



envirotech

Ecological Consultants
Environmental and Rural Chartered Surveyors

Preliminary Ecological Appraisal

Blackmoss Farm, Chipping



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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 in January 2023 to carry out a Preliminary Ecological Appraisal of land at Blackmoss Farm, Chipping. It is proposed that a new agricultural building is constructed on the site.
- 1.1.2 A data search and desk study of the site and an area within 2km of the site were undertaken to establish the presence of protected species and notable habitats.
- 1.1.3 The site was then visited by a licenced ecologist from Envirotech NW Ltd on the 24th January 2023. A full botanical survey of the site was initially undertaken and this was followed by surveys to establish the presence or absence of notable species at the site or in proximity such that they may be affected by the proposed development.
- 1.1.4 The plant species assemblages recorded at the site are all common in the local area and are considered to be of low ecological value. Sympathetically landscaped screening/open space is considered to offer habitat of equal or greater ecological value.
- 1.1.5 None of the hedgerows around the site perimeter were considered important under the Hedgerow Regulations (1997).
- 1.1.6 Low numbers of common bat species may forage over the site. Bats are unlikely roost on or near site. It is proposed that some roosting provision for bats will however be incorporated into the new building on site.
- 1.1.7 Birds may utilise hedges on site for nesting between March and September. Any vegetation clearance should therefore be undertaken outside of this period.
- 1.1.8 No other notable or protected species were recorded on the site.

1.2 Background

1.2.1 In January 2023 Envirotech NW Ltd were commissioned to carry out a Preliminary Ecological Appraisal of land at Blackmoss Farm, Chipping, central grid reference SD 6010 4033 (Figure 1). A site investigation was undertaken and a report compiled which includes recommendations for any future actions and or mitigation required.

1.2.2 The survey was requested in connection with the proposed construction of a new agricultural building.



1.3 Objectives

1.3.1 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.

2. METHODOLOGY AND SOURCES OF INFORMATION

2.1 *Data Search*

- 2.1.1 The Envirotech dataset, and the Multi-Agency Geographic Information for the Countryside (MAGIC) were searched to establish the presence of any records of statutorily protected, notable or rare species, and any designated sites of international, national, regional or local importance within a 2km radius of the site boundary.
- 2.1.2 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.
- 2.1.3 Google Earth and Google Street View were consulted to establish the presence of any features of ecological importance within the local area.

2.2 *Vegetation and Habitats*

- 2.2.1 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).
- 2.2.2 Searches were made for uncommon, rare and statutorily protected plant species, those species listed as protected in the Wildlife and Countryside Act (1981) and indicators of important and uncommon plant communities. All plant nomenclature follows Stace (2019).
- 2.2.3 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*).
- 2.2.4 The survey was also informed by questioning the site agent to ascertain the recent history of the site.

2.3 *Timing and Personnel*

- 2.3.1 During the visit, weather conditions were suitable for the survey types undertaken being mild day in winter.
- 2.3.2 The site and surrounding land was visited on the 24th January 2023 by
 - (FW) Miss Flora Whitehead BSc (Hons)
Natural England Bat Class Licence (Level 2)
Natural England Barn Owl Licence (Agent)
Natural England Great Crested Newt Licence (Level 1 Agent)

3. SPECIES SURVEY METHODOLOGY

3.1 *Amphibian*

- 3.1.1 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).
- 3.1.2 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.
- 3.1.3 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.
- 3.1.4 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.

3.2 *Badger*

- 3.2.1 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.
- 3.2.2 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.
- 3.2.3 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.
- 3.2.4 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.
- 3.2.5 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

3.3 Bats

3.3.1 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.

3.3.2 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.

3.3.3 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.

3.3.4 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.

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

3.4 Birds

3.4.1 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.

3.4.2 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'.

3.5 Brown Hare

- 3.5.1 The brown hare (*Lepus europaeus*) is a UK BAP species.
- 3.5.2 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.
- 3.5.3 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.

