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Environmental and Rural Chartered Surveyors

Ecological Appraisal

Land at Highmoor Farm
Clitheroe

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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	Emma Wainwright	Date	25/09/2018
Updated by	Amy Riley	Date	18/02/2020
Checked by	Andrew Gardner	Date	14/02/2020
Report Version	4		
Field data entered	☒		
Report Reference	4851		

Contents

1. EXECUTIVE SUMMARY

1.1.1 Envirotech NW Ltd were commissioned in August 2018 by Gary Hoerty Associates to carry out an ecological appraisal of land at Highmoor Farm, Clitheroe. It is proposed that new houses are constructed on the site. Envirotech NW Ltd were commissioned in November 2019 to update the necessary surveys and report.

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 Envirotech NW Ltd on the 12th and 26th September 2018. A full botanical survey of the site was initially undertaken and this was followed by surveys to establish the presence or absence of bats, amphibians, nesting birds, brown hares and badgers at the site or in proximity such that they may be affected by the proposed development.

1.1.4 The site was re-visited by Envirotech NW Ltd on the 21st November 2019. A full botanical survey of the site was initially undertaken and this was followed by surveys to establish the presence or absence of bats, amphibians, nesting birds, brown hares and badgers at the site or in proximity such that they may be affected by the proposed development.

1.1.5 The majority of the site is vegetated by species poor grazed grassland which is of low ecological value. Domestic gardens and public open space can maintain or improve the ecological value of these areas.

1.1.6 Two brooks run through the site. These habitats, the trees and scrub adjacent to them and hedgerows around and within the site offer much higher ecological value and should as far as possible remain unaffected.

1.1.7 Two hedgerows at the site were categorised as important under the Hedgerow Regulations (1997) for their ecological component.

1.1.8 It is proposed that some roosting provision for bats will be incorporated into the new houses or retained trees on site. Some trees on site provide potential bat roost sites and common bat species recorded commuting and foraging over the site.

1.1.9 Birds are likely to use hedgerows and scrub on site for nesting between March and September. Any vegetation clearance should therefore be undertaken outside of this period. It is proposed that artificial nesting sites should be incorporated into houses or retained trees.

1.1.10 No other notable or protected species were recorded on the site.

2. INTRODUCTION

2.1 Background

2.1.1 In August 2018 Envirotech NW Ltd were commissioned by Gary Hoerty Associates to carry out an Ecological Appraisal of land at Highmoor Farm, Clitheroe, central grid reference SD 75129 41683 (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 In November 2019 Envirotech NW Ltd were commissioned by Gary Hoetry Associates to update the Ecological Appraisal that was undertaken in August 2018.

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

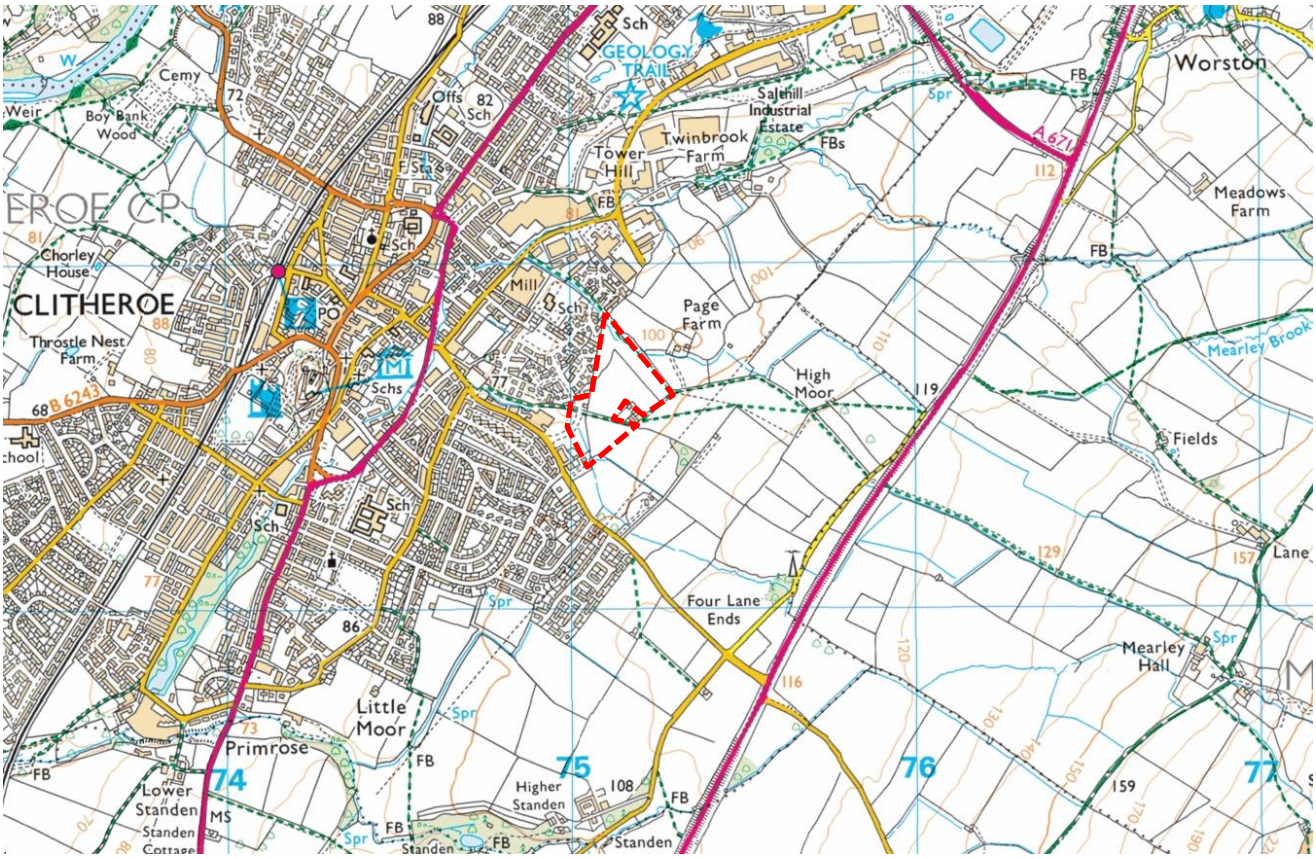

Figure 1 *Site location at SD 75129 41683 circled red.*

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 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.

