



envirotech

**Ecological Consultants
Environmental and Rural Chartered Surveyors**

Preliminary Ecological Appraisal

**Gradwells Farm, Copp Lane
Great Ecclestone**



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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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1. EXECUTIVE SUMMARY

- 1.1.1 Envirotech NW Ltd were commissioned to carry out a Preliminary Ecological Appraisal of land at Gradwells Farm, Copp Lane, Great Eccleston, PR3 0YN. It is proposed that new houses are constructed on the site.
- 1.1.2 The PEA follows on from previous work undertaken for an outline planning application of the wider site for housing.
- 1.1.3 A data search and desk study of the site and an area within 2km of the site were undertaken to establish the presence of protected species and notable habitats.
- 1.1.4 The site was then visited by licenced ecologists from Envirotech NW Ltd four occasions between April and May 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.
- 1.1.5 The plant species assemblages recorded at the site are all common in the local area and are considered to be of low ecological value. Retention of species rich hedges and enhancement of wildlife corridors is proposed.
- 1.1.6 Low numbers of common bat species were recorded foraging over the site. No bats were recorded roosting on or near site.
- 1.1.7 Birds were recorded nesting in hedgelines to the site boundary. Over wintering birds associated with the nearby estuary are unlikely to use the site.
- 1.1.8 No other notable or protected species were recorded on the site.

2. INTRODUCTION

2.1 Background

2.1.1 In April 2021 Envirotech NW Ltd were commissioned to carry out a Preliminary Ecological Appraisal of land off Gradwells Farm, Copp Lane, Great Eccleston at SD423399 (Figure 1). A site investigation was undertaken and a report compiled which includes recommendations for any future actions and or mitigation required.

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



2.2 Objectives

2.2.1 The main objectives of the study were:

- The completion of a 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 Biological Records centre for Lancashire “LERN”, 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 Past surveys of the adjacent fields were reviewed and survey data updated as required.

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*).
- 3.2.4 The survey was also informed by questioning the landowner/site agent to ascertain the recent history of the site.

3.3 *Timing and Personnel*

- 3.3.1 During the visits, weather conditions were suitable for the survey types undertaken being warm and dry in Spring.

3.3.2 The site and surrounding land was visited on the 16th April, 24th and 29th May 2021 by

- (AG) Mr Andrew Gardner *BSc (Hons), MSc, MRICS*
Natural England Bat Class Licence (Level 2)
Natural England Bat Low Impact Class Licence
Natural England Barn Owl Licence
Natural England Great Crested Newt Licence (Level 1)
Natural England Badger Class Licence
Natural England White Clawed Crayfish Licence

3.3.3 The site and surrounding land was visited on the 4th May 2021 by

- (FW) Miss Flora Whitehead *BSc (Hons)*
Natural England Bat Class Licence Agent (Level 1)
Natural England Barn Owl Licence
Natural England Great Crested Newt Licence Agent (Level 1)
- (SC) Ms Sian Comlay *BSc (Hons), Grad CIEEM*
Natural England Great Crested Newt 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.
- 4.1.5 There are no ponds on site but ponds in the wider area were assessed as part of previous surveys for an adjacent application.
- 4.1.6 The site was considered sufficiently low risk for GCN that no further assessments were warranted.

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 As a result of the potential suitability of the habitat outside the site and along its boundaries for foraging bats but the low potential for impacts upon bat species due to the proposal being on open and exposed grassland, two bat activity surveys were deemed necessary. The survey was based upon standard guidelines Hundt (2012), Collins, J. (ed) (2016) and NCC (1987) and Mitchell-Jones (2004) and was undertaken in suitable weather conditions by suitably qualified and experienced personnel.

4.3.5 The survey methods comprised a transect route which was walked in order to cover all on-site habitats from sunset until light levels dropped to the extent that bat flight heights could not be determined and walking over the site in the dark was judged to be unsafe, approx. 1.5hrs. Stops were made along the transect route for 3mins at a time. Surveyors were recording bat activity both at the stops and when walking between stops.

- 4.3.6 On 4th May 2021, there was no rain or wind and the temperatures at the end of the survey was 7 degrees Celsius. On the 29th May 2021, there was no rain or wind and the temperatures at the end of the survey was 12 degrees Celsius.
- 4.3.7 In addition to the activity survey, 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 on the site to allow an assessment of their potential to be used by bats to be made by a licensed surveyor.
- 4.3.8 Trees were all assessed in accordance with Collins, J. (ed) (2016).
- 4.3.9 Two Anabat express detectors were deployed to the site between 24th and 29th May 2021.

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'. All birds displaying breeding behaviour were recorded.
- 4.4.3 Two visits were made as per BTO BBS methodology on 16th April and 24th May 2021. The BBS methodology was adapted so that the entire site perimeter was walked. All areas of the site were approached within 250m.

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 Otter

- 4.6.1 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.

