

Preliminary Ecological Appraisal

**Field in Hollington,
Stoke-on-Trent,
Staffordshire
ST10 4HQ**

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 a site known as 'Field in Hollington, Stoke-on-Trent, Staffordshire ST10 4HQ'. The Preliminary Ecological Appraisal was undertaken on the 5th 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 situated in a rural location, just to the west of the village of Hollington in Staffordshire. A small number of residential properties are situated immediately to the west. Adjacent to the east and south is a poultry farm. To the north of the site (across the adjacent road) are agricultural fields, with hedgerows and ditches along the boundaries.

The site itself is an L-shaped field, dominated by semi-improved grassland, with hedgerows and trees along the boundaries.

The habitats found on site are generally common and of limited ecological value, particularly as the proposed development includes gardens, thereby replacing much of the habitat that will be lost.

There is however potential for protected species to occur on site, specifically;

The habitats for foraging bats are limited within the site, and loss of grassland is unlikely to significantly impact local bat populations, particularly as any new residential development will also include gardens, which can be used by foraging bats. If the hedgerows are to be severed or removed, or likely to be affected by an increase in light spill, there may be significant impacts on commuting routes, particularly if there are roosts in existing houses nearby. 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. If this cannot be accommodated, then it is recommended that bat transects are undertaken to check whether any important commuting routes are present.

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 contractors working on site be briefed regarding the potential for badgers to occur on site, and that a check for evidence of badger activity be carried out immediately prior to works commencing. Should such activity be found (at any time), then works must cease and the advice of a suitably qualified ecology sought.

Nesting birds may be present in the trees and hedgerows during the bird breeding season (March to August inclusive). If vegetation removal is planned during these months, then 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.

It is considered that this Preliminary Ecological Assessment provides a suitably detailed understanding of the baseline environment to inform an assessment of impacts on notable habitats and protected species, and so enable the Local Planning Authority to reach an informed planning decision.

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1.0 Introduction

Background

- 1.1 Absolute Ecology LLP was commissioned to undertake a Preliminary Ecological Assessment of a site known as 'Field in Hollington, Stoke-on-Trent, Staffordshire ST10 4HQ'.
- 1.2 The Assessment was undertaken on the 5th 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 situated in a rural location, just to the west of the village of Hollington in Staffordshire. A small number of residential properties are situated immediately to the west. Adjacent to the east and south is a poultry farm. To the north of the site (across the adjacent road) are agricultural fields, with hedgerows and ditches along the boundaries.

The site itself is an L-shaped field, dominated by semi-improved grassland, with hedgerows and trees along the 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) 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 5th 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 are no statutory designated sites within 2km of the site.
- 4.2 There are no statutory designated sites for bats within 5km of the site.
- 4.3 There are seven non-statutory sites within 2km of the site.
- Broadgatehall Drumble Local Wildlife Site
 - Birchendale road verge Retained BAS
 - Broadmoor Wood and Quarry Retained BAS
 - Yardhouse Farm Meadow Biodiversity Alert Site
 - Hollington (north-east of) Biodiversity Alert Site
 - The Long Chase (east of) Local Wildlife Site
 - Ferneyhill Retained BAS
- 4.4 SER provided the following records for protected and notable species within 2km of the site boundary:

Amphibians

Bufo bufo

Common Toad

Triturus cristatus

Great Crested Newt

Birds

Acanthis cabaret

Lesser Redpoll

Accipiter gentilis

Northern Goshawk

Actitis hypoleucos

Common Sandpiper

Alauda arvensis

Sky Lark

Alcedo atthis

Common Kingfisher

Anas acuta

Northern Pintail

Anas clypeata

Northern Shoveler

Anas crecca

Eurasian Teal

Anas platyrhynchos

Mallard

Anas querquedula

Garganey

Anas strepera

Gadwall

Anser albifrons

Greater White-fronted Goose

Anser anser

Greylag Goose

Anser brachyrhynchus

Pink-footed Goose

Anthus pratensis

Meadow Pipit

Anthus trivialis

Tree Pipit

Apus apus

Common Swift

Asio flammeus

Short-eared Owl

Aythya ferina

Common Pochard

Aythya fuligula

Tufted Duck

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| <i>Branta leucopsis</i> | Barnacle Goose |
| <i>Bucephala clangula</i> | Common Goldeneye |
| <i>Calidris alpina</i> | Dunlin |
| <i>Calidris canutus</i> | Red Knot |
| <i>Caprimulgus europaeus</i> | European Nightjar |
| <i>Charadrius dubius</i> | Little Plover |
| <i>Charadrius hiaticula</i> | Ringed Plover |
| <i>Chroicocephalus ridibundus</i> | Black-headed Gull |
| <i>Circus aeruginosus</i> | Eurasian Marsh Harrier |
| <i>Columba oenas</i> | Stock Dove |
| <i>Cuculus canorus</i> | Common Cuckoo |
| <i>Cygnus cygnus</i> | Whooper Swan |
| <i>Delichon urbicum</i> | House Martin |
| <i>Egretta garzetta</i> | Little Egret |
| <i>Emberiza citrinella</i> | Yellowhammer |
| <i>Emberiza schoeniclus</i> | Reed Bunting |
| <i>Falco peregrinus</i> | Peregrine Falcon |
| <i>Falco subbuteo</i> | Eurasian Hobby |
| <i>Falco tinnunculus</i> | Common Kestrel |
| <i>Fringilla montifringilla</i> | Brambling |
| <i>Gallinago gallinago</i> | Common Snipe |
| <i>Haematopus ostralegus</i> | Eurasian Oystercatcher |
| <i>Hirundo rustica</i> | Barn Swallow |
| <i>Larus argentatus</i> | Herring Gull |
| <i>Larus canus</i> | Common Gull |
| <i>Larus fuscus</i> | Lesser Black-backed Gull |
| <i>Larus fuscus subsp. graellsii</i> | a lesser black-backed gull |
| <i>Larus marinus</i> | Great Black-backed Gull |
| <i>Larus melanocephalus</i> | Mediterranean Gull |
| <i>Larus michahellis</i> | Yellow-legged Gull |
| <i>Limosa lapponica</i> | Bar-tailed Godwit |
| <i>Limosa limosa</i> | Black-tailed Godwit |
| <i>Linaria cannabina</i> | Linnet |
| <i>Loxia curvirostra</i> | Common Crossbill |
| <i>Lullula arborea</i> | Wood Lark |
| <i>Lymnocyptes minimus</i> | Jack Snipe |
| <i>Milvus milvus</i> | Red Kite |
| <i>Motacilla cinerea</i> | Grey Wagtail |
| <i>Motacilla flava</i> | Yellow Wagtail |
| <i>Motacilla flava subsp. flavissima</i> | Yellow Wagtail |
| <i>Muscicapa striata</i> | Spotted Flycatcher |
| <i>Numenius arquata</i> | Eurasian Curlew |
| <i>Numenius phaeopus</i> | Whimbrel |
| <i>Oenanthe oenanthe</i> | Northern Wheatear |
| <i>Passer domesticus</i> | House Sparrow |
| <i>Passer montanus</i> | Eurasian Tree Sparrow |
| <i>Phylloscopus trochilus</i> | Willow Warbler |
| <i>Picus viridis</i> | Green Woodpecker |
| <i>Podiceps nigricollis</i> | Black-necked Grebe |
| <i>Poecile montana</i> | Willow Tit |
| <i>Poecile palustris</i> | Marsh Tit |
| <i>Prunella modularis</i> | Dunnock |
| <i>Pyrrhula pyrrhula</i> | Common Bullfinch |

