

Ecological Impact Assessment

Henthorn Road, Clitheroe
Reference: 82-168-R7-1
Date: December 25





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EXECUTIVE SUMMARY

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| Site Address | Land north and south of Henthorn Road, Clitheroe, Ribble Valley, BB7 2SN |
| Coordinates | E 372958, N 440590 |
| Site Area | Approximately 7.21 ha |
| Impact Assessment | <p>The results of the ecological impact assessment show that most impacts on ecological receptors will be negligible.</p> <p>Positive likely significant effects at a site level and a larger scale are anticipated on habitats.</p> |
| Mitigation and Compensatory Measures | <p>The following mitigation is recommended:</p> <ul style="list-style-type: none"> ❖ Common amphibians are to be removed by hand from the working area during the clearance phase. ❖ Lighting plan should consider the habitats of the highest importance and maintain the individual trees, hedgerows and watercourses as dark areas. ❖ Updated badger walkover prior to the start of works. ❖ Precautionary Working Methods for badger. ❖ Vegetation should be retained where possible. Where vegetation requires removal, it should be checked for the presence of hedgehog prior to removal. If any vegetation is too dense to be fully inspected, it should be strimmed to 50 cm and checked for hedgehog before being cleared to ground level. If trees are removed, their bases should be checked, prior to removal, for sheltering hedgehogs. It is recommended that any clearance takes place outside of December to March to avoid impacting hibernating hedgehogs. ❖ Vegetation should be retained where possible. If any vegetation requires removal, it should be removed outside of the breeding bird season (March to September inclusive). Building demolition should also be undertaken outside of the nesting bird season. If this is not possible, a nesting bird check should be undertaken by a suitably qualified ecologist up to 48 hrs before works commence. If a nest, or nest in construction, is located, then a stand-off distance should be maintained until the young have fledged. ❖ The barn owl box on T20 will be checked under the supervision of a barn owl licence holder to determine if barn owls are using the box for breeding. If barn owls are not using the box, the box will be removed and installed elsewhere within an agricultural field away from the development. If barn owls are breeding, the box will need to remain in situ and monitored. An exclusion zone around the box will be implemented if barn owls are using the box during the works, which is likely to be around 100m. ❖ Pre-commencement check of grassland fields for young hare. ❖ Precautionary Working Methods for otters ❖ Precautionary Working methods for reptiles. |



- ✳ Best practice protection measures as detailed within PPG5 Pollution Prevention Guidelines (2007), are to be put in place to protect Pendleton Brook, the onsite lowland mixed deciduous woodland and connected non-statutory designated sites such as the River Ribble BHS.
- ✳ Invasive non-native species, Himalayan balsam, should be removed by a suitably qualified contractor prior to commencement of works.



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1. INTRODUCTION

1.1. BACKGROUND

E3P were instructed by Gladman Developments Limited to undertake an Ecological Impact Assessment (EclA) at Henthorn Road, Clitheroe, hereafter referred to as “the site”. This assessment follows the approach set out in the Chartered Institute of Ecology and Environmental Management’s (CIEEM) ‘Guidelines for Ecological Impact Assessment in the UK and Ireland’ (CIEEM, 2018). It provides an assessment of the likely ecological effects associated with the proposed development.

This report has been prepared by Phoebe Parry BSc (Hons), Consultant Ecologist at E3P.

1.2. PREVIOUS SURVEYS

1.2.1. PRELIMINARY ECOLOGICAL APPRAISAL

A Preliminary Ecological Appraisal (PEA) was undertaken on-site by E3P in December 2025 (report reference: 82-168-R1). The survey included a Condition Assessment for habitats on site. During the survey, the site was found to comprise modified grassland, individual trees, lowland mixed deciduous woodland, developed land sealed surface, other rivers and streams, a ditch, native hedgerow with trees, species-rich native hedgerow and species-rich native hedgerow with trees. The site was found to comprise the following ecological constraints:

- ✳ Opportunities for common amphibians within the grassland, hedgerow, and understory of individual trees, as well as the potential presence of great crested newts (*Triturus cristatus*) within waterbodies 250 m of the site (WB2, 2B5, WB6, WB7).
- ✳ High commuting and foraging potential for bats along the hedgerows, individual trees and watercourses on site. As well as one tree with PRF-I (T7) bat roosting potential and seven trees with PRF-M (T5, T9, T12, T14, T19 and T20) bat roosting potential identified on site.
- ✳ Potential presence of badgers (*Meles meles*) within the local area, with suitable foraging and sett-building opportunities on site.
- ✳ Potential presence of hedgehogs (*Erinaceus europaeus*) within the hedgerow and understory of individual trees.
- ✳ Potential presence of brown hare (*Lepus europaeus*) on site.
- ✳ Opportunities for nesting birds within the hedgerows and individual trees, with a barn owl (*Tyto alba*) box noted on T20.
- ✳ Potential presence of reptiles within the hedgerow and understory of individual trees.
- ✳ Potential presence of otter (*Lutra lutra*), water vole (*Arvicola amphibius*) and white clawed crayfish (*Austropotamobius pallipes*) within the watercourses on site.
- ✳ Potential presence of notable invertebrates within hedgerows and watercourses on site.



1.2.2. OTTER AND WATER VOLE SURVEY REPORT

An Otter and Water Vole Survey was conducted by E3P on 01st May 2025 (report reference: 82-168-R2). During the survey, two confirmed holts and one potential holt were identified along the surveyed area, with the two confirmed holts located downstream of the site, and the potential holt located within the site boundary. No signs of water vole were noted in either watercourse. An active kingfisher (*Alcedo atthis*) nest was noted along the northern bank of Pendleton Brook, located in the southeast of the site, with Himalayan balsam (*Impatiens glandulifera*) also found to be present in the brook.

1.2.3. BAT ACTIVITY SURVEY REPORT

A Bat Activity Survey Report was produced by E3P in September 2025 (report reference: 82-168-R3) following a series of nocturnal bat walkover surveys carried out in May, June and September 2025, as well as static bat activity surveys. During the activity surveys, the site was identified as having high levels of bat activity, which comprised common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), myotis species (*Myotis spp.*) and brown long-eared (*Plecotus auritus*). Common pipistrelle were observed in the highest frequency during the activity surveys, with the highest levels of bat activity occurring along Pendleton Brook and other linear habitat features such as the hedgerows and watercourse located on-site. A treeline to the northwest of the site was also shown to be important for the local bat population.

1.2.4. NOCTURNAL BAT SURVEY REPORT

A Nocturnal Bat Survey Report was produced by E3P in August 2025 (report reference: 82-168-R4) following three emergence surveys conducted on 12th June, 03rd July and 24th July 2025, which surveyed three trees (T5, T14, T19). No bats were observed emerging from the trees on site during the surveys. During the surveys, high levels of common pipistrelle activity were recorded across all vantage points, with levels of soprano pipistrelle and noctule (*Nyctalus noctula*) activity noted across the site, and a single Daubenton's bat (*Myotis daubentonii*) was detected during the third survey.

1.2.5. WHITE-CLAWED CRAYFISH REPORT

A White-Clawed Crayfish Survey was completed on 24th and 25th July 2025 (report reference: 82-168-R5). No crayfish were noted during the survey, and no field signs of white-clawed crayfish were noted within either watercourse.

1.2.6. BIODIVERSITY METRIC REPORT

A Biodiversity Metric Report was produced by E3P in December 2025 (report reference: 82-168-R6). The biodiversity metric found that the proposed development can achieve a gain in habitat, hedgerow and watercourse units in line with E3P's recommendations. The proposed scheme and recommendations showed a total gain of 1.75 habitat units (10.62%), 1.19 hedgerow units (11.10%) and 0.50 watercourse units (17.75%), achieving a gain higher than 10% and satisfying trading rules. As current works have been undertaken on an illustrative plan, the gains detailed within the report may change slightly when final plans are produced, however, the scheme is anticipated to reach the 10% requirement as a minimum.

1.2.7. INVASIVE SPECIES WALKOVER

Himalayan balsam was present along Pendleton Brook, with field horsetail (*Equisetum arvense*) also identified.



1.3. PROPOSED DEVELOPMENT

Development proposals comprise an outline planning application for the construction of residential units with associated gardens, access roads, and hard and soft landscaping.

1.4. SITE LOCATION

The site comprises two parcels of land located north and south of Henthorn Road. The site is located at the southwestern edge of Clitheroe. Pendleton Brook defines the site's southern boundary. The River Ribble is located 110 m northwest of the site at its closest point. An active railway line is located 180 m east of the site, and a sewage treatment works is located 120 m south of the site. Please refer to Figure 1 for the approximate site location.

Figure 1 **Approximate Site Location**



1.5. OBJECTIVES

The objectives of the Ecological Impact Assessment are as follows:

- ✦ To identify and describe all potentially significant ecological effects associated with the proposed development.
- ✦ To set out the mitigation measures required to ensure compliance with nature conservation legislation and to address any potentially significant ecological effects.
- ✦ To identify how mitigation measures will/could be secured.
- ✦ To provide an assessment of the significance of any residual effects.
- ✦ To identify appropriate enhancement measures.
- ✦ To set out the requirements (if any) for post construction monitoring.



2. PLANNING POLICY AND LEGISLATION

2.1. RIBBLE VALLEY BOROUGH COUNCIL LOCAL PLAN 2008 - 2028

The following policy within the Ribble Valley Local Plan (adopted December 2014) has been input below:

2.1.1. KEY STATEMENT EN4: BIODIVERSITY AND GEODIVERSITY

The Council will seek, wherever possible, to conserve and enhance the area's biodiversity and geodiversity and to avoid the fragmentation and isolation of natural habitats and help develop green corridors. Where appropriate, cross-Local Authority boundary working will continue to take place to achieve this.