4.6.2 Watercourses 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.

4.7 Reptiles

4.7.1 All native reptiles are protected in Britain under the Wildlife and Countryside Act of 1981. It is an offence to intentionally kill, injure, sell or advertise to sell any of the six native species.

4.7.2 The survey for these species was based on assessing the habitat type and suitability of the site. This comprised an assessment of satellite imagery for the site and surrounding area as well as comparison of the results from the records searches with habitat types. The general habitat at the site was evaluated in terms of its suitability to reptiles for foraging or breeding.

4.7.3 Reptile surveys comprising visual encounter surveys were undertaken on the 16th April, 14th, 24th and 29th May 2021. Searches of suitable refuges were also undertaken by carefully lifting potential refuges such as logs and stones before replacing them. Habitat at the site was not considered sufficiently suitable for a full presence/absence survey to be warranted.

4.8 Water Vole

4.8.1 Water voles (*Arvicola amphibious*) and their habitat are fully protected under Schedule 5 of the Wildlife and Countryside Act (1981). This provides protection from killing or taking by certain prohibited methods and their breeding and resting places are fully protected from destruction or obstruction, it is also an offence to disturb them in these places.

4.8.2 There is a stream on the North boundary of the site. This watercourse was surveyed and assessed for evidence of the presence of water vole.

4.8.3 This involved intensive searches by wading upstream where possible, and observing from the banks where not; looking for burrows and other signs including footprints, droppings and chewed vegetation. This was undertaken up to 5m from the water course.

4.9 Survey limitations

4.9.1 Due to the habitats present on site there were no significant constraints in respect of identifying the botanical interest of the site. Bats were active at the time of the survey.

4.9.2 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.

4.9.3 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.

4.9.4 No significant survey limitations were encountered.

5. RESULTS

5.1 *Data Search*

- 5.1.1 Envirotech and LERN 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 is the River Wyre - Upper Tidal Section BHS 1km to the North. There are no mapped priority habitats on the site. (Figure 3).
- 5.1.3 There is one statutory protected site within 2km, Wyre-Lune Marine Conservation Zones 850m to the North. The next nearest statutory protected site is Wyre Estuary SSSI and Morecambe Bay SAC/ RAMSAR/ SPA 3km to the North West (Figure 4).

