absolute ecology LLP wildlife surveys

Preliminary Ecological Appraisal

Land off Cheadle Rd

Alton,

Staffordshire

Report prepared for: Sammons Architects

March 2018

Notice to readers

This report has been prepared by Absolute Ecology 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).

The results of the survey and assessment work undertaken by Absolute Ecology are representative at the time of surveying.

Every endeavour has been made to identify the presence of protected species on site, where this falls within the agreed scope of works.

The flora and fauna detailed within this report are those noted during the field survey and from anecdotal evidence. It should not be viewed as a complete list of flora and fauna species that may frequent or exist on site at other times of the year.

Up to date standard methodologies have been used, which are accepted by Natural England and other statutory conservation bodies. No responsibility will be accepted where these methodologies fail to identify all species on-site.

Absolute Ecology cannot take responsibility where Government, national bodies or industry subsequently modify standards.

Absolute Ecology cannot accept responsibility for data collected from third parties.

Reference to sections or particular paragraphs of this document taken out of context may lead to misrepresentation.

Non-technical summary

Absolute Ecology LLP was commissioned to undertake a Preliminary Ecological Appraisal of a site known as land off Land off Cheadle Rd, Alton, Staffordshire, Grid Reference SK 05353 42653. The Preliminary Ecological Appraisal was undertaken on 7th March 2018 by Helen Staton BSc (Hons) an experienced and licensed ecologist who is an Associate member of the Chartered Institute of Ecology & Environmental Management (ACIEEM).

The survey area is situated in a predominantly rural location, which borders the village of Alton. The site is immediately bounded to the south by a B5032 and to the north is the SSSI Dimmings Dale & The Ranger. The site itself is dominated by species poor semi improved grassland, hard standing, fencing & dry stone walling.

There is a single statutory site located immediately adjacent to the application site therefore recommendations have been made to minimise impact during construction phase and long term. Also, within 2km of the site boundary, and twelve non-statutory sites. All non-statutory sites are well removed and isolated from the proposed development site by areas of residential housing, roads (minor and major) and watercourses, with the exception of two Local Wildlife Sites (LWS) which are within close proximity.

The Preliminary Ecological Appraisal confirmed the presence or potential presence of the following (see section 5 for further details):

- **Bats** – there is one tree located within the site boundary (TN5) which was assessed to have potential to support roosting bats. This tree should be retained and care should be taken during works to ensure minimum disturbance. Works should avoid the Root Protection Area (RPA) of the tree (and neighbouring trees within the woodland to the north) to prevent long term damage. Should any sections of the tree require felling/limb removal, further surveys would be required;

- **Badgers** – no setts were recorded onsite although the habitats on and offsite are considered suitable for this species. As activity patterns of this species can change over a short time it is recommended that a full badger survey is undertaken prior to the commencement of works;

- **Nesting birds** – With regards for nesting birds, the scrub, dry stone walls and onsite tree hold a high potential for nesting birds. Therefore, any pre construction de-vegetation and site clearance should be carried out avoiding the bird breeding season which runs March-August inclusive;

- **Reptiles -** The habitats onsite and offsite are considered suitable for reptile utilisation. It is therefore recommended that reptile presence/absence surveys are undertaken. Reptile surveys can be carried out between April and September (April, May and September being the optimal survey months). Seven checks of the refugia will need to be carried out to confirm presence or absence; and

- **Great crested newts** - the habitats present onsite (scrub, rubble/refuge piles, dry stone walls, poor semi improved grassland, tall ruderal) offer suitable great crested newt (GCN) terrestrial habitat (in addition to other common amphibians). There are six ponds located within 500m of the site, two of which are within 250m of the site boundary. The four ponds located over 250m are not considered to be a constraint to the proposed works due to their distance away and due to the size of the development site; therefore no further surveys are required on these ponds. With regards to the two ponds located within 250m of the site, additional surveys will be required including a Habitat Suitability Index (HSI) assessment of P6 (located 125m to the west) and presence/absence surveys of P4 (located 158m to the south). Four repeat surveys of P4 (and P6 if assessed to be of value for GCN following the HSI assessment) should be undertaken between mid-March and mid-June, with at least two of these in mid-April and mid-May. Should GCN be recorded during the four visits,, an additional two surveys will be required to assess the population size and a European Protected Species (EPS) licence may be required to allow works to commence onsite.

No other ecological constraints were identified. There are no anticipated constraints relating to riparian mammals.

Contents

1.0 Introduction

Background

1.1 Absolute Ecology LLP was commissioned to undertake a Preliminary Ecological Assessment of a site known as Land off Cheadle Rd, Alton, Staffordshire, Grid Reference SK 05353 42653.

1.2 The Assessment was undertaken on the 7th March 2018 by Helen Staton BSc (Hons) an experienced ecologist who is an Associate member of the Chartered Institute of Ecology & Environmental Management (CIEEM). Helen holds a Natural England Class 1 Bat Licence and Class 1 Great Crested Newt Licence.

1.3 The scope of this appraisal has been determined in line with the proportional approach to ecological survey, assessment and subsequent recommendations for avoidance and mitigation of impacts, which is encouraged in the emerging 'BS 42020: Biodiversity – Code of practice for planning and development'. This report has been prepared with du consideration for various best-practice guidance and methodologies including those of the Chartered Institute of Ecology and Environmental Management (CIEEM (2012)1 and the emerging BS 42020.

1.4 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.

1.5 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

1.6 The survey area is situated in a predominantly rural location, which boundaries the hamlet of Alton. The site is immediately bounded to the south by a B5032 and to the north is the SSSI Dimmings Dale & The Ranger.

1.7 The site itself is dominated by species poor semi improved grassland, hard standing, fencing & dry stone walling.

2.0 Methodology

Desk Study

2.1 In order to compile background information on the site and immediate surroundings Staffordshire Ecological Record (SER) was contacted.

