

ELMRIDGE FARM, ELMRIDGE LANE, CHIPPING, LANCASHIRE

ECOLOGICAL ASSESSMENT
(including a Licensed Bat Survey)

December 2012

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320130100P

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A SUMMARY

Introduction and Scope

- i. This Ecological Appraisal presents the status of the site at Elmridge Farm, near Chipping. The appraisal was requested in connection with proposals to redevelop the farmstead involving the demolition and relocation of modern farm buildings, renovation of an existing farmhouse and conversion of three barns to four dwelling houses with associated access and new garages.
- ii. This appraisal presents the results of a desktop study, extended Phase 1 Habitat Survey and licensed bat surveys carried out between May and December 2012. The scope of survey undertaken is appropriate to enable the identification of any potential ecological constraints, the remit of mitigation required and opportunities for biodiversity associated with the development proposals.

Results of Survey and Assessment

- iii. The proposals will have no adverse direct effect on statutory or non-statutory designated sites.
- iv. No habitats or species of significant ecological value will be affected by the proposals. No Habitats of Principal Importance will be directly affected. Measures will be implemented to protect the existing trees and hedgerows and minor watercourse during the works (refer to Section 5.1).
- v. Appropriate survey effort has been carried out to discount reasonably adverse effects on protected species such as Barn Owl, Water Vole and Great Crested Newt.
- vi. Three single Common Pipistrelle bat day summer roosts have been detected. A *Bat Mitigation Strategy* is presented at Section 5.5 and Figure 3. The strategy describes the appropriate timing of works, actions to be applied for the protection of bats during roof removal works and the measures to be implemented to accommodate bat roosting opportunities to conserve the bat roosts at the site.
- vii. The strategy presents all information requested by Natural England in a Mitigation Class Licence or European Protected Species Mitigation (EPSM) licence application/method statement. It is concluded that appropriate measures will be carried out to satisfy Regulation 53(9)(b) of *The Conservation of Habitats and Species Regulations 2010*.
- viii. Once planning permission is obtained the appropriate Natural England licence will be applied for to facilitate the works legally. Sufficient survey has been carried out to inform the planning decision and the application for the Natural England licence.
- ix. Section 5.5 outlines consideration of the tests specified under Regulations 53(9)(b) and 53(2)(e) to demonstrate that the proposals are of 'overriding public interest' and 'there is no satisfactory alternative'.
- x. Use of the buildings by nesting and roosting birds was detected. Recommendations for the protection of nesting birds and creation of opportunities for nesting to ensure there is no net loss is presented in Sections 5.3 and 5.4 and Figure 4.

Recommendations

- xi. The recommendations in Section 5 address all the mandatory measures and ecological recommendations to be applied to ensure compliance with wildlife legislation, the National Planning Policy Framework (NPPF) and best practice. The proposals will secure an opportunity to implement beneficial measures such as habitat creation that will safeguard habitats for wildlife such as birds and bats, with the aim of providing a net gain in biodiversity in accordance with the principles of the NPPF.

Conclusion

- xii. In principle, the proposals are feasible and acceptable in accordance with ecological considerations and relevant planning policy. The development proposals provide an opportunity to secure ecological enhancement for wildlife.

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1.0 INTRODUCTION

Introduction and Rationale

- 1.1 ERAP Ltd (Consultant Ecologists) was commissioned to carry out an ecological appraisal of land at Elmridge Farm, near Chipping by Sedgwick Associates, on behalf of their client, in March 2012.
- 1.2 The survey was commissioned in connection with proposals to carry out the following: -
- a. Renovate an existing dilapidated farmhouse;
 - b. Convert existing barns (Buildings 1, 2 and 7) to four dwelling houses with associated access and new garages;
 - c. Demolish a lean-to hay store (Building 3);
 - d. Demolish the cattle sheds (Buildings 4 to 6); and,
 - e. Construct new farm buildings with associated slurry pit and assess track on land to the north-east of the farm.
- 1.3 The following drawings prepared by MCK Associates Limited have been referred to in this appraisal:

Drawing 09-031 0001 Proposed New Farm
 Drawing 09-031 0002 Proposed Farm Building
 Series of Drawings 09/031 Proposed Development and Elevations

Site Location and Description

- 1.4 A general site description and aerial photograph of the site is presented at Section 3.2 and Figure 1.
- 1.5 For the purpose of this ecological appraisal the 'site' is defined as the Elmridge Farm (comprising the Existing Farmhouse and Buildings 1 to 7) and access track and the footprint of the proposed new farm buildings. The grid reference at the centre of Elmridge Farm is SD 5958 4062.

Objectives and Scope of Survey

- 1.6 Based on the proposals the scope of ecological assessment, carried out between May and December 2012, comprised: -
- a. A desktop study and search for known records of designated sites and protected/notable species at the site and local area;
 - b. A daylight licensed bat survey of the buildings and adjacent trees;
 - c. The survey and assessment of all habitats for statutorily protected species including Badger, Barn Owl and Great Crested Newt;
 - d. 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 guidance and other relevant guidance, and;
 - e. Provide a comprehensive and detailed description of all mitigation to demonstrate feasibility of the actions and commitment to implementation, in accordance with the development proposals.

Wildlife Legislation

1.7 A synopsis of all relevant wildlife legislation is presented at Appendix 5.

2.0 METHOD OF SURVEY

2.1 Desktop Study

2.1.1 The following sources of information and ecological records were consulted for information: -

- a. MAgiC: A web-based interactive map which brings together geographic information on key environmental schemes and designations, including details of statutory nature conservation sites;
- b. National Biodiversity Network (NBN Gateway); and,
- c. Lancashire Biodiversity Action Plan (BAP)

2.1.2 The Lancashire Environment Record Network (LERN) was contacted and ecological records within a 0.6 kilometre radius from the centre of the site were obtained.

2.2 Vegetation and Habitats

- 2.2.1 An Extended Phase 1 Habitat Survey of the site and immediate surrounds was carried out by Victoria Burrows B.Sc. (Hons), M.Sc. CEnv MIEEM on the 8th May 2012. The weather was dry and sunny, calm (Beaufort Scale 1) and 11°C at 10am. The conditions were favourable for the scope of works carried out. A follow-up site visit was carried out on the 7th December 2012; the weather on this date was dry and calm with a temperature of 1°C.
- 2.2.2 Vegetation and habitats within the site were described in accordance with the Joint Nature Conservation Committee Phase 1 Habitat Survey methodology (JNCC 2010).
- 2.2.3 The plant species within the site boundary were determined with estimates of the distribution, ground cover, abundance and constancy of individual species. The estimation of abundance was based on the DAFOR system where D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare, this being a widely used and accepted system employed by ecological surveyors.
- 2.2.4 All stands of vegetation and habitats were described and evaluated using the National Vegetation Classification (NVC). The NVC provides a systematic and comprehensive analysis of British vegetation and provides a reliable framework for nature conservation and land-use planning.
- 2.2.5 Searches were made for uncommon, rare and statutorily protected plant species, those species listed as protected in the *Wildlife and Countryside Act 1981* and species which are indicators of important and uncommon plant communities. All plant nomenclature follows Stace (1991).
- 2.2.6 Searches were carried out for the presence of invasive species, including those listed on the revised (April 2010) Schedule 9 of the *Wildlife and Countryside Act 1981*, namely Japanese Knotweed, Indian Balsam and Giant Hogweed.
- 2.2.7 Hedgerows were surveyed and assessed in accordance with the wildlife schedule of *The Hedgerows Regulations 1997*.

