

Land off Salisbury View, Wiltshire BB1 9PJ

PRELIMINARY ECOLOGICAL APPRAISAL

September 2025

ERAP (Consultant Ecologists) Ltd Reference: 2025-247

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Document Control

Survey Type:	Surveyors	Survey Date(s)
Phase 1 Habitat survey	Amy Sharples B.Sc. (Hons) M.Sc. ACIEEM	16 th November 2021
Water Vole surveys	Chris Swindells	22 nd October 2019 25 th October 2021
Updated walkover survey	Amy Sharples	24 th May 2023
Updated walkover survey	Amy Sharples	21 st August 2025
Reporting	Personnel	Date
Author	Amy Sharples B.Sc. (Hons) M.Sc. ACIEEM Senior Ecologist	22 nd August 2025
Signature(s)		
Checked	Rebecca Bayley Graduate Ecologist	26 th August 2025
Revised and issued	Amy Sharples	26 th August 2025
Report issued to	Persimmon (Lancashire)	
Version Number	5: 9 th September 2025. Report produced following updated walkover survey in August 2025 and updated site boundary	

SUMMARY

Introduction and Scope

- i. This ecological survey and assessment presents the ecological, biodiversity and nature conservation status of the land off Salesbury View, Wiltshire. 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 2021 and 2023 and water vole and otter surveys undertaken in 2019, 2021 and 2023. An updated walkover survey was undertaken in August 2025. 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 grazed and cut field units of improved grassland with an area of unmanaged improved grassland in the north, a small area of woodland in the south, a hedgerow, a tree line and dry ditches.

Results of Survey and Assessment

- i. The proposals will have no adverse direct or indirect effect on statutory or non-statutory designated sites for nature conservation.
- ii. The small area of woodland in the southern area of the site and associated with Knotts Brook is Lowland Mixed Deciduous Woodland Priority Habitat and is assessed to be of value at county level. In combination, the woodlands and associated watercourse provide established habitat connectivity and green infrastructure function around the site. Protection of the woodland is recommended at **Section 5.2**.
- iii. Hedgerow 1 is also Priority Habitat and provides habitat connectivity function and is assessed to be of value at the local level. The removal of Hedgerow 1 (in accordance with the Proposed Site Layout) is considered a significant loss, however this loss can be compensated for by native shrub and hedgerow planting elsewhere at the site, as recommended at **Section 5.7**.
- iv. No other habitats within the site are representative of Priority Habitat.
- v. Indian Balsam and Rhododendron, invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), were detected. It is an offence to cause the spread of these species in the wild. Guidance on the removal and control of these species is described at **Section 5.3**.
- vi. Recommendations relating to the retention of features suitable for use by foraging and commuting bats, and features to enhance habitats for roosting bats at the site are presented at **Section 5.5**.
- vii. The hedgerow and trees provide favourable foraging and nesting habitat for the species of birds detected within the site and the wider area via the records search (including house sparrow, a Priority Species). Consideration of birds (including protection of breeding birds and recommended enhancements for Priority Species) are presented at **Section 5.5**.
- viii. The recommendations to maintain habitat connectivity across the developed site, for species such as hedgehog, as part of good practice are presented at **Section 5.6**.
- ix. No other protected species have been detected.

Recommendations

- x. 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.
- xi. The proposals will secure an opportunity to implement beneficial measures such as habitat management and 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

- xii. 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 Persimmon Lancashire to carry out an ecological assessment of the land off Salesbury View, Wilpshire BB1 9PJ (hereafter referred to as the 'site'). The Ordnance Survey (OS) grid reference at the centre of the site is SD 68886 31793. 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 August 2025 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*), water vole (*Arvicola amphibius*), otter (*Lutra lutra*), 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 (Office of the Deputy Prime Minister, 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; there has been no requirement to consider great crested newt (*Triturus cristatus*) 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, 2025): An online database of ancient and veteran trees;
- c. *Environment Agency Main River Map* (Environment Agency, 2018);
- d. England Peat Map (<https://england-peat-map-portal-ncea.hub.arcgis.com/>);
- e. Lancashire Local Nature Recovery Strategy (<https://www.lancashire.gov.uk/council/strategies-policies-plans/environmental/local-nature-recovery-strategy/>) and <https://experience.arcgis.com/experience/d429aa6435b849838af1d2cef68de43b>)
- f. Lancashire Environment Record Network; and
- g. Lancashire 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 16th November 2021. The weather was overcast with a light air (Beaufort scale 1) and 12°C.
- 2.2.2 An updated walkover survey was undertaken by Amy Sharples on 24th May 2023. The weather was sunny with scattered cloud and a light air (Beaufort scale 1) and 16°C.
- 2.2.3 An updated walkover survey was undertaken by Amy Sharples on 21st August 2025. The weather was dry with scattered cloud, a light air (Beaufort scale 1) and an air temperature of 16°C.
- 2.2.4 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.
- 2.2.5 On site habitat mapping was assisted via use of GPS technology and QField on-site mapping software, using ERSI world imagery and a site location plans as a baseplan.
- 2.2.6 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.
- 2.2.7 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.
- 2.2.8 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.