2.2 Information requested was as follows:-

- Records of protected species within the 2 km of the site.
- Records of rare or notable species within the 2 km of the site.
- Non-statutory site designations on or within 2 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 were present:-

- Statutory site designations on or within 2 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 7th March 2018 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 Target notes (TN) were used to illustrate key features of interest (i.e. over mature trees / hedgerows) or to draw attention to areas considered too small to map or for the purpose of highlighting the location of an invasive plant species. Photographic plates have also been taken to help illustrate key site features.

2.6 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

2.7 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

2.8 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.

2.9 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

Data Search

2.10 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.

Field survey

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

2.12 The survey was undertaken in winter when not all botanical species are visible. However, given the sites dominant habitat type is poor semi improved grassland, the species recorded at the time of the survey are considered representative of the habitat type present and it is considered unlikely that the time of year which the survey was conducted, would act as a constraint to the results.

2.13 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

2.14 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 – Map of sites and species shown within Appendix 1

Sites

4.1 There is one statutory designated sites within 2 km of the site;

- Dimmings Dale & The Ranger– Site of Special Scientific Interest (SSSI);

Dimmingsdale & The Ranger

4.2 The SSSI is located immediately adjacent to the application site. The SSSI, Dimmings Dale is a predominately wooded valley located about two miles east of Cheadle. The stream, a tributary of the River Churnet, has cut trough the underlying Bunter Sandstone exposing several outcrops of the harder Keuper rocks. It carries exceptionally clean water which hosts a rich invertebrate fauna. Remnants of ancient semi-natural oak woodland along the valley have important populations of dead-wood invertebrates and, together with the outcrops, also support a rich community of mosses and liverworts.

4.3 There are 12 non-statutory sites within 2 km of the site, as shown within Table 1.

Table 1: Non Statutory sites within 2km

Grid Ref.	Site Name	Status
SK042421	Brownbank Wood	Retained BAS
SK051407	Greatgate Wood	Local Wildlife Site
SK057425	Shaw House Farm Fields	Local Wildlife Site
SK050438	Moss Bog	Retained BAS
SK059439	Churnet Valley Railway	Local Wildlife Site
SK064425	Rakes Dale	Local Wildlife Site
SK068425	Toothill Wood	Retained BAS
SK063430	Rainroach Rock	Local Wildlife Site
SK063433	Lord's Bridge (north of)	Local Wildlife Site
SK065432	Barbary Gutter	Local Wildlife Site
SK076429	Abbey Wood	Local Wildlife Site
SK079426	Castle Wood	Local Wildlife Site

Species

4.4 SER provided the following records for protected and notable species within 2 km of the site boundary (individual records discussed in detail within the Fauna section of the report):

Bats – eight species of bat recorded within the search area. All bat species are European and UK protected.

Amphibian – one European and UK protected species of amphibian recorded, great crested newt (*Triturus cristatus*), and one UKBAP species, common toad (*Bufo bufo*).

Birds – 36 species of bird recorded all either European or UK protected and 41 UKBAP species.

Mammal – three EU and/or UK protected species of mammal and two UKBAP species of mammal.

Reptiles – one species of reptile recorded within the search area, all UK protected.

Flowering plants – one UK protected plant species, bluebell *(Hyacinthoides non-scripta*).

Invertebrates – no UK or European protected invertebrate species have been recorded and no UKBAP species recorded within the search area.

Habitats

4.5 The following habitats or vegetation types were identified on or immediately offsite during the course of the habitat survey;

- Poor semi improved grassland
- Scrub
- Tall ruderal
- Scattered trees
- Dry stone walls

4.6 Supporting photographic plates are shown in Section 8.0.

Poor semi improved grassland (plate 1)

4.7 The site is dominated by species poor semi improved grassland with species recorded including dominant perennial rye grass (*Lolium perrenne*), occasional cocks foot (*Dactylis Glomerata)*, frequent buttercup (*Ranunculus* spp.), frequent clover (*Trifolium* spp.), occasional ribwort plantain (*Plantago lanceolate*), occasional dandelion (*Taraxacum officinale*). The sward is short as the grassland has grown over areas of hard standing, particularly towards the eastern end of the site.

Scrub (plate 2)

4.8 Located along the western boundary and within the north west corner of the site is an area of bramble dominated scrub (*Rubus fruticosus*) with occasional broom (*Cytisus scoparius*), ivy (*Hedera helix*), willowherb and thistle species (*Cirsium* spp). The scrub is scattered although dense in places. It has predominantly formed where the topography of the site alters, along a steep embankment.

Tall ruderal

4.9 Located along the northern boundary, is a linear stretch of tall ruderal dominated by rosebay willowherb (*Chamerion angustifolium*) and nettle (*Urtica dioica*) with occasional thistle spp, rushes (*Juncus* spp), teasel (*Dipsacus fullonum*), greater burdock (*Arctium lappa*) and herb-robert (*Geranium rebertianum*).

Scattered trees (plate 3)

4.10 Located along the northern boundary is a single mature tree which was assessed for its bat roosting potential shown within section 4.15.

Dry stone walls (plate 4)

4.11 The eastern and southern boundary comprise of dry stone walls. The walls appear old and sections have some vegetation cover including moss and occasional fox gloves (*Digitalis purpurea*).

Fauna

Bats

4.12 SER provided eight records of bats within the search area of the following species; Daubenton's (*Myotis daubentonii*), Whiskered/Brandt's (*Myotis mystacinus/brandtii*), common pipistrelle (*Pipistrellus*

pipistrellus), soprano pipistrelle (*Pipistrellus pygmaeus*) and brown long-eared (*Plecotus auritus*). No roosts were returned during the search, the records are for field observations only.

4.13 There are no building located onsite. Onsite, along the north boundary there is a mature tree (TN5 – plate 3) which was assessed to be low to moderate value for supporting roosting bats. A number of potential roosting features were identified including rot holes and damaged limbs.

4.14 Immediately offsite, along the northern boundary (within the neighbouring woodland) are a number of mature trees bound the site which were identified as having high bat roost potential (TN4). A large number of rot holes/crevices/dead wood were noted and while these trees will not be directly affected by the proposed works, care should be taken to minimise disturbance during and post construction.