2.3 Badger

2.3.1 A thorough search for Badger activity was carried out. The survey area covered the site and extended to the accessible land within a radius of 50 metres from the site boundary.

2.3.2 The following signs of Badger activity were searched for: -

- 'D' shaped sett entrances at least 0.25 metre 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 0.1 metre long with a long black section and a white tip
- Dung pit latrines and footprints
- Trampled pathways through vegetation and beneath fences.

2.4 Licensed Bat Survey

2.4.1 The licensed bat surveys were carried in accordance with standard methodology including the *Bat Mitigation Guidelines* (2004), the *Bat Workers Manual* (2004) and the *Bat Surveys: Good Practice Guidelines, 2nd Edition* (Hundt 2012).

Buildings: Daylight Survey

Surveyors and Survey Date

2.4.2 A daylight internal and external licensed bat survey of the buildings was carried out on the 8th May 2012 by Victoria Burrows (Natural England licence number 20120902 valid until 19th March 2013). A second inspection for hibernating bats was carried out on the 7th December 2012.

External Survey

2.4.3 An examination was made of the external elevations, roof and the whole perimeter of each of the buildings. Searches were carried out for droppings, urine stains, feeding signs and grease marks. Particular attention was paid to areas where bat droppings may accumulate such as the ground beneath the eaves, on window sills, the elevation walls and any other surfaces beneath the eaves around the perimeter of the buildings.

2.4.4 Searches were also made to find potential bat roosting habitat or accesses into internal areas and cavities where roosts may be present

2.4.5 Where possible, gaps were illuminated with a high-powered torch (refer to equipment list below). Ladders were used to gain better access to specific features above eye level. A video borescope (Sentient) was used to inspect cracks and crevices around the buildings in more detail and to search for bats and droppings.

Internal Survey

2.4.6 The internal survey involved an examination of the accessible internal areas (including roof voids) to find roosting bats or evidence of previous use of the buildings by bats such as droppings, remains of invertebrate prey and grease marks from repeated contact or passage through narrow roost accesses or against surfaces and other signs.

Dawn Re-entry Survey for Bat Activity

2.4.7 Dawn surveys which aim to detect bats returning to their roosts can be the most effective method of detecting a bat roost, particularly at a relatively complex site such as Elmridge Farm where many of the building elevations obscured each other and therefore observations. The objective of a dawn survey is to track bats entering the site to

determine whether they enter roosts at the site and/or carry out dawn swarming at a roost entrance.

- 2.4.8 The dawn survey was carried out by five strategically positioned surveyors, maximising coverage of the external elevations and roofs of all buildings. Surveyor positions are annotated on Figure 1. Any bat emergence or re-entry activity was recorded.
- 2.4.9 Heterodyne bat detectors were used to assist in determining the bat activity at the site. An Anabat SD2 detector was placed at the hay loft of Building 2 to detect bat activity inside the building.
- 2.4.10 The environmental conditions recorded during the survey were suitable.

Table A: Survey Details

Survey Type	Dawn Re-entry Survey
Date	11 th July 2012
Weather	Dry, calm (Beaufort Scale 0), 12°C at 03.00
Sunrise	04.58
Activity Survey Start Time	03.00
Activity Survey End Time	05.10

Equipment

- 2.4.11 Equipment used during the survey is listed in Table B below.

Table B: Survey Equipment

Extendable ladders	CEM DT8820 Environment meter (4 in 1)
LED Lenser P7 torch	8x20 binoculars
Clulite CB2 hand lamp	Hand held video optic borescope (Sentient).
Canon Ixus digital camera	Appropriate personal protective equipment
Batbox Duet bat detectors	Anabat SD2 bat detector

Trees

- 2.4.12 Trees were assessed for their suitability for use by roosting bats (i.e. presence of crevices, cracks, woodpecker holes, dense ivy cover and splits in the trunks and branches that could be accessed by bats). The criteria detailed at Appendix 3 were referred to during the assessment of the bat roost value of the trees.

2.5 Great Crested Newt

- 2.5.1 In accordance with the current Natural England guidance all ponds within an unobstructed 250 metres of a site should be surveyed/assessed for their suitability to support Great Crested Newts. A single pond (Pond 1) is present approximately 50 metres to the north of Elmridge Farm. The suitability of Pond 1 for Great Crested Newt is discussed in Section 3.5.
- 2.5.2 Pond 1 was assessed using the Habitat Suitability Index (HSI) (Oldham *et al* 2000). The pond was examined with reference to the ten HSI scoring criteria, which are: SI₁:Geographical location; SI₂:Pond area; SI₃:Pond drying; SI₄:Water quality (as indicated by the diversity of aquatic plants and invertebrates); SI₅:Shade, SI₆:Waterfowl, SI₇:Fish; SI₈:Abundance of other ponds within 1km radius; SI₉:Quality of terrestrial habitat; and SI₁₀ Macrophyte cover (i.e. aquatic and emergent plants).
- 2.5.3 The assessment was carried out by Victoria Burrows (registered Natural England Great Crested Newt survey Class Licence holder).

- 2.5.4 In accordance with planning policy and associated the government circulars namely 06/2005 survey data in relation to protected species (Great Crested Newts) is required prior to the validation of an application. In this instance, following an assessment of Pond 1, its relative location to the site, the habitats at the site and the nature of the development proposals it is concluded that there is a reasonable likelihood of the absence of Great Crested Newt and a full survey is not required. Information to support this conclusion is presented in Section 3.5 and Appendix 4.
- 2.6 Barn Owl and Other Bird Species**
- 2.6.1 All buildings were searched for pellets, faecal splashes and feathers which may indicate use by roosting or nesting Barn Owl
- 2.6.2 All bird species observed during the survey were recorded. All habitats were assessed for their value to support breeding birds.
- 2.7 Survey Limitations**
- 2.7.1 May and July are favourable times of year for the completion of the scope of survey outlined above.
- 2.7.2 All buildings were accessed. No access limitations occurred.
- 2.7.3 No significant survey limitations were experienced.
- 2.8 Evaluation Methodology**
- 2.8.1 The habitats, vegetation and animal life were evaluated with reference to standard nature conservation criteria as described by Ratcliffe (1977) and the Nature Conservancy Council (1989). These are size (extent), diversity, naturalness, rarity, fragility, typicality, recorded history, position in an ecological or geographical unit, potential value and intrinsic appeal.
- 2.8.2 Government advice on wildlife, as set out in the *National Planning Policy Framework* (2012) and associated government circulars has been taken into consideration. The UK and Lancashire Biodiversity Action Plans (BAPs) have been taken into account in the evaluation of the site.