3.6 Invertebrates

- 3.6.1 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.
- 3.6.2 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.

3.7 Reptiles

- 3.7.1 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.
- 3.7.2 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.
- 3.7.3 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.

3.8 Survey limitations

- 3.8.1 The survey was undertaken in winter. At this time of year plant species are less easily identified and the activity of some species is reduced.
- 3.8.2 Due to the habitats present on site there were no significant constraints in respect of identifying the botanical interest of the site.

3.8.3 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.

3.8.4 No significant survey limitations were encountered.

4. RESULTS

4.1 *Data Search*

- 4.1.1 Envirotech and 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.
- 4.1.2 The nearest non-statutory protected sites are areas of deciduous woodland priority habitat, 160m to the north and 320m to the south-east respectively. Areas of the Lancashire grassland and woodland ecological network lie in the wider area, separated from the site by farmland. Kidsnape Wood BHS and Ancient Woodland lies 2.1km to the south-west. See Figure 3.
- 4.1.3 The nearest statutory protected site is Fishwick Bottoms Local Nature Reserve, 3.9km to the north west (Figure 4). This is isolated from the site by farmland.



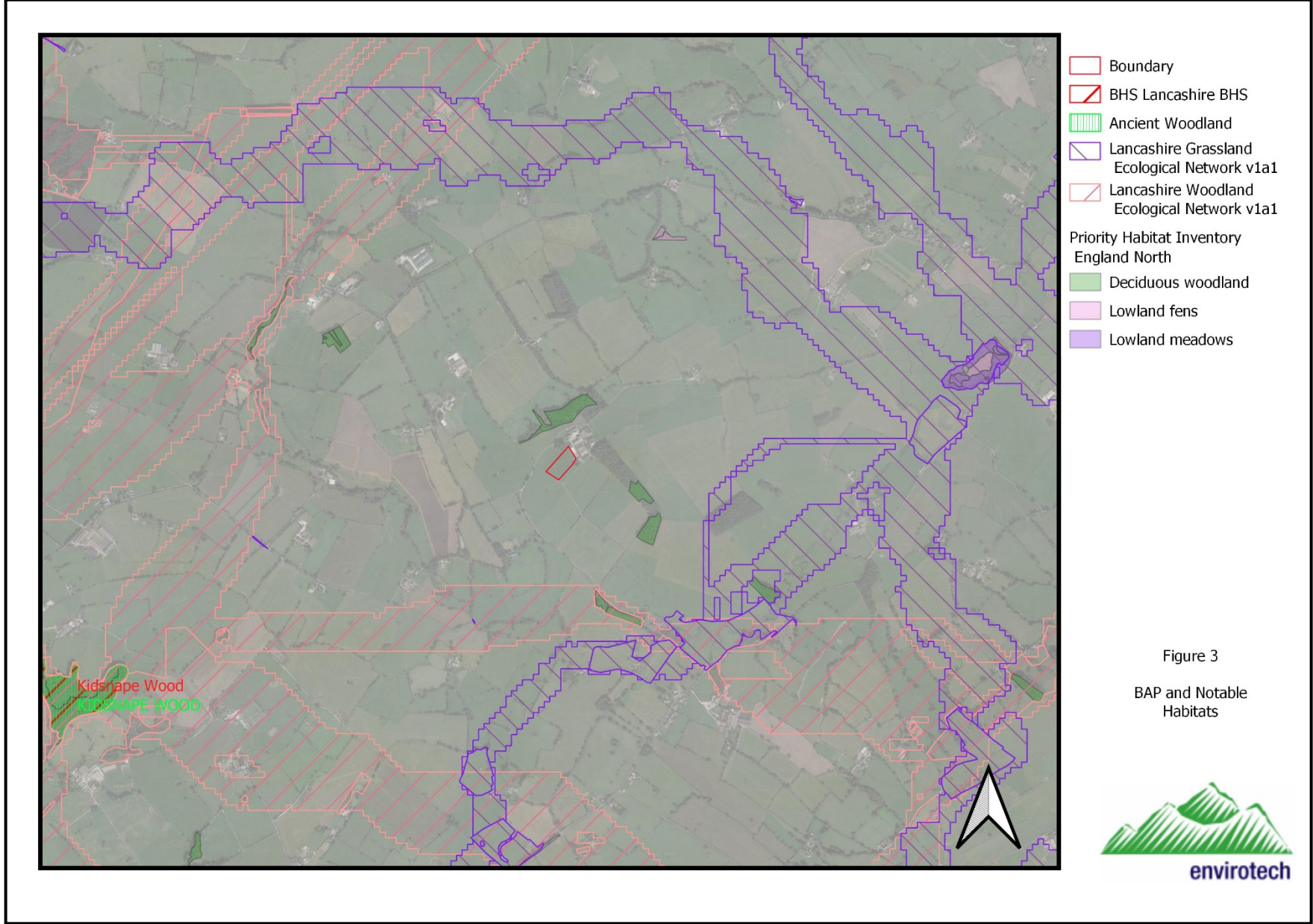


Figure 3

BAP and Notable Habitats





5. PHASE 1 SURVEY RESULTS

5.1 *Habitat Results*

5.1.1 The site comprises improved grassland with hedges on its boundary. The Blackmoss Farm complex lies immediately to the north-east of the site. A new building is nearing completion immediately to the north of the site. There is open farmland surrounding the site, divided by hedges and watercourses, and with occasional field ponds. There are areas of woodland to the east and north of the site.