3.2 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 12th and 26th September 2018 by

- (JS) Mr Jack Sykes BSc (Hons), MCIEEM
  Natural England Bat Class Licence (Level 2)

- (EW) Miss Emma Wainwright BSc (Hons) Grad CIEEM
  Natural England Bat Class Licence (Level 1)
  Natural England Great Crested Newt Licence (Level 1)

- (JW) Mr Jonathan Walker BSc (Hons)
  Unlicenced observer with experience in emergence surveys

- (AF) Mr Adrian Fryer
  Natural England Bat Class Licence (Level 1 Agent)

3.3.3 The site and surrounding land was visited on the 21st November 2019 by

- (AR) Ms Amy Riley BSc (Hons)

4. SPECIES SURVEY METHODOLOGY

4.1 Amphibian

4.1.1 Great crested newts (*Triturus cristatus*) are listed on Annexes II and IV of the EC Habitats Directive and Appendix II of the Bern Convention. It is protected under Schedule 2 of the Conservation (Natural Habitats) Regulations (2017) 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 EPS 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 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 carcases

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 Natural Habitats) Regulations (2017), as European 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. This resulted in the production of a map showing habitat quality both on and adjacent to the site.

4.3.4 As a result of the potential suitability of the habitat 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 survey 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.

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

4.3.7 Trees were all assessed in accordance with Collins, J. (ed) (2016).

4.3.8 An anabat detector was left within a dense hedgeline between the 12th and 23rd September 2018. This was set to record for ½ hr before sunset to ½ hr after sunrise.

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 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. 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. A search of the sides of the becks to a distance of 5m was undertaken to search for signs of water vole such as runs, holes, feeding remains and droppings.

4.9 Survey limitations

4.9.1 The surveys were undertaken in late summer. At this time of year most plant species are easily identified although the activity of some species is reduced.

4.9.2 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 surveys.

4.9.3 The duration, extent and scope of the surveys were considered sufficient to plan appropriate mitigation and recommend additional precautionary survey work required prior to the commencement of work.

4.9.4 No significant survey limitations were encountered.

5. RESULTS

5.1 Data Search

5.1.1 Envirotech and LERN hold no records of protected or notable species for the site. There are however records of protected or notable species within 2km including records of birds adjacent to the site (Figure 2). These are discussed in the relevant sections below.

5.1.2 The nearest non-statutory designated site is Clitheroe Castle Knoll Biological Heritage Site (BHS) c.800m to the West of the site (Figure 3). This BHS is isolated from the site by an urban mosaic of residential houses and associated gardens.

5.1.3 The nearest statutory designated site is Salthill and Bellman Park Quarries Site of Special Scientific Interest (SSSI) c.950m to the North of the site (Figure 4). The habitats within the SSSI are no representative of those within the survey site.

