



envirotech

Ecological Consultants
Environmental and Rural Chartered Surveyors

Preliminary Ecological Appraisal

Roe Farm, Catterall,
Garstang



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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.

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Author	Sian Comlay	Date	20/01/2021
Checked by	Andrew Gardner	Date	21/01/2021
Report Version	1		
Field data entered	<input checked="" type="checkbox"/>		
Report Reference	6889		

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.....	8
4. SPECIES SURVEY METHODOLOGY.....	9
4.1 Amphibian.....	9
4.2 Badger.....	9
4.3 Bats.....	10
4.4 Birds.....	10
4.5 Brown Hare.....	10
4.6 Invertebrates.....	11
4.7 Otter.....	11
4.8 Reptiles.....	11
4.9 Water Vole.....	12
4.10 Survey limitations.....	12
5. RESULTS.....	13
5.1 Data Search.....	13
6. PHASE 1 SURVEY RESULTS.....	16
6.1 Habitat Results.....	16
6.2 Vegetation.....	21
6.3 Amphibian.....	21
6.4 Badger.....	23
6.5 Bats.....	24
6.7 Birds.....	26
6.8 Brown Hare.....	26
6.9 Invertebrates.....	26
6.10 Otter.....	27
6.11 Reptiles.....	27
6.12 Water vole.....	28
6.13 Other.....	28
6.14 Statutory Sites.....	28
7. MITIGATION/RECOMMENDATIONS.....	29
7.1 Compensatory planting and habitat enhancement.....	29
7.2 Amphibians.....	29

7.3	Badger.....	30
7.4	Bats.....	30
7.5	Birds.....	31
7.6	Brown Hares.....	31
7.7	Invertebrates.....	31
7.8	Otter.....	31
7.9	Reptiles.....	32
7.10	Water vole.....	32
8.	CONCLUSION.....	33
9.	REFERENCES.....	34
10.	APPENDIX.....	35

1. EXECUTIVE SUMMARY

- 1.1.1 Envirotech NW Ltd were commissioned in January 2021 by ML Planning to carry out a Preliminary Ecological Appraisal of land at Roe Farm in Catterall, Garstang. It is proposed that a single new residential dwelling is constructed on the site.
- 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 an ecologist from Envirotech NW Ltd on the 14th January 2021. 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 Natural England should be consulted prior to the commencement of works on the site as the proposed development falls within the SSSI Impact Risk Zone for All Planning Applications.
- 1.1.5 As there is a pond within close proximity to the survey area, site works should proceed under a method statement for amphibians.
- 1.1.6 The plant species assemblages recorded at the site are all common in the local area and are considered to be of low ecological value. Domestic gardens and sympathetically landscaped areas are considered to offer habitat of equal or greater ecological value.
- 1.1.7 None of the hedgerows around the site perimeter were considered important under the Hedgerow Regulations (1997).
- 1.1.8 Birds are likely to utilise the hedgerow in the north of the site for nesting between March and September. Any vegetation clearance should therefore be undertaken outside of this period.
- 1.1.9 No other notable or protected species were recorded on the site.

2. INTRODUCTION

2.1 Background

2.1.1 In January 2021 Envirotech NW Ltd were commissioned by ML Planning to carry out a Preliminary Ecological Appraisal of land at Roe Farm in Catterall, Garstang, central grid reference SD480 413 (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 residential dwelling on the site.



Figure 1 Site location at SD480 413 circled red.

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, 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 (1991).
- 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*).

3.3 *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 was visited on the 14th January 2021 by
 - (SC) Ms Sian Comlay BSc (Hons)
Natural England Great Crested Newt Licence (Level 2)
Natural England Bat Class Licence (Level 2)

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.

4.2 *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 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.
- 4.2.3 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 Trees 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 UK and or County BAP species.

4.4.2 Bird species and behaviour was noted during the other field surveys. All areas are 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 UK BAP species.

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 presence of invertebrates was noted during the other surveys which were undertaken. The extent of sampling was limited in that it could be confirmed that no priority or BAP species 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 Waterbodies 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 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 winter. At this time of year plant species are less easily identified and the activity of some species is reduced.
- 4.10.2 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.
- 4.10.3 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 There are no statutory protected sites within 2km of the surveys area (Figure3). The survey area does however fall 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.

