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Tyrer Ecological Consultants Ltd, Roselands, 3 Cross Green, Formby L37 4BH

# **Preliminary Ecological Appraisal**

September 2023

Land at Egmont Street Mossley Ashton-under-Lyne OL5 9NB

National Grid Ref: SD97500174

















# Land at Egmont Street, Mossley, Ashton-under-Lyne, OL5 9NB Preliminary Ecological Appraisal

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This report aims to provide general advice on ecological constraints associated with any development of the site and includes recommendations for further survey; it is not intended that this report should be submitted with a planning application for development of the site, unless supported by the results of further surveys and a detailed assessment of the effects of the proposed development.

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# **Executive Summary**

As part of a proposed planning application at a plot of Land at Egmont Street in Mossley, Ashton-under-Lyne, Tyrer Ecological Consultants Ltd carried out a Preliminary Ecological Appraisal (PEA) in September 2023.

The PEA was commissioned by Bridgewater Land & Developments Ltd; proposals entail the clearance of the site to allow for the construction of 36 residential flats in three flat blocks with associated parking, infrastructure, and new access from Egmont Street.

Extensive findings, conclusions and recommendations are presented throughout the report; however, the reader should be aware of the following further necessary surveys and wider key recommendations.

#### **Habitats:**

Whilst no priority habitats occur within the site boundary, the River Tame occurs 5-10m to the north-east, and both is a UKBAP habitat and connects to the Huddersfield Narrow Canal SSSI located 0.1km to the north-east. Recommendations have been provided to minimise the risk of impacting the nearby waterways, in the form of a Construction Environmental Management Plan (CEMP) (see section 8.2).

# **Vegetation:**

Two invasive non-native plant species were identified within the application site boundary, Himalayan balsam, and Japanese knotweed. A scheme of eradication to be undertaken by a suitably licensed invasive species contractor has been recommended (see section 8.5).

#### Bats:

One mature silver birch at the eastern site boundary (T1) has been identified as hosting potential roost features and preliminarily categorised as pertaining to Low bat roost suitability. It is recommended that the site is reattended by a surveyor team equipped with ladders and an endoscope to assess and formerly recategorize the roost potential of T1 (see sections 8.8-8.9).

The tree lines, woodland and scrub, particularly when taking into account the proximity of the River Tame, are likely to provide good quality commuting and foraging habitat. Recommendations to reduce impacts from light and disturbance to this commuting route are provided (see sections 8.11-8.12).

# **Breeding Birds:**

In relation to common birds, vegetation within the Site provides opportunities for nesting birds within the breeding bird season in the form of shrubs, trees and tall vegetation. Given that all birds are protected when at the nest, it is therefore recommended that any vegetation works are carried out outside of the breeding bird season (March – August inclusive). For works undertaken within the breeding bird season, any areas that can support nesting birds such as areas of vegetation, should be checked by a professional Ecologist for nesting birds within 48 hours or less prior to works commencing (see sections 8.15-8.16).

#### **Terrestrial Fauna:**

Small terrestrial mammals including hedgehogs may utilise the site, whilst herpetofauna including common amphibians and reptiles such as grass snake could feasibly be present given the proximity of the River Tame. A program of Reasonable Avoidance Measures (RAMs) has been recommended in sections of 8.18-8.24 to minimise the risk of injuring or killing small fauna.

The River Tame was judged to be unlikely to host water vole or otter. As a precautionary measure, it has been recommended that these species are included within the CEMP recommended in section 8.2.

#### Invertebrates:

Whilst the site provides an area of good quality habitat likely to host an array of invertebrates, it is unlikely to host any assemblages which are significant at a local or wider scale, nor any specially protected invertebrate species. *No further surveys are recommended; however, the development should include enhancement measures for invertebrates.* 

# **Biodiversity enhancement:**

As a means of improving biodiversity value / enhancing the site any new landscaping should aim to incorporate majority use of native species as opposed to non-native exotic species which offer significantly fewer benefits to our native fauna. Suitable species for native landscaping have been provided in **Appendix III**.

# **Table of Contents**

- 1.0 Introduction & Scope
- 2.0 Legislation & Policy
- 3.0 Priority Habitats & Species
- **4.0** Methodology
- **5.0** Limitations
- 6.0 Desk Study Results
- **7.0** Field Study Results
  - 7.1. Habitat Survey
  - 7.2. Vegetation
  - 7.3. Bats
  - 7.4. Birds
  - 7.5. Terrestrial Mammals
  - 7.6. Herpetofauna
  - 7.7. Invertebrates
- 8.0 Conclusions & Recommendations
- **9.0** Bibliography

**Appendix I:** Site Photographs

**Appendix II:** Botanical Species List

Appendix III: Biodiversity Enhancement: General Recommendations

Appendix IV: UK Habitats Map

# 1.0 Introduction & Scope

- 1.1 As part of a proposed planning application at a plot of Land at Egmont Street in Mossley, Ashton-under-Lyne, Tyrer Ecological Consultants Ltd carried out a Preliminary Ecological Appraisal (PEA) in September 2023.
- 1.2 The PEA was commissioned by Bridgewater Land & Developments Ltd; proposals entail the clearance of the site to allow for the construction of 36 residential flats in three flat blocks with associated parking, infrastructure, and new access from Egmont Street. See **Figure 1.1** below for the proposed site plan.



Figure 1.1 - Proposed site plan with red line boundary (© Jigsaw Homes Group Ltd)

- 1.3 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 habitats or species are, or may be, present and could be affected by the proposals for which the application seeks consent.
- 1.4 The PEA was carried out in accordance with the 'Guidelines for Preliminary Ecological Appraisal, 2<sup>nd</sup> Edition' (CIEEM, 2017) and all associated 'CIEEM Competencies for Species Survey (CSS)', whilst this report has been presented in accordance with the British Standard 42020:2013 Biodiversity. Code of practice for planning and development.

# Aims & Objectives

1.5 The appraisal aims to ascertain the baseline nature of the Site 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 and present baseline ecological information (as necessary) within a suitable report,
- ➤ Identify, measure and map habitats using UK Habitat Classification Habitat Definitions Version 1.1 (2020),
- ➤ 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)),
- ldentify measures likely to be required in line with the mitigation hierarchy (i.e. impact avoidance > minimisation > mitigation > compensation),
- Identify additional survey requirements,
- > Aim to achieve no 'net loss',
- ➤ Identify 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),
- > Set out any requirements for post-development monitoring, management, or other commitments, and how they can be secured, where required.
- 1.6 As a functioning component of this specific ecological appraisal:
  - Habitats were identified, measured and mapped using the UK Habitat Classification Habitat Definitions Version 1.1 (2020);
  - ➤ Trees, where present and understood to be impacted, were subject to preliminary roost assessment (PRA) for Bats and scored against the bat roost suitability parameters defined in the Bat Conservation Trust Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3<sup>rd</sup> ed. (2016);
  - ➤ One watercourse was assessed in relation to its potential to host water vole (*Arvicola amphibius*) and otter (*Lutra lutra*).
- 1.7 This report provides <u>baseline</u> information as derived from the diurnal appraisal process outlined above and recommends any necessary additional surveys, or work, where applicable, to provide a conclusive ecological impact assessment.
- 1.8 The Applicant should be aware then 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/communities/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 <u>where necessary</u>, to allow the ecologist to arrive at a conclusive impact assessment.

