



envirotech

**Ecological Consultants
Environmental and Rural Chartered Surveyors**

Preliminary Ecological Appraisal

Land off Albany Drive, Copster Green, Blackburn, BB1 9EH



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ACCURACY OF REPORT

This report has been compiled based on the methodology as detailed and the professional experience of the surveyor. Whilst the report reflects the situation found as accurately as possible, all of the protected species this survey covers are wild and can move freely from site to site. Their presence or absence detailed in this report does not entirely preclude the possibility of a different past, current or future use of the site surveyed.

We would ask all clients acting upon the contents of this report to show due diligence when undertaking work on their site and/or in their interaction with protected species. If protected species are found during a work programme, and continuing the work programme could result in their disturbance, injury or death, either directly or indirectly an offence may be committed.

If in doubt, stop work and seek further professional advice.

Quality and Environmental Assurance

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1. EXECUTIVE SUMMARY

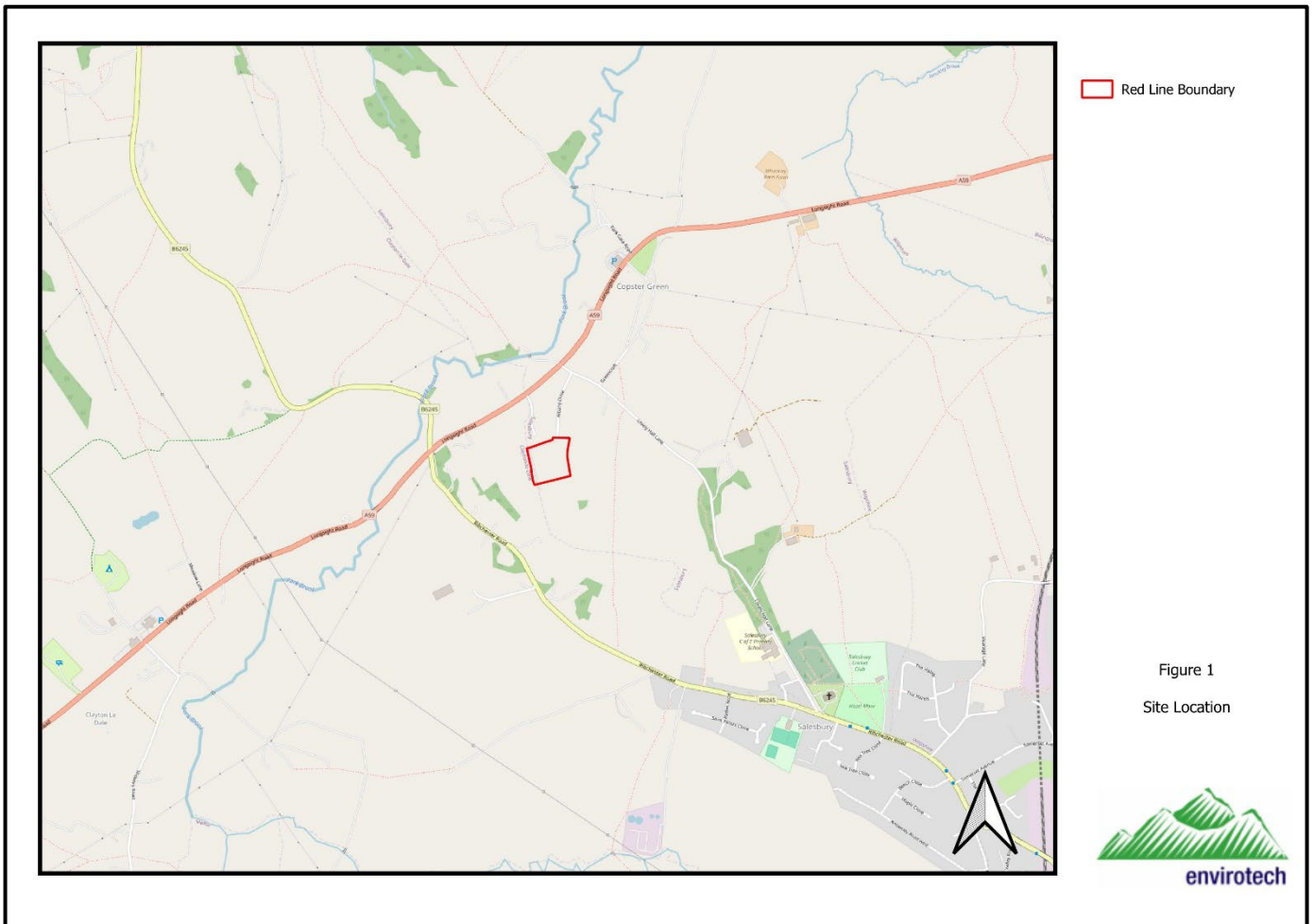
- 1.1.1 Envirotech NW Ltd were commissioned in November 2025 to carry out a Preliminary Ecological Appraisal of Land off Albany Drive, Copster Green.
- 1.1.2 It is proposed new houses are constructed on the site.
- 1.1.3 A data search and desk study of the site and an area within 2km of the site were undertaken to establish the presence of protected species and notable habitats.
- 1.1.4 The site was then visited by a licenced ecologist from Envirotech NW Ltd on 1st December 2025. A full botanical survey of the site was initially undertaken and this was followed by surveys to establish the presence or absence of notable species at the site or in proximity such that they may be affected by the proposed development.
- 1.1.5 The plant species assemblages recorded at the site are all common in the local area and are considered to be of low ecological value, comprising horse-grazed areas of modified grassland. Sympathetically landscaped open space is considered to offer habitat of comparable ecological value.
- 1.1.6 Most of the site's biodiversity value is in its boundary vegetation and hedgerows. Whilst none of the hedgerows around the site perimeter are considered 'important' under the Hedgerow Regulations (1997), all hedgerows are a HPI habitat and where possible should be retained in the scheme.
- 1.1.7 A mature Ash tree (T3) is embedded within Hedgerow 2 to the eastern edge of the site. The tree possesses potential roost features suitable for multiple bats/small maternity roosts. It is understood the tree will not be impacted by development.
- 1.1.8 Whilst bats, nesting birds and common species of amphibian are known to occur in the local area, there was no conclusive evidence of any specifically protected species regularly occurring on site or the surrounding areas which would require direction action, licencing or be negatively affected by site development following the mitigation proposed.
- 1.1.9 Contractors will be observant for protected species and all nesting birds. Should any species be found during construction, all site works should cease and further ecological advice should be sought with a view to a detailed method statement and programme of mitigation measures being prepared and implemented.

2. INTRODUCTION

2.1 Background

2.1.1 In November 2025 Envirotech NW Ltd were commissioned by Maybern Planning and Development Ltd to carry out a Preliminary Ecological Appraisal of Land off Albany Drive, Copster Green, central grid reference SD 67372 33517 (Figure 1). A site investigation was undertaken and a report compiled which includes recommendations for any future actions and or mitigation required.

2.1.2 The survey was requested in connection with the proposed construction of new houses.



2.2 Objectives

2.2.1 The main objectives of the study were:

- The completion of a UKHabs Version 2 (UKHab Ltd (2023)) survey including the preparation of a vegetation and habitat map of the site and the immediate surrounding area.
- The survey and assessment of all habitats for statutorily protected species.
- An evaluation of the ecological significance of the site.
- The identification of any potential development constraints and the specification of the scope of mitigation and enhancement required in accordance with wildlife legislation, planning policy and other relevant guidance, and;
- The identification of any further surveys or precautionary assessments that may be required prior to the commencement of any development activities.