4.15 The site as a whole offers good bat foraging opportunities, especially in conjunction with neighbouring habitats and features.

Badgers

4.16 SER provided records of badger within 2 km of the site (locations confidential).

4.17 No badger setts were recorded on or immediately offsite. A latrine was recorded along the southern boundary (TN2), towards the south west corner. It was located next to a section of dismantled wall with a clear well-worn mammal path leading to it from across the site and over the road.

4.18 As no setts are located onsite, no direct conflicts relating to badgers and development will be raised, although due to the suitability of the habitats immediately offsite with particular reference to the woodland to the north, an update badger survey should be completed prior to the start of works.

Dormice

4.19 There is one 1997 record of a hazel dormouse (*Muscard avellanarius*) located 858m away within Threap Wood, Dimmingsdale. The record is for evidence of feeding. Given the dominant habitats present onsite (poor semi improved grassland), it is considered that dormice are likely to be absent from the site.

Water Voles and Otters

4.20 There are three records of water vole (*Arvicola amphibious*) and four records of otter (*Lutra lutra*) occurring within 2 km of the site. The water vole records are from 1997 (historic) and 2007 and are for a site located over 2km away. The otter records date from 2001 and 2002 and are all for records within the River Churnet located over 1km from the site.

4.21 As no waterbodies or watercourses are present on or immediately offsite, there are no constraints relating to riparian mammals and the proposed works.

Other mammals

4.22 SER returned records of hedgehog (*Erinaceus europaeus*), brown hare (*Lepus europaeus*) and polecat (*Mustela ptorius*) within the search area.

4.23 Two records of hedgehog were returned from 1991 and 2009. The habitats present onsite, in particular the scrub and tall ruderal, are of suitability for this species, although not optimal as the site generally lacks cover.

4.24 Six records of brown hare were returned, ranging in dates from 2000-2011. The habitats onsite are generally considered unsuitable for this species, as they generally prefer more open habitats such as farmland, grassland and heathland. It is therefore considered that brown hares are likely to be absent.

4.25 Five records of polecat were returned, ranging in dates from 1993-2014. The habitats onsite are generally considered unsuitable for this species as they prefer lowland wooded habitats, marshes, along riverbanks or even in farm buildings or dry stone walls. It is considered unlikely that this species would be present onsite given the lack of cover/shelter.

Birds

4.26 A number of bird species were returned during the data search by SER. The site is relatively clear of vegetation, lacking hedgerows/trees (with the exception of a single tree on the north boundary) which does limit the site potential for nesting birds. The scattered scrub and dry stone walls however offer some potential particularly for crevice nesting species such as wren (*Troglodytes troglodytes*) which were observed onsite. Other bird species either observed or heard on site during the survey include: blackbird (*Turdus merula*), great tit (*Parus major*) and blue tit (*Cyanistes caeruleus*).

Reptiles

4.27 SER provided records of one species of reptile slow worm (*Anguis fragilis*) although records are historic (1888 and 1919).

4.28 The habitats onsite are generally considered suitable for reptile species; grass snake, common lizard and slow worm in particular. The scrub and tall ruderal offers shelter and foraging with more open areas offering basking opportunities. Across the site are a number of potential refuge piles comprising logs, stone/rubble (TN1 and TN3) in addition to the presence of bounding dry stone walls.

4.29 The site is well connected to the wider landscape via the woodland and SSSI to the north, hedgerows, dry stone walls and tree lines, all features which have the potential to facilitate commuting reptile species. Grass snakes are a priority species within Staffordshire, with a Biodiversity Action Plan in place.

Amphibians

4.30 SER returned two records of great crested newts within the search area dating from 2007 for a site located 1.8km away.

4.31 There are six ponds located within 500m of the site, as shown on Figure 1. A pond used to exist on the site itself although this was filled in several years ago. It is still visible on ordnance survey maps.

4.32 Ponds 2 and 4 were subject to a Habitat Suitability Index (HSI) as shown in Table 1. Ponds 1, 3, 5 and 6 were not HSI assessed as access was either denied or not obtained.

4.33 Pond 2 is located approx. 278m east of the site, next to the road. It is located on the edge of an improved grassland field and next to a mature hedgerow and trees. The pond was viewed from the roadside only. The pond appears well established and not prone to drying. Minimal aquatic and marginal vegetation was observed from the vantage point. No evidence of fowl was observed and fish presence is possible. Shade is approx. 50% and confined to the southern side. The habitats immediately bounding the pond are of good terrestrial habitat for amphibians, with connectivity to the wider landscape.

4.34 Pond 4 (plate 5) is located 158m south west, within a semi improved grassland field. It was viewed form a public right of way. The pond appears well established and not prone to drying. Aquatic and marginal

vegetation was present. *Juncus* spp dominate the margins and in places are dense. No evidence of fowl was observed and fish presence is possible. Scrub and hawthorn shrubs bound the east side of the pond. The habitats immediately bounding the pond are of good terrestrial habitat for amphibians, with connectivity to the wider landscape.

Table 1: Habitat Suitability Index assessment results

Date HSI assessment undertaken	07/03/2018	07/03/2018
Pond ref	Pond 2	Pond 4
SI1 - Location	1	1
SI2 - Pond area	0.8	0.97
SI3 - Pond drying	0.9	0.9
SI4 - Water quality	0.67	1
SI4 - Shade	1	1
SI6 - Fowl	1	1
SI7 - Fish	0.67	0.67
SI8 - Ponds	0.9	1
SI9 - Terr'l habitat	0.67	0.67
SI10 - Macrophytes	0.3	0.5
HSI	0.75 **Good**	0.85 **Excellent**