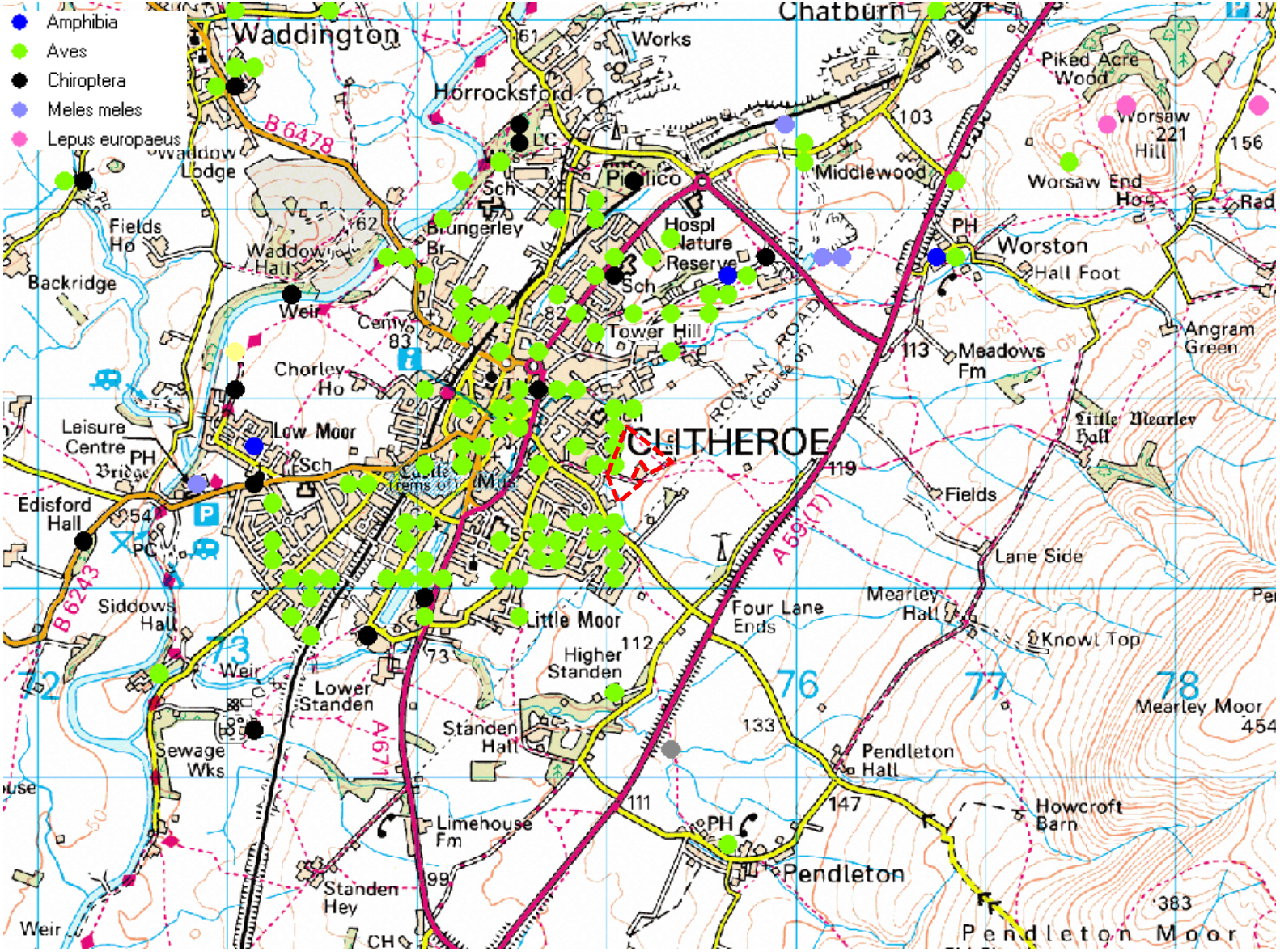

Figure 2 *Notable species records, site location is outlined red.*

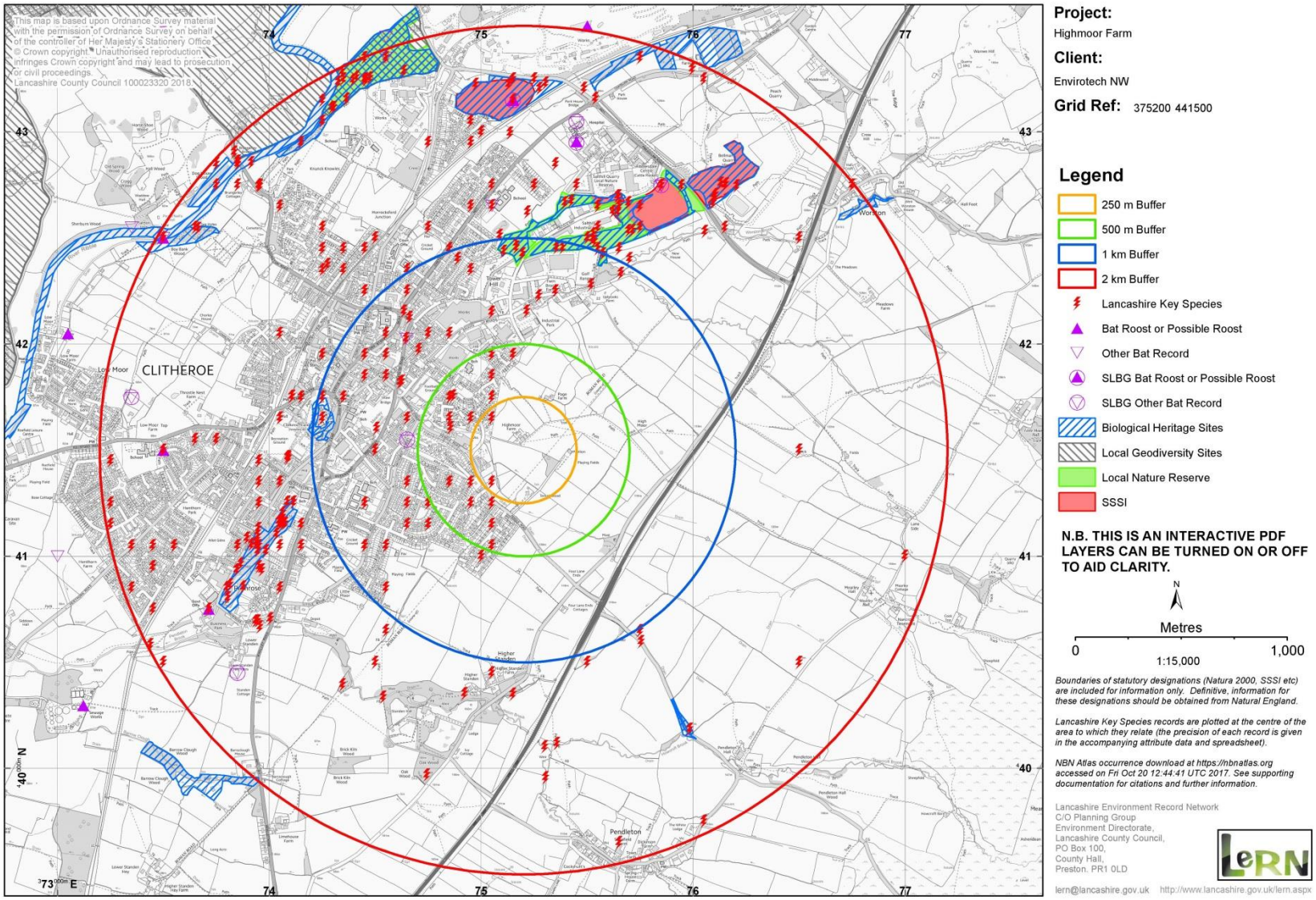

Figure 3 *Non-statutory sites 2km buffer.*

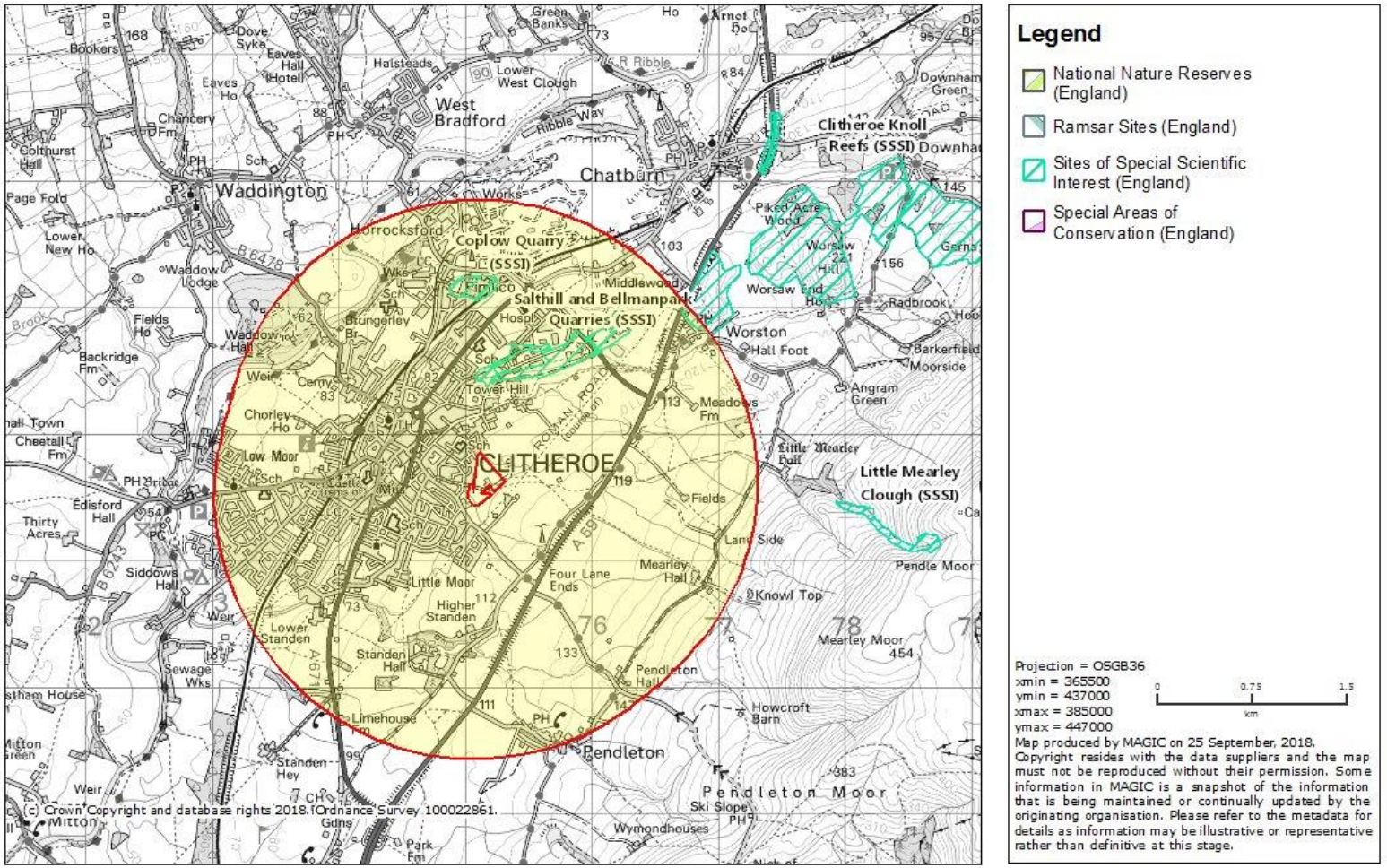

Figure 4 *Statutory designated sites 2km buffer.*

6. PHASE 1 SURVEY RESULTS

6.1 Habitat Results

6.1.1 The site comprises poor semi-improved grassland bound and intersected by hedgerows. A farm yard and buildings occur to the East. Residential houses and associated gardens abut the site to the West. Species spoor grassland further extends to the East and North.

6.1.2 See Figure 5 for the Phase 1 Habitat Plan and Table 1 for the descriptive Botanical and Faunal Target Notes, hereafter referred to as BTN and FTN.

Target Note	Description	Comment
BTN1	Poor semi-improved grassland	The majority of the site is vegetated by species poor semi-improved grassland. Species which are present within the grassland include perennial ryegrass (*Lolium perenne*), common sorrel (*Rumex acetosa*), creeping buttercup (*Ranunculus repens*), Dandelion *(Taraxacum officinale),* Common thistle (*Cirsium vulgare*), Yorkshire fog (*Holcus lanatus*) and cocksfoot (*Dactylis glomerata*). Soft Rush (*Juncus effusus)* is present in the wetter areas.
BTN2	Hardstanding	An access track runs into the site from the West and continues around to the North-east. There is no notable vegetation associated with this track. It is flanked by hedgerows and several mature trees. These trees have features suitable for bats and nesting birds, including woodpecker.
BTN3	Woodland and running water	A brook runs within the North of the site. A small area of woodland, dominated in its canopy by poplar (*Poplus* sp.) with occasional crack willow (*Salix capraea*), ash (*Faxinus excelsior*), hawthorn (*Crataegus monogyna*) and hazel (*Corylus avellana*) grows around it. A fallen willow from this woodland now lies across the poor semi-improved grassland field to the South.
BTN4	Other tall herb/ fern – ruderal	Tall ruderal species grow where disturbance levels have been reduced, especially around the fallen tree to the North of the site. Species present within these areas include nettle (*Urtica dioica*), rosebay willowherb (*Chamaenerion angustifolium*), broadleaved dock (*Rumex obtusifolia*) and creeping thistle (*Cirsium arvense*).
BTN5	Running water and dense scrub	Dense scrub and small hedgerows run along and radiate from a brook which runs through the South-west of the site. Species present in this area include crack willow, dogwood (*Cornus sanguinea*), hawthorn, bay laurel (*Laurus nobilis*), Ivy (*Hedera helix),* Nettle *(Urtica dioica),* Creeping buttercup, Holly (*Ilex aquifolium),* Hogweed *(Heracleum sphondylium),* Cleavers *(Galium aparine),* Cow parsley (*Anthriscus sylvestris),* Snowberry *(Symphoricarpos albus),* Moss sp., elm (*Ulmus* sp.) and common butterbur (*Petasites hybridus*). The brook was found to be fast flowing with a rocky substrate.
