Extended Phase I Habitat Survey

Land at Pilley, Lidget Lane, New road Tankersley

March 2013



Notice to readers

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Non-technical summary

- Absolute Ecology undertook an Extended Phase I Habitat Survey of a site known as land at Pilley, Lidget Lane, New road, Tankersley.

- The Phase I survey was undertaken on 8th March 2013 by an experienced and licensed ecologist who is a full member of the Chartered Institute of Ecology & Environmental Management (CIEEM).

- The site comprises farmland with hedgerows, trees and grassland. The site is bounded by Pilley Green Road, Lidget Lane and the M1 to the east.

- The hedgerows provide potential commuting routes and foraging resources for local bat populations. If there is due to be any significant impacts on hedgerows (e.g. loss, severance or light spill), up to three bat activity transects are recommended during the peak activity season of May to August. No features were observed on the mature trees that had potential to be used by roosting bats.

- No evidence of badger was found on site but this species could occur on the site in future. As badger activity can change over a short time, a full badger survey should be undertaken prior to any planning application and construction works.

- Nesting birds may be present in hedgerows, trees and grassland during the bird breeding season (March to August inclusive). If vegetation removal or any ground works are 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. Recommendations are given to provide a variety of bird nesting opportunities (e.g. bird boxes) as part of any development.

- The grassy field margins, hedgerows and scrub represent suitable habitat for common reptiles such as slow-worm. It is recommended that a reptile survey is undertaken in advance of any planning application (April, May and September are the best months) to confirm the presence or absence of reptiles. If reptiles are found, mitigation measures to capture and remove individuals would need to be undertaken prior to works affecting the habitat.

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1.0 Introduction

Background

1.1 Absolute Ecology was commissioned to undertake an Extended Phase I Habitat Survey of a site known as Lower Pilley, Lidget Lane, New road Tankersley (grid ref. SE 34024 00385).

1.2 The recently published NPPF replaces Planning Policy Statements (e.g. PPS9) and sets out current Government policy on biodiversity and nature conservation. Planners are required to set criteria-based policies against which proposals for development that may affect legally protected species will be judged. The NPPF promotes sustainable development by ensuring that developments take account of the role and value of biodiversity with emphasis on maintaining ecological networks at a landscape level.

1.3 The aim of the survey was to identify features of ecological interest, undertake a basic search of habitats present for evidence of use, or potential use, by protected species and to identify any other possible ecological constraints to the development.

Site Description

1.4 The site comprises semi-improved grassland and arable fields bordered by hedgerows and trees. The site is adjacent to Tankersley to the east and Pilley to the west, with open mixed farmland and patches of woodland to the south of the site. The M1 motorway lies to the east.



2.0 Methodology

Desk Study

2.1 In order to compile background information on the site and immediate surroundings the Sheffield Biological Records Centre (SBRC) was contacted.

2.2 Information requested was as follows:

- Records of protected species within 1 km of the site.
- Records of rare or notable species within 1 km of the site.
- Non-statutory site designations on or within 1 km of the site.

2.3 Additionally, MAGIC (Multi-Agency Geographic Information for the Countryside, 2010) was used to establish whether any of the following are present:

- Statutory site designations on or within 1 km of the site.
- Statutory sites designated for bats within 5 km of the site.

Habitat Survey

2.4 The site was visited on the 8th March 2013 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 the 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.

Nomenclature

2.9 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) 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) 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 increases the 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 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, 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 1 km of the site.

4.2 SBRC provided the following records for protected and notable species within 1.5 km of the site boundary:

Plants – 1712 records

Fungi – 140 records

Insects – 490 records

Mammals – water vole (4 records), hedgehog (10 records), brown hare (5 records), badger (5 records), bats (9 records), Daubenton's bat (62 records), whiskered bat (32 records), Natterer's bat (12 records), Leisler's bat (5 records), noctule (5 records), pipistrelle (11 records), 45 Khz pipistrelle (3 records), 55 Khz pipistrelle (7 records), brown long-eared bat (6 records)

Birds – 500 records

Reptiles - grass snake (6 records), adder (4 records)

Amphibians – common toad (12 records), common frog (16 records), great crested newt (37 records), smooth newt (15 records)

Habitats

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

- Semi-improved grassland
- Arable
- Hedgerows
- Broadleaved trees
- Scrub

Semi-improved grassland

4.4 The field margins contain areas of tussocky grasses including cocksfoot (*Dactylis glomerata*) and perennial ryegrass (*Lolium perenne*). Herbs were few but included cow parsley (*Anthriscus sylvestris*). The widest strips of grassland (up to 3 m) are present along the north boundaries. The remainder of the field margins are limited to approximately 0.5 m from the base of the hedgerow.

Arable

4.5 The fields have been recently sown with a cereal crop. They have small margins which range from 0.5 m to 3 m in width. These grassy margins are included under semi-improved neutral grassland above.

