



envirotech

Ecological Consultants
Environmental and Rural Chartered Surveyors

Preliminary Ecological Appraisal

Roe Farm, Garstang, PR3 0PA



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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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Contents

1. EXECUTIVE SUMMARY.....	5
2. INTRODUCTION.....	6
2.1 Background.....	6
2.2 Objectives.....	7
3. METHODOLOGY AND SOURCES OF INFORMATION.....	8
3.1 Data Search.....	8
3.2 Vegetation and Habitats.....	8
3.3 Timing and Personnel.....	9
4. SPECIES SURVEY METHODOLOGY.....	10
4.1 Amphibian.....	10
4.2 Badger.....	10
4.3 Bats.....	11
4.4 Birds.....	11
4.5 Brown Hare.....	12
4.6 Invertebrates.....	12
4.7 Otter.....	12
4.8 Reptiles.....	12
4.9 Water Vole.....	13
4.10 Survey limitations.....	13
5. RESULTS.....	14
5.1 Data Search.....	14
6. PHASE 1 SURVEY RESULTS.....	18
6.1 Habitat Results.....	18
6.2 Vegetation.....	24
6.3 Amphibian.....	24
6.4 Badger.....	26
6.5 Bats.....	26
6.7 Birds.....	26
6.8 Brown Hare.....	27
6.9 Invertebrates.....	27
6.10 Otter.....	27
6.11 Reptiles.....	28
6.12 Water vole.....	28
6.13 Statutory and Non-Statutory Sites.....	28
7. MITIGATION/RECOMMENDATIONS.....	30
7.1 Compensatory planting and habitat enhancement.....	30
7.2 Amphibians.....	30
7.3 Badger.....	31

7.4	Bats.....	31
7.5	Birds	31
7.6	Brown Hares.....	32
7.7	Invertebrates.....	32
7.8	Otter.....	32
7.9	Reptiles	32
7.10	Water vole	32
8.	REFERENCES	34