3. METHODOLOGY AND SOURCES OF INFORMATION

3.1 Data Search

- 3.1.1 The Envirotech dataset, National Biodiversity Network (NBN) and the Multi-Agency Geographic Information for the Countryside (MAGIC) were searched to establish the presence of any records of statutorily protected, notable or rare species, and any designated sites of international, national, regional or local importance within a 2km radius of the site boundary.
- 3.1.2 The Envirotech dataset is compiled from extensive field surveys from the period 2004-present, as well as records obtained from third parties during this time.
- 3.1.3 Google Earth and Google Street View were consulted to establish the presence of any features of ecological importance within the local area.
- 3.1.4 Due to the scale of development, in accordance with CIEEM guidelines, a data search of the county records centre was not required. The likely presence and impact on protected species could be adequately determined from the level of data search undertaken.

3.2 Vegetation and Habitats

- 3.2.1 A vegetation and habitat map was produced for the site and the immediate surrounding area. The mapping is based on the UKHabs V2 survey and reporting methodology.
- 3.2.2 Searches were made for uncommon, rare and statutorily protected plant species, those species listed as protected in the Wildlife and Countryside Act (1981) and indicators of important and uncommon plant communities. All plant nomenclature follows Stace (2019).
- 3.2.3 Searches were carried out for the presence of invasive species, including those listed on Schedule 9 of the Wildlife and Countryside Act (1981), namely Japanese knotweed (*Fallopia japonica*), Himalayan balsam (*Impatiens glandulifera*) and giant hogweed (*Heracleum mantegazzianum*) on terrestrial habitat and aquatic species such as floating pennywort (*Hydrocotyle ranunculoides*), water hyacinth (*Eichhornia crassipes*) and New Zealand pygmyweed (*Crassula helmsii*).
- 3.2.4 The survey was also informed by questioning the landowner/site agent to ascertain the recent history of the site.
- 3.2.5 Habitats of Principal Importance (HPI) were cross referenced with Natural England's inventory against the site boundary and where found ground truthed.

3.3 Timing and Personnel

3.3.1 During the visit, weather conditions were suitable for the survey types undertaken.

3.3.2 The site and surrounding land were visited on 1st December 2025 by: -

- (BF) Mr Bradley Foster MEnv (Hons)
Natural England Bat Class Licence (Level 1)
Natural England Barn Owl Licence (Agent)
Natural England Great Crested Newt Licence (Level 1)

4. SPECIES SURVEY METHODOLOGY

4.1 Amphibian

- 4.1.1 Great crested newts (*Triturus cristatus*) are protected under Schedule 2 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and Schedule 5 of the Wildlife & Countryside Act (1981).
- 4.1.2 Water-bodies located within or adjacent to the study area were identified and where access was possible were assessed for their potential to support great crested newts.
- 4.1.3 The criteria used in the assessment are based on those contained in the Herpetofauna Workers Manual and Oldham et al, 2000, and in applying these criteria a precautionary approach was adopted. Following the criteria developed by Oldham et al (2000), the HSI tool developed for use with great crested newts and forming part of Natural England's Licensing process was used to determine the suitability of ponds for great crested newts.
- 4.1.4 The pond assessment was undertaken in order to determine which water-bodies, based on their potential to support great crested newts, should be subject to presence/absence surveys.
- 4.1.5 From a review of Ordnance Survey maps, modern satellite imagery and having ground-truthed the site, there are two known ponds within a 250m radius of the site boundary- these being two ornamental garden ponds within the curtilage of Homeacre ~115m to the east.
- 4.1.6 A pond was previously located in the adjacent field of rank grassland directly to the east. From a review of aerial imagery this appears to have been infilled in ~2015.
- 4.1.7 Resultingly, the site was considered sufficiently low risk for use by GCN such that no further assessments were deemed necessary.

4.2 Badger

- 4.2.1 Badgers (*Meles meles*) and their setts are protected under the Protection of Badgers Act (1992). This legislation arises from animal welfare issues (rather than on the basis of nature conservation grounds) and protects badgers from being killed, injured or disturbed whilst occupying a sett.
- 4.2.2 A disturbance to badgers in their setts may occur as a result of construction operations. Natural England recommends that the use of heavy machinery in proximity of a sett entrance should be avoided, with a 'disturbance free-zone' being established.
- 4.2.3 The degree of disturbance attributed to construction activity is a function of the background level of activity badgers are accustomed to and that which will be attributed to a proposed activity. The "disturbance free zone" is therefore site specific.
- 4.2.4 The survey for badgers comprised an assessment of all suitable habitat within and outside the study area boundary (where this was possible) to a distance of 30m for indications of use by badgers.

4.2.5 Signs of badgers which were searched for included:

- Setts - 'D' shaped entrances at least 25cms wide and wider than they are high with large spoil mounds
- Discarded bedding at sett entrances (this includes grass and leaves)
- Scratching posts on shrubs and trees close to a sett entrance
- The presence of badger hairs which are coarse, up to 100mm long with a long black section and a white tip
- Dung pit latrines and footprints
- Habitual runs through vegetation and beneath fences
- Hedgehog carcasses

4.3 **Bats**

4.3.1 All British bat species are fully protected under Schedule 5 of the Wildlife and Countryside Act (1981), and are included on Schedule 2 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, as a Protected Species. Taken together, these pieces of legislation make it an offence to:

- Intentionally or recklessly kill, injure or capture bats;
- Deliberately or recklessly disturb bats (whether in a roost or not);
- Damage, destroy or obstruct access to bat roosts.

4.3.2 The Bat Conservation Trust Collins, J. (ed) (2023) issued guidelines on bat survey methodology, a key feature of their recommendation is for the undertaking of a pre-survey assessment - an initial desk-study and a walkover assessment of the survey area and its surrounding area to identify the relative value of the habitats present for bats and likely commuting routes. This is to be followed by a survey program that is appropriate to the likely level of bat activity within the survey area to be determined by and based on the experience of the surveyor.

4.3.3 The potential value of the survey area for foraging bats was assessed through consideration of two main factors: professional knowledge of bat ecology and foraging behaviour in combination with the geographical location, topography and habitats present within the survey area and surrounds.

4.3.4 All trees and structures on and within the survey area boundary were assessed for their potential to support roosting or hibernating bats. This comprised a close inspection of all trees and buildings on the site to allow an assessment of their potential to be used by bats to be made by a licensed surveyor.

4.3.5 Trees were all assessed in accordance with Collins, J. (ed) (2023) and categorised as No potential, PRF-I or PRF-M. PRF I is only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats. PRF M is suitable for multiple bats and may therefore be used by a maternity colony.

4.4 Birds

- 4.4.1 All breeding birds, other than pest species, are protected under the Wildlife and Countryside Act of 1981 when building a nest, rearing young or sitting on eggs. Some bird species, such as barn owl (*Tyto alba*), are protected when near an active nest site. Several birds are listed as Species of Principal Importance (SPI).
- 4.4.2 Bird species and behaviour were noted during the field survey. All areas were covered equally, in order to avoid the subjective survey of better quality 'bird habitat'.