Negative impacts on biodiversity through development proposals should be avoided. Development proposals that adversely affect a site of recognised environmental or ecological importance will only be permitted where a developer can demonstrate that the negative effects of a proposed development can be mitigated, or, as a last resort, compensated for. It will be the developer's responsibility to identify and agree on an acceptable scheme, accompanied by appropriate survey information, before an application is determined. There should, as a principle, be a net enhancement of biodiversity.

These sites are as follows:

- ✚ Sites of Special Scientific Interest (SSSIs)
- ✚ Local Nature Reserves (LNRs)
- ✚ Local Biological Heritage sites (CBHs)
- ✚ Special Areas of Conservation (SACs) and Special Protection Areas (SPAs)
- ✚ Local Geodiversity Heritage Sites
- ✚ Ancient Woodlands
- ✚ Lancashire Biodiversity Action Plan priority habitats and species
- ✚ European Directive on Protected Species and Habitats - Annexe 1 Habitats and Annexe II Species
- ✚ Habitats and Species of Principal Importance in England

With respect to sites designated through European legislation, the Authority will be bound by the provisions of the relevant Habitats Directives and Regulations.

For those sites that are not statutorily designated and compensation could be managed through a mechanism such as biodiversity offsetting via conservation credits.

2.2. NATIONAL PLANNING POLICY

The National Planning Policy Framework (NPPF) (2023) sets out national planning policy, including policies of relevance to conserving and enhancing the natural environment. The policy of relevance to the proposed development has been summarised below:



2.2.1. POLICY 15. CONSERVING AND ENHANCING THE NATURAL ENVIRONMENT

180. Planning policies and decisions should contribute to and enhance the natural and local environment by:

- ✦ *Protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);*
- ✦ *Recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;*
- ✦ *Maintaining the character of the undeveloped coast, while improving public access to it where appropriate;*

175. Plans should:

- ✦ *Distinguish between the hierarchy of international, national, and locally designated sites;*
- ✦ *Allocate land with the least environmental or amenity value, where consistent with other policies in this Framework;*
- ✦ *Take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure;*
- ✦ *And plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.*

Habitats and Biodiversity

179. To protect and enhance biodiversity and geodiversity, plans should:

- ✦ *Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national, and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and*
- ✦ *Promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.*

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

- ✦ *If significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- ✦ *Development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest and any broader impacts on the national network of Sites of Special Scientific Interest;*



- ✿ *Development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons, and a suitable compensation strategy exists; and*
- ✿ *Development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.*

181. *The following should be given the same protection as habitats sites:*

- ✿ *Potential Special Protection Areas and possible Special Areas of Conservation;*
- ✿ *Listed or proposed Ramsar sites; and*
- ✿ *Sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.*

182. *The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects) unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.*

2.3. BIODIVERSITY ACTION PLANS

2.3.1. UK

Section 41 (S41) of the NERC Act 2006 requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England when carrying out their normal functions. Habitats and species included on the S41 list are those found in England which were identified as requiring action under the former UK BAP.

DEFRA/Natural England's S41 list explanatory note identifies the habitats and their associated species to focus action on, with the 'Land Use Planning' sector (aimed at Local Planning Authorities and Regional Development Agencies (RDAs) regarding their development control and planning casework) being of relevance in this case.

The UK BAP is now focused on a country-level rather than at UK-level and was succeeded by the UK Post-2010 Biodiversity Framework in July 2012. For England, priority habitats and species are now covered in Section 41 of the *Natural Environment and Rural Communities (NERC) Act 2006*.

The NERC uses the UKBAP list of priority species and habitats as an important reference source; the list has been used to draw up the NERC species and habitats of principal importance in England. The list will be the focus for conservation action across the UK over the next decade, and therefore, "UK Priority Habitats" still acts as an important reference.

2.3.2. LOCAL LEVEL

The Biodiversity Action Plan for Lancashire is a strategy aimed at conserving and enhancing biological diversity. The plan proposes actions to protect priority habitats and species and encourage sustainable development in Lancashire, to be reviewed and amended annually.



3. METHODOLOGY

3.1. ECOLOGICAL IMPACT ASSESSMENT

The Ecological Impact Assessment (EclA) is based on the standard best practice methodology provided by the Guidelines for Ecological Impact Assessment (CIEEM, 2018). The assessment identifies important sites, habitats, species, and other ecological features that are of conservation value based on factors such as legal protection, statutory or local site designations such as Sites of Special Scientific Interest (SSSI) or Local Wildlife Sites (LWS) or inclusion on Red Data Book Lists or Local Biodiversity Action Plans. The importance of an ecological feature is considered within a defined geographical context.

The following frame of reference is used, or adapted to suit local circumstances, and has been described as a positive or negative effect at the highest level affected:

- ✿ International.
- ✿ National (UK).
- ✿ Regional.
- ✿ Metropolitan, County, vice-county, or other local authority-wide area.
- ✿ Local (up to 2 km from the site).
- ✿ Site level.

Consideration of impacts at all scales is important, and essential if objectives for no net loss of biodiversity and maintenance of healthy ecosystems are to be achieved. In identifying impacts, the review considers the client's site proposals and any subsequent recommendations made are proportionate / appropriate to the Site and have considered the Mitigation Hierarchy as identified below:

- ✿ Avoid: Provide advice on how the development may proceed by avoiding impacts to any species or sites by either consideration of site design or identification of an alternative option.
- ✿ Mitigate: Where avoidance cannot be implemented, mitigation proposals are put forward to minimise impacts to species or sites as a result of the proposals. Mitigation put forward is proportionate to the Site.
- ✿ Compensate: Where avoidance cannot be achieved, any mitigation strategy will consider the requirements for site compensatory measures.
- ✿ Enhance: The assessment refers to planning policy guidance (e.g. NPPF) to relate the ecological value of the Site and identify appropriate and proportionate ecological enhancement in line with both national and local policy.

3.1.1. ZONE OF INFLUENCE

To define the total extent of the study area for this assessment, the proposed scheme was reviewed to establish the spatial scale at which ecological features could be affected. The appropriate survey radii for the various elements of the assessment (i.e. desktop study, field survey and species-specific surveys) have been defined in the relevant sections below. These distances are determined based on the professional judgement of the ecologist leading the appraisal, considering the characteristics of the site subject to assessment, its surroundings, and the nature of the proposals.



3.1.2. LIKELY SIGNIFICANT EFFECTS

For the purpose of this EclA, a 'Likely Significant Effect' is an effect that either supports or undermines biodiversity conservation objectives for 'important' ecological features or for biodiversity in general. Conservation objectives may be specific (e.g. for a designated site), broad (e.g. national/local nature conservation policy) or more wide-ranging (enhancement of biodiversity). Effects are considered significant at the range of scales from international to local.

A Likely Significant Effect is an effect that is sufficiently important to require assessment and reporting so that the ecological consequences of the project are understood. In broad terms, Likely Significant Effects encompass impacts on the structure and function of defined sites, habitats or ecosystems and the conservation status of habitats and species (including extent, abundance, and distribution). Note: The following definitions are used for the terms 'impact' and 'effect' throughout this report:

- ✳ Impact – Actions resulting in changes to an ecological feature. For example, the construction activities of a development removing a hedgerow.
- ✳ Effect – Outcome to an ecological feature from an impact. For example, the effects on a dormouse population from the loss of a hedgerow.

Negligible describes where there is no likely significant residual effect.

3.2. DESKTOP STUDY

The following sources of information and ecological records were consulted:

- ✳ MAGIC – A web-based interactive mapping system, on which geographic information regarding key environmental schemes and designations are collated, including details of statutory conservation sites (accessed December 2025).
- ✳ Aerial mapping and ordnance survey maps.
- ✳ Local data records provided by Lancashire Environment Records Centre (LERC) on 20th December 2024.

A 2 km search area was utilised for the data search, with this being deemed an appropriate distance for the Zone of Influence of the site. The data search included the request for details of protected and notable species of flora and fauna within 2 km of the central grid reference of the site. In addition, a request was made for any non-statutory designated sites within 2 km of the site boundary.

Please note that a lack of up-to-date records does not confirm the absence of a species from the area. Lack of records may simply be a result of a lack of protected species surveys being undertaken within the local area.

3.3. SURVEYS

3.3.1. VEGETATION AND HABITATS

An Ecological Walkover was undertaken by Phoebe Parry on 17th December 2024. This was to assess the site's baseline conditions and potential for protected species to be present within and adjacent to the site. The weather was mild, dry, and overcast.

The walkover survey was undertaken to the standard methodology as detailed by the UK Habitat Classification Version 2.0 (UKHab, 2023). The assessment follows the methodology as per "Guidelines



for Preliminary Ecological Appraisal” (CIEEM, 2017). A UKHab Habitat Plan has been produced and is located in Appendix I.

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. All plant nomenclature follows Stace (2019).

Searches were carried out for the presence of invasive species, including those listed on the revised (April 2010) Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) including Japanese knotweed (*Reynoutria japonica*), Himalayan balsam and giant hogweed (*Heracleum mantegazzianum*).