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| <i>Recurvirostra avosetta</i> | Pied Avocet |
| <i>Riparia riparia</i> | Sand Martin |
| <i>Saxicola rubetra</i> | Whinchat |
| <i>Scolopax rusticola</i> | Eurasian Woodcock |
| <i>Sterna hirundo</i> | Common Tern |
| <i>Sterna paradisaea</i> | Arctic Tern |
| <i>Streptopelia turtur</i> | European Turtle Dove |
| <i>Sturnus vulgaris</i> | Common Starling |
| <i>Sylvia communis</i> | Common Whitethroat |
| <i>Tachybaptus ruficollis</i> | Little Grebe |
| <i>Tadorna ferruginea</i> | Ruddy Shelduck |
| <i>Tringa glareola</i> | Wood Sandpiper |
| <i>Tringa nebularia</i> | Common Greenshank |
| <i>Tringa ochropus</i> | Green Sandpiper |
| <i>Tringa totanus</i> | Common Redshank |
| <i>Turdus iliacus</i> | Redwing |
| <i>Turdus philomelos</i> | Song Thrush |
| <i>Turdus pilaris</i> | Fieldfare |
| <i>Turdus viscivorus</i> | Mistle Thrush |
| <i>Tyto alba</i> | Barn Owl |
| <i>Vanellus vanellus</i> | Northern Lapwing |
| Invertebrates | |
| <i>Bombus (Pyrobombus) hypnorum</i> | Tree Bumble Bee |
| <i>Spilosoma lubricipeda</i> | White Ermine |
| Mammals | |
| <i>Arvicola amphibius</i> | European Water Vole |
| <i>Erinaceus europaeus</i> | West European Hedgehog |
| <i>Lepus europaeus</i> | Brown Hare |
| <i>Lutra lutra</i> | European Otter |
| <i>Meles meles</i> | Eurasian Badger |
| <i>Mustela putorius</i> | Polecat |
| <i>Myotis</i> | Myotis Bat species |
| <i>Myotis nattereri</i> | Natterer's Bat |
| <i>Nyctalus noctula</i> | Noctule Bat |
| <i>Pipistrellus pipistrellus</i> | Common Pipistrelle |
| <i>Pipistrellus pygmaeus</i> | Soprano Pipistrelle |
| <i>Plecotus auritus</i> | Brown Long-eared Bat |
| Reptiles | |
| <i>Natrix natrix</i> | Grass Snake |
| Plants | |
| <i>Euphrasia confusa</i> | Little Kneeling Eyebright |
| <i>Filago vulgaris</i> | Common Cudweed |
| <i>Hieracium acuminatum</i> | Tall Hawkweed |
| <i>Hyacinthoides non-scripta</i> | Bluebell |
| <i>Mentha pulegium</i> | Pennyroyal |
| <i>Monotropa hypopitys</i> | Yellow Bird's-nest |
| <i>Polemonium caeruleum</i> | Jacob's-ladder |

Habitats

4.5 The following habitats or vegetation types were identified on the site during the course of the habitat survey.

- Semi-improved grassland
- Hedgerow
- Trees
- Building

Semi-improved grassland

4.6 The majority of the site comprised semi-improved grassland; showing signs of historic enrichment/management, and so relatively lacking in forb diversity (although the forb species present were generally frequent). The grassland contained meadow foxtail (*Alopecurus pratensis*), false oat-grass (*Arrhenatherum elatius*), crested dog's-tail (*Cynosurus cristatus*), cock's-foot (*Dactylis glomerata*), tall fescue (*Festuca arundinacea*) and perennial ryegrass (*Lolium perenne*). Forbs present included dandelion (*Taraxacum officinale*), common nettle (*Urtica dioica*), white dead-nettle (*Lamium album*), broad-leaved dock (*Rumex obtusifolius*), common sorrel (*Rumex acetosa*), white clover (*Trifolium repens*), daisy (*Bellis perennis*), cow parsley (*Anthriscus sylvestris*), bird's-foot trefoil (*Lotus corniculatus*) and common buttercup (*Ranunculus acris*). Occasional garden escapees, such as daffodil or bluebell cultivars, are also present.

Hedgerow

4.7 Lengths of hedgerow were present along the site boundaries. These were sparse and species-poor; dominated by common hawthorn (*Crataegus monogyna*), with frequent common holly (*Ilex aquifolium*), and occasional pedunculate oak (*Quercus robur*), elder (*Sambucus nigra*), ash (*Fraxinus excelsior*) and sycamore (*Acer pseudoplatanus*). The hedgerow understorey was limited; containing species tall ruderal species such as common sorrel, common nettle, rosebay willowherb (*Chamerion angustifolium*) and bramble (*Rubus fruticosus*).