4.5 Brown Hare

- 4.5.1 The brown hare (*Lepus europaeus*) is a SPI.
- 4.5.2 The survey method involved walking boundaries and surveying with binoculars. The survey was conducted at a suitable distance to ensure that the hares were not disturbed. Generally, surveys were undertaken throughout the early afternoon and evening when hares are thought to be most active and feeding.
- 4.5.3 Where present the number of brown hares in each field or hedgerow was recorded, together with the nature and use of the field, climatic conditions and time of day. The presence of forms and faeces where present were also recorded.

4.6 Invertebrates

- 4.6.1 A general assessment was made of the study area's suitability for supporting invertebrates during the survey. The study area's lack of habitat diversity, species-poor composition and uniformity of vegetation structure (i.e., lack of variation in height and microtopography) resulted in our belief that a low diversity of invertebrates would be likely to occur across the site.
- 4.6.2 The extent of sampling was limited in that it could be confirmed that no SPI would be likely to be affected by the proposal.

4.7 Reptiles

- 4.7.1 All native reptiles are protected in Britain under the Wildlife and Countryside Act of 1981. It is an offence to intentionally kill, injure, sell or advertise to sell any of the six native species.
- 4.7.2 The survey for these species was based on assessing the habitat type and suitability of the site. This comprised an assessment of satellite imagery for the site and surrounding area as well as comparison of the results from the records searches with habitat types. The general habitat at the site was evaluated in terms of its suitability to reptiles for foraging or breeding.
- 4.7.3 Habitat at the site was not considered sufficiently suitable for a full presence/absence survey to be warranted.

4.8 Water Vole

- 4.8.1 Water voles (*Arvicola amphibious*) and their habitat are fully protected under Schedule 5 of the Wildlife and Countryside Act (1981). This provides protection from killing or taking by certain prohibited methods and their breeding and resting places are fully protected from destruction or obstruction, it is also an offence to disturb them in these places.
- 4.8.2 A ditch edges part of the site boundary to the west. This watercourse was surveyed and assessed for evidence of the presence of water vole.
- 4.8.3 This involved intensive searches by wading upstream where possible, and observing from the banks where not; looking for burrows and other signs including footprints, droppings and chewed vegetation. This was undertaken up to 5m from the water course.

4.9 Survey limitations

- 4.9.1 The survey was undertaken in winter. At this time of year plant species are less easily identified and the activity of many species is reduced.
- 4.9.2 Due to the habitats present on site however, there were no significant constraints in respect of identifying the botanical interest of the site.
- 4.9.3 The duration, extent and scope of the surveys were considered sufficient to plan appropriate mitigation and recommend additional precautionary survey work required prior to the commencement of work.
- 4.9.4 No significant survey limitations were encountered.

5. RESULTS

5.1 *Data Search*

- 5.1.1 Envirotech hold no records of protected or notable species for the site. There are however records of protected or notable species within 2km (Figure 2). These are discussed in the relevant sections below.
- 5.1.2 The site lies within a corridor of the Lancashire Grassland Ecological Network. Areas of non-statutory protected woodland are also located within a 250m radius of the site boundary (Figure 3).
- 5.1.3 The nearest statutory protected site is the Harper Clough and Smalley Delph Quarries SSSI, located 4.5km to the south-east (Figure 4).

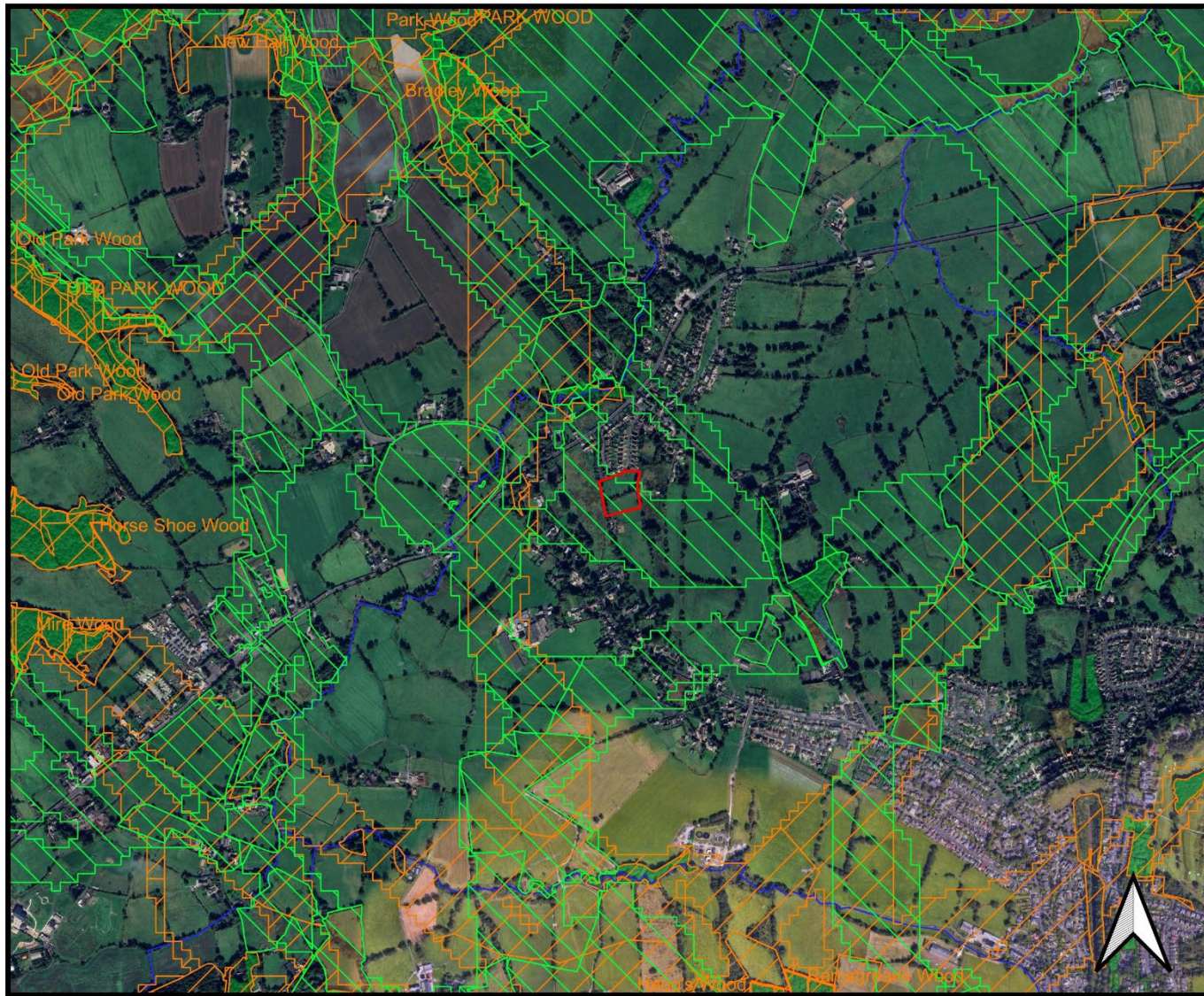


Red Line Boundary

- Mammals
- Bats
- Birds

Figure 2
Protected and
Notable Species





-  Red Line Boundary
-  Lancashire Grassland Ecological Network v1a1
-  Lancashire Woodland Ecological Network v1a1
-  Lancashire BHS
-  Watercourse
-  Ancient Woodland
-  Deciduous woodland
-  Good quality semi-improved grassland
-  Lowland meadows
-  Purple moor grass and rush pastures

Figure 3

Mapped Habitats of Principal Importance and Non-statutory Protected Sites





 Red Line Boundary

 SSSI

Figure 4

Protected Sites
and Habitats



6. UKHabs V2 SURVEY RESULTS

6.1 *Habitat Results*

6.1.1 The site comprises two compartments of horse-grazed modified grassland. The site is subdivided and enclosed by lines of species-rich native hedgerows with trees. A ditch edges part of the site boundary to the west. A permeable access track wraps around the site to the north and west.