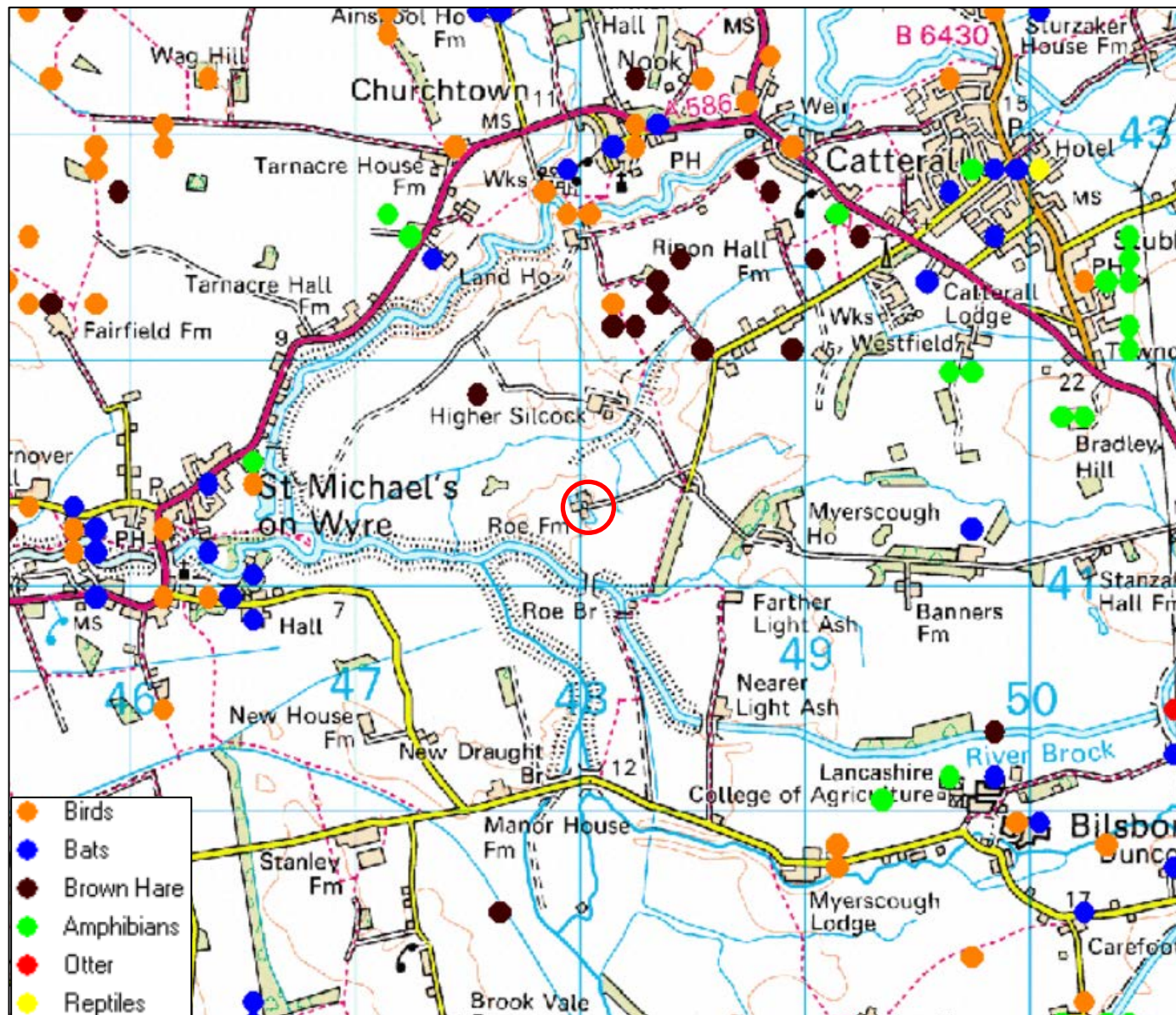


Figure 2 Notable species records, site location is circled red.