3.3.2. FAUNA

A thorough search of the site for signs of protected species of fauna was undertaken during the site walkover. These searches considered the following:

- ✦ Suitability of any ponds to support notable amphibians, and the suitability of the site’s terrestrial habitats to support amphibians.
- ✦ Suitability of the site to support reptiles by way of habitat structure and refuge piles, as well as links to the wider landscape.
- ✦ Signs of badgers, by way of setts, mammal paths, foraging signs or latrines to indicate usage of the site by the species, including a 30 m radius around the site boundary.
- ✦ Suitability of notable terrestrial mammals, including field signs of the species.
- ✦ Search of any watercourses for signs or suitability for water vole (*Arvicola amphibius*) and otter (*Lutra lutra*) by way of burrows, resting places, holts and foraging signs.
- ✦ Suitability of trees and structures which may support roosting bats.
- ✦ Assess suitability of the site to support foraging and commuting bats.
- ✦ Suitability of the site to support notable bird species.
- ✦ Suitability of the site to support notable invertebrates.
- ✦ Search of the site for any invasive species.

3.3.3. PRELIMINARY ROOST ASSESSMENT

A Preliminary Roost Assessment (PRA) was undertaken by Phoebe Parry on 17th December 2024. The survey involved undertaking a systematic search of the building and trees, searching for signs of bats, or spaces where bats would be able to access. The methodology followed that described in *Bat Surveys for Professional Ecologists*, 4th Edition (Collins, 2023). The trees were categorised for their bat roosting potential as described in Table 1 in accordance with Collins (2023).

Table 1 Bat Roosting Potential Classification of Trees

| CATEGORY | DESCRIPTION |
|----------|---|
| 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. |



3.3.4. HABITAT SUITABILITY INDEX

All ponds within a 250 m radius of the site boundary were evaluated using the *Habitat Suitability Index (HSI)* (Oldham et al., 2000), which was undertaken by Phoebe Parry.

The ponds were examined with reference to the ten HSI scoring criteria, which are as follows:

- ✿ SI1: Geographical location.
- ✿ SI2: Pond area.
- ✿ SI3: Pond drying.
- ✿ SI4: Water quality (as indicated by the diversity of aquatic plants and invertebrates).
- ✿ SI5: Shade.
- ✿ SI6: Waterfowl.
- ✿ SI7: Fish.
- ✿ SI8: Abundance of other ponds within a 1 km radius.
- ✿ SI9: Quality of terrestrial habitat.
- ✿ SI10: Macrophyte cover (i.e. aquatic and emergent plants).

A score is given according to the most appropriate criteria level set within each attribute, and a total score is calculated between 0 and 1. Pond suitability is assessed according to the following scale:

- ✿ < 0.50 = Poor.
- ✿ 0.50–0.59 = Below average.
- ✿ 0.60–0.69 = Average.
- ✿ 0.70–0.79 = Good.
- ✿ > 0.80 = Excellent.

3.4. SURVEY LIMITATIONS

An Ecological Walkover does not constitute a full botanical survey. Instead, key species are identified to give a representative description of each habitat type.

This survey was undertaken in December, which is an appropriate time of the year to undertake a survey. However, as a result of seasonal vegetation die back, it is possible that some species of flora may have been missed or misidentified, including some invasive/non-native species. Particularly along the watercourses. As such, an updated site walkover in the growing season was undertaken.

A survey of the areas within 30 m of the site boundary to search for field signs of badger was not possible, due to the presence of private land associated with residential gardens on the northern and eastern boundaries. As such, some features, including field signs of badger may have been missed.



One waterbody (WB2) within 250 m of the site could not be accessed due to it being situated on private land. As such, a HSI assessment could not be undertaken on this waterbody. However, this was later discounted as being suitable for great crested newts.

These constraints have been taken into consideration during the assessment.

3.5. ACCURATE LIFESPAN OF ECOLOGICAL DATA

Most ecological surveys remain valid for only short periods due to the inherently transient nature of the subject. CIEEM Advice Note on the 'Lifespan of Ecological Reports and Surveys' (2019) details the validity lifespan of ecological assessment. The survey results contained in this report are considered accurate for typically two years, notwithstanding any considerable changes to the site conditions.



4. SURVEY RESULTS

4.1. DESKTOP STUDY

4.1.1. SITE CONTEXT

The site predominantly comprised modified grassland fields anticipated to provide minimal ecological value. However, this habitat may be utilised by brown hare. The hedgerows and individual trees located on site are anticipated to provide foraging and commuting value for local wildlife, including birds and terrestrial mammals, such as bats, badgers, and hedgehogs. In addition, an unnamed watercourse was located within the site boundary, and Pendleton Brook along the southern site boundary. These aquatic features are anticipated to provide foraging and commuting opportunities for a variety of local fauna, including those that specialise feeding along aquatic habitats such as otter and Daubenton's bat. The River Ribble is located 110 m northwest of the site at its closest point. The river is connected to the site via Pendleton Brook, approximately 500 m southwest. This provides further commuting and foraging value for local wildlife.

An area of Deciduous Woodland Biodiversity Action Plan (BAP) Priority Habitat is located within the site boundary. This area encompasses part of Pendleton Brook. This area is also identified as Ancient Replanted Woodland. A number of additional woodland habitats are located along the length of Pendleton Brook and the River Ribble, which provide ecological connectivity between them. Numerous other woodland habitats are located within 2 km of the site. These habitats provide sheltered foraging opportunities for a range of local wildlife, including terrestrial mammals, in addition to roosting and nesting opportunities for bats and birds, respectively. The ancient woodland habitats can support a range of flora and specialist species of invertebrates, fungi and birds. As the ancient woodland on site is replanted, no veteran or ancient trees are anticipated to be present; however, the area may retain the unique soil and ground flora.

An area of wood pasture and parkland BAP priority habitat, is located 1 km northeast of the site. This habitat provides a mosaic of open grassland and scattered trees, which can support a range of local wildlife such as birds, bats and terrestrial mammals such as hedgehogs.

A large area of lowland fens BAP priority habitat, is located 1.7 km south of the site. This habitat is anticipated to support a range of wading birds and waterfowl.

Areas of Good Quality Semi-Improved Grassland Non-Priority Habitat are present approximately 1.6 km southeast and 1.8 km north of the site. These habitats are likely to provide valuable habitat for a diversity of flora and invertebrates, in addition to supporting ground-nesting birds and brown hare.

A total of seven waterbodies (WB1–WB7) were located within 250 m of the site. These waterbodies could support great crested newts; therefore, great crested newts may be present on site within their terrestrial phase.

4.1.2. DESIGNATED SITES

The site is not located within 2 km of any statutory designated sites. However, the site is located within the Impact Risk Zone of the Hodder River Section Site of Special Scientific Interest (SSSI). The SSSI is located 2.2 km southwest of the site. It is designated for its geological value, comprising Lower Carboniferous marine assemblages. Due to the SSSI being designated for its geological importance and the distance from the site to the SSSI, it is not anticipated that there would be any impacts on the SSSI as a result of the proposed development. In addition, as per the criteria listed on MAGIC (accessed December 2025), the proposed site will not require further consultation with Natural England to proceed in relation to the SSSI.



Eight Biological Heritage Sites (BHSs) are located within 2 km of the site. Please see Table 2 for details of the non-statutory sites.

Table 2 Non-Statutory Sites within 2 km of the Site

| SITE NAME | DESCRIPTION | PROXIMITY TO SITE |
|---|--|--------------------------------|
| River Ribble from London Road Bridge Preston, in West, to County Boundary, in East BHS | Designated for the river's importance for salmon (<i>Salmo salar</i>), sea trout (<i>Salmo trutta trutta</i>), otter and water vole. The riverbanks also provide nesting opportunities for a range of birds. | Approximately 80 m northwest |
| Barrow Clough Wood BHS | Comprises a large area of ancient woodland. | Approximately 540 m southeast |
| Primrose Lodge BHS | Comprises a semi-natural woodland and a dam along Mearly Brook, which supports locally scarce green figwort (<i>Scrophularia umbrosa</i>). | Approximately 560 m northeast |
| Clitheroe Castle Knoll BHS | Comprises a mosaic of exposed rock face, limestone grassland, scrub and woodland. | Approximately 1.3 km northeast |
| Sherburn Wood BHS | Comprises a semi-natural woodland which lies along the bank of the River Ribble. | Approximately 1.4 km north |
| Small Field BHS | Comprises a small field of semi-natural grassland with a stream along the northern boundary of the site. | Approximately 1.7 km south |
| Hard Hill Common BHS | Comprises areas of purple moor grass/rush pasture and a series of flushes. | Approximately 1.7 km south |
| Boy Bank BHS | Comprises a small semi-natural woodland and species-rich grassland. | Approximately 1.7 km north |

4.2. HABITATS

The main habitats encountered during the survey are described in the following subsections.

Please see Appendix I for the UKHab Habitat Plan.

4.2.1. MODIFIED GRASSLAND (G4)

The majority of the site comprised modified grassland, which appeared to be maintained at a short length due to regular grazing. Species present included white clover (*Trifolium repens*), cow parsley (*Anthriscus sylvestris*), creeping buttercup (*Ranunculus repens*), dandelion (*Taraxacum officinale* agg.), perennial ryegrass (*Lolium perenne*), bent species (*Agrostis* sp.), dock species (*Rumex* sp.), lesser celandine (*Ficaria verna*), crested dog's tail (*Cynosurus cristatus*), annual meadow grass (*Poa annua*) and nettle (*Urtica dioica*).



