

Land at 354 Manchester Road, Bury BL9 9NR

ECOLOGICAL SURVEY AND ASSESSMENT
(Including a Licensed Bat Survey)

April 2025

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Document Control

Survey Type:	Surveyors¹	Survey Date(s)
Phase 1 Habitat Survey and Daytime Bat Walkover Survey	Brian Robinson B.Sc. (Hons) MCIEEM Senior Ecologist	25 th September 2024
Reporting	Personnel	Date
Author	Brian Robinson B.Sc. (Hons) MCIEEM Senior Ecologist	1 st November 2024
Signature(s)		
Checked	Victoria Burrows B.Sc. (Hons) M.Sc. CEnv MCIEEM	4 th November 2024
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Bats		
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SUMMARY

Introduction and Scope

- i. This ecological survey and assessment presents the ecological, biodiversity and nature conservation status of land at 354 Manchester Road, Bury BL9 9NR. The assessment was requested in connection with proposals to develop the area to a single residential dwelling.
- ii. This report presents the results of a desktop study, data search, extended Phase 1 Habitat Survey and a licensed bat survey carried out in September 2024. The scope of survey undertaken is appropriate to identify potential ecological constraints, the remit of mitigation required and opportunities for biodiversity associated with the development proposals.
- iii. The site comprises an area of secondary broadleaved woodland and a hardstanding access track. A small area of ornamental planting to the south of the access track and associated with the garden associated with 354 Manchester Road is located within the site boundary.

Results of Survey and Assessment

- iv. The proposals will have no adverse direct or indirect effect on statutory or non-statutory designated sites for nature conservation.
- v. Only common and widespread plant species were found. None of the habitats present are representative of semi-natural habitat. It is not considered that the woodland habitat within the site is representative of Lowland Mixed Deciduous Woodland Priority Habitat. No irreplaceable habitats are present within the site. In terms of each habitat's importance in a geographical context, the broadleaved woodland is considered to be of 'local' importance, the garden habitats are of 'site' value only, and the hardstanding is not considered to hold any importance on a geographical scale.
- vi. It is recommended that, in order to be in accordance with the principles of the mitigation hierarchy, the proposals must seek to avoid impacts to the woodland habitat and trees where this is feasible to do so, and compensate for losses of woodland habitat where possible. It is considered that, in this instance, off-site compensation must be sought for any loss of woodland habitat associated with the proposed development. Recommendations relating to the proposed site layout are presented at **Section 5.2**.
- vii. Measures for the protection of any trees retained as part of the proposed development, and for the areas of woodland which are present at the margins of the site, are presented at **Section 5.3**.
- viii. Montbretia and Japanese Rose, both of which are invasive plant species listed under Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended), have been detected the garden area to the east of the site. Further guidance is presented at **Section 5.3**.
- ix. No badger or hedgehog were detected within the site, however the site supports suitable habitat for these species. Precautionary measures for the protection of these species (and other wildlife) during the construction phase are presented at **Section 5.3**.
- x. Trees within the site are suitable for use by roosting bats. Recommendations for actions which may be required if works are proposed to any of the trees suitable for use by roosting bats are presented at **Section 5.3**, with measures to ensure the habitats within and adjacent to the site remain suitable for foraging and commuting bats. Measures for the protection of nesting birds are presented at **Section 5.3**.

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- xi. The proposals present an opportunity to provide additional habitat within the site for roosting bats and nesting birds via the installation of bat and bird boxes. Recommendations for suitable bat and bird boxes to incorporate into the site design are presented at **Section 5.4**.

Recommendations

- xii. The recommendations in **Section 5.0** outline all the mandatory measures and additional actions to be applied to ensure compliance with wildlife legislation, the National Planning Policy Framework (NPPF) and best practice.
- xiii. The proposals will secure an opportunity to implement beneficial measures such as habitat creation that will safeguard habitats for wildlife such as birds and bats, with the aim of providing a net gain in biodiversity in accordance with the principles of the NPPF.

Conclusion

- xiv. It is concluded that the proposals are feasible and acceptable in accordance with ecological considerations and relevant planning policy. Development at the site will provide an opportunity to secure ecological enhancement for wildlife associated with residential dwellings.

1.0 INTRODUCTION

1.1 Background and Rationale

- 1.1.1 ERAP (Consultant Ecologists) Ltd was commissioned by Sedgwick Associates to carry out an ecological assessment of Land at 354 Manchester Road, Bury BL9 9NR (hereafter referred to as the 'site'). The Ordnance Survey (OS) grid reference at the centre of the 0.12 hectares site is SD 80356 09034. An aerial image of the site and its surrounding habitats is appended at **Figure 1** (source image: ESRI World Imagery).
- 1.1.2 The assessment was requested in connection with a planning application to develop an area of the site to a residential dwelling.

1.2 Scope of Works

- 1.2.1 The scope of ecological works undertaken in September 2024 comprised:
- A desktop study and data search for known ecological information at the site and the local area;
 - An Extended Phase 1 Habitat Survey and assessment, and assessment of the habitats present at the site using the UK Habitats Classification;
 - Assessment of the ecological value of the habitats within the site with the use of the National Vegetation Classification (NVC) and the Ratcliffe criteria, as presented in *A Nature Conservation Review* (Ratcliffe, 1977);
 - Survey and assessment of all habitats for relevant statutorily protected species¹ and other wildlife including badger (*Meles meles*), bird species and reptiles;
 - A daytime bat walkover survey for bats, which has comprised a licensed preliminary roost assessment of structures and a ground level tree assessment and an assessment of the suitability of the habitats within the site and the surrounding area for foraging and commuting bats;
 - The identification of any potential ecological constraints on the proposals and the specification of the scope of mitigation and ecological enhancement required in accordance with wildlife legislation, planning policy guidance and other relevant guidance; and
 - The identification of any further surveys or precautionary actions that may be required to inform the progression of the site through the planning process or prior to the commencement of construction activities.

¹ In accordance with *Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and Their Impact on the Planning System* (Ministry of Housing, Communities & Local Government, 2005) developers should not be required to undertake surveys for protected species unless there is reasonable likelihood of the species being present and affected by the development. In this instance (for example) there are no ponds within an unobstructed radius of 500 metres from the site, and no water bodies or water courses within or adjacent to the site; there has been no requirement to consider great crested newt (*Triturus cristatus*), water vole (*Arvicola amphibius*) or otter (*Lutra lutra*) as part of this assessment

2.0 METHOD OF SURVEY

2.1 Desktop Study and Data Search

2.1.1 The following sources of information and ecological records were consulted:

- a. MAGiC Maps: A web-based interactive map which brings together geographic information on key environmental schemes and designations, including details of statutory nature conservation sites;
- b. Ancient Tree Inventory (Woodland Trust, 2023): An online database of ancient and veteran trees;
- c. Greater Manchester Local Record Centre (GMLRC); and
- d. Greater Manchester Biodiversity Action Plan (BAP).

2.2 Vegetation and Habitats

2.2.1 An Extended Phase 1 Habitat Survey of the site was carried out by Brian Robinson on 25th September 2024. The weather was dry and overcast, with a light air (Beaufort scale 1) and an air temperature of 12°C.

2.2.2 A habitat and vegetation map was produced for the site and the immediate surrounding area and is appended at **Figure 2**. The mapping is based on the Joint Nature Conservation Committee Phase 1 Habitat Survey methodology (JNCC, 2010) with minor adjustments to illustrate and examine the habitats with greater precision.

2.2.3 On site habitat mapping was assisted via use of GPS technology and QField on-site mapping software, using *Land to the Rear of 354 Manchester Road, Bury: Existing Site Layout Drawing Number TRI-442-01* (TriCad Solutions Ltd, 2024) and *ESRI World Imagery* as base plans.

2.2.4 The plant species within the site boundary were determined with estimates of the distribution, ground cover, abundance and constancy of individual species. The estimation of abundance was based on the DAFOR system, where D = Dominant, A = Abundant, F = Frequent, O = Occasional and R = Rare, this being a widely used and accepted system employed by ecological surveyors. The terms L = Locally and V = Very were additionally used to describe the plant species distributions with greater precision.

2.2.5 Stands of vegetation and habitats were described and evaluated using the National Vegetation Classification (NVC). The NVC provides a systematic and comprehensive analysis of British vegetation and is a reliable framework for nature conservation and land-use planning.

2.2.6 Habitats within the site were assessed in accordance with *The UK Habitat Classification Version 2.0* (UKHab Ltd, 2023). The UK Habitat Classification, or 'UKHab' has been designed to function at two scales of minimum mappable unit (MMU): fine scale (25m² or 5 metres length) and large scale (400m² or 20 metres length). It has been considered for the purposes of this survey that the fine scale of 25m² or 5 metres length MMU is appropriate.

2.2.7 Searches were made for uncommon, rare and statutorily protected plant species, those species listed as protected in the *Wildlife and Countryside Act 1981* (as amended) and species which are indicators of important and uncommon plant communities. Plant nomenclature follows *New Flora of the British Isles 3rd Edition* (Stace, 2010).

- 2.2.8 Searches were carried out for the presence of invasive species, including those listed on Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended), including Japanese Knotweed (*Fallopia japonica*), Indian Balsam (*Impatiens glandulifera*) and Giant Hogweed (*Heracleum mantegazzianum*).

