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Ecological Phase 1 Survey Report

Land at Lamb Roe, Barrow, Clitheroe

September 2012

Control sheet

Project No & Title: BOW0017/423 Lamb Roe, Barrow, Clitheroe – Extended Phase 1 Survey

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Contents

1. Introduction	1
2. Methodology	2
3. Results	3
4. Impact Assessment and Recommendations	6
References	8
Legal Information	9
Appendix A – Extended Phase 1 Target Notes	11
Appendix B – Extended Phase 1 Habitat Plan	13
Appendix C – Species Records Plan	14

320120617P

1. Introduction

- 1.1 Bowland Ecology Ltd was commissioned by Janet Dixon Town Planners Ltd to undertake an Extended Phase 1 Habitat Survey and desk study of a site at Lamb Roe, Barrow, Clitheroe (NGR: SD 73482 37718). Planning permission is being sought for the development of the site.
- 1.2 The site currently comprises an undeveloped area of land adjacent to Clitheroe Rd. The habitats present include improved, poor semi-improved and semi-improved grasslands, and tall ruderal vegetation. The site is bordered by hard standing (roads), poor semi improved grassland, residential properties, and broadleaved woodland.
- 1.3 The purpose of the survey was to: 1) identify and map all habitats occurring within the survey area, 2) identify the presence of (or potential for) wildlife interests with particular reference to the need for further surveys and legal requirements, and 3) provide an ecological assessment and recommendations pertaining to the proposed development.
- 1.4 The ecological survey methodology followed that of an extended Phase 1 habitat survey. It also included a desk study to search for designated wildlife sites and protected species records. This report includes a description of survey methods and results; provides recommendations for further survey; and outlines recommendations to provide protection and enhancements for biodiversity and protected species. This report should be read in conjunction with the Phase 1 plan (Appendix B) and the target notes (1-5) as listed in Appendix A.

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2. Methodology

Desk Study

- 2.1 A targeted desk study was undertaken of the site and a 1km buffer zone involving an online search of the Multi Agency Geographical Information Centre (www.magic.gov.uk), Natural England's Nature on the Map (www.natureonthemap.org.uk) and other online resources. The local biological records centre for the area was also consulted, in this case the Lancashire Environment Record Network (LeRN). The UK and Local (Lancashire) Biodiversity Action Plans were also consulted.
- 2.2 The aim of the desk study was to identify the presence of statutory wildlife sites, non-statutory sites and any legally protected and notable species records for the area.

Extended Phase 1 Survey

- 2.3 The survey followed the Phase 1 habitat survey methodology (JNCC, 1993) and assessed all features of ecological significance within the survey area: All features of ecological significance were target noted and the location of target notes are shown in Appendix B.
- 2.4 The survey was extended such that evidence of fauna and faunal habitat was also recorded. The extended Phase 1 survey is a modified version of the Phase 1 survey and follows the approach recommended by the Guidelines for Preliminary Ecological Appraisal (IEEM, 2012) and the Guidelines for Baseline Ecological Assessment (IEA, 1995). This involves walking the whole site, mapping and describing the habitats present (e.g. woodland, grassland, scrub) and recording evidence of fauna and faunal habitat (e.g. droppings, tracks or specialist habitat such as ditches for water voles or ponds for breeding amphibians). A colour coded map of the habitats on site is produced, with corresponding target notes of ecologically interesting features (Appendix A).
- 2.5 The ecological survey was carried out on 7th September 2012 by Jack Kellet BSc (Hons). The weather was cool with light rain showers, 100% cloud cover and a light breeze. The timing of the survey was within the optimum period for completing such a survey, the conditions were suitable and the whole of the site was accessible. As a result, a comprehensive and valid assessment of the habitats present and their potential to support legally protected species was undertaken.

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3. Results

Statutory and Non-Statutory Wildlife Sites

- 3.1 There are three Biological Heritage Sites (BHS's) within 1km of the proposed area. The closest, Barrow Brook Field is just over 500m from the planning application boundary and is 1.3ha in size. The BHS is designated for its damp, species rich, semi natural MG4 grassland. A second BHS, Hard Hill Common is located on the other side of the railway line approximately 600m from the planning application site. The common is 27ha and is designated for its swamp and fen habitats including purple moor grass/rush pasture and flushes. The third BHS is the Calderstones Hospital Woodland/Railway Line. This site is 4.2ha and is designated for its artificial habitats. It lies approximately 750m from the planning application area.
- 3.2 No other statutory or non-statutory wildlife sites are present on or within 1km of the site.
- 3.3 Since all of these protected sites are designated for their habitats rather than faunal species and are over half a kilometre from the planning application site it is not considered that the planned development will have any impact upon them. They are therefore not considered further within this report.

