

# Preliminary Ecological Appraisal

3 Whitehouse End Cottages, Mow Cop, ST7 3PS

**James Porter** 

May 2016

# Notice to readers

This report has been prepared by Absolute Ecology LLP with all reasonable skill, care and diligence, within the terms of the contract with the client. The actions of the surveyor on site, and during the production of the report were undertaken in accordance with the Code of Professional Conduct for the Chartered Institute of Ecology and Environmental Management (www. cieem.org.uk).

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# Non-technical summary

Absolute Ecology LLP were commissioned to undertake a Preliminary Ecological Appraisal of land at 3 Whitehouse End Cottages, Mow Cop, ST7 3PS. The Preliminary Ecological Appraisal was undertaken on the 25<sup>th</sup> May 2016, by an experienced and licensed ecologist who is a member of the Chartered Institute of Ecology & Environmental Management (CIEEM).

The survey area is a small parcel of land in a rural location just to the east of Mow Cop in Staffordshire. The surrounding landscape is dominated by pasture and arable fields, with hedgerows and ditches along the boundaries. A wet ditch runs from the northeast, along an adjacent field boundary; reaching to within approx. 20m of site (to the east).

The site itself is a small enclosure, showing signs of ploughing, currently populated largely by tall ruderal vegetation. Trees and a small length of hedgerow are present on the site boundaries.

The site is isolated from the nearby designated sites and does not appear to contain any rare plant species, and it is not particularly diverse. The site shows potential for protected animal species however. Recommendations are therefore given, including the situations under which any further surveys would be required. To prevent potential delays, it would be prudent to undertake any recommended surveys well in advance of a planning application being made.

If there is due to be any loss or major severance of hedgerows/tree-lines (or a significant increase in light spill), then it is recommended that bat transects are undertaken to check whether any important commuting routes are present. Following Good Practice Guidelines for sites of relatively low suitability for bats, one survey visit should be conducted per season (spring – April/May, summer –June/July/Aug, autumn –Sept/Oct) in appropriate weather conditions for bats. These survey visits should comprise of transect surveys, in conjunction with deployment of a static bat detector (data to be collected on five consecutive nights per season). Further surveys may be required if these survey visits reveal higher levels of bat activity than predicted by habitat alone.

Although no badger activity was observed on the site at the time of the survey, activity patterns of this species can change over a short time. It is recommended that a check for badger activity is undertaken immediately prior to works commencing. Badger activity can be observed at any time of year.

Nesting birds may be present in the trees, hedgerow, tall ruderal vegetation and grassland during the bird breeding season (March to August inclusive). If clearance of these areas is planned during these months, a prior check for nesting birds should be undertaken by an ecologist. Any active nests that are found must not be moved until fledglings have dispersed.

A lighting design around the site should be considered at an early stage. Further details of this are given.



# Contents

## Notice to readers

## Non-technical summary

## Contents

1.0 Introduction

Background

Site Description

## 2.0 Methodology

Desk Study

Habitat Survey

Fauna

Valuation of Ecological Features

Nomenclature

## 3.0 Legislation

### 4.0 Results

Desk Study

Habitats

Fauna

## 5.0 Development Constraints and Recommendations

**Designated Sites** 

Habitats

Protected and Notable Species

## 6.0 References

- 7.0 Plans
- 8.0 Photographic Plates
- 9.0 Pre-survey Desk Study



## 1.0 Introduction

## Background

- 1.1 Absolute Ecology LLP was commissioned to undertake a Preliminary Ecological Assessment of a site known as land at 3 Whitehouse End Cottages, Mow Cop, ST7 3PS.
- 1.2 The Assessment was undertaken on the 25<sup>th</sup> May 2016 by James Porter BSc(Hons), MSc; an experienced ecologist who is a member of the Chartered Institute of Ecology & Environmental Management (CIEEM). He has 4 years' experience of conducting Preliminary Ecological Appraisals (Phase 1), and holds a Class 2 Bat Licence, with 5 years' experience of bat inspection, as well as a Class 1 Great Crested Newt Licence and 4 years' experience of GCN surveying.
- 1.3 The objective of this report is to provide the client with information on any known or potential protected or rare species that may be using the site, and to outline recommendations on how to proceed with the works in a legal and ecologically sensitive manner.
- 1.4 Unless the client indicates to the contrary, information on the species found to be present on the site will be passed to the county biological records centre to update records held for the area.

## **Site Description**

The survey area is a small parcel of land in a rural location just to the east of Mow Cop in Staffordshire. The surrounding landscape is dominated by pasture and arable fields, with hedgerows and ditches along the boundaries. A wet ditch runs from the northeast, along an adjacent field boundary; reaching to within approx. 20m of site (to the east).