6.1.2 The site is enclosed by residential housing to the north, close-grazed pasture to the south and rank grassland to the east and west.

6.1.3 See Figure 6 for the UK Habs V2 Plan and Table 1 for the descriptive Target Notes.

Target Note	Description	Comment
TN1	Site Access	The site is accessed via a galvanised steel gate off Albany Drive to the north. <i>Leylandii</i> (<i>Leylandii</i> x <i>Cupressocyparis leylandii</i>) vegetation from bordering garden areas overhangs the site boundary.
TN2	Hardcore Track	A permeable access track wraps around the site to the north and west.
TN3	Modified Grassland	The site comprises two identical compartments of horse-grazed modified grassland, sloping to the north. Grassland is dominated by Perennial Ryegrass (<i>Lolium perenne</i>) and Creeping Bent (<i>Agrostis stolonifera</i>), with occasional Crested Dog's-Tail (<i>Cynosurus cristatus</i>). Occasional Yorkshire Fog (<i>Holcus lanatus</i>), Marsh foxtail (<i>Alopecurus geniculatus</i>), Soft Rush (<i>Juncus effusus</i>) and Floating Sweet Grass (<i>Glyceria fluitans</i>) are located to wetter areas of ground. Herbaceous flowering vegetation includes White Clover (<i>Trifolium repens</i>), Mouse ear (<i>Cerastium fontanum</i>), Chickweed (<i>Stellaria media</i>), Plantain (<i>Plantago major</i>), Great Hairy willowherb (<i>Epilobium hirsutum</i>), Hoary Willowherb (<i>Epilobium parviflorum</i>), Nettle (<i>Urtica dioica</i>), Hogweed (<i>Heracleum sphondylium</i>), Broadleaved Dock (<i>Rumex obtusifolius</i>), Ribwort Plantain (<i>Plantago lanceolata</i>) and Ragwort (<i>Senecio jacobaea</i>).
TN4	Ditch	A ditch runs south-east to north-west beneath the northern half of Hedgerow 1, being ~50cm wide and ~30cm deep. The ditch can be openly accessed from either side.
TN5	Hedgerow 1 Species-rich Native Hedgerow with Trees	The western edge of the site is enclosed by a line of species-rich native hedgerow with trees. Shrubby vegetation consists of Hawthorn (<i>Crataegus monogyna</i>), Hazel (<i>Corylus avellana</i>), Holly (<i>Ilex aquifolium</i>), Elderberry (<i>Sambucus nigra</i>), Rose (<i>Rosa canina</i> or <i>arvensis</i>), Ash (<i>Fraxinus excelsior</i>) and Willow (<i>Salix</i> sp.). The hedgerow is interspersed with English Oak (<i>Quercus robur</i>), Sycamore (<i>Acer pseudoplatanus</i>) and Hornbeam (<i>Carpinus betulus</i>). Ground vegetation is dominated by Bramble (<i>Rubus fruticosus</i> agg) and Hogweed (<i>Heracleum sphondylium</i>). The hedge line is defunct for much of its length, containing large canopy gaps through which the field to the west can be accessed. It is understood an Ash tree (T19) is removed from the hedgerow to facilitate development.
TN6	Stable	The track leads to a stable and menage to the south-west of the redline boundary.

TN7	<p style="text-align: center;">Hedgerow 2 Species-rich Native Hedgerow with Trees</p>	<p>The eastern edge of the site is contained by a prominent line of species-rich native hedgerow with trees. Shrubby vegetation consists of Hawthorn, Blackthorn (<i>Prunus spinosa</i>) and Holly (<i>Ilex aquifolium</i>), being oversailed by Sycamore, English Oak and Ash. The hedgerow is largely defunct, with large canopy gaps around the mature Oak tree to its southern end. Ground vegetation is dominated by Nettle, Creeping thistle (<i>Cirsium arvense</i>), Bramble, Bracken (<i>Pteridium aquilinum</i>) and Rosebay Willow herb (<i>Epilobium angustifolium</i>). A mature Ash tree (T3) embedded towards the northern end of Hedgerow 2 possesses potential roost features for use by multiple bats/small maternity roosts.</p>
TN8	<p style="text-align: center;">Hedgerow 3 Species-rich Native Hedgerow with Trees</p>	<p>Traversing east to west across the centre of the site is an additional species-rich native hedgerow with trees. Shrubs comprise a line of Holly, Elder and Hawthorn, being interspersed with occasional Sycamore, Ash and English Oak. The hedgerow is enclosed by stock fencing to the south, but is open to grazing to the north. There are areas of rutted bare ground throughout the hedgerow owing to poaching. Ground vegetation is restricted to Cleavers (<i>Galium aparine</i>), Nettle and Chickweed.</p>

Table 1 Details of Target Notes.






-  Red Line Boundary
-  Target Notes
-  h2a5 Species-rich Native Hedgerow with Trees
-  r2b Other Rivers and Streams (Ditch)
-  g4 Modified Grassland
-  u1c Artificial Unvegetated Unsealed Surface

Figure 5
UK Habitats Survey Map





The site is accessed via galvanized steel gate off Albany Drive



A permeable track wraps around the north and west of the site



Hedgerow 1 encloses the site to the west



A shallow ditch runs beneath part of Hedgerow 1



Hedgerow 1 encloses the south-west of the site (leading to the stable)



The northern field compartment



The field comprises an area of short-grazed modified grassland



The southern field compartment



Perennial Ryegrass and Creeping Buttercup are dominant



Hedgerow 2 screens the eastern edge of the site



Hedgerow 3 cuts across the centre of the site, separating the two field compartments (looking north-east)



The hedgerow is subject to poaching and trampling of ground vegetation





Leylandii vegetation overhangs the site boundary from bordering garden areas to the north



Potential roost features recorded to a mature Ash tree (T3) towards the north-east corner of the site

