

Land at Marland Fold, Rochdale OL11 4RF

PRELIMINARY ECOLOGICAL APPRAISAL

October 2025

ERAP (Consultant Ecologists) Ltd Reference: 2024-280

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ERAP (Consultant Ecologists) Ltd
Building N2
Chorley Business and Technology Centre
East Terrace
Euxton Lane
Euxton
Chorley
PR7 6TE

Tel: 01772 750502

mail@erap.co.uk
www.erap.co.uk



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Document Control

Survey Type:	Surveyors	Survey Date(s)
Ecological appraisal surveys	Amy Sharples	1 st November 2024
Reporting	Personnel	Date
Author	Amy Sharples B.Sc. (Hons) M.Sc. ACIEEM Senior Ecologist	16 th January 2025
Signature(s)		
Checked	Brian Robinson B.Sc. (Hons) MCIEEM Senior Ecologist	16 th January 2025
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SUMMARY

Introduction and Scope

- i. This ecological survey and assessment presents the ecological, biodiversity and nature conservation status of the land at Marland Fold, Rochdale OL11 4RF. The assessment was requested in connection with proposals to develop the site to housing.
- ii. This report presents the results of a desktop study, data search and extended Phase 1 Habitat Survey carried out in November 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 improved / modified grassland with parcels of woodland, individual trees and an electricity substation.

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. The NVC communities present are typical of the geographical area and conditions present. No irreplaceable habitats were detected.
- vi. A small area at the north-eastern corner of the site (0.001 hectares) is identified as supporting 'Deciduous Woodland' by the Priority Habitats inventory, and it is considered that this area is indicative of 'Lowland Mixed Deciduous Woodland' Priority Habitat. No other habitats within the site are Priority Habitat.
- vii. The woodland parcels, grassland and scattered trees within the site are considered to be of 'local' importance as they support habitats of value to nesting birds and foraging birds and bats, and will contribute as wildlife links across the wider area.
- viii. The proposals have the potential for direct impacts to the area of Priority Habitat woodland, and also indirect impacts such as damage through inappropriate construction techniques. Recommendations relating to the site layout and the woodland are presented at **Section 5.2**. Recommendations relating to the protection of retained woodland within and adjacent to the site are presented at **Section 5.3**.
- ix. Invasive species listed on Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended) namely Indian Balsam and Variegated Yellow Archangel were detected. It is an offence to cause the spread of these species in the wild. Guidance on the control and management of these species is described in **Section 5.3**.
- x. The site is suitable for use by foraging and commuting bats and nesting birds. No other protected species have been detected. Recommendations to ensure any retained and proposed habitats are suitable for use by foraging and commuting bats and nesting birds are presented at **Section 5.2**. Measures for the protection of wildlife, including nesting birds and mammals during the construction phase of the proposed development, are presented at **Section 5.3**. Recommendations for enhancements to include within the layout of the site for biodiversity, namely the provision of roosting bat habitat and nesting bird habitat, are presented at **Section 5.4**. Appropriate landscape planting to enhance biodiversity as part of the proposals is recommended at **Section 5.6**.

Recommendations

- xi. 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.
- xii. The proposals will secure an opportunity to implement beneficial measures such 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

- xiii. 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 development.

1.0 INTRODUCTION

1.1 Background and Rationale

- 1.1.1 ERAP (Consultant Ecologists) Ltd was commissioned by Maybern Planning and Development to carry out an ecological assessment of the land at Marland Fold, Rochdale OL11 4RF (hereafter referred to as the 'site'). The Ordnance Survey (OS) grid reference at the centre of the site is SD 87907 12132. 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 the site to housing.

1.2 Scope of Works

- 1.2.1 The scope of ecological works undertaken in November 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 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 any 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 Amy Sharples B.Sc. (Hons) M.Sc. ACIEEM on 1st November 2024. The weather was overcast with scattered showers, a light air (Beaufort scale 1) and an air temperature of 11°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 *Topographical Land Survey* (JLP Surveying, 2024) as a base plan.

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 **Figures 1 and 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

Ground Level Tree Assessment

- 2.3.5 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.
- 2.3.6 Trees were assessed from the ground using binoculars and a high-powered torch. Each tree was searched for the presence of the following features:

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.

- 2.3.7 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).
- 2.3.8 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 2.1**.

Table 2.1: 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.

- 2.3.9 The requirement for further presence / absence surveys at each tree was then considered.

Habitat Assessment for Commuting / Foraging Bats

- 2.3.10 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 2.2**.

Table 2.2: 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.

Suitability	Potential Flight Paths and Foraging Habitats
	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

- 2.3.11 Bird species observed and heard during the survey were recorded.
- 2.3.12 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 species in the site.

Reptile Species

- 2.3.13 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 2.3**.

Table 2.3: 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

- 2.3.14 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.
- 2.3.15 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 in winter when plant species may be in a state of senescence or dormant; the surveyor is experienced in identifying plant species from their vegetative characteristics however, and a reliable assessment of the habitats present was possible.
- 2.4.2 All areas of the site were fully accessible at the time of the survey. No significant survey limitations were experienced.

- 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 tree 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, 2023) 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 (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 1.27 kilometres to the south-east of

²Hereafter the NPPF

the site and are designated for their important habitats which support a diverse assemblage of aquatic flora, including extensive colonies of the nationally scarce 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, 2025):

Infrastructure: Pipelines and underground cables, pylons and overhead cables (excluding upgrades and refurbishment of existing network). Any transport proposal including new or extended footways, cycleways, roads / car parks, railways and waterways (excluding routine maintenance). Airports, helipads and other aviation proposals.

Minerals, Oil and Gas: Planning applications for quarries, including: new proposals, Review of Minerals Permissions, extensions, variations to conditions etc. Oil and gas exploration / extraction.

Air Pollution: Any industrial / agricultural development that could cause air pollution (including: industrial processes, livestock and poultry units with a floorspace greater than 500m², slurry lagoons greater than 200m² and manure stores greater than 250 tonnes).

Combustion: General combustion processes greater than 20-megawatt energy input. Including: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis / gasification, anaerobic digestion, sewage treatment works, other incineration / combustion.

Waste: Landfill. Including: inert landfill, non-hazardous landfill, hazardous landfill.

Compost: Any composting proposal with more than 75000 tonnes maximum annual operational throughput. Including: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.

Water Supply: Large infrastructure such as warehousing / industry where the total net additional gross internal floorspace following development is 1,000m² or more.