The site itself is a small enclosure, showing signs of ploughing, currently populated largely by tall ruderal vegetation. Trees and a small length of hedgerow are present on the site boundaries.



## 2.0 Methodology

## **Desk Study**

- 2.1 In order to compile background information on the site and immediate surroundings the Staffordshire Ecological Record (SER) and RECORD (the biodiversity information system for Cheshire, Halton, Warrington and Wirral) was contacted.
- 2.2 Information requested was as follows:-
  - Records of protected species within the 2km of the site.
  - Records of rare or notable species within the 2km of the site.
  - Non-statutory site designations on or within 2km of the site.
- 2.3 Additionally, MAGIC (Multi-Agency Geographic Information for the Countryside, 2010) was used to establish whether any of the following were present:-
  - Statutory site designations on or within 2km of the site.
  - Statutory sites designated for bats within 5km of the site.

## Habitat Survey

- 2.4 The site was visited on the 25<sup>th</sup> May 2016 and was surveyed in accordance with the Joint Nature Conservation Committee (JNCC) Phase I Habitat Survey methodology (JNCC, 2007). This technique provides an inventory of the basic habitat types present and allows identification of areas of greater potential that might warrant further study.
- 2.5 The observable higher plant species in each habitat type within the site, and their abundance, were recorded using the DAFOR scale:
  - D Dominant
  - A Abundant
  - F Frequent
  - O Occasional
  - R Rare

### Fauna

2.6 Habitats present on the site were searched for obvious signs of faunal activity, *e.g.* presence of badger setts, mammal tracks or herpetofauna under refugia. Any buildings and mature trees on site were visually examined from the ground to identify features with the potential to support roosting bats.



## Valuation of Ecological Features

- 2.7 The value of areas of habitat and plant communities has been measured against published criteria where available. Biodiversity Action Plans (BAPs) have been searched to identify whether action has been taken to protect all areas of a particular habitat and to identify current factors causing loss and decline of particular habitats. The presence of injurious and legally controlled weeds has also been taken into account.
- 2.8 When assigning a level of value to a species, its distribution and status (including a consideration of trends based on available historic records) has been taken into account. Other factors influencing the value of a species are: legal protection, rarity and Species Action Plans (SAPs). Guidance, where it is available, for the identification of populations of sufficient size for them to be considered of national or international importance has also been taken into account.

## **Survey Constraints**

2.9 Data Search

Desk study data provides information on recorded species in the area and can be helpful for targeting survey. However, it is possible that protected species that have not been identified within the data search may occur on or adjacent to the site.

2.10 Field survey

Habitats within 50m of the site boundary were inspected as far as access allowed. Ponds up to 500m from the site were viewed where there was public access.

Fauna species present may not always leave field signs and in addition, species may take up residence on site subsequent to the survey. If no development takes place within 12 months of this survey report, the findings should be reviewed and may need updating, and a full survey should be repeated within three years

### Nomenclature

2.11 The English name only of flora and fauna species is given in the main text of this report; however, scientific names are used for invertebrates where no English name is available. Vascular plants and charophytes follow the nomenclature of The Botanical Society for the British Isles (BSBI) 2007 database (BSBI, 2011) with all other flora and fauna following the Nameserver facility of the National Biodiversity Network Species Dictionary (http://www.nhm.ac.uk/nbn/), which is managed by the Natural History Museum.