Figure 2 Showing Modified Grassland



4.2.2. LOWLAND MIXED DECIDUOUS WOODLAND (W1F) – PRIORITY HABITAT

An area of woodland was present in the northwest of the site. The woodland area is identified on MAGIC (accessed December 2025) as BAP Deciduous Woodland Priority Habitat and Ancient Replanted Woodland. The woodland comprised ash (*Fraxinus excelsior*), beech (*Fagus sylvatica*), sycamore (*Acer pseudoplatanus*) and Scots pine (*Pinus sylvestris*). The understorey comprised sparse wych elm (*Ulmus glabra*) saplings, ivy (*Hedera helix*) and holly (*Ilex aquifolium*). No ancient or veteran trees were noted within the woodland on site or the wider woodland plot.

Figure 3 Lowland Mixed Deciduous Woodland





4.2.3. DEVELOPED LAND; SEALED SURFACE

Hardstanding access roads were present in the west and east of the site. The roads were not colonised by any vegetation.

Figure 4 Showing Developed Land; Sealed Surface



4.2.4. OTHER RIVERS AND STREAMS (R50) – UNNAMED WATERCOURSE

A small stream (WC1) ran through the southern parcel of the site. WC1 comprised steep earthy banks, which were colonised by modified grassland. The sward height on the banks varied due to grazing from livestock. Rush species (*Juncus sp.*) was present along the brook. The water was shallow and slow-flowing. The bed comprised a mixture of boulders, gravel and silt.

Figure 5 Showing Other Rivers and Streams





4.2.5. OTHER RIVERS AND STREAMS (R50) – PENDLETON BROOK

Pendleton Brook ran along the southern boundary of the site. The northern bank face profile was gently stepped and was composed of modified grassland. The majority of the southern bank was engineered with concrete blocks. Towards the west, the bank was gently sloping and comprised modified grassland. Numerous mature trees were noted along both banks, such as ash, hawthorn (*Crataegus monogyna*), alder (*Alnus glutinosa*) and pedunculate oak (*Quercus robur*). The water was fast-flowing, and the bed of the brook comprised a rocky substrate. The water level was approximately 1 m deep; however, the depth varied due to the presence of larger boulders.

Figure 6 Showing Pendleton Brook



4.2.6. DITCH (R50)

A manmade ditch was present in the west of the site within the lowland mixed deciduous woodland. An outfall from a residential development to the east of the site discharged into the ditch. The ditch flowed into Pendleton Brook. The ditch was shallow at approximately 10-20 cm in depth and lacked any aquatic vegetation within the riverbed and along the banks. The substrate comprised silt and leaf litter.



Figure 7 **Showing Ditch**



4.2.7. INDIVIDUAL TREES (W32)

A number of individual trees were present throughout the site. The majority of which were associated with Pendleton Brook. Species included ash, hawthorn, alder and pedunculate oak.

Figure 8 **Showing Individual Trees**







4.2.8. SPECIES-RICH NATIVE HEDGEROW (H2A5)

A number of species-rich native hedgerows were present along the boundaries of the grassland fields. Please see **Table 1** for a summary of these hedgerows.



Table 1 Hedgerow Summaries

| REFERENCE | DESCRIPTION | PHOTOGRAPH |
|-----------|--|--|
| H1 | Hedgerow 1 (H1) extended along the western boundary of the northern modified grassland field on site. Species present within the hedgerow included blackthorn (<i>Prunus spinosa</i>), sycamore (<i>Platanus occidentalis</i>), hawthorn, hazel (<i>Corylus avellana</i>) and ash. The hedgerow was approximately 2 m tall and 1.6 m wide. |  |
| H2 | Hedgerow 2 (H2) extended along the eastern boundary of the northern modified grassland field on site. Species present included blackthorn, elder (<i>Sambucus nigra</i>), hawthorn, hazel and holly (<i>Ilex aquifolium</i>). The hedgerow was approximately 2 m tall and 3 m wide. |  |
| H3 | Hedgerow 3 (H3) ran along the southern boundary of the northern grassland field. The hedgerow comprised ash, blackthorn, elder, hawthorn, cherry species (<i>Prunus sp</i>), and hazel. The hedgerow was approximately 2 m tall and 1.5 m wide. |  |
| H4 | Hedgerow 4 (H4) was present along the northern boundary of the southern grassland field. The hedgerow comprised ash, blackthorn, hawthorn and hazel. The hedgerow was 2 m tall and 1.6 m wide. |  |



| REFERENCE | DESCRIPTION | PHOTOGRAPH |
|-----------|--|--|
| H5 | Hedgerow 5 (H5) was present along the northeastern boundary of the southern grassland field. The hedgerow comprised ash, elder, hawthorn, and hazel. The hedgerow was approximately 4 m tall and 3 m wide. |  |

4.2.9. NATIVE HEDGEROW (H2A)

One native hedgerow (H6) was identified on site. H6 extended along the southeastern boundary of the southern modified grassland field on site. Species present included blackthorn and hawthorn. Numerous mature trees were noted along the hedgerow, such as ash, pedunculate oak, and sycamore. The hedgerow was approximately 4 m tall and 3 m wide.

Figure 9 Showing Native Hedgerow





4.3. PROTECTED AND NOTABLE SPECIES

4.3.1. AMPHIBIANS

Consultation LERC did not identify any records of great crested newt within the 2 km search area.

Consultation with MAGIC did not identify any great crested newt European Protected Species Licences within the 2 km search area. The closest was located 3.7 km south of the site associated with a residential area. The licence was active between 2015 and 2020 for the damage and destruction of a great crested newt resting place.

Great crested newts' upper dispersal limit is generally considered to be up to 250 m from a waterbody (though occurrence of greater distances does exist where habitat connectivity is of high quality) (English Nature, 2001). A total of seven waterbodies were located within 250 m of the site. WB1, located approximately 40 m south of the site, was discounted as Pendleton Brook acts as a significant barrier to dispersal. One waterbody (WB2) could not be accessed during the survey, located 110 m northwest of the site. However, WB2 was identified within the catchment area of 'Flood Zone 3' and was assessed as being unlikely to sustain a newt population. Waterbodies WB3 and WB4, located 220 m northeast and 190 m north, respectively, could be inspected during the survey; however, these did not hold water and were therefore discounted from further assessment.

Waterbodies WB5, WB6 and WB7 all held water during the survey and could be suitable for great crested newts. WB5 was located 140 m north of the site, WB6 was located 20 m east of the site, and WB7 was located 50 m south of the site. All three water bodies were assessed as being POOR during the HSI assessment. The waterbodies were also attenuation ponds associated with a recent housing development, and as such, these are prone to fluctuating water levels and frequent drying, further reducing their suitability for great crested newts. While unlikely, great crested newts may still utilise these waterbodies and therefore great crested newts may be present on site during their terrestrial phase within the hedgerows and understorey of individual trees. Waterbodies WB5, WB6 and WB7 returned **negative** results (Report ref: 82-168-L1) for great crested newts during eDNA surveys and therefore, the species are considered to be absent from the site.

Please see Appendix III for the Waterbody Plan.

Records of common frog (*Rana temporaria*), common toad (*Bufo bufo*), palmate newt (*Lissotriton helveticus*), and smooth newt (*Lissotriton vulgaris*) were identified within 2 km of the site boundary. The closest of these composed a record of smooth newt and palmate newt from 2018, located approximately 210 m north of the site within a grassland field. Due to the lack of waterbodies within the site, the site does not offer suitable habitat for breeding common amphibians. However, the hedgerows, watercourse and scattered trees on site all provide suitable shelter and protection for the species group within their terrestrial phase. As such, common amphibians are anticipated to be present on site.

4.3.2. BATS

Consultation with LERC identified numerous records of bat species within the 2 km search area, including unidentified bat species, Daubenton's bat and pipistrelle species (*Pipistrellus sp.*). The closest of these was from 2015, located approximately 500 m east of the site and comprised a pipistrelle roost associated with an industrial estate.

Consultation with MAGIC identified the presence of three Natural England Bat Mitigation Licences within the 2 km search area. The closest was located approximately 90 m northwest of the site, associated with a woodland, active between 2020 and 2026 for the destruction of a common pipistrelle non-breeding roost and the damage of a common pipistrelle non-breeding and maternity roosts. The second was located 260 m south of the site associated with a sewage treatment works. The licence was active between 2015 and 2020 for the destruction of a common pipistrelle non-breeding roost. The final licence



was located 1.6 km east of the site, associated with a residential building. The licence was active between 2018 and 2023 for the damage and destruction of a common pipistrelle and soprano pipistrelle non-breeding roost and the damage of a breeding roost.

No buildings or structures were identified within the site boundary. All trees on site were assessed for their suitability to support roosting bats, as detailed in Collins (2023). One tree (T7) comprised features that had the potential to support individual bats on an occasional basis. As such, T7 was assessed as being a PRF-I tree. In addition, T5, T9, T12, T14, T16, and T20 comprised features which could support a larger number of bats on a more regular basis. As such, T5, T9, T12, T14, T16, and T20 were assessed as being PRF-M trees. T9 and T12 were adjacent to the site boundary. However, these could still be impacted by the proposed development.

T14 and T19 were identified as Category U trees within the Arboricultural Impact Assessment (FPCR, 2025) and are therefore unsuitable for retention. Nocturnal Bat Surveys were undertaken on these trees in addition to T5, and no emergences were noted during the surveys (E3P, 2025. Report reference 82-168-R4). T5 and the remaining PRF trees are anticipated to be retained and protected throughout the development.

Bat Activity Surveys were undertaken on site. The site was found to have valuable foraging and commuting value for local bat species such as common pipistrelle, soprano pipistrelle, noctule, myotis species and brown long-eared bat. Pendleton Brook and the woodland to the west of the site were found to be of particularly high importance (E3P, 2025. Report Reference: 82-168-R3).

4.3.3. BADGER

Consultation with LERC did not identify any records of badger within the 2 km search area.