- 3.1.4 The proposals do not match any of the criteria which would require further consultation with Natural England.

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' or 'SBI' in Greater Manchester.

- 3.1.6 Six SBI are located within a 2 kilometres radius from the centre of the site and are summarised in **Table 3.1**.

Table 3.1: SBI Within a 2 Kilometres Radius from the Centre of the Site

SBI Name	Distance and Direction from the Site	Reasons for Designation
Meadowcroft Woods	0.59 kilometres west	Ancient Woodland (Wd1)
Springfield Wood	0.6 kilometres west	Ancient Woodland (Wd1)
Meadow by Heywood Cemetery	1.11 kilometres west	Grassland (Gr2)
Rochdale Canal (Scowcroft to Warland)	1.26 kilometres east	Canal (Fw3) and Floating Water Plantain (GGSG1)

SBI Name	Distance and Direction from the Site	Reasons for Designation
Plumpton Wood	1.58 kilometres west	Woodland (Wd1), Plantation Woodland (Wd2) and Grassland (Gr2)
Queen's Park Lake	1.92 kilometres west	Birds (Br7)

3.1.7 The presence of the SBIs present in the wider area is considered further at **Section 4.2**.

Priority Habitats Inventory

3.1.8 The Priority Habitats Inventory³ was checked via MAGiC Maps. A small area (0.003 hectares) at the north-eastern corner of the site is identified as supporting 'Deciduous Woodland' by the Priority Habitats inventory, which may indicate that Lowland Mixed Deciduous Woodland Priority Habitat is present at the site. The area identified as Deciduous Woodland extends to the north-east of the site.

3.1.9 No further areas in the site are identified as supporting a Priority Habitat by the inventory. The presence of Priority Habitats at the site 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 Greater Manchester Local Record Centre (GMLRC) hold no records of protected and notable species for the site. A common pipistrelle (*Pipistrellus pipistrellus*) maternity roost is noted at a property to the east of the site access, dated 2010.

3.1.12 Records of protected and notable species for a 1 kilometre radius from the centre of the site are summarised in **Table 3.2**.

Table 3.2: Records of Protected Species Within a 1 Kilometres Radius from the Centre of the Site

Taxon Group	Species Name and Designations ¹ and Notes
Birds – WCAs1	Barn owl (<i>Tyto alba</i>): WCAs1. 1 record from 2012, located to the east of the site.
	Peregrine (<i>Falco peregrinus</i>): WCAs1. 1 record from 2007, located 385 metres to the north-east of the site.
	Kingfisher (<i>Alcedo atthis</i>): WCAs1. 10 records, dated between 1986 and 2023. The closest record is 345 metres to the north of the site, and from 2020.
Birds – PS and LBAP	Bullfinch (<i>Pyrrhula pyrrhula</i>): PS. 52 records, dated between 2010 and 2021. The closest record is 455 metres to the east of the site, and from 2021.
	Curlew (<i>Numenius arquata</i>): PS. 1 record from 2015, located 455 metres to the east of the site.
	Dunnock (<i>Prunella modularis</i>): PS. 107 records, dated between 2010 and 2021. The closest record is 405 metres to the south-east of the site, and from 2013.
	House sparrow (<i>Passer domesticus</i>): PS. 83 records, dated between 2010 and 2021. The closest record is 330 metres to the south-west of the site, and from 2015.
	Lesser redpoll (<i>Carduelis cabaret</i>): PS. 1 record from 2011, located 495 metres to the north-west of the site.

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.

Taxon Group	Species Name and Designations ¹ and Notes
	Song thrush (<i>Turdus philomelos</i>): PS. 31 records, dated between 2010 and 2021. The closest record is 405 metres to the south-east of the site, and from 2013. Starling (<i>Sturnus vulgaris</i>): PS. 119 records, dated between 2010 and 2021. The closest record is 405 metres to the south-east of the site, and from 2013.
Terrestrial Invertebrates	Cinnabar (<i>Tyria jacobaea</i>): PS. 1 record from 2019, located 575 metres to the north-west of the site. White-letter hairstreak (<i>Satyrrium w-album</i>): PS. 1 record from 2020, located 480 metres to the north-east of the site.
Terrestrial Mammals	Badger (<i>Meles meles</i>): PBA. 4 records, dated between 2018 and 2020. The closest record is over 500 metres from the site. Bat species (Order <i>Chiroptera</i>): EPS, WCAs5 and GMBAP. 1 record from 2008, located 830 metres to the north-east of the site. Common pipistrelle (<i>Pipistrellus pipistrellus</i>): EPS, WCAs5 and GMBAP. 25 records, dated between 1991 and 2021. The closest record is 75 metres to the north-west of the site, and from 2008. Hedgehog (<i>Erinaceus europaeus</i>): PS. 15 records, dated between 2013 and 2022. The closest record is 405 metres to the south-east of the site, and from 2022. Noctule bat (<i>Nyctalus noctula</i>): EPS, WCAs5, PS and GMBAP. 2 records, both from 1990. The closest record is 465 metres to the south-west of the site. Pipistrelle species (<i>Pipistrellus</i> sp.): EPS, WCAs5 and GMBAP. 88 records, dated between 1990 and 2021. The closest record is 0 metres to the south of the site, and from 2010. Whiskered / Brandt's bat (<i>Myotis mystacinus / brandtii</i>): EPS, WCAs5 and GMBAP. 1 record from 1992, located 640 metres to the north-west of the site.
¹ Key to Designation Codes: EPS = European Protected Species under The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. WCAs1 = Species receives full protection under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). WCAs5 = Species receives full protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). PBA = Protection of Badger Act 1992. PS = Priority Species listed under Section 41 of the NERC Act 2006. GMBAP = Species listed on the Greater Manchester Biodiversity Action Plan.	

3.1.13 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 0.46 hectares site is located between a residential area and Marland Wood and comprises an area of improved / modified grassland, parcels of woodland, individual trees and an electricity substation.
- 3.2.2 The southern and western site boundaries are defined by garden fences associated with the existing residential properties at Marland Fold. The northern and eastern site boundaries are not defined by a physical feature and habitats associated with Marland Wood lie beyond.
- 3.2.3 The appended **Figure 2** can be referred to for all habitat descriptions. Photographs are appended in **Section 8.2**.