Protected Species and Habitats Records

- 3.4 Searches with the LeRN provided numerous records within 1km of the site. Of particular relevance, are the following Lancashire BAP species which have been recorded within 1.5km of the site and therefore may be present if suitable habitats are found on site;
- Mammals; water vole, brown hare and common pipistrelle bat
 - Amphibians; common toad and great crested newt
 - Birds; curlew, reed bunting, skylark, lapwing, house sparrow, common sandpiper, meadow pipit, swift, grey heron, linnet, house martin, kestrel, oyster catcher, swallow, willow warbler, dunnoek, snad martin, starling and song thrush
 - Invertebrates; *Helophorus minutus* beetle, *Ilybius guttiger* beetle, small heath butterfly, lunar hornet moth
 - Fish; eel, bullhead
 - Flowering Plants; barberry, black poplar, small pondweed, mossy saxifrage, horsetail
 - Moss; slender stubble moss, dotted thyme moss
- 3.5 The locations of Lancashire BAP records are shown in Appendix C.
- 3.6 Online resources found a number of BAP species records for the grid square SD81 and therefore these species could potentially be present if suitable habitats are found on site;
- Amphibian; great crested newt and common toad.
 - Birds; common cuckoo, common grasshopper warbler, Eurasian curlew, Eurasian tree sparrow, grey partridge, house sparrow, lesser redpoll, northern lapwing, reed bunting, ring ouzel, spotted flycatcher, tree pipit, yellowhammer and wood warbler.
 - Flowering plants; cornflower and lesser butterfly orchid.

- Invertebrates; wall, small heath and white letter hairstreak butterflies, Autumnal rustic, broom, buff ermine, cinnabar, dark brocade, dusky brocade, ear moth, flounced chestnut, ghost, grey dagger, knot grass, mouse, small phoenix, small square spot and white ermine moths
 - Terrestrial mammals; otter
 - Fish; Atlantic salmon, brown sea trout, European eel and sea lamprey
 - Lichen; river jelly lichen and *Toninia sedifolia*
- 3.7 The Multi Agency Geographical Information Centre (www.magic.gov.uk), found three areas of UKBAP habitats, within 1km of the proposed development area. These are purple moor grass and rush pasture located within the Hard Hill Common BHS and lowland calcareous grassland and lowland meadow located within the Barrow Brook Field BHS. All of these habitats were more than 500m from the site.

Extended Phase 1 Survey

- 3.8 Target notes summarising key interest features for wildlife recorded during the Extended Phase 1 survey are included as Appendix A. The Phase 1 habitat plan for the study site is presented as Appendix B which includes dominant species codes for the habitats present and the locations of the target notes.
- 3.9 The proposed site is situated between the villages of Whalley and Barrow in Lancashire. The site itself comprises semi-improved species poor and semi-improved grassland, and tall ruderal vegetation. The surrounding landscape is generally one of rural villages, agricultural fields and hedgerows. The site is immediately surrounded by a small stand of woodland, fields, hard standing (roads), residential properties, and commercial properties.

Habitat descriptions from field survey

Semi-improved species poor grassland

- 3.10 Semi-improved species poor grassland makes up the majority of the site (TN5). The habitat appears to be subject to management in the form of periodic mowing, producing a short uniform sward. The dominant species is perennial rye grass (*Lolium perenne*).

Semi-improved grassland

- 3.11 There is a strip of semi improved grassland (TN3) between the main field and a small ditch (TN4) to the south east of the site. Species present include creeping cinquefoil (*Potentilla reptans*), meadow vetchling (*Lathyrus pratensis*), red clover (*Trifolium pratense*), common sorrel (*Rumex acetosa*), meadow buttercup (*Ranunculus acris*), creeping buttercup (*Ranunculus repens*), birds foot trefoil (*Lotus corniculatus*), cuckoo flower (*Cardamine pratensis*), bent grass (*Agrostis sp.*), perennial rye grass, cocksfoot (*Dactylis glomerata*), red fescue (*Festuca rubra*), Yorkshire fog (*Holcus Lanatus*), creeping soft grass (*Holcus mollis*), and tufted hair grass (*Deschampsia cespitosa*).

Tall ruderals

- 3.12 Tall ruderals (TN2), dominated by greater willowherb (*Epilobium hirsutum*), meadowsweet (*Filipendula ulmaria*) and hogweed (*Heracleum sphondylium*) make up the south east corner of the site, separated from the rest of the site by a small stream (TN4).