No badger setts were located on-site or within 30 m of the site boundary where access was possible. The site comprised sett-building opportunities within the hedgerow understorey and foraging and commuting opportunities within the grassland, hedgerow and individual trees.

4.3.4. OTHER TERRESTRIAL MAMMALS

Numerous records of European hedgehog were located within the 2 km search area, the closest of which was located approximately 500 m north of the site within a residential area. The site was assessed as providing suitable refuge and foraging habitat for hedgehogs within the grassland, individual trees and hedgerow understorey. The bases of individual trees may also offer suitable hibernation opportunities for the species.

Records of brown hare were recorded within the 2 km search area. The closest record was from 2020, located 1.7 km north and associated with an agricultural field. Additionally, the open grassland and hedgerow mosaic on site comprises good quality habitat for the species. As such, brown hare are anticipated to be present on site.

4.3.5. OTTER AND WATER VOLE

Consultation with LERC identified several records of otter within 2 km of the site boundary. The closest record from 2015 is located approximately 730 m north of the site, associated with the River Ribble. Two records from 2018 were also associated with Pendleton Brook, which runs along the site's southern boundary. These records were located 780 m west of the site.

WC1 was identified as having some suitable habitat for water vole; however, no signs of water vole were noted in both WC1 and Pendleton Brook during the Otter and Water Vole Survey (E3P, 2025. Report reference: 82-168-R2). As such, water vole can be reasonably discounted as being present on site.



No signs of otter were noted along WC1; however, the presence of otters was noted within Pendleton Brook. Two confirmed holts and one potential holt were identified along the surveyed area. The two confirmed holts were located downstream of the site, while the potential holt was located within the site boundary.

Please refer to Appendix IV for the Otter and Water Vole Survey Plan and Appendix V for the Otter Holt Plan.

Pendleton Brook was assessed as having high suitability for otter based on the commuting and foraging opportunities present in the brook and the numerous field signs of otter identified, including spraints, footprints, anal jelly and the holts. The numerous mature trees along the banks and fallen trees provide suitable holt-building opportunities, and Pendleton Brook provides connectivity to the River Ribble downstream and a number of watercourses upstream.

4.3.6. BREEDING BIRDS

Consultation with LERC identified numerous records of notable birds within the search area, including black-headed gull (*Chroicocephalus ridibundus*), peregrine (*Falco peregrinus*), house martin (*Delichon urbicum*), mallard (*Anas platyrhynchos*), greylag goose (*Anser anser*), woodpigeon (*Columba palumbus*), house sparrow (*Passer domesticus*), bullfinch (*Pyrrhula pyrrhula*), wren (*Troglodytes troglodytes*), and oystercatcher (*Haematopus ostralegus*).

Common and notable bird species are anticipated to be present within the hedgerow, individual trees and watercourses on site. A barn owl box was noted on T20.

An active kingfisher nest was noted on the northern bank of Pendleton Brook, located in the southeast of the site. Please refer to Appendix V for the location of the kingfisher nest.

Figure 10 Showing Kingfisher Nest



4.3.7. WHITE-CLAWED CRAYFISH

Consultation with LERC did not identify any records of white-clawed crayfish within the search area.



Both WC1 and Pendleton Brook were initially assessed as being suitable for white-clawed crayfish; however, no crayfish were noted within the watercourse during hand searching, torching or within the baited traps. No field signs of crayfish, such as burrows or remains in otter spraints, were noted within either watercourse. As such, white clawed crayfish were reasonably discounted as being present on site.

4.3.8. REPTILES

Consultation with LERC did not identify any records of reptiles within the search area.

The site is not anticipated to support large numbers of reptiles due to the large expanse of modified grassland, which appears to be regularly grazed, and as such comprises poor quality habitat for the species group. However, the hedgerow edges on site may provide some shelter for the reptiles. As such, they may be present on site in small numbers.

4.3.9. NOTABLE INVERTEBRATES

The data search identified records of notable invertebrate species within the search area, including ringlet (*Aphantopus hyperantus*), speckled wood (*Pararge aegeria*), comma (*Polygonia c-album*), cinnabar (*Tyria jacobaeae*), latticed heath (*Chiasmia clathrata*) and brimstone (*Gonepteryx rhamni*).

The majority of habitats on site are not anticipated to support notable invertebrates due to their lack of floristic diversity. However, speckled wood may utilise the hedgerows on site. In addition, aquatic invertebrates may utilise the watercourses on site. As such, this species may be present within the hedgerows and watercourse in small numbers.

4.3.10. INVASIVE PLANT SPECIES

Consultation with LERC identified records of wall cotoneaster (*Cotoneaster horizontalis*), Japanese knotweed, Himalayan balsam, and rhododendron (*Rhododendron ponticum*) within the search area.

Himalayan balsam was found to be present along Pendleton Brook during the Otter and Water Vole Survey. Furthermore, field horsetail was identified on site during the updated site walkover (E3P, 2025. Report Reference: 82-168-L2). Please refer to Appendix VI for the Invasive Species Plan.



5. ASSESSMENT OF IMPACT

The following section considers the potential ecological impacts that may occur from the proposed works, the mitigation measures provided and the significance of residual effects.

5.1 DESIGNATED SITES

5.1.1. POTENTIAL IMPACTS

The site is not located within 2 km of any statutory designated sites. However, the site is located within the Impact Risk Zone of the Hodder River Section Site of Special Scientific Interest (SSSI). The SSSI is located 2.2 km southwest of the site. It is designated for its geological value, comprising Lower Carboniferous marine assemblages. Due to the SSSI being designated for its geological importance and the distance from the site to the SSSI, it is not anticipated that there would be any impacts on the SSSI as a result of the proposed development. In addition, as per the criteria listed on MAGIC (accessed December 2025), the proposed site will not require further consultation with Natural England to proceed in relation to the SSSI.

However, the River Ribble BHS is located approximately 80 m northwest of the site. Impacts during the construction phase are anticipated to be:

- ✿ Potential transfer of invasive weeds.
- ✿ Pollution run-off during construction works.
- ✿ Removal of ecological connectivity to the surrounding habitats.
- ✿ Fragmentation of habitat networks.

In the absence of mitigation, an increased number of visitors to the designated sites may occur.

5.1.2. MITIGATION MEASURES

The River Ribble BHS is deemed vulnerable to adverse impacts from the proposed development, and so a Construction and Environment Management Plan (CEMP) is required.

Best practice protection measures are to be put in place to protect the BHS. The following control measures would be required during any ground works and during the construction phase to ensure there are no impacts on the designated sites or any wildlife utilising them:

- ✿ All operational plant will be kept well maintained.
- ✿ Turning off plant when not in use.
- ✿ Dampening of the operational areas will be regularly undertaken during dry weather conditions to avoid dust. Dust management will be extended to cover the plant and all operational areas and will be complied with throughout the period of development.
- ✿ Measures to prevent pollutants from entering ground and surface water is standard construction practice through the use of a bunded fuel storage and refuelling area at a discrete distance from any watercourses. These measures should be underwritten by spill management equipment being kept on-site and capable of being effectively utilised by trained operatives to contain any accidental spillage within any part of the operational area.



- ✿ A Toolbox Talk should be completed by a qualified ecologist to ensure contractors are aware of the designated site and its ecological importance.
- ✿ During night hours, no lighting is to be located facing the watercourses on site to ensure no wildlife are deterred from using them.
- ✿ A 'Site Tidy' protocol is to be put in place on-site. All litter is to be appropriately controlled, whilst on-site materials are to be adequately stored overnight.
- ✿ Where possible, all excavations will be battened at a 45-degree angle, or a ramp installed, to allow escape should animals become trapped.

Measures will also be taken throughout the construction phase to avoid dust pollution. Pollution prevention and control strategies will be adhered to at all times. Any dust incidents within proximity to the site and/or adjacent habitats will be reported to the site manager and the ECoW. Dust control measures will include the following:

- ✿ Where possible, use a vacuum rather than a sweeping brush.
- ✿ Select the appropriate means of extraction/ suppression.
- ✿ If anyone is asked to carry out dust generating activities without suppression measures, the site team will be consulted for advice.
- ✿ Dust generating tasks will never be carried out without the required control measures in place.
- ✿ Sealing and sheeting of stockpiles.
- ✿ Sheeting of vehicles transporting materials to and from the site.
- ✿ Limiting the speed of construction vehicles within the site to 10 mph to reduce dust trails.
- ✿ Surfacing, where practicable, of the site haul roads.
- ✿ Damping down using hoses and mobile bowsers.
- ✿ Carrying out of visual monitoring at sensitive locations.
- ✿ Regular servicing of plant and equipment, including cleaning/replacement of air filters.
- ✿ Issue of COSHH reports to identify any substances likely to cause offensive odours.
- ✿ Issue of Risk Assessment and Method Statements (RAMS) setting out how effective control measures will prevent the release of odours.

In addition, due to the nature of the proposed residential scheme, an increase in visitors to the designated sites may occur. As such, it is recommended that an advisory leaflet be produced and distributed to building occupants, which will include a 'Responsible User Code' for visitors to the sites. Public open space should also be provided within the site boundary.

5.1.3. SIGNIFICANCE OF RESIDUAL EFFECTS

Should the mitigation measures outlined in Section 5.1.2 be followed, the effects are assessed as **negligible**.



