locale included:
- Three granted EPSMLs for GCN within the considered range;
 - no 'Present' ponds survey within the considered range;
 - Identification of no ponds within 500m of the site.
- 7.6.3 Despite the presence of three EPSMLs for GCN within 2.0km of the application site, given the distance of the application site from a viable potential pond suitable for GCN i.e., greater than 500m, and the distance of the application site from the identified EPSMLs i.e., greater than 1.3km, the presence of GCN on the application site is considered highly unlikely and no impacts upon this species are anticipated under the proposed works and GCN are not likely to be impacted by the proposed works.

Other Herptiles

- 7.6.4 Given the habitat occurring within the boundary as described, the application site, may occasionally be used by generalist common amphibians such as Common Frog (*Rana temporaria*) subject to their presence in the area.
- 7.6.5 The nature of the proposals is highly unlikely to impact upon any reptiles, given the presence of adjoined sub-urban gardens. The site is enclosed on all sides and presence of dense

successional habitat alongside pressures from domestic cat combine to rule out likely presence of this elusive group, which are also unlikely to be present in the wider, urbanised landscape.

7.7 Invertebrates

- 7.7.1 The application site features many ecotones/habitat intersections and early successional mosaic of habitats which provide good structural diversity hence is likely to provide habitat for a variety of invertebrates. The application site is therefore likely to be of local significance to invertebrate assemblages, though specially protected invertebrates are unlikely to be present.

8.0 Conclusions & Recommendations

Habitats & Vegetation

- 8.1 No habitats or species of conservation importance were identified within the application site boundary, and no further recommendations are required.
- 8.2 One species listed as invasive under Schedule 9 of the WCA was identified at the site, in the form of Japanese Knotweed (*Reynoutria japonica*). Whilst it is not an offence for this species' to be present on a site, it is an offence to spread or allow it to spread; to prevent incidental spread of this species during the proposed works it is therefore recommended that a precautionary working method statement with appropriate biosecurity protocol is instated prior to commencement of site works.
- 8.3 To provide an opportunity for Biodiversity Net Gain and to improve the value of the site for native wildlife, a list of appropriate native species that might be incorporated into the proposed development has been supplied (see Appendix III).

Bats

- 8.4 Based upon the findings of the survey, covered throughout Sections 6.0 - 7.0 of the report and supported by Appendix I, the building at Land off Victoria Avenue is determined to offer '**Negligible**' bat roost suitability (see Figure 8.1 below) in accordance with Bat Conservation Trust – Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd ed. (2016); no further surveys are required in relation to bats and buildings; general enhancement measures are recommended in Appendix II.

Table 4.1 Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement.		
Suitability	Description Roosting habitats	Commuting and foraging habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting or foraging bats.

Figure 8.1 – Bat Conservation Trust extract on Negligible roost potential requirements.

- 8.5 Bats are a transient species and a building can deteriorate over time. In the highly unlikely event that bat(s) or evidence of bat(s), are found during the proposed works, then as a legal requirement the work at the site should immediately cease and an Ecologist be contacted for further advice. If bat(s) or their roost(s) will be affected, then an EPSML may be required to legally commence with the works. See Figure 8.2 for indicative evidence of bats.



Figure 8.2 – Evidence of bats. Droppings on the left, a Common Pipistrelle on the right – indicative.

- 8.6 One Horse Chestnut (*Aesculus hippocastanum*) (Target Note 2) tree has been preliminarily categorised as pertaining to “Low” bat roost suitability. It is therefore recommended that this tree is subject to a further intrusive inspection, to be carried out by a suitably qualified ecologist/tree climber equipped with an endoscope to check the identified crevices, and any other features, for evidence of a bat/bat roost(s) should this tree be felled. Following the intrusive inspection, a formal categorisation of bat roost potential should be re-assigned.
- 8.7 The results of the intrusive inspection would inform further recommendations as necessary - if a bat roost is confirmed, or suspected, dusk/dawn surveys would likely be required to ascertain the full value of the tree to bats. If the ecologist determines an absence of bats, or non-viable roost conditions, no surveys are necessary and standard reasonable avoidance measures may be employed, which can include temporary sealing of access points and/or soft-felling avoidance measures in accordance with section 6.2.9 of the Bat Conservation Trust - Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd ed. (2016).
- 8.8 Natural England provides information and guidance about EPSML’s and the following extract is included in that guidance:-

“If you intend to apply for a licence for development you are advised to seek the guidance of a consultant ecologist”.

