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Land at Oakfield, Longsight Road, Clayton le Dale, BB1 9DR

Ecological Survey & Assessment

July – August 2013

Ribble Ecology ref: RB-13-104

Prepared by: Mr MBarnes BSc (Hons) & Ms L Bousfield BSc (Hons)

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FOR THE	
ATTENTION OF	

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SUMMARY	1
1.0 INTRODUCTION.....	2
2.0 METHODOLOGIES.....	2
3.0 RESULTS	7
4.0 SUMMARY, ASSESSMENT& RECOMMENDATIONS	17
5.0 CONCLUSION.....	21
6.0 REFERENCES.....	21

SUMMARY

This report presents the results of an ecological survey and assessment, undertaken at **land associated with 'Oakfield', Longsight Road, Clayton Le Dale, Blackburn, BB1 9DR.**

The scope of survey and assessment has included consideration of: a) designated sites; b) vegetation and plant species; c) protected species of fauna; and d) UK Biodiversity Action Plan (BAP) priority species and habitats.

This work has been requested in connection with plans for the construction of a poultry unit, for which a planning application will be submitted to the local planning authority.

In summary, whilst survey results have shown that there are ecological considerations in relation to the planning proposal, it is judged that erection of a poultry unit and hard-standings is feasible, *provided that mitigation measures are applied.*

Section 4.3 of this report provides recommendations of appropriate mitigation measures and if the planning authority is minded to approve the application it is respectfully recommended that one or more planning conditions are used as a means of ensuring that the wildlife protection measures are enforceable.

1.0 INTRODUCTION

1.1 Overview

In July 2013, Ribble Ecology was commissioned to undertake an ecological survey and assessment at land associated with 'Oakfield', Longsight Road, Clayton Le Dale, Blackburn, BB1 9DR

The land is centred at grid reference **SD 66243 32817** and it comprises a pasture field in which the owner wishes to construct a poultry unit and associated hard-standing.

The request for an ecological survey and assessment was made in connection with a proposed planning application for installation of the poultry unit.

A plan showing a red-line boundary and the proposed layout of the building and hard-standing was supplied with the commission and hereafter within this report, the land within the red-line boundary is termed 'the Site' or 'the Application Site'.

1.2 Objectives

Ribble Ecology identified the objectives of the survey and assessment to be as follows:-

- Investigate all vegetation and habitat types, in accord with the JNNC guidelines¹ and compile one or more plant species lists where appropriate.
- Identify any occurrences of rare and/or protected plant species at the Site and also any non-native invasive plant species as listed on Schedule 9 of the *Wildlife and Countryside Act 1981 (WCA 1981)*.
- Using aforementioned plant species lists, identify National Vegetation Classification (NVC) communities and UK Biodiversity Action Plan (BAP) priority habitats.
- Undertake habitat appraisal for protected species such as: roosting, commuting & foraging bats; Badger; Water vole; Great crested newt and Schedule 1 birds and where possible include searches for field signs and evidence demonstrative of the presence of such species.
- Similarly, undertake habitat appraisal and search for field signs demonstrative of the presence of UK BAP priority species and other wildlife such as breeding birds.
- From the survey results, identify any ecological concerns or constraints and provide feedback on appropriate mitigation and compensation measures to avoid impacts on protected species and other local wildlife.

2.0 METHODOLOGIES

2.1 Personnel

All survey and assessment has been led by **Ms Lorna Bousfield B.Sc. (Hons). MCIEEM** and undertaken with the assistance of Mr Martyn Barnes B.Sc. (Hons).

Ms Bousfield is Principal Ecologist at Ribble Ecology and holds Natural England survey licenses in respect of Great crested newt (**class licence number CLS001700**) and bats (**licence number 20123140**). She is an experienced consultant with a wide skill base in

¹Ref: *Handbook for Phase 1 Habitat Survey – a technique for Environmental Audit* published by the Joint Nature Conservation Committee (JNCC 2003).

respect of ecological surveying and assessment, including plant species and habitat identification, detection of protected faunal species, assessment of potential impacts in accord with IEEEM Guidance on EcIA's and also the design and implementation of mitigation, compensation and habitat enhancement schemes.

Mr Martyn Barnes is an Assistant Ecologist at Ribble Ecology, has a degree in Conservation and Land management and has a range of field skills relevant to several protected species.

2.2 Desk study

A range of desk and internet based resources were used to obtain background information prior to attending the Site, with the internet resources being as follows:

- Bing Maps (www.bing.com/maps) and Google Earth for aerial photographs, including historic photographs in the case of Google Earth.
- Multi-Agency Geographic Information for the Countryside (MAGIC) collaborative database website (<http://magic.defra.gov.uk/MagicMap.aspx>), for information on key environmental schemes and statutory designations.
- National Biodiversity Network (NBN) Gateway (www.nbn.org.uk), for collated low-resolution records of protected and priority species occurrence.
- Natural England: Nature on the Map (www.natureonthemap.naturalengland.org.uk) for SSSI and National Nature Reserve (NNR) citations.
- Maps & Related Information Online (MARIO) – Lancashire County Council's interactive mapping website (<http://mario.lancashire.gov.uk/agsmario/>).
- Bing Maps (www.bing.com/maps) for a 1:25,000 Ordnance Survey map extract.
- Ribble Valley District-wide Local Plan Proposals Map (adopted June 1998) (http://www.ribblevalley.gov.uk/info/200180/planning_policy/432/districtwide_local_plan/3) for land designations.

2.3 Date, weather conditions & any limitations

The survey work was undertaken on **30th July 2013**, at which time no access or visibility limitations were encountered.

The seasonal timing and weather conditions were appropriate for completing all aspects of the survey, being dry, sunny and calm (Beaufort 2). The air temperature was 23° Celsius throughout the survey.

2.4 Vegetation & habitats

An Extended Phase 1 Habitat Survey was carried out throughout the Application Site. The Phase 1 Habitat Survey is a standardised method used to record habitat types and characteristic vegetation, as set out in the "*Handbook for Phase 1 Habitat Survey – a technique for Environmental Audit*" published by the *Joint Nature Conservation Committee (JNCC 2003)*. The methodology is 'Extended' through the additional recording of specific features indicating the presence, or likely presence, of protected species or other species of nature conservation significance.

Plant species lists were compiled where appropriate and the Site and survey area was searched for uncommon plant species, *UK Biodiversity Action Plan (BAP)* priority species and plant species listed as protected in the *Wildlife and Countryside Act 1981 (WCA 1981)*. All higher plant nomenclature within this report is written in accord with *Stace's New Flora*

of the British Isles (Stace, C. A. 1997).

Searches were carried out for the presence of invasive species, as covered by Section 14 and listed on Schedule 9 in the *WCA 1981* (as amended) (Schedule 9 as updated April 2010). Where possible, their extents of occurrence were mapped using a hand-held Global Positioning System (GPS).

Any occurrences of UK BAP priority habitat were noted and where possible the plant species lists were also used to identify National Vegetation Classification (NVC) communities (Rodwell, J. S. *Volumes 1 – 5, 1991 – 2000*), as the NVC provides a systematic and comprehensive analysis of British vegetation.

2.5 Fauna

2.5.1 Bat species

UK bat species are provided full legal protection under Schedule 5 (Section 9) of the *WCA 1981 (as amended)* and under *The Conservation of Habitats and Species Regulations 2010 (CHSR 2010)*, making them European Protected Species. In combination this legislation makes it illegal to intentionally kill, injure, harm or disturb bats and illegal to damage, disturb or obstruct access to bat roosts.