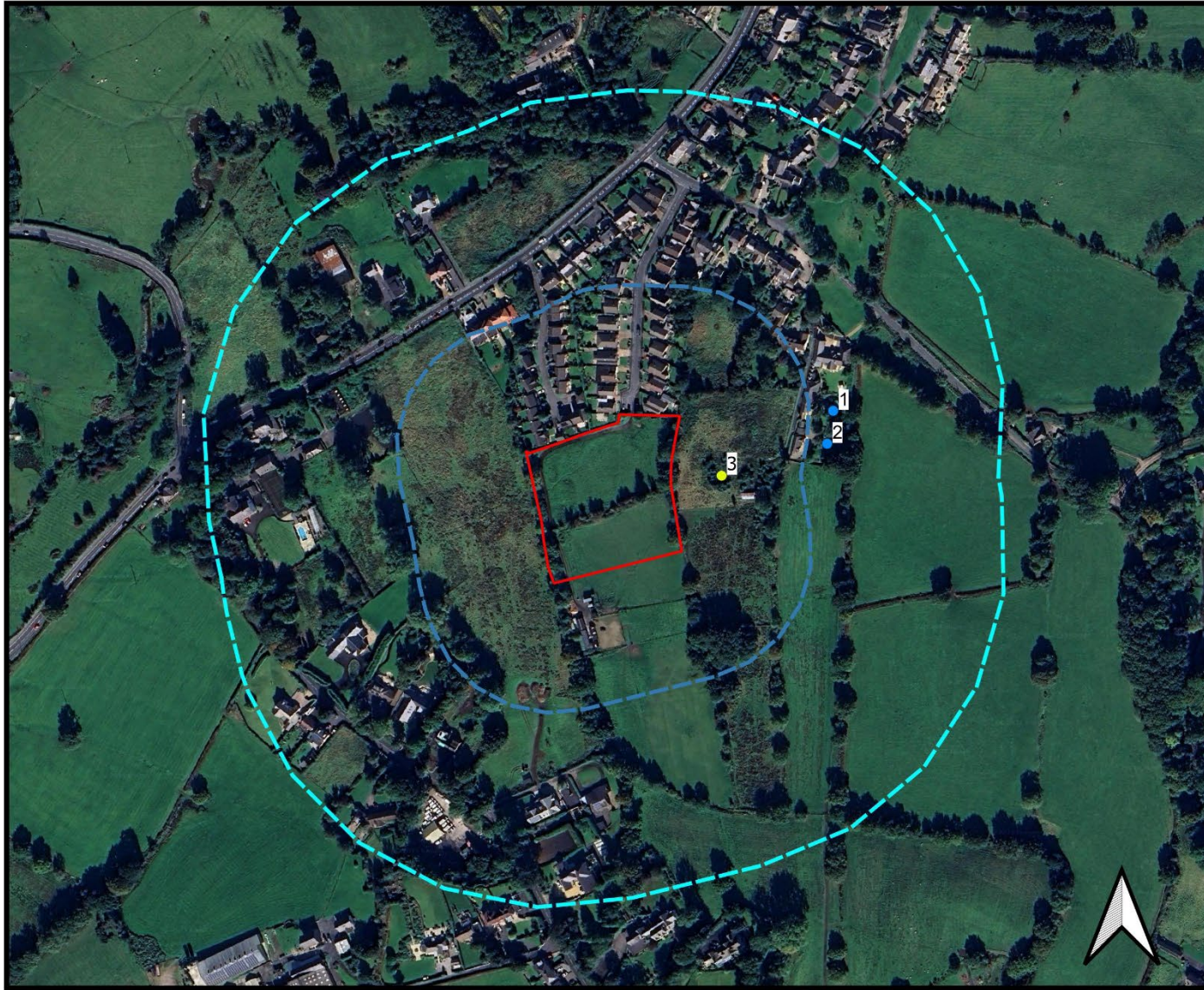
Table 2 Photographs

6.2 Vegetation

- 6.2.1 Details of the plant species found on site are included in the target notes. Species recorded are all commonly occurring and undoubtedly occur elsewhere in similar habitats in the local area.
- 6.2.2 The modified grassland has a low species diversity and ecological value, being dominated by palatable and agriculturally productive species. The site's grassland assemblage is indicative of regular grazing and disturbance. This habitat does not constitute a Habitat of Principal Importance (HPI).
- 6.2.3 The site is enclosed to the east and west by lines of species-rich native hedgerow with trees (Hedgerows 1 and 2). These hedgerows are largely fragmentary, but contain a number of mature trees and shrubs. A shallow ditch runs south-east to north-west beneath the northern half of Hedgerow 1.
- 6.2.4 The site is subdivided by an unmanaged line of species-rich native hedgerow with trees (Hedgerow 3), which is open to poach grazing. The hedgerows possess a moderate diversity of woody species. The hedgerow groundflora however is dominated by Bramble, bracken and tall ruderal vegetation. All hedgerows are a HPI habitat and should be retained in any proposed scheme. Where lengths need to be lost, hedgerows should be transplanted or new hedges planted as compensation.
- 6.2.5 None of the hedgerows are classified as important under the Hedgerow Regulations (1997) (See Appendix 1) owing to failing to contain the minimum necessary number of woody species and/or characteristic per 30m section.
- 6.2.6 There are no field trees/tree stock within the core development area of the site. Mature Ash, Sycamore, English Oak and Hornbeam are however embedded within the hedgerow borders.
- 6.2.7 There is no evidence of Japanese knotweed, giant hogweed or Himalayan balsam on the site. No other invasive or notable weed species listed on Schedule 9 (Section 14) of the Wildlife and Countryside Act (1981) (as amended) was identified within the site or adjacent land.

6.3 Amphibian

- 6.3.1 There are no records for amphibians within 2km of the site on the Envirotech dataset.
- 6.3.2 From a review of Ordnance Survey maps, modern satellite imagery and having ground-truthed the site, there are two known ponds within a 250m radius of the site boundary (Ponds 1 and 2), these being two ornamental garden ponds within the curtilage of Homeacre ~115m to the east.
- 6.3.3 A pond (Pond 3) was previously located in the adjacent field of rank grassland directly to the east. From a review of aerial imagery this appears to have been infilled in ~2015.
- 6.3.4 The location of these ponds is shown on Figure 6 below.