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3.0 SURVEY RESULTS

3.1 Desktop Study

Site Designations

- 3.1.1 There are no statutorily or non-statutorily designated areas for nature conservation within or immediately adjacent to the site.

Protected and Notable species

- 3.1.2 LERN does not hold any records of protected species for the site or the land immediately adjacent to the site.
- 3.1.3 LERN reported records of birds of Priority Species/Species of Principal Importance status within the 0.6 kilometre radius around the site. Species comprise Lapwing, Skylark, Linnet, Starling, House Sparrow, Dunnock, Reed Bunting and Song Thrush.

3.2 Vegetation and Habitats

General Description

- 3.2.1 Elmridge Farm lies off Elmridge Lane within a rural area between Longridge and Chipping. The cluster of farm buildings is accessed via a tree lined single track off Elmridge Lane.
- 3.2.2 Land surrounding the farmyard and buildings comprises cattle and sheep grazed semi-improved pasture, refer to Figure 1.

Buildings and Farmyard

- 3.2.3 All buildings are described in Section 3.4 and at Figure 2. The buildings are surrounded by hard-standing covered farmyard. The farmyard is regularly washed down to direct slurry towards the pit. Local areas of less frequently trampled yard have been colonised by Perennial Rye-grass, Annual Meadow-grass, Dandelion, Herb Robert and Common Nettle.
- 3.2.4 Around the existing farmhouse is a short mown lawn and herbaceous borders. A low stone wall separates the farmhouse from the surrounding farmyard and pasture. Ivy-leaved Toadflax, a wall growing plant, is present in the wall.

Access Track off Elmridge Lane

- 3.2.5 The single lane access track off Elmridge Lane is lined with a hedgerow and trees, refer to Photo 1.



Photo 1: Tree lined track off Elmridge Lane (hedgerows 1 and 2)

- 3.2.6 Hedgerow 1 on the south side of the track is 100% continuous and contains three Sycamore trees. A plant species list and assessment under *The Hedgerows Regulations 1997* is appended at Table 1.
- 3.2.7 Hedgerow 2 on the north side of the track contains a diversity of woody species and local plants of Bluebell. A plant species list and assessment under *The Hedgerows Regulations 1997* is appended at Table 1.

Field 1: Semi-improved grassland (footprint of proposed new farm buildings)

- 3.2.8 The field (Field 1) to the north-east of Elmridge Farm and proposed location for the new farm buildings comprises a sheep grazed field of semi-improved grassland, refer to Photo 2. Constant and abundant plant species comprise Perennial Rye-grass, Crested Dog's-tail, Rough-stalked Meadow grass, Yorkshire Fog and locally frequent Creeping Buttercup and Soft Rush to form the MG6 Crested Dog's-tail-Perennial Rye-grass community of the NVC.



Photo 2: Field 1

- 3.2.9 Field 1 is bordered by sparse shrubs of Hawthorn, Holly and Gorse with local Ash, Wych Elm and Alder. Ephemeral drainage ditches are present on all field boundaries.

Access Track from Gib Hey Lane

- 3.2.10 Construction and farm machinery will enter Field 1 and the new farm buildings from the east via Gib Hey Lane. Gib Hey Lane is an asphalt covered track regularly used to access Gib Hey Farm. A wooded strip is present to the east of the track; none of the trees overhang the track, refer to **Photo 3**.



Photo 3: Access track off Gib Hey Lane

- 3.2.11 Access from Gib Hey Farm to Field 1 will be via an existing dirt track used by farm machinery. The track is colonised by semi-improved MG6 grassland, Soft Rush and scattered Gorse scrub.

Invasive species

- 3.2.12 No invasive species listed on Schedule 9 of the *Wildlife and Countryside Act 1981* were detected at the site.

3.3 Badger

- 3.3.1 No Badger activity was detected at the site or in the adjacent surveyed habitats.
- 3.3.2 Badger and their habitats will not be affected by the development proposals.

3.4 Bat species

Buildings

- 3.4.1 The raw data of the dawn bat re-entry bat survey are appended at **Appendix 2** and **Figures 1 and 2** at **Appendix 6**.
- 3.4.2 A brief description of the buildings is presented at **Table C**, below: -

Table C: Description of the Existing Farmhouse and Buildings 1 to 7

Building Reference (Refer to Figures 1 and 2)	Brief Description
Existing Farmhouse	Two storey farmhouse with white rendered elevation walls and a pitched slate covered roof.
Building 1 (Barn)	Two storey stone built barn with a single storey brick built annex to the south. The building has pitched slate and stone tile covered roofs.
Building 2 (Barn)	Stone barn with a corrugated sheeting roof. A hay loft is present inside.
Building 3 (Lean to)	Steel framed lean to with a corrugated sheeting roof. A breeze block cattle shed section with a sloping corrugated roof is present to the west.
Building 4 (Cattle shed)	Timber framed cattle shed with a corrugated sheet metal roof.
Building 5 (Cattle shed)	Steel framed open sided cattle shed with corrugated sheeting roof.
Building 6 (Cattle shed)	Timber framed cattle shed with timber plank elevations and a pitched corrugated sheeting roof.
Building 7 (Barn)	Single storey stone barn with a corrugated sheeting roof.

3.4.3 In summary: -

- a. Opportunities for bat access were detected at features such as beneath ridge copings, beneath window lintels, beneath lead flashing and beneath roof slates/tiles at the Existing Farmhouse and Buildings 1, 2 and 7;
- b. Buildings 3, 4, 5 and 6 do not support any opportunities for use by roosting bats. No further surveys or works are necessary prior to demolition;
- c. The dawn re-entry surveys detected the following roosts: -
 - ROOST 1: Single Common Pipistrelle entered a roost at the roof verge between the slates and the wall top on the west gable end of the farmhouse, refer to Figure 2;
 - ROOST 2: Single Common Pipistrelle entered a roost beneath the ridge coping (third to the west of the middle chimney) on the farmhouse, refer to Figure 2; and,
 - ROOST 3: Single Common Pipistrelle entered a roost beneath the end of the ridge tile at the western gable of Building 2, refer to Figure 2.
- d. ROOSTS 1 to 3 are confirmed as single bat summer roosts;
- e. No evidence of a maternity roost was detected at the site.
- f. The internal walls of the stone barns are either white washed or well pointed. No cracks, crevices or opportunities suitable for use by hibernating bats were detected.