Species-poor hedgerow

4.6 The hedgerows forming the field and site boundaries are dominated by hawthorn (*Crataegus monogyna*) and elder (*Sambucus nigra*). The hedgerows contain occasional ivy (*Hedera helix*), dog rose (*Rosa canina*) and bramble (*Rubus fruticosus* agg). Grasses (see semi-improved neutral grassland) form the ground layer beneath the hedgerows. Herb species are rare but include common nettle (*Urtica dioica*). None of the hedgerows were assessed to be 'Important' under the Hedgerow Regulations 1997.

Broadleaved trees

4.7 Individual species of trees of varying ages are present mainly to the south boundary of the site and include elder, ash, pedunculate oak and hawthorn (*Crataegus monogyna*).

Scrub

4.8 Sections of the field boundary consist of a strip of scrub dominated by bramble and nettle.

Fauna

Bats

4.9 SBRC provided several records of bat species within 1.5 km of the site. There are semi-mature trees on site which do not appear to offer any potential roosting sites due to the lack of cracks, crevices or rot holes and dense ivy.

4.10 The site provides good foraging habitat for a range of bat species. The hedgerows are likely to be used by foraging bats as well as navigational flight lines leading to adjacent gardens and the wider landscape.

Badgers

4.11 SBRC provided records of badger within 1.5 km of the site. There was no evidence of badger on site or within 30 m of the site boundary where access was possible. Although the site is mainly bordered by roads, habitats on site are suitable for foraging badgers, and it is possible the species could occur on site in future.

Dormice

4.12 SBRC provided no records of dormice occurring within 1.5 km of the site. The potential for the site to support dormice is low. The individual trees and hedgerows provide only limited habitat.

Water voles and otters

4.13 SBRC provided no records of water voles or otters occurring within 1.5 km of the site. No ditches or running water are present on site.

Birds

4.14 The site as a whole provides good foraging and nesting habitat for a range of bird species. Common and widespread bird species were observed on site during the survey, including carrion crow (*Corvus corone*), magpie (*Pica pica*), wren (*Troglodytes troglodytes*) and blackbird (*Turdus merula*). Individual birds' nests were noted in the trees. Common bird species are likely to use the hedgerows for nesting and foraging.

Reptiles

4.15 SBRC did not provide any records of reptiles. The site contains habitat (field margins of grass and scrub, and the base of hedgerows) which has potential to be used by common reptiles such as slow-worms. If reptiles are present in this habitat, they may be harmed during vegetation removal or ground works.

Amphibians

4.16 SBRC provided records of amphibian species within 1.5 km. Great Crested Newts have been recorded 1 km from the site. No ponds or other types of standing water are present on site and there is one pond located 490 meters south west within a residential garden, given the distance and migratory and dispersal barriers such as housing, roads, poor habitat connectivity it would be unlikely great crested newts would in habitat the site.

Invertebrates

4.17 SBRC did not provide any records of protected or notable invertebrate species. The woodland on site is listed on the Ancient Woodland Inventory and has potential for more rare species of invertebrates. The remaining 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 designated statutory site within 1 km of the site.

- Potter Holes Plantation (Local Nature Reserve)

5.3 Potter Holes Plantation lies approximately 20 m from the development site, separated by a main road called New Road. Development should aim to ensure that there are no adverse impacts on this site; appropriate mitigation for any direct and indirect impacts of development, such as increased visitor pressure, should be considered at an early stage.

Habitats

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

Potential Impacts of Works

5.1 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.

5.2 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.

5.3 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.

5.4 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).

5.5 In the event that reptiles are present on site, they might be killed or injured during removal of vegetation or ground works. They would also suffer loss of habitat.

Recommendations

5.6 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 the recommended surveys well in advance of any master-planning and certainly before any planning application is made.

Bats

5.7 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.

5.8 If there is due to be any loss or major severance of hedgerows (or a significant increase in light spill), it is recommended that bat transects are undertaken to check whether any important commuting routes are present. Following Good Practice Guidelines for a small site of medium habitat quality, up to three activity transects should be undertaken within the peak activity season (May to August).

Badgers

5.9 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 full badger survey is undertaken prior to any planning application. Badger surveys can be undertaken at any time of year.

Birds

5.10 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.

5.11 Nesting birds may be present in the trees, hedgerows, pond and grassland during the bird breeding season (March to August inclusive). If vegetation removal 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.

5.12 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.

Reptiles

5.13 A reptile survey of the areas of field margin grassland should be undertaken prior to any planning application being made. Reptile surveys can be carried out between April and September (April, May and September are the optimal survey months). Standard survey methodology involves installing artificial refugia (0.5 m squares of roofing felt) throughout the habitat, which are used by basking reptiles if they are present. Seven checks of the refugia are carried out to confirm presence or absence.

5.14 If reptiles are present, mitigation will involve protecting individuals from harm during the development. Depending on the size of the population present, this may require catching and relocating reptiles prior to ground works and/or destructive searches during ground works.