1. EXECUTIVE SUMMARY

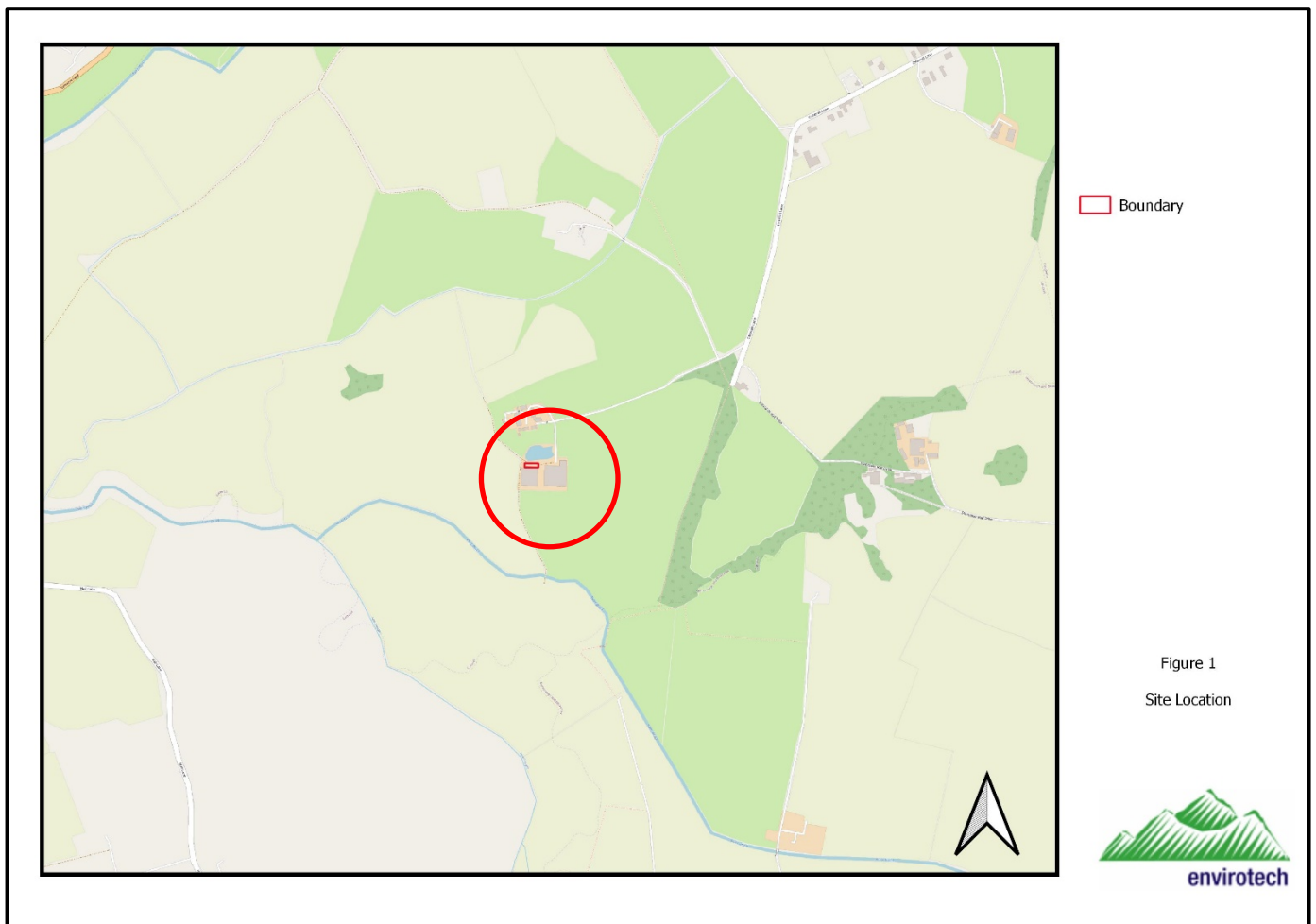
- 1.1.1 Envirotech NW Ltd were commissioned in July 2023 to carry out a Preliminary Ecological Appraisal of a small area of land at Roe Farm, Garstang. It is proposed that a roof cover is added to an existing silage clamp.
- 1.1.2 A data search and desk study of the site and an area within 2km of the site were undertaken to establish the presence of protected species and notable habitats.
- 1.1.3 The site was then visited by a licenced ecologist from Envirotech NW Ltd on 23rd August 2023. 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.
- 1.1.4 Habitats recorded at the site are all common in the local area and are considered to be of low ecological value, consisting of predominantly hardstanding.
- 1.1.5 Bats, amphibians and nesting birds are known to occur in the local area, however there was no conclusive evidence of any specifically protected species regularly occurring on the site or the surrounding areas which would be negatively affected by site development following the mitigation proposed.
- 1.1.6 The development proposal will not result in any direct land take to the surrounding fields/green space.
- 1.1.7 We recommend a series of reasonable avoidance measures (RAMS) are adopted for the site in respect of amphibians given its proximity (<10m) to a nearby duck pond.
- 1.1.8 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 July 2023 Envirotech NW Ltd were commissioned by ML Planning Limited to carry out a Preliminary Ecological Appraisal of land at Roe Farm, Garstang, central grid reference SD 48024 41251 (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 a roof covering over an existing silage clamp.



2.2 Objectives

2.2.1 The main objectives of the study were:

- The completion of a Phase 1 Habitat 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, the 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 Joint Nature Conservation Committee Phase 1 Habitat Survey methodology (JNCC 2003).
- 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 being warm and dry in late Summer.

3.3.2 The site and surrounding land was visited on 28th August 2023 by

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

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 Where relevant, 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 Where relevant, pond assessments were 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 A large agricultural pond is located in the centre of the farmstead, being <20m west of the development area.

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 (Hundt (2012) and Collins, J. (ed) (2016) 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 Where relevant, 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) (2016).

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 Where relevant, bird species and behaviour was noted during the site survey.

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 phase 1 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 Otter

- 4.7.1 Otters (*Lutra lutra*) are given protection by the Wildlife and Countryside Act (1981) as amended and Schedule 2 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

This protection means that it is an offence to deliberately or recklessly:

- Kill or injure otters;
- Destroy, damage or obstruct their dens, and
- Disturb them whilst in the den.

- 4.7.2 Where relevant, watercourses/bodies were assessed for their suitability and for the presence of otters within 10m of the banks. The banks and scrub vegetation were carefully searched for spraints, feeding remains, runs, prints and couches/holts.