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Running water

- 3.13 A small stream is located to the south of the site running south west (TN4). The stream is very overgrown with stands of water mint (*Mentha aquatic*), meadowsweet, *Typha* sp. and yellow iris (*Iris pseudacorus*).

Species Poor Hedgerow

- 3.14 The western boundary of the site consists of a species poor hedge extending from the access road down to the south west corner (TN1). The dominant species present are hawthorn (*Crataegus monogyna*) and dogwood.

Other habitats

- 3.15 There is a stone wall towards the northern end of the site and bare ground is present along the access road. Fence lines are located along the northern, eastern and southern boundaries of the site; whilst bare ground and stone walls have the potential to be colonised by pioneer plants, they are of little intrinsic ecological value. No buildings are present on the site.

Faunal description from field survey

- 3.16 A range of habitats are present within the site boundary including; grassland, tall ruderals and running water, which can provide a number of opportunities for fauna to inhabit the site.

Small and medium mammals

- 3.17 The grassland and tall ruderal habitats provide opportunities for small mammals such as mice, field voles and shrews. No badger setts were observed to be present at the time of survey. The site provides good opportunities for cover for fox and hedgehogs, which are a UK BAP species in areas of tall ruderals.

Birds

- 3.18 There is potential for common ground nesting and nesting birds to be present throughout the site, particularly within the hedgerow and areas of tall ruderals (TN1 and TN2). These habitats are also likely to provide foraging habitat and connectivity for birds within nearby woodland habitats. There are no trees on the site itself, however there is a small area of semi mature broadleaved woodland adjacent to the eastern boundary which is likely to have nesting birds present.

Amphibians

- 3.19 The site does provide good terrestrial habitat for amphibians such as great crested newts; however, there are no ponds within 250m of the proposed development site and the small stream on site is not suitable for amphibian breeding. There is therefore only a negligible risk of amphibians being present on site and they are not considered further within this report.

Bats

- 3.20 There are no trees or buildings on site and therefore no roosting habitat for bats. However there is a small area of semi mature broadleaved woodland adjacent to the eastern boundary. Whilst this woodland, the grassland habitats and the linear features, including the hedgerow around the site, are likely to provide foraging opportunities for a range of bat species there is no shortage of similar habitat in the surrounding landscape.

4. Impact Assessment and Recommendations

- 4.1 This section is a summary of ecological interest within the survey area and the recommendations and mitigation measures that should be considered should the development affect them.

Scheme Proposal

- 4.2 The scheme involves the development of the site for residential accommodation. The development may impact upon semi-improved species poor grassland, semi-improved grassland, tall ruderals, running water and hedgerows.

Habitats

- 4.3 The proposed development may have the greatest impact on species poor semi-improved grassland; this habitat was found to be species poor and of low ecological value. It also may impact upon semi-improved grassland, tall ruderals, species poor hedgerow and running water in the form of a small over grown stream. All of these habitats are commonly occurring and also of limited ecological value. Due to the low value of these habitats, it is considered that the development is not likely to have any significant impacts in respect of habitat types.

Birds

- 4.4 Where hedgerows and other potential bird nesting habitat, are removed as a result of the proposed works, it is recommended that the works should take place outside the breeding bird season which runs from late February until September, in order to prevent any impacts upon breeding birds.
- 4.5 Any vegetation clearance work that must be carried out within the bird breeding season will be subject to a pre-clearance bird survey carried out by a suitably experienced ecologist. No vegetation clearance will be carried out within 5m of an identified nest until the young have fledged and are no longer returning to the nest site. Vegetation will only be cleared once a scheme ecologist has declared the nest to be no longer in use. Mitigation for the loss of breeding bird habitat should include the planting of native species of trees and shrubs and the provision of alternative nesting opportunities in the form of nest boxes within the new development.

Running Water

- 4.6 If works are required in the proximity of the watercourse the contractor must provide a method statement to ensure any silt or other pollutants including hydrocarbons are not released into the water feature. Extra vigilance must be considered during period of wet weather or high flows. Any dewatering works must pass through adequate silt removal apparatus prior to returning to the watercourse. All works within the vicinity any watercourse should be in accordance with the Environment Agency Pollution Prevention Guidelines (PPG5).

Enhancement

- 4.7 A key element of the National Planning Policy Framework is to minimise impacts to biodiversity and provide enhancements. Paragraph 109 states that 'The planning system should contribute to and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in

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biodiversity where possible'. It also states in Paragraph 118 that 'when determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by encouraging opportunities to incorporate biodiversity in and around developments'.