Trees

4.8 A small number of semi-mature trees were present within the boundary hedgerows, comprising of similar species to those forming the hedgerows themselves. One mature sycamore was present in the southwest of site.

Building

4.9 A small metal shed was present towards the southwest of site. This was constructed of a rough timber frame, with walls and ceiling forming from single-skinned corrugated steel sheets.

Fauna

Bats

- 4.10 SER provided several records of bat species within 2km of the site. The building on site did not appear to offer any potential roosting sites for bats, as the materials used in its construction will undergo large temperature fluctuations, rendering conditions unsuitable for roosting bats. 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 Ivy.
- 4.11 The site provides reasonable foraging habitat for a range of bat species. The hedgerows are likely to be used by foraging bats, as well as for navigational flight lines.

Badgers

- 4.12 SER provided records of Badger within 2km of the site. The majority of the site provides optimal foraging habitat for Badgers in the form of semi-improved grassland. No evidence of Badger activity, such as sett entrances, hairs, dung pits, latrines or snuffle marks, was discovered during the survey.

Other mammals

- 4.13 SER provided records of Water Vole and Otter within 2km of the site, although the absence of any watercourse on or adjacent to site makes their presence unlikely. SER provided records of Brown Hare, Hedgehog and Polecat within 2km of the site. A few scattered Rabbit droppings were noted in a small number of locations on site, indicating the presence of Rabbits, which could be used as a food source by Polecat. 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

- 4.14 Records of a large number of bird species were provided by SER. The following were all either observed or heard on site during the survey: Wren, Magpie, Robin, Blackbird and Feral Pigeon.
- 4.15 The site as a whole provides potential foraging and nesting habitat for a range of bird species. The trees and hedgerows, offer good foraging and nesting habitat for a range of common birds, and show high potential for this use, although no bird nests were observed during the survey.

Reptiles

- 4.16 SER provided records of Grass Snake within 2km of the site. The site is generally unsuitable for reptiles and lacks extensive areas of scrub with open basking areas typically associated with reptiles. The hedgerows provide the only cover and foraging habitat. There were no potential refugia on site available for inspection.

Amphibians

- 4.17 SER provided records of Great Crested Newt and Common Toad within 2km of the site. No ponds are indicated on a plans of the site, or within 500m on OS maps or aerial photographs.

Therefore, although potentially suitable habitat for species of amphibians in the terrestrial phase of their life cycle is present on site, the lack of suitable water bodies in the surrounding area means the site is unlikely to support amphibian populations.

Invertebrates

- 4.18 SER provided records of Tree Bumble Bee and White Ermine within 2km of site; neither of which are particularly associated with the habitats or species found on site. 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 are no statutory designated sites within 2km of the site.
- 5.3 There are no statutory designated sites for bats within 5km of the site.
- 5.4 There are seven non-statutory sites within 2km of the site.
- Broadgatehall Drumble Local Wildlife Site
 - Birchendale road verge Retained BAS
 - Broadmoor Wood and Quarry Retained BAS
 - Yardhouse Farm Meadow Biodiversity Alert Site
 - Hollington (north-east of) Biodiversity Alert Site
 - The Long Chase (east of) Local Wildlife Site
 - Ferneyhill Retained BAS
- 5.5 The proposed development is well-removed from these designated sites, therefore no direct impacts are anticipated. The site is adjacent to residential properties, and so indirect impacts are not anticipated either; particularly as the proposed development is so limited in scale.

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 no existing plans for the site; however, if residential development is undertaken in the future, 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. Where further surveys for a particular habitat/complex or species are required prior to Planning Application, this is clearly stated.

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 any new residential development will also include gardens, which can be used by foraging bats. If the hedgerows are to be severed or removed, or likely to be affected by an increase in light spill, there may be significant impacts on commuting routes, particularly if there are roosts in existing houses nearby.
- 5.13 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. If this cannot be accommodated, 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.
- 5.14 Regardless of the results of these surveys, it would be of conservations benefit to provide additional roosting provision for bats on site; both on trees and within the fabric of the new buildings. This can prove a cost-effective way of enhancing the site for biodiversity.