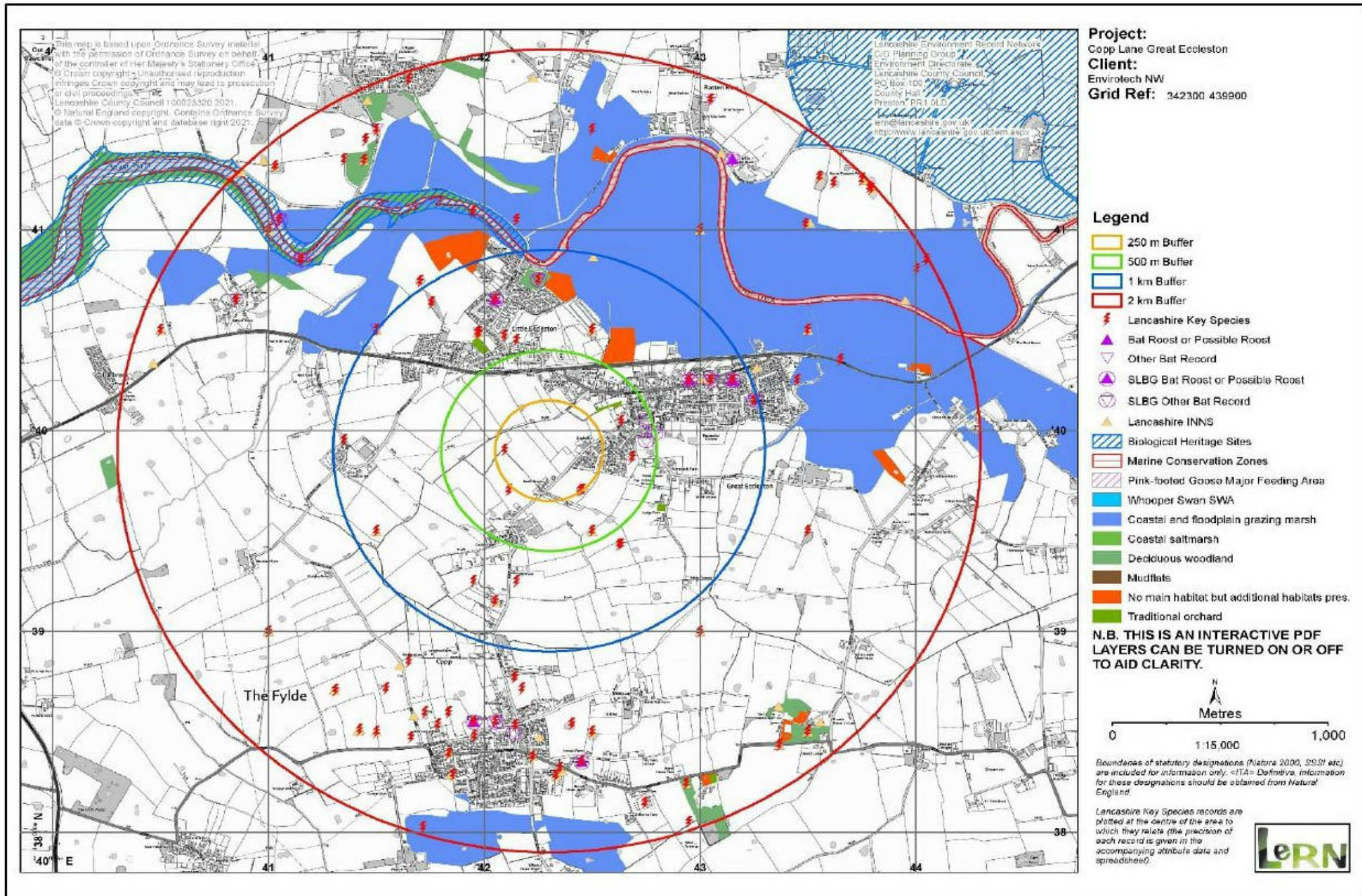


Figure 3 Non-statutory sites, priority habitat and species records 2km buffer.

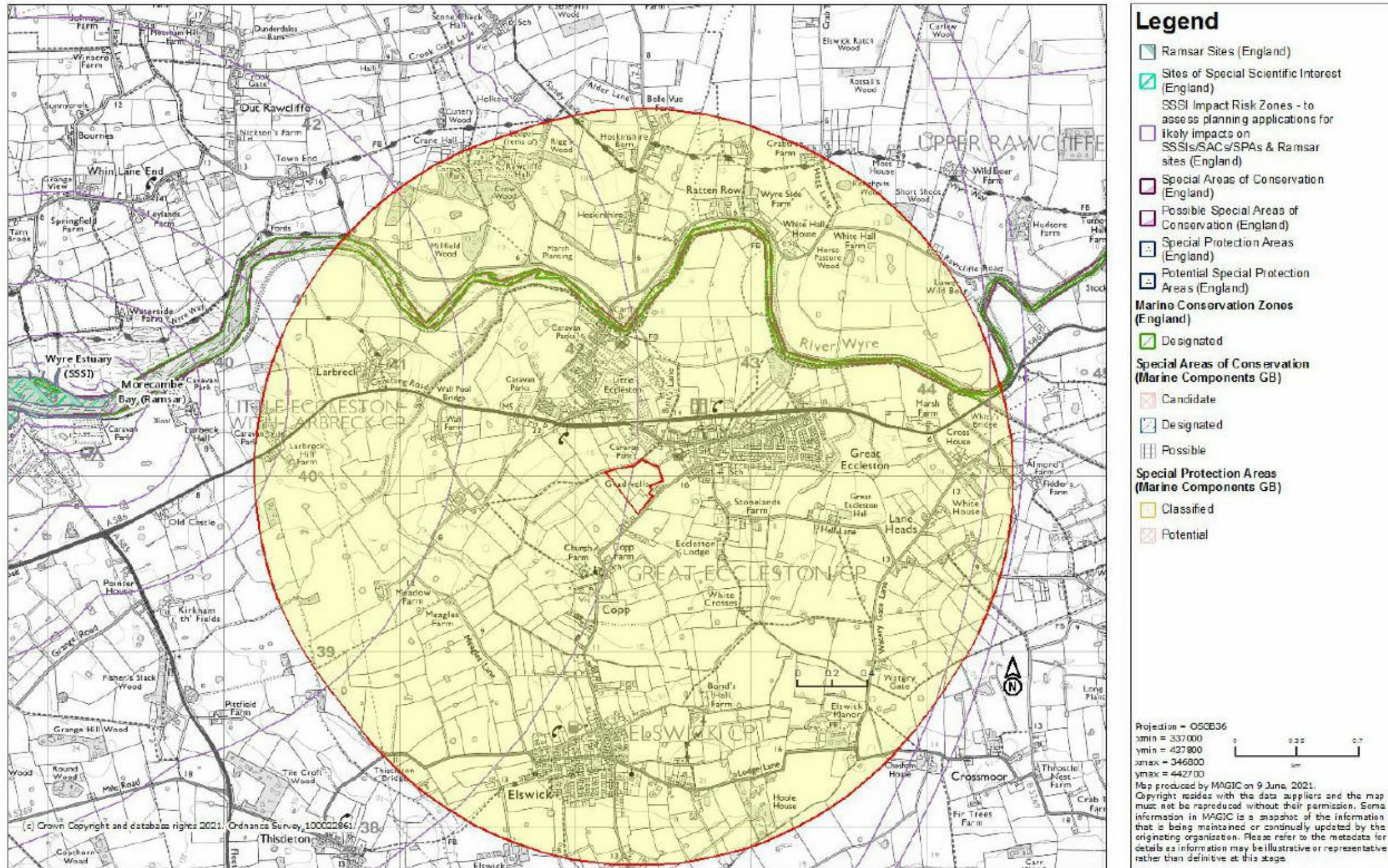


Figure 4 Statutory designated sites 2km buffer.