2.3 Animal Life

Badger

- 2.3.1 The survey area for badger covered the site (as annotated on **Figure 2**) and extended to accessible land within a radius of 50 metres from the site boundary. Private gardens / land were excluded from the survey.
- 2.3.2 The survey was conducted in accordance with guidance presented within *Badgers and Development* (Natural England, 2007) and *Badgers: advice for making planning decisions* (Natural England, 2022).
- 2.3.3 The following signs of badger activity were searched for:
- Sett entrances, e.g. entrances that are normally 25 to 35cm in diameter and shaped like a 'D' on its side;
 - Large spoil heaps outside sett entrances;
 - Bedding outside sett entrances;
 - Badger footprints;
 - Badger paths;
 - Latrines;
 - Badger hairs on fences or bushes;
 - Scratching posts; and
 - Signs of digging for food.
- 2.3.4 Habitats within and surrounding the site were assessed in terms of their suitability for use by foraging and sheltering badger in accordance with their known habitat preferences as detailed in current guidance and *Badger* (Roper, 2010).

Bat Species

Daytime Bat Walkover Survey

Survey Personnel

- 2.3.5 The site was assessed for its suitability to support roosting bats by Brian Robinson, Natural England Class Survey Licence WML CL18 (Bat Survey Level 2), Registration Number 2015-13161-CLS-CLS. The surveyor's qualifications and experience meet the criteria as defined in the *Technical Guidance Series Competencies for Species Survey: Bats* (CIEEM, 2013).

Preliminary Roost Assessment of Buildings and Structures within the Site

- 2.3.6 The surveys were carried out in accordance with standard methodology including the *Bat Mitigation Guidelines* (Mitchell-Jones, 2004), the *Bat Workers' Manual 3rd Edition* (Mitchell-Jones & Mcleish, 2004) and *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn)* (Collins, J. (ed), 2023).

- 2.3.7 No access was possible to the internal areas of the building and the structure within the site. An external examination of the building and structure (a possible former air raid shelter or cellar) was completed.
- 2.3.8 An inspection of the external surfaces, walls and roof of the building was carried out to find potential bat roosting habitat or accesses into internal areas where roosts may be present. Searches for evidence of bat presence in the form of droppings, urine stains, feeding signs, grease marks and other evidence were also carried out. An inspection of the bricked-up shelter / cellar was possible from its former entrance to determine any possible entry points for bats.
- 2.3.9 A list of equipment available is detailed in **Table 2.1**.

Table 2.1: Survey Equipment used during Daytime Bat Survey

Ladders
LED Lenser P14 torch
Olympus Tough TG-6 camera
8x20 binoculars
Ridgid Micro Inspection Camera Borescope CA-100

- 2.3.10 The suitability of the building and structure has been assessed in accordance with Table 4.1 of *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn)* (Collins, J. (ed), 2023), taking into account any presence of gaps suitable for access by bats, features suitable for use by roosting bats within the building (including crevice dwelling species and species which can roost in the open in roof voids), and the suitability of the surrounding habitats for use by foraging and commuting bats. The suitability of each building and structure has been informed by the following categories as presented in **Table 2.2**.

Table 2.2: Suitability Categories for Roosting Habitats in Buildings / Other Structures

Suitability	Description
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices / suitable shelter at all ground / underground levels).
Negligible ^a	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions ^b and / or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats ^c).
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions ^b and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions ^b and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool / stable hibernation site.

^aNegligible is defined as 'so small or unimportant as to be not worth considering, insignificant'. This category may be used where there are places that a bat could roost or forage (due to one attribute) but it is unlikely that they actually would (due to another attribute).

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

Suitability	Description
	‘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 <i>et al.</i> , 2016 and Jansen <i>et al.</i> , 2022). Common pipistrelle swarming has been observed in the UK (Bell, 2022 and Tomlinson, 2020) and winter hibernation of numbers of this species has been detected at Seaton Delaval Hall in Northumberland (National Trust, 2018). 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 prominent buildings in the landscape, urban or otherwise.

Ground Level Walkover Survey of the Trees

- 2.3.11 A preliminary assessment of the trees within the site was conducted to assess their suitability for use by roosting bats, and to inform whether further surveys or precautionary measures were required.
- 2.3.12 Trees were assessed from the ground using binoculars and a high-powered torch. Each tree was searched for the presence of the following features:
- 2.3.13 Woodpecker holes, rot holes, hazard beams, other vertical or horizontal cracks or splits in stems and branches, partially decayed platey 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 (*Hedera helix*) with stem diameters in excess of 50mm and bat, bird or dormouse (*Muscardinus avellanarius*) boxes.
- 2.3.14 Terms used to describe any features present follow (where possible) those outlined and described in *Bat Tree Habitat Key, 2nd Edition* (Andrews, H (ed), 2013) and *Bat Roosts in Trees: A Guide to Identification and Assessment for Tree-care and Ecology Professionals* (BTHK, 2018).
- 2.3.15 Trees have been assessed and described using the categories presented at Tables 4.2 and 6.2 of *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn)*, (Collins, J. (ed), 2023), as presented in **Table 2.3**.

Table 2.3: Definition of Terms and Suitability Categories Used in Tree Survey for Roosting Bats

Terms and Suitability Categories	Description
PRF	Potential Roost Feature
None	Either no PRFs in the tree(s) or highly unlikely to be any.
FAR	Further Assessment Required to establish if PRFs are present in the tree
PRF-I	PRF is only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats
PRF-M	PRF is suitable for multiple bats and may therefore be used by a maternity colony.

Habitat Assessment for Commuting / Foraging Bats

- 2.3.16 Habitats within and adjacent to the site were assessed for their value and suitability for commuting and foraging bats in accordance with Table 4.1 of *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn)* (Collins, J. (ed), 2023). Reference has been made to the categories, descriptions and examples presented in **Table 2.4**.

Table 2.4: Consideration of Suitability of Foraging and Commuting Habitat for Bats

Suitability	Potential Flight Paths and Foraging Habitats
None	No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide continuous lines of shade / protection for flight-lines, or generate/shelter insect populations available to foraging bats).
Negligible ^a	No obvious habitat features on site likely to be used as flight-paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.
Low	Habitat that could be used by small numbers of bats as flight-paths such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	Continuous habitat connected to the wider landscape that could be used by bats for flight-paths such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for flight-paths such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.
^a Negligible is defined as 'so small or unimportant as to be not worth considering, insignificant'. This category may be used where there are places that a bat could roost or forage (due to one attribute) but it is unlikely that they actually would (due to another attribute).	

Bird Species

- 2.3.17 Bird species observed and heard during the survey were recorded.
- 2.3.18 Habitats throughout the site and in the immediate surrounding area were assessed for their value to roosting, feeding and nesting birds, as indicated by the amount of shelter, feeding value, woody vegetation structure and species diversity of tree and shrub species in the site.

Reptile Species

- 2.3.19 The site and its surroundings were assessed in terms of their suitability for use by reptile species using the important characteristics for reptiles outlined in the draft document *Reptile Mitigation Guidelines* (Natural England, 2011), and the *Reptile Habitat Management Handbook* (Edgar, et al., 2010). These habitat characteristics are outlined in **Table 2.5**.

Table 2.5: Important Habitat Characteristics for Reptiles

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

Other Wildlife

- 2.3.20 Evidence of other wildlife observed whilst on site, but for which specific surveys were not made, was recorded and has been included in this report where it is considered of relevance to the planning application. This includes Priority Species.
- 2.3.21 Habitats have been assessed for their suitability for Priority Species identified in the data search results where this is considered relevant to the application.

2.4 Survey and Reporting Limitations

- 2.4.1 The survey was completed under suitable conditions and at a suitable time of year. No access was found at the bricked-up possible former air riad shelter, however it is considered that a reliable assessment of this structures suitability for use by roosting bats has been possible.
- 2.4.2 No significant survey limitations were encountered.
- 2.4.3 All measurements within this report are approximate only, and have been either measured (using QField) or estimated whilst on site or calculated using mapping software (QGIS) or internet-based mapping services such as MAGiC Maps and Google Earth.

2.5 Evaluation Methods

- 2.5.1 The habitats, vegetation and animal life were evaluated with reference to standard nature conservation criteria as described in *A Nature Conservation Review* (Ratcliffe, 1977) and *Guidelines for the Selection of Biological SSSIs* (Bainbridge, et al., 2013). These are size (extent), diversity, naturalness, rarity, fragility, typicality, recorded history, position in an ecological or geographical unit, potential value and intrinsic appeal.
- 2.5.2 Habitats have been assessed to determine whether they meet those described in *UK Biodiversity Action Plan: Priority Habitat Descriptions* (Maddock, A (ed), 2008); these lists are used to help draw up the statutory lists of Priority Habitats, as required under Section 41 of the *Natural Environment and Rural Communities (NERC) Act 2006*. Where suitable, the ecological value of the habitats present has been assessed using the terms outlined in *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine* (CIEEM, 2018). Each habitat and individual trees have been assessed to determine whether they are 'irreplaceable habitat', defined in *National Planning Policy Framework* (Department for Levelling Up, Housing and Communities, 2023)² as 'Habitats which would be technically very difficult (or take a very significant time) to restore, recreate or replace once destroyed, taking into account their age, uniqueness, species diversity or rarity. They include ancient woodland, ancient and veteran trees, blanket bog, limestone pavement, sand dunes, salt marsh and lowland fen'. The further detail presented in *The Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024* (GOV.UK, 2024) has also been referred to.
- 2.5.3 Government advice on wildlife, as set out in the NPPF and associated government circulars has been taken into consideration. Legislation relating to protected species, such as those listed under Schedules 1, 5, 6 and 8 of the *Wildlife and Countryside Act 1981* (as amended) and *The Conservation of Habitats and Species*

²Hereafter the NPPF

(Amendment) (EU Exit) Regulations 2019, is referenced where applicable, and any impacts to protected species are evaluated in accordance with current guidance.