4.8 Reptiles

- 4.8.1 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.
- 4.8.2 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.

- 4.8.3 Habitat at the site was not considered sufficiently suitable for a full presence/ absence survey to be warranted.

4.9 Water Vole

- 4.9.1 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.
- 4.9.2 There is a pond in close proximity to the survey area. This waterbody was surveyed and assessed for evidence of the presence of water vole.
- 4.9.3 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.

4.10 Survey limitations

- 4.10.1 The survey was undertaken in late summer. At this time of year plant species are easily identified.
- 4.10.2 Due to the habitats present on site there were no significant constraints in respect of identifying the botanical interest of the site.
- 4.10.3 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.
- 4.10.4 Surveys at the site have been undertaken over a number of years and as survey results remain similar, it is considered the level of use of the site by species targeted for survey has been determined.
- 4.10.5 No significant survey limitations were encountered.

5. RESULTS

5.1 *Data Search*

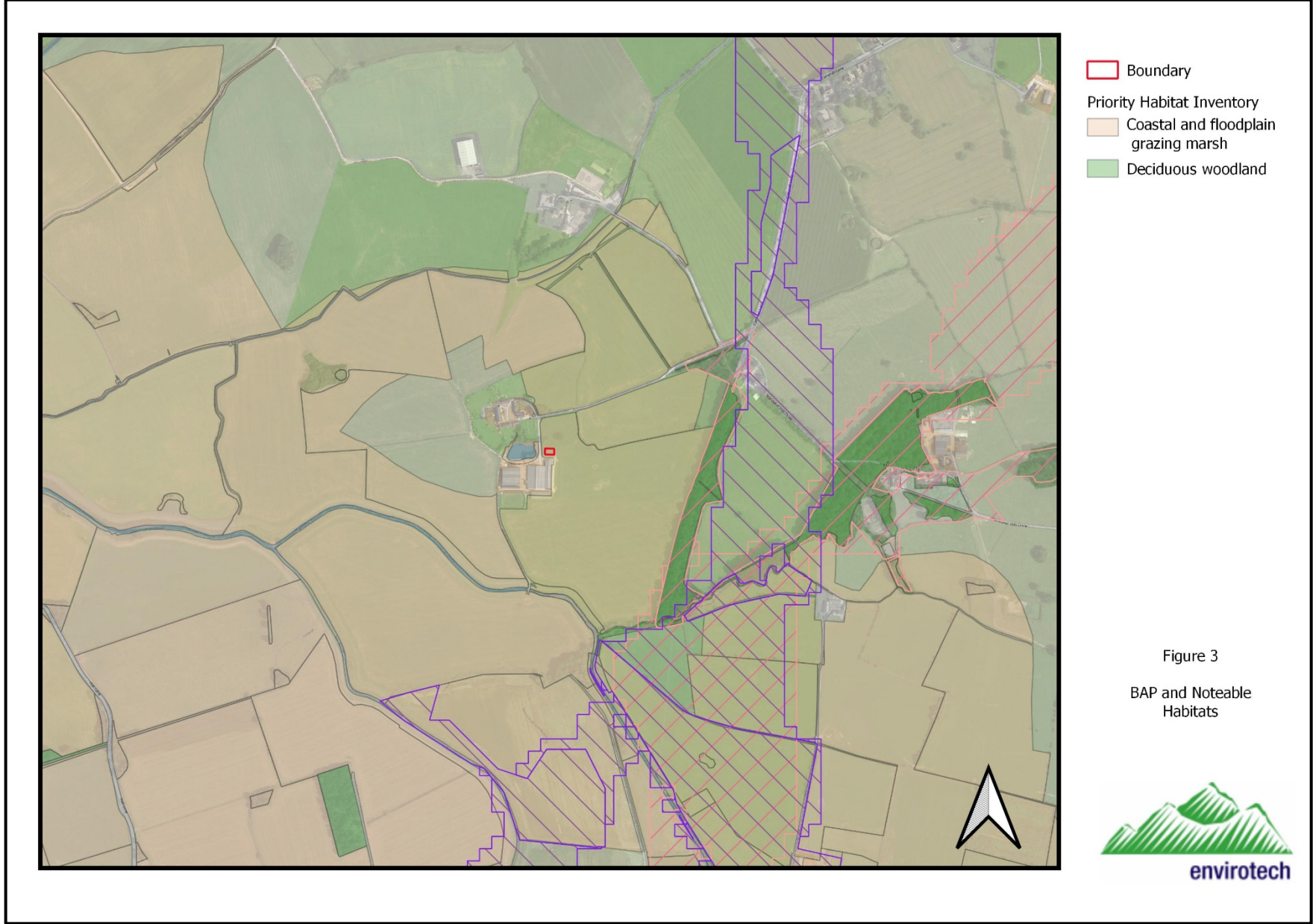
- 5.1.1 Envirotech hold no records of protected or notable species for the site. There are however records of protected or notable species within 2km (Figure 2). These are discussed in the relevant sections below.
- 5.1.2 The nearest non-statutory protected site an area of coastal floodplain grazing marsh, which the existing silage clamp is directly adjacent (Figure 3). Following a site visit, this habitat is better described as marginal vegetation.
- 5.1.3 There are no statutory protected sites within 2km of the survey area. The site is however located within a Major Feeding Area for Pink-footed Geese. Whilst this land is not afforded any statutory protection per se, it is considered functionally linked land for birds (Figure 4).
- 5.1.4 In addition to this, the site also falls within the Site of Special Scientific Interest (SSSI) Impact Risk Zone for multiple SSSIs, the closest being Rough Hey Wood SSSI located approximately 4.1km to the north east. The proposed development also falls within the SSSI Impact Risk Zone for *"All planning applications (except householder) outside or extending outside existing settlements/urban areas affecting greenspace, farmland, semi natural habitats or landscape features such as trees, hedges, streams, rural buildings/structures"*. Therefore, Natural England must be consulted prior to the commencement of work on the site.