## 3.0 Legislation

- 3.1 The United Kingdom Biodiversity Action Plan (BAP) 1994 sets out a strategy for implementing the Convention on Biological Diversity, which was signed by the United Kingdom at the Rio de Janeiro Earth Summit in 1992. The published report contains action plans for the United Kingdom's most threatened species and habitat plans for the most vulnerable areas.
- 3.2 The Local BAP sets out the county's part in the UK biodiversity planning process, in the form of local habitat and species action plans. Local BAPs are intended to focus resources, to conserve and enhance biodiversity, by taking account of national and local priorities.
- 3.3 Schedule 1 Part 1 of The Wildlife and Countryside Act 1981 (and amendments) this lists birds protected by special penalties at all times. It prohibits intentional killing/injuring, taking, possessing, disturbing and selling (including parts and derivatives, eggs, nests, *etc.* as applicable) as well as damaging, destroying or disturbing nests in current use or dependent young, *etc.*
- 3.4 Schedule 5 of The Wildlife and Countryside Act 1981 (and amendments) this prohibits deliberate killing, injuring, taking, possessing, disturbing and selling (including parts and derivatives) as well as damaging, destroying or obstructing any structure or place of refuge of listed fauna, such as Dormouse, Otter and bat species.
- 3.5 The Conservation of Habitats and Species Regulations 2010, consolidate all the various amendments made to the Conservation (Natural Habitats, &c.) Regulations 1994, in respect of England and Wales. It is illegal to kill, disturb, destroy eggs, breeding sites or resting places, to pick, collect, take cuttings, uproot or destroy in the wild as well as keep, transport, sell/exchange and offer for sale/exchange species listed.
- 3.6 The Countryside and Rights of Way Act 2000 this increases protection given by The Wildlife and Countryside Act 1981 (and amendments). The offence to intentionally damage any structure or place that a wild animal listed in Schedule 5 of the Act uses for shelter or protection or deliberately disturbing any such animal while in such a structure or place is extended so that the offence also covers reckless damage or disturbance. The CRoW Act also places a duty on Ministers and Government Departments to have regard for the purpose of conserving biological diversity in accordance with the Convention on Biological Diversity.
- 3.7 The Protection of Badgers Act 1992 this Act makes it illegal to wilfully kill, injure or take any Badger, or attempt to do so and it is an offence to intentionally or recklessly damage, destroy or obstruct access to any part of a Badger sett.
- 3.8 The Natural Environment and Rural Communities Act, 2006 as well as creating Natural England, this act gives all public authorities the duty to have regard for conserving biodiversity within the commission of their duties. This includes a duty to restore and enhance as well as maintain biodiversity. The act also strengthens protection for Sites of Special Scientific Interest (SSSI) and makes authorities liable for allowing damage to such sites or their features.



## 4.0 Results

## **Desk Study**

- 4.1 There is one statutory designated site within 2km of the site.
  - Roe Park Woods SSSI, approximately 1.25km northwest of the site.
- 4.2 There are no statutory designated sites for bats within 5km of the site.
- 4.3 There are nine non-statutory sites within 2km of the site.
  - Dale Green (south-west of) Retained BAS
  - Mow Cop Quarry Retained BAS
  - Newpool (east of) Biodiversity Alert Site
  - Willocks Wood (south-west of) Retained BAS
  - Knypersley Fishing Pool Retained BAS
  - Cheshire's Close Local Wildlife Site
  - Limekiln Farm Quarry Local Wildlife Site
  - Lower Roe Park Woods Local Wildlife Site
  - Mow Cop Heaths Local Wildlife Site
- 4.4 SER and Record provided the following records for protected and notable species within 2km of the site boundary:

Amphibians	
Bufo bufo	Common Toad
Birds	
Acanthis cabaret	Lesser Redpoll
Acanthis flammea	Common (Mealy) Redpoll
Accipiter nisus	Sparrowhawk
Actitis hypoleucos	Common Sandpiper
Aegithalos caudatus	Long-tailed Tit
Alauda arvensis	Sky Lark
Alcedo atthis	Common Kingfisher
Alectoris rufa	Red-legged Partridge
Anas crecca	Eurasian Teal
Anas platyrhynchos	Mallard
Anser anser	Greylag Goose
Anser brachyrhynchus	Pink-footed Goose
Anthus pratensis	Meadow Pipit



Anthus trivialis Apus apus Aythya fuligula Branta canadensis Buteo buteo Carduelis carduelis Carduelis chloris Chroicocephalus ridibundus Columba oenas Columba palumbus Corvus corone Corvus monedula Cuculus canorus Cyanistes caeruleus Delichon urbicum Dendrocopos major Emberiza schoeniclus Erithacus rubecula Falco peregrinus Falco subbuteo Falco tinnunculus Fringilla coelebs Fringilla montifringilla Gallinago gallinago Garrulus glandarius Haematopus ostralegus Hirundo rustica Larus argentatus Larus fuscus Larus marinus Linaria cannabina Linaria flavirostris Locustella naevia Loxia curvirostra Lymnocryptes minimus Motacilla alba Motacilla cinerea Motacilla flava Muscicapa striata Numenius arquata Oenanthe oenanthe Parus major Passer domesticus Passer montanus Perdix perdix

Tree Pipit Swift Tufted Duck Canada Goose Buzzard Goldfinch Greenfinch Black-headed Gull Stock Dove Common Wood Pigeon Carrion Crow Jackdaw Common Cuckoo Blue Tit House Martin Great Spotted Woodpecker Reed Bunting Robin Peregrine Falcon Eurasian Hobby Kestrel Chaffinch Brambling **Common Snipe** Jay Eurasian Oystercatcher Swallow Herring Gull Lesser Black-backed Gull Great Black-backed Gull Linnet Twite Common Grasshopper Warbler Common Crossbill Jack Snipe **Pied/White Wagtail** Grey Wagtail Yellow Wagtail Spotted Flycatcher **Eurasian Curlew** Northern Wheatear Great Tit House Sparrow **Eurasian Tree Sparrow Grey Partridge** 