BTN6	Cultivated/ disturbed land – Amenity grassland	Grassland adjacent to the brook is regularly mown and as such has a short sward. It is species poor and considered to be of low ecological value, species include Annual Meadow Grass *(Poa annua),* Daisy *(Bellis perennis),* Creeping buttercup and Dandelion. The Southern most section of amenity grassland has scattered trees growing over it. Tree species here include willow, ash and cherry (*Prunus* sp.).

BTN7	Other habitat	A farm yard and buildings occur adjacent to the site. A dwelling and associated land also occurs in the West of the site. None of these buildings were subject to detailed inspection. TT
TN8	Garden boundary - Boundary 1	The North-west site boundary; where the site abuts residential houses and associated gardens is formed by a network of fences and hedgerows. All hedgerow sections are heavily managed through cutting and are not classified as important due both to their short lengths and the fact that they bound the curtilage of a dwelling.
BTN9	Intact hedgerow – Hedgerow 1 **Important hedgerow under hedgerow regulation assessment**	Hedgerow 1 bounds the North of the site. It adjoins woodland, contains standard trees, has a bank supporting at least half of its length and is adjacent to a public footpath. Woody species recorded within its length include ash, elder (*Sambucus nigra*), hawthorn, hazel (*Corylus avellana*), holly (*Ilex aquifolium*) and rose (*Rosa* sp.). The only notable species listed on the hedgerow regulations assessment present in the base of Hedgerow 1 at the time of the survey was male fern (*Dryopteris felix-mas*).
BTN10	Defunct hedgerow – Hedgerow 2	Hedgerow 2 is species and structurally poor. There is a single mature oak (*Quercus* sp.) tree at its Southern extent but aside from this it is comprised solely of hawthorn. A ditch runs along its East side.
BTN11	Defunct hedgerow - Hedgerow 3	Hedgerow 3 contains mature ash trees growing at the North-west, these have features suitable for roosting bats and if these are to be removed they would require further assessments. There are no other notable features associated with Hedgerow 3. Woody species recorded in its length are ash, elder, hawthorn, rose and whitebeam (*Sorbus* sp.). There were no notable species listed on the hedgerow regulations assessment present at the base of Hedgerow 3 at the time of the survey.
BTN12	Intact hedgerow – Hedgerow 4	Hedgerow 4 has a dense structure and includes frequent rose alongside ash, elder and hawthorn. No notable species were recorded in its ground flora at the time of the survey.
BTN13	Intact hedgerow – Hedgerow 5 **Important hedgerow under hedgerow regulation assessment**	Hedgerow 5 contains mature ash and alder (*Alnus glutinosa*) trees along with hawthorn, ash and elder. The mature trees contain features suitable for roosting bats and nesting birds, including woodpecker. Hedgerow 7 is a parallel hedge to Hedgerow 5 and both hedgerows are adjacent to a public footpath. This hedge has been recently laid and appears to have been gapped up with a species rich hedgerow mix.
BTN14	Intact hedgerow – Hedgerow 6	Hedgerow 6 has had low levels of management in comparison to other hedgerows around the site. As a result it is tall and has a more open structure. Woody species within its length including ash, blackthorn (*Prunus spinosa*), elder, hawthorn and rose.