- Boundary
- Lepus europaeus
- Talpa europaea
- Pipistrelle
- Mallard
- Pink-footed Goose
- Wren
- Brown Hare
- Shaded Broad-bar

Figure 2
Protected and Notable Species







- Boundary
- Pink-footed Goose Major Feeding Area

Figure 4
Protected Sites



6. PHASE 1 SURVEY RESULTS

6.1 *Habitat Results*

- 6.1.1 A drone was overflown the site on 23rd August 2023. This produced a number of images which were stitched together to form an orthomosaic map, providing up to date aerial imagery of the site from which phase 1 habitat mapping has been based. Figure 5a shows the hi-resolution imagery overlain Google Earth only.
- 6.1.2 Figure 5b shows a panoramic image of the site from a height of approximately 50m.
- 6.1.3 The site comprises a concrete silage clamp with no roof. The site is located <10m south of a large duck pond. The wider landscape is dominated by agricultural land with residential dwellings and agricultural buildings.
- 6.1.4 See Figure 6 for the Phase 1 Habitat Plan and Table 1 for the descriptive Target Notes.



 Boundary

Figure 5a

Orthomosaic map using
drone imagery taken on

23/08/2023





Figure 5b- Panoramic view of Roe Farm, including the silage clamp.

Target Note	Description	Comment
TN1	Silage Clamp	The site consists of a 9 x 37m precast silage clamp. The clamp is not currently roofed, being enclosed with a protective cover and tyres.
TN2	Duck pond	Less than 10m north of the site is a large agricultural pond previously stocked with fish and grazed by ducks and other waterfowl. Mallard (<i>Anas platyrhynchos</i>), Moorhen (<i>Gallinula chloropus</i>) and Eurasian Coot (<i>Fulica atra</i>) were all sighted on the pond during the survey. There are occasional pockets of Bulrush (<i>Typha latifolia</i>) and Common Reed (<i>Phragmites australis</i>) surrounding the pond, in addition to Alder, Weeping Willow (<i>Salix babylonica</i>) and Horse Chestnut (<i>Aesculus hippocastanum</i>).
TN3	Yard area	East of the site is a busy yard area bound by large cattle shed and other agricultural buildings.
TN4	Himalayan Balsam	Small patches of Himalayan Balsam (<i>Impatiens glandulifer</i>) were located along the eastern banks of the pond. Much of the land surrounding the pond consists of improved grassland, being indicative of grazing and regular disturbance. Species consists of Perennial Ryegrass (<i>Lolium perenne</i>), Red Fescue (<i>Festuca rubra</i>), White Clover (<i>Trifolium repens</i>), Dandelion (<i>Taraxacum officinale</i>), Chickweed (<i>Stellaria media</i>), Plantain (<i>Plantago major</i>), Creeping Buttercup (<i>Ranunculus repens</i>), Broad-leaved Dock (<i>Rumex obtusifolius</i>), Nettle (<i>Urtica dioica</i>) and Field Thistle (<i>Cirsium discolor</i>).
<i>Table 1 Details of Target Notes.</i>		