Natural England's view is that:

“A licence is needed if the consultant ecologist, on the basis of survey information and specialist knowledge of the species concerned, considers that on balance the proposed

activity is reasonably likely to result in an offence under the Conservation of Habitats and Species (amendment) (EU exit) Regulations (2019)".

If the consultant ecologist, on the basis of survey information and specialist knowledge of the species concerned, considers that on balance the proposed activity is reasonably unlikely to result in an offence being committed then no licence is required. However, in these circumstances Natural England would urge that reasonable precautions be taken to minimise the effect on European protected species should they be found during the course of the activity. If European protected species are found, cease the work until you have assessed whether you can proceed without committing an offence.

- 8.9 A licence should be applied for if offences are unavoidable, and the work should not be re-started until a licence is obtained. The application should be completed by the developer and a consultant ecologist. The ecologist will need to be able to demonstrate to the satisfaction of Natural England that they have the relevant skills and knowledge of the species concerned.
- 8.10 Where more detailed bat surveys are recommended by the Ecologist, following an initial daytime investigation, then Local Planning Authorities on the advice of their ecological advisors, may not determine the application until such time that all relevant information is gathered, i.e. by conducting dusk/dawn surveys.

The advice that is provided by the ecological advisors is in full accordance with the obligations placed upon Local Planning Authorities by way of its duties under the Conservation of Habitats and Species (amendment) (EU exit) Regulations (2019) and National Planning Policy Framework (NPPF). Therefore, it would be prudent to make enquiries to the relevant departmental Planning Officer before submitting a Planning Application that includes an ecological survey report that recommends more detailed surveys.

- 8.11 Installation of overly harsh artificial lighting as part of any development that exceeds current levels may have a negative impact upon foraging/commuting bats in the landscape, particularly if increased light spillage occurs in areas of that are currently free from illumination. A bat-sensitive lighting plan is therefore recommended in order to avoid potential impacts to bats that may use the surrounding treelines. Several options to consider have been listed below, though the reader is referred to the Bat Conservation Lighting Guidelines for further information.

Appropriate luminaire specifications

Luminaires come in a myriad of different styles, applications and specifications which a lighting professional can help to select. The following should be considered when choosing luminaires.

All luminaires should lack UV elements when manufactured. Metal halide, fluorescent sources should not be used. LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability. Lighting should be directed to where it is needed and light spillage avoided. This can be achieved by the design of the luminaire and by using accessories such as hoods, cowls, louvres and shields to direct the light to the intended area only. Planting can also be used as a barrier or manmade features that are required within the build can be positioned so as to form a barrier.

Predicting where the light cone and light spill will occur: There are lighting design computer programs that are widely in use which produce an image of the site in question, showing how the area will be affected by light spill when all the factors of the lighting components listed above are taken into consideration. This should be a useful tool to inform the mitigation process.

Light levels: The light should be as low as guidelines permit. If lighting is not needed in any particular area, do not light. Numerous software programmes are currently available which can be used inform lighting plans, demonstrating how lighting decisions will illuminate a site.

Please refer to the 'Landscape and urban design for bats and biodiversity' (Gunnell et. al., 2012, Bat Conservation Trust)

Guidance Note 8 'Bats and Artificial Lighting' 2018, Bat Conservation Trust for further information.

Breeding Birds

- 8.12 No impacts are applicable in relation to specially protected bird species such as Black Redstart, and no further recommendations outside of the usual recommendations for breeding birds need be applied in relation to WCA Schedule 1 protected species.

- 8.13 Given the existing scrub and trees which may provide suitable nesting platforms that could be used by birds associated with garden and rural environments, to avoid disturbing nesting birds which may be present on the application site or have moved into the site since the site survey it is recommended that any clearance works of remaining trees or scrub should be undertaken outside of the breeding birds season of March-August unless it can be demonstrated by a suitable qualified, professional ecologist that breeding birds are absent beforehand.

NB: *All wild birds (with only minor exceptions) and their nests whilst being built or containing eggs or dependant young are protected from destruction, damage and disturbance under the Wildlife & Countryside Act 1981 (as amended). It is a punishable offence to interfere in any way with an active nest.*

- 8.14 It is recommended enhancement for nesting birds be incorporated into the proposed works, as per Appendix III.

Terrestrial Mammals

- 8.15 Given evidence of badger was identified within the survey boundary, the habitat present is considered suitable for foraging, commuting, and occasional sheltering/hibernating by Badger and European Hedgehog. It is therefore recommended that if hedgehogs are encountered during working operations, particularly if there is a risk of danger to the animals, they should be carefully placed in like-for-like habitat away from the working area; Badgers should be allowed to leave the site of their own accord. The following precautionary recommendations should be applied to prevent the harm of any badgers and/or hedgehog subject to their presence on the application site during the site clearance and construction phase of the development.