During the Extended Phase 1 Survey, all features were assessed for their *habitat suitability* and *potential* to support roosting, hibernating, foraging and commuting bats.

Trees were inspected from the ground, using close-focus binoculars and a high powered torch where necessary, to identify potential roost habitats such as rot holes, crevices and lifting bark.

In addition, all features were searched for field signs indicative of the current or former presence of bats, including droppings, remains of invertebrate prey, grease marks from repeated contact or passage through narrow roost accesses and/or bats themselves.

2.5.2 Badger

Badgers (*Meles meles*) and their setts are protected under the *Protection of Badgers Act 1992*. This legislation makes it illegal to kill, injure or take Badgers or to interfere with a Badger sett, with the *Act* defining 'a sett' as being "any structure or place which displays signs indicating current use by a Badger".

The Application Site was searched for evidence of Badger, with the aim of identifying any combination of the following field signs:

- Sett holes, wider than high, often with spoil heaps in front, sometimes also with discarded bedding;
- Disturbed ground and small holes from foraging activity;
- Trampled dispersal pathways and breach points under boundary fences;
- Distinctive hairs, snagged on fences etc. or found at sett entrances;
- Dung pits/latrines;
- Characteristically shaped footprints;
- Scratching at the base of trees and other features.

2.5.3 Birds

Wild birds, their nests and their eggs are protected under Part 1 of the *WCA 1981*, which makes it illegal to kill or injure a bird and to destroy its eggs or its nest whilst it is in use or being built. Game birds are an exception and are protected under the separate *Game Acts*, which fully protect them during the close season. In addition, certain bird species (such as Barn owl and Kingfisher) are specially protected under Schedule 1 of the *WCA 1981 (as amended)*, making it illegal to disturb these birds and their young at the nest.

All visible and audible birds were recorded during the survey, following the standard recording methodology and codes of the *British Trust for Ornithology (BTO) Common Birds Census (Marchant 1983)*.

Habitats at the Application Site were assessed for their *potential value* for nesting, roosting, feeding, and wintering birds, as indicated by the amount of shelter and species diversity amongst the shrubs, trees and grassland habitats in the Site.

2.5.4 Great crested newt & other amphibians

Great Crested Newts (GCNs) (*Triturus cristatus*) are provided full legal protection under Schedule 5 (section 9) of the *WCA 1981 (as amended)* and under *The CHSR 2010*, making them a European Protected Species. The legislation makes it illegal to intentionally kill, injure, harm or disturb the Great Crested Newt (GCN) and illegal to damage, destroy or obstruct access to any place used by sheltering or breeding GCNs.

Whilst the species breeds in water it forages, shelters and hibernates on land, typically within 250m of its breeding pond but sometimes up to 500m from the pond. Where planning proposals entail disturbance of land within range of GCN breeding ponds there is therefore a risk of killing, injury and/or habitat loss, which would contravene the legislation that protects them. This makes it a legal requirement to consider GCNs in relation to planning proposals, both in terms of aquatic habitat and terrestrial habitat.

Prior to attending the Application Site an Ordnance Survey map and Google Earth aerial photographs were checked for evidence of ponds within 250m unobstructed dispersal range of the Site. With this indicating that ponds were present, it was necessary to undertake further work, as outlined under sub-headings a) and b) below.

a) Aquatic habitat appraisal:

The pond adjacent to the Site was studied during the walkover survey and its Habitat Suitability Index (HSI) score was calculated. Another two ponds within 250m radius were situated on private land and could not be inspected, but a preliminary assessment of their sizes and locations was made. In addition, a 1:25,000 Ordnance Survey map, Lancashire County Council's MARIO on-line mapping and Google Earth were used in order to determine the historic presence or absence of these three ponds.

Habitat Suitability Index (HSI) scoring is a method of assessing the quality of a pond in terms of GCN breeding and associated habitat requirements, quantifying ten standard Suitability Index (SI) parameters, including water quality, flora, and impacts from waterfowl. The methodology of assessment and the thresholds for each of the ten assessment criteria are presented in the *ARG UK Advice Note 5 (May 2010)*, which quotes *Oldham et al. (2000)*.

The final HSI score reflects the *suitability* of the pond for breeding GCNs, though notably it cannot show the presence or absence of the species. The score is interpreted using the table on the following page.

HSI score	Pond Suitability for GCN
<0.5	Poor
0.5-0.59	Below Average
0.6-0.69	Average
0.7-0.79	Good
>0.8	Excellent

b) Terrestrial habitat appraisal:

GCNs feed, shelter and hibernate on the land and are known to disperse as far as 500m from their breeding ponds. However, research published by English Nature² (now Natural England) indicates that GCNs are most likely to be found within the first 50m of their breeding pond provided the terrestrial habitat structure and composition is suitable for use, and the likelihood of discovery further away from the pond gradually diminishes.

Since distance is an important factor, the *Great Crested Newt Mitigation Guidelines 2001* broadly distinguishes three 'categories' of GCN terrestrial habitat, based on distances from the GCN breeding pond. These categories are as follows:-

- '**Immediate**' habitat = **less than 50m** from the breeding pond.
- '**Intermediate**' habitat = **between 50m and 250m** from the breeding pond.
- '**Distant**' habitat = **more than 250m** from the breeding pond.

In accord with the research report, the trend is that for 'immediate', 'intermediate' and 'distant' habitats of similar structure and potential habitat value, the likelihood of use by GCN is highest for the 'immediate' habitat, lower for the 'intermediate' habitat and lowest for the 'distant' terrestrial habitat.

It follows that where the population size is small and the immediate habitat is of good quality, GCNs may rarely or never disperse more than 50m from the pond as they have no need to do so.

However, the size of the population and the quality, extent and connectivity of the terrestrial habitat is also influential, with GCN being likely to disperse further from the breeding pond if the 'immediate' terrestrial habitat is of poor quality or of limited extent, and being likely to disperse further where there are 'corridors' of optimal habitat to facilitate dispersal. Conversely, the presence of 'barriers' will preclude dispersal.

'Corridors' facilitating GCN movement are typically unmanaged strips of land that provide good quality habitat for sheltering and foraging GCNs, such as dense hedgerows. Conversely, 'barriers' are obstructions that prevent dispersal. Any examples of dispersal 'corridors' and 'barriers' within and around the Site were noted during the walkover survey. For example, the composition and 'permeability' of the red-line boundary was investigated.

Additionally, terrestrial habitats in the Site were investigated for their suitability and *potential value* for the support of GCN. The topography, land management, soil structure and vegetation structure were recorded and the habitats were labelled with qualitative categories of '*low*', '*medium*' or '*high*' value, taking into account all life-stages and seasonal requirements, such as the need for frost-free habitat in which to hibernate.

²Cresswell, W. & Whitworth, R. (2004). An Assessment of the Efficiency of Capture Techniques and the Value of Different Habitats for the Great Crested Newt (*Triturus cristatus*). English Nature Research Report Number 576, English Nature, Peterborough.

2.5.5 Water vole

Water voles (*Arvicola amphibious*) and their habitat are provided full legal protection under Schedule 5 (Section 9) of the *WCA 1981* (as amended), which makes it illegal to intentionally kill, injure or take Water voles and to damage, disturb or destroy their 'place of shelter', i.e. their habitat.