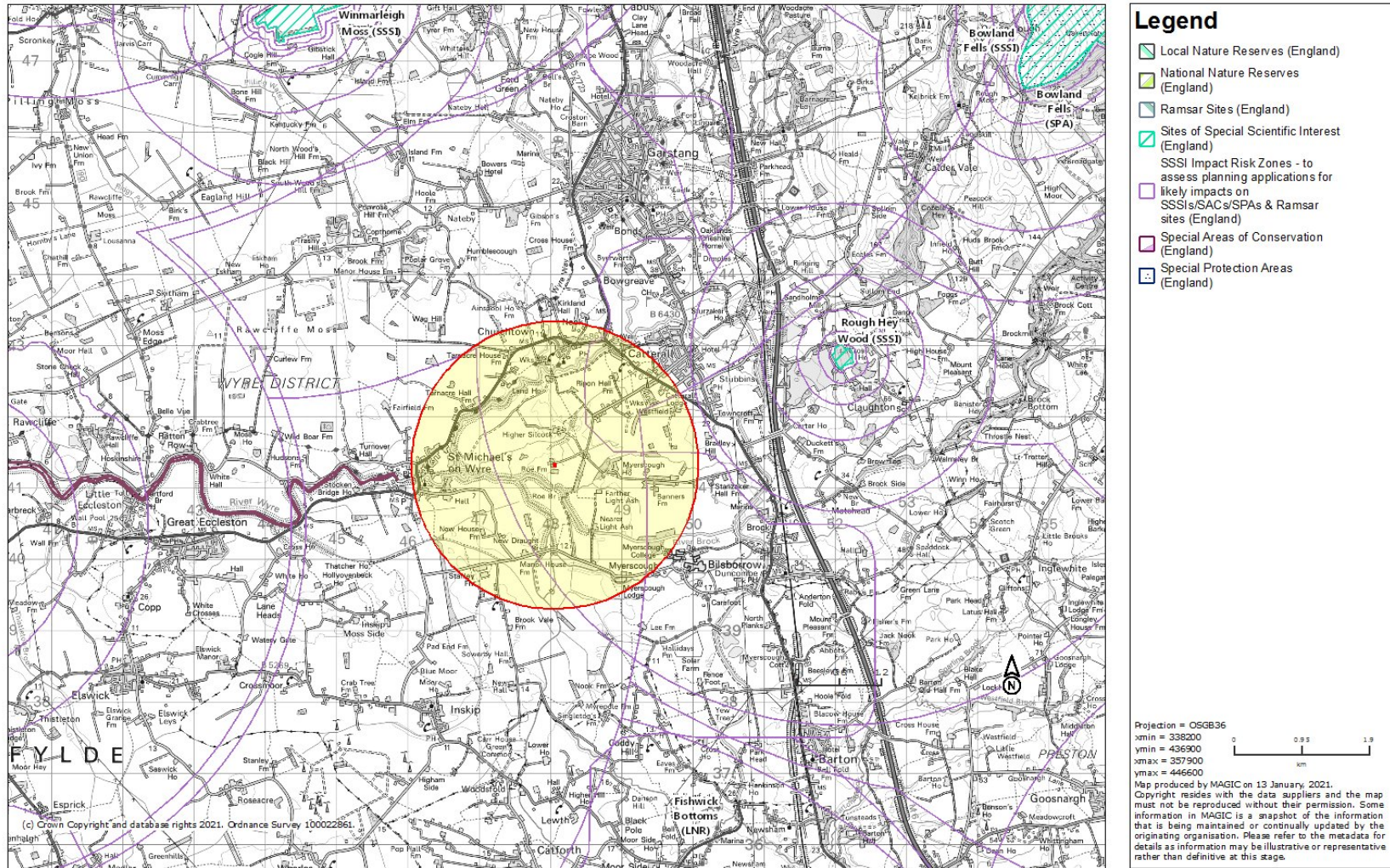


Figure 3 Statutory designated sites 2km buffer.

6. PHASE 1 SURVEY RESULTS

6.1 *Habitat Results*

6.1.1 The site comprises improved grassland with a hedgerow and fence lines along its boundaries. The survey area is bound by residential dwellings and access roads associated with the farm to the north and east, a pond to the south and amenity grassland associated with the residential dwelling to the west. The wider landscape is dominated by agricultural land with residential dwellings and agricultural buildings.