# Land at Egmont Street, Mossley, Ashton-under-Lyne, OL5 9NB Preliminary Ecological Appraisal

- 1.9 If protected species were subsequently found either during appraisal or 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.
- 1.10 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.
- 1.11 Protected/priority species omitted from this report have been discounted due to negating 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 impact the species or encroach on areas where the species may be present.

# 2.0 Legislation & Policy

- 2.1 The legislature and guidance considered for the purposes of this report includes the following:
  - Biodiversity Net Gain. Good practice principles for development,
  - BS 42020:2013 Biodiversity Code of Practice for Planning and Development;
  - Conservation of Habitats and Species Regulations (amendment) (2019) (EU Exit),
  - Countryside Rights of Way (CRoW) Act (2000),
  - Natural Environment and Rural Communities (NERC) Act (2006),
  - The Hedgerow Regulations (1997),
  - Town and Country Planning Act (1990),
  - Wild Mammals Protection Act (1996)
  - Wildlife and Countryside Act (WCA) (1981) (as amended),
- 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 internationally, 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 Legislature	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-eradicate 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.

Birds (Breeding & wintering)	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/Schedule 2 as invasive, including Japanese knotweed (Reynoutria japonica) and Himalayan balsam (Impatiens glandulifera), for example, carry notoriety regarding development. The Acts make it an offence for any person to grow or cause to grow in the wild any plants listed as invasive.	
Otter	CRoW Act (2000)  Conservation of Habitats and Species Regulations (2019) (EU Exit)  Wildlife and Countryside Act (1981) (as amended)	All Otters and their resting areas are afforded full protection from damage/destruction and otters may not be injured/killed/taken at any age.  Once identified, holts are protected whether the bat is in occupation or not.	
Reptiles	Conservation of Habitats and Species Regulations (2019) (EU Exit) – SL/SS Wildlife and Countryside Act (1981) (as amended) – SL/SS CRoW Act (2000)	All native reptile species have some degree of protection in the UK, through section 8(1) and (5) (specified in Schedule 5) of the Wildlife and Countryside Act 1981 (as amended). Sand lizard (SL) are species of principal importance however with greater protection(s).	

Water Vole	CRoW Act (2000)  Wildlife and Countryside Act (1981) (as amended)	Water voles are fully protected against intentional killing, capture or injury and intentional or reckless disturbance, obstruction, damage or destruction of their burrows.
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#### Relevant Policy

2.4 Guidance for Local Authorities: Extract from Office of the Deputy Prime Minister - Circular 06/2005:

"It is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established <u>before planning permission is granted</u>, otherwise all relevant material considerations may not have been addressed in making the decision".

- 2.5 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 reasons 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.
- 2.6 Policy N3 of the Tameside UDP Written Statement, Adopted Plan, regarding Nature Conservation Factors, states:

"When considering development proposals which could have an impact on wildlife, plant life or geological features (whether or not these are currently designated for protection) the Council will wish to be satisfied that the potential benefits to nature conservation have been fully taken into account in the design of the scheme and arrangements for subsequent maintenance or management, including any opportunities to help create or enhance wildlife habitats and increase biodiversity in both urban and rural locations.

# Land at Egmont Street, Mossley, Ashton-under-Lyne, OL5 9NB Preliminary Ecological Appraisal

Nature conservation factors should be addressed in the design of new areas of tree or shrub planting and landscaping, and in schemes for environmental improvement and reclamation of derelict land, particularly in wildlife corridors and areas which are deficient in wildlife habitats.

Consideration of these factors should be informed by the Council's Nature Conservation Strategy and the evolving Greater Manchester Biodiversity Action Plan."

# 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, connectivity, 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 The following Section 41: Habitats of Principal Importance in England and Section 41: Species of Principal Importance in England are considered potentially relevant to the appraisal though the list is not extensive (see **Table 3.1**):

Table 3.1 – Potentially relevant Section 41: Habitats and Species of Principal Importance

Habitats:			
Broad Habitat		Specific Habitat	
Freshwater		Rivers	
Woodland		Lowland mixed	deciduous woodland
Species:			
Taxon Group	Scientific Name	9	Common Name
	Passer domesticus		House sparrow
Birds	Poecile montanus		Willow tit
Bilus	Sturnus vulgaris		Starling
	Turdus philomel	los	Song thrush
Herpetofauna	Bufo bufo		Common toad
	Nyctalus noctula		Noctule
Mammals (Bats)	Pipistrellus pygmaeus		Soprano pipistrelle
	Plecotus auritus		Brown long-eared
Mammala (Other)	Arvicola amphibius		Water vole
Mammals (Other)	Erinaceus europaeus		Hedgehog
	Lutra lutra		Otter

# **Regional Context**

- 3.4 Local Biodiversity Action Plans (LBAP's) are a way of encouraging people to work together to 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.
- 3.5 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.
- 3.6 The Greater Manchester Biodiversity Action Plan (GMBAP) 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 local plans are considered of potential relevant to the survey area, see **Table 3.2**.

Table 3.2 - Potentially relevant NMBAP Species

Habitats:				
Canals	Canals			
Species:				
Taxon Group	Scientific Name	Common Name		
Birds	Phoenicurus ochruros	Black redstart		
biius	Poecile montanus	Willow tit		
Mammals (Bats)	Chiroptera	Bats (all)		
Plants	Populus nigra subsp. betulifolia	Native black poplar		

#### 4.0 Methodology

4.1 As part of the ecological appraisal report, a desk-top and field-based study is 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) designations within 2.0 kilometres of the Site boundary. To do so, the Multi Agency Geographic Information for the Countryside (MAGiC provided by DEFRA) was accessed to gather such information; this particular interactive mapping service was also used to locate any locally granted European Protected Species Mitigation Licenses (EPSML) and species records to further inform conclusions concerning such species in the context of the Site and its proposed development.
- 4.3 Historic satellite imagery was reviewed using sources such as Google Earth (© 2022/23) 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 Tameside Metropolitan Borough 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 serving the area, in this case Greater Manchester Record Centre (GMRC), has not been sourced at this time, with the combination of online EPSML data, extensive company records and the daytime survey data available to the ecologist considered to contain enough information in relation to the protected species likely to be present on site. If, however, 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.
  - 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 webbased 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, 2<sup>nd</sup> Edition (CIEEM, 2017) also 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."

# Field Survey

4.6 A daytime preliminary ecological appraisal was conducted on the 8<sup>th</sup> of September 2023 in good weather conditions (21°C), average wind 1/12 (Beaufort scale), cloud cover 100%, by the following surveyor (**Table 4.1**).

Mr. J. Pescod
Qualifying CIEEM

Pescod
Qualifying CIEEM

Description of most relevant credentials

Senior Ecologist with extensive training and experience,
MRes Advanced Biological Sciences, BSc (Hons)
Holder of a Natural England Great Crested Newt: CL08 Class 1 licence 2022-10653-CL08-GCN
Accredited agent on the Class 2 Natural England bat license of Mrs K Wilding (CLS-14227)
FISC 4 botanist.

Table 4.1 - Surveyor credentials

# 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, 2<sup>nd</sup> 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.
- 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 value on a geographical scale which is adopted on a site-to-site basis (see **Figure 4.1**). For botanical species list compiled in full, see **Appendix II**.
- 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) and Schedule 2 of The Invasive Alien Species (Enforcement and Permitting) Order 2019 (IASO).