Trees

- 3.4.4 No trees within the construction area meet the Category 1* or 1 criteria described at Appendix 3.

Bat foraging opportunities

- 3.4.5 The hedgerow and tree lined access road off Elmridge Lane and the wooded edge along Gib Hey Lane are suitable for the attraction of foraging bats, as demonstrated during the dawn survey.

3.5 Great Crested Newt

Aquatic Habitats

- 3.5.1 The proposals will have no direct effect on any ponds or aquatic habitats. There are no known records of Great Crested Newts within at least 250 metres from the site
- 3.5.2 Pond 1 is located approximately 50 metres to the north of Elmridge Farm (refer to Figure 1). The HSI was applied (refer to Appendix 4). Pond 1 scores an 'average' suitability for Great Crested Newt.
- 3.5.3 Intensive netting around all margins of the pond in May 2012 detected a single Common Frog tadpole only; no newts were detected.
- 3.5.4 Pond is located over 278 metres from the next nearest pond.

Terrestrial Habitats

- 3.5.5 As detailed in Section 3.2 the terrestrial habitats (hardstanding) within the Elmridge Farm farmstead are unfavourable for use by sheltering and feeding amphibians. The farmyard is regularly washed down to direct slurry to the pit.
- 3.5.6 The semi-improved pasture to the south of the farm (to be used to create an access to the garage for converted Building 1) and within the footprint of the proposed new farm buildings and slurry pit to the north-west are short grazed. This habitat offers no opportunities for use by sheltering or hibernating amphibians.

Summary and Conclusions

- 3.5.7 It is recognised that the application of the HSI is not intended to be a substitute for a full Great Crested Newt survey. However, in consideration of the above, and *in combination*, with the development proposals, it is concluded that it is very unlikely that the development proposals have any adverse effect on Great Crested Newt habitats or individual newts (or other amphibian species). This conclusion is supported by the following rationale: -
- a. No known records of Great Crested Newt are reported for the site or the surrounding 0.6 kilometre radius;
 - b. Pond 1 is outside the site boundary and will not be directly affected by the development proposals;
 - c. The HSI result for Pond 1 assesses the pond as 'average' suitability for Great Crested Newt, rather than 'good' or 'excellent', refer to Appendix 4;
 - d. There are no other ponds within an unobstructed radius of 250 metres from the pond which could provide a source of a Great Crested Newt population; and,
 - e. The terrestrial habitats within the site comprise hard-standing and closely grazed pasture: none of the habitats provide any significant opportunities for use by sheltering Great Crested Newt and other amphibians;
 - f. The farmyard area is regularly washed down and cleared of debris and slurry;

- g. A high wall around the slurry pit at the northern margin of the farm creates a physical barrier between the pond and pasture to the north and the farmyard; and,
- h. No favourable terrestrial habitats for use by amphibians such as woodland, piles of debris, coarse rank grassland with small mammal holes will be affected by the proposals.

3.5.8 Based on the information presented above it is concluded: -

- a. It is not reasonably likely that breeding Great Crested Newts are present at Pond 1;
- b. A full Great Crested Newt survey is not warranted, in this instance, to inform the planning application; and,
- c. No Great Crested Newts or their habitats will be affected by the redevelopment proposals.

3.6 Bird species

- 3.6.1 No evidence of use of the buildings at the site by nesting or roosting Barn Owl was detected.
- 3.6.2 Five old pellets indicative of roosting Kestrel was detected inside Building 7; no evidence of nesting was detected in May or July 2012.
- 3.6.3 Use of Building 1 by nesting Swallow (3 active nests in May 2012) was detected.
- 3.6.4 An active Starling nest was present behind the rotten timber soffit at the porch of the existing farmhouse in May 2012.
- 3.6.5 The wider fields to the south of the site and outside the construction zone are used by nesting Lapwing; two pairs were observed in May 2012.

3.7 Other Wildlife

- 3.7.1 No evidence of Water Vole was detected in the minor watercourse adjacent to Building 7 or the drainage ditches around Field 1. The water courses and drainage ditches will not be directly affected by the proposals.

4.0 EVALUATION AND ASSESSMENT OF ECOLOGICAL CONSIDERATIONS AND OPPORTUNITIES

4.1 Brief Description of Proposals and Assessment Approach

4.1.1 The proposals will involve the following:-

- a. Demolition of Buildings 3, 4, 5 and 6;
- b. Renovation of the existing farmhouse including re-roofing;
- c. Conversion of Buildings 1 and 2 to create dwelling houses involving the re-roofing of the buildings;
- d. Construction of a garage adjacent to Building 2;

- e. Construction of a garage on the footprint of Building 3 and an associated driveway to the south of the farmyard;
- f. Conversion of Building 7 to a new farmhouse;
- g. Construction of a new cattle shed within Field 1 to the north-east of the farm;
- h. Construction access to Elmridge Farm will be via the track of Elmridge Lane (the route currently used by large farm machinery);
- i. Construction access to the new farmhouse and new farm buildings will be from the east off Gib Hey Lane.

4.1.2 The results of the ecological surveys are evaluated below. An assessment of the effects of the development proposals is provided. Where necessary, measures to mitigate any ecological effects are described in Section 5.

4.1.3 The recommendations in Section 5 aim to ensure that the development is implemented in accordance with all wildlife legislation, Natural England guidance, the principles of the National Planning Policy Framework (NPPF), local planning policy and best practice.

4.1.4 Where possible, opportunities to enhance the ecological interest and habitat connectivity and seek biodiversity gain through appropriate landscape planting and habitat creation have been identified and recommended in Section 5 (in accordance with the principles of the NPPF and associated documents).

4.2 Designated Sites

4.2.1 The development proposals will have no direct adverse effect on statutory or non-statutory designated sites.

4.3 Vegetation and Habitats

4.3.1 None of the habitats within the site are of significant interest in terms of the plant species composition. None of the habitats present are representative of semi-natural habitat. The NVC communities present are typical of the geographical area and conditions present.

4.3.2 The hedgerows along the access track off Elmridge Lane are representative of UK BAP Priority Habitat/Habitat of Principal Importance and meet the criteria to be 'important' under *The Hedgerows Regulations 1997*. Protection of the trees and hedgerows is feasible, refer to Section 5.1.

4.3.3 The minor water course to the west of Building 7 and the drainage ditches around the west, north and east margins of Field 1 will not be directly affected by the proposals. Precautionary measures to protect the watercourse and associated trees are described in Section 5.1.

4.4 Animal Life

4.4.1 Appropriate survey has been carried out to discount reasonably any adverse effects on protected species such as Great Crested Newt, Water Vole, Barn Owl and their habitats.