Improved / Modified Grassland

- 3.2.4 The improved / modified grassland within the site includes areas which are regularly short mown at the western and southern area of the site (**Photos 1 and 2**), with the remainder of the grassland less frequently managed (**Photos 5 and 6**). The managed area in the western area of the site supports scattered trees comprising one Sycamore (*Acer pseudoplatanus*) and one Cherry species (*Prunus* sp.) (**Photo 3**). The managed area at the southern site boundary is bounded by a Beech (*Fagus sylvatica*) hedgerow (**Photo 4**).
- 3.2.5 The vegetation is characterised by abundant Yorkshire-fog (*Holcus lanatus*), Perennial Rye-grass (*Lolium perenne*) and Cock's-foot (*Dactylis glomerata*) and occasional Smooth Meadow-grass (*Poa pratensis*), Rough Meadow-grass (*Poa trivialis*), Broad-leaved Dock (*Rumex obtusifolius*), Common Bent (*Agrostis capillaris*), Soft-rush (*Juncus effusus*), Creeping Buttercup (*Ranunculus repens*), White Clover (*Trifolium repens*) and Indian Balsam (*Impatiens glandulifera*). A plant species list is appended at **Table 8.1**.
- 3.2.6 The improved / modified grassland is characteristic of an MG7 *Lolium perenne* ley grassland community of the NVC (Rodwell, 1992), particularly in the areas of high maintenance, and is described by the UKHab as g4 modified grassland with the secondary codes 14 scattered rushes, 106 mown and 524 invasive non-native.

Woodland Parcel at South-western Corner of the Site

- 3.2.7 A small area of woodland lies at the south-western corner of the site associated with the location of the substation (**Photo 8**).
- 3.2.8 The woody vegetation is characterised by occasional Sycamore, Alder (*Alnus glutinosa*), Hawthorn (*Crataegus monogyna*), Holly (*Ilex aquifolium*), Cherry species and Pedunculate Oak (*Quercus robur*). The ground layer is characterised by occasional Bramble and Indian Balsam with locally abundant Common Nettle (*Urtica dioica*). A plant species list is appended at **Table 8.2**.
- 3.2.9 The woodland parcel is not characteristic of an NVC community, and is described by the UKHab as w1g other broadleaved woodland with the secondary code 524 invasive non-native.

Woodland Parcel at Northern Area of the Site

- 3.2.10 An area of woodland lies at the northern area of the site and forms part of the wider Marland Wood (**Photos 9 and 10**).
- 3.2.11 The canopy is characterised by frequent Sycamore and Pedunculate Oak with occasional Silver Birch (*Betula pendula*), Beech (*Fagus sylvatica*), Cherry species, Goat Willow (*Salix caprea*) and Grey Willow (*Salix cinerea*) with locally abundant Ash (*Fraxinus excelsior*) and the shrub layer is characterised by occasional Hawthorn with locally abundant Holly and Blackthorn (*Prunus spinosa*). The ground layer is characterised by occasional Bramble and Indian Balsam with locally abundant Yorkshire-fog and Perennial Rye-grass. A plant species list is appended at **Table 8.3**.
- 3.2.12 The woodland parcel is representative of secondary woodland and is not characteristic of an NVC community. It is described by the UKHab as w1g other broadleaved woodland with the secondary code 524 invasive non-native.

Invasive Plant Species

- 3.2.13 No Japanese Knotweed is present at the site.
- 3.2.14 As illustrated on **Figure 2**, stands of Indian Balsam (*Impatiens glandulifera*) and Variegated Yellow Archangel (*Lamium galeobdolon*) were detected. 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 Snuffle marks and mammal paths were found within the woodland parcel at the north-western corner of the site.
- 3.3.2 A mammal hole is located 18 metres north-west of the site boundary (**Photo 11**). No evidence of badger such as badger hairs or footprints were found at the mammal hole, however the hole is of a suitable size and shape for use by badger.
- 3.3.3 From the distance to the site boundary, the altitude / level of the entrance in comparison with the site level and the orientation of the mammal hole it is unlikely that the tunnel extends into / beneath the site.
- 3.3.4 The presence of the mammal hole is considered further at **Section 4.4**.

Bat Species

Trees

- 3.3.5 The trees within the site do not support any features suitable for use by roosting bats. The suitability of the trees within the site for use by roosting bats is assessed to be 'none'.

Habitat Assessment for Commuting and Foraging Bats

- 3.3.6 The woodland parcels and trees at the site are of 'moderate' suitability for use by foraging and commuting bats. The site provides continuous habitat connected to the wider landscape, including Marland Wood, which could be used by bats for foraging.
- 3.3.7 The improved grassland within the site is unlikely to provide an abundance or diversity of invertebrate prey, and is therefore considered to be of 'low' suitability for use by foraging bats.
- 3.3.8 The habitats at the site will contribute to the wider foraging area of common species of edge-feeding foraging bats, such as common pipistrelle (*Pipistrellus pipistrellus*), and also low numbers of species known to forage over open habitats and over wide areas, such as noctule (*Nyctalus noctula*).

Bird Species

- 3.3.9 Birds detected in the site in November 2024 are listed in **Table 3.3**.

Table 3.3: Bird species Detected on 1st November 2024

Scientific Name	Common Name	BOCC Status ¹
<i>Erithacus rubecula</i>	Robin	Green

<i>Passer domesticus</i>	House sparrow	Red
<i>Pica pica</i>	Magpie	Green
<i>Turdus merula</i>	Blackbird	Green
¹ BOCC: Birds of Conservation Concern (Stanbury, et al., 2021). Priority Species are presented in Bold .		

- 3.3.10 The woodland parcels and scattered trees at the site are 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**.

Reptiles

- 3.3.11 The habitats within the site provides habitat suitable for sheltering, basking and hibernating reptiles. There are no piles of garden waste or other suitable debris for use by sheltering or hibernating reptiles however, and the site supports no favourable habitat for basking reptiles. Areas of the site are subject to high levels of management and is surrounded by existing residential properties to the south and east. GMLRC holds no records of reptile species within a 2 kilometres radius of the site. The presence of reptiles within the site is considered reasonably unlikely.

Other Wildlife

- 3.3.12 The site provides habitats suitable for use by sheltering and foraging hedgehog (*Erinaceus europaeus*), a Priority Species. 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 *Marland Fold, Rochdale, Marland Hill Farm, Landscape Proposals Dwg. No. 7532.01 Rev D* (Trevor Bridge Associates Ltd, 2025), hereafter the 'proposals plan', it is proposed to develop the site to housing with associated access road and landscaping.
- 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 are 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 The proposals do not match the criteria for which further consultation is required with Natural England in respect of the SSSI Impact Risk Zone, and it is considered that the site is sufficiently small and distant from all designated sites for nature conservation that no direct or indirect impacts will occur to the designated sites as a consequence of the proposed development.