5.1.2 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 majority of the site comprises improved grassland dominated by Perennial Ryegrass (<i>Lolium perenne</i>), with Broad-leaved Dock (<i>Rumex obtusifolius</i>) and Creeping Buttercup (<i>Ranunculus repens</i>) amid the sward.
TN2	Bare ground	In the north-east of the site there are building works associated with other agricultural buildings, leaving bare and heavily disturbed ground.
TN3	Defunct hedge - species-poor	The hedge to the north-west of the site is trimmed, gappy Hawthorn (<i>Crataegus monogyna</i>). Nettle (<i>Urtica dioica</i>) and occasional Foxglove (<i>Digitalis purpurea</i>) were noted at the base of the hedge. Occasional Bramble (<i>Rubus fruticosus agg</i>) grows through the hedge.
TN4	Defunct hedge - species-poor	The hedge to the south-west of the site is also trimmed Hawthorn, with several gaps. This hedge is fenced. Occasional Bramble grows through the hedge. Nettle was found at the base.
TN6	Standing water - Pond 1	A pond surrounded by Willow (<i>Salix sp.</i>). The water is polluted by slurry run-off.
TN7	Standing water - Pond 2	There is little standing water in this pond - it is vegetated with Bulrush (<i>Typha latifolia</i>), as well as immature Willow. Grasses and Soft Rush (<i>Juncus effusus</i>) extend into the wet area. The edges are poached by cattle. The pond lies in a grazed pasture, with little suitable habitat for foraging or commuting amphibians.
TN8	Birds	Birds may forage and nest in the hedges at the site. Although the lack the density of high quality habitat.
TN9	Bats	Bats may forage over the site but will not roost on the site.

Table 1 Details of Target Notes.



- Boundary
- Target Note
- Ponds
- Bare Ground
- Building
- Improved Grassland
- Standing Water
- Scrub - Dense/continuous
- Improved Grassland
- Defunct Hedge - Species-poor
- Fence

Figure 5
Phase 1 Habitat Survey





TN1 Improved grassland at the site, with vehicle tracks from other works.