- 2.5.4 The presence of any Priority Species, as listed under Section 41 of the *Natural Environment and Rural Communities (NERC) Act 2006* is noted, and habitats are assessed in terms of their suitability and value for these species. The presence of habitats and / or species listed by the Greater Manchester Biodiversity Action Plans has been taken into account in the evaluation of the site.

3.0 SURVEY RESULTS

3.1 Desktop Study and Data Search

Statutory Designated Sites for Nature Conservation and SSSI Impact Risk Zones

- 3.1.1 The site is not and does not form part of any statutory designated site for nature conservation.
- 3.1.2 The site lies within a Site of Special Scientific Interest (SSSI) Impact Risk Zone for the overlapping Rochdale Canal SSSI and Special Area of Conservation (SAC), which are located 7.69 kilometres to the east of the site. The Rochdale Canal SSSI and SAC are designated for their importance to aquatic plant species, including the European Protected Species Floating Water-plantain (*Luronium natans*).
- 3.1.3 The SSSI Impact Risk Zone requires the Local Planning Authority to consult with Natural England on likely risks from the following development categories (Natural England, 2024):
- Infrastructure:** Airports, helipads and other aviation proposals.
 - Air Pollution:** Livestock and poultry units with a floorspace greater than 500m² and slurry lagoons greater than 4000m².
 - Combustion:** General combustion processes greater than 50 megawatts energy input, including energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis / gasification, anaerobic digestion, sewage treatment works and other incineration / combustion.
- 3.1.4 The proposals do not meet any of the development categories which would require further consultation with Natural England on likely risks from the proposed development to the statutory designated sites for nature conservation present in the wider area.

Non-statutory Designated Sites for Nature Conservation

- 3.1.5 The site is not and does not form part of any non-statutory designated site for nature conservation, called 'Sites of Biological Importance (SBI)' or 'SBIs' in Greater Manchester.
- 3.1.6 Fourteen SBIs are located within a 2 kilometres radius from the centre of the site, and are summarised in **Table 3.1**.

Table 3.1: SBIs within a 2 Kilometres Radius from the Centre of the Site

SBI Name	Distance and Direction from the Site	Reasons for Designation
Swan Lodge	0.53 kilometres to the south-west	Open Water (Fw3); Running water (Fw4); Aquatic Invertebrates (AI1)

SBI Name	Distance and Direction from the Site	Reasons for Designation
Lower Hinds	0.92 kilometres to the north-west	Calcareous Grassland (Gr3)
Manchester, Bolton & Bury Canal (East)	1.02 kilometres to the south-west	Ponds (Fw2); Canal (Fw3)
Elton Goyt	1.09 kilometres to the west	Grassland (Gr2); Birds (Br4 & Br5)
Elton Reservoir	1.19 kilometres to the west	Grassland (Gr2); Birds (Br6)
Daisyfield	1.2 kilometres to the north-west	Reedbed & Swamp (Fw1); Ponds & Small Lodges (Fw2); Grassland (Gr2); Aquatic invertebrates (AI1); Woodland (Wd1)
Townside	1.22 kilometres to the north	Swamp (Fw1)
Hollins Vale	1.22 kilometres to the south-east	Grassland (Gr2); Ponds & Small Lodges (Fw2)
Withins Reservoir	1.57 kilometres to the west	Reservoir (Fw3); Birds (Br6)
Hollins Plantation	1.89 kilometres to the south-east	Woodland (Wd1)
Parr Brook	1.92 kilometres to the south-east	Grassland (Gr2)
Marl Pits at Black Lane	1.92 kilometres to the west	Ponds & Small Lodges (Fw2); Amphibians (Am1)
Wetland near Radcliffe	1.93 kilometres to the south-west	Ponds & Small Lodges (Fw2)
Sailor's Brow & Springwater Park	1.96 kilometres to the south	Ponds & Small Lodges (Fw2); Habitat Mosaic (HM); Aquatic Invertebrates (AI1)

3.1.7 The presence of the SBIs is considered further at **Section 4.2**.

Priority Habitats Inventory

3.1.8 The Priority Habitats Inventory³ was checked via MAGiC Maps. No Priority Habitats are identified at the site by the inventory, but the site is noted as being supporting 'no main habitat but additional habitats present'.

3.1.9 This is considered further at **Section 4.3**.

Ancient Tree Inventory

3.1.10 No ancient or veteran trees are identified at the site by the inventory.

Protected and Notable Species

3.1.11 GMLRC hold no records of protected and notable species for the site. Records of protected and notable species for a 2 kilometres radius from the centre of the site are summarised in **Table 3.2**.

³ A spatial dataset that describes the geographic extent and location of Natural Environment and Rural Communities Act (2006) Section 41 habitats of principal importance.

Table 3.2: Records of Protected Species Within a 2 Kilometres Radius from the Centre of the Site

Taxon Group	Species Name and Designations ¹ and Notes
Amphibians	Great crested newt (<i>Triturus cristatus</i>): EPS, WCAs5, PS and GMBAP. 79 records, dated between 1988 and 2022. The closest record is 1120 metres to the west of the site, and from 2022.
	Common toad (<i>Bufo bufo</i>): PS. 52 records, dated between 2012 and 2022. The closest record is 865 metres to the west of the site, and from 2022.
Birds – WCAs1 species	Black redstart (<i>Phoenicurus ochruros</i>): WCAs1 and GMBAP. 2 records, both from 2012. The closest record is 1145 metres to the west of the site.
	Barn owl (<i>Tyto alba</i>): WCAs1. 102 records, dated between 2009 and 2023. The closest record is 960 metres to the west of the site, and from 2023.
	Hobby (<i>Falco subbuteo</i>): WCAs1. 57 records, dated between 2004 and 2021. The closest record is 1145 metres to the west of the site, and from 2013.
	Kingfisher (<i>Alcedo atthis</i>): WCAs1. 510 records, dated between 1988 and 2022. The closest record is 435 metres to the west of the site, and from 1999.
	Little ringed plover (<i>Charadrius dubius</i>): WCAs1. 728 records, dated between 1988 and 2022. The closest record is 1025 metres to the west of the site, and from 2007.
	Peregrine (<i>Falco peregrinus</i>): WCAs1. 247 records, dated between 1992 and 2021. The closest record is 1025 metres to the west of the site, and from 2010.
	Scaup (<i>Aythya marila</i>): WCAs1. 291 records, dated between 1992 and 2021. The closest record is 1145 metres to the west of the site, and from 2013.
Birds – Priority Species	Bullfinch (<i>Pyrrhula pyrrhula</i>), bar-tailed godwit (<i>Limosa lapponica</i>), Cetti's warbler (<i>Cettia cetti</i>), common redpoll (<i>Carduelis flammea</i>), common scoter (<i>Melanitta nigra</i>), cuckoo (<i>Cuculus canorus</i>), curlew (<i>Numenius arquata</i>), dunnoek (<i>Prunella modularis</i>), grasshopper warbler (<i>Locustella naevia</i>), hawfinch (<i>Coccothraustes coccothraustes</i>), herring gull (<i>Larus argentatus</i>), house sparrow (<i>Passer domesticus</i>), lapwing (<i>Vanellus vanellus</i>), lesser redpoll (<i>Carduelis cabaret</i>), linnet (<i>Linaria cannabina</i>), marsh tit (<i>Poecile palustris</i>), reed bunting (<i>Emberiza schoeniclus</i>), ring ouzel (<i>Turdus torquatus</i>), skylark (<i>Alauda arvensis</i>), song thrush (<i>Turdus philomelos</i>), spotted flycatcher (<i>Muscicapa striata</i>), starling (<i>Sturnus vulgaris</i>), tree pipit (<i>Anthus trivialis</i>), tree sparrow (<i>Passer montanus</i>), wood warbler (<i>Phylloscopus sibilatrix</i>) and yellow wagtail (<i>Motacilla flava</i>).
Bony Fish	Brown trout (<i>Salmo trutta</i>): PS. 3 records, all from 2013. The closest record is to the east of the site; an accurate estimation of distance of the record to the site cannot be made due to the locational data being less than a six figure grid reference
Terrestrial invertebrates – Priority Species	Buff ermine (<i>Spilosoma luteum</i>), cinnabar (<i>Tyria jacobaeae</i>), grey dagger (<i>Acronicta psi</i>), knot grass (<i>Acronicta rumicis</i>), latticed heath (<i>Chiasmia clathrata</i>), shaded broad-bar (<i>Scotopteryx chenopodiata</i>), small heath (<i>Coenonympha pamphilus</i>), wall (<i>Lasiommata megera</i>), white ermine (<i>Spilosoma lubricipeda</i>) and white-letter hairstreak (<i>Satyrrium w-album</i>).
Terrestrial mammals	Soprano pipistrelle (<i>Pipistrellus pygmaeus</i>): EPS, WCAs5, PS and GMBAP. 14 records, dated between 2003 and 2020. The closest record is 560 metres to the south-east of the site, and from 2020.
	Brown long-eared bat (<i>Plecotus auritus</i>): EPS, WCAs5, PS and GMBAP. 6 records, dated between 2017 and 2020. The closest record is to the west of the site; an accurate estimation of distance of the record to the site cannot be made due to the locational data being less than a six figure grid reference
	Brandt's bat (<i>Myotis brandtii</i>): EPS, WCAs5 and GMBAP. 1 record from 2018, located 1235 metres to the south-west of the site.
	Noctule bat (<i>Nyctalus noctula</i>): EPS, WCAs5, PS and GMBAP. 47 records, dated between 1988 and 2021. The closest record is 520 metres to the north-east of the site, and from 2019.