Badgers

- 5.15 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 contractors working on site be briefed regarding the potential for badgers to occur on site, and that a check for evidence of badger activity be carried out immediately prior to works commencing. Should such activity be found (at any time), then works must cease and the advice of a suitably qualified ecology sought.

Birds

- 5.16 Where possible, habitats suitable for nesting and foraging birds should be retained, enhanced or created within any new development. The hedgerow habitats within the site are likely to be the most valuable to nesting birds, and should be retained as far as possible.
- 5.17 Nesting birds may be present in the trees and hedgerows during the bird breeding season (March to August inclusive). If vegetation removal is planned during these months, then 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.
- 5.18 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

- 5.19 A lighting design around the new development 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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Institute of Ecology and Environmental Management (2007). *Guidelines for Ecological Impact Assessment in the United Kingdom*. [Online]. Available at: <http://www.ieem.net/ecia/> [accessed on 27th September 2011].

Joint Nature Conservation Committee (2007) *Handbook for Phase I Habitat Survey – a Technique for Environmental Audit*. JNCC: London.

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The Protection of Badgers Act 1992, (c.51), London: HMSO.

UK BAP (2008) *Priority Habitat Descriptions* [Online]. Available at: <http://www.ukbap.org.uk/library/UKBAPPriorityHabitatDescriptionsfinalAllhabitats20081022.pdf> [accessed on 27th September 2011]