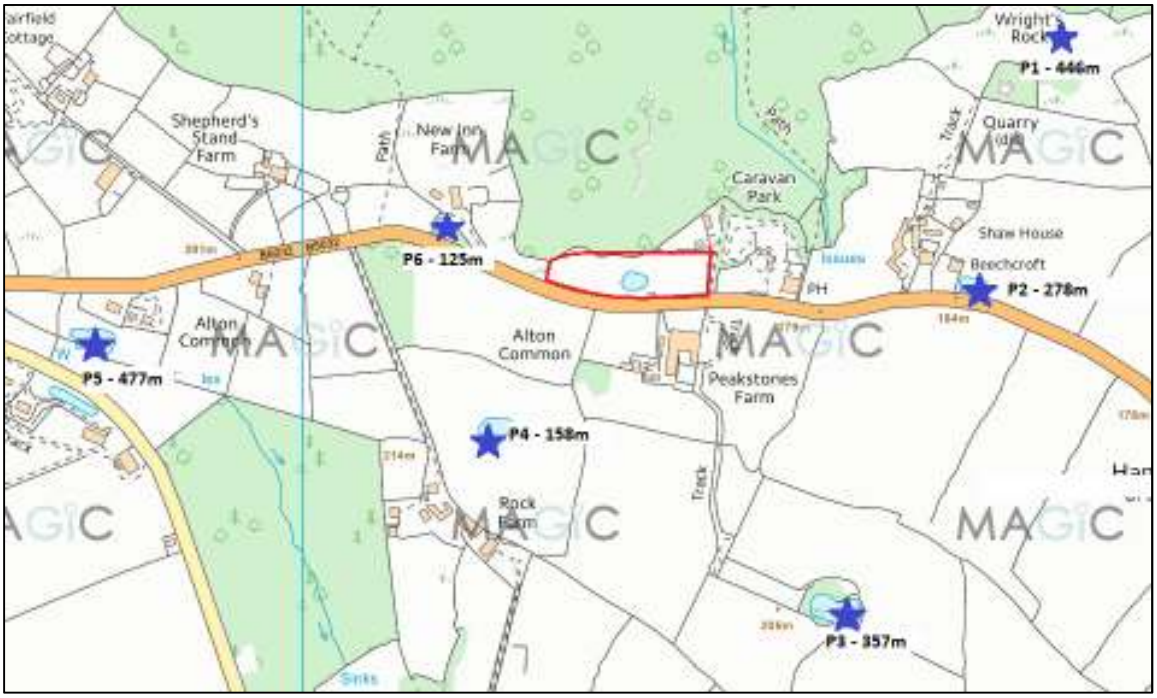
4.35 The HSI was conducted on the 7th March 2018, which is considered a sub optimal time for conducting assessment of this type. Elements of the HSI, in particular the water quality and macrophytes have been assumed. The results from the HSI assessment concluded that P2 is of 'good' value and P4 is of 'excellent' value for supporting great crested newts.

4.36 The terrestrial habitats present onsite (scrub, rubble piles, dry stone walls) are considered suitable for great crested newt utilisation, offering foraging/commuting opportunities, in addition to hibernation opportunities.

4.37 As ponds 1, 2, 3 and 5 are located over 250m away from the site, and as the size of the proposed development is relatively small (between 0.5 and 1ha) they are not considered to be a constraint to the proposed works. A GCN Rapid Rask Assessment of the ponds was carried out (taken from GCN Method Statement WML-A14-2) concluding that an offence on the species is considered highly unlikely. The risk assessment for P1 details that an offence is considered likely. A copy of the completed Rapid Risk Assessment is shown in section 10.0.

4.38 As P4 has been assessed to be of value for GCN, and as Pond 6 is of unknown value (and as they are located within 250m of the site boundary), further surveys will be required on these ponds.

Figure 1: Pond Location Plan including distance from the site boundary



Invertebrates

4.39 SER did not provide any records of protected 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. Additionally, given the size of the proposed development, and type (caravan park which will retain some areas of planting) its loss is not considered to have a major negative impact on any invertebrate species.

5.0 Development Constraints and Recommendations

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

Designated Sites

5.2 There is a single statutory site present within 2km of the site; the Dimmings Dale & The Ranger– Site of Special Scientific Interest (SSSI) which is immediately adjacent to the application site. In order to minimise the indirect impacts on the SSSI site, it is recommended that a buffer zone is created with post and wire fencing along the boundary of the site to prevent people accessing the SSSI.

5.3 The buffer zone should include hedgerow planting along with incorporating a rough grassland area with additional trees (please see Recommendations, Hedgerows & Planting) which would minimise lighting and noise. The buffer zone will need to be managed appropriately in the longer term. The width of the buffer zone should be established during the landscape design scheme. In terms of disturbance from ground works, run offs precautionary measures will be put in place as best-practice measures during the construction phase should be implemented:

5.4 The new hedgerow should be created on the boundary of the SSSI. It is also recommended that Harris fencing is installed which could be constructed along the boundary line as an extra precautionary measure during the construction phase and while the hedgerow is establishing. The new hedgerow along the SSSI should be planted with native species. The creation of a new hedgerow will reduce people accessing the SSSI and will reduce noise and lighting impacts. Please see table 2 for species to plant.

Table 2: List of species for two types of hedgerow deemed suitable for these areas, which can be planted for conservation or to provide a thorn-less barrier.

	Species	**Planting Time**
Conservation Hedgerow	Hawthorn (*Corylus avellana*)	January/February
	Blackthorn (*Prunus spinosa*)	January/February
	Field maple (*Acer campestre*)	January/February
	Spindle (*Euonymus europaeus*)	January/February
	Hazel (*Corylus avellana*)	January/February
	Dog rose (*Rosa canina* agg.)	January/February
	Wayfaring tree (*Viburnun lantana*)	January/February
	Oak (*Quercus robur*)	January/February
Thorn-less Hedgerow	Field maple (*Acer campestre*)	January/February
	Common dogwood (*Cornus sanguinea*)	January/February
	Guelder rose (*Viburnum opulus*)	January/February
	Wild privet (*Ligustrum vulgare*)	January/February
	Hornbeam (*Carpinus betulus)*	January/February

5.5 Any landscaping relating to the proposed development should also take into consideration bats and other wildlife, and it is recommended that only native tree and shrub species are planted. In particular, no plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981 should be planted during the landscaping of this development. For further details of Schedule 9 plants, visit the Defra website: www.defra.gov.uk/wildlife-pets/non-native.