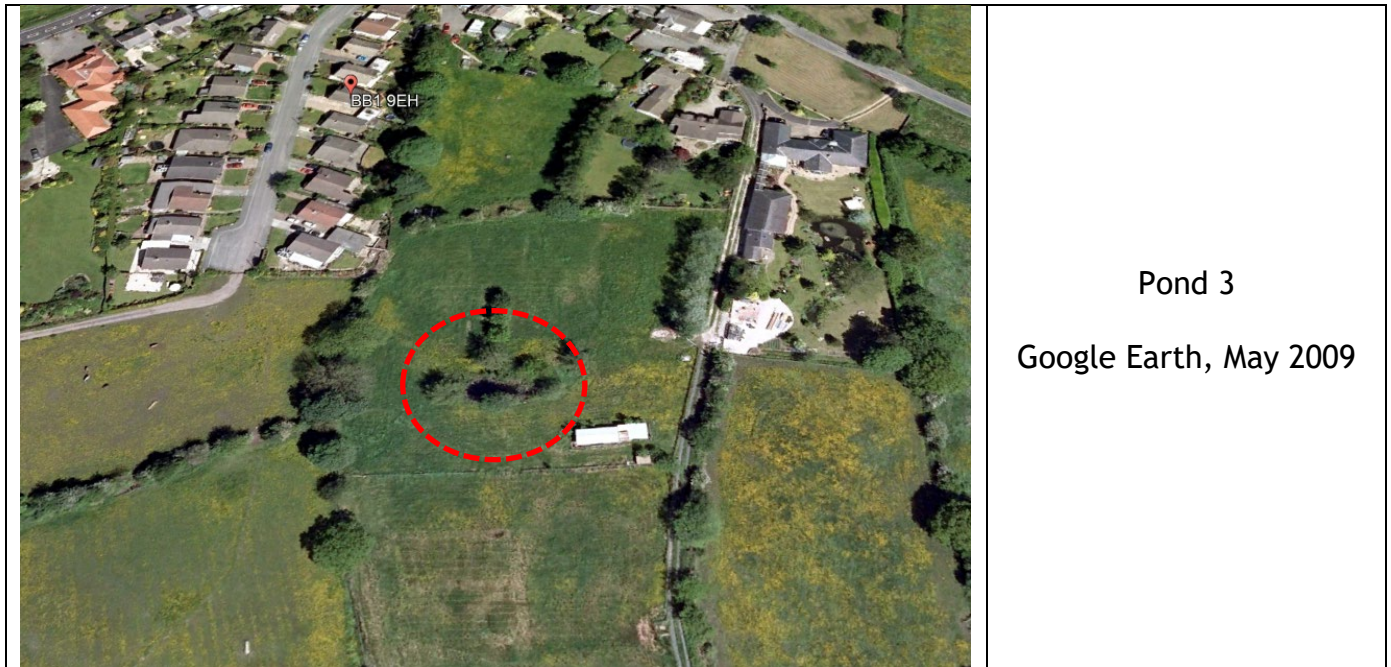


- Red Line Boundary
- 100m Buffer
- 250m Buffer
- Pond
- Infilled Pond

Figure 6
Site, Buffer Zones
and Ponds



- 6.3.5 It is understood part of the site (the northern field compartment) was surveyed by Cameron S Crook and Associates in 2014 as part of a previous planning application, during which Ponds 1-3 were surveyed.
- 6.3.6 Pond 1 comprised a well-maintained garden pond. Pond 1 was considered to rarely dry (being fed by an artificial stream running from Pond 2, the water being filtered and pumped back to Pond 2 to maintain constant flow), being topped up by the owners when low. The water quality was very clear owing to filtering. Pond 1 was however found to be stocked with Koi carp.
- 6.3.7 Pond 2 comprises a balancing pool for Pond 1, comprising a small body of water $\leq 35\text{m}^2$. Pond 2 contained no fish, possessing a high degree of macrophyte cover (80-90%), but was of a similarly artificial and semi-landscaped nature. Pond 1 possessed a HSI Index of 0.5 (below average) and Pond 2 a HSI Index of 0.65 (average).
- 6.3.8 Pond 3 relates to a former field pond surrounded by marginal aquatic vegetation, small trees and tall rank grassland. Pond 3 possessed a HSI Index of 0.72 (good).
- 6.3.9 Presence/absence surveys were conducted on Ponds 1-3 between 3rd and 15th May 2014, comprising a mix of bottle trapping and torchlight surveys. No GCN were recorded in Ponds 1-3, with no amphibians recorded in Ponds 1 and 2. Pond 3 was found to contain a small population of Smooth Newts (max count: 8), a low number of Palmate Newts (max count: 2) and a single Common Frog (as well as tadpoles).
- 6.3.10 Pond 3 has since been infilled, as seen from aerial imagery in ~2015 (Table 3).



	<p style="text-align: center;">Infilling of Pond 3 Google Earth, April 2015</p>
	<p style="text-align: center;">Current aerial imagery of the bordering field</p>

Table 3- Aerial imagery of Pond 3

6.3.11 Factoring in the relative distance of Ponds 1 and 2 from the site, their ornamental nature within a formalised garden area and absence of any amphibians during presence/absence surveys in 2014, we consider the completion of further amphibian surveys unnecessary.

6.3.12 The core development area has a low value to amphibians being open and exposed. Structural diversity at ground level across the site is poor. There are no areas with log, rubble piles or compost heaps which would be particularly favourable to amphibians, though the bordering hedgerows and trees could provide suitable commuting habitat and hibernacula.

6.3.13 Amphibians would be unlikely to attempt to cross the core development area as it comprises an area that is mostly open with uniform length grass. Whilst not a physical

barrier to the dispersal of amphibians, the site is regarded as being a potentially hostile environment to them.

6.3.14 Whilst the proposed development is unlikely to result in the permanent loss of or a substantial negative effect on any waterbodies, considerations regarding the methods, duration and/or timing of works should all however be made. These are discussed in Section 7.2.

6.4 Badger

6.4.1 There are no records of badgers within 2km of the site on the Envirotech dataset.

6.4.2 Badger setts do not occur on site and a lack of feeding signs or runs across the site would suggest that they do not occur within 30m of site boundaries.

6.4.3 The proposed development will not impact on any existing badger runs or setts. The porosity of the surrounding fields to the passage of badgers will not be affected.

6.5 Bats

6.5.1 There are eight records of three species of bat within 2km of the site on the Envirotech dataset. Records relate to Common Pipistrelle (*Pipistrellus pipistrellus*), Soprano Pipistrelle (*Pipistrellus pygmaeus*) and Brown Long-Eared (*Plecotus auritus*).

6.5.2 The foraging habitat at the site is considered poor for bat species being open and exposed. The modified grassland offers negligible foraging opportunities for bats given their uniformity and exposure. The bordering hedgerows and mature trees do however possess a moderate degree of structure, diversity and interconnectivity, providing sheltered flight lines and thoroughfares through which bats could move through the local area.

6.5.3 Whilst the hedgerows and trees are the most structurally diverse habitat onsite, they are not considered exceptional in the local area. More extensive areas of medium and high-quality habitat occur locally, including the enclosed woodland and riverine habitat along the River Ribble ~2km to the west.

6.5.4 It is not considered there would be significant degradation of foraging habitat as a result of the proposal so long as the hedgerows and trees are retained and or their loss is compensated for in any landscaping scheme.

6.5.5 All trees within Hedgerows 1-3 were assessed in accordance with Collins, J. (ed) (2023) and assigned a risk category. All of the trees on site were considered Negligible Risk or PRF-I, with the exception of T3- a mature Ash tree embedded within Hedgerow 2. The tree is located between plots 25 and 26 (Figure 7). PRF I is only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats. PRF M is suitable for multiple bats and may therefore be used by a maternity colony. T3 possesses a number of cavities and deadwood for potential use by roosting bats. The location of T3 is shown in Figure 7.

6.5.6 It is understood T3 is to be retained post-development.

- 6.5.7 Should T3 need to be removed to facilitate development however, it is advised an aerial tree inspection is undertaken to ascertain the nature of the potential roost features and search for evidence of bats (live individuals, droppings and staining).
- 6.5.8 Risk categories from and the requirement for mitigation for each tree category are shown on Figure 8.
- 6.5.9 We consider bat species are highly unlikely to rely on the core development area for feeding, but undoubtedly rely on surrounding habitats for foraging. There are no structures or buildings available for use by roosting bats within the redline boundary. Roosting by bats may however occur within T3.



- Red Line Boundary
- Bat Tree Risk

Figure 7
Bat Tree Risk



Table 6.3. Showing types of survey approaches that are relevant to tree surveys following steps taken in Figure 6.1.