6. PHASE 1 SURVEY RESULTS

6.1 *Habitat Results*

6.1.1 The site comprises improved grassland with hedges on its boundary. There is more open grassland to the North and East. To the South is a road and West an area of cleared ground subject to housing development.

6.1.2 See Figure 5 for the Phase 1 Habitat Plan and Table 1 for the descriptive Target Notes.

Target Note	Description	Comment
TN1	Improved Grassland	The fields all comprise improved grassland used for silage production. Perennial Ryegrass (<i>Lolium perenne</i>) dominant with Timothy-grass (<i>Phleum pratense</i>) and Creeping Buttercup (<i>Ranunculus repens</i>) frequent. Mouse ear (<i>Cerastium fontanum</i>), Sweet Vernal Grass (<i>Anthoxanthum odoratum</i>) and Meadow Buttercup (<i>Ranunculus acris</i>) are occasional to the field boundaries.
TN2	Marshy Grassland	A small depression which may be ephemerally wet with occasional Soft Rush (<i>Juncus effusus</i>) and other species as per TN1
TN3	Deciduous trees	Three mature Ash (<i>Fraxinus excelsior</i>) forming a line into the field
TN4	Species poor hedge	A Hawthorn (<i>Crataegus monogyna</i>) dominated well cut hedge to the roadside
TN5	Species poor hedge	A taller hedge of Hawthorn, Elderberry (<i>Sambucus nigra</i>). Ditch along half its length. Nettle (<i>Urtica dioica</i>), Yorkshire Fog (<i>Holcus lanatus</i>), Cleavers (<i>Galium aparine</i>) and Broad-leaved dock (<i>Rumex obtusifolius</i>) to its base. Connects with Hedge TN4 to its South and Hedge TN6 to the North.
TN6	Species rich hedge	A taller hedge with trees. Ash, Beech (<i>Fagus sylvatica</i>), Blackthorn (<i>Prunus spinosa</i>), Elderberry, Gorse (<i>Ulex europaeus</i>), Hawthorn, Hazel (<i>Corylus avellana</i>), Holly (<i>Ilex aquifolium</i>), Oak (<i>Quercus Sp.</i>), Sycamore (<i>Acer pseudoplatanus</i>) and Rose (<i>Rosa canina</i> or <i>arvensis</i>). Wet ditch to the North, adjacent a footpath. Connected to Hedge TN7 to the East.
TN7	Species rich hedge	A tall hedge. Crab apple (<i>Malus sylvestris</i>), Ash, Hawthorn, Holly, Oak, Blackthorn and Sycamore.
TN8	Species poor hedge	Elder, Hawthorn, Rose and Goat Willow (<i>Salix caprea</i>). Male-Fern (<i>Dryopteris filix-Mas</i>) to its base along with a dry ditch. In hedge trees to the South.

Table 1 Details of Target Notes.



- Boundary
- Improved Grassland
- ▨ Marsh/Marshy Grassland
- Intact Hedge - Species-poor
- ⋈ Hedge and Trees - Native Species-rich
- ⋈ Fence
- ⋈ Hedge and Trees - Species-poor
- Running Water
- Parkland/scattered Trees - Broad-leaved
- Target Note

Figure 5
Phase 1 Habitat Survey





The site comprises open fields of improved grassland used for silage production (TN1)



Marshy grassland with ephemeral standing water (TN2). Photo taken after heavy rain



Row of Ash trees to the North of the site (TN3)



Species poor hedge to the roadside to the South is flail mown (TN4)



Species poor taller hedge to the West (TN5)



Species rich hedge with trees to the North of the site (TN6)



Species rich hedge with trees to the East of the site (TN7 and TN8)