Taxon Group	Species Name and Designations ¹ and Notes
	Bat species (Order <i>Chiroptera</i>): EPS, WCAs5 and GMBAP. 6 records, dated between 1989 and 2013. The closest record is 615 metres to the south-east of the site, and from 2005.
	Common pipistrelle (<i>Pipistrellus pipistrellus</i>): EPS, WCAs5 and GMBAP. 264 records, dated between 1985 and 2023. The closest record is 30 metres to the south-east of the site, and from 2009.
	Daubenton's bat (<i>Myotis daubentonii</i>): EPS, WCAs5 and GMBAP. 23 records, dated between 1995 and 2021. The closest record is 75 metres to the north-west of the site, and from 2011.
	Myotis species (<i>Myotis</i> sp.): EPS, WCAs5 and GMBAP. 23 records, dated between 2014 and 2017. The closest record is 720 metres to the east of the site, and from 2015.
	Nathusius' pipistrelle (<i>Pipistrellus nathusii</i>): EPS, WCAs5 and GMBAP. 3 records, dated between 2014 and 2021. The closest record is 1240 metres to the west of the site, and from 2014.
	Pipistrelle species (<i>Pipistrellus</i> sp.): EPS, WCAs5 and GMBAP. 168 records, dated between 1985 and 2022. The closest record is 60 metres to the north-west of the site, and from 2001.
	Whiskered/ Brandt's bat (<i>Myotis mystacinus/brandtii</i>): EPS, WCAs5 and GMBAP. 3 records, dated between 2012 and 2020. The closest record is to the west of the site; an accurate estimation of distance of the record to the site cannot be made due to the locational data being less than a six figure grid reference
	Otter (<i>Lutra lutra</i>): WCAs5 and PS. 39 records, dated between 2003 and 2023. The closest record is 350 metres to the west of the site, and from 2022.
	Water vole (<i>Arvicola amphibius</i>): WCAs5 and PS. 1 record from 2009, located 1655 metres to the east of the site.
	Badger (<i>Meles meles</i>): PBA. 76 records, dated between 2008 and 2023. The closest record is not provided within this report due to the sensitive nature of this species.
	Brown hare (<i>Lepus europaeus</i>): PS and GMBAP. 135 records, dated between 1993 and 2023. The closest record is 815 metres to the south-west of the site, and from 1998.
	Hedgehog (<i>Erinaceus europaeus</i>): PS. 29 records, dated between 2011 and 2022. The closest record is 145 metres to the south of the site, and from 2020.
¹Key to Designation Codes: EPS = European Protected Species under <i>The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019</i>. WCAs1 = Species receives full protection under Schedule 1 of the <i>Wildlife and Countryside Act 1981</i> (as amended). WCAs5 = Species receives full protection under Schedule 5 of the <i>Wildlife and Countryside Act 1981</i> (as amended). PBA = <i>Protection of Badger Act 1992</i>. PS = Priority Species listed under Section 41 of the <i>NERC Act 2006</i>. GMBAP = Species listed on the <i>Greater Manchester Biodiversity Action Plan</i>.	

3.1.12 The presence of these protected and notable species within the wider area has been taken into account throughout this report.

3.2 Vegetation and Habitats

General Description

3.2.1 The approximately 0.12 hectares site is located within suburban housing and supports an area of woodland and access track. An area of garden and a single building are adjacent to the western site boundary. A structure (a possible former air raid shelter or cellar) is located within the woodland.

3.2.2 The northern site boundary is defined by hardstanding associated with the residential dwelling to the north of the site. The eastern site boundary is defined by fencing beyond which lies a residential garden associated with 354 Manchester Road. A small area of ornamental planting within this garden is located

within the site boundary, at the southern end of the access track. The southern site boundary is defined by timber fencing and the southern elevation of Building 1, beyond which lies gardens and a further area of woodland. The western site boundary is defined by fencing, beyond which lies gardens and residential housing associated with Windermere Drive.

- 3.2.3 The appended **Figure 2** can be referred to for all habitat descriptions. Photographs are appended in **Section 8.2**.

Woodland 1

- 3.2.4 Refer to **Photos 1 to 4**. Woodland 1 is located at the western end of the site, and is located within a wider strip of woodland extending to the west, north and south. The woodland is not marked on old Ordnance Survey maps dated between 1885 and 1973 (as provided by the National Library of Scotland website⁴) and the ground shows signs of former earthworks and development.
- 3.2.5 The woodland is characterised by a canopy of constant and frequent Ash (*Fraxinus excelsior*), frequent Sycamore (*Acer pseudoplatanus*) and rare Lime species (*Tilia* sp.). One dead Crack-willow (*Salix fragilis*) is located within the woodland. The trees are described as being with the 'mature' age category in 354 *Manchester Road, Bury BL9 9NR: Arboricultural Report* (Birtle Tree Services Ltd, 2024), hereafter the 'arboricultural report'. The shrub layer is characterised by occasional and locally abundant Holly (*Ilex aquifolium*), locally abundant Hawthorn (*Crataegus monogyna*) and locally frequent Sycamore (*Acer pseudoplatanus*), Garden Privet (*Ligustrum ovalifolium*) and Cherry Laurel (*Prunus laurocerasus*). The ground flora is characterised by constant and frequent Common Nettle (*Urtica dioica*), frequent and locally abundant Ivy and frequent Cleavers (*Galium aparine*). A plant species list is appended at **Table 8.1**.
- 3.2.6 The woodland is not typical of any NVC community. The woodland is classified as A1.1.1 Broadleaved woodland - semi-natural in Phase 1 Habitat Survey terminology, and is described by the UKHab as w1g other woodland: broadleaved with the secondary codes 203 mature tree, 200 tree, 202 young trees – self-set, 31 secondary woodland and 521 unmanaged.
- 3.2.7 Due to the prevalence of non-native species within the woodland shrub layer and the lack of a typical ground flora within the woodland, it is not considered that the woodland is indicative of Lowland Mixed Deciduous Woodland Priority Habitat.

Hardstanding Access Track

- 3.2.8 Refer to **Photo 5**. The hardstanding access track to the site is composed of compacted stone and asphalt. No vegetation is associated with the section located within the site. The area leading to the site supports very locally frequent Perennial Rye-grass, Annual Meadow-grass (*Poa annua*) and Dandelion (*Taraxacum officinale* agg.).
- 3.2.9 The hardstanding is classified as J4 Bare ground in Phase 1 Habitat Survey terminology, and is described as u1b6 other developed land by the UKHab.

Garden Adjacent to the Eastern Site Boundary– Amenity Grassland, Ornamental Shrubs, Flower Beds and Trees and a Building

- 3.2.10 Refer to **Photos 6 to 11**.

⁴ <https://maps.nls.uk/os/6inch-england-and-wales/>

- 3.2.11 The short- mown amenity grassland within the garden to the east of the site is characterised by constant and frequent Perennial Rye-grass (*Lolium perenne*) and Springy Turf-moss (*Rhytidiadelphus squarrosus*), occasional and locally frequent Daisy (*Bellis perennis*) and Common Chickweed (*Stellaria media*) and occasional Wavy Bitter-cress (*Cardamine flexuosa*), Wood Avens (*Geum urbanum*), Selfheal (*Prunella vulgaris*) and Creeping Buttercup (*Ranunculus repens*). Two Cherry species (*Prunus* sp.) trees and a Cherry Laurel shrub are also located over the amenity grassland.
- 3.2.12 The grassland is typical of an *MG7 Lolium perenne leys and related grasslands* (Rodwell, 1992) of the NVC and is classified as J1.2 Cultivated / disturbed land – amenity grassland in Phase 1 Habitat terminology. The grassland is described as g4 modified grassland with the secondary codes 200 tree, 106 mown, 516 active management and 828 vegetated garden by the UKHab.
- 3.2.13 The ornamental shrubs and flower beds are characterised by locally abundant garden exotics, Japanese Rose (*Rosa rugosa*), Montbretia (*Crocasmia crocosmiiflora*), Ivy and Hydrangea (*Hydrangea macrophylla*) with locally frequent Enchanter's-nightshade (*Circaea lutetiana*) and Broad Buckler-fern (*Dryopteris dilatata*).
- 3.2.14 The ornamental shrubs, flower beds are not typical of any NVC community, and are classified as J1.4 Introduced shrub In Phase 1 Habitat terminology. The areas are described as u1 built up and urban areas with the secondary codes 847 introduced shrub, 16 tall forbs, 516 active management, 828 vegetated garden and 846 flower bed by the UKHab.
- 3.2.15 No vegetation is associated with Building 1, which is described in detail in relation to its suitability for use by roosting bats at **Section 3.4**.
- 3.2.16 The building, a glasshouse, is classified as J3.6 Buildings in Phase 1 Habitat Survey terminology, and is described as u1b5 buildings by the UKHab.