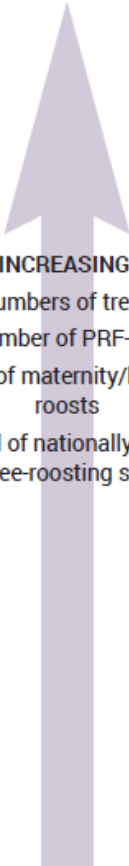
Scenario	Types of approaches after considering impact avoidance as first step in mitigation hierarchy.
Known bat roosts	Roost characterisation surveys (see Section 7.3) followed by EPS licensing (for loss) or PWMS (for e.g. disturbance impacts where buffers are required).
 <p>INCREASING: numbers of trees number of PRF-Ms likelihood of maternity/hibernation roosts likelihood of nationally or locally rare tree-roosting species</p>	<p style="text-align: center;">ALBST</p> <p>Consider trapping, tagging and radio-tracking to find roosts of high conservation significance (see Chapter 9).</p> <p>This method is likely to be appropriate on (a) nationally significant infrastructure projects, (b) projects that impact sites designated for tree roosting bats, and/or (c) areas of woodland with high suitability for bats or ancient woodlands. See Box 6.1. CONSULTATION WITH RELEVANT SNCB IS ESSENTIAL, A BESPOKE APPROACH MAY BE REQUIRED⁷⁹.</p> <p style="text-align: center;">FURTHER SURVEYS APPROACH (but consider cost-effectiveness when compared to ALBST)</p> <p>PRF inspection surveys for PRF-M features in summer (see Table 6.4. and Section 6.8). Where features inaccessible or too extensive for PRF inspection, carry out emergence surveys in summer with NVAs (see Table 6.4. and Section 7.2). Consider winter roosting potential. MAY NEED TO CONSULT WITH RELEVANT SNCB.</p> <p style="text-align: center;">ROOST RESOURCE APPROACH (if only PRF-Is^a)</p> <p>No further surveys. Provide appropriate compensation for all PRF-Is in advance of impacts and a PWMS for works (see Reason & Wray, 2023).</p>
<p>^a If there are larger numbers of trees with features categorised as PRF-I then this increases the likelihood of a roost being present. Conversely, if there are very few trees in the landscape then PRF-I features may have increased importance. Context should always be understood and considered.</p>	

Figure 8 Tree risk categories from Collins, J. (ed) (2023)

6.6 Birds

- 6.6.1 There are 40 records of birds within 2km of the site on the Envirotech dataset.
- 6.6.2 Common garden birds and those indicative of urban and farmland fringes are undoubtedly present within the local area and are likely to frequent the site. For example, there are extensive records of Dunnock (*Prunella modularis*), Goldfinch (*Carduelis carduelis*), Greenfinch (*Chloris chloris*), House Sparrow (*Passer domesticus*) and Starling (*Sturnus vulgaris*).
- 6.6.3 Hedgerows within the redline boundary of the site are available to opportunistic nesting birds such as Dunnock (*Prunella modularis*), Wren (*Troglodytes troglodytes*) and Blue tit (*Cyanistes caeruleus*).
- 6.6.4 Common ground foraging birds such as Chaffinch (*Fringilla coelebs*), Blackbird (*Turdus merula*) and Pied wagtail (*Motacilla alba yarrellii*) are also likely to frequent the site.
- 6.6.5 Rot holes and cracks within T3 may support cavity nesting species such as Tree Creeper (*Certhia familiaris*) and Woodpeckers.
- 6.6.6 Grassland within the core development area of the site will not be used by ground nesting birds given the equestrian use of the site, degree of regular human presence and uniformity of habitats at ground level.
- 6.6.7 Precautionary mitigation is considered appropriate. The landscaping scheme should include species such as rowan (*Sorbus aucuparia*) which are seed bearing and will provide food for birds in the winter.
- 6.6.8 The habitat on site is not considered to be of anything more than of local significance, habitats present are well represented in the local area. The impact on nesting birds is therefore considered likely to be minor.

6.7 Brown Hare

- 6.7.1 Brown hare are a SPI. There are no records of Brown Hare within a 2km radius of the site on the Envirotech dataset.
- 6.7.2 No indication of brown hares was recorded on the site.
- 6.7.3 The site boundary has some potential for brown hares to create forms but use of the site is likely to be limited due to its open and exposed nature and regular human presence.
- 6.7.4 A risk assessment of the site in respect of its future potential for and value to brown hares could be adequately made. We consider the risk to brown hares is very low.

6.8 Invertebrates

- 6.8.1 There are 52 records of notable invertebrates within a 2km radius of the site on the NBN database, relating to various records of ground beetle, hoverfly and ladybird.

- 6.8.2 No deadwood or vegetation was recorded within the core development area which would provide an important resource for invertebrates within the local area.
- 6.8.3 Herbaceous vegetation within the core development area is restricted to common flowering species such as Creeping buttercup, Mouse ear and Dock.
- 6.8.4 Tall ruderal vegetation, brambles and mature trees to the site boundaries are likely to provide foraging opportunities for winged insects, although this is unlikely to be locally significant.
- 6.8.5 Given the poor-quality habitats contained within the site in comparison to the wider area, it is not considered that this site is of any local significance for invertebrates.
- 6.8.6 Impacts on insects are considered likely to be negligible, with post development domestic gardens creating comparable habitat diversity to that already present.
- 6.8.7 The significance of the site to invertebrates is likely to be limited in the local context although the habitat on site will support invertebrate species. Mitigation can be incorporated into the design and landscaping scheme with the careful selection of plant species and substrates for the garden areas.

6.9 Reptiles

- 6.9.1 There are no records for reptiles within 2km of the site on the Envirotech dataset.
- 6.9.2 The majority of the site has a very low value to reptiles being devoid of significant ground cover and microhabitats at ground level. There are no areas of the core development area which would be particularly favourable to reptiles.
- 6.9.3 The core development area constitutes areas of poorly drained grassland dipping towards a northerly aspect.
- 6.9.4 No indication of reptiles was recorded at the site.
- 6.9.5 As a consequence, precautionary mitigation would be appropriate in respect of construction activities so as to ensure reasonable avoidance measures are taken to avoid the killing or injury of these species.

6.10 Water vole

- 6.10.1 There are no records of water voles within 2km of the site on the Envirotech dataset.
- 6.10.2 A ditch borders part of the site boundary to the west, comprising a rocky unvegetated channel with shallow sloping banks. The ditch is heavily shaded, possessing no lush marginal vegetation needed for food and cover.
- 6.10.3 The banks are unsuitable for tunnelling given their shallow sloping nature. The ditch is no greater than 30cm deep, with presence of water unlikely to be all year round.

6.10.4 No signs of water voles, such as burrow entrances, droppings, feeding piles or footprints were present. We consider this species is likely to be absent from the site. Precautionary mitigation would be appropriate.

6.11 Other

6.11.1 The site may be crossed by species such as fox (*Vulpes vulpes*) and rabbit (*Oryctolagus cuniculus*) are known to occur locally.

6.11.2 The boundary hedgerows may provide suitable habitat for small mammals such as field vole (*Microtus agrestis*) and Hedgehog (*Erinaceus Europaeus*).

6.12 Statutory and Non-Statutory Sites

Direct Impacts:

6.12.1 There are no statutory or non-statutory sites which are connected to the site such that site development would directly affect the dispersal of species between them or directly impact upon their integrity.

6.12.2 The habitats on site do not represent or are linked to those found in any of the statutory or non-statutory sites locally.

Indirect Impacts:

6.12.3 There are no statutory or non-statutory sites which are connected to the site such that site development would indirectly affect the dispersal of species between them or indirectly impact upon their integrity.