4.4.2 In the absence of mitigation the re-roofing of the Existing Farmhouse and Building 2 will destroy the three detected roosts and, if carried out at an inappropriate time of year, may harm individual bats. As described in Section 5.5 mitigation to avoid a significant adverse effect on the favourable conservation status of bats at the site and minimise the risk of harm to individual bats is entirely feasible. The recommendations at Section 5.5 and

Figures 3 and 4 are in accordance with current Natural England guidance and wildlife legislation.

- 4.4.3 Use of the site by nesting and roosting birds included Priority Species (Starling) was detected. Recommendations for the protection of nesting birds and creation of opportunities for nesting to ensure there is no net loss is presented in Section 5.3 and 5.4.

5.0 MITIGATION, RECOMMENDATIONS AND ECOLOGICAL ENHANCEMENT

5.1 Protection of Existing Habitats

Trees and Hedgerows

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- 5.1.1 The development proposals will ensure the protection and retention of the following: -
- a. Hedgerows 1 and 2 along the access road off Elmridge Lane;
 - b. The hedgerows and trees and ditches around Field 1 to be used to construct the new farm buildings and slurry pit;
 - c. Trees along the track near Building 7; and,
 - d. Trees along the track off Gib Hey Lane to be used to access the new farm buildings and Building 7.
- 5.1.2 Where necessary, during the construction phase, temporary protective demarcation fencing will be used to protect the trees and shrubs that are to be retained. The fencing must extend outside the canopy of the retained trees and must remain in position until all construction is completed to ensure protection is provided throughout the construction phase.
- 5.1.3 The fencing will be in accordance with BS5837:2012 *Trees in Relation to Design, Demolition and Construction - Recommendations*.

Watercourse

- 5.1.4 The watercourse near Building 7 will be protected during the construction and through the implementation of best practice measures. In particular, the following Pollution Prevention Guidance (PPG) will be adhered to: -
- a. PPG1: General Guide to the Prevention of Pollution
 - b. PPG5: Works in, Near or Liable to Affect Watercourses
 - c. PPG6: Working at Demolition and Construction Sites
 - d. PPG7: Refuelling Facilities.

5.2 Site Management Prior to the Commencement of Works

- 5.2.1 It is recommended that the grassland within Field 1 continues to be managed and maintained as a closely grazed sward until commencement of construction. This will ensure that this ecological assessment remains valid and the grassland habitats to be affected by the construction of the new farm building do not become suitable for colonisation by wildlife including Common Toad.

5.3 Protection of Nesting Birds

- 5.3.1 All wild birds are protected under the *Wildlife and Countryside Act 1981* while they are breeding. It is mandatory that works at the buildings, trees, shrubs, Bramble scrub or other suitable breeding bird habitat is only commenced outside the bird breeding season. The bird breeding season typically extends between March to August inclusive.
- 5.3.2 Prior to any works scheduled within the bird breeding season it is advised that advice from an ecologist is sought. It may be necessary to carry out a walkover survey to demonstrate satisfactorily that no breeding birds, active nests, eggs or fledglings are present in the working area.
- 5.3.3 If breeding birds are detected the ecologist will issue guidance in relation to the protection of the nesting birds in conjunction with the scheduled works. This may involve cordoning off an area of the site or minimising the works permitted until the young birds have fledged.

5.4 Compensatory Habitats for Nesting Birds

- 5.4.1 The development proposals will result in the loss of features currently used by nesting Starling (a Priority Species) (1 active nest detected), nesting Swallow (3 active nests detected) and roosting Kestrel.
- 5.4.2 Compensatory opportunities to conserve the long-term use of the site by these species are recommended. The recommendations are illustrated on **Figure 4**.

5.5 Roosting Bats and Mitigation Strategy

Scope of Survey Carried Out

- 5.5.1 The scope of the licensed bat surveys applied has ensured reasonable actions have been applied to detect the presence of roosting bats. The surveys are in accordance with Hundt (2012) and Natural England guidance; no further surveys are necessary.

Planning Application and Natural England Licence

- 5.5.2 The detection of the three single bat day summer roosts does not preclude the development proposals. However, works that will disturb or damage the roosting places must only be carried out under the relevant Natural England licence. This is currently a Natural England European Protected Species Mitigation (EPSM) licence. However, based on the minor status of the roosts used by a common species¹ of bat it is concluded that the Mitigation Class Licence currently being trialled by Natural England may be applicable.

¹ 'Common species' =

Common Pipistrelle is described as 'widely distributed throughout the UK.' A population of 2,430,000 is reported in the National Bat Monitoring Programme (NBMP) 2010 Data (Bat Conservation Trust website).

- 5.5.3 When available, the Mitigation Class Licence will permit the removal of minor roosts used by common species of bat (i.e. low status roosts) under the supervision of the licensed bat surveyor. Victoria Burrows at ERAP Ltd has been approved and accepted to take part in the trial of this Class Licence.
- 5.5.4 Regardless of which licence is applicable it is still necessary to demonstrate compliance with the three tests of Regulation 53 of *The Conservation of Habitats and Species Regulations 2010*. The information presented below is appropriate to inform a Natural England licence application.
- 5.5.5 The tests are presented below with supporting rationale.

First Test: That the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range [Regulation 53 (9)(b)]

- 5.5.6 Mitigation and compensation for the temporary loss of three single Common Pipistrelle summer day roosts is entirely feasible within the scope of the development proposals. An outline of the mitigation strategy to be implemented is presented below and on **Figure 3**.
- 5.5.7 The mitigation strategy draws on the following available information: -
- Natural England guidance;
 - Information presented in the 'BCT Mitigation Conference Proceedings' (2007) arranged by the Bat Conservation Trust);
 - Implemented and monitored activities/specifications carried out by ERAP Ltd at other sites/properties; and,
 - Information presented on the 'Roost' website provided by the Bat Conservation Trust.

Timing of Works

- 5.5.8 Based on the type of roosts detected (i.e. not maternity roosts or hibernation roosts) there is no timing restriction on the commencement of works at ROOSTS 1 to 3 (subject to the guidance in relation to nesting birds, refer to **Section 5.3**).
- 5.5.9 Other works around the site which will not disturb or directly affect the known roosts such as the commencement of construction of the garages, demolition of Buildings 3 to 6, construction of the new farm building may commence at any time of year and if necessary, prior to the receipt of the relevant Natural England licence. It is essential that construction materials are not lent against the elevations of the existing buildings or positioned so that they obstruct the known roost entrances in any way.

Actions to be applied during the Demolition/Conversion Works

- 5.5.10 In accordance with best practice roof slates, ridge copings and lead flashing will be removed carefully from the Existing Farmhouse and Buildings 1, 2 and 7, by hand, under the supervision of the licensed bat surveyor. The works at ROOSTS 1 and 3 will be carried out under the supervision of the licensed bat surveyor.