- Materials that may cause entrapment such as plastic/metal fencing should not be left around the site following the cessation of daytime work/

- Trenches MUST be covered at the end of each working day, or include a means of escape for any animal falling in as badgers will continue to use established paths across a site even when construction work has started.
- Any excavations which cannot be covered will include ramps (at an angle of no more than 45°) to allow any animal that may become trapped to escape.
- Any temporarily exposed open pipe system MUST be capped in such a way as to prevent badgers gaining access, as may happen when contractors are off site.
- Any chemicals or harmful materials will be stored so that they cannot be accessed by badgers,
- Stock piling of spoil material MUST be left un-compacted and not allowed to grass over, as if grassed over and compacted, this may encourage badgers to excavate new setts and lead to costly delays.
- Fires must not be used as a means of the disposing of waste materials.
- In the event an underground void/potential sett entrance is exposed during the works, work must cease immediately; and an Ecologist must be contacted to determine if the opening forms part of a previously undiscovered tunnel network of a badger sett. If this cannot be ruled out, works will cease, and Natural England consulted for further advice.

Furthermore, it is recommended that enhancement for hedgehog is incorporated into the redevelopment of the site (see Appendix III).

Herptiles

- 8.16 No further surveys for GCN will be recommended as part of this report as no impacts are considered likely, as the terrestrial habitat present on site is of low value to this species and no ponds are present within 500m of the site boundary.
- 8.17 If during the works any frogs or toads are encountered that are at risk of harm, operators are advised that using wet gloves they should be removed from harm by being carefully handled and removed off the work site to be placed in nearby like-for-like habitat. At no point should any contractor handle a newt. If a newt is found it is advised the animal should be left undisturbed, work is to cease, and an Ecologist/ECOW be contacted to appraise the finding and provide further guidance.

The applicant and all contractors should be aware that in the extremely unlikely event that if at any stage GCN are encountered during works, or at any other stage of the work programme, works would be required to immediately cease and an Ecologist made aware as to provide further guidance in this situation.

In the event that GCN or their habitat would be directly impacted upon, including disturbance, an EPSML to legally proceed with the development may be required following detailed further presence/absence surveys.

- 8.18 There are no records of reptiles known within the immediate area of the site, and despite the survey area containing some favourable foraging habitat their presence on the site is considered highly unlikely.

Invertebrates

- 8.19 Taking into account the presence of ecotones and vegetated areas typically utilised by a range of invertebrates including Dipterans, Hymenopterans, Coleopterans and Lepidopterans, the site is likely to host a diverse invertebrate assemblage which may be of local significance. Taking into account the large area of the site to be affected by the proposed works, some impact upon the local populations is possible; therefore, to mitigate for the loss of this habitat it is recommended that enhancement for invertebrates be incorporated into communal areas of the application site such as the central southern region adjacent to “B1” (see Figure 1.1).
- 8.20 An indicative enhancement suggestion would be to utilise the soil excavated during construction of the dwellings to create a new bund at the southern end of the site. This bund would be 1-2m in height, with a gentle north-facing slope and a south-facing cliff with uncompacted soil, and could either be left to naturally reseed or be seeded with a suitable native wildflower mix, such as the Traditional Meadow Wildflower mix from Landlife Wildflowers.

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Appendix I: Site Photographs



Plate 1: Overview of the application site.



Plate 2: Character of the north of the application site.



Plate 3: Stand of Poplars.



Plate 4: Bare ground on site.



Plate 5: Scrub present at the north of the application site.



Plate 6: Line of trees at the north of the application site.



Plate 7: Bare ground within the scrubbed areas of the application site and line of trees at the west of the site (right of the image).



Plate 8: Ephemeral/ruderal vegetation with scattered rushes.



Plate 10: Tarmacked area of the application site.



Plate 11 – Tall herb/ruderal grassland.



Plate 12: Character of the road leading onto and through the application site.



Plate 13 – Character of the fencing surrounding the application site.



Plate 14: Character of the south-eastern elevation of the building.



Plate 15: Character of the northern elevation of the building.



Plate 16: Character of the eastern elevation of the building.



Plate 17: Japanese Knotweed (INNS) present at the south of the application site (Target Note 2).



Plate 18: *Suspected badger faeces present on the site.*



Plate 19: Japanese Knotweed (INNS0 identified in the centre of the site (Target Note 1).