Water voles are characteristically associated with a range of aquatic habitat types, including ponds, field drains, reservoirs, wetlands and rivers.

Prior to attending the Application Site an Ordnance Survey map and aerial photographs were checked for evidence of water courses and water bodies within or adjoining the Site. Further investigation was then conducted on Site where necessary, though no detailed survey work was required.

2.5.6 Otter

In England and Wales Otters (*Lutra lutra*) are protected under Section 9(4)(b) and (c) and (5) of the *WCA 1981* and they are fully protected under *The CHSR2010*. Collectively, this makes it illegal to deliberately or intentionally capture, injure, kill, harm or disturb Otter and illegal to damage, destroy or obstruct access to an Otter holt.

Otters will utilise a wide range of aquatic habitat types, including large ponds, drainage channels, reservoirs, wetlands and rivers.

Prior to attending the Application Site an Ordnance Survey map and aerial photographs were checked for evidence of such water features within or close to the Site. Further investigation was then conducted on Site where necessary, though no detailed survey work was required.

2.5.7 Reptiles

All native British reptiles are provided partial legal protection against intentional killing and injury under Schedule 5 (Section 9) of the *WCA 1981* (as amended). In addition, Sand lizard (*Lacerta agilis*) and Smooth snake (*Coronella austriaca*) are fully protected under the *WCA 1981* (as amended) and under *The CHSR2010*.

Habitats throughout the Application Site were assessed for their suitability and potential to support reptiles, from which it was determined that no detailed survey work was required.

2.5.8 Other wildlife

Any evidence of other wildlife occurrences was noted during the survey. Habitat appraisal was applied in respect of Brown hare (*Lepus europaeus*) and Hedgehog (*Erinaceus europaeus*), which are both UK BAP priority species.

3.0 RESULTS

3.1 Desk study

3.1.1 Designated sites

The Application Site is centred at grid reference **SD 66243 32817**.

The desk study has demonstrated that at this location there is no statutory designated site

of ecological interest, such as a Special Protection Area (SPA), a Special Area of Conservation (SAC), a Ramsar wetlands or a Site of Special Scientific Interest (SSSI).

Further, there are no internationally or nationally designated statutory sites within a 1.0km radius around the red-line boundary.

In relation to non-statutory sites of *local* biodiversity interest, from the Ribble Valley District-wide Local Plan Proposals Map 'South' (adopted June 1998) shows that there are no locally designated BHSs at the Application Site or in the immediate surrounding area.

3.1.2 Protected and priority species

The desk study revealed evidence of the known presence of a range of protected species within 5.0km radius of the Application Site. This is by no means likely to be a conclusive or exhaustive list, but the species are summarised as follows:

- Mammals: Badger; Brown Long-eared bat; Common pipistrelle; Daubenton's bat; Noctule bat; Otter; Soprano pipistrelle; Water vole.
- Amphibians: Great crested newt.
- Birds: Barn owl; Common Kingfisher; Fieldfare; Redwing.

In addition, a wide array of UK BAP priority species has been recorded in the 5.0km surrounding area, including many bird, invertebrate and plant species, plus Brown hare, Hedgehog and Common toad.

All of the species identified in the desk study have been given consideration during the walkover survey and the subsequent assessment work in this report.

3.2 Vegetation and habitats

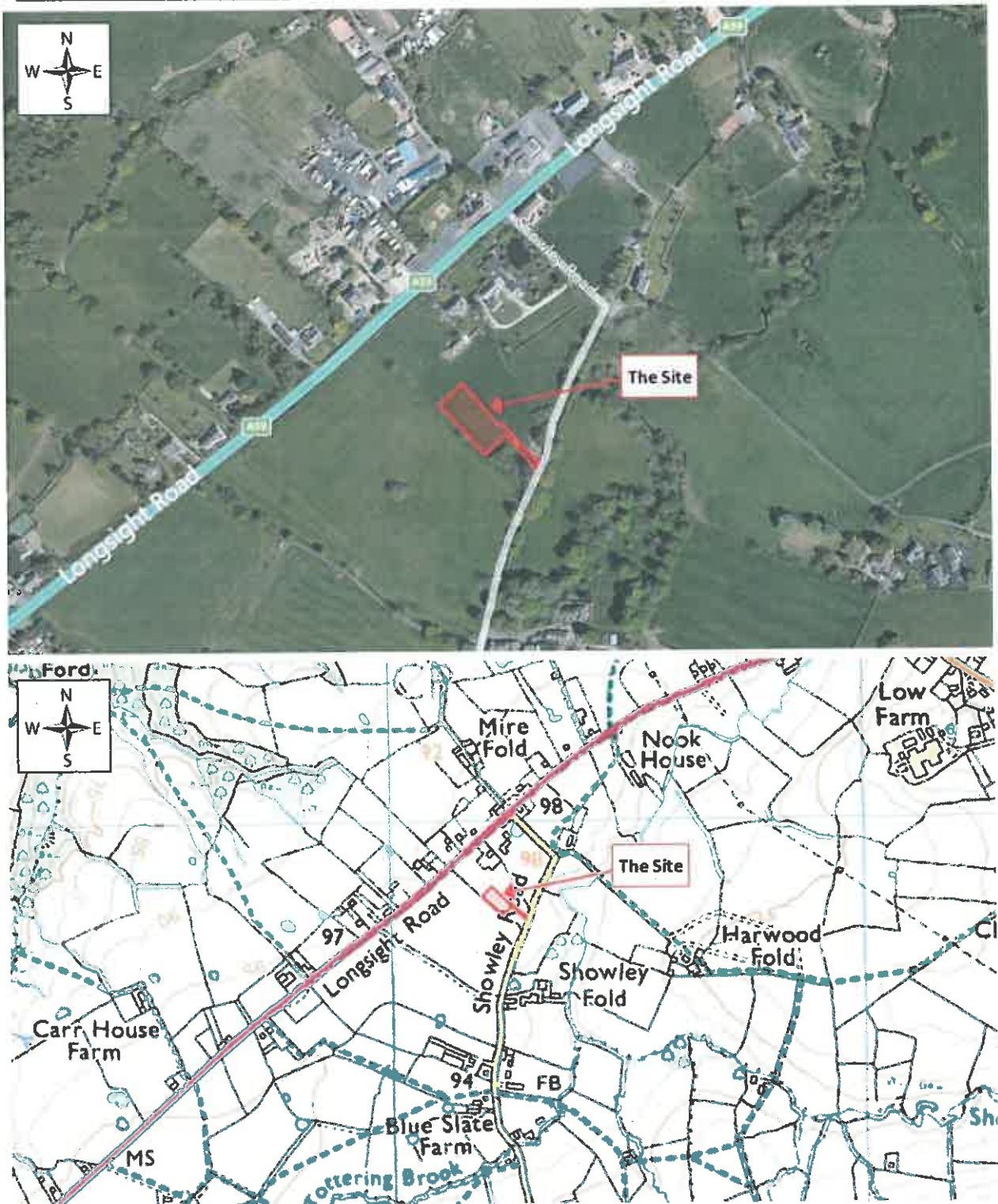
3.2.1 Location & surroundings

Fig. 1 (next page) presents an extract from an Ordnance Survey map and a labelled aerial photograph (both © Bing Maps), exemplifying the location of the Application Site in relation to its surroundings.