- 2.2.9 Hedgerows were assessed in accordance with *The Hedgerows Regulations 1997* wildlife and landscape criteria (H.M.S.O., 1997).
- 2.2.10 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).
- 2.2.11 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:
 - a. Setts entrances, e.g. entrances that are normally 25 to 35cm in diameter and shaped like a 'D' on its side;
 - b. Large spoil heaps outside sett entrances;
 - c. Bedding outside sett entrances;
 - d. Badger footprints;
 - e. Badger paths;
 - f. Latrines;
 - g. Badger hairs on fences or bushes;
 - h. Scratching posts; and
 - i. 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. 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 and shrub 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

Water Vole and Otter

- 2.3.14 Knotts Brook lies adjacent to the southern site boundary.
- 2.3.15 Knotts Brook was assessed in accordance with the following methods to determine any field signs of water vole and otter and their suitability for water vole and otter. A total of 400 metres of watercourse was surveyed in total.
- 2.3.16 The survey methods detailed in *Water Vole Field Signs and Habitat Assessment: A Practical Guide to Water Vole Surveys* (Dean, 2021) and *The Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series)* Eds. Fiona Mathews and Paul Chanin (Dean, et al., 2016), were applied and the watercourse and its associated banks were searched for burrows, latrines, feeding remains, runs, feeding lawns, nests and footprints.
- 2.3.17 The otter survey was undertaken in accordance with the habitat requirements and preferences detailed in *Ecology of the European Otter. Conserving Natura 2000 Rivers, Ecology Series 10* (Chanin, 2003) and searches were made for signs of otter in accordance with *Monitoring the Otter Lutra lutra. Conserving Natura 2000 Rivers Monitoring Series No 10* (Chanin, 2003) and *Otters: advice for making planning decisions* (Natural England, 2022).
- 2.3.18 Knotts Brook was searched for dung (spraints), tracks (footprints), feeding remains, otter slides (into water), holts (underground dens) and couches (above ground sites where otters rest during the day).

Other Wildlife

- 2.3.19 Evidence of other wildlife, including Priority Species, 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.
- 2.3.20 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 All areas of the site were accessed at the time of the survey. No significant survey limitations were experienced. CONSIDER ACCESS LIMITATIONS, THE DATE OF THE SURVEY AND ANYTHING ELSE.
- 2.4.2 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* (Ministry of Housing, Communities & Local Government, 2024)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 (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 Lancashire BAP has been taken into account in the evaluation of the site.

3.0 SURVEY RESULTS

3.1 Desktop Study and Data Search

Site Allocations

- 3.1.1 The site is allocated for residential development to meet housing requirements under Housing Allocation Policy 2 of *A Local Plan for Ribble Valley 2008-2028* (Ribble Valley Borough Council, 2019).

Statutory Designated Sites for Nature Conservation and SSSI Impact Risk Zones

- 3.1.2 The site is not and does not form part of any statutory designated site for nature conservation.
- 3.1.3 The site lies within a Site of Special Scientific Interest (SSSI) Impact Risk Zone for Red Scar and Tun Brook Woods SSSI, West Pennine Moors SSSI, Clock Wood Gorge SSSI and Harper, Clough and Smalley Delph Quarries SSSI.
- 3.1.4 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: 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.

²Hereafter the NPPF

Discharge: Any discharge of water or liquid waste of more than 20m³/day that is discharged to ground (i.e. to seep away) or to surface water, such as a beck or stream.

3.1.5 The proposed development does not match any of the descriptions, and the SSSI Impact Risk Zone states:

'You do not need to consult Natural England on the proposed development at this location.

The Impact Risk Zones for Sites of Special Scientific Interest (SSSI IRZs) indicate that at the location selected, the proposed development is unlikely to have a harmful effect on terrestrial Sites of Special Scientific Interest (SSSIs) and the Special Areas of Conservation (SACs), Special Protection Areas (SPAs) or Ramsar sites that they underpin.

Therefore, you do not need to consult Natural England on the likely impacts of development on terrestrial SSSIs and the SACs, SPAs or Ramsar sites that they underpin.'

Non-statutory Designated Sites for Nature Conservation

3.1.6 The site is not and does not form part of any non-statutory designated site for nature conservation, called Biological Heritage Sites (BHS) or District Wildlife Sites (DWS) in Lancashire.

3.1.7 Five BHS and two DWS are located within a 2 kilometres radius from the centre of the site, and are summarised in **Table 3.1**.

Table 3.1: BHS and DWS Within a 2 Kilometres Radius from the Centre of the Site

Name	Distance and Direction from the Site	Reasons for Designation
Parsonage Reservoir BHS and DWS	0.72 kilometres east	The BHS and DWS comprises a reservoir straddling the boundary between the districts of Hyndburn and Ribbles Valley. The site is important for the presence of water-purslane, a species that is included in the <i>Provisional Lancashire Red Data List of Vascular Plants</i> .
Ramsgreave Wood BHS	0.83 kilometres west	The BHS comprises woodland which is ancient semi-natural in character.
Hazel Moor BHS	0.93 kilometres north-west	To BHS comprises of two areas of biological interest. To the south a rectangular area of common land between Ribchester Road and the nearby cricket ground, to the north a mosaic of grassland, scrub and developing woodland along both sides of Lovely Hall Lane.
Haggs's Wood BHS	1.2 kilometres west	The BHS comprises woodland which is ancient semi-natural in character.
Pleckgate Rough BHS and DWS	1.64 kilometres south-west	The BHS and DWS comprises an area of acid grassland on the edge of playing fields to the south of Ramsgreave Drive, in the Pleckgate area of Blackburn. The mosses on the site are of particular interest; the site is one of only a few known localities in Lancashire for Compact Bog-moss. Other mosses occurring include, Cow-horn Bog-moss, Bog Groove-moss, Common Haircap and Springy Turf-moss.

3.1.8 The presence of the BHS and DWS is considered further at **Section 4.2**.

Local Nature Recovery Strategy

3.1.9 There are no local nature measures identified by the Lancashire Local Nature Recovery Strategy Map.

Main River Designation

3.1.10 In accordance with *Main River* Map (Environment Agency, 2018) the ditches located within the site and Knotts Brook which lies adjacent to the southern site boundary are not Main Rivers.

Priority Habitats Inventory

3.1.11 The Priority Habitats Inventory³ was checked via MAGiC Maps. No Priority Habitats are identified at the site by the inventory.

Ancient Tree Inventory

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

Protected and Notable Species

3.1.13 Records of protected and notable species for a 2 kilometres radius from the centre of the site are summarised in **Table 3.2**.