Plate 20: Horse Chestnut tree with PRF present at the west of the site (Target Note 2).

Appendix II: Site-Specific Botanical Species List

Each species recorded was given an abundance value according to the standard DAFOR scale, where:

- D = Dominant
- A = Abundant
- F = Frequent*
- Occasional*
- R = Rare*

*These values can be prefixed by the letter L (locally) to provide more subtle biogeographical data.

Taxon	Common Name	Scientific Name	DAFOR	Additional Notes
Anthophyta (Flowering plants)	Alder	<i>Alnus glutinosa</i>	F	
	Annual Meadow Grass	<i>Poa annua</i>	F	
	Black Medic	<i>Medicago lupulina</i>	LA	
	Bramble	<i>Rubus fruticosus</i> agg.	LD	
	Broad Leaved Dock	<i>Rumex obtusifolius</i>	O	
	Buddleja	<i>Buddleja davidii</i>	O	
	Cleavers	<i>Gallium aparine</i>	O	
	Cock's-foot	<i>Dactylis glomerata</i>	O	
	Common Bent	<i>Agrostis capillaris</i>	F	
	Common Ivy	<i>Hedera helix</i>	F	
	Common Nettle	<i>Urtica dioica</i>	F	
	Common Ragwort	<i>Senecio jacobaea</i>	O	
	Cranesbill sp.	<i>Geranium sp.</i>	R	
	Creeping Buttercup	<i>Ranunculus repens</i>	F	
	Creeping Thistle	<i>Cirsium arvense</i>	F	
	Cypress species	<i>Cupressus sp.</i>	O	
	Dandelion	<i>Taraxacum</i> agg.	O	
	Dog Rose	<i>Rosa canina</i>	O	
	English Oak	<i>Quercus robur</i>	R	
	False Oat Grass	<i>Arrhenatherum elatius</i>	F	
	Goat Willow	<i>Salix caprea</i>	O	
	Greater Willowherb	<i>Epilobium hirsutum</i>	O	
	Grey Willow	<i>Salix cinerea</i>	O	
	Hard Rush	<i>Juncus inflexus</i>	R	

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	Hedge Bindweed	<i>Calystegia sepium</i>	F	
	Horse Chestnut	<i>Aesculus hippocastanum</i>	O	
	Japanese Knotweed	<i>Reynoutria japonica</i>	R	INNS
	Leyland Cypress	<i>Cupressus x leylandii</i>	R	
	Pendulous Sedge	<i>Carex pendula</i>	R	
	Perennial Rye Grass	<i>Lolium perenne</i>	O	
	Petty Spurge	<i>Euphorbia peplus</i>	R	
	Prickly Sow Thistle	<i>Sonchus asper</i>	O	
	Purple Loosestrife	<i>Lythrum salicaria</i>	O	
	Ribwort Plantain	<i>Plantago lanceolata</i>	F	
	Rosebay Willowherb	<i>Chamerion angustifolium</i>	F	
	Rowan	<i>Sorbus aucuparia</i>	O	
	Soft Rush	<i>Juncus effusus</i>	F	
	Spotted Ladies Thumb	<i>Persicaria maculosa</i>	O	
	Sweet Vernal Grass	<i>Anthoxanthum odoratum</i>	R	
	Sycamore	<i>Acer pseudoplatanus</i>	O	
	Tufted Hair Grass	<i>Deschampsia flexuosa</i>	R	
	White Poplar	<i>Populus alba</i>	LA	
	Yorkshire Fog	<i>Holcus lanatus</i>	O	

Appendix III: Biodiversity Enhancement

Proposed - Native Landscaping

A series of trees, woody shrubs, climbers, herbaceous plants and ferns have been given within the table below which are suitable for incorporation into the proposed development; the list of plants given below are readily commercially available.