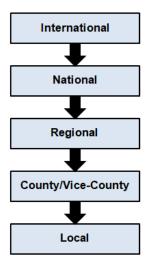


Figure 4.1 – Geographic Frame of Reference entailing degrees of conservation importance

#### Faunal assessment

4.11 During a site walkover the identification and/or evidence of priority fauna encountered was documented whilst in tandem the area was assessed for the potential to support the priority species in section 3.0. The walkover also aimed to identify any ephemeral pools or unmapped waterbodies.

#### Bats

- 4.12 The site was assessed for bats; 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.
- 4.13 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, 3<sup>rd</sup> ed. (2016): (see **Figure 4.2**).

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 and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to	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.
	be suitable for maternity or hibernation <sup>b</sup> ).	Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree
	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.	(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 and surrounding habitat but unlikely to support a roost of high conservation status	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.
	(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).	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 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.

<sup>\*</sup> For example, in terms of temperature, humidity, height above ground level, light levels or levels of disturbance.

Figure 4.2 – Bat Conservation Trust (BCT) guidelines extract

- 4.14 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,
  - Presence / absence of roost potential,
  - Value and types of roost potential if present (i.e. maternity, hibernation, transition).

# **Breeding birds**

- 4.15 The site was inspected for evidence of nesting 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 this can take the form of searching structures, woody vegetation, semi-aquatic vegetation such as reeds and / or the ground. Elevations of any buildings or structures on site were inspected for evidence of birds that show a high dependency upon built structures, many of which are in a state of decline. These might include the following species for example:
  - House martin (Delichon urbica): Birds of Conservation Concern (BoCC) red status,
  - House sparrow (Passer domesticus): BoCC red status,
  - Starling (Sturnus vulgaris): BoCC red status,
  - Swift (Apus apus): BoCC red status.

For example, in terms of temperature, maintage, maintage, maintage across gradual revers or severs or severs or discursance.
 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.
 This system of categorisation aligns with BS 8596:2015 Surveying for bats in trees and woodland (BSI, 2015).

4.16 Additional to the site's capacity to support generally common species for breeding, the area was also subject to an assessment for wider capacity to support species with extra protection under Schedule 1 of the Wildlife & Countryside Act (1981) (as amended) and other priority species.

#### Other terrestrial mammals

- 4.17 The walkover included an assessment for the presence/suitability of badger (*Meles meles*), which includes signs of activity such as prints, hairs, digging, setts, 'runs' leading to and from a sett and the existence of latrines or 'snuffle' holes where badgers have foraged in the ground.
- 4.18 The Site was also assessed for the presence/suitability of hedgehog (*Erinaceus europaeus*).

#### Water vole

- 4.19 Survey methodology detailed in 'The Water Vole Mitigation Handbook' (The Mammal Society Mitigation Guidance Series) Eds. Fiona Mathews and Paul Chanin (Dean, et al., 2016), was applied for all waterbodies adjacent to the site where accessible and safe. This included a preliminary search of up to 30 metres (considered as the Sites immediate Zone of Influence) beyond the site boundary for:
  - Sightings confirmed sighting of a Water Vole during the survey.
  - Latrines collections of droppings.
  - Burrows holes along the water's edge and in the bank above.
  - Footprints forefoot and hind foot.
  - Pathways in vegetation low runs or tunnels pushed through vegetation.
  - Feeding remains piles of chewed lengths of vegetation with 45-degree cuts to the ends.
  - Cropped grass around tunnel entrances grazed vegetation to form a 'lawn' around burrow.
- 4.20 Waterways adjacent to the site were subject to a water vole HSI assessment; a single watercourse, the River Tame, is noted directly adjacent to the northern site boundary (see **Figure 4.3**).

#### Applying the water vole HSI

The water vole habitat suitability assessment has been designed by Harris et al. (2009). The method grades sites by a simple scoring index with each character scoring 1 if present and 0 if absent. These scores are then applied to habitat categories of: ,3: Unsuitable, 3-5: Suboptimal, >5 Optimal. The criteria are as follows: -

- Well-developed (>60%) bank-side and emergent vegetation to provide cover;
- Year-round availability of food sources;
- Suitable refuge areas above extremes in water levels;
- Steep banks suitable for burrowing;
- Permanent open water;
- Presence of berm (ledge at water level);
- Lack of disturbance through poaching, grazing and/or recent management; and
- Nest building opportunities in vegetation above water level.

#### Otter

4.21 Survey methodology detailed within published criteria (CIEEM, 2017) and best practice guidelines 'Monitoring the Otter' (Chanin, 2003) was followed during the preliminary ecological appraisal. The preliminary check involved viewing accessible areas of the River Tame for a preliminary search for signs of otter including spraints, slides, runs, footprints, feeding remains, anal jelly, couches/resting places and holts (Access was achieved via viewing from a road bridge over the river); see **Figure 4.3**.



**Figure 4.3** – Map showing the vantage points (yellow) over the River Tame, relative to the red line site boundary, from which the river was surveyed/inspected for otter and water vole potential (Google Earth, 2023)

#### Great crested newt (GCN)

4.22 During desktop assessment a 250 metres radial search was undertaken from the site boundary in relation to the presence of ponds, ditches or other water bodies that may support great crested newt (GCN) (*Triturus cristatus*). 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.

- 4.23 Following current best practice considering the national roll out of District Level Licencing (DLL) across England and based on likely effects, a proportionate assessment of the water bodies range within 250m from site has been applied. Where a development is anticipated to affect GCN the search can be extended up to 500m or more.
- 4.24 Based on the desk study, using Google Earth Pro 2022/23, MAGiC Maps 2022/23 as well as Ordnance Survey (OS) map data, no standing water bodies were identified within the red line boundary. One pond was identified within the 250m considered radius at 230m to the southwest; however, this pond is separated from the site by an active railway, busy road, and

numerous developments with no functional connectivity. This pond was therefore excluded from the assessment of the proposed development in relation to GCN.

#### **Reptiles**

- 4.25 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, leaf litter, 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-worm (*Anguis fragilis*) use similar habitats to Common Lizards, and are often found in rank grassland, gardens and derelict land under refugia,
  - Grass snakes have broadly similar requirements to common lizards but with a greater reliance on ponds and wetlands, where they prey on amphibians.
- 4.26 In assessment of a site for reptiles several important habitat characteristics are considered, outlined in **Table 4.2** below, as derived from the *Reptile Habitat Management Handbook* (Edgar, 2010).

1. Location (in respect of species range)7. Connectivity to good quality habitat2. Vegetation structure8. Prey abundance3. Insolation9. Refuge opportunity4. Aspect10. Hibernation habitat potential5. Topography11. Disturbance regime6. Surface geology12. Egg-laying site potential

Table 4.2 – Important habitat characteristics for reptiles

#### Invertebrates

- 4.27 The application site was assessed for the presence of features that should be considered of high value to invertebrates. Several important 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.
- 4.28 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,

# Land at Egmont Street, Mossley, Ashton-under-Lyne, OL5 9NB Preliminary Ecological Appraisal

- Nature of the immediate and surrounding habitat in relation to shelter, foraging and commuting opportunities.
- 4.29 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 the surveyor and author Mr. J. Pescod.