BTN15	Intact hedgerow – Hedgerow 7	Hedgerow 7 runs parallel to Hedgerow 5. Whilst standard trees do occur in the length of this hedgerow, they are not sufficiently frequent to qualify as a feature under the hedgerow regulations assessment. Woody species within its length are ash, elder, hawthorn and rose. No notable ground flora species were present at the time of the survey.
BTN16	Mature trees	Mature broadleaf trees occur in the majority of hedgerows on site, these trees are ecologically important as they provide good habitat for a number of species, as a result these trees should be retained as far as possible.
FTN1	Water vole	Access to the brook in the South of the site was not possible due to this being fenced off and padlocked. The section of the brook which was visible did not appear suitable for use by this species. The brook in the North of the site was accessed in full but was found to be similarly unsuitable. The banks of this brook were very gently sloping and would not provide suitable opportunities for water voles to form their burrows. Suitable vegetation for this species to forage on was absent from the banks of this brook and was not apparent on the banks of the South brook.
FTN2	Birds	Hedgerows and scrub around the site are frequently of sufficient density that they would provide significant potential for birds to nest. No active nest sites were recorded at the time of the survey.
FTN3	Bats	Several of the trees around the site are mature or veteran and may provide potential bat roost sites in their structures.

Table 1 *Details of Botanical and Faunal Target Notes.*

Figure 5- *Phase 1 Habitat Survey*

Figure 6 Hedgerows within the site boundary

	A brook in the North of the site has a rocky substrate and negligible potential for use by water vole.
	Poor semi-improved grassland is the frequent habitat type on site.
	The access track flanked by hedgerows and mature trees. These trees have potential for roosting bats due to their size, age and frequent potential roosting sites. Potential new access tracks into the development sites

	Mature tree located within BTN 13 with potential roosting feature for bats. Trees must be inspected for use by bats and birds before felling
	A pond to the South of the site could be seen from within site ownership. (Image taken in 2018)
	Large mature trees within the centre of the site (within hedgerow BTN11), these should be retained as part of the scheme. If they can not be retained they must be inspected fully for potential bat roosting features before felling. A nesting bird check will be required during nesting season if any works on the trees are to be carried out.

	Image taken looking North-west across the site In wetter areas soft rush is growing
	Woodland (BTN3) in the Northern corner of the site. This should be retained as it provides a valuable resource for a number of species. The roots of the trees should be adequately protected during the development.

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. Whitebeam was recorded in Hedgerow 3. Whilst this species occurs relatively rarely in the wild, this individual is highly likely to have been planted here; as they are frequently in the North West of England.

6.2.2 The poor semi-improved and amenity grasslands have a very low species diversity and ecological value. Whilst the assemblage of species within it is higher than improved pasture, the species are all indicative of regular disturbance, these habitats do not constitute BAP habitats.

6.2.3 Intact hedgerows bounding and intersecting the site are generally of good quality; containing a good diversity of woody plant species and having dense structures. All of the hedgerows were found to be distinctly lacking in any of the notable ground flora species. This is likely as a result of past grazing pressures.

6.2.4 Hedgerow 1 and Hedgerow 5 (BTN9 and 13) are classified as important under the hedgerow regulations assessment. An access point will be created within hedgerow 5, this section of hedgerow to be removed should be transplanted, methods for this are outlined in Table 5.

6.2.5 Hedgerow 1 has four features; a public right of way, gaps which do not exceed 10% of its length and standard trees. It also contains an average of 3.5 woody plant species within its 30m sections. The number of woody species to trigger potential importance is reduced from 4 to 3 in the county of Lancashire when matched with a public highway. This hedgerow is therefore classified as important under the hedgerow regulations.

6.2.6 Hedgerow 5 has four features; a public right of way, gaps which do not exceed 10% of its length, standard trees and a parallel hedge and contains four woody species within its central 30m section. Hedgerow 5 appears to have been recently laid and gapped up with a species rich hedgerow mix. The addition of new species increases the number of woody species present. The hedgerow regulations require a hedge to have been established for at least 30 years. The newly added species have not been present for 30 years but the original hedgerow has. This may be a point of contention and we have erred on the site of caution in identifying the hedgerow as important under the hedgerow regulations assessment.

6.2.7 All other hedgerows are not classified as important under the hedgerow regulations but all hedgerows are a UK BAP habitat. Within hedgerow 7 an access point will be created, the area to be lost should be compensated for.

6.2.8 Hedgerow 4 will be lost as part of the scheme, this loss will be compensated for by the planting of a new hedgerow at the site to the south of the existing access track.

6.2.9 Defunct hedgerows (Hedgerow 2 and 3) is of lower ecological value due to their poor structure. Hedgerow 2 will be improved and hedgerow 3 will be lost as apart of the

scheme. Hedgerow 3 should be compensated for by linear planting of shrub / hedging plants.

6.2.10 Many of the trees around the site are mature or veteran. They provide a significant level of vegetative structure within the local area, and in several cases add to the value of the hedgerows, due to the age and structure of the trees these are not easily replaced and therefore should as far as possible be retained.

6.2.11 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 69 records for amphibians within 2km of the site. Species recorded are palmate newt (*Lissotiton helveticus*), smooth newt (*L. vulgaris*) and common frog (*Rana temporaria*). Great crested newt (*Triturus cristatus*) has not been recorded within this search range.