4.3 Vegetation and Habitats

- 4.3.1 Only common and widespread plant species were found. The NVC communities present are typical of the geographical area and conditions present. No irreplaceable habitats are present within the site.

- 4.3.2 A small area at the north-eastern corner of the site (0.001 hectares) is identified as supporting 'Deciduous Woodland' by the Priority Habitats inventory and is considered to be characteristic of the Lowland Mixed Deciduous Woodland Priority Habitat type.
- 4.3.3 It is not considered that the woodland parcel at the south-western corner of the site is indicative of the Lowland Mixed Deciduous Woodland Priority Habitat type.
- 4.3.4 In terms of each habitat's importance in a geographical context⁴, the woodland parcels, grassland and scattered trees within the site are considered to be of 'local' importance as they support habitats of value to nesting birds and foraging birds and bats, and will contribute as wildlife links across the wider area.
- 4.3.5 The proposals plan indicates that 0.0054 hectares of the woodland parcel in the south-west corner of the site and 0.1086 hectares of woodland at the northern area of the site will be removed to facilitate the development. In order to be in accordance with the principles of the mitigation hierarchy⁵ the proposals are designed to provide a minimum 15 metre buffer from off-site Ancient Woodland and accommodate the retention of the on-site woodland where feasible. Enhancement of off-site areas of woodland will form part of any compensation effort of lost areas of woodland associated with the proposed development via the Biodiversity Net Gain requirements. Recommendations relating to the proposed site layout are presented at **Section 5.2**.
- 4.3.6 The proposals plan currently has the potential for direct impacts to the area of off-site Priority Habitat woodland, and also indirect impacts to retained areas of woodland via damage through inappropriate construction techniques. Inappropriate construction techniques have the potential to impact upon the nature conservation value of the habitats associated with the off-site woodland via direct damage and pollution. Appropriate measures to ensure that the off-site woodland is protected during the construction phase of the proposed development are presented at **Section 5.3**.
- 4.3.7 It is considered that the protection of the off-site woodland during works is feasible provided appropriate measures are taken for its protection, and impacts to the off-site woodland during the construction phase of the proposed development can be avoided.
- 4.3.8 The proposals have been designed in order that the proposed houses face onto the proposed road, with no gardens backing onto the off-site woodland; this will avoid the potential for garden encroachment.
- 4.3.9 Inappropriate lighting has the potential to disturb nocturnal wildlife such as foraging and commuting bats and also nesting and roosting birds. An appropriate lighting design for the site which will avoid excessive lighting shining over the off-site woodland is recommended at **Section 5.4**.
- 4.3.10 The proposals plan demonstrates that the site has been designed in a manner which will minimise direct impacts to the Priority Habitat (off-site woodland) and ensure that impacts such as garden encroachment can be avoided. Appropriate measures to be adopted during the construction phase of the proposed

⁴ 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.

⁵ '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)

development will avoid impacts associated with development during this phase of the proposals and are presented at **Section 5.2**.

- 4.3.11 The presence of Indian Balsam and Variegated Yellow Archangel, both of which are invasive species listed under Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended), has been detected within the site. It is considered that the proposals present an opportunity for the eradication and management of these species as part of the proposed development. Further guidance is presented at **Section 5.3**.

4.4 Protected Species and Other Wildlife

- 4.4.1 Habitats within and adjacent to the site are suitable for foraging and commuting bats. The protection of the off-site woodland will conserve opportunities adjacent to the site for the attraction of foraging bats. The retention of these features, in combination with the sensitive use of lighting at the developed site, will avoid any significant adverse effect on opportunities for foraging and commuting bats. The proposals provide an opportunity for the creation of suitable features for roosting bats; recommendations for features suitable for use by roosting bats are presented at **Section 5.4**.
- 4.4.2 The woodland and scattered trees within the site provide suitable habitat for nesting and foraging bird species, including Priority Species. Measures for the protection of nesting birds during any proposed works at the site are presented at **Section 5.2**. The proposals provide an opportunity for the creation of suitable features for nesting birds, including Priority Species; recommendations for features suitable for use by nesting birds are presented at **Section 5.4**.
- 4.4.3 Appropriate survey effort and / or assessment in accordance with standard survey guidance, has been carried out to reasonably discount adverse effects on other relevant protected species namely reptile species.
- 4.4.4 The site supports suitable habitat for foraging badger and hedgehog, a Priority Species. A mammal hole suitable for use by badger has been identified in the wider area, and hedgehog have the potential to be harmed during the site strip and construction phases of the development. Further surveys to determine the usage of the mammal hole are presented at **Section 5.2**. Measures for the protection of mammals such as badger and hedgehog during works are presented at **Section 5.3**.

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 186(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 development.

5.2 Further Surveys

- 5.2.1 It is recommended that further surveys are completed at the mammal hole to the north of the site (and the woodland and site generally) to determine the likely usage of the site by badger, and to inform if the proposed development will have any impact upon sheltering badger and badger setts.
- 5.2.2 Additional surveys at the site should comprise a mixture of direct searches for badger activity and any additional sett creation, and surveys to determine any activity by badger at the mammal hole identified; survey could include regular inspection for activity and / or use of camera traps.

5.3 Protection of Existing Vegetation and Recommendations in Relation to Site Layout

Recommendations in Relation to Site Layout

- 5.3.1 It is recommended that the proposals are revised to accommodate the areas of Lowland Mixed Deciduous Woodland Priority Habitat as part of this site layout. As this cannot be achieved at the site the proposed site layout has been designed to retain as much of the norther area of woodland as feasible and new woodland planting (at the northern area of the site) has been incorporated into the site layout.
- 5.3.2 Enhancement of off-site areas of woodland will form part of any compensation effort of lost areas of woodland associated with the proposed development via the Biodiversity Net Gain requirements.
- 5.3.3 In addition to the above, the site layout accommodates the following:
- Green infrastructure and green links through the site with the use of landscape planting and trees as stepping stones (it is recognised that this can only be achieved at the site within garden habitats);
 - Compensation for the loss of grassland habitat via the provision of wildflower grassland within the landscape planting within the site;
 - Use of native species in the landscape planting scheme; and
 - Alignment of properties to create 'pockets' of contiguous gardens as stepping stones for wildlife through the site (note this this is already achieved by the existing site layout);
 - Avoidance of unnecessary lighting and preparation and implementation of a sympathetic external lighting scheme in accordance with current guidance (see below);
 - Avoidance of concrete based garden boundary fencing and use of timber fencing with gaps of 0.15 metres beneath to permit passage of wildlife, e.g. hedgehog, a Priority Species, between gardens; and
 - Incorporation of features for wildlife such as boxes for roosting bats and nesting birds within the developed areas of the site (refer to **Section 5.4**).