#### 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 that 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 The optimal time of the year to carry out a preliminary ecological appraisal / UK Habitats survey is April to October; therefore, the survey was undertaken within the optimal period for habitat identification, with timing therefore not considered a constraint.
- 5.3 The survey took place within both the active bat season; survey timing is not considered a constraint in relation to bats.
- 5.4 The bird breeding season is typically March-August (inclusive), extending into September. Evidence of current nesting is most evident within the breeding season, though historic evidence and suitability for nesting can be most identifiable outside of the season when denser foliage is absent from trees. No constraints in relation to breeding birds therefore apply.
- 5.5 The surveyor was unable to access either bankside of the River Tame, to undertake a thorough inspection for evidence of, or suitability for, water vole and otter. Instead, the assessment was undertaken from a raised vantage point, from which suitability of the river could be assessed, though no search for evidence of either species could be undertaken. This has been taken into consideration in the conclusions and recommendations relative to water vole and otter.
- 5.6 In considering all possible survey constraints, no other significant limitations were experienced that might adversely influence the results, conclusions, and recommendations of this report.

#### 6.0 Desk Study Results

The application site comprises a disused brownfield site of 0.45ha immediately to the northwest of Egmont Street in Mossley, Ashton-under-Lyne; the Site is located circa 14.0km east of Manchester city centre; see **Figure 6.1** for site location within context of the wider landscape. Based upon historical aerial imagery of the site, the southern half appears to have been used in the past for vehicle storage, whilst the northern half appears to variously been used as sheep pasture and left to grow into secondary woodland.



**Figure 6.1** - Location of the application site (red boundary) within the landscape, bat records held by Tyrer Ecological Consultants Ltd are marked with a green dot (Source: Google Earth Pro 2022/23)

- 6.2 The immediate habitat (up to 500 metres) is predominantly urbanised with industrial warehouses to the north-east and south-west, surrounded by terraced housing; an area of disused brownfield occurs to the north, whilst to the south beyond Egmont Street lies the King George playing fields. The area is intersected by linear features running north to south, most notably including the River Tame immediately to the east, and Huddersfield Narrow Canal Site of Special Scientific Interest (SSSI). A railway runs through Mossley to the east, and numerous A- and B-roads provide access to residential and business areas. A region of deciduous woodland priority habitat extends to the south beyond the playing fields, broadly following the two waterways, and a small patch of lowland fen to the north-east within the Huddersfield Narrow Canal.
- 6.3 The extending environment (up to 2.0 kilometres, see **Figure 6.2**) broadly continues in similarity to that of the immediate with regions of residential and business development following the river, canal and railway, interspersed with natural and semi-natural habitat. A number of Local Nature Reserves (LNRs) occur to the east and west, including Castle Clough & Cowbury Dale LNR, Cowbury Dale LNR), and Knot Holl LNR, cited for their habitat arrays which collectively include woodland, open water, wetland, grassland and moorland, and for their species assemblages which include birds and invertebrates. Three areas within the search radius are identified as moorland, two smaller areas to the north-west of Mossley and one larger area to the east which extends into the Peak District.

6.4 Collectively, the wider environment is considered highly favourable for a variety of species associated with rural and sub-urban environments with commuting corridors and stepping-stone habitats existing in the form of waterways, areas of woodland, and the railway. The species most likely to utilise the application site and its immediate habitat are airborne species, such as bats and birds, whilst terrestrial fauna including hedgehog could also be present.

#### Statutory designated sites

- 6.5 One statutory designated site for nature conservation features within 2.0 kilometres of the Site in the form of the Huddersfield Narrow Canal SSSI, located 0.1km to the north-east at its closest point. The canal has been designated as the best example of a flowing eutrophic water system in Greater Manchester and is host to several wetland habitats including swamp and tall fen, along with unimproved and semi-improved neutral and acidic grassland. The canal supports the specially protected plant floating water-plantain (*Luronium natans*), listed on Schedule 8 of the WCA.
- 6.6 The application Site is within the Impact Risk Zone (IRZ) of the Huddersfield Narrow Canal SSSI and Dark Peak SSSI which occurs to the east. The IRZ system sets the criteria for development whereby a Local Authority (Tameside Metropolitan Borough Council) would be required to consult with Natural England (NE) regarding potential risks to the designated sites posed by the proposed development. The planning application does not meet the threshold of 50 units in a residential development whereby it becomes immediately evident NE need to be consulted.

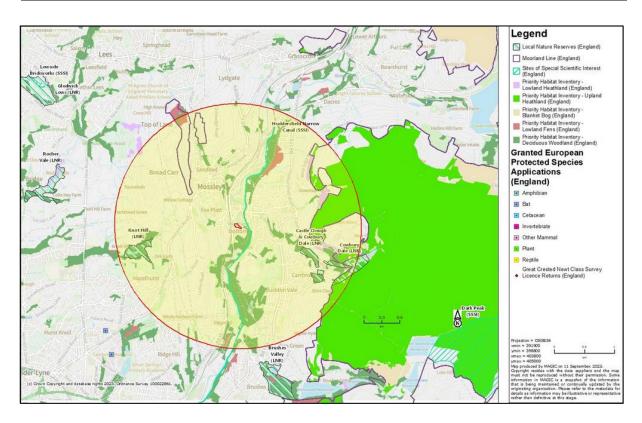
**NB:** "It is important to note that the SSSI IRZs only indicate Natural England's assessment of likely risk to the notified features of SSSIs. Where they indicate such a risk is unlikely, this does not mean that there are no potential impacts on biodiversity or the wider natural environment.

# **Notable Species Information**

- An online search of MAGiC maps revealed an absence of any granted European Protected Species Mitigation Licences (EPSMLs) within a 2.0 kilometres radius of the application site.
- 6.8 Tyrer Ecological Consultants Ltd have previous and ongoing projects involving protected species within the surrounding area as such, the following biological data (see **Table 6.1**) is readily available to the Ecologist from the company database all data has been previously submitted to the LERC serving the area.

Table 6.1 – LERC submitted biological data records collected by Tyrer Ecological Consultants Ltd

Year	Distance from Site	Context (where relevant)
2015	0.4km north	Common pipistrelle ( <i>Pipistrellus pipistrellus</i> ) day roost used by up to four bats.



**Figure 6.2 –** Designated site and priority habitat data for the area within 2.0 kilometres of the application site (Source: MAGiC, 2023)

# 7.0 Field Survey Results

# 7.1 <u>Habitat Survey</u>

- 7.1.1 See **Table 7.1.1 (below)** for baseline information and habitat descriptions; refer to **Appendix I** for any supporting imagery; scientific names for **Table 7.1.1** are given in **Appendix II**.
- 7.1.2 Refer to Appendix III UK Habitats Map for the location of habitats a Target Notes (TN).