5.2. HABITATS

5.2.1. POTENTIAL IMPACTS

A Statutory Biodiversity Metric Calculation was carried out by E3P in December 2025. The majority of valuable habitats on site such as the hedgerows, watercourses and individual trees are expected to be retained, as detailed in the Framework Plan (FPCR Environment & Design Ltd, 2025, reference: 9053-DPCR-XX-XX-DR-L-0001 P14) and post-development plan (see Appendix II), and the scheme currently shows a gain of 1.75 (10.62%) habitat units, 1.19 (11.10%) hedgerow units, and 0.50 (17.75%) watercourse units.

There will be a minor loss in the lowland mixed deciduous woodland on site identified as ancient, replanted woodland and priority habitat.

5.2.2. MITIGATION MEASURES

The scheme shows a greater than 10% gain in habitat, hedgerow and watercourse units. As such, the site will be in a better condition post-development. Furthermore, the majority of valuable habitats such as the watercourses, hedgerows and individual trees will be retained and enhanced.

The minor loss in woodland on site will be compensated for through on-site lowland mixed deciduous woodland planting. The habitat lost will be compensated for to satisfy the trading rules, in addition to a > 45% uplift in units planted on site. Specifically, a total of 0.17 units of woodland will be lost, this is compensated for by the creation of 0.49 units of lowland mixed deciduous woodland on site which result in an uplift of 0.32 units. The woodland will be planted along the western boundary of the site and along Pendleton Brook, further enhancing the value of the watercourse. This proposed woodland planting is also in line with potential measures outlined in Lancashire's Local Nature Recovery Strategy (Lancashire County Council, 2025)

The proposed works provide an opportunity to institute enhancement for biodiversity through native plant species planting and the addition of faunal boxes. A landscaping plan should be devised which incorporates, as far as practicable, native species with known benefits to wildlife common in the area.

Pollution and prevention measures as outlined in Section 5.1.2. should be adhered to protect both the onsite watercourses and the woodland.

5.2.3. SIGNIFICANCE OF RESIDUAL EFFECTS

Should the mitigation and compensation measures be followed, the effects are assessed as **positive**.

5.3. BATS

5.3.1. POTENTIAL IMPACTS

Pendleton Brook, the onsite hedgerows and woodland on and adjacent to the site boundary, were found to provide value for commuting and foraging bats.

5.3.2. MITIGATION MEASURES

The lighting plan should consider the habitats of the highest importance and maintain the woodland, individual trees, and watercourses as dark areas. It is recommended that any security lighting during construction be appropriately placed to avoid being directed at these habitats.



T7 was identified as having a PRF-I bat roosting potential. However, this tree is anticipated to be retained and protected throughout the development.

To reduce the potential lighting impacts for bats, the following recommendations are advised for the lighting strategy:

- ✿ Lighting should be pre-fixed on any proposed buildings, to ensure impacts on sensitive areas such as the treelines, hedgerows and scattered trees are diminished.
- ✿ Warm white tones are preferable to blue-toned lights (3000k).
- ✿ LED lights are preferable as they produce minimal UV.
- ✿ To avoid light spill skyward, ensure lights face downward.
- ✿ Make use of vegetation to block light spill into dark areas

Lighting should follow the protocols outlined in the Institute for Lighting Engineers document “Guidance for the Reduction of Obtrusive Lighting” (2005) and BCT’s “Bats and Artificial Light at Night” (2023) to minimise disturbance and sky-glow off-site.

It is recommended that any planting within the site be of native fruiting/flowering species in order to enhance the site for foraging bats post-completion. Bat boxes could be installed throughout the site post-construction to enhance the site for the species group.

5.3.3. SIGNIFICANCE OF RESIDUAL EFFECTS

Should the mitigation and compensation measures be followed, the effects are assessed as **negligible**.

5.4. COMMON AMPHIBIANS

5.4.1. POTENTIAL IMPACTS

Small numbers of common amphibians are anticipated to be present within the habitats on site.

5.4.2. MITIGATION MEASURES

It is recommended that during the clearance phase of works, any common amphibians encountered be moved by hand, away from construction activities.

5.4.3. SIGNIFICANCE OF RESIDUAL EFFECTS

Should the mitigation and compensation measures be followed, the effects are assessed as **negligible**.

5.5. BREEDING BIRDS

5.5.1. POTENTIAL IMPACTS

The woodland, hedgerows, and individual trees on site were anticipated to support breeding birds. A minor loss in some of these habitats will occur as part of the development.



A barn owl box was noted on T20.

An active kingfisher nest was noted on the northern bank face of Pendleton Brook.

5.5.2. MITIGATION MEASURES

Where vegetation requires removal, this should be carried out outside of nesting bird season. Breeding bird season occurs between March–September (inclusive). If this is not possible, a suitably qualified ecologist should inspect the area no more than 48 hours prior to the removal. Should any nests, or nests in construction, be located, a suitable stand-off distance should be maintained until the young have fledged. The ecologist will advise on suitable stand off and provide a toolbox talk to all site contractors regarding their working limits and legal implications.

An additional nesting bird check should be undertaken along Pendleton Brook by a suitably qualified ecologist up to 48 hrs before works commence to ascertain whether the kingfisher nest is active or whether new nests have been created along the bank face. A buffer zone defined by an ecologist will be maintained from the nest during and post-construction to ensure no kingfishers are intentionally disturbed as a result of the development.

To reduce the chance of barn owl nesting during the working period, the barn owl box will be checked under the supervision of a licence holder to determine if barn owls are using the box for breeding. If barn owls are not using the box, the box will be removed and installed elsewhere within agricultural fields away from the works. If barn owls are breeding, the box will need to remain in situ and monitored. An exclusion zone around the box will be implemented if barn owls are using the box during the proposed development. This will be agreed with an ornithologist, but is likely to be around 100 m.

It is recommended that species-specific nest boxes be incorporated into the proposed development, on retained trees or within proposed residential properties, to create new nesting habitats on-site. Such boxes include swift boxes/bricks, sparrow terraces, starling boxes, in addition to a number of standard nest boxes.

5.5.3. SIGNIFICANCE OF RESIDUAL EFFECTS

Should the mitigation and compensation measures be followed, the effects are assessed as **negligible**.

5.6. BADGERS

5.6.1. POTENTIAL IMPACTS

No badger setts were located on-site or adjacent during the Preliminary Ecological Appraisal or updated walkover. The proposed works has the potential to disturb foraging or commuting badgers, which may be utilising the site.

5.6.2. MITIGATION MEASURES

It is recommended that an updated site walkover prior to the development is carried out to identify any new badger setts. If a badger sett is located, a stand-off distance may be required, as well as Precautionary Working Methods. If the sett requires closure, a Natural England Badger Licence would be required. Please note that badger licences can only be obtained between July and November each year to avoid potential impact on pregnant females.

The following Precautionary Working Methods will be adhered to during the construction phase to ensure that no badgers within the local area are impacted by the proposed development.



- ✦ All site operatives will be inducted to the presence of the species and their working limits and legal responsibilities.
- ✦ All site operatives will be inducted as to identifying potential badger setts and should be vigilant if they suspect they locate a new sett during works and inform the project ecologist immediately.
- ✦ All excavations will be battered at a 45-degree angle, or ramps will be installed, to allow the escape should animals become trapped. Alternatively, excavations will be covered overnight.
- ✦ All site machinery and materials will be appropriately stored to avoid harm to the species, notably between July and November each year, when extra care is needed to avoid potential impacts on pregnant females

5.6.3. SIGNIFICANCE OF RESIDUAL EFFECTS

Should the mitigation and compensation measures be followed, the effects are assessed as **negligible**.

5.7. OTTERS

5.7.1. POTENTIAL IMPACTS

Otters utilise Pendleton Brook as a commuting and foraging feature. Additionally, two confirmed holts were noted downstream of the site. The first was located 340 m southwest of the site, and the second was located 210 m west of the site. A potential holt was located along Pendleton Brook on the northern bank in the south of the site.

5.7.2. MITIGATION MEASURES

A 25 m buffer from the potential otter holt will be put in place to avoid any potential impacts the development may have on the species. No works will be permitted within the 25 m buffer. Based on current proposals, a 25 m buffer will be maintained. However, if plans change and a 25 m buffer cannot be maintained, monitoring will be required to ascertain whether it is a holt and what type of holt.

Furthermore, all site operatives will be given a Toolbox Talk on the presence of the species and its legal protection. Site operatives will be required to sign the Toolbox Talk in order to confirm they have understood the details provided. Contact details of the ecologist will be provided to the site operatives.

The following Precautionary Working Methods should be adhered to for all works on site:



- ✳ All site personnel are to be inducted through the use of a Toolbox Talk on the presence of otters, their legal protection and working limits.
- ✳ An updated otter survey will be undertaken prior to the development commencing.
- ✳ The banks of the brook will be litter picked at the start and end of works, and all construction-related materials are not to be stored within 25 m of any potential holt.
- ✳ No artificial lighting will be installed, both during the works period and following on from the completion of the project, to ensure the brook is maintained as a dark area for otter.
- ✳ Any temporarily exposed open pipe system should be capped in such a way as to prevent otters gaining access, as this may happen when contractors are off-site.
- ✳ No works within 25 m of the brook will be undertaken after dusk or before dawn.
- ✳ As otters are naturally inquisitive, any excavations that are left overnight will include a ramp of 45° or less on one face to allow otter and other wildlife to climb out should they fall into the excavation.
- ✳ Commuting otters may lie-up in stacked pipes or beneath pallets. These features, where they are within 25 m of the brook, should be inspected daily by a suitably qualified ecologist before the start of works.

5.7.3. SIGNIFICANCE OF RESIDUAL EFFECTS

Should the mitigation and compensation measures be followed, the effects are assessed as **negligible**.