Consideration of Lighting

- 5.3.4 Paragraph 191(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 off-site woodland, 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).
- 5.3.8 The measures outlined above will protect the habitats identified as being suitable for use by foraging and commuting bats during the construction phase of the proposed development. To ensure that this habitat is not degraded due to unsuitable lighting, any lighting to be used at the site during construction should be directional and screened where possible. It is important to maintain an unlit corridor between Marland Fold (the location of the maternity roost) and the woodland habitats in the wider area. This specification should be included within a Construction Environmental Management Plan (CEMP) or similar document.
- 5.3.9 Due to the nature of the proposed development it is considered feasible that the lighting at the site can be designed in a suitable manner for the protection of bats and other wildlife, and this can be secured by the use of a suitably worded planning condition.

5.4 Protection of Existing Features and Wildlife During Construction Phase

Protection of Woodland, Trees and Shrubs

- 5.4.1 During the construction phase, temporary protective demarcation fencing will be used to protect the woodland, trees and shrubs 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.
- 5.4.2 The fencing will be in accordance with BS5837:2012 *Trees in Relation to Design, Demolition and Construction: Recommendations* (BSI, 2012).

Invasive Plant Species

- 5.4.3 It is an offence under the *Wildlife and Countryside Act 1981* (as amended) to cause the spread of Indian Balsam or Variegated Yellow Archangel in the wild. It is recommended that a specialist contractor is employed for the eradication and control of the invasive species at the site, and that this is completed under a suitable Invasive Species Management Plan.

Protection of Nesting Birds

- 5.4.4 All wild birds are protected under the *Wildlife and Countryside Act 1981* (as amended) while they are breeding. It is advised that any works such as vegetation clearance that will affect habitats suitable for use by nesting birds, including the unmanaged neutral grassland, 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.
- 5.4.5 If breeding birds are detected the ecologist will issue guidance in relation to the protection of the nesting birds in conjunction with the scheduled works. This may involve cordoning off an area of the site until the young birds have fledged.

Protection of Mammals and Other Wildlife

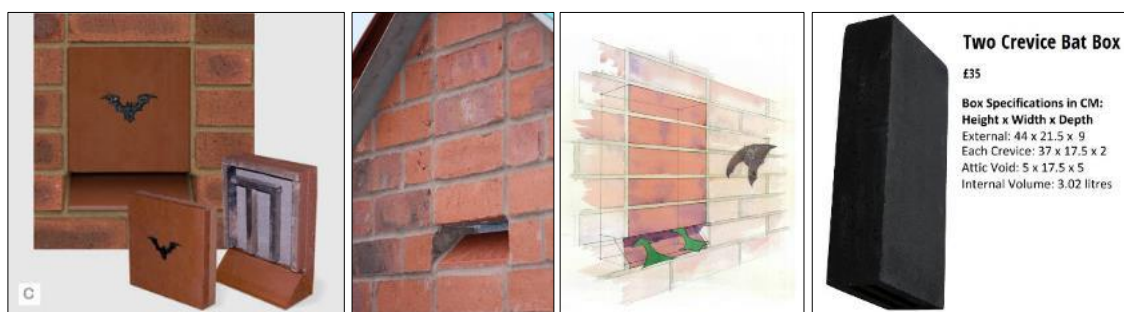
- 5.4.6 Owing to the identified suitability of the habitats surrounding the site for fauna such as badger and hedgehog, during the site preparation and construction operations it is essential that the following best practice and Reasonable Avoidance Measures are applied⁶:
- a. Flail the vegetation in the site regularly until immediately prior to commencement of works on site;
 - b. Ensure all machinery remains within the site boundary;
 - c. Cover or infill all trenches / other excavations before nightfall;
 - d. If covering is not feasible leave a temporary ramp in all trenches / other excavations in order to allow wildlife to escape;
 - e. Raise stored materials (e.g. on pallets) in order to ensure that amphibians / other wildlife, such as hedgehog, do not shelter in brick piles;
 - f. Educate all personnel prior to construction as to best practice with regards to the protection of amphibians;
 - g. Educate all personnel prior to construction to be able to identify different species of amphibians;
 - h. In the event of discovery of evidence of a badger sett, all works must cease and a suitably qualified ecologist must be contacted for further advice. ERAP (Consultant Ecologists) Ltd can be contacted on 01772 750502; and
 - i. If any other sheltering wildlife are detected during works then these must be carefully placed within a clean bucket and immediately transported to suitable sheltered habitat outside the working area of the site.

⁶ Note that these measures may also be used to protect individual great crested newt during the proposed works, however as described above, a DLL must be in place before any site clearance works are commenced at the site.

5.5 Provision of Opportunities for Nesting Birds and Roosting Bats

Enhancing Habitats for Roosting Bats

- 5.5.1 It is recommended that the development incorporates the installation of two bat access panels at the new buildings.
- 5.5.2 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. Once the development layout has been finalised, an ecologist should advise on appropriate number and positions for the bat access panels. 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 box⁷

Enhancing Habitats for Nesting Birds

House Sparrow

- 5.5.3 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).
- 5.5.4 The installation of two house sparrow terrace nest boxes is recommended at the proposed new housing. 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.
- 5.5.5 Such bird boxes are available from the NHBS (www.nhbs.com) or Wild Care (www.wildcare.co.uk). Once the development layout has been finalised, an ecologist should advise on appropriate number and positions for the house sparrow terrace nest boxes. An example of a suitable house sparrow bird box is given below at **Insert 2**.

⁷ Left to right: IBstock Enclosed Bat Box 'c' (left); Habibat Bat Access Panels (centre left and centre right) and Greenwood's Ecohabitats' 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.