Periparus ater Pernis apivorus Phasianus colchicus Phoenicurus phoenicurus Phylloscopus collybita Phylloscopus sibilatrix Phylloscopus trochilus Pica pica Picus viridis Poecile palustris Prunella modularis Pyrrhula pyrrhula Regulus regulus Scolopax rusticola Sitta europaea Streptopelia decaocto Sturnus vulgaris Sylvia atricapilla Sylvia communis Tringa ochropus Troglodytes troglodytes Turdus iliacus Turdus merula Turdus philomelos Turdus pilaris Turdus torquatus Turdus viscivorus Tvto alba Vanellus vanellus

#### Invertebrates

Aeshna cyanea Aeshna grandis Aglais io Aglais urticae Andricus fecundator Andricus quercuscalicis Anthocharis cardamines Aphantopus hyperantus Bombus (Bombus) lucorum Bombus (Bombus) lucorum Bombus (Bombus) terrestris Bombus (Megabombus) hortorum Bombus (Melanobombus) lapidarius Bombus (Psithyrus) campestris Bombus (Psithyrus) sylvestris Coal Tit European Honey-buzzard Pheasant Common Redstart Chiffchaff Wood Warbler Willow Warbler Magpie Green Woodpecker Marsh Tit Dunnock Bullfinch Goldcrest Eurasian Woodcock Nuthatch **Collared Dove** Starling Blackcap Whitethroat Green Sandpiper Wren Redwing Blackbird Song Thrush Fieldfare **Ring Ouzel** Mistle Thrush Barn Owl Northern Lapwing

Southern Hawker Brown Hawker Peacock Small Tortoiseshell Artichoke Gall Knopper Gall Orange-tip Ringlet White-Tailed Bumble Bee Buff-Tailed Bumble Bee Small Garden Bumble Bee Large Red Tailed Bumble Bee Field Cuckoo Bee



Bombus (Pyrobombus) hypnorum Bombus (Pyrobombus) pratorum Bombus (Thoracobombus) pascuorum Callophrys rubi Celastrina argiolus Celastrina argiolus subsp. britanna Chiasmia clathrata Coccinella septempunctata Coenonympha pamphilus Colletes (Colletes) daviesanus Diarsia rubi Dolichovespula (Pseudovespula) sylvestris Gonepteryx rhamni Hepialus humuli Lasiommata megera Lycaena phlaeas Maniola jurtina Maniola jurtina subsp. splendida Melanchra persicariae Ochlodes sylvanus Palomena prasina Pararge aegeria Pieris brassicae Pieris napi Pieris rapae Polygonia c-album Polyommatus icarus Pontania (Pontania) proxima Psyllopsis fraxini Pyronia tithonus Pyronia tithonus subsp. britanniae Spilosoma lubricipeda Spilosoma lutea Thymelicus lineola Thymelicus sylvestris Vanessa atalanta Vanessa cardui

#### Mammals

Arvicola amphibius Erinaceus europaeus Lepus europaeus Meles meles Microtus agrestis Mus musculus Tree Bumble Bee Early Bumble Bee Common Carder Bee Green Hairstreak Holly Blue Holly Blue Latticed Heath 7-spot Ladybird Small Heath insect - hymenopteran Small Square-spot Tree Wasp Brimstone Ghost Moth Wall Small Copper Meadow Brown Meadow Brown Dot Moth Large Skipper Green Shieldbug Speckled Wood Large White Green-veined White Small White Comma **Common Blue** Pontania (Pontania) proxima Psyllopsis fraxini Hedge Brown Hedge Brown White Ermine **Buff Ermine** Essex Skipper Small Skipper **Red Admiral** Painted Lady

European Water Vole West European Hedgehog Brown Hare Eurasian Badger Field Vole House Mouse



Mustela nivalis Mustela putorius Myotis mystacinus/brandtii Nyctalus noctula Oryctolagus cuniculus Pipistrellus pipistrellus Pipistrellus pygmaeus Plecotus auritus Rattus norvegicus Sciurus carolinensis Talpa europaea Vulpes vulpes

#### Plants

Agrostis capillaris Alnus glutinosa Alopecurus geniculatus Anthemis cotula Anthoxanthum odoratum Athyrium filix-femina Betula pendula Blechnum spicant Calluna vulgaris Campanula rotundifolia Cardamine flexuosa Cardamine pratensis Carex panicea Cedrus atlantica Cedrus deodara Cedrus libani Centaurea nigra Cerastium fontanum Cerastium glomeratum Chamerion angustifolium Chenopodium album agg. Cirsium arvense Cirsium palustre Coniferales Crataegus monogyna Crocosmia pottsii x aurea = C. x crocosmiiflora Cynosurus cristatus Cytisus scoparius Dactylis glomerata Dactylorhiza fuchsii Deschampsia cespitosa