Invasive Plant Species

- 3.2.17 As illustrated on **Figure 2**, stands of Montbretia and Japanese Rose were detected in the garden area to the east of the site. These species are listed on Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended); it is an offence to spread or cause their spread in the wild. This is considered further at **Section 4.3**.

3.3 Animal Life

Badger

- 3.3.1 No badger or signs of badger were detected within the site or within the accessible 50 metres around the site. The habitats within the site are suitable for use by foraging and sheltering badger, however, and records of badger are reported for the wider area.
- 3.3.2 The suitability of the site for badger is considered further at **Section 4.4**.

Bat Species

Daytime Survey: Building and Structure

- 3.3.3 Refer to **Photos 6** and **12**. Building 1 is an unmanaged glasshouse constructed on a timber frame and which is partially sunk into the earth at its northern elevation. The building is overgrown with Bramble

scrub inside. No features suitable for use by roosting bats were detected at the building, which is considered to have no suitability for use by roosting bats.

- 3.3.4 Refer to **Photo 13**. The entrance to the bricked-up structure (a possible former air raid shelter or cellar) is partially covered over by ivy and is obscured from use by bats due to the vegetation present. Inspection around the entrance found the structure to be bricked up behind the vegetation; no access is possible by roosting bats, and therefore the structure is not considered to hold any suitability for use by roosting bats. The presence of roosting bats at the structure is reasonably discounted.

Trees

- 3.3.5 Refer to **Photos 14 to 27**. Tree 10 supports a tear-out on its main stem's southern face, approximately 5 metres from the ground. Trees 1, 2, 4, 5, 6, 7, 8, 9, 12, 13, 14, 15 and 16 all support dense ivy, which may obscure further features suitable for use by roosting bats⁵.
- 3.3.6 As inspected from the ground, the feature at Tree 10 may lead to a larger cavity present within the tree suitable for use by a maternity roost of bats; the feature identified at Tree 10 has the potential to be classified as 'PRF-M', although this may be downgraded if surveys at height reveal the feature does not extend into a larger cavity within the tree.
- 3.3.7 The features detected at Trees 1, 2, 4, 5, 6, 7, 8, 9, 12, 13, 14, 15 and 16 are all considered to conform to the 'PRF-I' suitability category.
- 3.3.8 The presence of trees with features suitable for use by roosting bats is considered further at **Section 4.4**.

Habitat Assessment for Commuting and Foraging Bats

- 3.3.9 The site is located within a wider area characterised by residential housing to the west and east, and areas of open playing fields and industrial land / warehousing to the south. A strip of woodland (of which the site forms a part) extends to the north and south of the site.
- 3.3.10 The woodland habitat within the site is not extensive in terms of its size, but does link to further woodland habitats to the north and south, and is likely to provide suitable habitat for and contribute to the wider foraging area of species associated with suburban habitats such as common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*) and brown-long-eared bat (*Plecotus auritus*). The woodland habitats may also provide suitable habitat for myotis species such as whiskered and / or Brandt's bats (*Myotis mystacinus* / *brandtii*). The hard standing and garden habitats within the site are unlikely to contribute significantly to the foraging or commuting habitat present in the wider area for bats.
- 3.3.11 Overall the site is assessed to be of 'moderate' suitability for use by foraging and commuting bats, and is located within a wider area of 'moderate' suitability.

3.4 Bird Species

- 3.4.1 Birds detected in the site in September 2024 are listed in **Table 3.3**.

⁵ It is recognised that ivy is anecdotally thought to provide potential roosting habitat for low numbers / individual crevice dwelling bat species, however in accordance with *Bat Roosts in Trees - A Guide to Identification and Assessment for Tree-Care and Ecology Professionals* (BTHK, 2018) actual evidence of bat roosting behind ivy is rare, with only two confirmed roosts known in the UK and suggests ivy is not typically used by roosting bats.

Table 3.3: Bird Species Detected on 25th September 2024

Scientific Name	Common Name	BOCC Status ¹
<i>Cyanistes caeruleus</i>	Blue tit	Green
<i>Erithacus rubecula</i>	Robin	Green
<i>Fringilla coelebs</i>	Chaffinch	Green
<i>Troglodytes troglodytes</i>	Wren	Amber
<i>Turdus merula</i>	Blackbird	Green
¹ BOCC: Birds of Conservation Concern (Stanbury, et al., 2021). Priority Species are presented in bold.		

- 3.4.2 The woodland provides suitable for use by nesting passerine (i.e. perching) species, including those detected within the site during the survey. This is considered further at **Section 4.4**, below.

Reptiles

- 3.4.3 The habitats within the site provide poor quality habitat for sheltering, basking and hibernating reptiles. There are no piles of garden waste or other suitable debris for use by sheltering or hibernating reptiles, and the shaded site supports no favourable habitat for basking reptiles. The species-poor habitats within the site are reasonably unlikely to support a large population or a variety of invertebrate prey.
- 3.4.4 The site is not adjacent or linked to any areas of favourable habitat for reptile species, and there are no records of reptile for the site or the wider area. The presence of reptiles within the site is reasonably discounted.

Other Wildlife

- 3.4.5 The site supports suitable habitat for foraging and sheltering hedgehog (*Erinaceus europaeus*), a Priority Species. The site is unlikely to provide core or important habitat for this species however, due to its small size. The suitability of the site for hedgehog is considered further at **Section 4.4**.

4.0 EVALUATION AND ASSESSMENT

4.1 Introduction and Description of Proposals

- 4.1.1 In accordance with 'Location Plan.pdf' it is proposed to develop a single residential dwelling within the site, with associated garden and hardstanding.
- 4.1.2 **Section 4.2** provides an assessment of any impacts of the proposed development on the designated sites for nature conservation present in the wider area. The ecological value of habitats within the site is evaluated at **Section 4.3**, and protected and notable species are considered at **Section 4.4**.

4.2 Designated Sites for Nature Conservation

- 4.2.1 It is considered that the site is sufficiently small and distant from all designated sites for nature conservation that the proposed development will have no adverse direct or indirect effect upon them or their features of interest.

4.3 Vegetation and Habitats

- 4.3.1 Only common and widespread plant species were found. None of the habitats present are representative of semi-natural habitat. The NVC communities present are typical of the geographical area and conditions present. It is not considered that the woodland habitat within the site is representative of Lowland Mixed Deciduous Woodland Priority Habitat. No irreplaceable habitats are present within the site.
- 4.3.2 In terms of each habitat's importance in a geographical context⁶, the broadleaved woodland is considered to be of 'local' importance as it supports habitats of value to nesting birds and foraging birds and bats, and will contribute as wildlife links across the wider area. The garden habitats are of 'site' value only, and the hardstanding is not considered to hold any importance on a geographical scale.
- 4.3.3 It is recommended that, in order to be in accordance with the principles of the mitigation hierarchy⁷, the proposals must seek to avoid impacts to the woodland habitat where this is feasible to do so, and compensate for losses of woodland habitat, where possible within the site. Recommendations relating to the proposed site layout are presented at **Section 5.2**.
- 4.3.4 Measures for the protection of any areas of woodland or trees retained as part of the proposed development, and for the areas of woodland which are present at the margins of the site, are presented at **Section 5.3**.
- 4.3.5 Montbretia and Japanese Rose, both of which are invasive plant species listed under Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended), have been detected within the garden area to the east of the site. Although invasive plant species have not been detected within the site itself, their proximity to the site must be taken into account, and is considered further at **Section 5.3**.

4.4 Protected Species and Other Wildlife

- 4.4.1 No badger or signs of badger were detected within the site, however the site supports suitable habitat for foraging and sheltering badger, and records of badger are reported for the wider area. Precautionary measures for the protection of badger during the construction phase of the proposed development (including a pre-works check to ensure that the findings of this report remain accurate) are presented at **Section 5.3**.
- 4.4.2 Trees within the site are suitable for use by roosting bats; Tree 10 is of 'PRF-M' suitability and Trees 1, 2, 4, 5, 6, 7, 8, 9, 12, 13, 14, 15 and 16 are all of 'PRF-I' suitability. Bats and their roosts are protected under *The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019* and under Schedule 5 of the *Wildlife and Countryside Act 1981* (as amended).
- 4.4.3 It is recommended at **Section 5.2** of this report that, where-ever possible as part of the proposed development, individual trees are retained and incorporated into the site design. Appropriate measures

⁶ Using the terms presented at Section 4.7 of *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine* (CIEEM, 2018), i.e. International and European, National, Regional, Local Authority-wide area, River Basin District, Estuarine system / Coastal cell or Local. The term 'site' value is additionally used to highlight ecological features considered to be of importance in the context of the wider site habitats, but which are of negligible value in the context of the local area.