-  Boundary
-  Target Note
-  Standing Water
-  Hardstanding



Figure 6
Phase 1 Habitat Survey



The proximity of the duck pond to the silage clamp.



Much of the surrounding land consists of improved pasture.



The duck pond is less than 10m north of the silage clamp (seen in the background).



Small stands of Himalayan Balsam are located along the eastern bank of the pond.

Table 2 Photographs

6.2 Vegetation

- 6.2.1 Details of the plant species found on/near the site are included in the target notes. The core development area consists of an existing silage clamp constructed from pre-cast cement. There is no green space here.
- 6.2.2 Much of the land use surrounding the pond consists of improved grassland, as seen to the east. This has a very low species diversity and ecological value, the species contained within it are all indicative of regular grazing and disturbance.
- 6.2.3 No hedges are located within the core development area or are expected to be removed to facilitate the construction of the new building.
- 6.2.4 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. Small stands of Himalayan Balsam were however located on the eastern banks of the pond adjacent the site.

6.3 Amphibian

- 6.3.1 There are 11 records for amphibians within 2km of the site. None of these records relate to Great Crested Newt (*Triturus cristatus*), although there are records of Common Frog (*Rana temporaria*), Common Toad (*Bufo bufo*), Palmate newt (*Lissotriton helveticus*) and Smooth newt (*Lissotriton vulgaris*).
- 6.3.2 A search of OS Mapping Data identified a single pond within 250m of the site, the duck pond approximately 10m north of the site.

- 6.3.1 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 the mill pond for great crested newts. The HSI was developed as a tool to aid fieldworkers to give ponds and their surrounding habitat a numerical score in terms of their suitability for great crested newts. See Table 3.
- 6.3.2 Within the Natural England Method Statement application form for great crested newt Licences, guidance states the following approach (Natural England, 2008):
- 6.3.3 ‘If a pond has a very low HSI score (say <0.5) then there would typically be a minimal chance of great crested newt presence. Hence, with due care and in limited circumstances, the HSI might be used in the absence of newt survey to help conclude that an offence is highly unlikely and therefore work could proceed in that area without a licence. This application of the HSI should only be used where the predicted impacts - were newts to be present - would be low (eg, development at least 100m from pond, permanent habitat loss <0.5ha or temporary habitat loss <5ha). The developer and consultant should realise that there would still be a risk of committing an offence, but it would typically be so low as to be negligible. Obviously, note that if HSI >0.5, this is not confirmation of newt presence; a newt survey would be required to confirm this’.

Pond Number	1
Location	1
Pond area	0.8
Pond drying	0.9
Water quality	0.33
Shade	1
Fowl	0.01
Fish	0.67
Ponds	0.55
Terrestrial habitat	0.33
Macrophytes	0.4
<i>HSI</i>	<i>0.40 (Poor)</i>

Table 3- Results of the Habitat Suitability Index.

- 6.3.4 The pond scores 0.40 (Poor) for great crested newt suitability. This is due to the pond being majorly impacted by ducks. The pond is also known to have previously contained a large population of fish. The pond is surrounded by hardstanding, amenity grassland and improved pasture which are considered to provide poor terrestrial habitat for this species. The potential for Great Crested Newts to utilise the pond and forage or hibernate on the site is considered to be very low.
- 6.3.5 The proposed development is unlikely to result in the permanent loss of or a substantial negative effect on any waterbodies. Whilst the pond is within 10m of the silage clamp, this structure will only be modified to include a new roof. Major ground works will not occur on site. Boundary areas around the farmstead which may provide occasional foraging or refuge sites for amphibians are to be retained.