6.1.2 See Figure 4 for the Phase 1 Habitat Plan and Table 1 for the descriptive Botanical and Faunal Target Notes.

Target Note	Description	Comment
TN1	Improved grassland	The survey area is dominated by short improved grassland. Species recorded within the grassland include Perennial Ryegrass (<i>Lolium perenne</i>), Yorkshire Fog (<i>Holcus lanatus</i>), Cocksfoot (<i>Dactylis glomerata</i>), Creeping buttercup (<i>Ranunculus repens</i>), White clover (<i>Trifolium repens</i>), Bittercress (<i>Cardamine hirsuta</i>) and Common mouse-ear chickweed (<i>Cerastium fontanum</i>). Occasional Nettle (<i>Urtica dioica</i>), Creeping thistle (<i>Cirsium arvense</i>) and Broadleaved dock (<i>Rumex obtusifolius</i>) were present around the peripheries of the site.
TN2	Species poor intact hedgerow	A failed hedgerow is present along the northern boundary of the site. This hedgerow is dominated by Hawthorn (<i>Crataegus monogyna</i>) with Ivy (<i>Hedera helix</i>) also present. The ground flora below the hedgerow was dominated by Cleavers (<i>Galium aparine</i>) and Ivy.
TN3	Species poor defunct hedgerow	A recently planted Beech (<i>Fagus sylvatica</i>) hedgerow is present adjacent to the western fence line
TN4	Fence line	Wooden post and wire fences were present along the eastern, southern and western boundaries of the site.
TN5	Scattered trees	A single tree with light ivy cover is present in the north east of the site.
TN6	Scattered scrub	Bramble (<i>Rubus fruticosus agg</i>) scrub was present in front of the hedgerow in the north of the site.
TN7	Other - Rubble pile	A rubble pile was present in the west of the site. Creeping thistle, Nettle and Pineapple weed (<i>Matricaria discoidea</i>) were identified growing on the rubble pile.
TN8	Standing water and scattered trees	A duck pond surrounded by scattered trees, predominantly Hawthorn, Willow (<i>Salix sp.</i>) and Alder (<i>Alnus glutinosa</i>) was present to the south of the survey area.
TN9	Birds	The hedgerow provides potential foraging and nesting habitat for birds.
TN10	Bats	The along the boundaries of the site and the pond to the south provide potential foraging opportunities for bats.
TN11	Amphibians	The pond to the south of the site is a duck pond, therefore reducing suitability for use by amphibians.

Table 1 Details of Botanical and Faunal Target Notes.



Key

- Boundary
- Habitat**
- Improved Grassland
- Other Habitat
- Standing Water
- Defunct Hedge - Species-poor
- Intact Hedge - Species-poor
- Parkland/scattered Trees - Broad-leaved
- x Scrub - Scattered
- TN

Figure 4
 Phase 1 Habitat Survey Map
 Roe Farm, Catterall, Garstang
 Rev 1 18/01/2021





Site dominated by improved grassland.

Rubble pile in the east of the site.



Intact hedgerow and scattered scrub along the northern boundary.



Defunct beech hedgerow adjacent to the fence line along the western boundary.



Duck pond surrounded by trees beyond the southern boundary.

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 improved grassland has a very low species diversity and ecological value. The species present are all indicative of regular grazing, management and disturbance, this habitat does not constitute a BAP habitat.
- 6.2.3 The intact hedgerow bounding the site to the North is species poor and contains a low diversity of woody plant species but all hedgerows are a UK BAP habitat. This hedgerow should be retained in any proposed scheme and where lengths need to be lost, they should be transplanted or new hedges planted as compensation.
- 6.2.4 The defunct species poor hedgerow adjacent to the western boundary also has a low ecological value. It has no understory and has fairly recently been planted. Should this hedgerow need to be lost, transplanting is unlikely to be of ecological benefit. New shrub/ scrub planting would be suitable compensation for the loss.
- 6.2.5 None of the hedgerows are classified as important under the Hedgerow Regulations (1997) (See Appendix 1).
- 6.2.6 A single tree is present in the north eastern corner of the site. The trees around the pond to the south of the site are outside of the red line boundary and will not be impacted by the proposed works.
- 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 records for amphibians within 2km of the site. There are no records of great crested newt in the local area, though there are several records for 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 (Figure 5), this is the duck pond to the south of the survey area.