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	Common frog (<i>Rana temporaria</i>): WCAs5 & LBAP (slae only). 7 records, dated between 1988 and 2020. The closest record is 940 metres to the north, and from 2020.
Birds – WCAs1 Species	Barn owl (<i>Tyto alba</i>): WCAs1. 1 record from 2024. 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. Goldeneye (<i>Bucephala clangula</i>): WCAs1. 1 record from 1991, located 1055 metres to the east.
Birds – Priority Species & LBAP	PS & LBAP: Skylark (<i>Alauda arvensis</i>), herring gull (<i>Larus argentatus</i>), curlew (<i>Numenius arquata</i>), house sparrow (<i>Passer domesticus</i>), dunnoek (<i>Prunella modularis</i>), bullfinch (<i>Pyrrhula pyrrhula</i>), starling (<i>Sturnus vulgaris</i>), song thrush (<i>Turdus philomelos</i>) and lapwing (<i>Vanellus vanellus</i>). PS Only: Lesser redpoll (<i>Acanthis cabaret</i>). LBAP Only: Common sandpiper (<i>Actitis hypoleucos</i>), meadow pipit (<i>Anthus pratensis</i>), swift (<i>Apus apus</i>), grey heron (<i>Ardea cinerea</i>), pochard (<i>Aythya ferina</i>), black-headed gull (<i>Chroicocephalus ridibundus</i>), kestrel (<i>Falco tinnunculus</i>), oystercatcher (<i>Haematopus ostralegus</i>), lesser black-backed gull (<i>Larus fuscus</i>) and willow warbler (<i>Phylloscopus trochilus</i>).
Bony Fish	PS & LBAP: European eel (<i>Anguilla anguilla</i>) and brown/sea trout (<i>Salmo trutta</i>). LBAP Only: Bullhead (<i>Cottus gobio</i>) and brown trout (<i>Salmo trutta</i> subsp. fario).

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
Flowering Plants	LBAP Only: Narrow-leaved Water-plantain (<i>Alisma lanceolatum</i>), Barberry (<i>Berberis vulgaris</i>), Small Water-pepper (<i>Persicaria minor</i>), Common Cornsalad (<i>Valerianella locusta</i>) and Blue Water-speedwell (<i>Veronica anagallis-aquatica</i>).
Insect – Butterfly	Ringleet (<i>Aphantopus hyperantus</i>): LBAP. 1 record from 2019, located 345 metres to the south-west. Wall (<i>Lasiommata megera</i>): PS & LBAP. 2 records, dated 1999 and 2000. The closest record is 105 metres to the south-west, and from 2000. White-letter hairstreak (<i>Satyrrium w-album</i>): WCAs5, PS & LBAP. 1 record from 2003, located 35 metres to the south-west.
Insect - Moth	PS & LBAP: V-moth (<i>Macaria wauaria</i>). PS Only: Grey dagger (<i>Acronicta psi</i>), knot grass (<i>Acronicta rumicis</i>), green-brindled crescent (<i>Allophyes oxyacanthae</i>), mouse moth (<i>Amphipyra tragopoginis</i>), dusky brocade (<i>Apamea remissa</i>), centre-barred sallow (<i>Atethmia centrargo</i>), mottled rustic (<i>Caradrina morpheus</i>), latticed heath (<i>Chiasmia clathrata</i>), small square-spot (<i>Diarsia rubi</i>), small phoenix (<i>Ecliptopera silaceata</i>), dusky thorn (<i>Ennomos fuscantaria</i>), autumnal rustic (<i>Eugnorisma glareosa</i>), spinach (<i>Eulithis mellinata</i>), ghost moth (<i>Hepialus humuli</i>), rustic (<i>Hoplodrina blanda</i>), rosy rustic (<i>Hydraecia micacea</i>), dot moth (<i>Melanchra persicariae</i>), powdered quaker (<i>Orthosia gracilis</i>), shaded broad-bar (<i>Scotopteryx chenopodiata</i>), white ermine (<i>Spilosoma lubricipeda</i>), feathered gothic (<i>Tholera decimalis</i>), cinnabar (<i>Tyria jacobaeae</i>), oak hook-tip (<i>Watsonalla binaria</i>), dark-barred twin-spot carpet (<i>Xanthorhoe ferrugata</i>) and neglected rustic (<i>Xestia castanea</i>). LBAP Only: Gold spangle (<i>Autographa bractea</i>), puss moth (<i>Cerura vinula</i>) and dark marbled carpet (<i>Dysstroma citrata</i>).
Terrestrial Mammals	Badger (<i>Meles meles</i>): PBA. 1 record from 1946, located more than 1.5 kilometres from the site. Brown hare (<i>Lepus europaeus</i>): PS & LBAP. 13 records, dated between 2012 and 2021. The closest record is to the south of the site; an accurate estimation of distance and direction of the record to the site cannot be made due to the locational data being less than a six figure grid reference. Brown long-eared bat (<i>Plecotus auritus</i>): EPS, WCAs5, PS & LBAP. 2 records, both from 2022. The closest record is 1045 metres to the south. Common pipistrelle (<i>Pipistrellus pipistrellus</i>): EPS & WCAs5. 18 records, dated between 2009 and 2020. The closest record is 1350 metres to the north-west, and from 2014. Hedgehog (<i>Erinaceus europaeus</i>): PS & LBAP. 18 records, dated between 2007 and 2023. The closest record is 435 metres to the south-west, and from 2021. Myotis bat species (<i>Myotis</i>): EPS, WCAs5 & LBAP. 6 records, dated between 2014 and 2020. The closest record is 1050 metres to the south, and from 2014. Noctule (<i>Nyctalus noctula</i>): EPS, WCAs5, PS & LBAP. 3 records, dated between 2014 and 2022. The closest record is 1045 metres to the south, and from 2022. Otter (<i>Lutra lutra</i>): EPS, WCAs5, PS & LBAP. 1 record from 2015, located 835 metres to the south-west. Pipistrelle (<i>Pipistrellus</i>): EPS, WCAs5 & LBAP. 13 records, dated between 1986 and 2022. The closest record is 270 metres to the south, and from 2018. Soprano pipistrelle (<i>Pipistrellus pygmaeus</i>): EPS, WCAs5, PS & LBAP. 7 records, dated between 2014 and 2022. The closest record is 1045 metres to the south, and from 2022.
¹Key to Designation Codes:	

Taxon Group	Species Name and Designations ¹ and Notes
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. LBAP = Species listed on the Lancashire Biodiversity Action Plan.	