4.8 Measures to enhance the biodiversity of the site include:

- a) Seeking the advice of a professionally/suitably qualified ecologist throughout the progress of the development in order to maximise ecological and biodiversity gains at each stage.
- b) Planting of scattered trees around the proposed new buildings. Species that should be used should include hawthorn, ash, oak and rowan. Specimens should be sourced locally, they should be planted at an appropriate time of year (Oct – Feb, when there is no ground frost) and protected from grazing by rabbits and deer.
- c) Installation of bird nesting boxes on the properties adjacent to woodland areas.
- d) Any plantings within the new development would provide foraging habitat for bats, and therefore have the potential to increase the value of the site. Nectar rich plants that attract insects would be recommended as they would enhance foraging opportunities for bats in the local area.

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References

- IEA. 1995. *Guidelines for Baseline Ecological Assessment*. Chapman and Hall.
IEEM, 2012. *Guidelines for Preliminary Ecological Appraisal*. IEEM.
Joint Nature Conservation Committee (1993). *Handbook for Phase 1 Habitat Survey: A technique for environmental audit*. JNCC
www.ukbap.org.uk

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Legal Information

This report provides guidance of potential offences as part of the impact assessment. This report does not provide detailed legal advice and for full details of potential offences against protected species the relevant acts should be consulted in their original forms i.e. The Wildlife and Countryside Act, 1981, as amended, The Countryside and Rights of Way Act 2000, The Natural Environment and Rural Communities Act, 2006 and The Conservation of Habitats and Species Regulations 2010.

Bats

All **bats** in the UK are listed on Schedule 5 of the Wildlife and Countryside Act (WCA) (1981, as amended), updated by the Countryside and Rights of Way Act (2000). It is therefore subject to provision 9 of the WCA which makes it an offence to;

- Intentionally kill, injure or take any wild bat,
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by any wild bat
- Intentionally or recklessly disturb any wild bat while it is occupying a structure or place which it uses for that purpose.
- Possess or control any live or dead specimen or anything derived from a UK bat species.

The Countryside and Rights of Way Act 2000 amends the Wildlife and Countryside Act to also make it an offence to intentionally or recklessly damage, destroy or obstruct a place that bats use for shelter or protection. The term 'reckless' is defined by the case of Regina v Caldwell 1982. The prosecution has to show that a person either deliberately took an unacceptable risk, or failed to notice or consider an obvious risk.

The Conservation of Habitats and Species Regulations 2010 which make provision implementing Council Directive 92/43/EEC on the conservation of natural habitats and of wild flora and fauna (the Habitats Directive). These give additional protection to bats, which are listed on Schedule 2 of the Regulations. Under Regulation 39 a person commits an offence if he;

- Deliberately captures, injures or kills any wild animal of a European protected species.
- Deliberately disturbs wild animals of any such species in such a way as to be likely significantly to affect the ability of any significant group of animals of that species to:
 - i) to survive, to breed or to reproduce or to rear or nurture their young or
 - ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate or the local distribution or abundance of that species

A bat roost has been interpreted by Natural England to mean any structure or place which is used for shelter or protection whether or not bats are present at the time

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Breeding Birds

Breeding birds are protected by Section 1 of the Wildlife and Countryside Act (1981, as amended). All birds, their nests and eggs are protected by law and it is thus an offence, with certain exceptions, to intentionally;

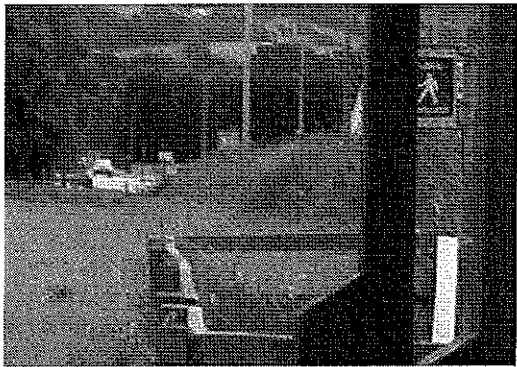
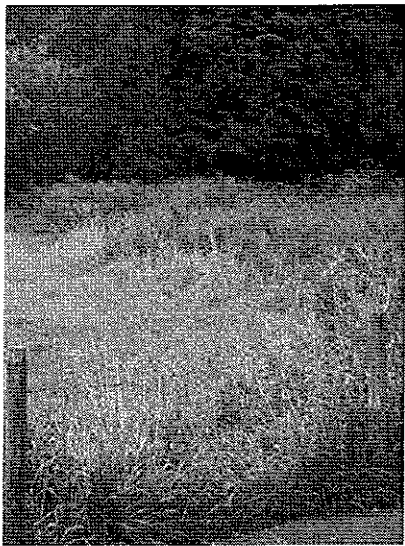
- Kill, injure or take any wild bird,
- Take, damage or destroy the nest of any wild bird while it is in use or being built,
- Take or destroy the egg of any wild bird.