As shown, the Site is located rurally, to the south of the A59 Longsight Road, with agricultural pasture fields to all sides, along with field boundary trees and hedgerows.

Longsight Road to the north is a relatively large and busy road, measuring approx. 8m wide, whilst Showley Road is a small by-road, measuring approx. 3m wide.

Fig. 1: Location of the Application Site in relation to its surroundings



3.2.2 Features within the Site

Fig. 2 (appended) presents a labelled vegetation and habitat map of the Site, as prepared using an aerial photograph (© Google Earth) and results from the walkover survey.

Photographs and descriptions of habitat features and vegetation types throughout the Site are provided in the following paragraphs.

Hard-standings & disturbed ground:

An access path of gravel and stone is present in the south-east side of the Application Site, providing vehicular access off Showley Road. **Photo 1** below shows the path to be largely devoid of vegetation. However, sparse colonisation of low-growing ruderals has occurred along a central strip, species including Greater Plantain (*Plantago major*), Pineappleweed (*Matricariadiscoidea*) and Knotgrass (*Polygonum aviculare*).



This sparse flora is indicative of an *OV21: Poa annua – Plantago major* NVC community, which is botanically poor and has no rare species. There are also no invasive species. The vegetation is *not* an example of BAP priority habitat.

Sheep-grazed grassland:

The most extensive vegetation cover throughout the Site is mesotrophic grassland. This is predominantly one field unit of agricultural pasture that is used for grazing sheep, as can be seen above in **Photo.1**, plus in **Photo.2** on the next page.

The botanical composition is species poor, comprising predominantly grass species such as abundant Perennial Rye-grass (*Lolium perenne*) and frequent Yorkshire Fog (*Holcus lanatus*), Crested Dog's-tail (*Cynosurus cristatus*) and Red fescue (*Festuca rubra*). Accompanying herb species are also present within the sward, including occasional or locally frequent Meadow Buttercup (*Ranunculus acris*), White Clover (*Trifolium repens*), and Ribwort Plantain (*Plantago lanceolata*). **Table 1** (appended) presents a full list.

The grassland supports no rare plant species and it is representative of an *MG7: Lolium perenne* NVC community, which is of common and widespread occurrence, with no notable plant species. It is *not* an example of UK BAP priority habitat.

Shallow & defunct field drain:

The only other habitat feature within the red-line boundary is the edge of a shallow and seasonal depression that appears to be a former field drain. The depression runs as an approx. 1.5m wide strip along the western side of the field unit, between the grassland and a boundary hedgerow (described in subsequent paragraphs). Beyond the red-line boundary it continues running north-west, adjacent to the hedge.

The ditch is only recessed approximately 0.2m below the field and there is no water channel within it. The ground was not waterlogged at the time of survey, but Soft Rush

(*Juncus effusus*) is dominant, accompanied by Creeping Buttercup (*Ranunculusrepens*), both of which are tolerant of waterlogging. Yorkshire Fog and Sweet Vernal (*Anthoxanthumodoratum*) are also present, but again the botanical diversity is low and the vegetation is *not* an example of a BAP priority habitat.

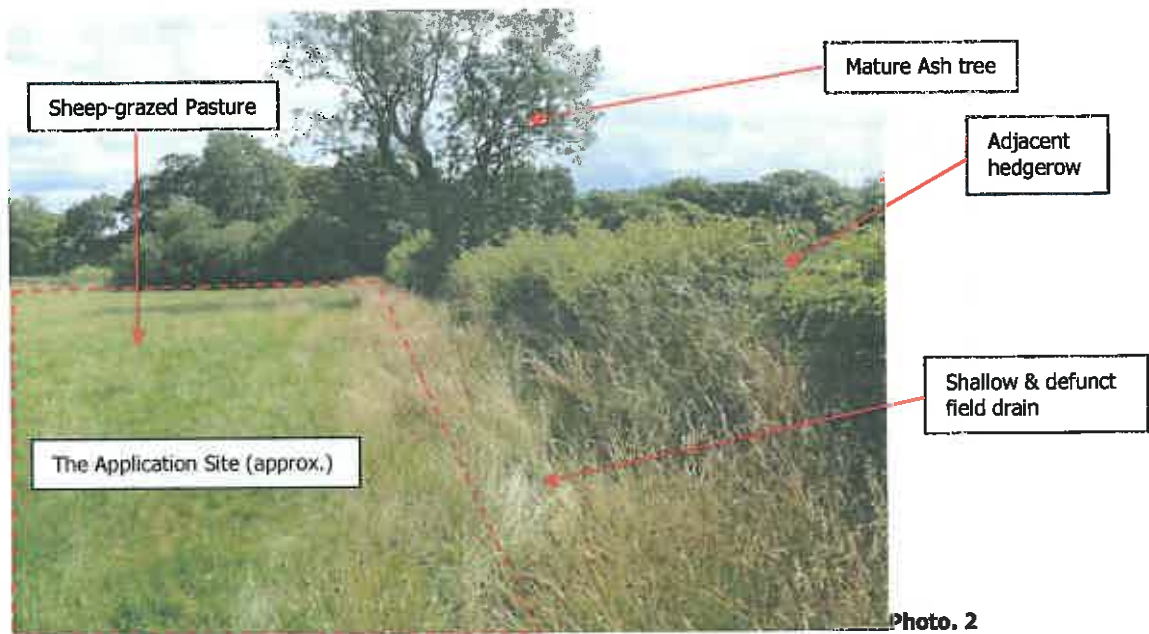


Photo. 2

In relation to NVC classification, the species composition of the rush vegetation most closely resembles the *MG10: Juncus effusus – Holcuslanatus* NVC community. This is of widespread occurrence throughout lowland Britain and is not ecologically notable. Again it is *not* an example of BAP priority habitat.

Boundary hedgerow& tree:

There is one field boundary hedgerow situated adjacent to the Application Site's red-line boundary, as exemplified on **Fig. 2** (appended) and in **Photo.2**. This extends in a north-west direction, running between Showley Road at its south-eastern end, up to Longsight Road at its north-western end.

The hedgerow comprises dominant Hawthorn (*Crataegusmonogyna*) and appears to have undergone management in the past, thus is dense and functional. At the time of survey it was unmanaged and 2 - 3m high, being fenced to its west side, but with no hedge bank and no evidence of woodland herbs in its base.

It contains two standard trees, the one adjacent to the Site being a mature Ash (*Fraxinus excelsior*) (see **Photo. 2**). The tree itself is clad with Ivy (*Hedera helix*) on its trunk and main boughs, and has occasional rotten small boughs.

The composition is an example of the *W21: Crataegusmonogyna* NVC community and the hedge *is an example of a UK BAP priority habitat*, though it *does not qualify as 'important'* when assessed against the ecological criteria of the *Hedgerows Regulations 1997*.

Pond:

Directly adjacent to the Site's southern red-line boundary there is a single, oval-shaped pond, measuring approximately 30m long and 15m wide and with its water surface recessed approx. 2.0m below the height of the adjacent field. It is fenced out of the field and additionally there is a bund along its north-eastern side, alongside the aforementioned access track into the field.

Both the bund and the moderately steeply sloping north-eastern and north-western banks adjacent to the Site support tall herbaceous vegetation and coarse grasses, whilst the south-western and south-eastern banks support dense shrubs and sparse, bifurcate early-mature trees respectively, as indicated in **Photo's 3& 4**.