Wildlife and Countryside Act 1981 (and amendments). (c.69), London: HMSO

7.0 Plans

Extended Phase I Habitat Survey



Legend

- SI Semi-improved grassland
- Building
- Tree
- Hedgerow

8.0 Photographic Plates



Image 1: Site viewed from north



Image 2: Site viewed from south

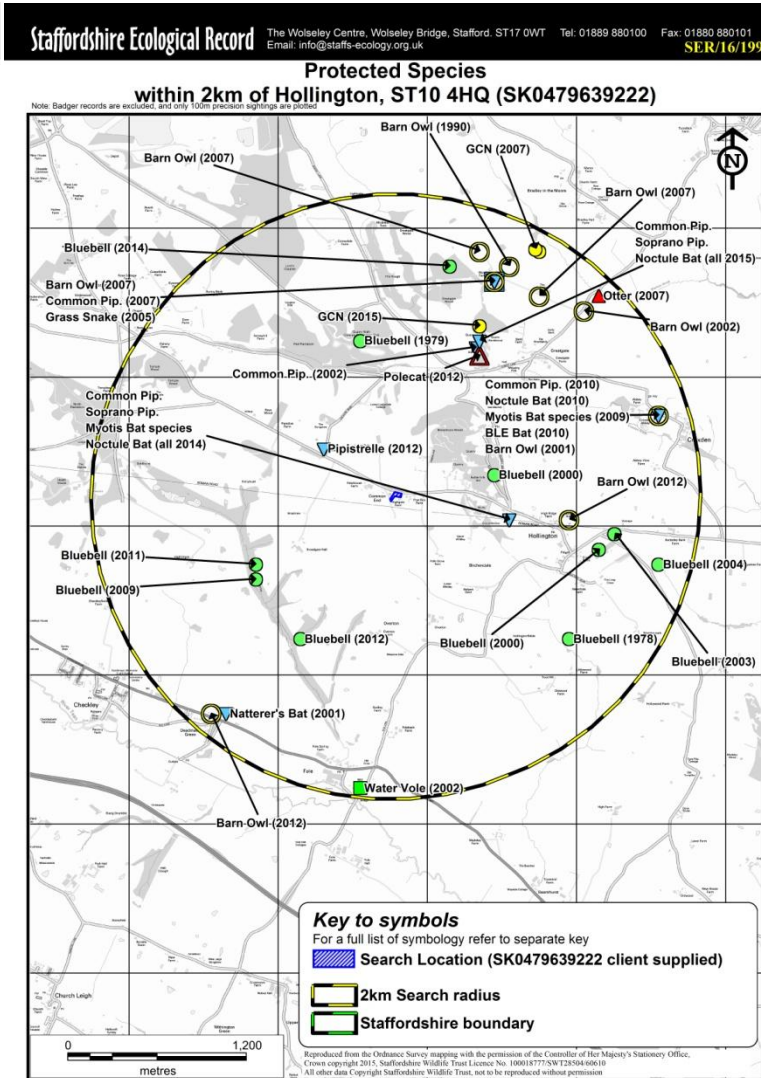
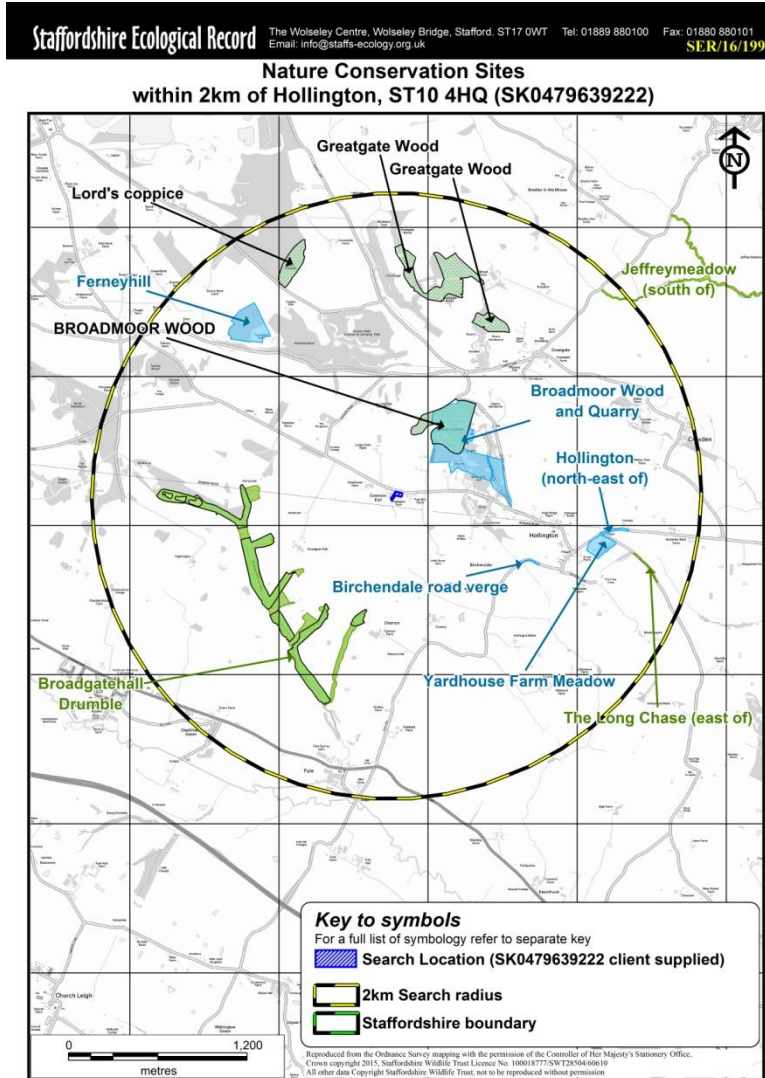


Image 3: Northern boundary hedgerow, adjacent to road



Image 4: Small metal shed on site

9.0 Pre-survey desk study



A legend to the map showing Nature Conservation Sites and Species




Introduction

These colours are used on the site alert mapping within the SWT GIS, but SER cannot guarantee the same colours are used in any other mapping system, particularly those based on ArcView.


Statutory Designations from Natural England's web-site

- | | | | |
|---|--------------------------------------|---|--|
|  | National Nature Reserves | ★ | NNR (boundary not available owing to OS restrictions) |
|  | Sites of Special Scientific Interest | ★ | SSSI (boundary not available owing to OS restrictions) |
|  | Local Nature Reserves | ★ | LNR (boundary not available owing to OS restrictions) |


Non-statutory Designations from the Staffordshire Grading System (1995 onwards)

- | | |
|---|--|
|  | Site of Biological Importance (ex Grade 1 SBI equivalent to "Local Wildlife Site") |
|  | Biodiversity Alert Site (ex Grade 2 SBI) |
|  | Proposed/potential Site of Biological Importance |


Geological Sites

- | | |
|---|---|
|  | Regionally Important Geological/geomorphological Site (= Local Geological Site) |
|---|---|