Table 7.1.1 – UK Habitat codes and descriptions with Target Notes

Area Habitats	Description
w1g6 – Line of trees	A line of semi-mature trees, comprising ash ( <i>Fraxinus excelsior</i> ), hawthorn ( <i>Crataegus monogyna</i> ), and blackthorn ( <i>Prunus spinosa</i> ) over bramble ( <i>Rubus fruticosus agg.</i> ), along with two large-leaved lime ( <i>Tilia platyphyllos</i> ).
	Secondary Habitat Code(s): -
<b>g4–</b> Modified grassland	A small region of improved grassland within the scrub to the north of the site, with species including cock's-foot ( <i>Dactylus glomerata</i> ), creeping bent ( <i>Agrostis stolonifera</i> ), red fescue ( <i>Festuca rubra</i> ), broad-leaved dock ( <i>Rumex obtusifolius</i> ), common nettle ( <i>Urtica dioica</i> ), dandelion ( <i>Taraxacum agg.</i> ), dove's-foot crane's-bill ( <i>Geranium molle</i> ), meadow buttercup ( <i>Ranunculus acris</i> ) and scattered soft-rush ( <i>Juncus effusus</i> ). Scrub from the surrounding habitat is encroaching, with occasional young broom ( <i>Cytisus scoparius</i> ) and hazel ( <i>Corylus avellana</i> ).
	Secondary Habitat Code(s): 10 – Scattered scrub, 14 – Scattered rushes
h3h – Mixed scrub	Mixed, predominantly native scrub in the north of the site, with species predominantly including willow ( <i>Salix sp.</i> ), hawthorn, blackthorn, hazel, broom, and dogwood ( <i>Cornus sanguinea</i> ), along with buddleja ( <i>Buddleja davidii</i> ) and Wilson's honeysuckle ( <i>Lonicera nitida</i> ).
u1b6 – Other developed land	Secondary Habitat Code(s): -  An area of hardstanding historically used for parking and storage of materials, and still host to two small walk-in containers. Scattered ephemeral plant species are present, typically comprising 'urban weeds', including Canadian fleabane ( <i>Erigeron canadensis</i> ), Oxford ragwort ( <i>Senecio squalidus</i> ), and water bent ( <i>Polypogon viridis</i> ).  Secondary Habitat Code(s): 17 ruderal/ephemeral
w1g7 – Other broadleaved woodland types	A region of secondary sycamore ( <i>Acer pseudoplatanus</i> ) dominated woodland located at the western end of the application site; the trees are generally young and are overcrowded, and other species present include occasional ash, rowan ( <i>Sorbus aucuparia</i> ) and silver birch ( <i>Betula pendula</i> ).  Secondary Habitat Code(s): 38 – Secondary woodland
	Description
Target Notes	TN1: Himalayan balsam – Invasive Non-native Species (INNS)
Target Notes	TN2: Japanese knotweed - INNS
	TN3: Mature silver birch trees, T1 and T2

#### **Priority habitats**

7.1.3 The woodland present within the site is secondary and comprised predominantly of sycamore; it does not qualify as the UKBAP habitat woodlands. Whilst the River Tame does not fall within the application site, it does fall within 5-10m of the site boundary. The river likely qualifies as a UKBAP river, and additionally has connectivity to the Huddersfield Narrow Canal SSSI; therefore, any impacts to the river are likely to impact the wider network of waterways including the SSSI.

# 7.2 <u>Vegetation</u>

# Notable species

7.2.1 No species of conservation importance were located anywhere within the site during the appraisal.

Invasive non-native species (INNS)

7.2.2 One INNS listed under Schedule 9 of the WCA, Japanese knotweed, and one INNS listed under Schedule 2 of the IASO, Himalayan balsam, was located within the red line boundary of the site during the diurnal appraisal (see **Figure 7.2.1** for approximate locations).

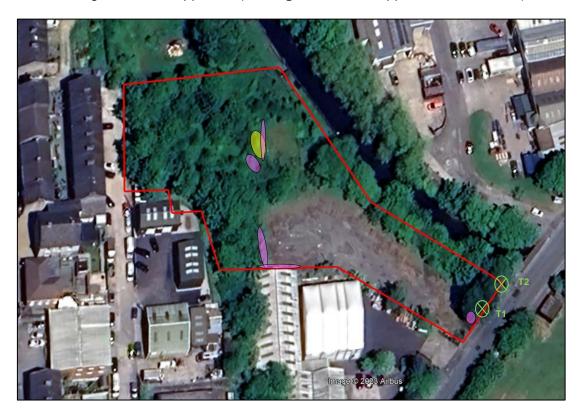


Figure 7.2.1 – Location of Himalayan balsam (pink) and Japanese knotweed (yellow), and of trees T1 and T2 within the application site boundary (Source: Google Earth Pro 2023)

# 7.3 Bats

- 7.3.1 No buildings are present within the application site boundary.
- 7.3.2 All trees present within the woodland at the western end of the site and the line of trees along the north-eastern site boundary were assessed for the presence/absence of PRFs and were found to be absent of features considered suitable for roosting bats including broken branches,

cracked limbs and woodpecker holes, for example. These trees are typically immature, and thus have no reached a sufficient size nor age at which they would typically develop 'veteran' features that provide suitable roosting opportunities and have been duly categorised as pertaining to **Negligible** bat roost potential in line with current BCT guidance.

7.3.3 Two mature silver birch trees (see **Figure 7.2.1** for location of the trees **Figure 7.3.1** for images of the trees) are present at the south-eastern site boundary, the southernmost of which (T1) was found to be entirely absent of PRFs and is categorised as of **Negligible** bat roost potential. The northernmost tree (T2) was identified as hosting a single rot hole at a fallen bough on the western aspect, at a height of approximately 2.5m. On the basis of this feature, T2 has been preliminarily categorised as pertaining to **Low** bat roost suitability; recommendations in relation to T2 have been provided within section 8.0.



Figure 7.3.1 - Character of T1 (left) and T2 (right) with PRF on T2 indicated

7.3.4 All trees and taller vegetation are considered to offer suitable foraging and commuting opportunities for populations of bats, subject to their presence in the local environment, whereby they act as landmarks for navigation and foci around which invertebrate prey species gather. Notably, the woodland forms part of a larger woodland corridor extending to the south, with both the River Tame and Huddersfield Narrow Canal providing favourable connectivity, particularly for species which frequently utilise urban and suburban environs such as bats of the *Pipistrellus* genus, and for species strongly associated with waterbodies including Daubenton's (*Myotis daubentonii*) bats.

# 7.4 Birds

7.4.1 In relation to WCA Schedule 1 specially protected bird species such as barn owl (*Tyto alba*) and black redstart, the site and its immediate surroundings are absent of habitat suitable for foraging/hunting or nesting by either species, and no evidence was found to suggest any form of site use or historic nesting.

- 7.4.2 In relation to more common birds, the site provides numerous viable nesting and foraging opportunities in the form of the woodland, scrub, and lines of trees present on site. Whilst no evidence of nesting was encountered attesting to definitive breeding, due to the dense nature of the woodland and scrub any nesting could have been obscured, and it is considered possible that the Site may be used for breeding purposes in the breeding bird season.
- 7.4.3 The following bird species were observed during the survey (see **Table 7.4.1**):

**Table 7.4.1 –** Bird species observed during the survey

Species	Scientific Name	Status (BoCC)
Great Tit	Parus major	Green
Jackdaw	Corvus monedula	Green
Robin	Erithacus rubecula	Green
Wood pigeon	Columba palumbus	Amber
Wren	Troglodytes troglodytes	Amber

S.41 - a bird listed on section 41 of the Natural Environment Rural Communities Act 2006 (NERC Act)

LBAP - A local biodiversity action plan listed species

Q - Qualifying species of nearby SSSI site(s)

SPEC - a species of conservation concern, Amber or Red, Red being the highest conservation priority

# 7.5 Terrestrial Mammals

- 7.5.1 No field signs of badger, such as latrines, pathways, hairs, footprints, or feeding signs, for example snuffle holes and scratched trees / logs, were located within the Site boundary. Whilst the woodland and scrub in the western half of the site does provide suitable sett-building habitat for this species, given the developed surrounding of the Site, the presence of badger in the immediate vicinity of the Site is considered unlikely.
- 7.5.2 In respect of hedgehogs, the site provides some habitat for value for commuting, foraging and refuge/hibernation in the form of grassland, scrub and woodland. The occasional presence of hedgehog within the Site boundary is considered possible, though no evidence of hedgehogs was observed during the survey.