5.6 Standing trees should be retained where possible, and any new planting should contain native species of trees.

Table 3: List of native tree species

	Species	**Planting Time**
Native Tree Species	Ash (*Fraxinus excelsior)*	January/February
	Aspen (*Populus tremula)*	January/February
	Field maple (*Acer campestre*)	January/February
	Bird Cherry (*Prunus padus*)	January/February
	English Elm(*Ulmus minor* var *vulgaris*)	January/February
	Oak (*Quercus robur*)	January/February

5.7 Suitable and appropriate measures or precautions should be taken to avoid any issues relating to fuel spillage. This could involve the use of spill kits (absorbent materials) on site.

5.8 Good site practice should be employed to ensure that fuels on site are stored within a locked, sealed and bunded container. The refuelling of vehicles should occur in one location, and a drip tray should always be used.

5.9 All workers should be given a tool box talk prior to works commencing to make them aware of the adjacent SSSI and providing advice on protection measures.

5.10 A lighting design around the new development, and specifically on the southern 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.

5.11 There are 12 non-statutory sites within 2km of the site, Shaw House Farm Fields within close proximately, given that site main attributes are of flora, and that the habitats located onsite are non reflective of those present within the LWS, no impacts are envisaged. The remainder of the non-statutory sites are well removed and isolated form the proposed development.

Habitats

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

Potential Impacts of Works without Mitigation

5.13 The proposal plan is shown within the Figures section of the report and is for the creation of a caravan and camping site, potential impacts are likely to include the following;

Bats

5.14 Potential loss of a roost, should the onsite tree be felled.

Badger

5.15 Loss of foraging/commuting.

Nesting Birds

5.16 Loss of nesting and foraging opportunities. Site clearance may directly harm nesting birds if carried out during the breeding season (March to August inclusive).

Reptiles

5.1 The site has potential to support reptiles, common lizard, grass snake and slow worm in particular. The sites redevelopment could result in the loss of foraging/commuting habitat. Site clearance may directly kill/injure reptiles.

Great crested newts

5.2 The site has potential to support terrestrial GCN (and other common amphibians; toads, frogs, news). The sites redevelopment could result in the loss of foraging/commuting habitat for GCN and site clearance and development works may directly kill/injure GCN.

Recommendations

5.3 The following are general recommendations that are likely to be a minimum requirement for any future development of the site.

Bats

5.4 A single tree is located onsite (TN5) which was identified across the site as having potential to support roosting bats. It is advised that in the first instance, that this tree is retained, which would negate the need of additional surveys and minimise impacts on the local bat population.

5.5 Care should be taken during works to ensure minimum disturbance to the onsite tree, and to neighbouring trees within the woodland to the north (TN4) which were identified as having potential to support roosting bats. Works should avoid the Root Protection Area (RPA) of the trees to prevent long term damage. Should the onsite trees require felling and/or limb removal/pruning, ecological advice should first be sought as additional surveys would be required (aerial climbing surveys/bat activity

surveys). A lighting plan (as detailed in section 5.10) should be incorporated to minimise impacts on any potential bat roosting features.

Badgers

5.6 Although no badger setts were observed on or immediately offsite at the time of the survey, activity patterns of this species can change over a short time. It is therefore recommended that an update badger survey is undertaken prior to the commencement of works. Badger surveys can be undertaken at any time of year and to allow sufficient time to obtain a Natural England badger mitigation licence (should a sett be discovered on or immediately offsite) the survey should be scheduled three months prior to the commencement of works.

5.7 Additionally, during construction works, excavations should be left closed overnight or a mammal ladder installed. The ladder needs to be of a size suitable for badgers and can be constructed out of a piece of wood/timber.

Birds

5.8 With regards for nesting birds, the habitats onsite (scrub, dry stone walls, tree) are of high value for nesting and foraging birds. Therefore, any pre construction de-vegetation/site clearance works should be done outside of the bird breeding season which runs March-August inclusive. Where this is not possible and works are to be scheduled during the bird breeding season, a nesting bird check should be carried out by a competent surveyor. Should active nests be present, an exclusion zone will need to be established around the nest(s) and works within this area will need to be avoided until the young have fledged.

5.9 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/.

Reptiles

5.10 The site has the potential to support reptile species. It is therefore recommended that reptile presence/absence surveys are undertaken.

5.11 A reptile survey of the whole site should be carried out prior to development. Reptile surveys can be carried out between April and September (April, May and September being 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.

5.12 If reptiles are present, mitigation will involve protecting individuals from harm during the development. Depending on the size of population present and area of habitat loss, this may require catching and translocating reptiles to a suitable receptor site prior to groundworks and/or destructive searches during groundworks.

Great crested newts

5.13 The site has the potential to support terrestrial GCN. There are no waterbodies present onsite. There are six ponds within 500m of the site boundary, two of which are located within 250m – Ponds 4 and 6.

5.14 With regards for Ponds 1, 2, 3 and 5, based on their distance away from the site boundary (over 250m) and due to the size of the proposed development site (0.5-1ha), an offence on the legal protection of GCN is considered highly unlikely (as shown within the Rapid Risk Assessment section 10.0) therefore no further surveys are required on these ponds.

5.15 Pond 4 was subject to a HSI assessment which concluded it to be of 'excellent' value for supporting GCN. A HSI was not carried out on P6 due to lack of access at the time of the survey.

5.16 It is firstly recommended that access is obtained to P6 in order to carry out HSI assessment. Once assessed, depending on its suitability, it too may need to be included within the GCN presence/absence surveys, which will need to be carried out on P4.

5.17 Four repeat surveys of P4 (and P6 id assessed to be of value for GCN following the HSI assessment) should be undertaken between mid-March and mid-June, with at least two of these in mid-April and mid-May. If GCN are confirmed to be absent (after four visits), no further surveys are required, and works can commence without mitigation.

5.18 If great crested newts are found to be present, a further two surveys are required to estimate population size. Standard survey methodology involves three different methods, preferably torchlight counts, bottle trapping and an egg search.