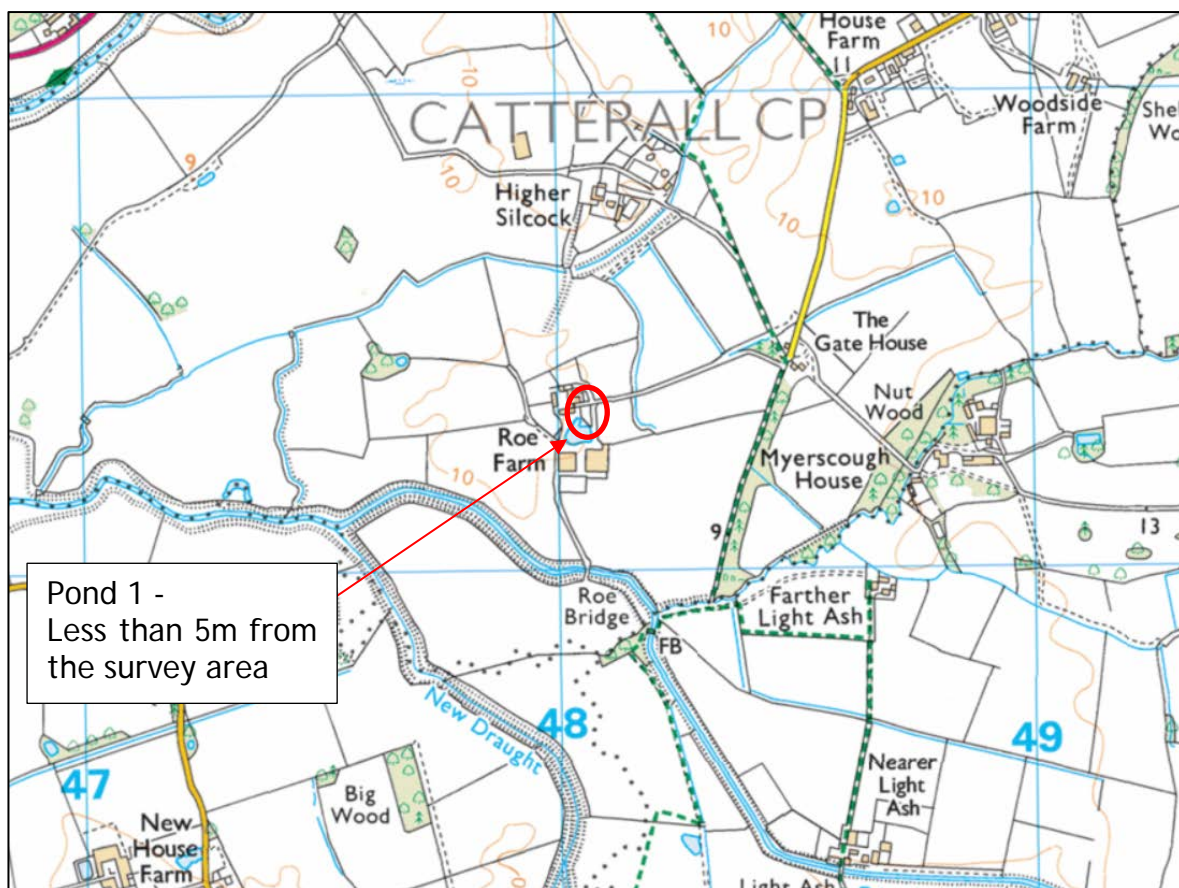


Figure 5 Ponds within 250m, site circled red

- 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 <0.5 ha or temporary habitat loss <5 ha). 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'.
- 6.3.4 Macrophytes cover was excluded from the calculation as an estimate for Macrophyte cover should only be undertaken between March and the end of September.