Table 2 Photographs

6.2 Vegetation

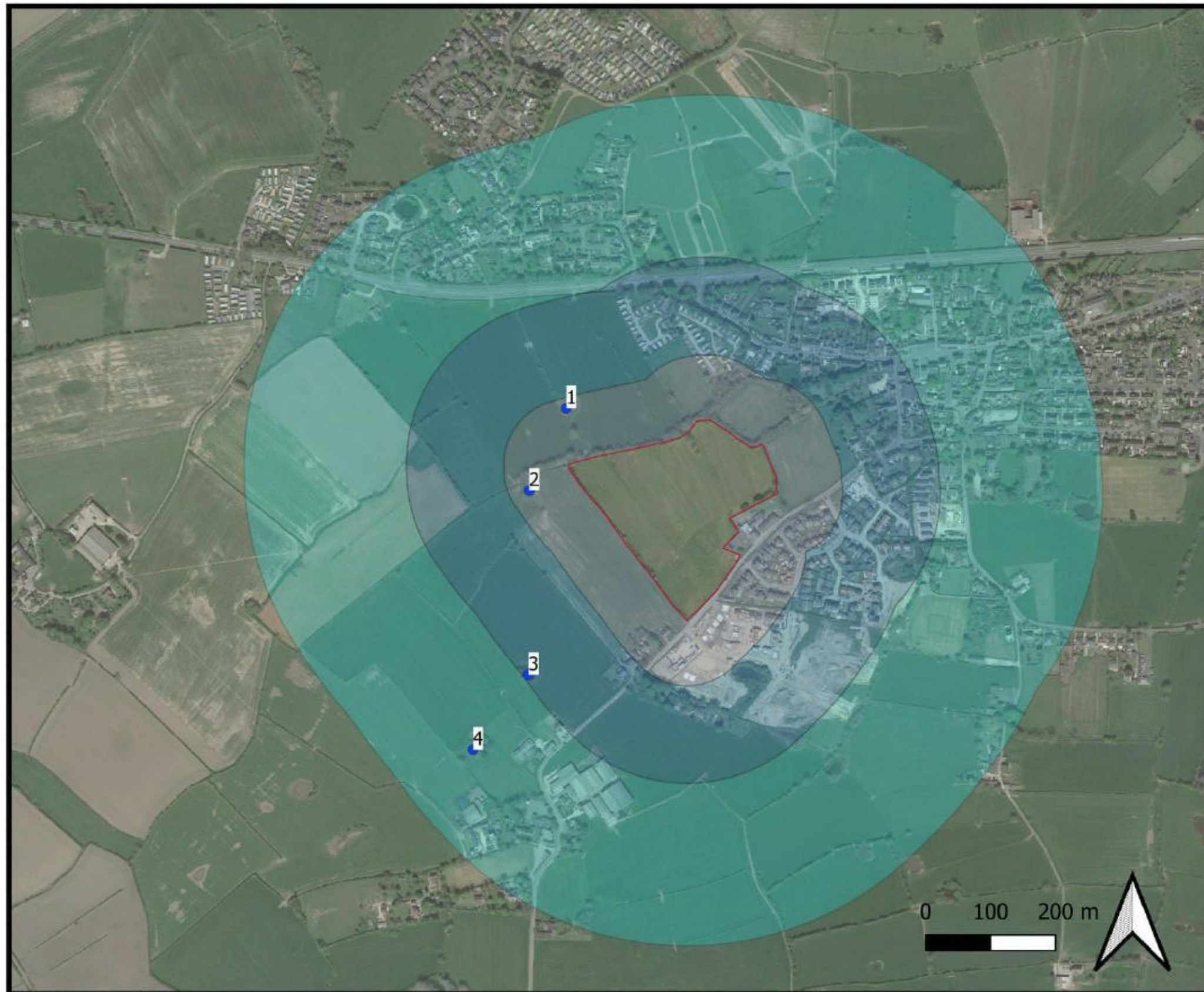
- 6.2.1 Details of the plant species found on site are included in the target notes.
- 6.2.2 The improved grassland which dominates the site has a low species diversity and ecological value.
- 6.2.3 A small area of marshy grassland also comprises common species but is more ecologically diverse than the adjacent fields.
- 6.2.4 The intact hedges bounding the site to the South and East are species poor and contain a low diversity of woody plant species. Hedges to the North and East are species rich (5+ woody species). They should be retained in any proposed scheme and where lengths need to be lost, they should be transplanted or new hedges planted as compensation. Hedgerows are a UK Priority Habitat and any lengths lost should be replaced.
- 6.2.5 Hedgerow regulations assessments require specific criteria to be met. Sycamore for example is not classified as a woody species when counting species in the hedge. Woody species are averaged over 30m sections, rather than the full length of the hedgerow. Results of the Hedgerow Regulations assessment are shown in the Appendix. Hedgerow TN6 is “important” under the hedgerow regulations.
- 6.2.6 Trees within the site boundary comprise Ash which are well grown but show signs of Ash dieback. Mature trees also occur to the site boundary to the North and South-east.
- 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 33 records for amphibians within 2km of the site. The nearest records for great crested newt are 1300m from the site.
- 6.3.2 The site has some potential value to amphibians in their terrestrial phase due to the presence of hedges and trees on the site boundary which could be utilised for foraging, refuges and/or hibernacula. The improved grassland has some potential value but is less structurally diverse than the boundaries.
- 6.3.3 There are four ponds within 500m of the site, Figure 6. Other ponds to the South-east are isolated from it by new housing. Crook (2019) describes these ponds as

“(P1) comprises a medium-sized pond which is dominated by tall emergent vegetation comprising mainly reed canary grass, reed-mace, and great willow-herb, with a boundary partially comprising dense bramble and willow scrub that overhangs much off the water's edge. At the time of survey there was little open water evident. The pond is surrounded by species-poor improved grassland. Pond P2 was found to be covered in dense scrub and heavily shaded with little open water. Neither of these ponds are suitable for use by great crested newts and could not be surveyed using conventional methods.