5.19 Once the population size has been estimated (small, medium or large), a European Protected Species (EPS) licence from Natural England may be required to allow the development to proceed. The EPS licence sets out a Method Statement including appropriate mitigation to ensure that individual newts are not harmed and to mitigate for any loss of habitat. The EPS licence application process can take up to ten weeks.

6.0 References

Anon (1995) *Guidelines for Baseline Ecological Assessment*. Institute of Environmental Assessment. Chapman & Hall.

Anon (1995) *The UK Biodiversity Action Plan*. Joint Nature Conservation Committee, Peterborough.

Anon (1999) *Advice Sheet 10: Reptile Survey*. Froglife, Peterborough.

Anon (2002) *Badgers and Development*. English Nature, Peterborough.

Anon (2003) *Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit* (Revised reprint). Joint Nature Conservancy Council, Peterborough.

Anon (2004) *Reptiles: Guidelines for Developers*. English Nature, Peterborough.

Foster, J. (2001) *Great Crested Newt Mitigation Guidelines*. English Nature, Peterborough.

Gent, T. & Gibson, S. (1998) *Herpetofauna Workers Manual*. Joint Nature Conservation Committee, Peterborough.

Hundt L (2012) Bat Surveys: Good Practice Guidelines, 2nd edition, Bat Conservation Trust.

Mitchell-Jones, A.J. (2004). *Bat Mitigation Guidelines*. English Nature, Peterborough.

Mitchell-Jones, A.J. & McLeish, A.P. [Eds.] (2004). *The Bat Workers Manual* (3rd edition). Joint Nature Conservancy Council, Peterborough.

Rose, F. (1991). *The Wild Flower Key*. Frederick Warne, London.

Websites used:

Protected Sites: www.magic.gov.uk

Protected Species: http://data.nbn.org.uk/

Rotherham Biodiversity Action Plan:
http://www.rotherham.gov.uk/info/1009/wildlife/946/biodiversity_action_plan/1

UKBAP: http://jncc.defra.gov.uk/page-5155

www.rspb.org.uk

www.streetmap.co.uk

www.maps.google.co.uk

www.bing.com/maps

Web addresses for access to full UK legislation and policy text:

Conservation (Natural Habitats &c.) Regulations 1994:
http://www.opsi.gov.uk/si/si1994/uksi_19942716_en_1

Conservation (Natural Habitats &c.) (Amendment) Regulations 2007:
http://www.opsi.gov.uk/si/si2007/uksi_20071843_en_1

Conservation (Natural Habitats &c.) (Amendment) Regulations 2009:
http://www.legislation.gov.uk/uksi/2009/6/pdfs/uksi_20090006_en.pdf

Habitats Directive:
http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm

Wildlife and Countryside Act 1981:
http://www.legislation.gov.uk/ukpga/1981/69

Countryside and Rights of Way Act 2000:
http://www.legislation.gov.uk/ukpga/2000/37/contents

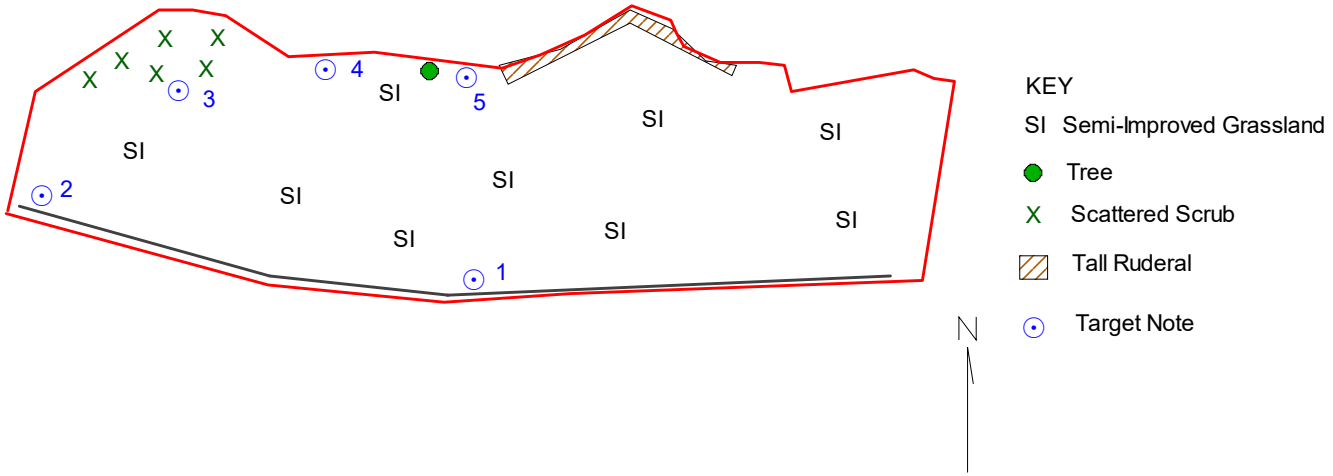
Protection of Badgers Act 1992:
http://www.opsi.gov.uk/ACTS/acts1992/ukpga_19920051_en_1

Natural Environment and Rural Communities Act 2006:
http://www.legislation.gov.uk/ukpga/2006/16/contents

National Planning Policy Framework 2012:
http://www.communities.gov.uk/publications/planningandbuilding/nppf

7.0 Plans

Phase I Habitat Survey Map



Target Note 1	Rubble pile
Target Note 2	Badger Path
Target Note 3	Log pile
Target note 4	Bat Potential Trees within Woodland
Target Note 5	Tree with low-moderate bat roosting potential.