5.8. HEDGEHOGS

5.8.1. POTENTIAL IMPACTS

The habitats on site provide suitable refuge and foraging habitat for hedgehogs, with foraging and hibernation opportunities within the hedgerow and individual tree understory. These habitats are likely to be disturbed or removed during the development.

5.8.2. MITIGATION MEASURES

Habitats on site should be retained where possible. Where vegetation requires removal, it should be checked for the presence of hedgehog prior to removal. If any vegetation is too dense to be fully inspected, it should be strimmed to 50 cm and checked for hedgehog before being cleared to ground level. If trees are removed, their bases should be checked, prior to removal, for sheltering hedgehogs. It is recommended that any clearance takes place outside of December-March to avoid impacting hibernating hedgehogs.

Post-development, a series of hedgehog houses could be installed throughout the site to enhance the site's value for the species.

5.8.3. SIGNIFICANCE OF RESIDUAL EFFECTS

Should the mitigation and compensation measures be followed, the effects are assessed as **negligible**.



5.9. BROWN HARE

5.9.1. POTENTIAL IMPACTS

Brown hare, a UK BAP species, may be present on site within the open modified grassland

5.9.2. MITIGATION MEASURES

The habitats on-site are common within the wider landscape, and as such, impacts on the local brown hare population are anticipated to be low.

It is recommended that a pre-commencement check for young hare, which may have been left in the grassland fields by mothers after the breeding season (February to September), is undertaken.

5.9.3. SIGNIFICANCE OF RESIDUAL EFFECTS

Should the mitigation and compensation measures be followed, the effects are assessed as **negligible**.

5.10. WATER VOLE

5.10.1. POTENTIAL IMPACTS

No signs of water vole were noted on site. Therefore, it is highly unlikely water vole will be impacted by development.

5.10.2. MITIGATION MEASURES

Due to the lack of evidence of the presence of water vole on site, no mitigation measures for water vole are recommended.

5.10.3. SIGNIFICANCE OF RESIDUAL EFFECTS

The effects are assessed as **negligible**.

5.11. WHITE-CLAWED CRAYFISH

5.11.1. POTENTIAL IMPACTS

No signs of white-clawed crayfish were noted on site. Therefore, it is highly unlikely that white-clawed crayfish will be impacted by development.

5.11.2. MITIGATION MEASURES

Due to the lack of evidence of the presence of water vole on site, no mitigation measures for white-clawed crayfish are recommended.

5.11.3. SIGNIFICANCE OF RESIDUAL EFFECTS

The effects are assessed as **negligible**.



5.12. INVERTEBRATES

5.12.1. POTENTIAL IMPACTS

Notable invertebrates may be present within the hedgerow and watercourses.

5.12.2. MITIGATION MEASURES

Based on current plans, the majority of the hedgerows and watercourses will be unaffected by the proposed development.

Precautionary working methods should be followed as outlined in Section 5.2.1.

5.12.3. SIGNIFICANCE OF RESIDUAL EFFECTS

Should the mitigation and compensation measures be followed, the effects are assessed as **negligible**.

5.13. REPTILES

5.13.1. POTENTIAL IMPACTS

The removal of vegetation on site could adversely affect reptile populations due to the suitable habitat.

5.13.2. MITIGATION MEASURES

The site was assessed as having potential for a small number of reptiles within the hedgerows. As such, these habitats should be retained where possible. However, if they require clearance, it is recommended that the following Precautionary Working Methods be followed:

- ✿ All site contractors are to be inducted as to the potential presence of the species group, their legal responsibilities and working limits, by a suitably qualified, experienced ecologist.
- ✿ It will be checked by an ecologist for the presence of reptiles, and once the area is deemed free, the area will be turfed with a toothed bucket.
- ✿ During works, the site should be kept tidy of debris and material, and any vegetation within the working areas should be maintained below 50 mm in height to discourage amphibians or reptiles from re-entering these areas.
- ✿ If a reptile is identified, works should cease, and the project ecologist contacted immediately to capture the individual.

5.13.3. SIGNIFICANCE OF RESIDUAL EFFECTS

Should the mitigation and compensation measures be followed, the effects are assessed as **negligible**.



5.14. INVASIVE NON-NATIVE PLANT SPECIES

5.14.1. POTENTIAL IMPACTS

Himalayan balsam, an invasive non-native species, was identified along Pendleton Brook. Field horsetail was also identified on site.

5.14.2. MITIGATION MEASURES

Himalayan balsam is listed under Schedule 9 of the Wildlife and Countryside Act 1981. It is therefore an offence to cause the spread of them in the wild. As such, it is advised that a licensed invasive species contractor be appointed to eradicate the species from the site.

Field horsetail was also identified during the survey, and it is recommended that this be eradicated due to the damage it can cause to areas of hardstanding. Field horsetail is not listed under Schedule 9 of the Wildlife and Countryside Act 1981 and therefore does not require removal legally.

5.14.3. SIGNIFICANCE OF RESIDUAL EFFECTS

Should the mitigation and compensation measures be followed, the effects are assessed as **negligible**.

5.15. SUMMARY

Table 2 shows a summary of the effects anticipated by the proposals.

| RECEPTOR | PREDICTED RESIDUAL EFFECT |
|------------------------------|----------------------------------|
| DESIGNATED SITES | Negligible |
| HABITATS | Positive |
| BATS | Negligible |
| AMPHIBIANS | Negligible |
| BREEDING BIRDS | Negligible |
| BADGERS | Negligible |
| OTTERS | Negligible |
| BROWN HARE | Negligible |
| HEDGEHOGS | Negligible |
| WATER VOLE | Negligible |
| WHITE-CLAWED CRAYFISH | Negligible |
| INVERTEBRATES | Negligible |
| REPTILES | Negligible |
| INVASIVE SPECIES | Negligible |



6. REFERENCES

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- ✿ CIEEM (2019). Lifespan of Ecological Reports and Surveys.
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- ✿ E3P (2025) Otter and Water Vole Survey Report – Henthorn Road, Clitheroe (Report Reference: 82-168-R2-1)
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- ✿ Wildlife and Countryside Act (2010) Schedule 9 of the Wildlife and Countryside Act 1981.



END OF REPORT

APPENDIX I

UKHAB HABITAT PLAN



Key:

-  Red Line Boundary
-  Other rivers and streams
-  Individual Tree
-  Tree with PRF-M bat roosting potential
-  Tree with PRF-I bat roosting potential
-  Native hedgerow with trees
-  Species-rich native hedgerow
-  Species-rich native hedgerow with trees
-  Developed land; sealed surface
-  Lowland mixed deciduous woodland
-  Modified grassland



Notes

| | | | | |
|--|----------------|---------------------------|--------------------------------------|-------------------|
| Issue: 1 | Revision: 1 | Date: 04/12/2025 | Drawn: PP | Authorised: CK |
| Client: Gladman Developments Ltd | | Job No. 82-168 | Date: 04/12/2025 | |
| | | Drawing No. 82-168-011 | Scale: 1:4000 | |
| Job title: Henthorn Road, Clitheroe | | | Drawing title: UKHab Habitat Plan | |



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**APPENDIX II
POST DEVELOPMENT
PLAN**





- Key:**
- Red Line Boundary
 - Ditches
 - Enhanced watercourse
 - Retained watercourse
 - Proposed tree
 - Existing tree
 - Proposed species-rich native hedgerow
 - Enhanced hedgerow
 - Retained species-rich native hedgerow
 - Retained species-rich native hedgerow with trees
 - Artificial unvegetated, unsealed surface (Proposed)
 - Developed land; sealed surface (proposed)
 - Lowland mixed deciduous woodland (retained)
 - Mixed scrub (proposed)
 - Modified grassland (proposed)
 - Developed land; sealed surface (retained)
 - Other neutral grassland (proposed)
 - Lowland mixed deciduous woodland (proposed)
 - Sustainable drainage system (proposed)
 - Traditional orchards (proposed)
 - Residential development (proposed)

Notes

| | | | | |
|-------------------------------------|----------------|---------------------------|---------------------|-------------------|
| Issue: 1 | Revision: 1 | Date: 04/12/2025 | Drawn: PP | Authorised: CK |
| Client: Gladman Developments Ltd | | Job No. 82-168 | Date: 04/12/2025 | |
| | | Drawing No. 82-168-011 | Scale: 1:4000 | |

| | |
|--|---|
| Job title: Henthorn Road, Clitheroe | Drawing title: Post-Development Plan |
|--|---|

0 20 40 60 80 100 m

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APPENDIX III WATERBODY PLAN





- Key:
- Red Line Boundary
 - 250m from site boundary
 - Potential waterbodies
 - Discounted waterbodies

Notes

| | | | | |
|--|----------------|---------------------------|----------------------------------|-------------------|
| Issue: 1 | Revision: 2 | Date: 10/12/2025 | Drawn: MM | Authorised: CK |
| Client: Gladman Developments Ltd | | Job No. 82-168 | Date: 10/12/2025 | |
| | | Drawing No. 82-168-007 | Scale: 1:4500 @ A4 | |
| Job title: Henthorn Road, Clitheroe | | | Drawing title: Waterbody Plan | |