TN2 Building works taking place at time of survey in the northern half of the site



TN3 Defunct hedge of hawthorn to north-west





TN4 Defunct hedge of hawthorn to south-west, with fencing



Pond 1 to east of site, heavily affected by slurry run-off



Pond 2 to south of site, dominated by Bulrush, with little standing water even after wet winter weather

Table 2 *Photographs*

5.2 Vegetation

- 5.2.1 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.
- 5.2.2 The improved grassland has 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 grazing and disturbance, this habitat does not constitute a BAP habitat.
- 5.2.3 The hedges bounding the site to the north-west and south-west are species poor and contain a low diversity of woody plant species but all hedgerows are a UK BAP habitat. 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.
- 5.2.4 None of the hedgerows are classified as important under the Hedgerow Regulations (1997) (See Appendix 1).
- 5.2.5 Trees adjacent to the site comprise the willows around Pond 1.
- 5.2.6 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.

5.3 Amphibian

- 5.3.1 There are four records for amphibians within 2km of the site. There are no records of great crested newt in the local area, though there are two records for smooth newt (*Lissotriton vulgaris*).
- 5.3.2 The core development area has a low value to amphibians being open and exposed. The boundary hedgerows and trees/hedges in the wider area could be utilised as refuges and/or hibernacula but there are no breeding ponds in proximity to the site (see below).
- 5.3.3 Structural diversity at ground level across the site is very poor. There are no areas with log, rubble piles or compost heaps which would be particularly favourable to amphibians.
- 5.3.4 Amphibians would be unlikely to attempt to cross the site as it comprises an area that is mostly open with uniform length grass. Whilst not a physical barrier to the dispersal of amphibians, the site is regarded as being a potentially hostile environment to them.
- 5.3.5 There are two ponds within 250m of the site. Pond 1 is immediately adjacent to the north-east corner of the site. Pond 2 lies approx. 100m to the south-west of the site.
- 5.3.6 Following the criteria developed by Oldham et al (2000), the HSI tool developed for use with great crested newts and forming part of Natural England's Licensing process was used to determine the suitability of the pond for great crested newts. The HSI was

developed as a tool to aid fieldworkers to give ponds and their surrounding habitat a numerical score in terms of their suitability for great crested newts. See Table 3.

Pond ref.	1	2
SI1 - Location	1	1
SI2 - Pond area	0.6	0.2
SI3 - Pond drying	0.9	0.5
SI4 - Water quality	0.01	0.67
SI4 - Shade	0.6	0.2
SI6 - Fowl	0.67	0.67
SI7 - Fish	1	1
SI8 - Ponds	1	1
SI9 - Terrestrial habitat	0.33	0.33
SI10 - Macrophytes	0.3	0.8
HSI	0.43	0.55
Table 3 Results of Habitat Suitability Index		

<0.5 = poor
 0.5 - 0.59 = below average
 0.6 - 0.69 = average
 0.7 - 0.79 = good
 > 0.8 = excellent
HSI Scores

5.3.7 Within the Natural England Method Statement application form for great crested newt Licences, guidance states the following approach (Natural England, 2008):

5.3.8 'If a pond has a very low HSI score (say <0.5) then there would typically be a minimal chance of great crested newt presence. Hence, with due care and in limited circumstances, the HSI might be used in the absence of newt survey to help conclude that an offence is highly unlikely and therefore work could proceed in that area without a licence. This application of the HSI should only be used where the predicted impacts - were newts to be present - would be low (eg, development at least 100m from pond, permanent habitat loss <0.5ha or temporary habitat loss <5ha). The developer and consultant should realise that there would still be a risk of committing an offence, but it would typically be so low as to be negligible. Obviously, note that if HSI >0.5, this is not confirmation of newt presence; a newt survey would be required to confirm this'.

5.3.9 Pond 1 scores 0.43 (poor) for great crested newt suitability. It is judged that the level of obvious pollution of the water from slurry discharge severely reduces the likelihood of any amphibian activity in the pond. The development area largely comprises open, exposed grassland. The potential for great crested newts to utilise the pond and forage or hibernate on the site is considered to be very low.