	Common Name	Scientific Name	Planting Preference
Ferns	Male Fern	<i>Dryopteris filix-mas</i>	Semi-shade or shaded
	Soft Shied-fern	<i>Polystichum setiferum</i>	Semi-shade or shaded
	Maidenhair Fern	<i>Adiantum capillus-veneris</i>	Suitable for rockeries / walled gardens
	Royal Fern	<i>Osmunda regalis</i>	Full sun in moist-damp areas
Herbaceous plants	Bloody Crane's-bill	<i>Geranium sanguineum</i>	Dry soils - suitable for rockeries
	Columbine	<i>Aquilegia vulgaris</i>	Semi-shade or open areas
	English Bluebell	<i>Hyacinthoides non-scripta</i>	Moist soils in semi-shade or open areas
	Giant Bellflower	<i>Campanula latifolia</i>	Semi-shade or open areas
	Greater Knapweed	<i>Centaurea scabiosa</i>	Dry-moist soils. Suitable for borders
	Greater Woodrush	<i>Luzula sylvatica</i>	Moist soils in semi-shade or open areas
	Meadow Crane's-bill	<i>Geranium pratense</i>	Humid-moist soils. Suitable for borders
	Musk Mallow	<i>Malva moschata</i>	Dry-moist soils. Suitable for borders and rockeries
	Sea Campion	<i>Silene uniflora</i>	Dry soils - suitable for rockeries
	Stinking Hellebore	<i>Helleborus foetidus</i>	Semi-shade or open areas
Climbers	Honeysuckle	<i>Lonicera periclymenum</i>	Dry-moist soils
	Hops	<i>Humulus lupulus</i>	Dry-moist soils
	Ivy	<i>Hedera helix</i>	Dry-moist soils
	Sweet-briar	<i>Rosa rubiginosa</i>	Dry-moist soils
Woody Shrubs	Blackthorn	<i>Prunus spinosa</i>	-
	Dogwood	<i>Cornus sanguinea</i>	-
	Guelder Rose	<i>Viburnum opulus</i>	-
	Hawthorn	<i>Crataegus monogyna</i>	-
	Hazel	<i>Corylus avellana</i>	-
	Holly	<i>Ilex aquifolium</i>	-
Trees	Alder Buckthorn	<i>Frangula alnus</i>	-
	Osier	<i>Salix viminalis</i>	-
	Pedunculate Oak	<i>Quercus robur</i>	-
	Purple Willow	<i>Salix purpurea</i>	-
	Rowan	<i>Sorbus aucuparia</i>	-
	Silver Birch	<i>Betula pendula</i>	-
	Wild Cherry	<i>Prunus avium</i>	-
Aquatic/marginal plants	Common Water-crowfoot	<i>Ranunculus aquatilis</i>	Ponds
	Marsh Marigold	<i>Caltha palustris</i>	Marginal vegetation
	Ragged Robin	<i>Silene flos-cucculi</i>	Marginal vegetation
	Water Mint	<i>Mentha aquatica</i>	Marginal vegetation
	Water-violet	<i>Hottonia palustris</i>	Ponds
	White Water-lily	<i>Nymphaea alba</i>	Ponds

Enhancing a development site for Bats

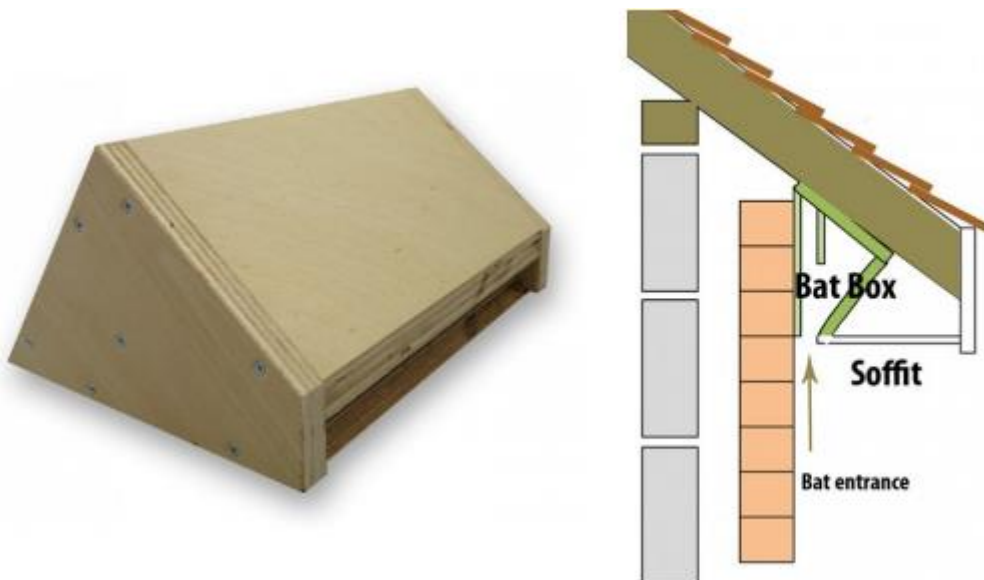
Integrated bat box

The Habibat Bat Box is a solid box made of insulating concrete with internal roosting space. The box blends seamlessly into brick-built properties and may be incorporated into the fabric of buildings, being best placed on gable elevations.