- 3.1.14 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 5.05 hectare site is in a suburban location in the south of Wilpshire, Ribble Valley with the southern edge of the site lying close to the boundary of Blackburn with Darwen Borough Council. The site comprises fields of grazed / cut improved grassland with a section of unmanaged improved grassland at the northern area of the site, a small area of woodland in the south, a hedgerow, a tree line and dry ditches. The site slopes upwards in a north-easterly direction.
- 3.2.2 The site boundaries are demarcated by fence lines and stone walls. Grazed improved grassland similar to the grassland within the site lies to the east of the site. Knotts Brook and further woodland lies adjacent to the south-eastern and southern site boundaries. Existing residential developments lie adjacent to the northern and western site boundaries.
- 3.2.3 The appended **Figure 2** can be referred to for all habitat descriptions. Photographs are appended in **Section 8.2**.

Improved Grassland

- 3.2.4 At the time of the survey the site supported grazed / cut improved grassland, with a section of unmanaged improved grassland in the northern area of the site (**Photos 1 and 2**).
- 3.2.5 The vegetation is characterised by constant and abundant Perennial Rye-grass (*Lolium perenne*) with frequent Cock's-foot (*Dactylis glomerata*) and Yorkshire-fog (*Holcus lanatus*), occasional Smooth Meadow-grass (*Poa pratensis*), Rough Meadow-grass (*Poa trivialis*), Creeping Buttercup (*Ranunculus repens*) and White Clover (*Trifolium repens*) and locally abundant Creeping Bent (*Agrostis stolonifera*), Common Couch (*Elytrigia repens*) and Common Nettle (*Urtica dioica*). A plant species list is appended at **Table 8.1**.
- 3.2.6 The improved grassland is characteristic of an *MG7 Perennial Rye-grass* grassland ley community of the NVC (Rodwell, 1992), and is described by the UKHab as g4 modified grassland with the following secondary codes: 14 scattered rushes, 101 cattle grazed and 106 mown.

Hedgerow 1

- 3.2.7 Hedgerow 1 (**Photo 3**) is 206 metres long and separates the south-western field unit from the south-eastern field unit, and is unmanaged. The base of the hedgerow is grazed and a dry ditch is associated with the southern length of the hedgerow.

- 3.2.8 The woody vegetation is characterised by constant and abundant Hawthorn (*Crataegus monogyna*) with occasional Ash (*Fraxinus excelsior*) and locally abundant Pedunculate Oak (*Quercus robur*), Goat Willow (*Salix caprea*) and Grey Willow (*Salix cinerea*). The understorey is characterised by occasional Cock's-foot, Yorkshire-fog, Perennial Rye-grass and Bramble (*Rubus fruticosus* agg.) with locally abundant Ivy (*Hedera helix*), Annual Meadow-grass (*Poa annua*), Smooth Meadow-grass, Rough Meadow-grass and Creeping Buttercup. A plant species list is appended at **Table 8.2**.
- 3.2.9 The hedgerow is characteristic of a W21 Hawthorn - Ivy community of the NVC (Rodwell, 1991), and is described by the UKHab as h2a Hedgerow (Priority Habitat) with the following secondary codes: 524 invasive non-native and 612 fence.
- 3.2.10 As detailed at **Table 8.3**, Hedgerow 1 does not currently meet the criteria to be assessed and 'important' in accordance with *The Hedgerows Regulations 1997*.

Tree Line 1

- 3.2.11 Tree line 1 (**Photo 4**) separates the south-western field unit from the northern field unit and comprises Pedunculate Oak, Hawthorn, Goat Willow, Alder (*Alnus glutinosa*), Holly (*Ilex aquifolium*) and Bramble. A dry ditch lies at the eastern end of the tree line.
- 3.2.12 The tree line is not characteristic of an NVC community, and is described by the UKHab as w woodland and forest with the secondary code 33 line of trees.

Woodland

- 3.2.13 The small area of woodland (**Photo 5 and 6**) in the southern area of the site forms part of a wider woodland area which supports a canopy layer which is characterised by occasional Sycamore (*Acer pseudoplatanus*), Silver Birch (*Betula pendula*) and Pedunculate Oak (*Quercus robur*), a scrub layer characterised by occasional Bramble (*Rubus fruticosus* agg.) and locally abundant Holly (*Ilex aquifolium*), and a ground layer characterised by frequent Indian Balsam and locally abundant moss species, Yorkshire-fog, Soft-rush, Perennial Rye-grass and Common Nettle. A plant species list is appended at **Table 8.4**.
- 3.2.14 The woodland is not characteristic of an NVC community, and is described by the UKHab as w1g other broadleaved woodland.

Invasive Plant Species

- 3.2.15 No Japanese Knotweed is present at the site.
- 3.2.16 As illustrated on **Figure 2**, stands of Indian Balsam were detected at Hedgerow 1. The woodland supports stands of Rhododendron and Indian Balsam is present throughout. These species are listed on Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended); it is an offence to spread or cause its 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. No evidence of badger such as setts / holes, prints, hairs, dung pits or snuffle holes were detected at the site or in the immediate surrounding area.

Due to the absence of any field signs of badger, the presence of badger at the site is reasonably discounted. No further survey for badger is required.

Bat Species

Daytime Survey: Trees

- 3.3.2 No trees within the site support features suitable for use by roosting bats. All trees within the site are categorised as ‘none’ suitability for use by roosting bats.

Habitat Assessment for Commuting and Foraging Bats

- 3.3.3 The grassland, hedgerow and tree line within the site may be suitable for and contribute to the wider foraging area of low numbers 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*).
- 3.3.4 The woodland at the southern area of the site is suitable for use by foraging bats and is assessed as ‘low’ suitability.