Photo. 3



Photo. 4

A full species list is presented in **Table 2** (appended) for the tall herb and coarse grassland vegetation. Several species of abundance include Creeping buttercup, Hogweed (*Heracleum sphondylium*), Great willowherb (*Epilobium hirsutum*), Common nettle (*Urtica dioica*) and Reed Canary-grass (*Phalaris arundinacea*), plus Himalayan balsam (*Impatiens glandulifera*). The species composition is *not* representative of a distinct NVC community and is indicative of a mixture of ruderal species (locally frequent Common nettle, Creeping thistle and Cleavers for example), plus wetland plants (locally frequent Meadowsweet, Amphibious bistort and Bittersweet for example). There is no BAP priority habitat.

The shrubs at the south-western bank of the pond comprise dominant Grey willow (*Salix cinerea*), which overhang the water by approx. 1.5m.

The trees to the south comprise mature Ash (*Fraxinus excelsior*), again clad with Ivy and with understorey vegetation comprising Blackthorn (*Prunus spinosa*), Ivy, sparse Bramble (*Rubus fruticosus*) and Himalayan balsam.

Invasive species:

There is evidence of abundant Himalayan balsam on the pond's banks, but there is no evidence of this species within the red-line boundary of the Application Site itself.

There is also no evidence of other invasive plant species, including Japanese knotweed (*Fallopia japonica*) and Giant hogweed (*Heracleum mantegazzianum*).

3.3 Fauna

3.3.1 Bats

There are no buildings or trees within the Application Site.

The Ash tree adjacent to the south-western boundary is clad with Ivy on its trunk and main boughs, and has occasional rotten small boughs in the upper canopy. However, no holes or crevices are present amongst the main boughs or trunk facing the Site. It is judged there may be *low potential* for this tree to support roosting bats, though there is unlikely to be potential value for hibernating bats.

In relation to foraging and commuting bats, the adjacent pond and trees are likely to afford potential value, but the grassland of the Application Site itself is of no value.

In summary, it is judged that there are no implications in relation to bats, though best-practice retention and protection of nearby features will be necessary.

3.3.2 Badger

There is no evidence of the presence of Badger and the grassland of the field itself is judged unlikely to be colonised in the foreseeable future, as it is a small field unit, evidently accessed and utilised by people on a regular basis and not situated adjacent to woodland or other notable shelter or foraging habitat for Badger.

It is judged that there is no requirement for further consideration of the species.

3.3.3 Birds

In relation to Schedule 1 bird species it is assessed there is no habitat value for nesting, roosting or foraging within the red-line boundary of the Application Site.

Habitat assessment indicates that there is negligible likelihood of the grassland being used by ground nesting birds because the field unit is small, grazed and appears to be accessed and regularly used. Consistent with this, no ground-nesting bird species were recorded at the time of survey.

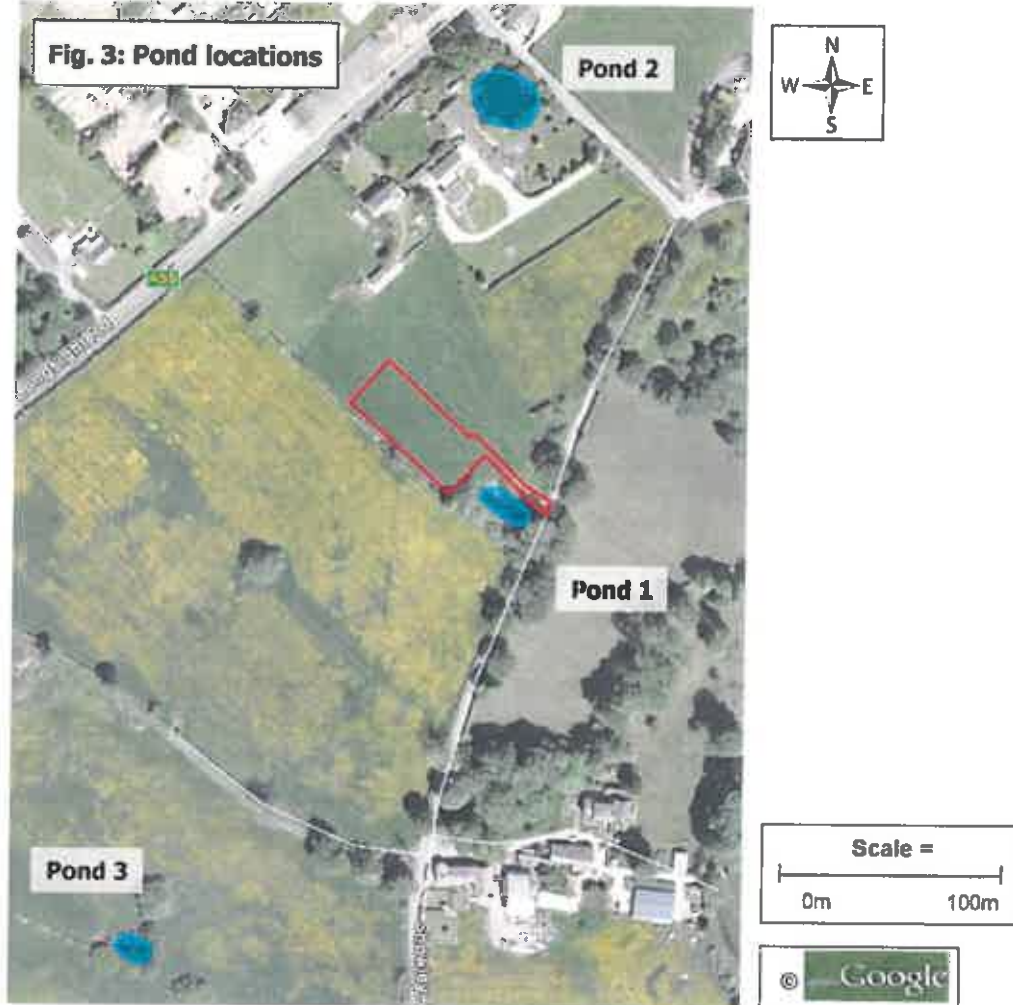
In relation to shrub and tree habitats, the hedgerow and the trees and shrubs around the pond are all of potential value for nesting passerine birds and corvid species, but these are evidently situated outside the red-line boundary so only require best-practice consideration in relation to retention and protection measures.

3.3.4 Great crested newt & other amphibians

Aquatic Habitat Appraisal

There are three ponds within a 250m radius of the Application Site, with these being

labelled on Fig. 3.



As shown, the aforementioned pond adjacent to the Site is labelled as **Pond 1**. The closest part of the Site's red-line boundary is 8m from the pond edge and the furthest part is approx. 65m away. This means that the majority of the Site's land is within 'immediate' terrestrial habitat range of the pond, i.e. within 50m of the water. Only this pond has been studied in accord with the HSI scoring system, as the others are outside the boundary of ownership. The SI scores are presented below.