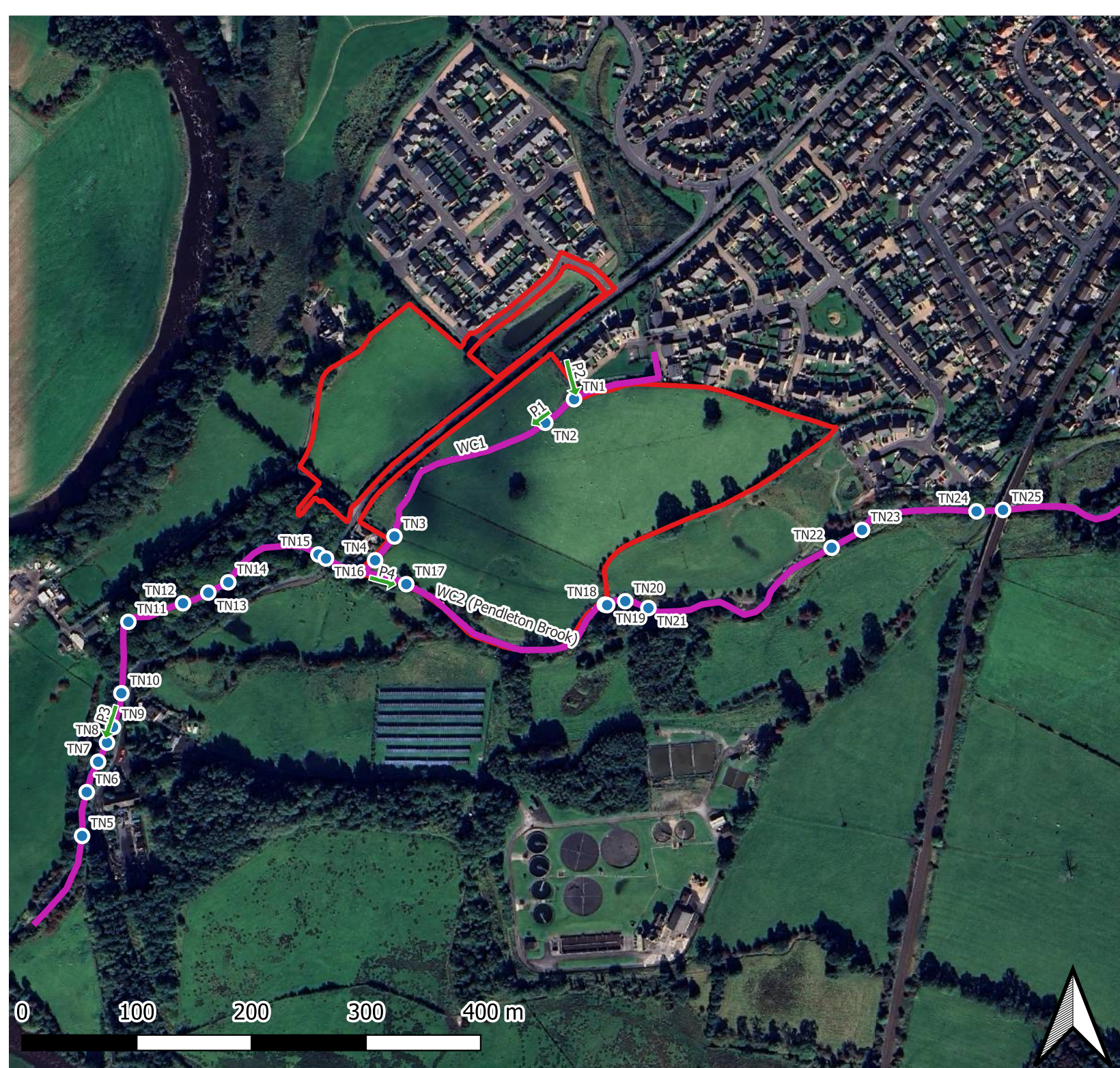


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**APPENDIX IV
OTTER AND WATER VOLE
SURVEY PLAN**





Key:

- Red Line Boundary
- ➔ Plates
- Target Notes
- Survey Area

Notes

- TN5 - Otter holt, spraints, anal jelly and prints
- TN8 - Possible resting place with spraints
- TN11 - Otter holt, spraints and prints
- TN15 - Possible resting place with spraints
- TN17 - Possible otter holt
- TN18 - Active kingfisher nest
- TN21 - possible resting place with spraints
- TN22 - Possible resting place with spraints

| | | | | |
|-------------------------------------|----------------|---------------------------|-----------------------|-------------------|
| Issue: 1 | Revision: 2 | Date: 10/12/2025 | Drawn: PP | Authorised: CK |
| Client: Gladman Developments Ltd | | Job No. 82-168 | Date: 10/12/2025 | |
| | | Drawing No. 82-168-006 | Scale: 1:4500 @ A4 | |

Job title: Henthorn Road, Clitheroe
 Drawing title: Otter and Water Vole Survey Plan

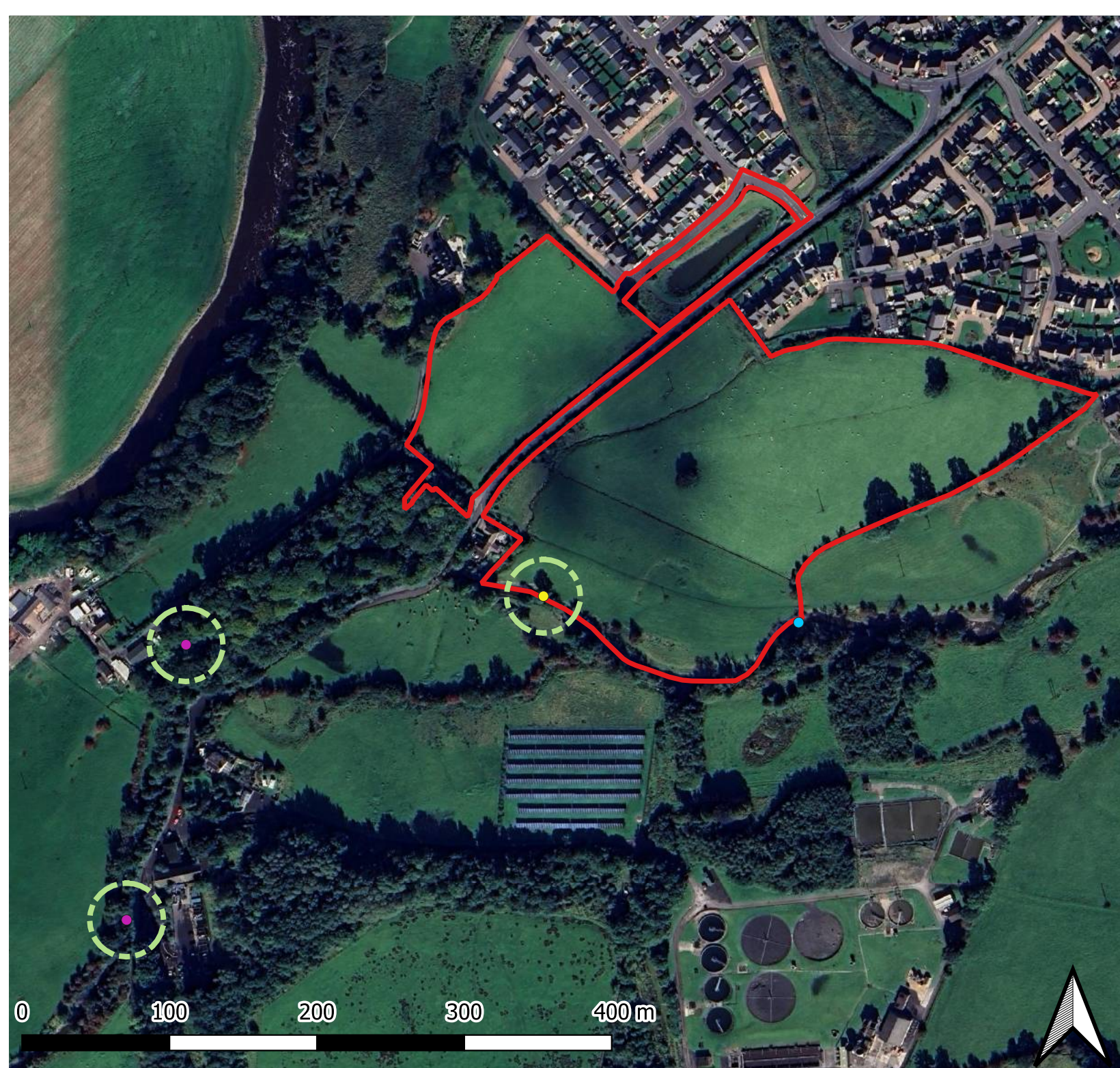
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APPENDIX V

OTTER HOLT PLAN





Key:

- Red Line Boundary
- Otter holt
- Potential otter holt
- Kingfisher nest
- 25m buffer

Notes

| | | | | |
|--|----------------|---------------------------|-----------------------------------|-------------------|
| Issue: 1 | Revision: 2 | Date: 10/12/2025 | Drawn: PP | Authorised: CK |
| Client: Gladman Developments Ltd | | Job No. 82-168 | Date: 10/12/2025 | |
| | | Drawing No. 82-168-009 | Scale: 1:3500 @ A4 | |
| Job title: Henthorn Road, Clitheroe | | | Drawing title: Otter Holt Plan | |

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APPENDIX VI

INVASIVE SPECIES PLAN





Key:

-  Red Line Boundary
-  Himalayan balsam
-  Field horsetail

Notes

| | | | | |
|--|----------------|---------------------------|---|-------------------|
| Issue: 1 | Revision: 2 | Date: 10/12/2025 | Drawn: MM | Authorised: CK |
| Client: Gladman Developments Ltd | | Job No. 82-168 | Date: 10/12/2025 | |
| | | Drawing No. 82-168-004 | Scale: 1:2300 @ A4 | |
| Job title: Henthorn Road, Clitheroe | | | Drawing title: Invasive Species Plan | |



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