Bird Species

- 3.3.5 Birds detected in the site in August 2024 are listed in **Table 3.3**.

Table 3.3: Bird species Detected on 21st August 2025

Scientific Name	Common Name	BOCC Status ¹
<i>Columba palumbus</i>	Wood pigeon	Amber
<i>Pica pica</i>	Magpie	Green
<i>Turdus merula</i>	Blackbird	Green

¹BOCC: Birds of Conservation Concern (Stanbury, et al., 2021).

- 3.3.6 The woodland, hedgerow and trees 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**.
- 3.3.7 The site slopes upwards in a north-easterly direction and is grazed, with the exception of a small unmanaged area in the north of the site in close proximity to existing residential properties. It is considered that the habitats in the site are not suitable for ground nesting birds.

Reptiles

- 3.3.8 The grazed habitats within the site provide poor quality habitat for sheltering, basking and hibernating reptiles. The homogenous vegetation supports little variation in its physiognomy. The species-poor habitats within the site are reasonably unlikely to support a large populations or a variety of invertebrate prey. The presence of reptiles within the site is reasonably discounted.

Water Vole and Otter

- 3.3.9 No evidence of use of the dry ditches within the site by water vole or otter was found.
- 3.3.10 No evidence of the use of Knotts Brook by water vole or otter was found during the survey.

Other Wildlife

- 3.3.11 The site provides habitats suitable for use by foraging and sheltering 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 It is proposed to develop the site to housing with associated roads, hard standing and landscaping with the retention of the majority of Tree Line 1 and the full retention of the small area of woodland in the south of the site, refer to *Site Location Plan, Drawing Revision P4* (IDPartnership Northern, 2025).
- 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 site does not support any habitats or species which contribute to, or complement the identified designated sites (statutory and non-statutory) in the wider area. The site is not directly or hydrologically linked to any of the designated sites.
- 4.2.2 No potential pathways for direct or indirect adverse impacts or likely significant effects on the integrity and conservation objectives of the statutory and non-statutory designated sites in the wider area as a result of the development proposals are identified.

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.
- 4.3.2 The habitat directly adjacent to the northern site boundary does not match the description of the Lowland Mixed Deciduous Woodland Priority Habitat, with existing residential properties and other buildings lying adjacent to the northern site boundary. The woodland in the southern area of the site associated with Knotts Brook is Lowland Mixed Deciduous Woodland Priority Habitat and is assessed to be of value at the county level in terms of the habitat's importance in a geographical context⁴. In combination, the woodlands and associated watercourse provide established habitat connectivity and green infrastructure function around the site. Protection of the woodland and off-site habitat adjacent to the southern site boundary is recommended at **Section 5.2**.

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.

- 4.3.3 The proposals have the potential for indirect impacts on the woodland such as damage through inappropriate construction techniques and by increased recreational pressures. These impacts are assessed below.

Damage of the Woodland During the Construction Phase of the Proposed Development

- 4.3.4 Inappropriate construction techniques have the potential to impact upon the nature conservation value of the habitats associated with the woodland via direct damage and pollution. Appropriate measures to ensure that the woodland is protected during the construction phase of the proposed development are presented at **Section 5.2** of this report.
- 4.3.5 It is considered that the protection of the woodland during works is feasible provided appropriate measures are taken for its protection, and impacts to the woodland during the construction phase of the proposed development can be avoided.

Recreational Impacts

- 4.3.6 The proposed development will retain the existing footpath links and therefore no additional links into the wider area will be created. It is considered that the development will not create significant additional recreational pressure on the woodland due to the existing public footpath system.

Garden Encroachment

- 4.3.7 The proposed development will increase the potential for garden encroachment of the woodland.

Habitat Degradation Due to Lighting

- 4.3.8 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 woodland is recommended at **Section 5.2**.

Summary

- 4.3.9 The proposals plan demonstrates that the site has been designed to minimise direct impacts to the woodland and to ensure that impacts such as garden encroachment can be avoided. Appropriate measures to be adopted during the construction phase of the proposed development will avoid impacts associated with development during this phase of the proposals and are presented at **Section 5.2**.
- 4.3.10 Hedgerow 1 is also Priority Habitat (albeit species poor) and provides habitat connectivity function and is assessed to be of value at the local level. In accordance with the Proposed Site Layout it is proposed to remove Hedgerow 1. The removal of Hedgerow 1 is considered a significant loss, however this loss can be compensated for by native shrub and hedgerow planting elsewhere at the site, as recommended at **Section 5.7**.
- 4.3.11 No other habitats within the site are representative of Priority Habitat.
- 4.3.12 The improved grassland is not identified to be of greater ecological value than at the site level.
- 4.3.13 The presence of Indian Balsam and Rhododendron, invasive species listed under Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended), have been detected within the site. It is considered that the proposals present an opportunity for the removal and control 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. Recommendations relating to the retention of features suitable for use by foraging and commuting bats, and features to enhance habitats for roosting bats at the site are presented at **Section 5.5**.
- 4.4.2 The woodland, hedgerow and trees provide favourable foraging and nesting habitat for the species of birds detected within the site and the wider area via the records search (including house sparrow, a Priority Species). Consideration of birds (including protection of breeding birds and recommended enhancements for Priority Species) are presented at **Section 5.5**.

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 development.

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

- 5.2.1 It is recommended that, where possible, the woodland, hedgerow and tree line are retained by the proposed development and enhancements sought via appropriate management where this is feasible.
- 5.2.2 In accordance with the site layout, the woodland will be retained by the proposed development and the majority of Tree Line 1 will also be retained. Hedgerow 1 will be removed.
- 5.2.3 It is acknowledged that habitat will be lost as a consequence of the proposals. To compensate for the loss it is recommended that the proposals include new native hedgerow planting.
- 5.2.4 It is also recommended that the proposal incorporate native tree and shrub / scrub planting and swales of wildflower grassland at the open space to compensate for the loss of improved grassland at the site.
- 5.2.5 It is recommended that the site layout accommodates the following:

- a. 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);
- b. Compensation for the loss of grassland habitat via the provision of wildflower grassland within the landscape planting within the site;
- c. Use of native species in the landscape planting scheme; and
- d. 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);
- e. Avoidance of unnecessary lighting and preparation and implementation of a sympathetic external lighting scheme in accordance with current guidance (see below);
- f. 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
- g. 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

- 5.2.6 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.'