HSI score for Pond 1		
SI categories	Score description	Score value
SI1 – Location	Zone A	1.0
SI2 – Pond area	Approx. 400m ²	0.9
SI3 – Pond drying	Never	0.9
SI4 – Water quality	Moderate – Pond skater, water boatman and water beetle present during the inspection	0.67
SI5 – Shade	50%	1.0
SI6 – Fowl	Minor; Mallard & Moorhen present	0.67
SI7 – Fish	Possible	0.67
SI8 – Ponds	8 – 9ponds in an unobstructed 1km radius	0.9
SI9 – Terrestrial habitat	Good	1.0
SI10 Macrophytes	10%	0.4
HSI score		0.78 (good)

The pond has a high HSI score, but it is notable that reference to the 1:25,000 Ordnance Survey map gives **no evidence of Pond 1**, nor does reference to Lancashire County Council's MARIO maps. Reference to historic photographs on Google Earth clarifies that **the pond did not appear to exist** in the years 2000, 2003 and 2005. This indicates it is of relatively recent creation, which indicates that the bund on its north-eastern side is spoil that was excavated from the hollow. The recent creation of the pond is significant because this suggests that **its likelihood of supporting breeding GCN could be somewhat lower than that indicated by the HSI score**, because there have been less than 10 years for it to be colonised.

The water body labelled as **Pond 2** is located approx. 100m to the north-east of the red-line boundary at its closest, within the grounds of a residential property. All of the Site's habitat is within 'intermediate' range of this pond, i.e. between 50m and 250m away, but the intervening habitat comprises the obstacles of buildings, hard-standings and managed gardens. Reference to Google Earth images indicate that the pond has a surface area of approx. 550m². It appears permanent and is judged to have a reasonably high likelihood of supporting waterfowl and/or fish because of its shape and permanence. However, being unable to survey the pond in full it has not been possible to calculate a HSI score.

Pond 3 is a field pond that is situated 245m the south-west of the closest Application Site boundary. Measurements from Google Earth indicate it has a surface area of approx. 200m² and images show that it is situated in an agricultural grassland field, with trees and/or large shrubs casting shade over it from the southern and eastern sides. It is a substantial distance away from the Site, but having been unable to survey it in full it is not possible to state whether or not it is suitable for GCN.

Terrestrial Habitat Appraisal:

If any amphibian species *are* associated with these ponds, it is judged that the grassland of the Application Site will afford **low-moderate potential value** as foraging habitat, but **no value** for sheltering or hibernating GCNs, due to the lack of cover and the presence of livestock.

Within range of Pond 1, such grassland is predominantly within 'immediate' habitat range, whilst it is entirely at 'intermediate' range from the other two ponds.

There are no dispersal barriers separating the Site from Pond 1, nor physical barriers separating it from Ponds 2 and 3. However intervening habitats between the Site and Pond 2 comprise buildings and hard-standings as well as a pasture field, with the hard landscaping not being conducive to use by dispersing amphibians. The habitats separating the Site from Pond 3 comprise mostly grassland fields, so there are no barriers to dispersal, but nor are there any dispersal corridors because the boundary hedgerows run perpendicular to the route leading between the pond and the Site.

Notably, all field boundary hedgerows and small woodland copses in the wider surrounding area are judged likely to have much higher *potential value* for GCN than the short grassland of the Application Site because they are suitable to serve all seasonal and daily requirements of GCN: they afford above-ground shelter and undisturbed soil, with rootstocks and most likely mammal holes that will provide below-ground shelter as well.

Whilst it is not possible to state the presence or absence of GCNs at each of the three aforementioned ponds, it is possible to make an assessment of risk at the Application Site by *assuming presence* rather than absence, i.e. if GCNs are assumed to be present in Pond 1, their likelihood of occurrence on the hard-standing and grassland of the Application Site can thus be assessed as follows:

- Based on the grassland's current use, it is judged that by daylight there is negligible potential for occurrence at any time of the year.
- At night there is low potential for foraging and dispersing GCN to cross the grassland during the season when they are active (i.e. March to early November inclusive).
- In winter months (i.e. mid-November to end of February inclusive) there is no potential for GCN occurrence because there is no value for hibernating GCNs.
- Any stripping of grassland and/or placing of construction materials on the grassland by day will therefore present a negligible of killing or injury.
- Any action undertaken after darkfall and during the newt active season will present a low-moderate risk of killing or injury of dispersing GCNs.
- Any action undertaken in winter presents no risk.
- During the active season then leaving open trenches overnight and/or leaving construction materials heaped in such a way that amphibians may seek shelter under them will pose a moderate risk of killing or injury.

Whilst this suggests that the risk associated with the planning application is only relatively low, it also demonstrates that the species requires further consideration and that precautionary mitigation will be required.

3.3.5 Water vole

The shallow and defunct field drain along the south-western side of the Site has no potential value for Water vole. The banks and margins of Pond 1 are suitable for Water vole but have not been made the subject of presence/absence searches because the pond is outside the red-line boundary and at least 8m away from the nearest proposed work.

So long as the proposal does not affect the pond habitat then Water vole does not require further consideration.

3.3.6 Otter

There is no habitat of value for Otter within or adjoining the Application Site. This species does not require further consideration.

3.3.7 Reptiles

Habitat assessment indicates there is negligible potential for occurrence of reptiles at the Application Site. The required combination of basking, foraging, sheltering and hibernating habitats is absent. It is concluded that reptiles do not require further consideration in relation to the proposal.

3.3.8 Other wildlife

Whilst it is possible for Brown hare and Hedgehog to pass through the Site and to use it as part of larger foraging habitats, the short-grazed grassland is judged to be of no value for either species to use for shelter or breeding, due to the lack of cover. There are no implications in relation to these species.

4.0 SUMMARY, ASSESSMENT & RECOMMENDATIONS

4.1 Summary

The results from the desk study, data search and walkover survey, show that there are the following ecological considerations at the Application Site:

- Statutory/non-statutory sites of ecological interest = No concerns or constraints.
- BAP priority habitats and/or rare or protected plant species = No concerns or constraints, though it is to be noted that the hedgerow adjacent to the south-western boundary is an example of BAP priority habitat and the Ash tree is a mature specimen and contributes to local ecological value at a site-specific scale. Also outside the Site, Pond 1 is also of local, site-specific ecological value.
- Invasive plant species = Although there is currently no evidence of invasive species within the red-line boundary, the presence of Himalayan balsam around Pond 1 indicates that this species needs to be taken into consideration when working at the Site, as it colonises by means of abundant seed dispersal.
- Bats, Badger, Water vole, Otter, reptiles, Brown hare and Hedgehog = No concerns or constraints.
- Breeding birds = No concerns or constraints, though it should be noted that the hedgerow adjacent to the south-western boundary is suitable for use by nesting birds, thus requires protection during works. Also outside the Site, it is likely that Pond 1 and adjacent bankside vegetation will support breeding birds.
- Great crested newt = There is *potential* for GCN occurrence within one or more of the three ponds that are present within 250m radius. Whilst the terrestrial habitat of the Site is only of very limited potential value for GCN, it is still necessary to take the species into consideration, especially as presence or absence of GCN has not been conclusively determined at any of the ponds.

4.2 Assessment

It is understood (by Ribble Ecology) that the proposal is for construction of a poultry unit, with associated crushed limestone hard-standings to the north-east and south-east of the structure. The proposals drawing prepared by Rae Connell Associates, does not show any proposals for landscaping, or for surface water collection, but illustrates that vehicular access will be via the existing track of Showley Road.