The nearest off-site pond, P3, was found to be open with some marginal scrub and a well-developed emergent and marginal aquatic vegetation. Pond P4 is heavily shaded due to the presence of a dense margin of scrub but could not be surveyed in detail due to lack of access permission.”



- Ponds
- 100m
- 250m
- 500m
- Boundary

Figure 6
Ponds with 100m, 250m
and
500m site buffer



- 6.3.4 There is no standing water on site other than an ephemeral depression which has no potential for breeding amphibians.
- 6.3.5 A wet ditch to the North boundary was found to contain flowing water and would not be suitable for breeding amphibians.
- 6.3.6 Standard presence/ absence surveys were undertaken by Crook (2019) in Ponds 1, 2 and 3. Pond 4 had access refused. No Great crested newts were recorded. Common Frog (*Rana temporaria*), Common Toad (*Bufo bufo*) and Common Newt (*Lissotriton vulgaris*) were recorded in low numbers.
- 6.3.7 Common toad (*Bufo bufo*) are UK BAP species, the potential presence of this should be considered. As such precautionary mitigation would be appropriate in respect of construction activities.

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 50 records of five species of bat within 2km of the site.
- 6.5.2 The foraging habitat over the core of the site is very poor for bat species being open and exposed. The improved grassland offers low foraging opportunities for bats.
- 6.5.3 Boundary hedgerows to the South and West are poorly connected in the landscape. Hedgerows to the North and East are well connected and would provide potential higher quality foraging areas.
- 6.5.4 The results of the activity survey (Figure 7) confirm our assessment of the potential for the habitat and trees at the site to support bats. Figure 7 combines the results of both surveys on 4th and 29th May 2021. There being very low levels of bat activity.
- 6.5.5 Two Common Pipistrelle (*Pipistrellus pipistrellus*) were recorded foraging along a hedge to the North of the site on both occasions.
- 6.5.6 Anabats were deployed. Anabat 1 was deployed on a fence line 40m from a hedgeline. No bats were recorded. Anabat 2 was deployed in a species rich hedge. Analysis was undertaken with KALEIDOSCOPE 4.0.1 and Bats of Europe 3.1.3 S/A: 0. No manual checking was undertaken to prevent surveyor bias. A low number of bat passes were recorded for six species of bat. The limitations of auto ID and call attenuation from the trees under which the anabat was deployed are likely to result in a higher number of bat species being recorded than are present, Table 3.



- Anabat Location
- - - Transect
- Trees Risk for Bats
- Site Boundary
- ★ Transect Stop
- ➔ Common Pipistrelle

Figure 7
 Bat Activity
 Combination of Surveys
 4th and 29th May 2021



KALEIDOSCOPE 4.0.1						
Bats of Europe 3.1.3 S/A:	MYBE	MYBR	MYDAU	MYNA	PIPI	PIPY
0						
*	43	11	13	8	1230	5
20210524						
20210525	25	9	3	7	392	2
20210526	3		1		185	
20210527	12	2	7		288	1
20210528	3		2	1	362	2
20210529					3	

Table 3- Anabat 2 results

- 6.5.7 It is evident that the hedgeline to the North of the site has elevated importance for bats on site. No bat activity was recorded over other hedgerows and an anabat purposefully left 40m from a hedgerow in the middle of the field, recorded no bat activity. This would suggest bats are not foraging over the centre of the site. It is not considered there would be significant degradation of foraging habitat as a result of the proposal so long as the northern hedgerow and trees are retained and or their loss is compensated for in any landscaping scheme.
- 6.5.8 All trees around the site perimeter were also assessed in accordance with Collins ed. (2016) and assigned a risk category. All of the trees on site were category 2 (low) or category 3 (negligible) risk. Risk category 2 trees are shown on Figure 7. No indications of roosting or highly suitable roost sites were located within the trees. All of the trees could be adequately inspected.
- 6.5.9 We consider bat species are highly unlikely to rely on the site for feeding but may occur in the local area. Roosting by bats will not occur on the site.