5.3.10 Pond 2 scores 0.55 (below average) for great crested newt suitability. It is judged that the lack of open water, the small size of the pond and the poaching by cattle significantly reduce the likelihood of use of this pond by great crested newt. The habitat around the pond is largely open, grazed grassland, offering poor habitat for foraging and commuting.

5.3.11 The proposed development will not result in the permanent loss of or a substantial negative effect on any waterbodies or foraging areas linked to them. Boundary areas which may provide foraging or refuge sites, are to be retained.

5.4 Badger

5.4.1 No records of badgers occur within 2km of the site.

5.4.2 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.

5.4.3 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.

5.5 Bats

5.5.1 There is one record of one species of bat within 2km of the site.

5.5.2 The foraging habitat at the site is very poor for bat species being open and exposed. The improved grassland offers negligible foraging opportunities for bats. The hedge lines are poor in terms of their structure, diversity and interconnectivity.

5.5.3 Despite being poor, the hedgerows on the site offer the best foraging habitat for bats on the site as the remainder of it comprises open and exposed pasture. Whilst these areas of the site are the most structurally diverse but they are not considered exceptional in the local area. More extensive areas of medium and high quality habitat occur locally, including the woodland to the east and north.

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

5.5.5 Trees around the site perimeter were also assessed in accordance with Collins ed. (2016) and assigned a risk category. The willows around Pond 1 were category 3 (negligible) risk. No indications of roosting or highly suitable roost sites were located within the trees. All of the trees could be adequately inspected. Risk categories from Hundt (2012) and the requirement for mitigation for each tree category are shown on Figure 6.

5.5.6 We consider bat species are highly unlikely to rely on the site for feeding but may occur in the local area. Roosting by bats will not occur on the site.

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

Figure 6 Tree risk categories from Hundt (2012).

5.7 Birds

- 5.7.1 There are no records of breeding birds within 2km of the site, but birds will breed in the local area.
- 5.7.2 The gappy defunct hedges within the site have insufficient density to be of high value to nesting birds, but nesting may occur. The improved grassland has a low potential for use by nesting birds as the grassland is grazed and as such is usually short. Trampling risks are also very high within this area of the site.
- 5.7.3 There were no rot holes or cracks in the trees within the site boundary which would support tree hole nesting species such as woodpeckers.
- 5.7.4 A risk assessment of the site in respect of its future potential for and value to nesting birds could be adequately made.
- 5.7.5 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.

5.8 Brown Hare

- 5.8.1 Brown hare are a UK BAP priority species. There is one records of brown hares within 2km of the site.
- 5.8.2 No indication of brown hares was recorded on the site.
- 5.8.3 The site has some potential for brown hares to create forms but use of the site is likely to be limited due to its open and exposed nature and regular human presence.
- 5.8.4 A risk assessment of the site in respect of its future potential for and value to brown hares could be adequately made. We consider the risk to brown hares is very low.

5.9 Invertebrates

- 5.9.1 Invertebrates have been recorded within 2km of the site.
- 5.9.2 No deadwood or vegetation on site was recorded which would provide an important resource for invertebrates in the local area.
- 5.9.3 Given the poor quality habitats contained within the site in comparison to the wider area, it is not considered that this site is of any local significance for invertebrates.
- 5.9.4 Impacts on the species are considered likely to be negligible, post development compensatory planting will create greater habitat diversity in the area than already exists.

5.10 Reptiles

- 5.10.1 There are no records for reptiles within 2km of the site.

5.10.2 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.

5.10.3 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.

5.10.4 No indication of reptiles was recorded at the site.

5.10.5 As a consequence, precautionary mitigation would be appropriate in respect of construction activities so as to ensure reasonable avoidance measures are taken to avoid the killing or injury of these species.

5.11 Other

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

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

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

5.12 Statutory and Non-Statutory Sites

Direct Impacts:

5.12.1 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.