On the basis of what is shown, the only loss of habitat is that of short-grazed grassland and sparse ruderal vegetation growing on hard-standing. The vegetation is not of botanical value and the habitat is not of value for breeding birds. The only uncertainty in relation to protected species is whether or not GCNs are present in the locality and whether they utilise the grassland for dispersal or foraging by night. If present, there is potential for a low negative impact on GCN unless reasonable avoidance measures are applied.

Additionally, secondary consideration of the adjacent boundary hedgerow, mature Ash tree and pond is necessary because of the relatively close proximity of these features to the proposed new poultry unit. It is predicted that unless appropriate precautions are applied there is a risk of the following minor negative impacts in relation to such features:

- Damage of the branches and roots of adjacent shrubs and trees.
- Displacement of wildlife due to inappropriate use of outdoor lighting

- Risk of pond water contamination due to run-off from the poultry unit.

However, it should be noted that even in the absence of mitigation, all potential negative impacts that are identified in preceding paragraphs are small scale and minor. With appropriate mitigation measures in place, they can be reduced or eliminated, as explained in Section 4.3 of this report.

4.3 Recommendations

The recommendations arising from the survey and assessment are for a combination of standard and best-practice measures, for the protection of habitats and species alike. All are presented under sub-headings within this section of the report.

4.3.1 Precautionary protection of GCN & other amphibians

In case ponds within range of the Site support GCNs and/or other amphibians, it will be necessary to apply precautionary protection and compensation measures, as follows:

Prior to commencement:

- All grass that is currently short-grazed is to be *kept* in management and kept short right up until commencement of works, so it does not develop potential value for sheltering amphibians.

Clearly defining the zone of works& protecting adjacent features:

- The footprint of the Application Site only affects the short grassland and a small area of existing hard-standing, but it is assumed (by Ribble Ecology) that there may also need to be storage of materials and/or vehicles in close proximity. If this is the case, all storage is either to be on the existing hard-standing of the track adjacent to the north-eastern boundary, or on hard-standing associated with the small outbuilding to the north.
- It is recommended that a clearly defined zone of work is demarcated with tape or fencing, so that protective stand-offs from the hedgerow, shallow ditch and pond are clearly defined along the south-western and south-eastern sides of the Site.
- All workers must clearly understand that the demarcated areas must be protected from physical disturbance for the duration of works, with no breaking of ground and no removal of vegetation from such zones.

Implementing invasive works:

- Any storage of materials is to be on the adjacent hard-standing of the existing access track or the existing hard-standing around the small outbuilding to the north. There is to be **no storage of materials, chemicals or vehicles on vegetated land that is being retained and protected; all storage is to be away from the pond, and on hard-standings.**
- When construction materials are brought into the plot for use in the development, **all materials are to be stored so they are elevated off the ground**, on pallets, in skips, on lorries, or kept off the ground by other means. This is so that they do not create new features for amphibians to shelter under.
- When lifting existing features, or moving pallets etc. workers must try to **lift items cleanly upwards, rather than dragging them.** Any amphibians beneath them can then escape.
- Where new footings are excavated, **open, vertical-sided trenches or pits are**

not to be left for a period of more than 24hrs in case dispersing amphibians fall into them. Where possible, fore-planning should be applied and holes should only be dug at a time when it is known they can be used and re-filled, or else planks of wood should be placed in them to serve as 'escape bridges' for amphibians (and other wildlife).

Provided these measures are implemented there will be negligible risk of killing or injuring amphibians during the course of the works.

4.3.2 Protection of the pond

Pond 1 is situated outside the Application Site and suitably distanced from the work that there is no physical threat its banks or hollow. However, consideration of surface water and of potential run-off may be necessary, depending on the type of building that is proposed, and whether there will be effective containment of poultry manure and feed.

It must be ensured that there is no risk of run-off entering the pond and contaminating it.

One appropriate option might be to excavate a small balancing pond in grassland directly to the north-west end of the Application Site, then channel all water into this new pond. The hollow could be planted with Common reed (*Phragmites australis*) or Branched bur-reed (*Sparganium erectum*), which would filter any associated run-off.

4.3.3 Precautionary protection of breeding birds

There is no concern or constraint in relation to the Application Site itself, but if there is a requirement to trim back the adjacent hedgerow then standard protection of breeding birds is applicable in relation to the timing of hedgerow management works. The bird breeding season is typically March to August inclusive so hedge trimming is to take place outside this period, ensuring it will not affect nesting birds.

4.3.4 Prevent the spread of invasive species

The development must not cause the spread of Himalayan balsam in the wild. To aid with identifying this species, a selection of photographs are shown on the following page.

To prevent the spread of Himalayan balsam it is recommended that the measures listed below are applied:

- a) Himalayan balsam is only present *adjacent* to the Site at the moment, but this species spreads by means of an explosive seed-dispersal mechanism, sending seeds several metres away from the parent plant.
- b) Provided the 8m stand-off from the pond is retained at all times and there is no excavation of soil from closer to the pond it is anticipated there should be no risk of soil contamination, but it is to be reiterated that workers and machinery must not physically disturb any Himalayan balsam plants that are setting seed (seeding is typically in the July – August time frame).
- c) Throughout erection of the poultry building and laying of the hard-standing, workers should keep alert for signs of Himalayan balsam germination and should immediately hand pull any Himalayan balsam plants that are detected. The plants die if left on the surface; they are non-resilient annual plants and do not regenerate once pulled.
- d) Top soil from within the Site should be disposed of responsibly, ideally with retention and re-use within the Site, thus ensuring no seeds are spread in the soil.

Himalayan balsam identification sheet:**4.3.5 Protection of the roots and branches of the hedgerow and tree:**

Where the adjacent hedgerow and tree are being retained, it is important that their roots are protected against excavation and compaction by heavy machinery, and that their branches are not damaged by machinery.

Demarcation of the aforementioned buffer (specified for protection of amphibians) will appropriately protect the hedge and tree.

4.3.6 Precautionary consideration of nocturnal wildlife:

Wildlife is typically deterred by bright outdoor lighting, so if any lighting is required as part of the proposal then this is to be kept directional, low-level, focussed and/or screened or hooded. The lighting should not illuminate the nearby trees, shrubs, hedgerow or pond. This will permit bats, birds and other wildlife to continue using such vegetation for feeding and shelter.

5.0 CONCLUSION

In conclusion, whilst there are ecological considerations in relation to the planning proposal, it is judged that erection of a poultry unit and hard-standings is feasible, *provided that mitigation measures are applied*, as recommended in **Section 4.3** of this report. If the planning authority is minded to approve the application it is respectfully recommended that one or more planning conditions are used as a means of ensuring that wildlife protection measures are enforceable.