Weasel Polecat Whiskered/Brandt's Bat Noctule Bat European Rabbit Common Pipistrelle Soprano Pipistrelle Brown Long-eared Bat Brown Rat Eastern Grey Squirrel European Mole Red Fox

Common Bent Alder Marsh Foxtail Stinking Chamomile Sweet Vernal-grass Lady-fern Silver Birch Hard-fern Heather Harebell Wavy Bitter-cress Cuckooflower **Carnation Sedge** Atlas Cedar Deodar Cedar-of-Lebanon **Common Knapweed** Common Mouse-ear Sticky Mouse-ear Rosebay Willowherb Fat Hen **Creeping Thistle** Marsh Thistle Coniferales Hawthorn Montbretia Crested Dog's-tail Broom Cock's-foot Common Spotted-orchid **Tufted Hair-Grass** 



Deschampsia flexuosa Digitalis purpurea Dryopteris affinis Dryopteris dilatata Epilobium ciliatum Epilobium palustre Epilobium tetragonum Equisetum arvense Equisetum telmateia Eriophorum vaginatum Fagus sylvatica Festuca ovina Fraxinus excelsior Galium murale Galium saxatile Glyceria fluitans Glyceria maxima Heracleum sphondylium Hieracium diaphanum Holcus lanatus Holcus mollis Hyacinthoides non-scripta Hypochaeris radicata llex aquifolium Juncus acutiflorus Juncus effusus Lolium perenne Lonicera periclymenum Lotus corniculatus Lotus pedunculatus Luzula multiflora Lysimachia nemorum Malus Malus pumila Malus sylvestris Mentha pulegium Mentha spicata Metasequoia glyptostroboides Meum athamanticum Moehringia trinervia Molinia caerulea Myosotis sylvatica Nardus stricta Oreopteris limbosperma Persicaria maculosa

Wavy Hair-grass Foxglove Scaly Male-fern Broad Buckler-fern American Willowherb Marsh Willowherb Square-stalked Willowherb Field Horsetail Great Horsetail Hare's-tail Cottongrass Beech Sheep's-fescue Ash Small Goosegrass Heath Bedstraw Floating Sweet-grass Reed Sweet-grass Hogweed Dark-leaved Hawkweed Yorkshire-fog **Creeping Soft-grass** Bluebell Cat's-ear Holly Sharp-flowered Rush Soft-rush Perennial Rye-grass Honeysuckle Common Bird's-foot-trefoil Greater Bird's-foot-trefoil Heath Wood-rush Yellow Pimpernel Apple Apple Crab Apple Pennyroyal Spear Mint Dawn Redwood Spignel Three-nerved Sandwort Purple Moor-grass Wood Forget-me-not Mat-grass Lemon-scented Fern Redshank



Phleum pratense Plantago lanceolata Poa trivialis Polemonium caeruleum Polygonum aviculare Populus tremula Potentilla erecta Prunus Prunus avium Prunus laurocerasus Prunus Iusitanica Quercus Quercus alba Quercus robur Quercus robur forma fastigiata Ranunculus acris Ranunculus flammula Ranunculus repens Ribes sanguineum Rosa canina agg. Rubus painteri Rubus robiae Rubus subtercanens Rubus tuberculatus Rubus warrenii Rumex acetosa Rumex crispus Rumex sanguineus Salix fragilis Sambucus nigra Senecio aquaticus Senecio jacobaea Senecio vulgaris Spergularia marina Stachys sylvatica Stellaria alsine Stellaria media Succisa pratensis Taraxacum officinale agg. Taxus baccata Trifolium pratense Trifolium repens Ulex europaeus Ulex gallii Urtica dioica

Timothy **Ribwort Plantain** Rough Meadow-grass Jacob's-ladder Knotgrass Aspen Tormentil Planted Cherry Wild Cherry **Cherry Laurel** Portugal Laurel Oak White Oak Pedunculate Oak Cypress Oak Meadow Buttercup Lesser Spearwort Creeping Buttercup Flowering Currant Dog Rose a flowering plant Bramble Bramble Bramble Bramble Common Sorrel Curled Dock Wood Dock Crack-willow Elder Marsh Ragwort Common Ragwort Groundsel Lesser Sea-spurrey Hedge Woundwort **Bog Stitchwort Common Chickweed Devil's-bit Scabious** Dandelion Yew Red Clover White Clover Gorse Western Gorse Common Nettle



Vaccinium myrtillus Vaccinium vitis-idaea Veronica beccabunga Veronica montana Viola tricolor Bilberry Cowberry Brooklime Wood Speedwell Wild Pansy