8.0 Photographic Plates

Plate 1: View of the site from the east boundary

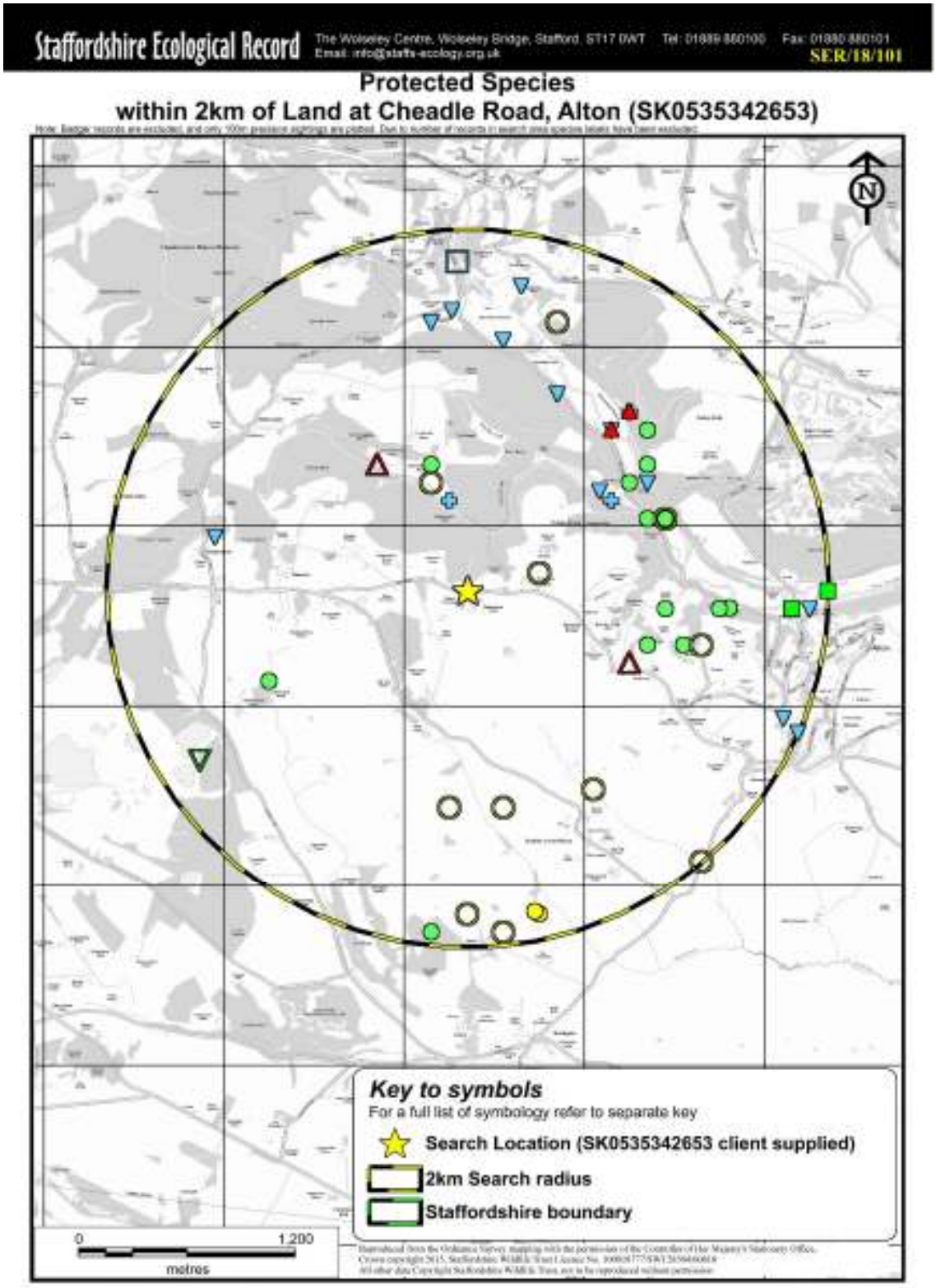
Plate 2: Scrub along the north west boundary

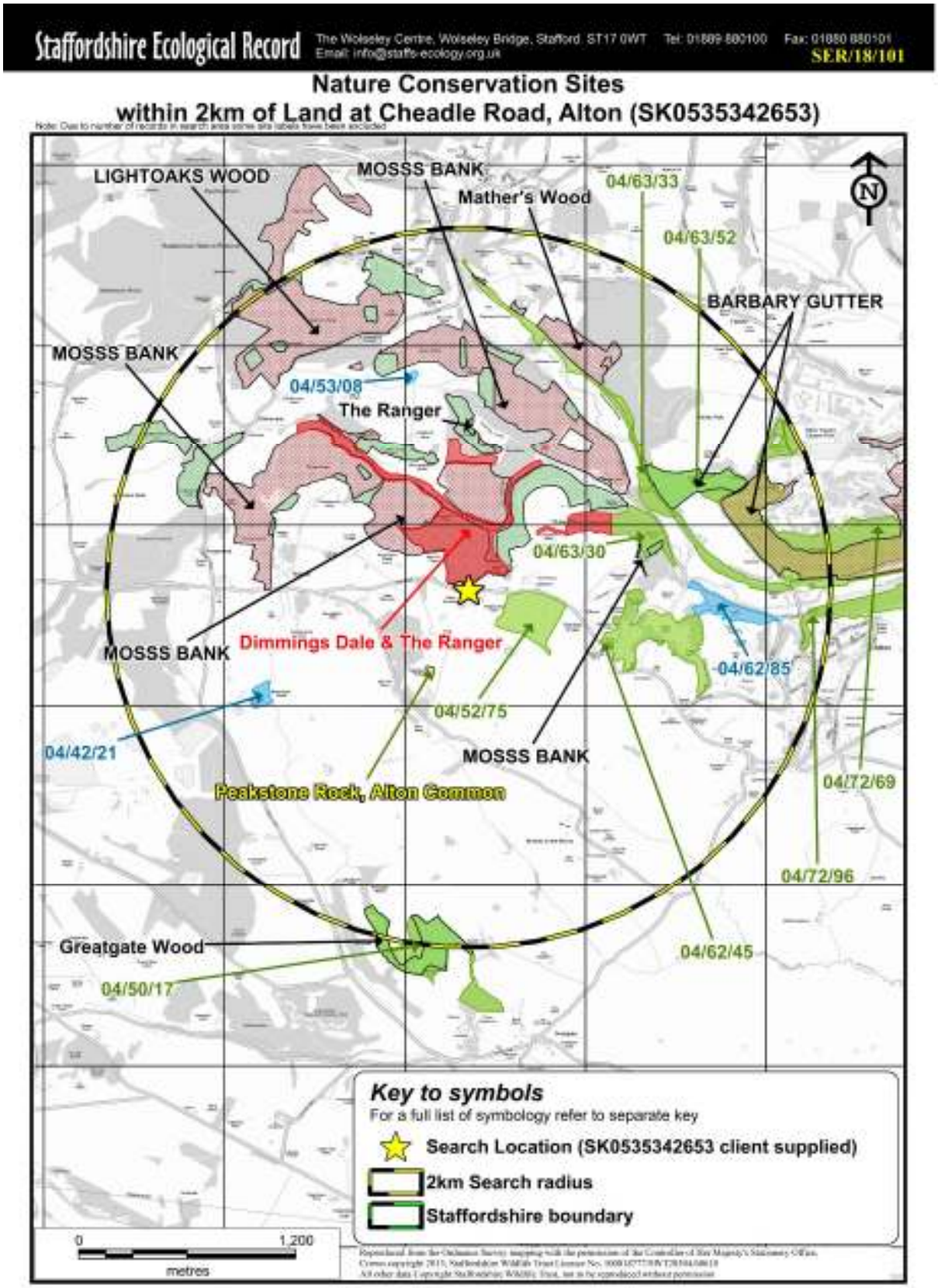
Plate 3: Tree located onsite along the north boundary (TN5)