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	-
<i>HSI</i>	<i>0.40 (Poor)</i>

Table 3 Results of Habitat Suitability Index.

- 6.3.1 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 also surrounded by hardstanding, amenity grassland and improved pasture which are considered to provide poor terrestrial habitat. The potential for Great Crested Newts to utilise the pond and forage or hibernate on the site is considered to be very low.
- 6.3.2 The core development area has a low value to amphibians being open and exposed. The boundary hedgerow to the west is defunct and not considered to be suitable for refugia and/or hibernacula. The hedgerow along the northern boundary provides limited use or refugia and/or hibernacula. It is understood that these features will not be impacted by the proposed development.
- 6.3.3 The proposed development will not result in the permanent loss of or a substantial negative effect on any waterbodies or foraging areas linked to them.
- 6.3.4 The rubble pile on the site does provide potential refugia and/or hibernacula for amphibians, however, it is considered that the duck pond has low suitability for use by amphibians due to the low HSI score and it being relatively isolated from further ponds within the wider landscape. The risk of any offence being committed is considered to be very low. We would therefore conclude that the risk to this species from the proposed works is low. With a strict method statement, it is likely that works at the site can proceed without causing a significant disturbance to any great crested newt population and or killing or injuring amphibians.

6.4 Badger

- 6.4.1 No records of 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 at the site is very poor for bat species being open and exposed. The improved grassland offers negligible foraging opportunities for bats. The hedgerows and single scattered tree are poor in terms of their structure, diversity and interconnectivity.
- 6.5.3 Despite being poor, the tree and hedgerows on the site offer the best foraging habitat for bats on the site as the remainder of it comprises open and exposed pasture. Whilst these areas of the site are the most structurally diverse but they are not considered exceptional in the local area. More extensive areas of medium and high quality habitat occur locally, including the pond with scattered trees to the south, pockets of woodland and tree lined water courses within the wider landscape.
- 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 are retained and or their loss is compensated for in any landscaping scheme and lighting along the southern and south western boundaries is minimised.
- 6.5.5 The tree on site was also assessed in accordance with Collins ed. (2016) and assigned a risk category. The tree on site is category 3 (negligible) risk. No indications of roosting or highly suitable roost sites were located within the tree. The tree could be adequately inspected. Risk categories from Hundt (2012) and the requirement for mitigation for each tree category are shown on Figure 6.
- 6.5.6 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.

Tree category and description	Stage 1 Initial survey requirements	Stage 2 Further measures to inform proposed mitigation	Stage 3 Likely mitigation
Known or confirmed roost	Follow SNCO guidance and these guidelines wherever possible, to establish the extent to which bats use the site. This is particularly important for roosts of high risk species and/or roosts of district or higher importance and above		The tree can be felled only under EPS licence following the installation of equivalent habitats as a replacement.
Category 1* Trees with multiple, highly suitable features capable of supporting larger roosts	Tree identified on a map and on the ground. Further assessment to provide a best expert judgement on the likely use of the roost, numbers and species of bat, by analysis of droppings or other field evidence. <i>A consultant ecologist is required</i>	Avoid disturbance to trees, where possible. Further dusk and pre-dawn survey to establish more accurately the presence, species, numbers of bats present and the type of roost, and to inform the requirements for mitigation if felling is required.	Felling would be undertaken taking reasonable avoidance measures ³ such as ‘soft felling’ to minimise the risk of harm to individual bats.
Category 1 Trees with definite bat potential, supporting fewer suitable features than category 1* trees or with potential for use by single bats	Tree identified on a map and on the ground. Further assessed to provide a best expert judgement on the potential use of suitable cavities, based on the habitat preferences of bats. <i>A consultant ecologist required</i>	Avoid disturbance to trees, where possible. More detailed, off the ground visual assessment. Further dusk and pre-dawn survey to establish the presence of bats, and if present, the species and numbers of bats and type of roost, to inform the requirements for mitigation if felling is required.	Trees with confirmed roosts following further survey are upgraded to Category 1* and felled under licence as above. Trees with no confirmed roosts may be downgraded to Category 2 dependent on survey findings
Category 2 Trees with no obvious potential, although the tree is of a size and age that elevated surveys may result in cracks or crevices being found; or the tree supports some features which may have limited potential to support bats.	None. <i>A consultant ecologist is unlikely to be required</i>	Avoid disturbance to trees, where possible. No further surveys.	Trees may be felled taking reasonable avoidance measures. Stop works and seek advice in the event bats are found, in order to comply with relevant legislation.
Category 3 Trees with no potential to support bats	None. <i>A consultant ecologist is not required unless new evidence is found</i>	None.	No mitigation for bats required.