⁷ 'A sequential process should be adopted to avoid, mitigate and compensate negative ecological impacts and effects. This is often referred to as the 'mitigation hierarchy' (CIEEM, 2018)

in accordance with current best practice must be taken at any works to the trees identified as being suitable for use by roosting bats.

- 4.4.4 Further surveys will be required if any works are required at Tree 10, should in the first instance involve the inspection of the tear-out at height to determine whether it extends into a cavity favourable for use by roosting bats (if this can be safely achieved).
- 4.4.5 It is otherwise considered that any of the other trees to be felled should be removed carefully under a Reasonable Avoidance Measures Method Statement. A Method Statement for the removal of the trees is presented at **Section 5.3**.
- 4.4.6 Habitats within and adjacent to the site are suitable for foraging and commuting bats. The proposals have the potential to degrade the habitats within and surrounding the site via an inappropriate use of artificial lighting. Recommendations relating to the suitable use of lighting as part of the site design are presented at **Section 5.3**.
- 4.4.7 The woodland and trees and shrubs in the garden area provide suitable foraging and nesting habitat for the species of birds detected within the site and the wider area via the records search. All wild birds are protected under the *Wildlife and Countryside Act 1981* (as amended) while they are breeding. The proposals have the potential to impact nesting birds during the construction phase of the proposed development; measures for the protection of birds during the proposed works are presented at **Section 5.3**.
- 4.4.8 The site supports habitats suitable for use by foraging and sheltering hedgehog, a Priority Species, and the proposed works have the potential to kill or injure hedgehog if they are conducted in an unsuitable manner during the site's construction phase. Measures for the protection of hedgehog (and other wildlife) during the construction phase of the proposed development are presented at **Section 5.3**.
- 4.4.9 The proposals present an opportunity to provide additional habitat within the site for roosting bats and nesting birds via the installation of bat and bird boxes. Recommendations for suitable bat and bird boxes to incorporate into the site design are presented at **Section 5.4**.
- 4.4.10 The presence of protected or notable species is otherwise reasonably discounted at the site.

5.0 RECOMMENDATIONS AND ECOLOGICAL ENHANCEMENT

5.1 Introduction

- 5.1.1 These recommendations aim to ensure that the development is implemented in accordance with relevant wildlife legislation, Natural England guidance, the principles of the NPPF, local planning policy and best practice.
- 5.1.2 The recommendations address the potential impacts identified in **Section 4.0** and are appropriate and proportionate.
- 5.1.3 In accordance with Chapter 15, paragraph 193(d) of the NPPF:

'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'.

- 5.1.4 Where possible, opportunities to enhance the ecological interest and habitat connectivity and seek biodiversity gain through appropriate landscape planting and habitat creation have been identified.
- 5.1.5 All recommendations are appropriate to the geographical area, the habitats in the wider area, the wildlife present in the local area (and likely to use the site post-construction) and take into consideration the end use of the site as a residential dwelling.

5.2 Recommendations in Relation to Site Layout

- 5.2.1 It is recommended that, where possible, the proposals retain trees within the site, although it is recognised that these trees would then form part of garden habitat, rather than be retained woodland.
- 5.2.2 It is not considered feasible to retain any areas of woodland within the site, and there compensation for the losses of woodland habitat associated with the proposed development must be sought as off-site compensation.

5.3 Protection of Habitats and Wildlife

Protection of Woodland at the Site Boundaries and Trees within the Site

- 5.3.1 During the construction phase, temporary protective demarcation fencing will be used to protect the woodland habitat and its associated trees which are to be retained. The fencing must extend outside the canopy of the retained trees and must remain in position until all areas have been developed to ensure protection is provided throughout the construction phase.
- 5.3.2 The fencing will be in accordance with BS5837:2012 *Trees in Relation to Design, Demolition and Construction: Recommendations* (BSI, 2012).

Invasive Plant Species

- 5.3.3 It is an offence under the *Wildlife and Countryside Act 1981* (as amended) to cause the spread of Montbretia and Japanese Rose in the wild. Neither species is currently present within the site, although their presence is recognised and appropriate measures should be taken to ensure that they are not spread into the site during the construction phase of the proposed development. It is recommended that an updated survey for invasive plant species is undertaken prior to the commencement of works, and suitable Invasive Plant Species and Biosecurity measures are following during the construction phase of the proposed development.

Consideration of Lighting

- 5.3.4 Paragraph 198(c) in Chapter 15 (conserving and enhancing the natural environment) of the NPPF states that development should:

'limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.'

Construction Phase

- 5.3.5 Any lighting to be used at the site during construction should be directional and screened where possible, this specification should be included within a Construction Environment Management Plan (CEMP), or similar.

Development Lighting Design

- 5.3.6 The lighting scheme to be implemented at the developed site must involve the use of appropriate products and screening, where necessary, to ensure no excessive artificial lighting shines over the retained woodland and areas of ecological enhancement and any landscape planting, as lighting overspill may deter use by wildlife such as foraging bats.
- 5.3.7 The lighting scheme will be designed with reference to current guidance, namely:
- Guidance Note 08/23: Bats and Artificial Lighting at Night* (Institution of Lighting Professionals & Bat Conservation Trust, 2023); and
 - Bats and lighting: Overview of current evidence and mitigation guidance* (Stone, 2014).

Protection of Bats During Works to Trees

- 5.3.8 If any works are proposed at T10 then further surveys will be required to determine the tree's suitability for use by roosting bats. It is recommended that, in the first instance, an aerial inspection of the tear-out associated with the tree is completed to determine this feature's suitability for use by roosting bats. It is noted that, in accordance with the arboricultural report, no works are proposed at T10 (in the location as annotated on **Figure 2**).
- 5.3.9 If any works are proposed at Trees 1, 2, 4, 5, 6, 7, 8, 9, 12, 13, 14, 15 and 16 (all of which are of 'PRF-I' suitability) then, in accordance with *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn)* (Collins, J. (ed), 2023), the following actions must be applied:
- Appropriate timing of works. The optimal time for tree removal is between September and late February inclusive.
 - Any Ivy at the trees must be removed prior to a further inspection by the licensed bat surveyor. If additional features are discovered, then these will be inspected by the bat worker.
 - If works to limbs or felling is required then limbs / trees must be section or soft felled under the supervision of a licensed bat surveyor, avoiding cutting through or close to any cavities. This is likely to involve climbing the tree.
 - Cut sections will be lowered to the ground with the use of ropes.
 - Once on the ground the cavity will be inspected by the licensed bat surveyor and guidance issued.
 - All felled sections will be left to lie on the ground for 24 hours before removing Ivy and snedding (removing side branches).
 - If at any time during the works a bat is discovered or suspected all contractors must withdraw from the area and ERAP (Consultant Ecologists) Ltd (01772 750502) or the Bat Conservation Trust must be contacted for further guidance.

Protection of Nesting Birds

- 5.3.10 All wild birds are protected under the *Wildlife and Countryside Act 1981* (as amended) while they are breeding. Any works such as vegetation clearance that will affect habitats suitable for use by nesting birds are scheduled to commence outside the bird nesting season. Commencement of works in the nesting season must be informed by a pre-works nesting bird survey, carried out by a suitably experienced ecologist. The bird breeding season typically extends between March to August inclusive.

Protection of Other Wildlife

- 5.3.11 It is recommended that the following Reasonable Avoidance Measures (RAMs) are adopted during the construction phase of the proposed development.
- An updated survey will be completed prior to the commencement of works to determine any presence of wildlife species (including and signs of badger within the site or within 50 metres of the site);
 - All site personnel must be made aware of this RAMs, and the RAMs should be made part of the site induction for all personnel involved in soil strip, ground clearance, or other relevant activities;
 - Prior to any soil strip, vegetation will be strimmed to a height of no less than 0.15 metres and all arisings removed;
 - During construction, any holes, trenches or other pits which hedgehog (or other wildlife) could fall into will be covered overnight, or have sloped banks or ramps top allow escape;
 - If any wildlife species (such as hedgehog) is detected it must be carefully picked up by an operative wearing clean gloves, placed in a clean bucket, and moved to an area of suitable habitat beyond the development area.

5.4 Enhancements of Retained Habitat and Enhancements for Wildlife

Landscape Planting within the Garden Area

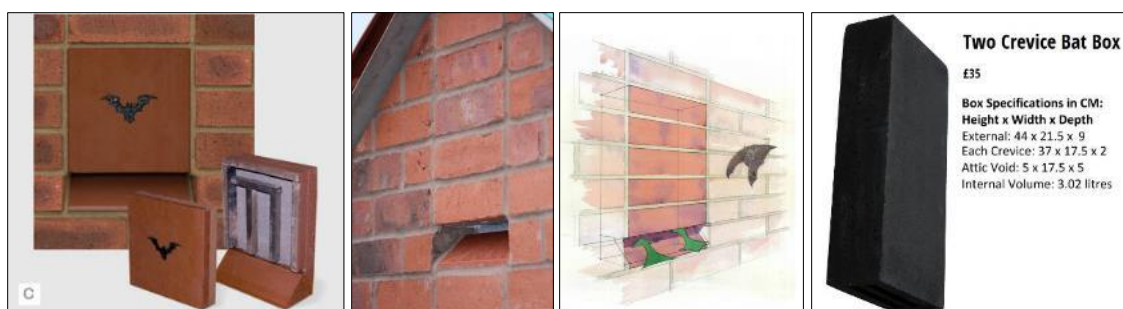
- 5.4.1 Landscape planting within the site should, where possible, comprise native woody species. Suitable woody species are presented at **Table 5.1**.