6.3.2 There is no standing water on site, though there is a garden pond to the South (Pond 1). This pond could be seen from land within site ownership and a Habitat Suitability Index in relation to its suitability as a habitat for great crested newts has been compiled/estimated (Table 3). A value for macrophyte cover has been omitted in line with guidelines due to the survey being undertaken outside the period March – May. There are no other ponds shown on aerial photography within 250m of the site.

Pond ref	Pond 1
SI1 - Location	0.5
SI2 - Pond area	0.2
SI3 - Pond drying	0.9
SI4 - Water quality	0.33
SI4 - Shade	1
SI6 - Fowl	0.67
SI7 - Fish	0.33
SI8 - Ponds	0.1
SI9 - Terrestrial habitat	0.97
SI10 – Macrophyte cover	-
HSI	0.44

Table 3 *Habitat Suitability Index*

6.3.3 A HSI value of 0.44 categorises Pond 1 as having poor suitability as a habitat for great crested newts. Conditions were indicative of use by fish and fowl and the pond is isolated from any other standing water bodies locally. These factors are all considered to contribute to the low suitability of Pond 1.

6.3.4 The core development areas have a low value to amphibians being open and exposed grassland. The boundary hedgerows may be used by amphibians commuting and seeking refuge.

6.3.5 Structural diversity at ground level across the majority of the site is very poor. There are no areas with log, rubble piles or compost heaps which would be particularly favourable to amphibians.

6.3.6 Whilst great crested newts are unlikely to occur at the site, the potential presence of other species including the BAP species Common toad (*Bufo bufo*) should be considered. As such precautionary mitigation would be appropriate in respect of construction activities.

6.4 Badger

6.4.1 There are 14 records of badgers occurring within 2km of the site on the datasets searched.

6.4.2 There is a small section of woodland in the North of the site and another compartment of broadleaf woodland some distance to the East.

6.4.3 Badger setts do not however 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.

6.4.4 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 311 records of four species of bat within 2km of the site on the datasets searched. Species recorded are common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*P.pygmaeus*), noctule (*Nyctalus noctula*) and Daubenton's (*Myotis daubentoii*) bats.

6.5.2 The poor semi-improved grassland offers negligible foraging opportunities for bats this is open, exposed an unlikely to be attractive to bats. The hedgerows and brooks provide potential for bats to forage and commute across and around the site. Whilst these areas of the site are the most structurally diverse they are not considered exceptional in the local area. More extensive areas of medium and high quality habitat occur locally, including the gardens and existing residential dwellings adjacent (Figure 9).

6.5.3 Due to the potential for use of the hedgerows and tree lines at the site by foraging and commuting bats, two bat activity surveys were undertaken on the 12th and 26th September 2018. Surveys comprised a walked transect of the site by three surveyors for a period of 1.5hrs. The surveyors used EM3 time expansion bat detectors.

6.5.4 Whilst the surveys were undertaken at the end of the "bat year" night time temperatures were still suitable for foraging bats and winged insects were noted during the survey.

6.5.5 The results of the activity survey (Figure 7) confirm our assessment of the potential for the habitat, trees and buildings at the site to support bats.

6.5.6 An anabat detector left in a hedge to the North of the site recorded one pass by Noctule *(Nyctalus noctula)* and one pass by Brown Long-Eared *(Plecotus auritus)*. (Table 4). The hedgeline in which the anabat was deployed was considered to be the better bat habitat on the site. The results concur with our activity surveys which suggest a low level of bat activity over the site.

KALEIDOSCOPE 4.0.1			
Bats of Europe 3.1.3 S/A:+1		NYNO	PLAUR
*	Total	1	1
20180912	*		
	20180912		
20180913	*		
	20180913		
20180914	*		
	20180914		
20180915	*		
	20180915		
20180916	*		
	20180916		
20180917	*		
	20180917		
20180918	*		
	20180918		
20180919	*		
	20180919		
20180920	*	1	1
	20180920	1	1
20180921	*		
	20180921		
20180922	*		
	20180922		
20180923	*		
	20180923		

Table 4 *Anabat results*

6.5.7 Foraging habitat within the centre of the site will be affected. Currently the central hedgerows and mature trees provide linkages across the landscape for foraging and commuting bats. Boundary hedgerows and trees are to be retained and a new hedgerow in the Southern area of the development will be planted and hedgerow 2 (BTN10) will be improved. The creation and improvement of these hedgerows will improve the connectivity around the site. It is therefore considered there will not be a significant of foraging and commuting habitat in the long run. As far as possible hedgerows and trees should be retained and improved.

6.5.8 Mature trees within the site boundary were assessed in accordance with Collins ed. (2016) and assigned a risk category. Category 1 and Category 2 trees are shown in Figure 8. Several of the trees around the site are of sufficient size and structure that bat roost sites may occur. The frequency of trees did not allow for individual activity surveys though no bats were seen to emerge from or re-enter any trees during the transect surveys undertaken in 2018. The requirement for mitigation for each tree category is shown on Figure 10. Any category 1 or 2 tree to be affected must be inspected for signs of use by bats before works can begin, this should be undertaken by a suitably qualified ecologist.

envirotech

Figure 7
Results of the
Bat Transect Surveys

SCALE:NTS REV 01

*Habitats outside the site boundary are indicative only
and have been mapped from within the site boundary or from publicly accessible land

Key

Site Boundary

Tree Risk Category

N

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Figure 8
Tree Risk Category

SCALE: NTS | REV 02

*Habitats outside the site boundary are indicative only
and have been mapped from within the site boundary or from publicly accessible land

Figure 9- *Bat Habitat Survey*

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. ***A consultant ecologist is required***	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 that 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. ***A consultant ecologist required***	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. ***A consultant ecologist is unlikely to be required***	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. ***A consultant ecologist is not required unless new evidence is found***	None.	No mitigation for bats required.

Figure 10 *Tree risk categories from Hundt (2012).*

6.7 Birds

6.7.1 There are numerous records of birds within 2km of the site.

6.7.2 The intact hedgerows around the site are frequently of sufficient density to be of potential for use by nesting birds. The gappy defunct hedges within the site have insufficient density to be of high value to nesting birds.

6.7.3 Birds are unlikely to utilise the regularly disturbed pasture land for nesting.

6.7.4 The habitat on site is not considered to be of local significance, habitats present are well represented in the local area. The impact on nesting birds is therefore considered likely to be minor.

6.8 Brown Hare

6.8.1 Brown hare are a UK BAP priority species. There are five records of brown hares within 2km of the site.

6.8.2 Whilst there is some potential for this species to utilise the site, no indication of brown hares was recorded during either survey. The regular human presence and use of the site by a large number of dog walkers is considered to reduce this potential.