# Water vole

- 7.5.3 No evidence of water vole was identified during the survey, though no access to the watercourse or banks could be achieved and thus it is likely that evidence, subject to presence, would not be readily visible. The terrestrial habitat present within the site boundary is of low favourability for water vole, providing little in the way of suitable foraging habitat. However, the application site does fall within 5-10m of the River Tame. During the site walkover the river was subject to a water vole HSI (see **Table 7.5.1**), undertaken from a vantage point on a road bridge immediately to the east of the site boundary.
- 7.5.4 The River Tame is steep sided, and at the time of survey shallow and fast-flowing, with some limited bankside and in-channel vegetation though areas are dominated by the INNS

Himalayan balsam and montbretia (*Crocosmia x crocosmiiflora*). Due to the tall, steep sides of the river bank, there are few opportunities for nest building, and no berms or refuge areas. The river scores 'Sub-optimal' in the HSI; though taking into account the fast water flow of the river, the presence of abundant invasives along the banks, and the location of this stretch of river within a developed region, the presence of water vole is considered highly unlikely.

Table 7.5.1 – HSI scoring for water vole

Water Vole Habitat Suitability Assessment (1 if feature is present)		
< 3 = Unsuitable Habitat / 3 – 5 = Sub-optimal Habitat / > 5 = Optimal Habitat	River Tame	
Well developed (>60%) bankside and aquatic vegetation providing cover	0	
Year-round availability of food sources	0	
Suitable refuge areas above extremes in water levels	0	
Steep banks suitable for burrowing	1	
Permanent open water	1	
Ledge or berm present at water level	0	
Lack of disturbance through poaching, grazing and/or recent management	1	
Nest building opportunities in vegetation above water level	0	
Habitat Suitability Index Score Total	3	

#### <u>Otter</u>

7.5.5 Similarly, the location of the stretch of river within a disturbed, developed area and the shallow nature of watercourse are likely to discourage use of the river for even commuting or foraging by otter. The site itself is entirely unsuitable for this species, and the presence of otter within the application site or the adjacent stretch of the River Tame can be reasonably discounted.

# 7.6 <u>Herpetofauna</u>

#### Great crested newt (GCN)

- 7.6.1 In respect of great crested newt (GCN), no ponds exist within the red line boundary of the site, and the singular pond occurring within the 250m radial buffer is separated from the application site by significant physical barriers that would prevent dispersal from this direction; as such, no ponds were assessed using the industry standard Habitat Suitability Index (HSI) assessment.
- 7.6.2 Important elements to consider when assessing likely impacts against GCN includes:
  - The scale, nature and magnitude of proposals,
  - 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 around the pond,
  - · Area of site habitat loss,
  - Nature of habitat to be lost and potential value to GCN,
  - Most up to date Government guidance considering EPS.
- 7.6.3 As derived from the desktop assessment, evidence of GCN in the locale includes:

- No granted EPSMLs for GCN present within a 2.0 kilometre search buffer,
- No 'Present' Class Survey Licence Returns within the search range.
- 7.6.4 Whilst the site present favourable terrestrial habitat for refuge and hibernation in the form of the scrub and woodland, and for foraging in the form of the small area of rough grassland, the site is isolated from any ponds or pond networks that would be required to support a breeding population of GCN. GCN are therefore not a material consideration in this application.

# Wider herpetofauna

- 7.6.5 The lack of a pond network in the area reduces the likelihood that more common and widespread amphibians, such as common frog (*Rana temporaria*) may utilise the site. Despite this, the habitats present could provide suitable habitat for these species when in their terrestrial phase, and given the proximity of the River Tame, their presence cannot be ruled out.
- 7.6.6 In respect of reptiles, the site provides suitable habitat for this taxon in the form of a mosaic of scrub, woodland, grassland and hardstanding, which provide areas for refuge, hibermation, basking and hunting. However, the site is surrounded by developed land, and isolated from other, larger regions of suitable habitat. Due to the presence of the adjacent River Tame, the presence of species such as grass snake (*Natrix helvetica*) cannot be categorically discounted, though is considered highly unlikely.

# 7.7 Invertebrates

7.7.1 An assessment of the habitats on the site found some features suitable to support pollinators i.e., flowering plants, trees and shrubs hedgerows, and an abundance of ecotones at the intersection of scrub, woodland, grassland, and hardstanding which is likely to support a variety of invertebrates. However, the habitat features identified are abundant throughout to the wider environment and are unlikely to support a regionally significant assemblage of invertebrates, nor any specially protected invertebrate species.

#### 8.0 Conclusions & Recommendations

#### **Habitats**

#### Statutory designated sites

- 8.1 The Huddersfield Narrow Canal SSSI occurs within 0.1km of the application site boundary, and the River Tame located 5-10m to the north-east of the site has connectivity to the SSSI; any impacts to the River Tame are thus highly likely to also impact upon the SSSI. It is therefore recommended that a series of precautionary risk avoidance measures, detailed in a Construction Environmental Management Plan (CEMP) created by a suitably qualified person, are strictly adhered to throughout the construction phase of the development proposals.
- 8.2 This CEMP should at a minimum include:
  - Directing surface water drainage away from the adjacent River Tame;
  - A barrier along the north-eastern site boundary to prevent any water, chemical or substrate run-off;
  - Proper storage of materials so that no spillage occurs on site; and
  - The provision of spill kits in order to rapidly contain any spillage which might occur.

#### Priority habitats

8.3 No priority habitats occur within the site boundary, though the River Tame to the north-east is likely to qualify as the UKBAP habitat 'Rivers'. The creation and adherence to a CEMP as outlined above will minimise the risk of negative impacts to this habitat.

### Vegetation

- 8.4 No species of conservation importance were identified within the application site boundary. Two INNS were recorded at the site; namely the Schedule 9 (WCA) listed Japanese knotweed and Schedule 2 (IASO) listed Himalayan balsam. The proposals carry as risk of spreading both species off the site during the site clearance and construction period.
- 8.5 Whilst it is not illegal to host any species designated as such within a site, it is an offence, under current legislature, to knowingly permit the spread of INNS beyond the confines of your site, either via allowing it to grow unchecked or through the irresponsible removal and dumping of waste / plant matter. To prevent incidental spread of this species during the proposed works it is recommended that this species is eradicated from the site by a licenced invasive species contractor, including a period of post-development monitoring to ensure successful eradication and prevent regeneration. All plant waste should be disposed of a landfill licensed to accept INNS plant waste.
- As a means of improving biodiversity value / enhancing the site any new landscaping should aim to incorporate majority use of native species as opposed to non-native exotic species which offer significantly fewer benefits to our native fauna. Suitable species for native landscaping have been provided in **Appendix III**.

#### **Bats**

8.7 One mature silver birch (T2) was identified as hosting PRFs and preliminarily categorised as pertaining to **Low** bat roost suitability (**Figure 8.1**) in accordance with Bat Conservation Trust – Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3<sup>rd</sup> ed. (2016).