Insert 2: Schwegler 1SP House Sparrow Nesting Terrace

Swift

- 5.5.6 The swift (*Apus apus*) has recently been added to *The Birds of Conservation Concern Red list* (Stanbury, et al., 2021) owing to the recorded recent declines and its identified status as a high conservation priority.
- 5.5.7 The construction of the residential properties provides an opportunity for the installation of additional nesting opportunities for swift to assist their conservation. The installation of two suitable swift nest boxes is recommended at the new housing. 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.
- 5.5.8 Such bird boxes are available from the NHBS (www.nhbs.com) or Wild Care (www.wildcare.co.uk). Once the development layout has been finalised, an ecologist should advise on appropriate number and positions for the bat access panels. An example of a suitable swift nest boxes are illustrated at **Insert 3**.



Insert 3: Examples of swift nest boxes⁸

5.6 Maintenance of Habitat Connectivity Throughout the Developed Site

- 5.6.1 To ensure habitat connectivity is maintained as part of the development proposals, raised fencing or gaps within the proposed fencing to allow access by other wildlife (including hedgehog) should be incorporated across the site; example accesses are presented at **Insert 4**, 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.

⁸ From left to right No. 17A Schwegler Swift Nest Box (Triple Cavity) as installation (centre), Manthorpe Swift Nesting Box (right) and Ibstock Eco-habitat for Swift (right), all available from www.NHBS.com and / or Wild Care (www.wildcare.co.uk).



Insert 4: Showing wildlife access gap within fencing

5.7 Landscape Planting

- 5.7.1 It is recommended that the landscape planting within the residential site is composed from native species and species known to be of value for the attraction of wildlife.
- 5.7.2 It is recommended that trees which support blossom and fruit which will attract insects are incorporated into the landscape planting. Suitable species are presented in **Table 5.1**.

Table 5.1: Suitable Native Species for Tree and Shrub Planting

Scientific Name	Common Name	Scientific Name	Common Name
<i>Acer campestre</i>	Field Maple	<i>Prunus spinosa</i>	Blackthorn
<i>Corylus avellana</i>	Hazel	<i>Rosa arvensis</i>	Field Rose
<i>Crataegus monogyna</i>	Hawthorn	<i>Rosa canina</i>	Dog-rose
<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

- 5.7.3 The understorey and ground cover planting design should be prepared to optimise the attraction of invertebrates such as feeding bumblebees and butterflies. Where possible the use of native species should be maximised but where necessary non-native species known to be attractive to invertebrates should be used.
- 5.7.4 Planting schemes that include flowering species such as *Viburnum*, *Ceanothus*, *Hebe*, *Lavandula*, *Lonicera*, *Potentilla*, *Rosmarinus* and *Vinca* can maximise opportunities for feeding invertebrates and for the attraction of foraging bats and birds.
- 5.7.5 For further plants suitable for the attraction of pollinators please refer to the *Perfect for Pollinators Plant List* (Royal Horticultural Society, 2012). It is recommended that the selection of plant species at the site ensures that a variety of flowering species are available throughout the year.
- 5.7.6 Other appropriate plants to include within the landscaping scheme include night-scented flowers which will attract moth species and bats; a list of suggested species is presented at **Table 5.2**.

Table 5.2: Recommended Plants for Use in Gardens to Attract Bats⁹

Flowers for Borders	
Aubretia species (<i>Aubretia</i> sp.)	Michaelmas Daisy (<i>Aster</i> sp.)

⁹ Extracted from *Encouraging bats, A guide for bat-friendly gardening and living* (Bat Conservation Trust, 2016).

Candytuft (<i>Iberis sempervirens</i>)	Night-scented Stock (<i>Matthiola longipetala</i>)
Cherry pie (<i>Heliotropium arborescens</i>)	Oxeye Daisy (<i>Leucanthemum vulgare</i>)
Corncockle (<i>Agrostemma githago</i>)	Fiddleneck (<i>Phacelia tanacetifolia</i>)
Cornflower (<i>Centaurea cyanus</i>)	Poached Egg Plant (<i>Limnanthes douglasii</i>)
Corn Marigold (<i>Glebionis segetum</i>)	Primrose sp. (<i>Primula</i> sp.)
Corn Poppy (<i>Papaver rhoeas</i>)	Red Campion (<i>Silene dioica</i>)
Coneflower species (<i>Echinacea</i> sp.)	Common Valerian (<i>Valeriana officinalis</i>)
Bluebell (<i>Hyacinthoides non-scripta</i>)	Scabious species (<i>Scabiosa</i> sp.)
Evening primrose (<i>Oenothera biennis</i>)	St John's Wort species (<i>Hypericum</i> sp.)
Honesty (<i>Lunaria annua</i>)	Sweet William (<i>Dianthus barbatus</i>)
Ice plant 'Pink lady' (<i>Delosperma cooperi</i>)	Tobacco Plant species (<i>Nicotiana</i> sp.)
Knapweed species (<i>Centaurea</i> sp.)	Vervain species (<i>Verbena</i> sp.)
Mallow species (<i>Malva</i> sp.)	Wallflower species (<i>Erysimum</i> sp.)
Mexican aster (<i>Cosmos bipinnatus</i>)	
Herbs	
Wild Angelica (<i>Angelica sylvestris</i>)	Hyssop (<i>Hyssopus officinalis</i>)
Bergamot (<i>Monarda didyma</i>)	Lavender species (<i>Lavandula</i> sp.)
Borage (<i>Borago officinalis</i>)	Lemon Balm (<i>Melissa officinalis</i>)
Coriander (<i>Coriandrum sativum</i>)	Marjoram (<i>Origanum majorana</i>)
English Marigold (<i>Calendula officinalis</i>)	Rosemary (<i>Rosmarinus officinalis</i>)
Fennel (<i>Foeniculum vulgare</i>)	Sweet Cicely (<i>Myrrhis odorata</i>)
Feverfew (<i>Tanacetum parthenium</i>)	Thyme species (<i>Thymus</i> sp.)

6.0 CONCLUSION

- 6.1 This ecological assessment has demonstrated that a residential development at the site is feasible and acceptable in accordance with ecological considerations and the NPPF.
- 6.2 Measures to conserve the habitat connectivity and green infrastructure function through and around the site are entirely feasible and are achieved by the proposals plan.
- 6.3 Development at the site will provide an opportunity to secure ecological enhancement for fauna typically associated with residential areas such as breeding birds and roosting bats and the positive management of retained and created habitats in accordance with conservation objectives.
- 6.4 The development proposals can be achieved in accordance with wildlife legislation, relevant planning policy and best practice.