Staffordshire Wildlife Trust Sites

- | | |
|--|---------------------|
|  | SWT Nature Reserves |
|--|---------------------|

















Other Nature Reserves

- | | |
|---|---|
|  | Royal Society for the Protection of Birds |
|---|---|

Ancient Woodland Inventory

- | | |
|---|---------------------------------|
|  | Ancient & Semi-natural Woodland |
|  | Ancient Replanted Woodland |

Species Information

- | | | | |
|---|---|---|--|
|  | Mammals excluding those listed below |  | Amphibians and reptiles excluding those below |
|  | Otter (<i>Lutra lutra</i>) |  | Great Crested Newt (<i>Triturus cristatus</i>) |
|  | Badger (<i>Meles meles</i>) - not normally supplied |  | Native Crayfish (<i>Austropotamobius pallipes</i>) |
|  | Water Vole (<i>Arvicola terrestris</i>) |  | Flowering plants except those below |
|  | All bat species |  | Bluebell (<i>Hyacinthoides non-scripta</i>) |
|  | All bird species |  | Butterflies and Moths |
|  | Any other protected species (precise to 100m) |  | BAP Species Records (precise to 100m) |
|  | All Protected Species Records (precise to 1km) |  | BAP Species Records (precise to 1km) |

Notes:

The Local Nature Reserve and other nature reserve boundaries can overlay the current grading when both layers are actively visible

Where there are multiple species records for the same grid reference the dot for one species may obscure the dots for other species - all species records will be displayed in the accompanying spreadsheet

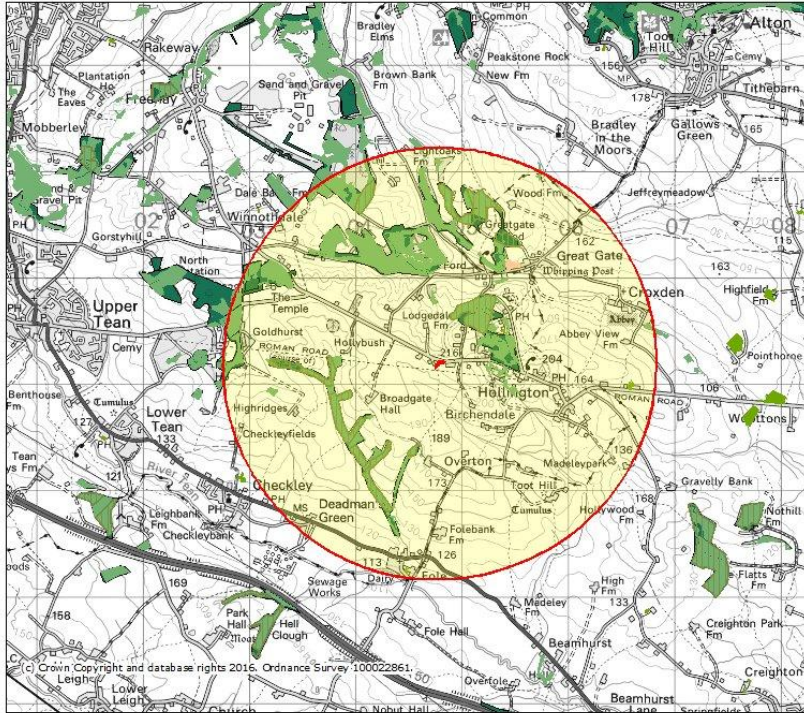
Not all the above categories may be present on the accompanying map

Version 2.0 July 2011

M:\Workspcs\SER\Enquiry Legend.wor



Habitats - Hollington, Stoke on Trent



Legend

- Priority Habitat Inventory - Lowland Dry Acid Grassland (England)
- Ancient Woodland (England)**
 - Ancient and Semi-Natural Woodland
 - Ancient Replanted Woodland
- Priority Habitat Inventory - Deciduous Woodland (England)
- National Inventory of Woodland and Trees (England)
- Priority Habitat Inventory - Traditional Orchards (England)

Projection = OSGB36
 xmin = 394900
 ymin = 334700
 xmax = 414100
 ymax = 343900
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