Birds listed on Schedule 1 of the Wildlife and Countryside Act (1981, as amended) are subject to increased protection through a penalty system. For species listed on this Schedule it is also an offence to intentionally or recklessly;

- Disturb any Schedule 1 bird while it is building a nest or is in or near a nest containing eggs or young,
- Disturb dependent young of any Schedule 1 bird.

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Appendix A – Extended Phase 1 Target Notes

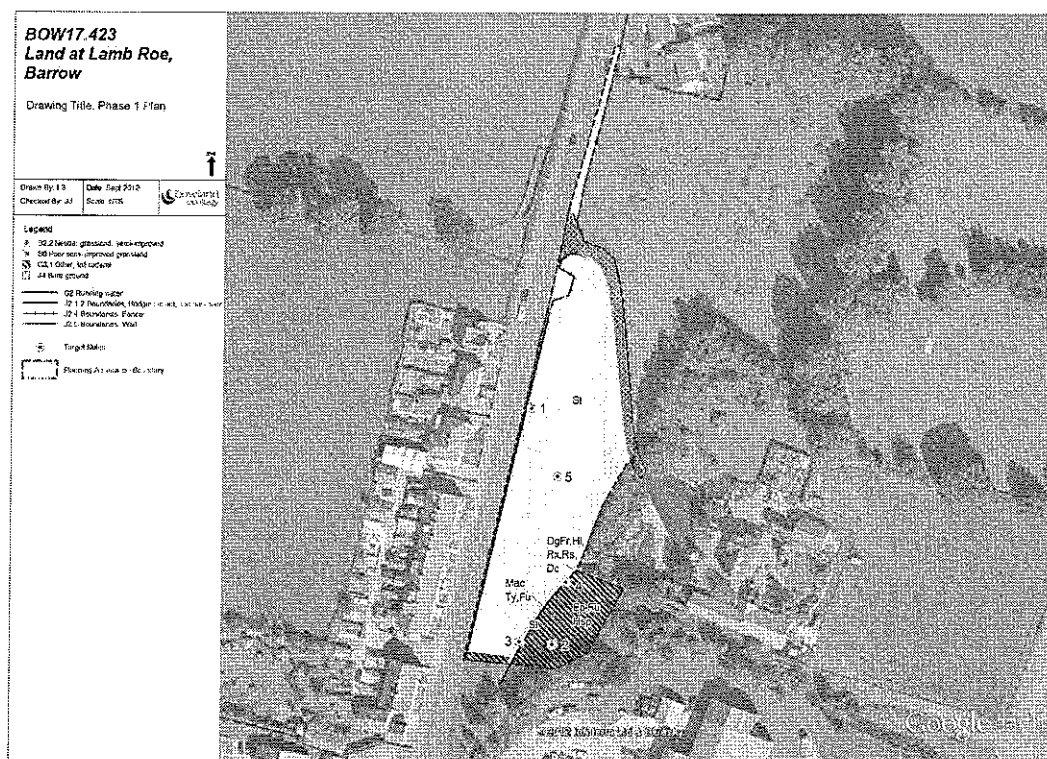
Target Note	Description	Photograph
1	A species poor hedgerow consisting mainly of hawthorn and dogwood extends from the access road to the south west corner, making up the western boundary of the site. This hedgerow has potential for nesting birds to be present	
2	Tall ruderals make up the south west corner. Species present include great willowherb, meadowsweet, and hogweed. This habitat has the potential to be used by small and medium sized mammals and ground nesting birds. No evidence of badger activity was found during the survey.	
3	Between the ditch and the main field is a strip of semi-improved grassland which does not appear to be subject to the same level of management as the species poor semi improved grassland, being more rank and tussocky. Species present include creeping cinquefoil, meadow vetchling, red clover, common sorrel, meadow buttercup, creeping buttercup, birds foot trefoil, cuckoo flower, bent grass, perennial rye grass, cocksfoot, red fescue, Yorkshire fog, tufted hair grass.	

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4	Between the tall ruderals and the grassland is ditch with a small stream running south west. The stream is very overgrown with water mint, meadowsweet, umbellifer sp., yellow iris and <i>Typha</i> sp. It has low potential for amphibians and water vole	
5	Semi-improved species poor grassland comprises the majority of the site. The habitat appears to be subject to management, producing a short uniform sward. The dominant species is rye grass with few other species present. This grassland provides potential habitat for foraging birds and small mammals.	

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Appendix B – Extended Phase 1 Habitat Plan



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Appendix C – Species Records Plan