### Habitats

- 4.5 The following habitats or vegetation types were identified on the site during the course of the habitat survey.
  - Improved grassland
  - Tall ruderal vegetation
  - Trees
  - Hedgerow

#### Improved grassland

- 4.6 Approximately half of the site comprises of an improved grassland enclosure. The grassland present on site shows signs of having been heavily affected by livestock grazing, in that it has lost many of the species expected in an unimproved sward. There is only a very limited range of grasses present; along with a few common forbs, mainly those demanding of nutrients and resistant to grazing.
- 4.7 Species present include perennial ryegrass (Lolium perenne), crested dog's-tail (Cynosurus cristatus), white clover (Trifolium repens), common sorrel (Rumex acetosa), dandelion (Taraxacum officinale), daisy (Bellis perennis) and common buttercup (Ranunculus acris). Tall ruderal species, such as rosebay willowherb (Chamerion angustifolium), common nettle (Urtica dioica), bramble (Rubus fruticosus) and white dead-nettle (Lamium album) are also present.

#### Tall ruderal vegetation

4.8 Approximately half of the site contains a highly disturbed area, showing signs of having been ploughed. This area has been colonised by common ruderal species, including; rosebay willowherb, common nettle, bramble, white dead-nettle, creeping buttercup (*Ranunculus repens*), cleavers (*Galium aparine*), bird's-foot trefoil (*Lotus corniculatus*), coltsfoot (*Tussilago farfara*), common vetch (*Vicia sativa*), dandelion (*Taraxacum officinale*) and forget-me-not (*Myosotis scorpioides*).

#### Trees

4.9 A number of trees are present along the site boundaries; ranging from young to semi-mature. Species present include common hawthorn (*Crataegus monogyna*), common beech (*Fagus sylvatica*), common holly (*Ilex aquifolium*), silver birch (*Betula pendula*), ash (*Fraxinus excelsior*), pedunculate oak (*Quercus robur*), elder (*Sambucus nigra*) and plum (*Prunus sp.*).

#### Hedgerow

4.10 A small length of hedgerow is present along the southern boundary. This is heavily dominated by common beech, although elder, oak and hawthorn are also present.



### Fauna

Bats

- 4.11 SER and Record provided several records of bat species within 2km of the site. There are no buildings on site, and none of the trees on site appeared to offer any features suitable for roosting bats such as rot holes, or cracked/split limbs; although a small number had a dense covering of lvy.
- 4.12 The site provides foraging habitat for a range of bat species. The tree lines and hedgerows are likely to be used by foraging bats as well as navigational flight lines.

#### Badgers

4.13 SER and Record provided records of Badger within 2km of the site. The site provides optimal foraging habitat for Badgers in the form of improved grassland and tall ruderal vegetation. No evidence of Badger activity, such as setts, hairs, dung pits, latrines or snuffle marks, was discovered during the survey.

#### Dormice

4.14 There are no records of Dormice occurring within 2km of the site. The potential for the site to support Dormice is low. The hedgerow provides only limited habitat and is not well connected to the wider area. No significant areas of woodland are evident in the surrounding area and it is considered that Dormice are likely to be absent from the site.

#### Other mammals

4.15 SER and Record provided records of Water Vole, Hedgehog, Brown Hare, Field Vole, House Mouse, Weasel, Polecat, and Mole within 2km of the site. Conditions on site do not raise any particular prospect of these species occurring however. With regard to other mammals the whole site provides habitat with plenty of cover and as such is expected to support a good number of common small mammals.

### Birds

- 4.16 Records of a number of bird species were provided by SER and Record. The following were all either observed or heard on site during the survey: Blue Tit, Magpie, Blackbird and Robin.
- 4.17 The site as a whole provides good foraging and nesting habitat for a range of bird species. The areas of improved grassland and tall ruderal vegetation provide cover for ground nesting birds, although these are small in area. The remaining habitats on site; trees and hedgerows, offer good foraging and nesting habitat for a range of common birds.

#### Reptiles

4.18 SER and Record did not provide any records of reptiles. The site is generally unsuitable for reptiles and lacks extensive areas of scrub with open basking areas typically associated with reptiles. The hedgerows and small brash piles provide the only cover and foraging habitat. All



potential refugia on site were inspected visually and by endoscope, and no evidence of reptiles found.