5.12.2 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:

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

6. MITIGATION/RECOMMENDATIONS

7.1 *Compensatory planting and habitat enhancement*

- 7.1.1 The roots of hedges and 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/field boundaries to enhance the ecological value of the site and continuity between the site and the wider area.
- 7.1.3 Hedgerows around the site should be retained or improved where possible. Any lengths of intact hedgerow to be removed to facilitate development should be transplanted and or replanted in order that there is no net negative impact on this BAP habitat due to development. The roots of hedgerow plants/trees should be adequately protected during development from compaction/ground disturbance.

7.2 *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 Pond 1 could be improved by reducing pollution from slurry run-off. Ideally, run-off should be diverted to a slurry pit or midden. This would increase the value of the pond to all local wildlife.
- 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 may occur within 2km of the site. Any 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 and light spill onto the boundary should be minimised.

7.4.2 New planting within the site should enhance structural diversity

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 elsewhere on the farm.

7.5 Birds

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

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

- 7.5.3 New planting within the site and the retention of trees and shrubs on the site boundary will maintain the ecological functionality of the site for breeding birds.
- 7.5.4 Artificial bird nesting sites for swallow 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.
- 7.5.6 Precautionary mitigation is considered appropriate. The landscaping scheme should include species such as Hawthorn and Rowan (*Sorbus aucuparia*) which are seed bearing and will provide food for birds in the winter.

7.6 Brown Hares

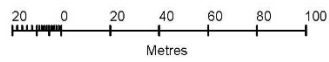
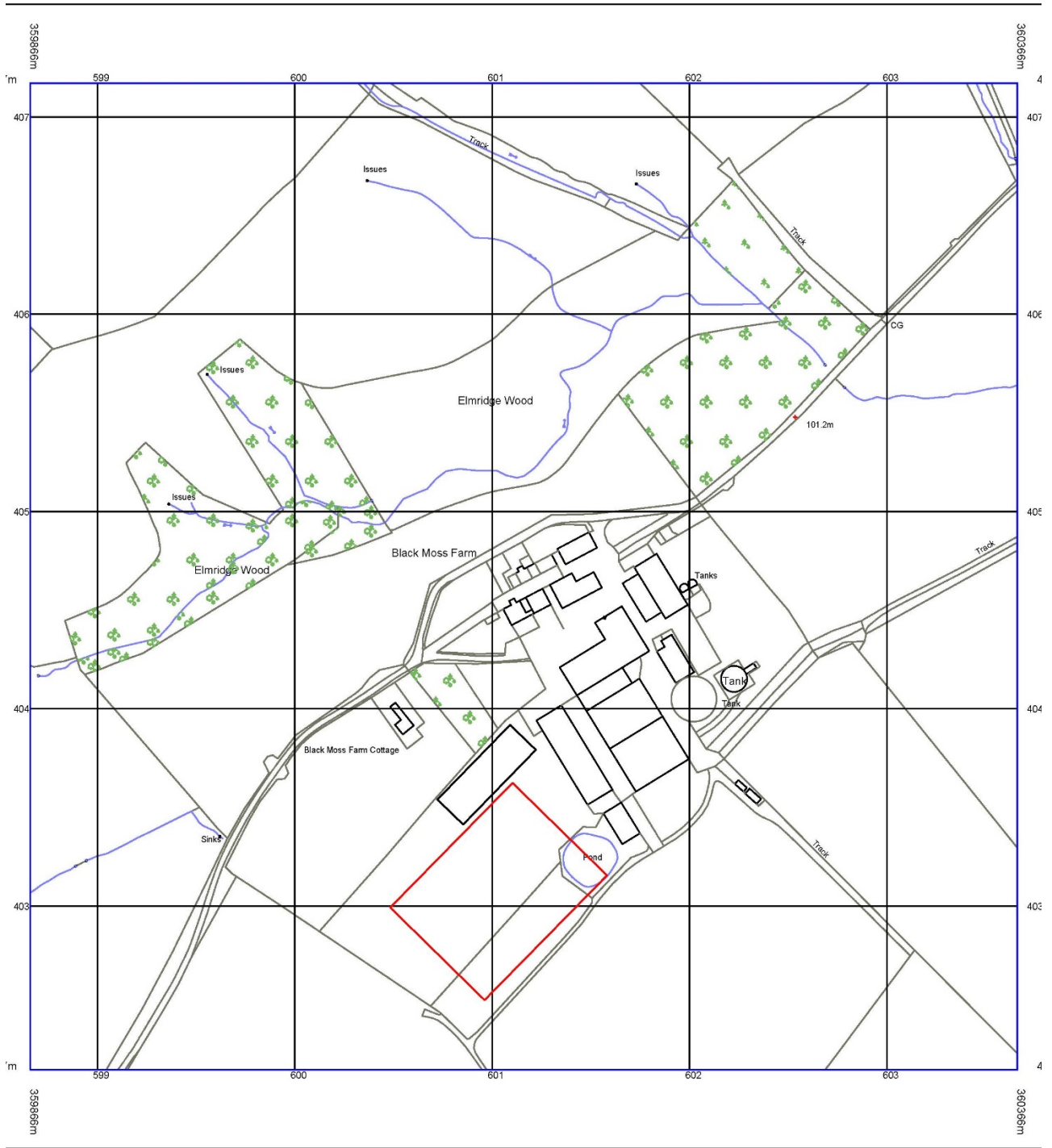
- 7.6.1 There is no requirement for specific mitigation for this species. However, as a precautionary measure, in the unlikely event that any signs of any brown hare activity is subsequently found, all site works should cease and further ecological advice should be sought with a view to a detailed method 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 substrates or ponds during work. To effect this, spill kits should be provided on site. Re-fuelling of all plant and machinery should be undertaken away from open drains and water courses. Drip trays should be used under static machinery.