Table 5.1: Suitable Native Species for Tree and Shrub Planting for Woodland Creation

Scientific Name	Common Name	Scientific Name	Common Name
<i>Acer campestre</i>	Field Maple	<i>Prunus spinosa</i>	Blackthorn
<i>Alnus glutinosa</i>	Alder	<i>Quercus robur</i>	Pedunculate Oak
<i>Betula pendula</i>	Silver Birch	<i>Rosa arvensis</i>	Field Rose
<i>Corylus avellana</i>	Hazel	<i>Rosa canina</i>	Dog-rose
<i>Crataegus monogyna</i>	Hawthorn	<i>Salix caprea</i>	Goat Willow
<i>Ilex aquifolium</i>	Holly	<i>Sambucus nigra</i>	Elder
<i>Malus sylvestris</i>	Crab Apple	<i>Sorbus aucuparia</i>	Rowan
<i>Prunus avium</i>	Wild Cherry	<i>Ulmus glabra</i>	Wych Elm
<i>Prunus padus</i>	Bird Cherry	<i>Viburnum opulus</i>	Guelder Rose

Enhancing Habitats for Roosting Bats

- 5.4.2 It is recommended that the development incorporates the installation of one bat access panel at the new building.
- 5.4.3 The bat access panels should be sited at least 4 metres above ground level, ideally facing or close to areas of landscape planting or existing linear features. The access panels should not be positioned over windows or doorways where bat droppings may become a nuisance. Suitable bat access panels are available from NHBS Ecology (www.nhbs.com), Wild Care (www.wildcare.co.uk) and / or Greenwood's Ecohabitats (www.greenwoodsecohabitats.co.uk) and are presented at **Insert 1**.



Insert 1: Examples of integrated bat access panels and an externally mounted box⁸

5.4.4 It is recommended that four bat boxes are erected onto suitable retained trees within the site. An ecologist will advise on the siting of the bat boxes whilst on site.

5.4.5 Bat boxes should be installed to the following guidelines (Bat Conservation Trust, 2024):

- At least 4 metres above the ground (where safe installation is possible);
- Sheltered from strong winds and exposed to the sun for part of the day (usually south or south-west). Ideally several bat boxes will be installed to provide a variety of different thermal options for bats. Grouping a number of boxes each with a different aspect can achieve this; while a number of boxes is preferable to one, a single box is still viable and may be used by roosting bats;
- Located close to unlit linear features, such as lines of trees or hedgerows; and
- Installed where the bat box entrance is not cluttered or impeded by branches, or accessible to predators (such as cats) by large branches underneath them.

5.4.6 Suitable bat boxes are the Schwegler 1FF, Greenwood Ecohabitat's single or double cavity boxes and Schwegler 1FD, see **Insert 2**.



Insert 2: Schwegler 1FF, Greenwood Ecohabitat's single cavity and Schwegler 1FD bat boxes

⁸ Left to right: IBstock Enclosed Bat Box 'c' (left); Habibat Bat Access Panels (centre left and centre right) and Greenwood's Ecohabitat's two crevice bat box (right). Products with a brick face are illustrated, however the Habibat bat access panels can be supplied unfaced to enable the addition of matching material.

Enhancing Habitats for Nesting Birds

House Sparrow

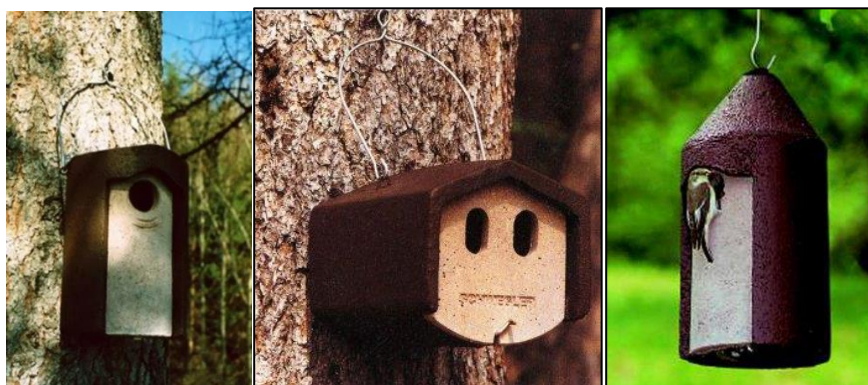
- 5.4.7 House sparrows are associated with suburban areas. Monitoring suggests a severe decline in the UK house sparrow population, estimated as dropping by 71 per cent between 1977 and 2008 with large falls in both rural and urban populations (RSPB, 2023).
- 5.4.8 The installation of one house sparrow terrace nest boxes is recommended at the proposed new house. The boxes will not be positioned over windows or doorways where droppings may become a nuisance. RSPB advice states that boxes should ideally be sited facing north to east, to avoid exposure to direct sunlight, which may cause overheating of chicks in the nest.
- 5.4.9 Such bird boxes are available from the NHBS (www.nhbs.com) or Wild Care (www.wildcare.co.uk). ERAP (Consultant Ecologists) Ltd will advise on the siting of bird boxes. An example of a suitable house sparrow bird box is given below at **Insert 3**.



Insert 3: Schwegler 1SP House Sparrow Nesting Terrace

Woodland Birds

- 5.4.10 Three bird boxes associated with woodland bird species are to be installed at retained trees within the site. An ecologist will advise on the siting of the woodland bird boxes whilst on site. RSPB advice states that boxes should ideally be sited facing north to east, to avoid exposure to direct sunlight, which may cause overheating of chicks in the nest. The boxes should be at least 4 metres from ground level.
- 5.4.11 One of each of the boxes presented at **Insert 4** will be used.



Insert 4: Schwegler 3S, Schwegler 1N and Schwegler 2M boxes, suitable for a variety of woodland birds.

Maintenance of Habitat Connectivity Throughout the Developed Site

- 5.4.12 To ensure habitat connectivity is maintained as part of the development proposals, gaps within any proposed fencing to allow access by other wildlife (including hedgehog) should be incorporated across the site; example accesses are presented at **Insert 5**, as reproduced from *Hedgehogs and Development* (British Hedgehog Preservation Society / PTES, 2019). It is recommended that appropriate wildlife gaps (at least 0.1 metre tall and 0.15 metre wide) are installed at suitable intervals around the base of the proposed fencing.



Insert 5: Showing wildlife access gap within fencing

6.0 CONCLUSION

- 6.1 This ecological assessment has demonstrated that, provided off-site compensation can be sought for the woodland and trees present within the site, the development of a single residential dwelling at the site is feasible and acceptable in accordance with ecological considerations and the NPPF.
- 6.2 It is possible to implement reasonable actions for the protection and long-term conservation of fauna such as nesting birds and commuting / foraging bats associated with the site.
- 6.3 The proposals present an opportunity to create enhancements for roosting bats and nesting birds.

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8.0 APPENDIX: TABLES, PHOTOGRAPHS AND FIGURES

8.1 Plant Species Lists

Table 8.1: Plant Species List for Woodland 1

Scientific Name	Common Name	DAFOR	% Cover
Canopy Layer Species			
<i>Acer pseudoplatanus</i>	Sycamore	F	30%
<i>Fraxinus excelsior</i>	Ash	F*	40%
<i>Salix fragilis</i>	Crack-willow	R	<1%
<i>Tilia</i> sp.	Lime species	R	<1%
Shrub Layer			
<i>Acer pseudoplatanus</i>	Sycamore	LF	<1%
<i>Aesculus hippocastanum</i>	Horse-chestnut	R	<1%
<i>Aucuba japonica</i>	Spotted-laurel	R	<1%
<i>Crataegus monogyna</i>	Hawthorn	LA	5%
<i>Fraxinus excelsior</i>	Ash	LA	<1%
<i>Ilex aquifolium</i>	Holly	O/LA	5%
<i>Ligustrum ovalifolium</i>	Garden Privet	LF	<1%
<i>Lonicera periclymenum</i>	Honeysuckle	LA	<1%
<i>Prunus laurocerasus</i>	Cherry Laurel	LF	<1%
<i>Sambucus nigra</i>	Elder	O	<1%
Ground Flora			
<i>Anthriscus sylvestris</i>	Cow Parsley	O	<1%
<i>Galium aparine</i>	Cleavers	F	<1%
<i>Geum urbanum</i>	Wood Avens	LF	<1%
<i>Hedera helix</i>	Ivy	F/LA	5%
<i>Lapsana communis</i>	Nipplewort	R	<1%
<i>Plantago major</i>	Greater Plantain	R	<1%
<i>Rumex obtusifolius</i>	Broad-leaved Dock	R	<1%
<i>Urtica dioica</i>	Common Nettle	F*	30%
¹ Key to DAFOR: D=Dominant, A=Abundant, F=Frequent, O=Occasional, R=Rare, V=Very, L=Local and *denotes a constant species			