- 8.8 Due to the height of the identified PRF on the western aspect of T2, it was not possible to full inspect it from ground level and ascertain its suitability for roosting bats. It is therefore recommended that T2 is subject to a further intrusive inspection, to be carried out by a suitably licenced ecologist/tree climber equipped with an endoscope, to check the identified crevice and any other features for evidence of a bat/bat roost(s). Following the intrusive inspection, an amendment to the categorisation of bat roost potential may be re-assigned.
- 8.9 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 in line with current guidance. 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, 3<sup>rd</sup> ed. (2016).
- 8.10 All trees and scrub present in within the site boundary should be considered highly valuable to bats in a local context in that they likely provide valuable foraging/commuting habitat; particularly the tree line forming the north-eastern site boundary which, together with the River Tame, likely provides a high value route for species that may include Daubenton's bats.
- 8.11 It is understood that under the current proposals, all or part of this treeline will be felled to allow for the new development. To prevent the loss of a commuting and foraging route, and to reduce disturbance of the river by the occupiers of the new dwellings, it is recommended that this treeline is retained in full. Where this is not possible, it is recommended that a new line of trees is planted to replace any trees lost, comprising native woody species as listed in **Appendix III**.
- 8.12 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, subject to their presence, particularly if increased light spillage occurs in areas of that are currently free from illumination, notably including the River Tame to the north-east. 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 Trust's 'Bats and Artificial Lighting at Night' guidelines (August 2023) for further information.

<u>Appropriate luminaire specifications</u>: Light sources, lamps, LEDs and their fittings come in a myriad of different specifications which a lighting professional can help to select. However, the following should be considered when choosing luminaires and their potential impact on Key Habitats and features:

- All luminaires should lack UV elements when manufactured. Metal halide, compact 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.
- A warm white light source (2700Kelvin or lower) should be adopted to reduce blue light component.
- Light sources should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone, 2012).
- Internal luminaires can be recessed (as opposed to using a pendant fitting) where installed in proximity to windows to reduce glare and light spill.
- Waymarking inground markers (low output with cowls or similar to minimise upward light spill) to delineate path edges.
- Column heights should be carefully considered to minimise light spill and glare visibility. This
  should be balanced with the potential for increased numbers of columns and upward light
  reflectance as with bollards.

- Only luminaires with a negligible or zero Upward Light Ratio, and with good optical control, should be considered - See ILP GN01.
- Luminaires should always be mounted horizontally, with no light output above 90° and/or no upward tilt.
- Where appropriate, external security lighting should be set on motion-sensors and set to as short a possible a timer as the risk assessment will allow. For most general residential purposes, a 1 or 2 minute timer is likely to be appropriate.
- Use of a Central Management System (CMS) with additional web-enabled devices to light on demand.
- Use of motion sensors for local authority street lighting may not be feasible unless the authority has the potential for smart metering through a CMS.
- The use of bollard or low-level downward-directional luminaires is strongly discouraged. This is
  due to a considerable range of issues, such as unacceptable glare, poor illumination efficiency,
  unacceptable upward light output, increased upward light scatter from surfaces and poor facial
  recognition which makes them unsuitable for most sites. Therefore, they should only be
  considered in specific cases where the lighting professional and project manager are able to
  resolve these issues.
- Only if all other options have been explored, accessories such as baffles, hoods or louvres can
  be used to reduce light spill and direct it only to where it is needed. However, due to the lensing
  and fine cut-off control of the beam inherent in modern LED luminaires, the effect of cowls and
  baffles is often far less than anticipated and so should not be relied upon solely.

#### **Breeding Birds**

- 8.13 In relation to WCA Schedule 1 specially protected bird species, no evidence to suggest any form of breeding behaviour or any usage of the site was encountered. Any impacts which may arise from the development proposals to these specially protected birds can, therefore, be reasonably ruled out.
- 8.14 In relation to more common birds, the woodland, tree line and scrub present offer birds a plethora of potential nesting opportunities, particularly during the breeding bird season of March August.
- 8.15 Given that all birds are protected when at the nest, it is recommended that any vegetation clearance works on site in relation to the areas with breeding potential listed above are carried out outside of the breeding bird season (March August inclusive). For works undertaken within the breeding bird season, any areas that can support nesting birds should be checked by a professional Ecologist for nesting birds within 48 hours or less prior to works commencing.
- 8.16 Where / if active nests are located by the Ecologist, then any works which may affect them would have to be delayed until the young have fledged and the nest has been abandoned naturally, this can be aided, for example, via implementation of appropriate buffer zone(s) around the nest site (typically 5 10 metres) in which no disturbance is permitted until the nest is no longer in use. This would have to be coordinated through the expert judgement of the professional ecologist and species pending.

Point 3.24 of the British Standards Publication 42020:2013 defines a professional ecologist as: "a person who has, through relevant education, training or experience, gained recognised qualifications and expertise in the field of ecology and environmental management."

**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.

#### **Terrestrial mammals**

- 8.17 No evidence of badger was observed anywhere within or adjacent to the application site, and despite the suitability of the woodland for sett-building, the developed nature of the sites surroundings significantly reduce the likelihood of badgers being present.
- 8.18 Hedgehog are likely to utilise the site in some capacity owing to the habitat features present. Vegetation removal / management, as well as any excavation, presents a risk of injury. Therefore, a programme of Reasonable Avoidance Measures (RAMs) should be created by a suitable Ecological Clerk of Works (ECoW), and adhered to at the site during development, particularly where excavations / trenches will be made. These should include, for example:
  - Limiting working hours to the daylight,
  - Carrying out morning checks for the presence of hedgehogs, brown hares, and other small animals,
  - Provisioning low angle sloping boards of approximately 300 mm wide to be placed within any excavations at the end of each working day, to facilitate a means of escape for mammals such as hedgehogs,
  - Backfilling excavations at the end of the working day, if possible,
  - Not leaving any bulky equipment / general construction aggregates around the development area, instead leave them on bare ground away from the risk zone.
- 8.19 Both the application site and the adjacent stretch of the River Tame are considered unlikely to host either water vole or otter. Nonetheless, these species should be incorporated into the CEMP recommended in section 8.2, with a specific focus of the erection of physical barriers along the north-eastern site boundary which will prevent disturbance of any species utilising the watercourse, and create a buffer between the works area and the river.

# Great crested newt (GCN)

8.20 Regarding great crested newt (GCN), the results of both the desktop and field study suggest that the risk of this species being present within the application site, or the immediate vicinity is minimal. As such, no further recommendations are made in relation to GCN.

# Other amphibians

- 8.21 Common amphibians could potentially utilise the site for commuting / refugia when in their terrestrial phase, given the proximity of the adjacent river. Any clearance and habitat management should therefore have due regard to local wildlife as discussed; to this effect, the reasonable avoidance measures (RAMs) outlined previous for hedgehogs should be extended to accommodate common amphibians. These RAMs should include handling any amphibians with wet gloves to prevent impact / injury, and also the soft demolition of any areas suspected as being potential refuge areas for amphibians.
- 8.22 Should any frogs or toads be encountered within the works area, they should be handled with wet gloves to prevent impact / injury and moved to an area of like for like habitat outside of the works area away from potential harm. The applicant and all contractors would be aware that if at any stage newts are encountered during works, or at any other stage of the programme of works, such works would be required to immediately cease and the Ecologist / ECoW would be made aware as to provide further guidance, if an Ecologist is not already present.
- 8.23 The applicant should be aware that where it is discovered great crested newts would be impacted by the proposals, a development licence (options include District level licence, traditional development mitigation licence, low impact class licence or other) informed by

survey data and a suitable mitigation strategy may be required to legally proceed with the works. In some cases, a licence may not be necessary where risks can be avoided, minimised or mitigated for through reasonable avoidance measures (RAMs), 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.