Soffit access

Where soffits are instated at gable elevations, roost provision may be instated in the form of a soffit bat box with internal roosting space.



Externally fitted boxes

A large number of externally fitted box models for bats exist for buildings and trees. Suitable models for both buildings and trees may include the Greenwoods Ecostycrete Bat Box.

See - <https://www.greenwoodsecohabitats.co.uk/shop>

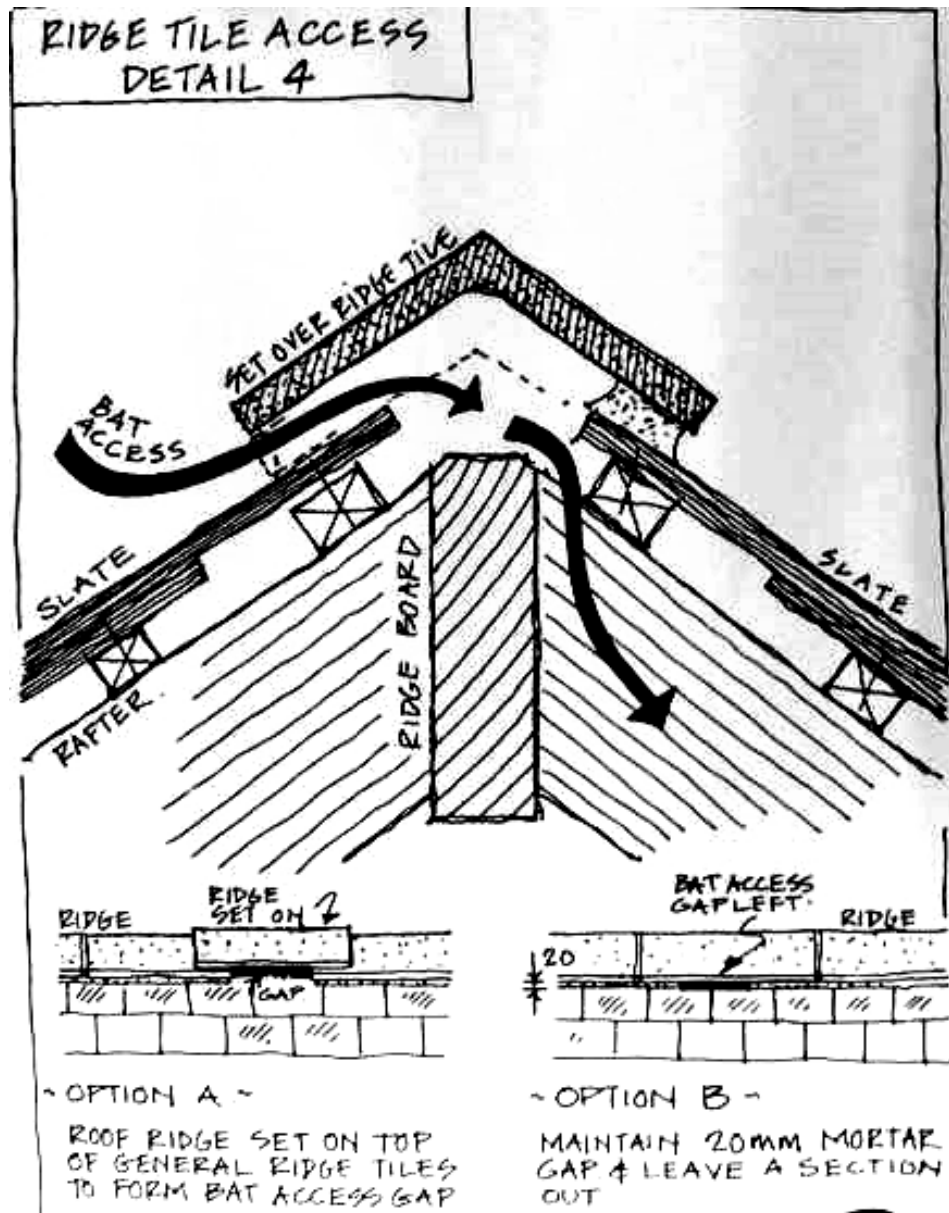


Ridge access

Where appropriated, ridge tile access should be made with the incorporation of traditional Bitumen 1F underfelt immediately beneath ridge tiles. Breathable BRM membrane can cause significant problems where bats are in contact with it, whereby their fine claws become entangled within the fibres of the membrane, entrapping and killing bats.