7. MITIGATION/RECOMMENDATIONS

7.1 *Compensatory planting and habitat enhancement*

- 7.1.1 The roots of trees on the site and its boundaries should be adequately protected during work in accordance with industry standards. All trees should as far as possible be retained in the scheme.
- 7.1.2 Provision of native fruit and nut bearing trees throughout the site would help link and layer retained habitats, provide valuable feeding opportunities for birds and complement the site's landscaping. Trees could provide valuable screening and enhance structural diversity of the site edges. Species could consist of Wild Cherry (*Prunus avium*), Field maple (*Acer campestre*), Aspen (*Populus tremula*), Silver Birch (*Betula pendula*) and Rowan (*Sorbus aucuparia*).
- 7.1.3 Wildflower seed could be used to plant up verges and/or sown beneath new trees and hedgerow. Grass mixes selected should contain native species only (being sourced from within the UK) and should contain at least 20% nectar and pollen rich herbaceous flowering plants. Grass could be cut at the end of April (to invigorate wildflower growth and cut back dominate grasses) and again at the end of summer (late-August). Cut risings should be removed from the site in order to limit soil fertility.
- 7.1.4 It is understood new species-rich hedgerow will be planted along the southern boundary of the site. All new hedgerow should comprise a double staggered line of native shrubs, planted at a density of 5-7 shrubs per linear metre. All new hedgerow planting should consist of 60% Hawthorn, 20% Blackthorn and 20% other species such as Hazel (*Corylus avellana*), Holly, Field Maple, Crab apple (*Malus sylvestris*), Cherry Plum (*Prunus cerasifera*) and others. Such specimens could be scattered throughout the hedgerow or established as isolated blocks. Hedgerow should be cut on rotation every 2-3 years so as to allow woody specimens to properly flower.

7.2 *Amphibians*

- 7.2.1 There is no requirement for specific mitigation for these species. There are currently no suitable breeding sites on or near the site. However, as a precautionary measure, in the unlikely event that any signs of any amphibian activity is subsequently found, all site works should cease and further ecological advice should be sought with a view to a detailed method statement and programme of mitigation measures being prepared and implemented.
- 7.2.2 The following points should also be followed: -
- All work must take place during daylight hours as amphibians are more likely to be commuting over night and this will ensure the risk to any amphibians commuting through the site will be minimised.
 - During the development, measures should be put in place to discourage amphibians from using the development area, the creation of any piles of earth, materials and rubble which could form potential artificial hibernacula and refuge should be avoided at all times. It is recommended that any spoil or rubble will be removed immediately

to skips, or on hard standing or short grass. This will ensure that no potential amphibian hibernation or resting sites are created.

- The storage of all loose materials must be palletised or similar so they are off the ground whenever possible.
- Should any trenches and excavations be required, an escape route for animals that enter the trench must be provided, especially if left open overnight. Ramps should be no greater than of 45 degrees in angle. Ideally, any holes should be securely covered. This will ensure amphibians are not trapped during work.
- All excavations left open overnight or longer should be checked for animals prior to the continuation of works or infilling. Back filling should be completed immediately after any excavations, ideally back filling as an on-going process to the work in hand.

7.3 Badger

7.3.1 Badger setts are known to occur within 2km of the site. These setts will be undisturbed by work but in order to minimise impacts on badgers passing over the site the following points should also be followed.

- All work must take place during daylight hours as badgers are more likely to be commuting over the site at night and this will ensure the risk to any badgers passing through the site will be minimised.
- Should any trenches and excavations be required, an escape route for animals that enter the trench must be provided, especially if left open overnight. Ramps should be no greater than of 45 degrees in angle. Ideally, any holes should be securely covered. This will ensure badgers are not trapped during work.
- All excavations left open overnight or longer should be checked for animals prior to the continuation of works or infilling. Back filling should be completed immediately after any excavations, ideally back filling as an on-going process to the work in hand.
- Boundary fences/walls should incorporate gaps at their base to facilitate the passage of badgers across the site.

7.4 Bats

7.4.1 Work at night should be restricted, new planting within the site should enhance structural diversity and light spill onto the boundary should be minimised.

7.4.2 New roosting provision for crevice dwelling bats could be incorporated into the buildings on site or bat boxes could be erected in retained trees.

7.4.3 Any PRF-M trees (T3) to be felled should be re-inspected for bats to confirm they remain absent. Should this tree be removed in order to facilitate development, it is recommended aerial tree inspections or emergence surveys be undertaken to determine the nature of the potential roost features and to search for evidence of bats (e.g. live individuals, droppings, or staining).

7.4.4 It is understood T3 will not be impacted by development and is to be retained at this time.

7.5 Birds

7.5.1 Nesting by birds within the development area is considered unlikely to occur. Birds may nest within hedges on the periphery of the site.

7.5.2 Any vegetation to be trimmed or cleared should be checked for nesting birds before it is removed. Ideally this should occur outside the bird nesting period March- September. If vegetation clearance is to occur in the March-September period a check for nesting birds should be conducted first by a suitably qualified individual.

7.5.3 New planting within the site and the retention of trees and shrubs on the site boundary will maintain the ecological functionality of the site for breeding birds.

7.5.4 Artificial bird nesting sites for Swallow (*Hirundo rustica*) and House martin (*Delichon urbicum*) could be incorporated into the new buildings under the eaves in suitable locations.

7.5.5 If nesting birds are found at the site all site works shall cease and further ecological advice shall be sought with a view to a detailed method statement and programme of mitigation measures being prepared and implemented.

7.6 Brown Hares

7.6.1 There is no requirement for specific mitigation for this species. However, as a precautionary measure, in the unlikely event that any signs of any brown hare activity is subsequently found, all site works should cease and further ecological advice should be sought with a view to a detailed method statement and programme of mitigation measures being prepared and implemented.

7.6.2 The points in respect of not working at night and leaving open trenches with means of escape detailed for badgers are also applicable to this species.

7.7 Invertebrates

7.7.1 Landscaping should include native or wildlife friendly species including night flowering plants.

7.7.2 At least 20% of any grass/wildflower seed mixes should consist of herbaceous flowering plants.

7.8 Reptiles

7.8.1 There is no requirement for specific mitigation for these species. However, as a precautionary measure, in the unlikely event that any signs of any reptile activity is subsequently found, all site works should cease and further ecological advice should be

sought with a view to a detailed method statement and programme of mitigation measures being prepared and implemented.

7.8.2 The points in respect of not leaving open trenches without means of escape detailed for badgers are also applicable to these species.

7.9 Water vole

7.9.1 There is no requirement for specific mitigation for this species. However, as a precautionary measure, in the unlikely event that any signs of any Water vole activity is subsequently found, all site works should cease and further ecological advice should be sought with a view to a detailed method statement and programme of mitigation measures being prepared and implemented.

8. REFERENCES

Biggs J, Ewald N, Valentini A, Gaboriaud C, Griffiths RA, Foster J, Wilkinson J, Arnett A, Williams P and Dunn F 2014. Analytical and methodological development for improved surveillance of the Great Crested Newt. Appendix 5. Technical advice note for field and laboratory sampling of great crested newt (*Triturus cristatus*) environmental DNA. Freshwater Habitats Trust, Oxford.

Collins, J. (ed) (2023) *Bat Surveys for Professional Ecologists: Good practice guidelines* (4th edn). The Bat Conservation Trust, London.

Collins, J. (ed) (2016) *Bat Surveys for Professional Ecologists: Good practice guidelines* (3rd edn). The Bat Conservation Trust, London.

Hundt, L. (2012) *Bat Surveys: Good Practice Guidelines* (Second Edition). BCT, London.

Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). *Herpetological Journal* 10 (4), 143-155.

Stace, C. (2019). *New Flora of the British Isles*. Cambridge University Press.

UKHab Ltd (2023). *UK Habitat Classification Version 2.0* (at <https://www.ukhab.org>)

9. APPENDIX