8.2 Photographs



Photo 1: Woodland 1



Photo 2: Woodland 1, southern end

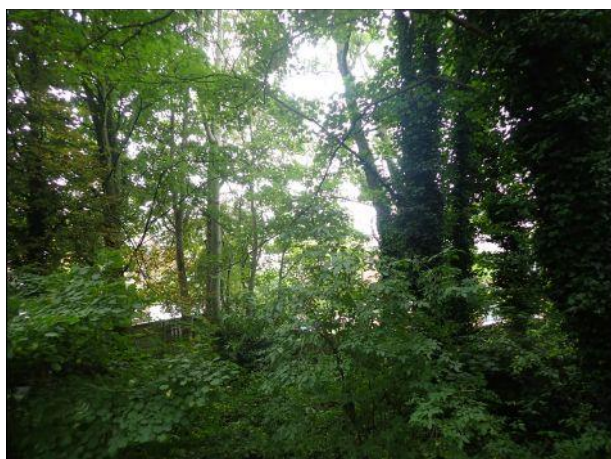


Photo 3: Woodland 1, western end



Photo 4: Woodland 1



Photo 5: Hardstanding access track



Photo 6: Cherry tree in grassland in garden (and Building 1) to the east of the site



Photo 7: Cherry tree in amenity grassland in garden to the east of the site, and ornamental shrubs



Photo 8: Ornamental shrubs and flower bed in garden to the east of the site



Photo 9: Locally abundant ivy in garden to the east of the site



Photo 10: Ornamental shrubs in garden to the east of the site



Photo 11: Amenity grassland is garden to the east of the site



Photo 12: Building 1, adjacent to the eastern site boundary



Photo 13: Entrance to possible former air raid shelter or cellar in garden



Photo 14: Tree 1



Photo 15: Tree 2

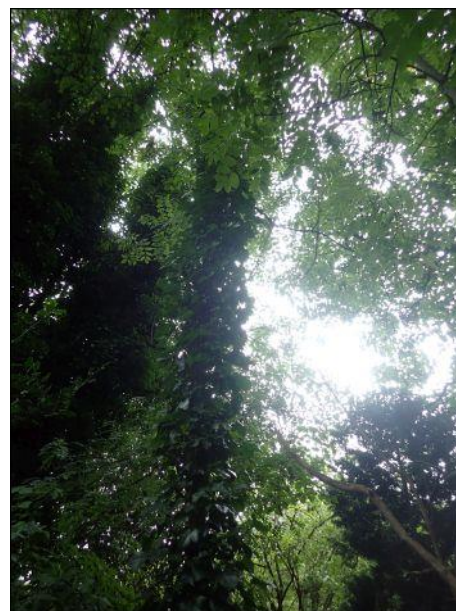


Photo 16: Tree 4



Photo 17: Tree 5

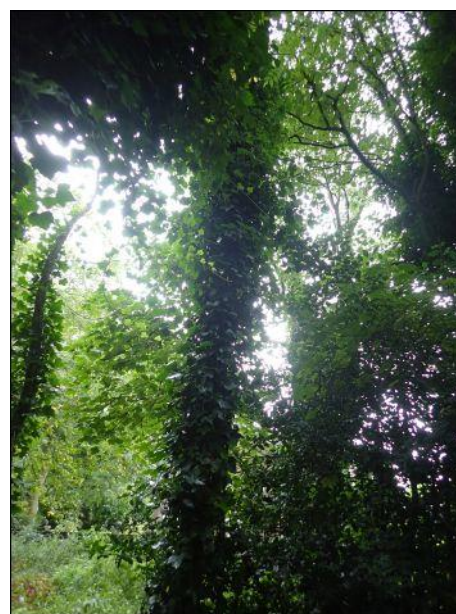


Photo 18: Tree 6

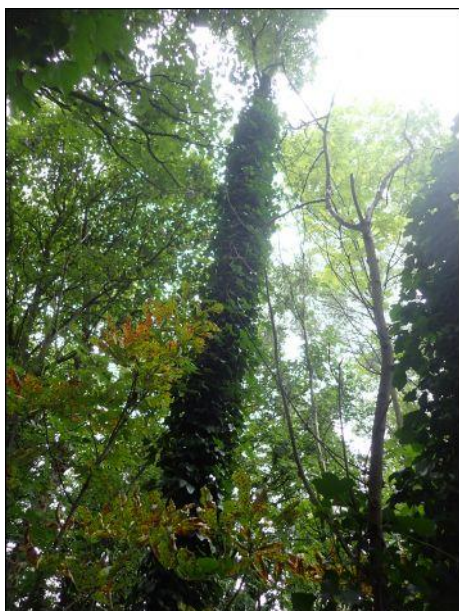


Photo 19: Tree 7



Photo 20: Tree 8



Photo 21: Tree 9



Photo 22: Tree 10



Photo 23: Tree 10 tear-out



Photo 24: Tree 12



Photo 25: Tree 13



Photo 26: Trees 14 and 15



Photo 27: Tree 16

8.3 Figures

Figure 1: Aerial Image of the Site and its Surroundings

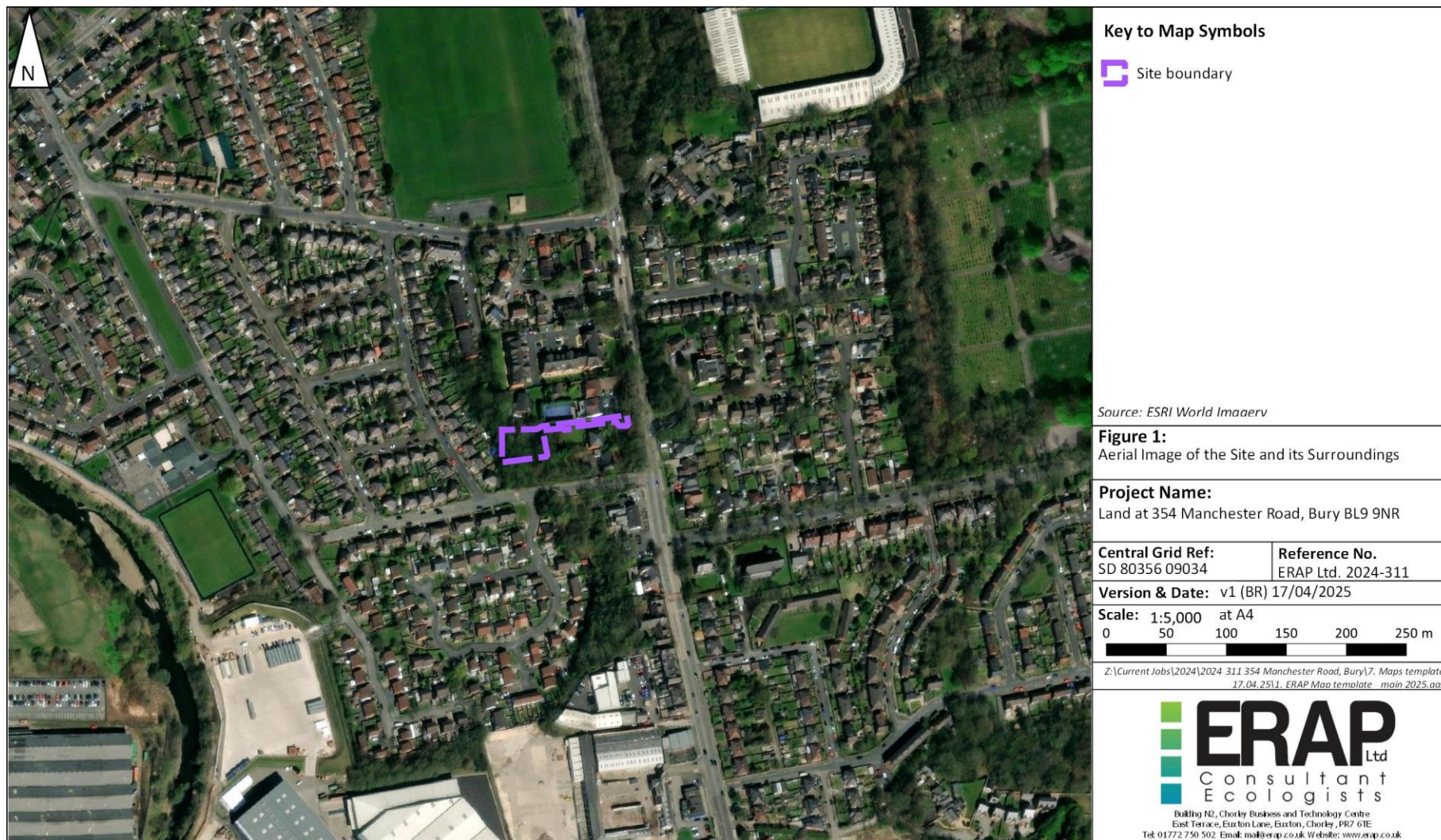


Figure 2: Phase 1 Habitat and Vegetation Map