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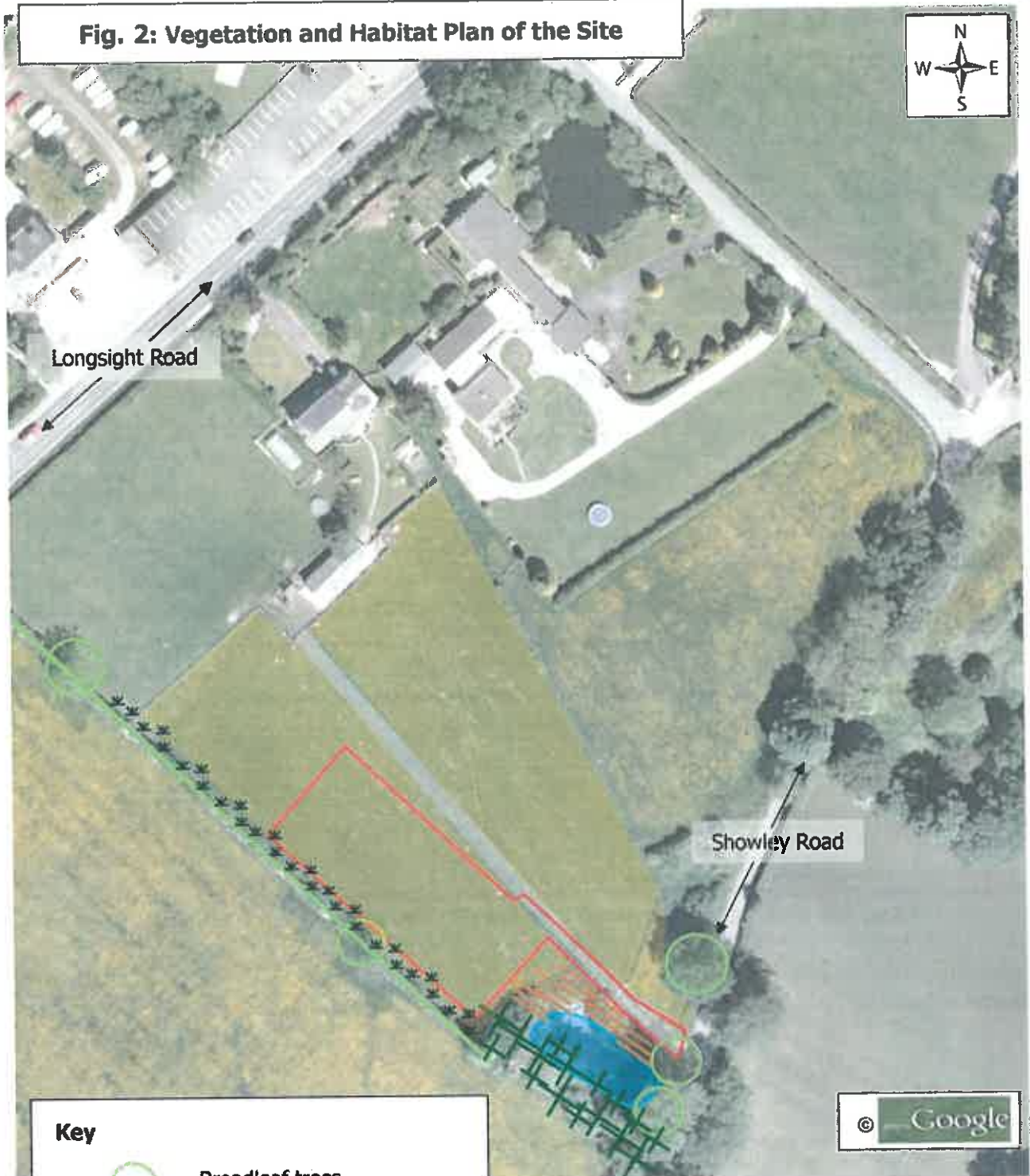
Table 1: A collective plant species list for the grazed grassland			
Species common name	Species Latin name	Distribution	Estimated % cover
Grasses and herbaceous plants			
Amphibious bistort	<i>Persicariaamphibia</i>	R	<1%
Bent grass sp.	<i>Agrostis sp.</i>	LF	5%
Broad-leaved dock	<i>Rumexobtusifolius</i>	R	<1%
Common mouse-ear	<i>Cerastiumfontanum</i>	O	1%
Creeping buttercup	<i>Ranunculusrepens</i>	F*	8%
Crested dog's-tail	<i>Cynosuruscristatus</i>	F*	10%
Field horsetail	<i>Equisetum arvense</i>	VL	<1%
Greater plantain	<i>Plantagolanceolata</i>	R	<1%
Jointed rush	<i>Juncus articulatus</i>	VL	<1%
Meadow buttercup	<i>Ranunculusacris</i>	O/LF	3%
Meadow foxtail	<i>Alopecuruspratensis</i>	VL	<1%
Oval sedge	<i>Carexovallis</i>	VL	<1%
Perennial rye-grass	<i>Loliumperenne</i>	F/LA*	25%
Red clover	<i>Trifoliumpratense</i>	O	1%
Red fescue	<i>Festucarubra</i>	O/LF*	8%
Ribwort plantain	<i>Plantagolanceolata</i>	VLF	2%
Sneezewort	<i>Achilleaptarmica</i>	R	<1%
Soft rush	<i>Juncus effusus</i>	VL	<1%
Sweet vernal grass	<i>Anthoxanthumodoratum</i>	O	2%
Timothy	<i>Phleumpratense</i>	F	5%
White clover	<i>Trifoliumrepens</i>	F	8%
Yorkshire fog	<i>Holcuslanatus</i>	F*	15%
Key: D = Dominant; A = Abundant; F = Frequent; O = Occasional; R = Rare; L = Locally, v = very			

Table 2. A plant species list for the mixed tall herb and coarse grassland vegetation

Species common name	Species Latin name	Distribution	Estimated % cover
Amphibious bistort	<i>Persicaria amphibia</i>	LA	-
Bittersweet	<i>Solanum dulcamara</i>	VLF	-
Broad-leaved dock	<i>Rumex obtusifolius</i>	O/LF	-
Broad-leaved willowherb	<i>Epilobium montanum</i>	VL	-
Cleavers	<i>Galium aparine</i>	LF	-
Cock's-foot	<i>Dactylis glomerata</i>	O/LF	-
Common couch	<i>Elytrigia repens</i>	O	-
Common nettle	<i>Urtica dioica</i>	F	-
Cow parsley	<i>Anthriscus sylvestris</i>	O	-
Creeping buttercup	<i>Ranunculus repens</i>	F	-
Creeping thistle	<i>Cirsium arvense</i>	O/LF	-
False oat grass	<i>Arrhenatherum elatius</i>	F	-
Garlic mustard	<i>Alliaria petiolata</i>	VL	-
Hard rush	<i>Juncus inflexus</i>	VL	-
Hedge bindweed	<i>Calystegia sepium</i>	VLF	-
Himalayan balsam	<i>Impatiens glandulifera</i>	LA	-
Hogweed	<i>Heracleum sphondylium</i>	F	-
Meadowsweet	<i>Filipendula ulmaria</i>	VLF	-
Reed canary grass	<i>Phalaris arundinacea</i>	LA	-
Rose sp.	<i>Rosa</i> sp.	VL	-
Rosebay willowherb	<i>Chamelon angustifolium</i>	VLF	-
Spear thistle	<i>Cirsium vulgare</i>	O	-
Timothy	<i>Phleum pratense</i>	O	-
Yorkshire fog	<i>Holcus lanatus</i>	F	-

Key: D = Dominant; A = Abundant; F = Frequent; O = Occasional; R = Rare; L = Locally, v = very

Fig. 2: Vegetation and Habitat Plan of the Site



Key

-  = Broadleaf trees
-  = Saplings & shrubs
-  = Tall ruderal vegetation
-  = Grazed grassland
-  = Hedgerow
-  = Hard-standing
-  = Rushes
-  = Pond
-  = Himalayan balsam
-  = Approx. Site boundary

Scale = 1:1500

0m 10m 50m

Grid ref: SD 66243 32817

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