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Enhancing a development site for Breeding Birds

Nesting Birds - Common/Woodland/Garden

This traditional design has proved to be highly effective in attracting robins, as well as other small species such as black redstart, spotted flycatcher and wren. It is designed to be installed on the walls of houses, barns, garden sheds or other buildings and should be hung so that the entrance is to one side (at an angle of 90° to the wall). The front panel can be easily removed for cleaning.

This type of box should not be made conspicuous on a tree or bush because small predators can enter through the unprotected opening. By hanging on a wall, predators won't be able to reach the box. Alternatively hide the box in ivy, honeysuckle or other climbing plants.



See - www.nhbs.com/2h-schwegler-robin-box

Enhancing a development site for Invertebrates

Bee bricks

The Bee Brick can be used in place of a standard brick or block in construction to create habitat for solitary bees. Alternatively, it can be used as a standalone bee house in your garden or wild patch. It will provide much needed nesting space for solitary bee species such as red mason bees and leafcutter bees, both of which are non-aggressive.

Each Bee Brick contains cavities in which solitary bees can lay their eggs before sealing the entrance with mud and chewed-up vegetation. The offspring will emerge the following spring and the cycle will begin again. Each cavity goes part way into the brick, which is solid at the back. Bee Bricks should be placed in a warm sunny spot on a south-facing wall at a minimum height of 1m, with no vegetation obstructing the holes. It is highly recommended that bee-friendly plants should be located nearby so that the bees using the bricks have food, otherwise it is unlikely that the brick will be used.

Available in a choice of four colours: white grey, dark grey, yellow and red.

Specification

- * Material: Concrete
- * Origin: Cornwall, UK
- * Dimensions: W 215mm x D 105mm x H 65mm
- * Weight: 2.9kg
- * Colours: White grey, yellow, dark grey and red



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Deadwood and other semi-natural provisions

Falling and standing deadwood provides habitat opportunities for a wide range of invertebrates; however, poor execution of enhancement often leads to reduced efficacy. Log piles will generally dry out too quickly or rot too fast depending on their location; it is therefore more effective to place large logs in full sun to allow slow rotting which is favourable for beetles. Some smaller logs in full sun will provide additional habitat for bees and wasps, whilst loose bunds with bare earth also provide abundant opportunities for these and other taxa.



Large piled logs in shade will rot slowly providing abundant opportunities for beetles



Bunds constructed of sand/earth are valuable to beetles, bees, wasps and other species

Proposed – Enhancement for Hedgehog

Hedgehog Home

Specification:

Exterior quality 12mm resin bonded ply. The box remains untreated on the inside. Best situated in a quiet corner of the garden, and covered with leaves and other garden debris. Removable lid for cleaning purposes and reinforced corners, manufactured with surface sunk nails to resist rusting.



Nest box size: Height 22cm x Width 38cms x Length 47cm

Environmentally positive: Direct action to help hedgehog survival rates, encouraging biodiversity; FSC timber; Zero carbon footprint in use.

Hedgehog Highway

Hedgehog numbers have dramatically declined in recent years. Research suggests that this is partly because it is becoming harder for hedgehogs to move freely due to an increase in the number of solid walls and fences being erected around gardens. This reduces the available foraging area and so restricts the amount of food that they can eat as well as reducing the possibility of meeting a mate. Creating a hole in a garden wall or fence will allow local hedgehogs to pass through from garden to garden safely.

A hole measuring 13cm by 13cm is the right size for a hedgehog to pass through but too small for most pets. Once you have made your hole in the fence or wall, you can fix the Eco Hedgehog Hole Plate to the fence, ensuring that the hole does not get blocked or stretched. The plate has six screw holes, three along each side, which can be used to fix the plate to your fence or wall. Additional holes can be made in the plastic if required.

The Eco Hedgehog Hole Plate is made from 100% recycled plastic, which is mostly derived from plastic waste from farms across the UK. The plastic hedgehog hole is UV-stabilised so will not rot or degrade over time.