Discovery of a Bat

- 5.5.11 If a bat is discovered during the strip of the roof, in accordance with standard practice, the licensed bat surveyor will carefully place the bat in a suitable box with water. The bat will either be placed in one of the 1FF Schwegler bat boxes (refer to **Figure 3**) or released at the site later that day (at bat emergence time) provided weather conditions are favourable for bat activity (by this time the roof will have been stripped and there is no risk of the bat returning to the same roost point only to be uncovered the following day).
- 5.5.12 Favourable conditions for bat activity are dry with an air temperature greater than 7°C and a wind no greater than Beaufort Scale 4.
- 5.5.13 If conditions are not favourable for release, the bat will be kept in captivity by the licensed surveyor and released at the site when conditions are favourable.
- 5.5.14 If at any time during the works a bat is discovered or suspected when the licensed bat surveyor is not on site all contractors must withdraw from the area and ERAP Ltd or Natural England must be contacted for further advice.

Habitat Creation/Compensation for use by Roosting Bats

- 5.5.15 Prior to the commencement of works two bat boxes (1FF specification (refer to Figure 3)) will be installed on suitable trees along the access track to Elmridge Farm, to be advised by the Ecologist. The boxes will be a permanent feature to be retained at the site. This will ensure there is no net loss of roosting opportunities at the site at any point during the works.
- 5.5.16 Two types of opportunities for use by roosting bats will be reinstated/incorporated into the converted and renovated buildings to provide a total of nine gaps (refer to Figure 3). In summary: -

Table D: Proposed roost accesses at the converted and renovated buildings at Elmridge Farm

Building	NEW Roost Access Point Type	Description	Number	Specification, refer to Figure 3
Existing Farmhouse	A	Ridge Access: Gap (20mm high by 40mm wide) beneath ridge coping.	A1	In the same position as detected ROOST 1
			A2	Within 1 metre of the west gable end.
	B	Roof Verge: Reinstatement of gap at south facing gable roof verge	B1	Gap 40mm wide by 20mm high to be left at the roof verge of the west facing gable to reinstate ROOST 2.
Converted Building 1	A	Ridge Access: Gap (20mm high by 40mm wide) beneath ridge coping.	A3	Main ridge within 1 metre of the west gable. Gap on south side.
			A4	Main ridge within 1 metre of the east gable. Gap on south side.
Converted Building 2	A	Ridge Access: Gap (20mm high by 40mm wide) beneath ridge coping.	A5	Main ridge within 1 metre of the west gable. Gap on south side.
			A6	Main ridge within 1 metre of the east gable. Gap on south side.
Converted Building 7	A	Ridge Access: Gap (20mm high by 40mm wide) beneath ridge coping.	A7	Main ridge within 1 metre of the west gable. Gap on south side.
			A8	Main ridge within 1 metre of the east gable. Gap on south side.
TOTAL			Detail A (8) + Detail B (1) = 9	

Land Ownership, Post-development Safeguard and Monitoring

- 5.5.17 All mitigation and compensation for bats will be carried out within the land under the control of the applicant. No off-site mitigation is proposed.
- 5.5.18 The property owner is aware of the protection afforded to bat and their habitats. The proposed bat access accesses and boxes do not require any maintenance or cleaning out.
- 5.5.19 Owing to the presence of three single bat summer roosts used by a common species Natural England do not request any post-development monitoring. The licensed Ecologist will carry out an inspection during the construction to check all bat mitigation is installed appropriately and in accordance with the Natural England licence.

Demonstration that the proposals for which a licence is sought are for the purposes of 'preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment' [Regulation 53(2)(e)];

- 5.5.20 The use of modern machinery and methods of housing livestock has precluded the economic use of the existing buildings on-site. The stone-built barns (Buildings 1 and 2) are too small to be of any significant value to the applicant (also the farmer). The more modern structures (Buildings 4 to 6) are laid out in a manner that does not allow the level of manoeuvrability required for modern machinery.
- 5.5.21 These factors impact upon the productivity of the farmer, and in turn the economic success of the farm. The current proposals to renovate/convert the stone-built buildings and farmhouse and relocate the farm activities to the field to the north-east of the site will effectively 'save' the stone-built buildings (and therefore comply with Policy H15 of the Ribble Valley Local Plan, see below) and enable the farmer to continue to farm the land in a sustainable and economic way.
- 5.5.22 Significant changes to the layout of the farmstead would be required to increase productivity which would have to involve the re-siting and extension of the more modern structures (Buildings 4 to 6). This would either involve extending the farmstead or building over the footprint of the existing stone traditionally-built barns (Buildings 1 and 2). If they are not built over then the barns will remain redundant and over time, will deteriorate and collapse.
- Consideration of 'There is no satisfactory alternative' including the implications of the 'do-nothing' option [Regulation 53(9)(a)]*
- 5.5.23 In consideration of the do-nothing option the farmer would have to extend the farmstead on adjacent land, as proposed. However the stone-built buildings would remain redundant and over time, will deteriorate and collapse. This is not acceptable to the local planning authority as traditionally constructed barns are, as stated in the preamble to Policy H15 of the LP, "very much part of the Ribble Valley's character and heritage". One of the objectives of the LP is to "keep these buildings well maintained and protect them as a feature within the landscape for future generations". The ultimate loss of the stone-built barns as a result of the 'do-nothing' option would have an adverse impact on the character of the area and wider Area of Outstanding Natural Beauty (AONB).
- 5.5.24 The retention by renovation and conversion of Existing Farmhouse and Buildings 1, 2 and 7 is compliant with both national and local planning policies.
- 5.5.25 For example, Part 6 of NPPF seeks to significantly boost the supply of housing. Whilst only 4 new dwellings will be created, as previously stated, the LPA has a serious and significant shortage in its deliverable housing land supply and therefore the redevelopment makes a valuable contribution. Indeed, the LP recognises that barn conversions make valuable contributions towards the number of homes in the borough. It has also been demonstrated that the proposals involve the re-use of redundant buildings and are therefore compliant with NPPF policy on new homes in rural areas.
- 5.5.26 The conversion of existing, traditional stone-built buildings is a more favourable option to meet the supply of housing than construction of new buildings within the rural area.
- 5.5.27 The renovation and conversion works will enable bat roosting opportunities to be created and conserved at the site in the long-term.
- 5.6 Landscape Planting**
- 5.6.1 The proposals plans illustrate proposals to line the site margins and new gardens and access driveways to the converted barns with hedgerows and trees.