#### Amphibians

- 4.19 SER and Record provided records of Common Toad within 2km of the site.
- 4.20 No standing water was present on or adjacent to site. Natural England's Great Crested Newt (GCN) Mitigation Guidelines (English Nature, 2001) recommend that any waterbodies within 500m of a site, and sites with suitable terrestrial habitats within 500m of a waterbody, should be assessed for great crested newt potential. However, the great crested newt Rapid Risk Assessment (RRA; from Natural England's EPSL method statement for the species) assesses habitat losses of up to 5 hectares (ha) of land situated greater than 250m from a breeding pond as 'Green: offence highly unlikely'. Thus, for sites less than 5ha, assessing ponds up to 250m from the site boundary is more appropriate and acceptable. In this instance, one pond is present within 250m of site. This is a large artificial pool, with little emergent vegetation, and which was observed to contain fish. It is therefore considered unsuitable for GCN.
- 4.21 Although the improved grassland, hedgerow and tall ruderal vegetation all provide optimal habitat for species of amphibians in the terrestrial phase of their life cycle, the lack of suitable water bodies in the surrounding area means the site is unlikely to be important for amphibians.

#### Invertebrates

4.22 SER and Record did not provide any records of protected or notable invertebrate species. The habitats on site are generally common and do not provide much potential for rare invertebrate species, although they are expected to support a number of more common species.



## 5.0 Development Constraints and Recommendations

5.1 The site is the subject of a possible planning application for a residential development. Ecological constraints and recommendations with regard to any development are discussed below.

## **Designated Sites**

- 5.2 There is one statutory designated site within 2km of the site.
  - Roe Park Woods SSSI, approximately 1.25km northwest of the site.
- 5.3 There are no statutory designated sites for bats within 5km of the site.
- 5.4 There are nine non-statutory sites within 2km of the site.
  - Dale Green (south-west of) Retained BAS
  - Mow Cop Quarry Retained BAS
  - Newpool (east of) Biodiversity Alert Site
  - Willocks Wood (south-west of) Retained BAS
  - Knypersley Fishing Pool Retained BAS
  - Cheshire's Close Local Wildlife Site
  - Limekiln Farm Quarry Local Wildlife Site
  - Lower Roe Park Woods Local Wildlife Site
  - Mow Cop Heaths Local Wildlife Site
- 5.5 These sites are well-removed from the proposed development, and not connected by suitable habitat. Potential for any direct impacts is therefore limited. Indirect impacts of development are similarly considered unlikely from the construction of a pig farrowing unit and associated animal feed store.

## Habitats

5.6 Botanically, the site itself does not appear to have any rare species and it is not particularly diverse.



## **Potential Impacts of Works**

- 5.7 There are existing plans for the construction of a pig farrowing unit and associated animal feed store. Potential impacts are likely to include the following:
- 5.8 Removal of grassland, hedgerows and trees may cause loss of bat foraging habitat. Loss or severance of hedgerows may affect bat commuting routes. An increase in general light levels could also affect bat foraging and commuting.
- 5.9 Although no badger setts were observed on site, badger activity can change over a short time. If any setts are created on site prior to works, tunnels could be affected by ground works and vegetation removal and badgers could be harmed.
- 5.10 Loss of grassland, hedgerows and trees may affect birds that use the site for breeding and foraging by causing a decrease in nesting sites and food resources. Loss of these habitats may directly harm nesting birds if carried out during the breeding season (March to August inclusive).

## Recommendations

5.11 The following are general recommendations that are likely to be a minimum requirement for any future development of the site. To prevent potential delays, it would be prudent to undertake any recommended surveys well in advance of any planning application being made.

#### Bats

- 5.12 The habitats for foraging bats are limited within the site, and loss of grassland is unlikely to significantly impact local bat populations, particularly as the construction of a pig farrowing unit is likely to attract foraging bats. If the hedgerows or tree-lines are to be severed or removed, or likely to be affected by an increase in light spill, then there may be significant impacts on commuting routes, particularly if there are roosts in existing houses nearby.
- 5.13 If there is due to be any loss or major severance of hedgerows/tree-lines (or a significant increase in light spill), then it is recommended that bat transects are undertaken to check whether any important commuting routes are present. Following Good Practice Guidelines for sites of relatively low suitability for bats, one survey visit should be conducted per season (spring April/May, summer –June/July/Aug, autumn –Sept/Oct) in appropriate weather conditions for bats. These survey visits should comprise of transect surveys, in conjunction with deployment of a static bat detector (data to be collected on five consecutive nights per season). Further surveys may be required if these survey visits reveal higher levels of bat activity than predicted by habitat alone.

#### Badgers

5.14 Although no badger activity was observed on the site at the time of the survey, activity patterns of this species can change over a short time. It is recommended that a check for badger



activity is undertaken immediately prior to works commencing. Badger activity can be observed at any time of year.