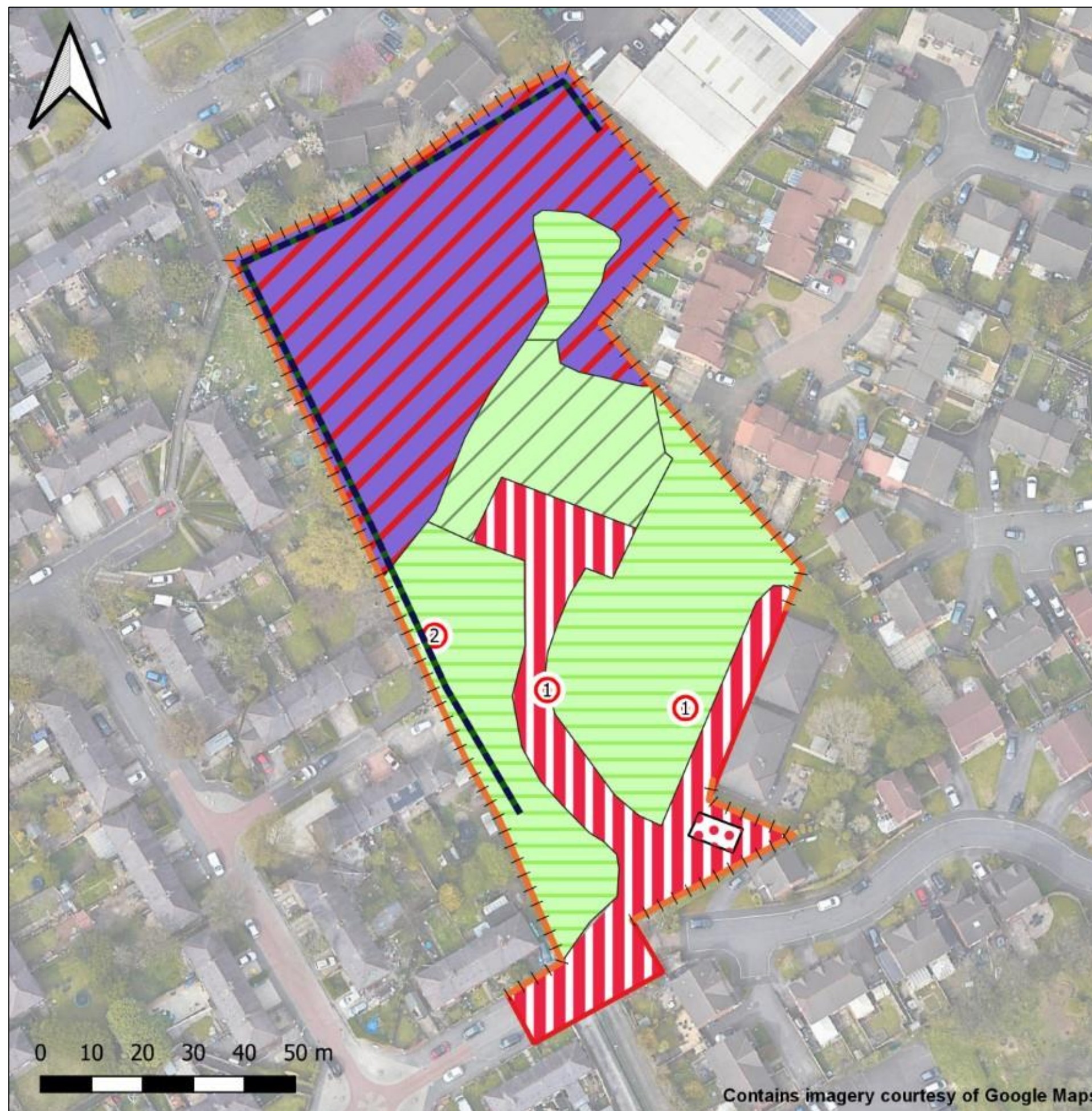


Specification: Material: Low density Polyethylene board (100% recycled plastic)

* Dimensions: Height 26cm x width 23cm

* Entrance Hole: 13cm x 13cm

* Country of Manufacture: England



UKHabs Map Legend

- g3c 10 11 16 80 - OTHER NEUTRAL GRASSLAND
10 scattered scrub, 11 scattered trees, 16 tall herb, 80 unmanaged
- h3 11 - DENSE SCRUB
11 scattered trees
- u1b - DEVELOPED LAND, SEALED SURFACE
- u1b5 - BUILDING
- g3c 14 17 80 - OTHER NEUTRAL GRASSLAND
14 scattered rushes, 17 ruderal ephemeral, 80 unmanaged
- w1g6 - LINE OF TREES
- u1e 69 - BUILT LINEAR FEATURE
69 fence
- Boundary
- Target Notes
1 - Japanese Knotweed locations
2 - Horse Chestnut with PRF

Land off Victoria Avenue

Survey Date: 17/08/2022
 Drawn: Miss. K. Judson
 Date Drawn: 20/08/2022
 Checked & Approved: Mrs. K. Wilding
 Size: A3
 Scale: 1:1000

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