5.6.2 It is recommended that the planting is composed from native species that are complementary to the surrounding habitats. A list of suitable species is presented below:-

Hedgerow shrubs

Blackthorn
Dog Rose
Elder
Hawthorn
Holly

Prunus spinosa
Rosa canina
Sambucus nigra
Crateagus monogyna
Ilex aquifolium

Trees

Pedunculate Oak
Rowan
Crab Apple
Wild Cherry

Quercus robur
Sorbus aucuparia
Malus sylvestris
Prunus avium

5.6.3 The planting will improve habitat connectivity around the site and enhance the opportunities for wildlife such as feeding and nesting birds, invertebrates and foraging bats.

6.0 CONCLUSION

6.1 This ecological appraisal has demonstrated that, in principle, the development proposals are feasible and acceptable in accordance with ecological considerations and the National Planning Policy Framework (NPPF).

6.2 Mitigation for roosting bats, in accordance with current Natural England guidance, wildlife legislation and best practice, is entirely feasible within the remit of the development proposals.

6.3 Compensatory opportunities for nesting birds will be incorporated into the proposals.

6.4 The proposals will provide an opportunity to secure ecological enhancement for wildlife associated with site and local area.

7.0 REFERENCES

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8.0 APPENDICES

APPENDIX 1: TABLES AND FIGURES

TABLE 1: Plant Species Composition, Frequency and Abundance for the hedgerows along the access track

Scientific Name	Common Name	Hedgerow H1		Hedgerow H2	
		Abund.	Cover	Abund.	Cover
Woody Species					
<i>Acer pseudoplatanus</i>	Sycamore	LA	10%	F	20%
<i>Corylus avellana</i>	Hazel	F	2%	LVA	0%
<i>Crataegus monogyna</i>	Hawthorn	F*	30%	A*	40%
<i>Ilex aquifolium</i>	Holly	LA	30%	LVA	10%
<i>Spiraea</i> sp.	Spiraea species	LA	5%	LF	5%
<i>Rosa canina</i>	Dog Rose	LF	1%	LF	1%
<i>Prunus spinosa</i>	Blackthorn	LF	10%	-	-
<i>Quercus robur</i>	Pedunculate Oak	-	-	LF	2%
<i>Sambucus nigra</i>	Elder	LF	5%	VL	<1%
<i>Sorbus aucuparia</i>	Rowan	LF	1%	LF	5%
Understorey					
<i>Anthriscus sylvestris</i>	Cow Parsley	-	-	VLF	<1%
<i>Alopecurus pratensis</i>	Meadow Foxtail	A*	10%	F*	10%
<i>Cirsium arvense</i>	Creeping Thistle	O	<1%	-	-
<i>Dryopteris dilatata</i>	Broad Buckler Fern	F*	5%	LF	1%
<i>Digitalis purpurea</i>	Foxglove	-	-	F*	1%
<i>Galium aparine</i>	Cleavers	F*	2%	F/LA*	5%
<i>Hedera helix</i>	Ivy	LA	5%	LF	5%
<i>Hyacinthoides non-scripta</i>	Bluebell	-	-	VLF	<1%
<i>Vicia sepium</i>	Bush Vetch	VLF	<1%	-	-
<i>Lonicera periclymenum</i>	Honeysuckle	-	-	LVA	10%
<i>Ranunculus repens</i>	Creeping Buttercup	F*	2%	-	-
<i>Stellaria holostea</i>	Greater Stitchwort	VLF	<1%	VLF	<1%
<i>Silene dioica</i>	Red Campion	-	-	VLF	<1%
<i>Rubus fruticosus</i> agg.	Bramble	VL	<1%	F	5%
<i>Taraxacum officinale</i>	Dandelion	O	<1%	O	<1%
<i>Urtica dioica</i>	Common Nettle	F*	2%	LA*	5%
Hedgerow continuity		100%		95%	
Length of Hedgerow		100 metres		100 metres	
Height of Hedgerow		1.5 metres to 5 metres		1.5 metres to 5 metres	
Hedgebank present?		No		Yes	
Ditch present?		No		No	
Number of trees		3		3	
Management		Cut on sides and top		Cut on top and sides	
Public footpath or highway present?		Yes		Yes	
Total number of woody species		9		9	
Number of woody species listed in <i>The Hedgerows Regulations 1997</i>		7		7	
No. of woody species in 1 st 30m section		5 (Cm, Ca, Ia, Rosa, Sau)		5 (Sau, Ia, Cm, Rosa and Qr)	
No. of woody species in 2 nd 30m section		N/A		N/A	
No. of woody species in 3 rd 30m section		N/A		N/A	
Average number of woody species		5		5	
No. of woodland herbs		1		2	
Important in accordance with <i>The Hedgerows Regulations 1997?</i>		Yes		Yes	

1Key to DAFOR: D=Dominant, A=Abundant, F=Frequent, O=Occasional, R=Rare, V=Very, L=Local and *denotes a constant species

APPENDIX 2: RESULTS OF DAWN RE-ENTRY SURVEY OF THE EXISTING FARMHOUSE AND BUILDINGS 1 TO 7

Table 2.1: Bat activity detected during dawn re-entry survey on 11th July 2012.
 Surveyor positions are annotated on Figure 1

Time	Activity	Species (assume 1 bat unless stated)	Observations
Surveyor 1 (VB): Stationed in the centre of the farmyard and inside Building 2			
03.34	C	P45	Commutated over farmyard
03.45	C	P45	Commutated over farmyard west to east (was observed leaving site to the east)
03.54	C	P45	Commutated over farmyard west to east (was observed leaving site to the east)
04.01	-	-	Swallows awake
04.15	F	P45	Flew back up lane to the yard and left site to the north
Surveyor 2 (SH): Stationed at the north-west and south west elevations of Building 1			
03.48	C	P45	Commutated from farmyard and left site to the south
03.55	C	P45	Commutated from farmyard and left site to the south
04.05	F	P45	Flew through Building B and left site to the west.
04.11	F	P45	Foraging around elevations of Building 1
04.21	F	P45	Flew into and through Building 3
Surveyor 3 (RL): Stationed between the west gable of Building 2 and the east gable of the farmhouse			
03.35	Heard not seen	-	-
03.46	C	P45	Commutated around the west gable of Building 2 and into farmyard (picked up by Surveyor 1)
03.58	-	Heard not seen	-
04.08	F	P45	Along access track
04.11	F	P45	Along access track
04.13	F	P45	Along access track
04.23	F	P45	Along access track
04.24	R	P45	Entered roost beneath end of ridge tile at west gable end of Building 2 (ROOST 3)
Surveyor 4 (GH): Stationed at the west and north elevation of the Existing Farmhouse			
03.34 to 03.50	F	P45	Feeding over grassland and chicken pens to the west until 03.50
04.06	F	P45	Foraging over grassland to the north
04.08	F	P45	Foraging over grassland to the north
04.16	R	P45	Entered gap at the roof verge between the slates and the wall top of the west facing gable of existing farmhouse (ROOST 1).
04.28	R	P45	Entered gap beneath the ridge coping (north side) at the third coping from the central chimney of existing farmhouse (ROOST 2).
Surveyor 5 (BR): Stationed at Building 7			
03.33	F	P45	Foraging along track.
03.40	F	Myotis species	Foraging along track.
03.49	F	Myotis species	Foraging along track.
03.55	F	P45	Around north elevation of building
04.18	F	P45	Around north elevation of building
From 4.18 to end of survey	No activity		

Key:

- P45 = Common Pipistrelle
- E = Emerged
- R = Re-entered
- C = Commute
- F = Forage/Flight

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APPENDIX 3: BAT TREE ASSESSMENT CRITERIA

Criteria for Assessment of Trees in accordance with Category 1 to 3 as defined in Table 8.4 of the Bat Conservation Trust Bat surveys-good practice guidelines 2nd Edition (Hundt, L. 2012).