- 6.3.6 Whilst Great crested newts can disperse up to 1km from breeding ponds, the probability of an offence outside of the core breeding and resting area is usually small. Great crested newts also tend to avoid below average ponds, except for when they are in close proximity to an occupied pond/in areas of high pond density.
- 6.3.7 We consider that non-licensed avoidance measures can be utilised in order to prevent an offence from being committed. Reasonable Avoidance Measures (RAMS) are discussed in Section 7.1 of the report.

6.4 Badger

- 6.4.1 There are no badgers occur within 2km of the site.
- 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 109 records of at least six species of bat within 2km of the site. Species identified within the data search include unidentified Myotis (*Myotis* sp.), Daubenton's (*Myotis daubentonii*), Whiskered (*Myotis mystacinus*), Natterer's (*Myotis nattereri*), unidentified Pipistrelle (*Pipistrellus* sp.), Common Pipistrelle (*Pipistrellus pipistrellus*), Nathusius's Pipistrelle (*Pipistrellus nathusii*) and Brown Long-Eared (*Plecotus auritus*).
- 6.5.2 The foraging habitat within the development area is poor for bat species given its open and exposed nature. The agricultural buildings and surrounding improved grassland offer negligible foraging opportunities for bats.
- 6.5.3 It is not considered there would be significant degradation of foraging habitat as a result of the proposal. All trees and hedgerow bounding the farmstead are to be retained.
- 6.5.4 We consider bat species are highly unlikely to rely on the site for feeding but may occur in the local area. Roosting by bats is not considered to occur on the site.

6.6 Birds

- 6.6.1 There are 576 records of birds within 2km of the site.
- 6.6.2 The site has a low potential for use by nesting birds giving its hardstanding nature and the dominance of surrounding pasture. Trampling risks are also very high within this area of the site owing to its proximity to a busy yard area and access roads.
- 6.6.3 There are no hedgerows or trees either within or bounding the site and therefore the risk to nesting birds is considered to be very low. 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. Precautionary mitigation is considered appropriate.

- 6.6.4 Whilst the site is purportedly located within a major feeding area for Pink-footed Geese, we do not consider the site to lie within a sensitivity zone for overwintering wildfowl. The risk to over wintering wildfowl is negligible. The development site lies adjacent an existing farmstead and is located within a field of cow pasture. As such it is already heavily disturbed.
- 6.6.5 There are no records of wildfowl, waders or any other waterbirds on site on the NBN database.

6.7 *Brown Hare*

- 6.7.1 Brown hare are a UK BAP priority species. There are 36 records of brown hares within 2km of the site.
- 6.7.2 No indication of brown hares was recorded on the site.
- 6.7.3 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 15 notable invertebrates have been recorded within 2km of the site.
- 6.8.2 No deadwood or vegetation on site was recorded which would provide an important resource for invertebrates in the local area.
- 6.8.3 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. Impacts on the species are considered likely to be negligible, post development the domestic garden will create greater habitat diversity in the area than already exists.

6.9 *Otter*

- 6.9.1 There is a single record of otter within 2km of the site. This record is from over 1.5km from the site but connected to the watercourse approximately 300m to the south of the survey area.
- 6.9.2 No indication of the presence or past use of the site by otter was found. The adjacent pond provides potential foraging habitat for otter as it has the potential to support fish, however, there is no direct connectivity between the pond to the west and the water course to the south.
- 6.9.3 Although there is no evidence of use of the pond adjacent to the site by otters, otters are known to travel large distances from their holts and the pond may provide a suitable feeding site for otter.
- 6.9.4 This species is unlikely to be significantly impacted by the site development as the pond will not be directly impacted by the works.

6.9.5 Precautionary mitigation would be appropriate in respect of construction activities which will need to be restricted at night.

6.10 Reptiles

6.10.1 There is a single record of Slow-worm (*Anguis fragilis*) within 2km of the site.

6.10.2 The site has a very low value to reptiles being devoid of significant ground cover. There are occasional rubble piles that provide suitable refugia for reptiles, although these are located outside of the development area.