## Reptiles

8.24 The Site is unlikely to support reptiles, however in the interests of best practice, as a reasonable precaution concerning this group any bespoke working Method Statement outlining reasonable avoidance measures (RAMs) and working protocols as an informant and safety measure should also consider the welfare of reptiles.

#### Invertebrates

8.25 Whilst the application site does provide an array of habitat features and ecotones, it is unlikely to host any assemblages of invertebrates that would be notable at a local or wider level, with abundant similar habitat present in the surrounding area. However, the loss of any such habitat when compounded with habitat loss as a result of other developments in the region could have a deleterious effect on local invertebrate populations. It is therefore recommended that the development proposals incorporate provisions for invertebrates, both in the form of varied native planting and of insect boxes such as 'insect hotels'.

### General enhancement

8.26 As a means of improving biodiversity value / enhancing the site any new landscaping should aim to incorporate majority use of native species as opposed to non-native exotic species which offer significantly fewer benefits to our native fauna. Suitable species for native landscaping have been provided in **Appendix III**.

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Appendix I: Site Photographs

Plate 1 - Character of the Site viewed from beyond the eastern boundary



Plate 2 - Character of the hardstanding



Plate 3 - Woodland to the west of the site



Plate 4 - Grassland, scrub and woodland, with Japanese knotweed visible



Plate 5 – Japanese knotweed with Himalayan balsam



Plate 6 - Line of trees along the north-eastern boundary



Plate 7 – Walk-in storage crate on the hardstanding



Plate 8 – Character of the adjacent section of the River Tame with montbretia and Himalayan balsm

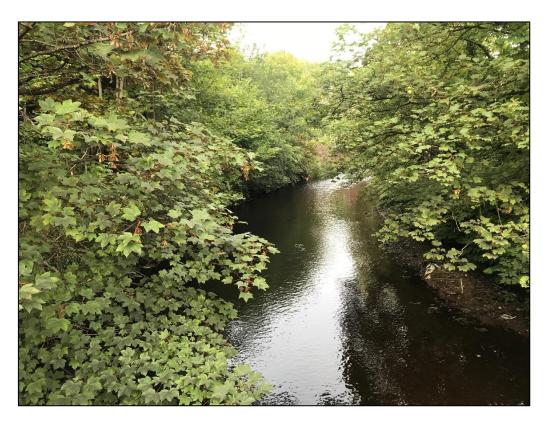


Plate 9 - North-western view of the River Tame



Plate 10 - South-eastern view of the River Tame

Appendix II: Botanical Species List

Species nomenclature follows Stace, C (2019) – definitive English names.

Taxon	Common Name	Scientific Name	
Bryophyta (Mosses)	Springy Turf-moss	Rhytidiadelphus squarrosus	
Polypodiopsida	Field Horsetail	Equisetum arvense	
(Ferns)	Male-fern	Dryopteris filix-mas	
Anthophyta	Ash	Fraxinus excelsior	
(Flowering plants)	Bittercress sp.	Cardamine sp.	
	Black Medic	Medicago lupulina	
	Blackthorn	Prunus spinosa	
	Bramble	Rubus fruticosus agg.	
	Broad-leaved Dock Rumex obtusifolius		
	Broad-leaved Willowherb	pad-leaved Willowherb Epilobium montanum	
	Broom	Cytisus scoparius	
	Buddleja	Buddleja davidii	
	Canadian Fleabane	Erigeron canadensis	
	Carrots	Daucus carota	
	Cock's-foot	Dactylus glomerata	
	Colt's-foot	Tussilago farfara	
	Common Ivy	Hedera helix	
	Common Nettle	Urtica dioica	
	Creeping Bent	Agrostis stolonifera	
	Creeping Thistle	Cirsium arvense	
	Curled Dock	Rumex crispus	
	Dandelion	Taraxacum agg.	
	Dogwood	Cornus sanguinea	
	Dove's-foot Crane's-bill	Geranium molle	
	False Oat-grass	Arrhenatherum elatius	
	Great Willowherb	Epilobium hirsutum	
	Groundsel	Senecio vulgaris	
	Hawthorn	Crataegus monogyna	
	Hazel	Corylus avellana	
	Herb-Robert	Geranium robertianum	
	Himalayan Balsam	Impatiens glandulifera	
	Hogweed	Heracleum sphondylium	
	Japanese Knotweed	Reynoutria japonica	
	Large-leaved Lime	Tilia platyphyllos	
	Meadow Buttercup	Ranunculus acris	
	Mugwort	Artemisia vulgaris	
	Oxford Ragwort	Senecio squalidus	
	Pedunculate Oak	Quercus robur	
	Pendulous Sedge	Carex pendula	
	Prickly Sow-thistle	Sonchus asper	

Red Clover	Trifolium arvense
Red Fescue	Festuca rubra
Ribwort Plantain	Plantago lanceolata
Rosebay Willowherb	Chamaenerion angustifolium
Rowan	Sorbus aucuparia
Selfheal	Prunella vulgaris
Silver Birch	Betula pendula
Soft-rush	Juncus effusus
Sycamore	Acer pseudoplatanus
Water Bent	Polypogon viridis
White Clover	Trifolium repens
Willow sp.	Salix sp.
Wilson's Honeysuckle	Lonicera nitida
Yorkshire-fog	Holcus lanatus

Appendix III: Biodiversity Enhancement: General Recommendations

# Native Planting and/or Landscaping - recommended species

The below species have been assessed against the local soil and habitat types and are deemed suitable for the site. All plant material should comply with the minimum requirements in BS 3936-1: 1992 Specification for trees and shrubs and BS 3936-4: 2007 Specification for forest trees and BS 8545: 2014 Trees from Nursery to Independence in the Landscape. Any plant material, which in the opinion of the appointed Landscape Architect, does not meet the requirements of the Specification, or is unsuitable, or defective in any other way, will be rejected. The minimum specified sizes in the plant schedule will be strictly enforced. The contractor should replace all plants rejected at own cost.

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

### **Enhancement for Nesting Birds**



-2h Schwegler robin box

This traditional design has proved to be highly effective in attracting Robins as well as other small wood/garden 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.

For more information - www.nhbs.com/2h-schwegler-robin-box



- 1B Schwegler Nest Box

These Woodcrete nest boxes are famous for their durability - lasting for at least 20-25 years.

Woodcrete is a breathable blend of wood, concrete and clay which will not rot, leak, crack or warp, whilst preventing condensation and maintaining more constant temperatures inside than wooden boxes. Schwegler bird boxes are backed by conservation organisations, government agencies and forestry experts and experiments have shown that the highest density if bird populations (i.e. breeding pairs per hectare) is achieved with Schwegler nest boxes. They are carefully designed to provide a stable environment and to mimic natural nest and roost sites with internal brood chamber dimensions that are similar to natural woodpecker cavities.

Schwegler have a patented method of installation on trees that prevents the tree trunk from growing over the hanger from which the box is suspended. A separate replacement front panel is also available.

## **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

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

### Enhancing a development site 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 Polethylene board (100% recycled plastic)
- \* Dimensions: Height 26cm x width 23cm
- \* Entrance Hole: 13cm x 13cm
- \* Country of Manufacture: England