- 5.2.7 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, areas of ecological enhancement and any landscape planting, as lighting overspill may deter use by wildlife such as foraging bats.

- 5.2.8 The lighting scheme will be designed with reference to current guidance, namely:

- a. *Guidance Note 08/23: Bats and Artificial Lighting at Night* (Institution of Lighting Professionals & Bat Conservation Trust, 2023); and
- b. *Bats and lighting: Overview of current evidence and mitigation guidance* (Stone, 2014).

5.3 Protection of Existing Features and Wildlife During Construction Phase

Protection of Trees

- 5.3.1 During the construction phase, temporary protective demarcation fencing will be used to protect any 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.
- 5.3.2 The fencing will be in accordance with BS5837:2012 Trees in Relation to Design, Demolition and Construction: Recommendations (BSI, 2012).

Protection of Knotts Brook

- 5.3.3 The guidance presented at *Pollution prevention for businesses* (Defra and the Environment Agency, 2023) will be adhered to at any works near Pond 1. Appropriate measures must be adopted to ensure the protection of the pond for the following:
- a. Activities which involve pollution substances;
 - b. Activities which produce contaminated water;
 - c. Activities which use drains;
 - d. Storage of materials, products and waste;
 - e. Unloading and moving of potential pollutants;
 - f. Construction, inspection and maintenance activities near watercourses; and
 - g. Works in, over or near a river, stream, lake or pond.

- 5.3.4 It is recommended that a pollution incident response plan is prepared prior to the commencement of works, and an environmental management system (EMS) is prepared to help avoid pollution and act to ensure appropriate actions are taken if an incident occurs.

Protection of Bat Foraging Habitat During Works; Construction Phase Lighting

- 5.3.5 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. This specification should be included within a Construction Environmental Management Plan (CEMP) or similar document.

Protection of Nesting Birds

- 5.3.6 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.
- 5.3.7 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.

Reasonable Avoidance Measures Method Statement for Hedgehog and Other Wildlife

- 5.3.8 During the site preparation works and construction operations it is essential that the following best practice and Reasonable Avoidance Measures Method Statement (RAMMS) are applied for the protection of amphibians and terrestrial mammals:
- a. All site personnel must be made aware of this RAMMS and best practice guidance;
 - b. A pre-commencement check of the site for amphibians and terrestrial mammals including hedgehog will be completed by a suitably experienced ecologist prior to the commencement of works. The results of the pre-commencement surveys will be presented in the form a letter;

- c. During works all arising waste must be either removed from the area or placed in a skip to avoid the accumulation of materials that may create suitable habitat and shelter for terrestrial mammals;
- d. During construction, bricks etc. must ideally be stored on pallets or raised from the ground in another suitable manner in order that no suitable habitat for hedgehog is created;
- e. Trenches or holes must be fitted with a means of escape (such as ramped edge or a sloping plank of timber). This will ensure that any inquisitive animals do not become trapped;
- f. Deep trenches / excavations must not be left open overnight. Any open excavations (e.g. foundations/ footings/ service trenches etc) will be covered with plywood sheeting (or similar) at the end of each working day;
- g. Any pipes must be stored with caps on (to prevent animal entry);
- h. No fires must be lit at the site;
- i. The use of chemicals (such as fertilisers and herbicides) harmful to wildlife should be avoided wherever possible;
- j. If any common amphibian species (except great crested newt) is detected on site, it must be carefully picked up, placed in a clean bucket and moved to an area of suitable habitat beyond the working area; and
- k. If a hedgehog is detected on site, it must be carefully picked up, placed in a clean bucket and moved to an area of suitable habitat beyond the working area. ERAP (Consultant Ecologists) Ltd (01772 750502) can be contacted for further guidance if required.

Invasive Plant Species

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

5.4 Provision of Opportunities for Nesting Birds and Roosting Bats

Enhancing Habitats for Roosting Bats

- 5.4.1 It is recommended that the development incorporates the installation of bat access panels at the new buildings.
- 5.4.2 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 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 box⁵

Enhancing Habitats for Nesting Birds

House Sparrow

- 5.4.3 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).
- 5.4.4 The installation of 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.
- 5.4.5 Once the development layout has been finalised, an ecologist should advise on appropriate positions for the bird boxes. 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 2**.



Insert 2: Schwegler 1SP House Sparrow Nesting Terrace

Swift

- 5.4.6 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.
- 5.4.7 The installation of swift 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

⁵ 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.

boxes should ideally be sited facing north to east, to avoid exposure to direct sunlight, which may cause overheating of chicks in the nest.

- 5.4.8 Once the development layout has been finalised, an ecologist should advise on appropriate positions for the bird boxes. 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 swift nest boxes is given below at **Insert 3**.



Insert 3: Examples of swift nest boxes⁶

5.5 Maintenance of Habitat Connectivity Throughout the Developed Site

- 5.5.1 To ensure habitat connectivity is maintained as part of the development proposals, 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.



Insert 4: Showing wildlife access gap within fencing

5.6 Enhancement and Management of Retained Habitats and Landscape Planting

Enhancement and Management of the Retained Habitats

- 5.6.1 It is recommended that the retained woodland habitat is brought into active management for biodiversity and to promote the longevity of these habitats. A Habitat Management Plan would be prepared to include the following:

⁶ 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).

- a. Specification of the removal/control and safe disposal of invasive species such as Indian Balsam etc.;
- b. Installation of bird boxes including boxes of a design for specific species such as nuthatch and robin;
- c. Creation of dead wood habitat piles for colonisation by invertebrates, fungi and small mammals including hedgehog (Priority Species); and
- d. Plug planting of woodland herbs such as native Bluebell (*Hyacinthoides non-scripta*).