CATEGORY	DESCRIPTION	CRITERIA
Known or Confirmed	Confirmed roost	Confirmed roost Evidence found that indicates tree/tree features are being used by bats. Droppings found at the base of the tree, below a cavity. Bats heard 'chattering' inside a feature on a warm day or at dusk Bat(s) observed flying from or to a feature.
1*	Very high value	Trees with multiple, highly suitable features capable of supporting larger roosts. Features of particular significance, suitable for high priority roosts such as maternity roosts, used by large numbers of bats, offering conditions that are uncommon or rare in the local area. Features such as large cavities, extensive branch or trunk splits, also including multiple features in the same tree that offer a diversity of opportunities. Features may also include dense ivy.
1	High value	Trees with definite bat potential supporting fewer suitable features than category 1* trees or with potential for use by single bats. Features which provide a more secure form of roost for small groups of bats and individuals, but may still be quite common types of feature, such as small cavities, minor splits or sparse ivy cover.
2	Moderate value	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. A tree which on close inspection the potential roost positions are in some way not ideal. They could be upward facing or holes very low down or cluttered by adjacent branches.
3	Low/Negligible value	Trees that have no features which could be used by bats for roosting (Usually young trees).

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APPENDIX 4: GREAT CRESTED NEWT ASSESSMENT AND HABITAT SUITABILITY INDEX (HSI)

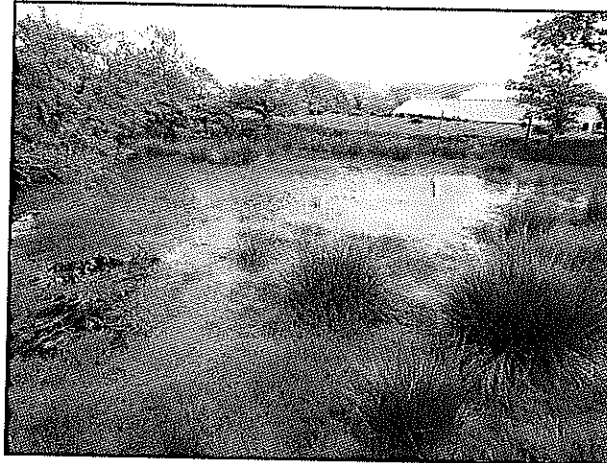


Photo 4.1: Pond 1

Table 4.1: Habitat Suitability Index (HSI) for Pond 1

Indices	Pond 1	
Distance to Site	50 metres	
SI1 - Location	Zone A	1
SI2 - Pond area	Approximately 1100m ²	0.925
SI3 - Pond drying	Dries annually (as confirmed by farmer)	0.1
SI4 - Water quality	Poor. Only midge larvae and water louse detected	0.33
SI4 - Shade	10% owing to Sycamore tree and Hawthorn and Gorse on margins	1
SI6 - Fowl	Absent	1
SI7 - Fish	Absent	1
SI8 - Ponds	10	1
SI9 - Terrestrial habitat	Poor	0.33
SI10 - Macrophytes	95% (see Table 4.3, below)	0.9
HSI Score	0.62: Average	

Table 4.2: Categorisation of HSI score

HSI score	Pond suitability for Great Crested Newt
<0.5	Poor
0.5 - 0.59	Below average
0.6 - 0.69	Average
0.7 - 0.79	Good
>0.8	Excellent

Table 4.3: Further Information: Pond 1

Shape	Irregular		
Water Turbidity and Depth	Turbid and 0.5 metres deep in centre		
Banks	Shallow earth banks		
Immediate surrounds	Sheep grazed pasture		
Aquatic vegetation	<i>Callitriche stagnalis</i>	Common Water Starwort	LD (90%)
	<i>Glyceria fluitans</i>	Floating Sweet-grass	LD (10%)
Amphibians	Intensive netting around all margins detected 1 Common Frog tadpole only.		

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APPENDIX 5: SYNOPSIS OF RELEVANT LEGISLATION

Bat species

All British bat species and their roosts are legally protected under the *Wildlife and Countryside Act 1981* (as amended) and the *Conservation of Habitats and Species Regulations 2010* (as amended). Under this legislation it is an offence to intentionally kill, injure or capture bats, deliberately disturb bats and damage, destroy or obstruct access to bat roosts. Since the introduction of the Countryside and Rights of Way (CROW) Act in 2000 it is also an offence to recklessly harm or disturb bats in their roosting places.

Breeding Birds

All wild birds are protected under the *Wildlife and Countryside Act 1981* (as amended), whilst they are actively nesting or roosting. Section 1 of this Act, makes it an offence to kill, injure or take any wild bird, and to intentionally take, damage or destroy the nest of any wild bird while that nest is in use or being built. It is also an offence to take or destroy any wild bird eggs.

Barn Owl

Barn owls are listed on Schedule 1 of the *Wildlife and Countryside Act 1981* which gives them special protection.

It is an offence, with certain exceptions, to:

- Intentionally kill, injure, or take (handle) any wild barn owl;
- Intentionally take, damage or destroy any wild barn owl nest whilst in use or being 'built' (barn owls do not 'build' a nest but may make a nest scrape);
- Intentionally take or destroy a wild barn owl egg;
- Have in one's possession or control a wild barn owl (dead or alive), or egg, (unless one can show that it was obtained legally);
- Intentionally or recklessly disturb any wild barn owl whilst 'building' a nest or whilst in, on, or near a nest containing eggs or young;
- Intentionally or recklessly disturb any dependent young of wild barn owls.

APPENDIX 6: FIGURES

Figure 1: Plan to illustrate Elmridge Farm site and the buildings surveyed

Figure 2: Plans to illustrate results of bat and bird surveys

Figure 3: Plans to illustrate mitigation and compensation for roosting bats

Figure 4: Plans to illustrate proposed compensatory measures for use by nesting birds