Designated site

5.15 In order to minimise the indirect impacts upon Potters Holes Plantation, it is recommended that a buffer zone, supporting vegetation and trees, is established along the southern site boundary and that this buffer zone is managed appropriately in the longer term. The width of the buffer zone should be established during the scheme design.

5.16 A lighting design around the new development, and specifically on the northern boundary opposite Potters Holes, 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 8 m 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.

6.0 References

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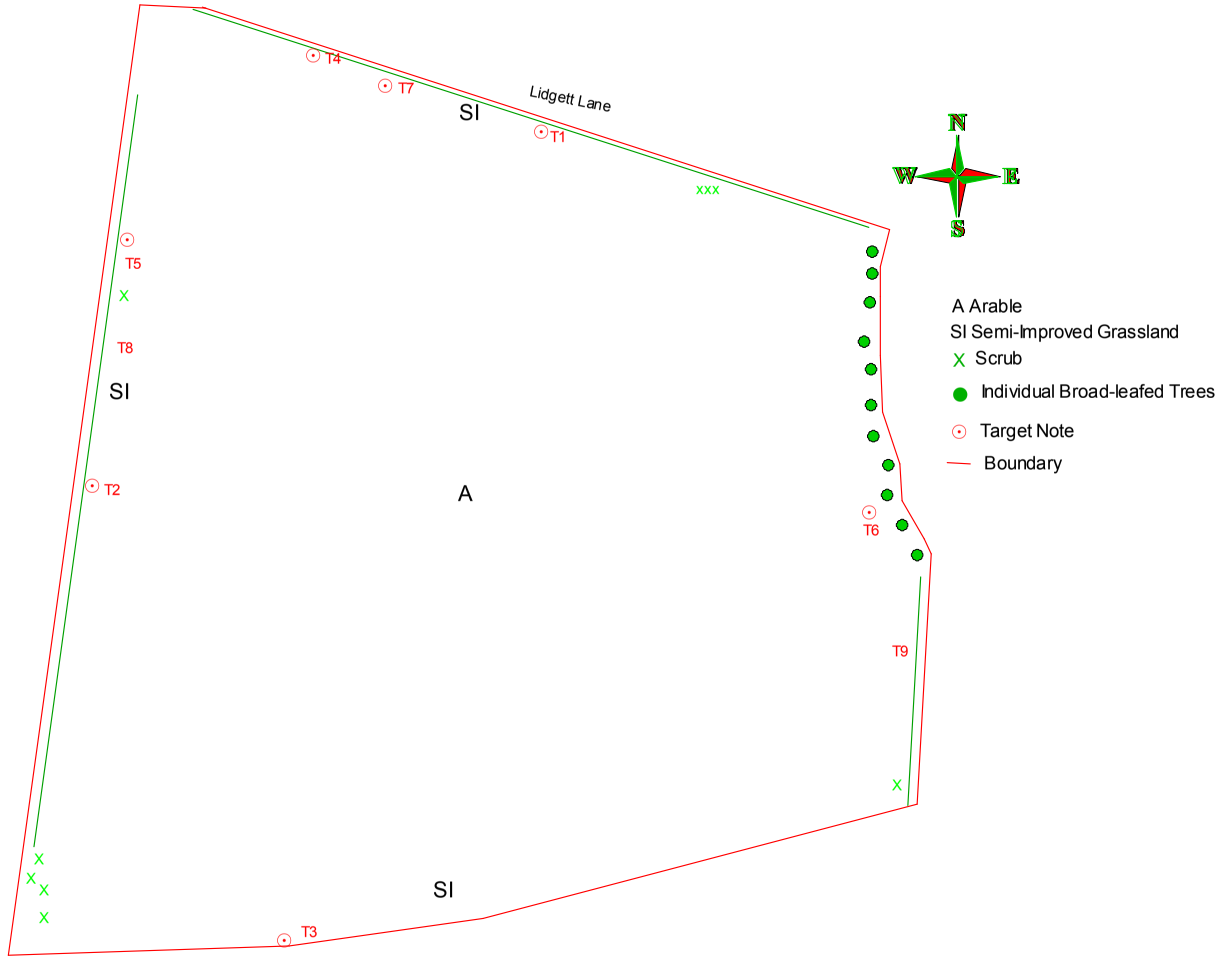
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7.0 Plans

Extended Phase I Habitat Survey



8.0 Photographic Plates



Plate 1: View of area of arable farmland with semi-improved grassland strips on the boundary of the site which is potential reptile habitat (Target note 1). Also showing potential bat commuting & foraging route (Target note 4), indicated by red arrow.



Plate 2: Further potential reptile habitat coupled with nesting bird opportunities.

APPENDIX 1: Target Notes

Table 2: Target Notes

Number	Target Note
1, 2, 3	Grassland showing potential reptile habitat; hedgerows and grassland for cover and foraging.
4, 5, 6	Hedgerows form suitable bat commuting and foraging routes around the site and lead to the wider landscape.
7 ,8, 9	Hedgerows & trees show potential bird nesting opportunities; birds were seen foraging within the hedgerow.