7.8 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.



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Figure 7 Proposed site plan

7. CONCLUSION

- 7.1.1 Ecological surveys, site appraisals and impact assessments were carried out with respect to land comprising open farmland and bare ground at Blackmoss Farm, Chipping. It is proposed a new agricultural building will be constructed on the site.
- 7.1.2 Amphibians, bats, nesting birds and brown hares are known to occur in the local area, there was however no conclusive evidence of any specifically protected species regularly occurring on the site or the surrounding areas which would be negatively affected by site development following the mitigation proposed.
- 7.1.3 The vegetation to be cleared has a low ecological significance in the local area; the trees close to but outside the development area are generally of low quality.
- 7.1.4 The protection of hedges and trees on the site boundary and adjacent as well as landscaping will promote structural diversity in both the canopy and at ground level and will encourage a wider variety of wildlife to use the site than already occurs.
- 7.1.5 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.

8. REFERENCES

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9. APPENDIX

Hedge		Feature								
	Length 20m +	Hedge is not bounding the curtilage of dwelling	Hedge established more than 30years	Hedge boundary of protected or common land or land used for agriculture or forestry						
TN3	Yes	No	No	No						
TN4	Yes	No	No	No						
No = Automatic failure										
ARCHAEOLOGY AND HISTORY										
	Archaeological feature which is included in the schedule of monuments	Situated wholly or partly within an archaeological site	Boundary of a pre-1600 AD estate	Integral part of a field system	Protected species records					
	No*	No*	No*	No*	No					
	No*	No*	No*	No*	No					
Yes = Automatic pass										
FEATURES										
	Bank or wall	Gaps less than 10%	Standard trees	Ditch	Parallel hedge	Footpath/ Bridleway	Connection points	Woody species	Average ground flora species	HEDGE CLASSIFIED AS IMPORTANT
	No	No	No	No	No	No	1	1	1	No
	No	Yes	No	No	No	No	1	1	0	No
7 woody species or 6 woody species + 3 features or 5 woody species + 4 features or highway + 4 woody species and 2 features										

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