#### Birds

- 5.15 Where possible, habitats suitable for nesting and foraging birds should be retained, enhanced or created within any new development. The hedgerow and tree habitats within the site are likely to be the most valuable to nesting birds, and should be retained as far as possible.
- 5.16 Nesting birds may be present in the trees, hedgerow, tall ruderal vegetation and grassland during the bird breeding season (March to August inclusive). If clearance of these areas is planned during these months, a prior check for nesting birds should be undertaken by an ecologist. Any active nests that are found must not be moved until fledglings have dispersed.
- 5.17 It would be of conservation benefit to install a variety of nesting boxes for different bird species within the site in future (buildings and trees where suitable) to enhance the site for nesting birds and encourage bird diversity. Information on bird nesting boxes can be found at http://www.rspb.org.uk/advice/helpingbirds/nestboxes/. Enhancing existing hedgerows or planting new hedgerows and shrubs within any new development can benefit birds if a wide range of native species are used.

#### Other considerations

5.18 A lighting design around the site should be considered at an early stage. Light spill can affect the foraging and commuting strategy of many species and thus should be avoided on nearby trees and hedges/shrubs and should not exceed 200 lumens (150 watts). Any security lighting should be on a timer setting and faced downwards to prevent spillage onto nearby habitats. The height of any lighting columns around the development should not exceed 8m to further reduce any ecological impact of light pollution. Low-pressure sodium lamps (SOX) fitted with hoods are recommended to direct light below the horizontal plane to minimize upward light spill. It is recommended that the use of artificial lighting follows the protocols outlined in the Institute for Lighting Engineers document "Guidance for the Reduction of Obtrusive Lighting" (2005) and BCT's "Artificial Lighting and Wildlife Interim Guidance: Recommendations to Help Minimise the Impact of Artificial Lighting" (2014) to minimise disturbance and sky-glow across the site.



## 6.0 References

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## 7.0 Plans

Extended Phase I Habitat Survey





# 8.0 Photographic Plates



Image 1: Improved grassland in west of site



Image 2: Tall ruderal vegetation in east of site



Image 3: Brash pile in east of site





Image 4: Metal container in east of site



Image 5: Hedgerow along southern boundary



Image 6: Log/stone pile in west of site



## 9.0 Pre-survey desk study



## MAGIC Designated sites - 3 Whitehouse End Cottages

MAGIC Habitats - 3 Whitehouse End Cottages









ordshire Ecological Record obseley Centre, Wolseley Bridge, ord, ST17 0WT SS9 880100 Fax: 01889 880101 info@staffs-ceology.org.sk	A legend to the map showing Nature Conservation Sites and Specie		
Introduction			
These colours are used on colours are used in any of	the site alert mapping with her mapping system, particu	in the SWT GIS, but SER cannot guarantee the same larly those based on ArcView.	
Statutory Designatio	ns from Natural Engla	and's web-site	
National Nature Re	serves 🔶 NNR (boundary not available owing to OS restrictions)		
Sites of Special Sci	ntific Interest 🛛 🚖 SSSI (boundary not available owing to OS restrictions)		
Local Nature Reser	ves 🔶 LNR (	es 🚽 LNR (boundary not available owing to OS restrictions)	
Non-statutory Desig	nations from the Staffe	ordshire Grading System (1995 onwards)	
Site of Biological II	nportance (ex Grade 1 SBI)	equivalent to "Local Wildlife Site"	
Biodiversity Alert S	ite (ex Grade 2 SBI)		
Proposed/potential	Site of Biological Importance	e	
<b>Geological Sites</b>			
Regionally Importa	nt Geological/geomorpholog	gical Site (= Local Geological Site)	
Staffordshire Wildlif	fe Trust Sites		
SWT Nature Reserv	/es	Ancient Woodland Inventory	
Other Nature Reserv	ves	Ancient & Semi-natural Woodland	
Royal Society for th	e Protection of Birds	Ancient Replanted Woodland	
<b>Species Information</b>		30000000000	
▲ Mammals excluding	g those listed below	Amphibians and reptiles excluding those belo	
Otter (Lutra lutra)		<ul> <li>Great Crested Newt (Triturus cristatus)</li> </ul>	
🔶 Badger (Meles mele	es) - not normally supplied	Native Crayfish (Austropotamobius pallipes)	
Water Vole (Arvico	la terrestris)	Flowering plants except those below	
All bat species		<ul> <li>Bluebell (Hyacinthoides non-scripta)</li> </ul>	
All bird species		Butterflies and Moths	
<ul> <li>Any other protected</li> </ul>	species (precise to 100m)	<ul> <li>BAP Species Records (precise to 100m)</li> </ul>	
All Protected Specie	es Records (precise to 1km)	BAP Species Records (precise to 1km)	
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Where there are multi obscure the dots for o	ple species records for the s ther species - all species rec	ame grid reference the dot for one species may ords will be displayed in the accompanying spreadshe	
Not all the above cate	gories may be present on the	e accompanying map	
		Version 2.0 July 2011	