Landscape Planting

- 5.6.2 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.
- 5.6.3 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

- 5.6.4 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.
- 5.6.5 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.
- 5.6.6 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.
- 5.6.7 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 Bats⁷

Flowers for Borders	
Aubretia species (<i>Aubretia</i> sp.)	Michaelmas Daisy (<i>Aster</i> sp.)
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 National Planning Policy Framework.
- 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 Measures to conserve the habitat connectivity through the site are entirely feasible.
- 6.4 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.

⁷ Extracted from *Encouraging bats, A guide for bat-friendly gardening and living* (Bat Conservation Trust, 2016).

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8.0 APPENDIX 1: TABLES AND FIGURES

8.1 Plant Species Lists

Table 8.1: Plant Species List for Improved Grassland

Scientific Name	Common Name	DAFOR ¹	Cover
	Moss species	LA	2%
<i>Agrostis stolonifera</i>	Creeping Bent	LA	5%
<i>Bellis perennis</i>	Daisy	LA	2%
<i>Buddleja davidii</i>	Butterfly-bush	LF	<1%
<i>Cerastium fontanum</i>	Common Mouse-ear	LF	1%
<i>Cirsium arvense</i>	Creeping Thistle	VLA	<1%
<i>Cirsium vulgare</i>	Spear Thistle	VLF	<1%
<i>Crataegus monogyna</i>	Hawthorn	VLF	<1%
<i>Dactylis glomerata</i>	Cock's-foot	F	15%
<i>Elytrigia repens</i>	Common Couch	LA	5%
<i>Galium aparine</i>	Cleavers	VLA	<1%
<i>Holcus lanatus</i>	Yorkshire-fog	F	15%
<i>Juncus effusus</i>	Soft-rush	LA	1%
<i>Lolium perenne</i>	Perennial Rye-grass	A*	20%
<i>Matricaria discoidea</i>	Pineappleweed	VLA	<1%
<i>Phalaris arundinacea</i>	Reed Canary-grass	LF	<1%
<i>Poa annua</i>	Annual Meadow-grass	LA	<1%
<i>Poa pratensis</i>	Smooth Meadow-grass	O	5%
<i>Poa trivialis</i>	Rough Meadow-grass	O	5%
<i>Ranunculus repens</i>	Creeping Buttercup	O	10%
<i>Rumex acetosa</i>	Common Sorrel	LF	<1%
<i>Rumex obtusifolius</i>	Broad-leaved Dock	VLA	<1%
<i>Salix caprea</i>	Goat Willow	LF	<1%
<i>Senecio jacobaea</i>	Common Ragwort	LF	<1%
<i>Stellaria media</i>	Common Chickweed	LF	1%
<i>Taraxacum officinale</i> agg.	Dandelion	LF	1%
<i>Trifolium pratense</i>	Red Clover	VLA	<1%
<i>Trifolium repens</i>	White Clover	O	10%
<i>Typha latifolia</i>	Bulrush	VLF	<1%
<i>Urtica dioica</i>	Common Nettle	LA	2%
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 Hedgerow 1

Scientific Name	Common Name	Hedgerow 1	
		DAFOR	% Cover
Woody Species			
<i>Betula pendula</i>	Silver Birch	LA	<1%
<i>Crataegus monogyna</i>	Hawthorn	A*	80%
<i>Fraxinus excelsior</i>	Ash	O	5%
<i>Ilex aquifolium</i>	Holly	LA	<1%
<i>Quercus robur</i>	Pedunculate Oak	LA	5%
<i>Salix caprea</i>	Goat Willow	LA	5%
<i>Salix cinerea</i>	Grey Willow	LA	5%
<i>Vaccinium myrtillus</i>	Bilberry	LA	<1%
<i>X Cuprocyparis leylandii</i>	Leyland Cypress	LF	<1%
Ground Layer			
<i>Berberis vulgaris</i>	Barberry	VLF	<1%
<i>Cirsium vulgare</i>	Spear Thistle	VLF	<1%
<i>Dactylis glomerata</i>	Cock's-foot	O	5%
<i>Dryopteris filix-mas</i>	Male-fern	VLA	<1%
<i>Geranium robertianum</i>	Herb-Robert	VLF	<1%
<i>Hedera helix</i>	Ivy	LA	5%
<i>Holcus lanatus</i>	Yorkshire-fog	O	10%
<i>Impatiens glandulifera</i>	Indian Balsam	VLA	<1%
<i>Juncus effusus</i>	Soft-rush	VLA	<1%
<i>Lolium perenne</i>	Perennial Rye-grass	O	10%
<i>Poa annua</i>	Annual Meadow-grass	LA	1%
<i>Poa pratensis</i>	Smooth Meadow-grass	LA	2%
<i>Poa trivialis</i>	Rough Meadow-grass	LA	2%
<i>Ranunculus repens</i>	Creeping Buttercup	LA	<1%
<i>Rubus fruticosus</i> agg.	Bramble	O	10%
<i>Rumex obtusifolius</i>	Broad-leaved Dock	LF	<1%
¹ Key to DAFOR: D=Dominant, A=Abundant, F=Frequent, O=Occasional, R=Rare, V=Very, L=Local and *denotes a constant species.			
Species highlighted in grey are classed as either ‘woody’ or ‘woodland’ species contributing to <i>The Hedgerows Regulations 1997</i> wildlife and landscape criteria assessment.			