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

6.9 Invertebrates

6.9.1 Numerous 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 The plant species assemblages found on site are not representative of those found in sites which are designated for their invertebrate interest.

6.9.4 Impacts on the species are considered likely to be negligible, post development domestic gardens will create greater habitat diversity in the area than already exists.

6.9.5 Semi-Improved pasture, tall ruderal and scrub vegetation has some value to species such as common butterflies but this is not considered to be locally significant.

6.9.6 The brooks on site were seen to have good water quality and will undoubtedly support aquatic invertebrates.

6.9.7 Although the habitat on site will support invertebrate species mitigation can be incorporated into the design and landscaping scheme with the careful selection of plant species and substrates for the garden areas.

6.10 Reptiles

6.10.1 There are two records for common lizard (*Zootoca vivipara*) within 2km of the site on the datasets searched. There are no other reptile species recorded within this search range.

6.10.2 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.

6.10.3 No indication of reptiles was recorded at the site.

6.10.4 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.

6.11 Water vole

6.11.1 There are four records of water voles within 2km of the site. These records are all c.2km to the North-east of the site and are isolated from it by Clitheroe town.

6.11.2 The vegetation growing along the brooks was not found to provide suitable foraging for this species. The North most brook does not have potentially suitable banks for water voles to create burrows.

6.11.3 No indications of use of the watercourses by water vole, such as feeding remains, latrines or burrows were seen at the time of the survey.

6.12 Other

6.12.1 The boundary hedgerows provide potential commuting routes for hedgehog (*Erinaceus europaeus*). Potential for this species to cross the wider landscape post development will be maintained and enhanced by boundary hedgerows.

6.13 Statutory and Non-Statutory Sites

Direct Impacts:

6.13.1 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.

6.13.2 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:

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

7. MITIGATION/RECOMMENDATIONS

7.1 Compensatory planting and habitat enhancement

7.1.1 The roots of trees on the site and its boundaries should be adequately protected during work in accordance with industry standards. Several of the trees on site are mature and can not be replaced with ease. A considerable amount of trees on site are proposed to be lost, either due to condition or placement. The loss of these trees should be adequately compensated for.

7.1.2 Any category 1 or 2 trees to be affected by the development must be checked by a certified individual for bats prior to works being carried out.

7.1.3 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. Scrub planting could be undertaken along the North-west boundary.

7.1.4 Hedgerows around the site should be retained and 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 in line with industry standards during development from compaction/ground disturbance.

7.1.5 There are two hedgerows on site which are categorised as important under the hedgerow regulations assessment, these should remain where possible. If sections of these hedgerows are to be removed then they should be trans-located, see Table 5 for the correct methods.

7.1.6 The proposal includes the removal of the defunct hedgerow 3. Transplantation is not considered to be of significant ecological benefit as there are no notable species assemblages associated with it. Replanting linear lines of species rich native trees/ shrubs would be more beneficial.

7.1.7 Hedgerow 4 is to be lost, this hedgerow should be adequately compensated for by the planting of a new hedgerow or linear feature within the site boundary.

1	Receptor Site- A trench is to be dug at the receptor site approximately 1m deep, 1m wide in the middle with side/s shallow tapered.
2	Receptor Site - Soil in the bottom of the trench is to be loosened and mixed with some top soil excavated from the receptor trench.
3	Coppice- The existing hedge should be cut back heavily to reduce its bulk. The level of cutting back should be similar to that which would be done should it be laid. Small trees should be coppiced to 30cm above ground level.
3	Lifting- Determine the length of hedgerow that can be moved in each digger bucket. The roots between each plant should then be severed. This is to be done by hand, but could be achieved more successfully and easily if a hydraulically powered blade/knife
4	Lifting- A trench is to be dug on the lifting side approximately 1m from the cut stems of the hedge. The machine bucket should be "combed" gently down to expose rather than break root ends.
5	Lifting- Whenever encountering large roots, an attempt should be made to cut them (strong loppers, sharpened mattock) rather than break them.
6	Lifting- With a non-reversible bucket the plants should be scooped from behind. Ideally using a reversible bucket the plant can then be lifted from underneath. In either case maintain as much of the root ball as is possible.
7	Lifting- Any large (>15mm) roots broken during lifting should be pruned to leave clean
8	Placement- On placement, maintain the correct height and line of each plant. One or two people on the ground should be able to direct the machine operator and to assist in carrying out step 9.
9	Placement- The trench should be back-filled with top soil (ideally from the original site position) sufficiently to stabilise the plant. Soil should be firmed in around the root ball by treading.
10	Placement- Potential air pockets under the roots should be manually filled with topsoil.
11	Placement- Enough space should be left in the trench to leave room for the next stem.
12	Placement- Back-filling to be completed when a run of 4 or 5 plants are in place. This is to minimise tracking of the machine in adverse weather conditions.
13	Post establishment- The transplanted hedge should be supplemented with new planting where transplanted stems do not take. The new hedge should be allowed to bulk out before being trimmed.

Table 5 *Correct method for trans-locating hedgerows*

7.2 Amphibians

7.2.1 There is no requirement for specific mitigation for these species. However, as a precautionary measure, in the unlikely event that any signs of any 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 An attenuation basin has been proposed in the Northern corner of the site, this will provide a new habitat for amphibians.

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 should be minimised.

7.4.2 New roosting provision for crevice dwelling bats should be incorporated into the buildings on site and bat boxes should be erected in retained trees due to the loss of trees with suitable bat roosting potential.

7.4.3 Linear hedgerows and lines of trees should as far as possible be retained this ensures there is connectivity to areas of higher quality bat foraging habitat.

7.4.4 Any category 1 or 2 trees to be felled must 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 hedgerows at the site is likely to occur, nesting within mature trees is also possible.

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 hedgerows where possible will maintain the ecological functionality of the site for breeding birds.

7.5.4 Artificial bird nesting sites could be incorporated into the retained trees at the site and under the eaves of carefully chosen houses e.g. swift bricks.

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 brooks or substrates during work. To prevent 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 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.