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8.0 APPENDIX 1: TABLES AND FIGURES

8.1 Plant Species Lists

Table 8.1: Plant Species List for Improved / Modified Grassland

Scientific Name	Common Name	DAFOR ¹	Cover
	Moss species	LA	<1%
	Ornamental shrubs	LA	<1%
	Ornamental Willow species	R	<1%
	Garden escapes	LA	<1%
<i>Acer pseudoplatanus</i>	Sycamore	VLA	<1%
<i>Agrostis capillaris</i>	Common Bent	O	5%
<i>Cerastium fontanum</i>	Common Mouse-ear	LA	<1%
<i>Chamerion angustifolium</i>	Rosebay Willowherb	VLA	<1%
<i>Cirsium arvense</i>	Creeping Thistle	LA	<1%
<i>Cotoneaster simonsii</i>	Himalayan Cotoneaster	R	<1%
<i>Crataegus monogyna</i>	Hawthorn	VLA	<1%
<i>Dactylis glomerata</i>	Cock's-foot	A	10%
<i>Dryopteris filix-mas</i>	Male-fern	VLF	<1%
<i>Elytrigia repens</i>	Common Couch	LA	<1%
<i>Equisetum arvense</i>	Field Horsetail	VLA	<1%
<i>Fragaria ananassa</i>	Garden Strawberry	R	<1%
<i>Fraxinus excelsior</i>	Ash	VLA	<1%
<i>Galium aparine</i>	Cleavers	LA	<1%
<i>Hedera helix</i>	Ivy	VLA	<1%
<i>Heracleum sphondylium</i>	Hogweed	VLA	<1%
<i>Holcus lanatus</i>	Yorkshire-fog	A	20%
<i>Hydrangea macrophylla</i>	Hydrangea	R	<1%
<i>Hypericum androsaemum</i>	Tutsan	VLA	<1%
<i>Impatiens glandulifera</i>	Indian Balsam	O	10%
<i>Iris pseudacorus</i>	Yellow Iris	VLA	<1%
<i>Juncus effusus</i>	Soft-rush	O	5%
<i>Lamium galeobdolon</i>	Variegated Yellow Archangel	VLA	<1%
<i>Lolium perenne</i>	Perennial Rye-grass	A	20%
<i>Lonicera periclymenum</i>	Honeysuckle	VLF	<1%
<i>Phalaris arundinacea</i>	Reed Canary-grass	VLA	<1%
<i>Plantago lanceolata</i>	Ribwort Plantain	LA	<1%
<i>Plantago major</i>	Greater Plantain	LA	<1%
<i>Poa annua</i>	Annual Meadow-grass	LA	<1%
<i>Poa pratensis</i>	Smooth Meadow-grass	O	10%
<i>Poa trivialis</i>	Rough Meadow-grass	O	10%
<i>Potentilla anserina</i>	Silverweed	VLF	<1%
<i>Prunus</i> sp.	Cherry species	VLA	<1%
<i>Prunus spinosa</i>	Blackthorn	VLA	<1%
<i>Ranunculus repens</i>	Creeping Buttercup	O	5%
<i>Rubus fruticosus</i> agg.	Bramble	LA	<1%
<i>Rumex obtusifolius</i>	Broad-leaved Dock	O	10%
<i>Senecio jacobaea</i>	Common Ragwort	R	<1%
<i>Sorbus aucuparia</i>	Rowan	R	<1%
<i>Taraxacum officinale</i> agg.	Dandelion	LA	5%
<i>Trifolium repens</i>	White Clover	O	5%

Scientific Name	Common Name	DAFOR ¹	Cover
<i>Urtica dioica</i>	Common Nettle	LA	<1%
¹ Key to DAFOR: D=Dominant, A=Abundant, F=Frequent, O=Occasional, R=Rare, V=Very, L=Local and *denotes a constant species			

Table 8.2: Plant Species List for Woodland Parcel at South-western Corner of Site

Scientific Name	Common Name	DAFOR ¹	Cover
<i>Acer pseudoplatanus</i>	Sycamore	O	10%
<i>Aesculus hippocastanum</i>	Horse-chestnut	O	10%
<i>Alnus glutinosa</i>	Alder	O	1%
<i>Crataegus monogyna</i>	Hawthorn	O	10%
<i>Dryopteris dilatata</i>	Broad Buckler-fern	VLA	<1%
<i>Dryopteris filix-mas</i>	Male-fern	VLA	<1%
<i>Galium aparine</i>	Cleavers	LA	<1%
<i>Hedera helix</i>	Ivy	VLA	<1%
<i>Hypericum androsaemum</i>	Tutsan	VLF	<1%
<i>Ilex aquifolium</i>	Holly	O	10%
<i>Impatiens glandulifera</i>	Indian Balsam	O	10%
<i>Iris pseudacorus</i>	Yellow Iris	VLF	<1%
<i>Juglans regia</i>	Walnut	LA	1%
<i>Lamium galeobdolon</i>	Variegated Yellow Archangel	LA	<1%
<i>Plantago lanceolata</i>	Ribwort Plantain	LF	<1%
<i>Polystichum lonchitis</i>	Holly-fern	R	<1%
<i>Prunus</i> sp.	Cherry species	O	10%
<i>Quercus robur</i>	Pedunculate Oak	O	2%
<i>Rubus fruticosus</i> agg.	Bramble	O	10%
<i>Urtica dioica</i>	Common Nettle	LA	5%
<i>X Cuprocyparis leylandii</i>	Leyland Cypress	LA	1%
¹ Key to DAFOR: D=Dominant, A=Abundant, F=Frequent, O=Occasional, R=Rare, V=Very, L=Local and *denotes a constant species			