Table 8.3: Hedgerow Description and Assessment in Accordance with *The Hedgerows Regulations 1997*

	Hedgerow Name	Hedgerow 1		
Description	Height x width (metres)	3 x 1 metres		
	Length (metres)	206 metres		
	Continuity	90%		
	Management	Unmanaged / grazed beneath		
Woody Species	Section number ¹	1	2	3
	Qualifying woody species	3	3	2
	Average Number	2.67 (rounded to 3)		
Number of Features Present	(a) Bank or wall along at least ½ length	X		
	(b) Gaps which in agg. do not exceed 10%	✓		
	(c)-(e) 1 standard tree per 50m	X		
	(f) At least 3 woodland species within 1m	X		
	(g) Ditch along at least ½ its length	✓		
	(h) Connections scoring 4 points or more	X		
	(i) Parallel hedge within 15m	X		
	Total Features	2		
Hedgerow Importance	Criteria for Hedgerow Importance 1	No		
	Criteria for Hedgerow Importance 2:	No		
	Criteria for Hedgerow Importance 3:	No		
Hedgerow Important Criteria	Criteria for Hedgerow Importance 1: Hedgerow contains species listed as: (1) Part 1 of Schedule 1, Schedule 5 or Schedule 8 of <i>Wildlife and Countryside Act 1981</i> (as amended); (2) Declining breeders in ‘Red Data Birds of Britain’; and / or (3) Categorised as ‘endangered’, ‘extinct’ or ‘vulnerable’			
	Criteria for Hedgerow Importance 2: Hedgerow includes (Number of woody species required reduced by one in Lancashire): (i) At least 7 woody species (on average); (ii) At least 6 woody species (on average) and at least 3 features; (iii) At least 6 woody species (on average), including one of: Black Poplar, Large-leaved Lime, Small-leaved Lime or Wild Service Tree; and / or; (iv) At least 5 woody species (on average), and has 4 features			
	Criteria for Hedgerow Importance 3: Is adjacent to is adjacent to a bridleway, footpath or byway and includes at least 4 woody species on average and 2 features from (a) to (g).			

¹Up to and including 100 metres length = 1 section required.
100 to 200 metres length = 2 sections required
Greater than 200 metres length = 3 sections required.

Table 8.4: Plant Species List for Woodland

Scientific Name	Common Name	DAFOR ¹	Cover
Canopy Layer			
<i>Acer pseudoplatanus</i>	Sycamore	O	20%
<i>Betula pendula</i>	Silver Birch	O	20%
<i>Crataegus monogyna</i>	Hawthorn	LA	5%
<i>Quercus robur</i>	Pedunculate Oak	O	20%
<i>Sorbus aucuparia</i>	Rowan	LA	5%
Scrub Layer			
<i>Ilex aquifolium</i>	Holly	LA	5%
<i>Rhododendron ponticum</i>	Rhododendron	VLA	<1%
<i>Rubus fruticosus</i> agg.	Bramble	O	10%
Ground Layer			
	Moss species	LA	2%
<i>Agrostis capillaris</i>	Common Bent	VLA	<1%
<i>Carex pendula</i>	Pendulous Sedge	R	<1%
<i>Chamerion angustifolium</i>	Rosebay Willowherb	VLF	<1%
<i>Dactylis glomerata</i>	Cock's-foot	VLA	<1%
<i>Dryopteris dilatata</i>	Broad Buckler-fern	VLF	<1%
<i>Dryopteris filix-mas</i>	Male-fern	VLF	<1%
<i>Festuca rubra</i>	Red Fescue	VLA	<1%
<i>Ficaria verna</i>	Lesser Celandine	VLF	<1%
<i>Hedera helix</i>	Ivy	VLA	<1%
<i>Holcus lanatus</i>	Yorkshire-fog	LA	1%
<i>Impatiens glandulifera</i>	Indian Balsam	F	30%
<i>Juncus effusus</i>	Soft-rush	LA	1%
<i>Lolium perenne</i>	Perennial Rye-grass	LA	1%
<i>Phyllitis scolopendrium</i>	Hart's-tongue	R	<1%
<i>Ranunculus repens</i>	Creeping Buttercup	VLA	<1%
<i>Typha latifolia</i>	Bulrush	VLF	<1%
<i>Urtica dioica</i>	Common Nettle	LA	5%
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 8.5: Photographs



Photo 1: Modified grassland



Photo 2: Modified grassland



Photo 3: Hedgerow 1



Photo 4: Tree Line 1

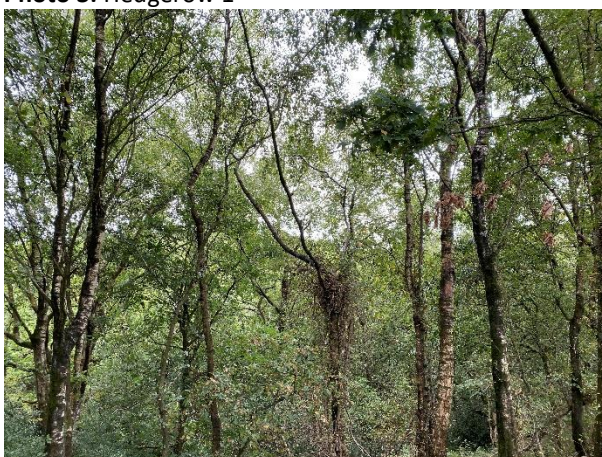


Photo 5: Woodland



Photo 6: Woodland



Photo 7: Knotts Brook

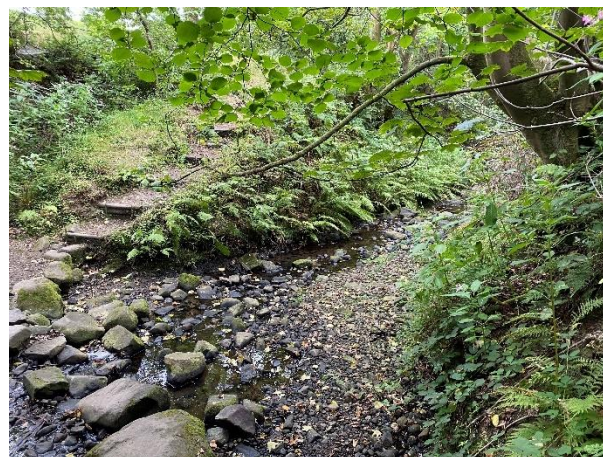


Photo 8: Knotts Brook

8.3 Figures

Figure 1: Aerial Image of the Site and its Surroundings



Figure 2: Phase 1 Habitat and Vegetation Map of the Site