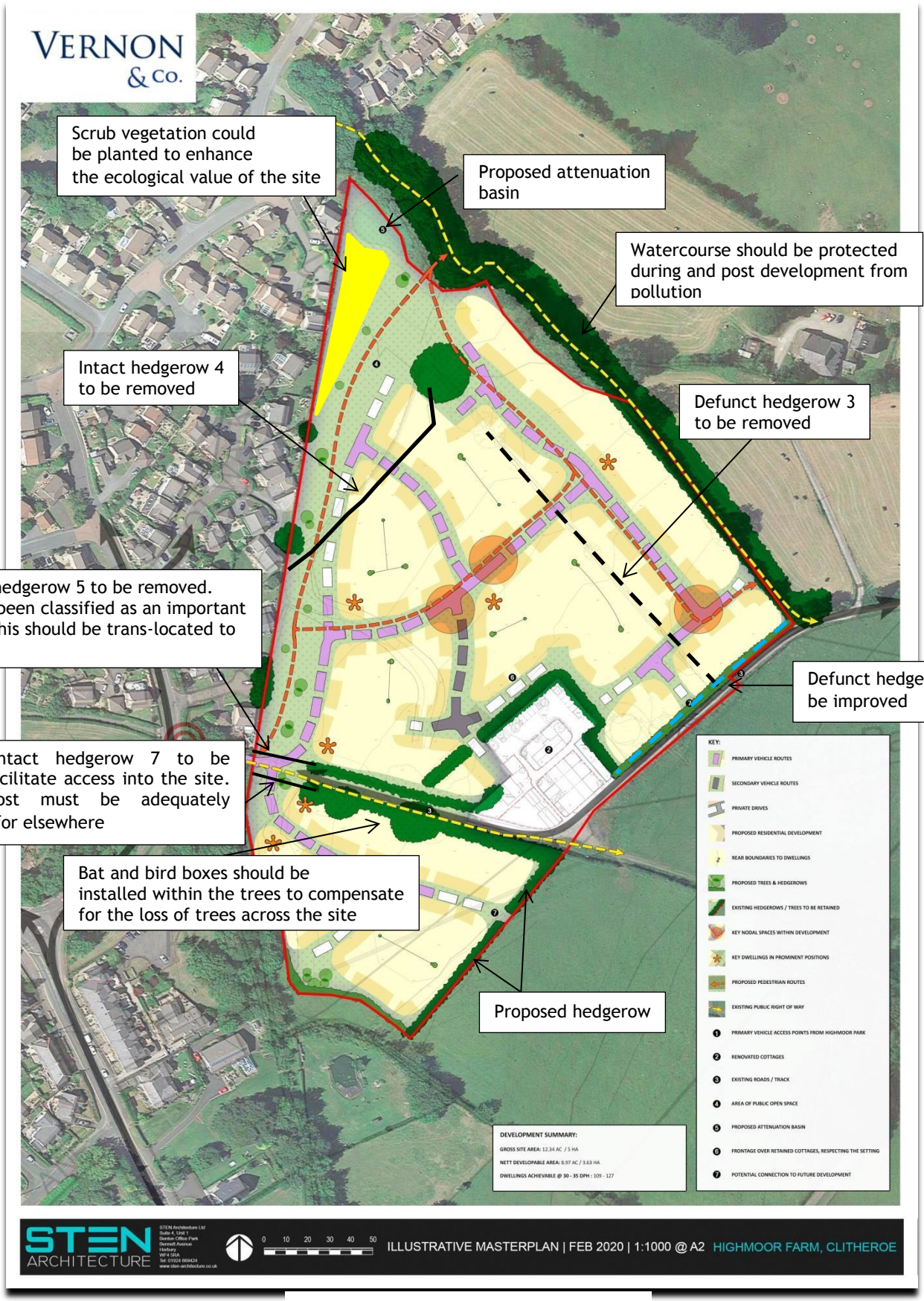

Figure 10 *Proposed Masterplan*

8. CONCLUSION

8.1.1 Ecological surveys, site appraisals and impact assessments were carried out in September 2018 and November 2019 with respect to pastureland bound and intersected by hedgerows at Highmoor Farm, Clitheroe. It is proposed new houses will be constructed on the site.

8.1.2 Amphibians, bats, birds, brown hares, badgers, reptiles and water vole have been recorded 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.

8.1.3 A pond to the South of the site was found to have poor suitability for use by great crested newts. Precautionary mitigation and reasonable avoidance measures will be appropriate in relation to other amphibian species which may commute around the site.

8.1.4 Common bat species were recorded commuting around the site in 2018. Potential for use of the site in this way should be maintained via the retention of hedgerows and scrub around watercourses.

8.1.5 The majority of the site is species poor grassland with low ecological value. Domestic gardens and sympathetically landscaped open space can maintain the ecological value of these areas.

8.1.6 Hedgerows at the site are considered to be the habitat of greatest ecological value; they are frequent and often of good quality. The retention of these hedgerows wherever possible should be made a priority. Intact hedgerow 4, defunct hedgerows 2 and sections of hedgerow 5 and 7 will be lost. The loss of these hedgerows must be compensated for as hedgerows are a UK BAP habitat.

8.1.7 A new hedgerow to the South-east of the site has been proposed and defunct hedgerow 2 will be improved. This will retain the connectivity around the site.

8.1.8 Mature and veteran trees provide suitable habitat for many species and where possible the retention of these trees should be made a priority alongside hedgerows.

8.1.9 A considerable number of trees on site are to be lost, prior to felling trees outlined as containing potential roosting provision for bats (category 1 or 2 trees) must be checked by a certified individual. If trees are to be felled during bird nesting season (March-September) then these must be checked for nesting birds by a qualified individual.

8.1.10 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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Feature / 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	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	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
1	Yes	Yes	Yes	Yes		No*	No*	No*	No*	No		No	Yes	Yes	No	No	Yes	5	3.5	0.5	**Yes**
2	Yes	Yes	Yes	Yes		No*	No*	No*	No*	No		No	No	No	Yes	No	Yes	2	1	0	No
3	Yes	Yes	Yes	Yes		No*	No*	No*	No*	No		No	No	Yes	No	No	No	1	1	0	No
4	Yes	Yes	Yes	Yes		No*	No*	No*	No*	No		No	Yes	No	No	No	No	1	4	0	No
5	Yes	Yes	Yes	Yes		No*	No*	No*	No*	No		No	Yes	Yes	No	Yes	Yes	0	4	0	**Yes**
6	Yes	Yes	Yes	Yes		No*	No*	No*	No*	No		No	Yes	No	No	No	No	2	4	0	No
7	Yes	Yes	Yes	Yes		No*	No*	No*	No*	No		No	Yes	No	No	Yes	Yes	3	3.3	0	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									

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