Figure 6 Tree risk categories from Hundt (2012).

6.7 Birds

- 6.7.1 There are 576 records of birds within 2km of the site.
- 6.7.2 The intact hedgerow in the North of the site offers potential habitat for feeding and nesting birds. The improved grassland has a low potential for use by nesting birds as the grassland is grazed and managed and as such is usually short. Trampling risks are also very high within this area of the site.
- 6.7.3 The defunct hedgerow along the western boundary has insufficient density to be of high value to nesting birds.
- 6.7.4 There were no rot holes or cracks in the trees within the site boundary which would support tree hole nesting species such as woodpeckers.
- 6.7.1 Potential nest sites were located within the core development area but the surveys were undertaken at a time of year when nesting had been completed. A risk assessment of the site in respect of its future potential for and value to nesting birds could however be adequately made.
- 6.7.2 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.
- 6.7.3 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.
- 6.7.4 The site does not lie within a sensitivity zone for overwintering wildfowl. The risk to overwintering wildfowl is negligible. The development site lies adjacent an existing farmstead and is as such already disturbed.

6.8 Brown Hare

- 6.8.1 Brown hare are a UK BAP priority species. There are 36 records of brown hares within 2km of the site.
- 6.8.2 No indication of brown hares was recorded on the site.
- 6.8.3 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.
- 6.8.4 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.

6.9 Invertebrates

- 6.9.1 15 notable invertebrates have been recorded within 2km of the site.

- 6.9.2 No deadwood or vegetation on site was recorded which would provide an important resource for invertebrates in the local area.
- 6.9.3 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.
- 6.9.4 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.

6.10 Otter

- 6.10.1 There is a single record of otter within 2km of the site. This records is from over 1.5km from the site but connected to the watercourse approximately 300m to the south of the survey area.
- 6.10.2 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 on site and the water course to the south.
- 6.10.3 Although there is no evidence of use of the pond adjacent to the site by otters, otter are known to travel large distances from their holts and the pond may provide a suitable feeding site for otter.
- 6.10.4 This species is unlikely to be significantly impacted by the site development as the pond will not be directly impacted by the works.
- 6.10.5 Precautionary mitigation would be appropriate in respect of construction activities which will need to be restricted at night.

6.11 Reptiles

- 6.11.1 There is a single record of Slow-worm (*Anguis fragilis*) within 2km of the site.
- 6.11.2 The majority of the site has a very low value to reptiles being devoid of significant ground cover. The rubble pile provides suitable refugia for reptiles.
- 6.11.3 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.
- 6.11.4 Due to the small scale of the site and it not being surrounded by highly suitable reptile habitat it is considered that the would not be suitable for habitual use by reptiles for foraging or commuting.
- 6.11.5 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.

6.12 Water vole

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

6.12.1 No signs of water voles, such as droppings, feeding piles or footprints were present around the pond to the south 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.

6.12.2 Therefore this species are considered to be absent from the site.

6.13 Other

6.13.1 The boundary hedgerows are species poor and provide little potential for use by hedgehog (*Erinaceus europaeus*). Fragmentation of habitat locally and existing land use do not provide optimal conditions for the free passage of this species across the site and slugs and snails are likely to occur only at very low numbers.

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

6.13.3 The boundary hedgerows may provide suitable habitat for small mammals such as field vole (*Microtus agrestis*) but these areas are small and the sites value to small mammals is limited.

6.14 Statutory Sites

Direct Impacts:

6.14.1 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.