Table 8.3: Plant Species List for Woodland Parcel at Northern Boundary

Scientific Name	Common Name	DAFOR ¹	Cover
	Moss species	LA	<1%
<i>Acer pseudoplatanus</i>	Sycamore	F	20%
<i>Betula pendula</i>	Silver Birch	O	5%
<i>Cerastium fontanum</i>	Common Mouse-ear	VLA	<1%
<i>Cirsium arvense</i>	Creeping Thistle	VLA	<1%
<i>Cirsium vulgare</i>	Spear Thistle	VLF	<1%
<i>Crataegus monogyna</i>	Hawthorn	O	10%
<i>Dryopteris dilatata</i>	Broad Buckler-fern	LA	<1%
<i>Dryopteris filix-mas</i>	Male-fern	LA	<1%
<i>Equisetum arvense</i>	Field Horsetail	VLA	<1%
<i>Fagus sylvatica</i>	Beech	O	10%
<i>Fraxinus excelsior</i>	Ash	LA	5%
<i>Heracleum sphondylium</i>	Hogweed	LF	<1%
<i>Holcus lanatus</i>	Yorkshire-fog	LA	2%
<i>Hypericum androsaemum</i>	Tutsan	LA	<1%
<i>Ilex aquifolium</i>	Holly	LA	5%
<i>Impatiens glandulifera</i>	Indian Balsam	O	5%
<i>Iris pseudacorus</i>	Yellow Iris	LA	<1%
<i>Juncus effusus</i>	Soft-rush	VLA	<1%
<i>Lolium perenne</i>	Perennial Rye-grass	LA	3%
<i>Potentilla anserina</i>	Silverweed	VLA	<1%
<i>Prunus</i> sp.	Cherry species	O	10%
<i>Prunus spinosa</i>	Blackthorn	LA	3%
<i>Quercus robur</i>	Pedunculate Oak	F	20%
<i>Ranunculus repens</i>	Creeping Buttercup	LA	<1%
<i>Rubus fruticosus</i> agg.	Bramble	O	5%
<i>Rumex obtusifolius</i>	Broad-leaved Dock	LF	<1%
<i>Salix caprea</i>	Goat Willow	O	3%
<i>Salix cinerea</i>	Grey Willow	O	1%
<i>Stellaria media</i>	Common Chickweed	VLA	<1%
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

Table 8.4: Photographs



Photo 1: Area of managed improved / modified grassland at the western area of the site



Photo 2: Area of managed improved / modified grassland at the western area of the site



Photo 3: Scattered tree at the area of managed improved / modified grassland at the western area of the site



Photo 4: Beech hedgerow at the area of managed improved / modified grassland at the southern site boundary



Photo 5: Improved / modified grassland



Photo 6: Improved / modified grassland



Photo 7: Woodland parcel at the northern site boundary



Photo 8: Woodland parcel at south-western corner of the site



Photo 9: Woodland parcel at the northern site boundary



Photo 10: Woodland parcel at the northern site boundary



Photo 11: Mammal hole within the woodland parcel at the northern site boundary

8.3 Figures

Figure 1: Aerial Image of the Site and its Surroundings

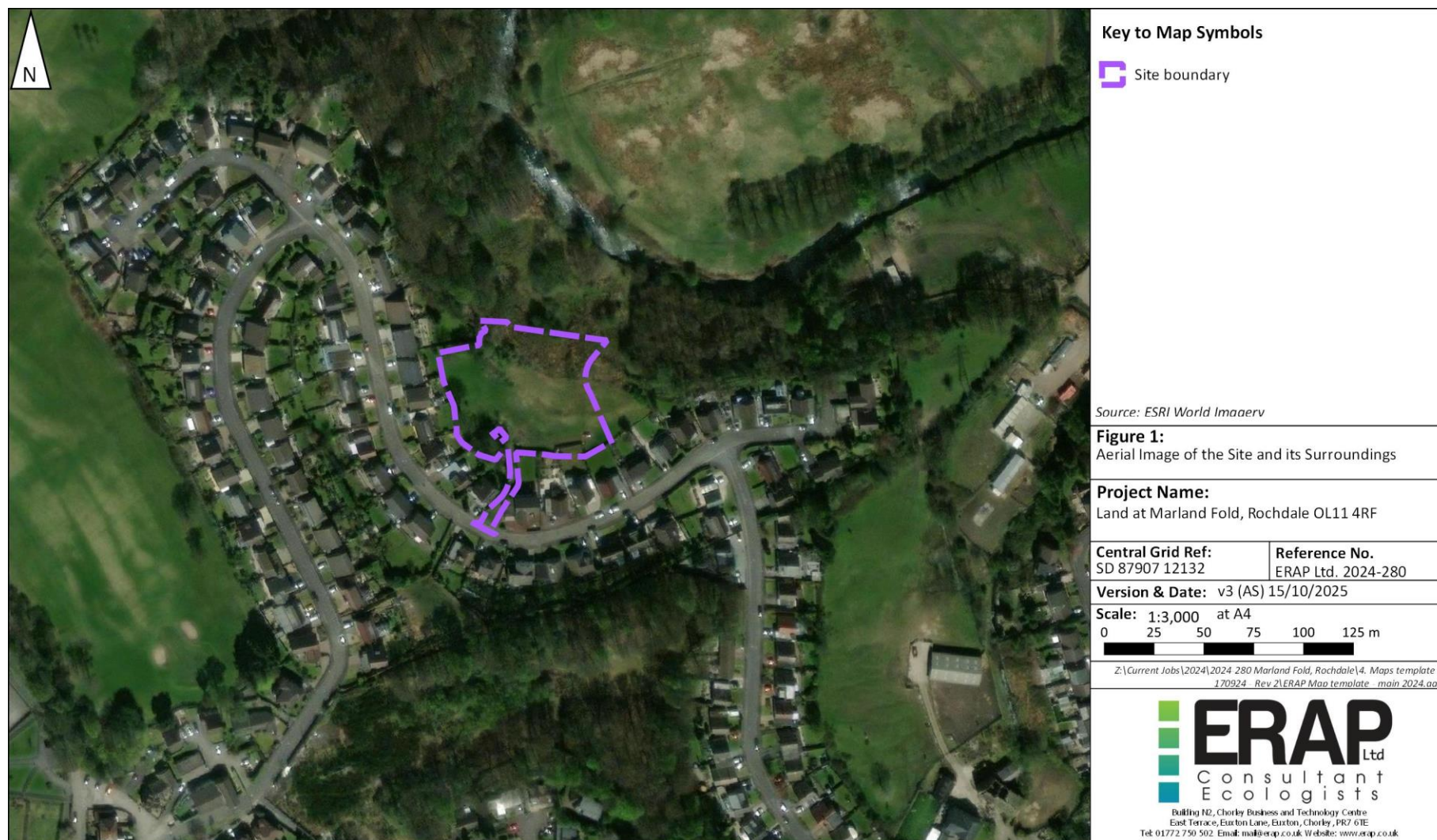


Figure 2: Phase 1 Habitat and Vegetation Map