6.10.3 Reptiles may also occur along the boundary of the site and this provides linkage across the local landscape. It is however understood that these areas will be unaffected by the proposal.

6.10.4 Due to the site's small area and not being surrounded by highly suitable reptile habitat, it is considered that habitual use of the site by reptiles for foraging or commuting is highly unlikely.

6.10.5 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.

6.11 Water vole

6.11.1 There are no records of water voles within 2km of the site.

6.11.2 No signs of water voles, such as droppings, feeding piles or footprints were present around the pond west of the site. We consider this species is likely to be absent from the site. It is highly unlikely that water vole would cross the development site due to poor connectivity with good vole habitat within the wider landscape.

6.11.3 Resultingly, this species is considered absent from the site.

6.12 Statutory and Non-Statutory Sites

Direct Impacts:

6.12.1 There are no 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. Whilst the site is purportedly located within a major feeding area for Pink-footed Geese, we do not consider the site to lie within a sensitivity zone for overwintering wildfowl. The risk to overwintering wildfowl is negligible. The development site lies within close proximity of an existing farmstead, access road, yard area and large cow shippin. As such it is already heavily disturbed and offers no feeding or refugia opportunities.

6.12.2 There are no 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.

Indirect Impacts:

6.12.3 The proposed development falls within the SSSI Impact Risk Zone for All Planning Applications, therefore, Natural England must be consulted prior to commencement of works on the site.

7. MITIGATION/RECOMMENDATIONS

7.1 *Compensatory planting and habitat enhancement*

- 7.1.1 Small patches of Himalayan Balsam were recorded along the eastern bank of the pond adjacent the site. Whilst there is no legal obligation to remove Himalayan Balsam from privately owned land, it is an offence under the Wildlife and Countryside Act 1981 to spread or encourage this species to grow on neighbouring land (or into the wild).
- 7.1.2 At a minimum, no material containing these plants should be removed or disturbed unless part of their targeted removal. All footwear, equipment and machinery (e.g., digger tracks) should be scrubbed free of soil before leaving the site, ensuring balsam seeds are not spread offsite.

7.2 *Amphibians*

- 7.2.1 Whilst it is possible that common amphibians may use the pond directly north of the site for breeding, the presence of waterfowl (including ducks) and lack of macrophyte cover and connectivity is likely to reduce such chances. It is considered unlikely that great crested newts will use this pond due to its poor HSI score.
- 7.2.2 The portion of the site being developed is small and if works follow a series of reasonable avoidance measures, impacts on any amphibian species potentially utilising the site are likely to be negligible.
- 7.2.3 In order to further minimise impacts on amphibians the following points should also be followed.
- If Great crested newts are found onsite during construction works, all site works should cease and further ecological advice should be sought from a licensed ecologist.
 - All work must take place during daylight hours as amphibians are more likely to be commuting overnight 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 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, placed on hard standing or short grass. If material is to be stored on site, then all loose material must be palletised or similar so they are off the ground whenever possible. Otherwise, Great crested newts and other amphibians may hibernate within these piles- given their protection from frost and flooding.

- 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.
- Any amphibians/reptiles (excluding GCN) found should be transferred to an identified safe location outside of the construction zone.

7.3 Badger

7.3.1 Badger setts are not known to occur within 2km of the site. Regardless, the following points should 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 site boundary should be minimised.

7.4.2 Overall, it is considered there is more than sufficient scope for mitigation and compensation at the site such that there will be no adverse impact on the favourable conservation status of bats affected by the proposal.

7.5 Birds

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

7.5.2 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 Contaminants should not be allowed to enter the adjacent pond during work. Re-fuelling of all plant and machinery should be undertaken away from open drains and water courses. Drip trays should be used under static machinery.

7.8 Otter

- 7.8.1 There is no requirement for specific mitigation for this species. However, as a precautionary measure, in the unlikely event that any signs of any otter 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 working at night and leaving open trenches with means of escape detailed for amphibians are also applicable to this species which is only likely to pass through the site at night.

7.9 Reptiles

- 7.9.1 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.
- 7.9.2 The points in respect of not leaving open trenches without means of escape detailed for badgers are also applicable to these species.

7.10 Water vole

- 7.10.1 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

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