6.6 Birds

- 6.6.1 There are 275 records of birds within 2km of the site.
- 6.6.2 The intact hedgerows to the site boundaries offer potential habitat for feeding and nesting birds. The improved grassland has a low potential for use by nesting birds as the grassland is mown and very dense.
- 6.6.3 There were no rot holes or cracks in the trees within the site boundary which would support tree hole nesting species such as woodpeckers.
- 6.6.4 The results of the two BBS surveys undertaken are combined onto Figure 8. Nesting Woodpigeon (*Columba palumbus*) were recorded nesting in a hedge.
- 6.6.5 The birds recorded are all of common species and BOCC Green listed.
- 6.6.6 The habitat on site is not considered to be of anything more than of local significance to nesting birds, the habitats present are well represented in the local area. The impact on nesting birds is therefore considered likely to be minor.



- B. Blackbird
- BT Blue Tit
- GT Great Tit
- PH Pheasant
- WP Woodpigeon
- WR Wren
- C. Carrion Crow
- R. Robin
- BOCC Amber
- BOCC Green
- BOCC Red
- Schedule 1
- Site Boundary

Figure 8
Bird Survey



6.6.7 The site lies partially within a pink footed geese major feeding area. This species is not recorded on site or within 2km on the LERN data set. There are records of wildfowl on the Fylde Bird Club data set but these are recorded at a 1km resolution as reported by (GMEU, 2020). An HRA prepared for an adjacent plot of land (GMEU, 2020) concluded that *“the patterns of usage by birds in the local area has not altered from the findings of the 2018 Strategic HRA for the wider land allocation. Data from outside of the Site in the local landscape shows a widespread distribution of species and with some very limited changes over time in usage by pink-footed geese.”*

6.6.8 Crook (2019a) reports *“The site and surrounding area comprises green fields which could be used by SPA birds; however, given that none of the bird records identified within the area related to the site or adjacent fields, the site and immediate surroundings are not considered to constitute FLL.*

The closest open farmland to the allocation sites for which bird records indicate regular use and therefore constitute FLL is located over 1 km to the north and west of the site, adjacent to the River Wyre (beyond the A586, which acts as a link road from the A6 to Blackpool.”

6.6.9 The surrounded fields are subject to the construction of new housing, some of which is partly constructed some of which is consented. The site, if undeveloped, would form an island within these areas which would be unsuitable for use by overwintering wildfowl. Retention of this site as green space is therefore unlikely to provide functionally linked land as compensation for development adjacent.

6.6.10 There is the potential for an increase in recreational use of the estuary some 3km from the site.

6.7 Brown Hare

6.7.1 Brown hare are a UK BAP priority species. There are five 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 The site boundary has some potential for brown hares to create forms.

6.7.4 A risk assessment of the site in respect of its future potential for and value to brown hares could be adequately made. We consider the risk to brown hares is very low.

6.8 Otter

6.8.1 There is one record for otter within 2km of the site.

6.8.2 No indication of the presence or past use of the site by otter was found. The boundary ditch is considered unlikely to support fish. This species is considered as being absent from the site.

6.9 Reptiles

- 6.9.1 There are no records for reptiles within 2km of the site.
- 6.9.2 The majority of the site has a very low value to reptiles being devoid of significant ground cover. There are no areas of the core development area which would be particularly favourable to reptiles.
- 6.9.3 Reptiles may occur along the boundary of the site and this provides linkage across the local landscape. It is however outside the site boundary and is unaffected by the proposal.
- 6.9.4 As a consequence, precautionary mitigation would be appropriate in respect of construction activities so as to ensure reasonable avoidance measures are taken to avoid the killing or injury of these species.

6.10 Water vole

- 6.10.1 There are no records of water voles within 2km of the site.
- 6.10.2 The vegetation growing along the ditch to the North boundary is sparse, the bank sides are steep.
- 6.10.3 No signs of water voles, such as droppings, feeding piles or footprints were present in 2021. Crook (2019) also report the absence of this species from the site boundary.

6.11 Other

- 6.11.1 The boundary hedgerows provide potential for use by hedgehog (*Erinaceus europaeus*).

6.12 Statutory and Non-Statutory Sites

Direct Impacts:

- 6.12.1 There are no statutory or non-statutory sites which are connected to the site such that site development would directly affect the dispersal of species between them or directly impact upon their integrity.
- 6.12.2 The habitats on site do not represent or are linked to those found in any of the statutory or non-statutory sites locally.

Indirect Impacts:

- 6.12.3 There is the potential for runoff from the site via the open watercourse to the North of the site. A suitable surface water attenuation scheme (basins, cellular storage and over-sized pipes) would need to be implemented to achieve greenfield run-off rates and prevent pollution and sediments entering the River Wyre.
- 6.12.4 There may be an increase in the local population as a result of works which would give rise to increased recreational use of the adjacent SAC/ SPA/ RAMSAR site. This impact is not easily quantifiable but it is possible. To mitigate the effect it is recommended that a

Householder Pack is made available to all new residents of the development highlighting the sensitivity of the area and impacts caused as a result of recreational disturbance.