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

Indirect Impacts:

6.14.3 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 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 The landscaping scheme should utilise plants which are native and wildlife friendly. In particular night flowering species would be beneficial to bats. Wildflower seed could be used to plant verges to enhance the ecological value of the site and continuity between the site and the wider area.
- 7.1.3 Hedgerows around the site should be retained or improved where possible. Any lengths of intact hedgerow to be removed to facilitate development should be transplanted and or replanted in order that there is no net negative impact on this BAP habitat due to development. The roots of hedgerow plants/trees should be adequately protected during development from compaction/ground disturbance.
- 7.1.4 If the defunct species poor hedgerow is removed, transplantation is not considered to be of significant ecological benefit as there are no notable species assemblages associated with it, replanting of linear lines of trees/ shrubs would be more beneficial.

7.2 *Amphibians*

- 7.2.1 We considered it possible that common amphibians may use the pond to the south of the site for breeding, although the presence of ducks and lack of macrophyte cover and connectivity is likely to reduce this. It is considered unlikely that great crested newts will use this pond due to the poor HSI score. Therefore the risk of any offence being committed is very low.
- 7.2.2 The portion of the site being developed is small and if works follow a strict method statement, 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.
- Removal of the rubble pile from the site should take place during the late spring/early summer in the presence of a suitably qualified individual and when amphibians are most likely to be absent from refugia.
 - A new log/rubble pile should be created adjacent to the pond.
 - 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 not known to occur within 2km of the site, however there is suitable sett building habitat within 2km. Any setts within 2km 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.

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, particularly the boundary with the pond, 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 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 core development area is considered unlikely to occur. Birds may nest within hedgerow along the northern boundary 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 the hedgerows on the site boundary will maintain the ecological functionality of the site for breeding birds.
- 7.5.4 Artificial bird nesting sites for swallow 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 Contaminants should not be allowed to enter the pond or substrates during work. To effect this, spill kits should be provided on site. 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 to the rubble pile removal for amphibians is also applicable to this species.

7.9.3 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. CONCLUSION

- 8.1.1 Ecological surveys, site appraisals and impact assessments were carried out with respect to land at Roe Farm in Catterall, Garstang. It is proposed that a single new residential dwelling is constructed on the site.
- 8.1.2 Natural England should be consulted prior to the commencement of works on the site as the proposed development falls within the SSSI Impact Risk Zone for All Planning Applications.
- 8.1.3 Bats, birds, brown hare, amphibians, otter and reptiles are known to occur in the local area, there was however 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.
- 8.1.4 Works at the site should proceed under a method statement to minimise disturbance to any amphibians that may pass over the site during the development.
- 8.1.5 The vegetation to be cleared has a low ecological significance in the local area as the site is dominated by improved grassland.
- 8.1.6 The protection of trees on the site boundary and landscaping will promote structural diversity in both the canopy and at ground level and will encourage a wider variety of wildlife to use the site than already occurs.
- 8.1.7 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.

9. REFERENCES

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10. APPENDIX

Hedge		Feature								
	Length 20m +	Hedge is not bounding the curtilage of dwelling	Hedge established more than 30years	Hedge boundary of protected or common land or land used for agriculture or forestry						
1	Yes	Yes	Yes	Yes						
2	Yes	Yes	No	Yes						
No = Automatic failure										
ARCHAEOLOGY AND HISTORY										
	Archaeological feature which is included in the schedule of monuments	Situated wholly or partly within an archaeological site	Boundary of a pre-1600 AD estate	Integral part of a field system	Protected species records					
	No*	No*	No*	No*	No					
	No*	No*	No*	No*	No					
Yes = Automatic pass										
FEATURES										
	Bank or wall	Gaps less than 10%	Standard trees	Ditch	Parallel hedge	Footpath/ Bridleway	Connection points	Woody species	Average ground flora species	HEDGE CLASSIFIED AS IMPORTANT
	No	Yes	No	No	No	No	1	1	0	No
	No	No	No	No	No	No	2	1	0	No
7 woody species or 6 woody species + 3 features or 5 woody species + 4 features or highway + 4 woody species and 2 features										

* Historic and archaeological records have not been checked for this site.



Key

- Boundary
- Hedgerow Number

Hedgerow Regulations
Assessment

Roe Farm, Catterall, Garstang

Rev 1 20/01/2021