Plate 4: Dry stone wall located along the southern boundary

Plate 5: P4 assessed to be of ‘excellent’ value for supporting GCN

9.0 Appendix 1: Desk Study




Staffordshire Ecological Record
The Wolseley Centre, Wolseley Bridge, Stafford. ST17 0WT Tel: 01889 880100 Fax: 01889 880101
Email: info@staffs-ecology.org.uk
SER/18/101
Nature Conservation Sites
within 2km of Land at Cheadle Road, Alton (SK0535342653)
LIGHTOAKS WOOD
MOSSS BANK
Mather's Wood
04/63/33
04/63/52
BARBARY GUTTER
MOSSS BANK
04/53/08
The Ranger
04/63/30
MOSSS BANK
Dimmings Dale & The Ranger
04/62/85
04/52/75
04/42/21
MOSSS BANK
Peakstone Rock, Alton Common
04/72/69
04/72/96
Greatgate Wood
04/50/17
04/62/45
N
Key to symbols
For a full list of symbology refer to separate key
Search Location (SK0535342653 client supplied)
2km Search radius
Staffordshire boundary
0
1,200
metres

Staffordshire Ecological Record
The Wolseley Centre, Wolseley Bridge,
Stafford. ST17 0WT
Tel: 01889 880100 Fax: 01889 880101
Email: info@staffs-ecology.org.uk

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
- Otter (Lutra lutra)
- Badger (Meles meles) - not normally supplied
- Water Vole (Arvicola terrestris)
- All bat species
- All bird species
- Any other protected species (precise to 100m)
- All Protected Species Records (precise to 1km)
- Amphibians and reptiles excluding those below
- Great Crested Newt (Triturus cristatus)
- Native Crayfish (Austropotamobius pallipes)
- Flowering plants except those below
- Bluebell (Hyacinthoides non-scripta)
- Butterflies and Moths
- BAP Species Records (precise to 100m)
- 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:\Workspc\SER Enquiry Legend.wor

10.0 GCN Rapid Risk Assessment

P1 – 446m, P2 – 278m, P3 – 357m, P5 – 477m

Component	**Likely effect** (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)	**Notional offence probability score**
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	No effect	0
Land 100-250m from any breeding pond(s)	No effect	0
Land >250m from any breeding pond(s)	0.5 - 1 ha lost or damaged	0.03
Individual great crested newts	No effect	0
	Maximum:	0.03
Rapid risk assessment result:	**GREEN: OFFENCE HIGHLY UNLIKELY**	

P4 – 158m, P6 – 125m

Component	**Likely effect** (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)	**Notional offence probability score**
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	No effect	0
Land 100-250m from any breeding pond(s)	0.5 - 1 ha lost or damaged	0.3
Land >250m from any breeding pond(s)	No effect	0
Individual great crested newts	No effect	0
	Maximum:	0.3
Rapid risk assessment result:	**AMBER: OFFENCE LIKELY**	

Guidance on risk assessment result categories
"Green: offence highly unlikely" indicates that the development activities are of such a type, scale and location that it is highly unlikely any offence would be committed should the development proceed. Therefore, no licence would be required. However, bearing in mind that this is a generic assessment, you should carefully examine your specific plans to ensure this is a sound conclusion, and take precautions (see **Non-licensed avoidance measures tool**) to avoid offences if appropriate. It is likely that any residual offences would have negligible impact on conservation status, and enforcement of such breaches is unlikely to be in the public interest.
"Amber: offence likely" indicates that the development activities are of such a type, scale and location that an offence is likely. In this case, the best option is to redesign the development (location, layout, methods, duration or timing; see **Non-licensed avoidance measures tool**) so that the effects are

minimised. You can do this and then re-run the risk assessment to test whether the result changes, or preferably run your own detailed site-specific assessment. Bear in mind that this generic risk assessment will over- or under-estimate some risks because it cannot take into account site-specific details, as mentioned in caveats above. In particular, the exact location of the development in relation to resting places, dispersal areas and barriers should be critically examined. Once you have amended the scheme you will need to decide if a licence is required; this should be done if on balance you believe an offence is reasonably likely.
"Red: offence highly likely" indicates that the development activities are of such a type, scale and location that an offence is highly likely. In this case, you should attempt to re-design the development location, layout, timing, methods or duration in order to avoid impacts (see **Non-licensed avoidance measures tool**), and re-run the risk assessment. You may also wish to run a site-specific risk assessment to check that this is a valid conclusion. If you cannot avoid the offences, then a licence should be applied for.