6.12.5 Householder packs should comprise, but are not limited to;

- Introduction letter to the pack, setting out the issue and providing a contents page of included documents.
- Description of the European designated sites and their features, this should include a map explaining the boundaries of European designated sites.
- An explanation of the sensitivities of features to recreational disturbance and key sensitive times for the features of the European designated sites.
- List any access restrictions in the local area (i.e. under the Countryside and Rights of Way Act 2000, Marine and Coastal Access Act 2009 or Byelaws).
- Suggestions of alternative recreational sites (i.e. parks, walking or cycling routes).
- Code of conduct (i.e. not disturbing flocks of feeding / roosting birds, suggested distances to keep from birds).
- Suggested areas for responsible bird watching and opportunities for people to get involved in the local natural environment (i.e. volunteering opportunities).

6.12.6 The following principles to be followed for the packs;

- The householder packs are tailored to the location of the development and the European designated sites in the area.
- Tailored to the audience using clear and easy to understand language.
- An appropriate format is used to present and share the householder packs (i.e. print, size).

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 lost should be replaced.

7.2 *Amphibians*

- 7.2.1 There is no requirement for specific mitigation for these species. There are currently no suitable breeding sites on or near the site. However, as a precautionary measure, in the unlikely event that any signs of any amphibian activity is subsequently found, all site works should cease and further ecological advice should be sought with a view to a detailed method statement and programme of mitigation measures being prepared and implemented.
- 7.2.2 Consider the use of SUDS on site to provide new aquatic habitat during development. Such areas would be best placed in public open space where connectivity to the site boundaries and wider area is improved.
- 7.2.3 In order to further minimise impacts on amphibians the following points should also be followed.
- All work must take place during daylight hours as amphibians are more likely to be commuting over night and this will ensure the risk to any amphibians commuting through the site will be minimised.
 - During the development, measures should be put in place to discourage amphibians from using the development area, the creation of any piles of earth, materials and rubble which could form potential artificial hibernacula and refuge should be avoided at all times. It is recommended that any spoil or rubble will be removed immediately to skips, or on hard standing or short grass. This will ensure that no potential amphibian hibernation or resting sites are created.
 - The storage of all loose materials must be palletised or similar so they are off the ground whenever possible.
 - Should any trenches and excavations be required, an escape route for animals that enter the trench must be provided, especially if left open overnight. Ramps should be no greater than of 45 degrees in angle. Ideally, any holes should be securely covered. This will ensure amphibians are not trapped during work.

- All excavations left open overnight or longer should be checked for animals prior to the continuation of works or infilling. Back filling should be completed immediately after any excavations, ideally back filling as an on-going process to the work in hand.

7.3 Badger

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

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

7.4 Bats

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

7.4.2 The hedgerow to the North should be retained and this corridor enhanced with new planting/ vegetation buffering.

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

7.4.4 Any category 2 trees to be felled should be re-inspected for bats to confirm they remain absent.

7.4.5 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 hedges on the periphery of the site.

- 7.5.2 Any vegetation to be trimmed or cleared should be checked for nesting birds before it is removed. Ideally this should occur outside the bird nesting period March- September. If vegetation clearance is to occur in the March-September period a check for nesting birds should be conducted first by a suitably qualified individual.
- 7.5.3 New planting within the site and the retention of trees and shrubs on the site boundary will maintain the ecological functionality of the site for breeding birds.
- 7.5.4 Artificial bird nesting sites for swallow 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 *Otter*

- 7.7.1 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.
- 7.7.2 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.

7.8 *Reptiles*

- 7.8.1 There is no requirement for specific mitigation for these species. However, as a precautionary measure, in the unlikely event that any signs of any reptile activity is subsequently found, all site works should cease and further ecological advice should be sought with a view to a detailed method statement and programme of mitigation measures being prepared and implemented.
- 7.8.2 The points in respect of not leaving open trenches without means of escape detailed for badgers are also applicable to these species.

7.9 Water vole

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



Figure 9 Proposed site plan

8. REFERENCES

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9. APPENDIX

Feature		Hedge			ARCHAEOLOGY AND HISTORY	FEATURES					HEDGE CLASSIFIED AS IMPORTANT										
Hedge		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	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	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
4	Yes	Yes	Yes	Yes		Yes	No*	No*	No*	No*	No	No	Yes	No	No	No	No	1	1	0	No
5	Yes	Yes	Yes	Yes		Yes	No*	No*	No*	No*	No	No	Yes	No	No	No	No	4	2	0	No
6	Yes	Yes	Yes	Yes		Yes	No*	No*	No*	No*	No	No	Yes	Yes	Yes	Yes	Yes	3	5.3	0	Yes
7	Yes	Yes	Yes	Yes		Yes	No*	No*	No*	No*	No	No	Yes	No	No	No	No	4	5	0	No
8	Yes	Yes	Yes	Yes	Yes	No*	No*	No*	No*	No	No	Yes	Yes	No	No	No	2	4	1	No	
No = Automatic failure					Yes = Automatic pass					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.