

# **Preliminary Ecological Appraisal**

Sytch Lane, Brown Edge, Staffordshire Moorlands

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# Notice to readers

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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.

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# Non-technical summary

Absolute Ecology LLP was commissioned to undertake a Preliminary Ecological Appraisal of land off Sytch Lane, Brown Edge, Staffordshire Moorlands, ST6 8QR.

An Extended Phase I Habitat survey was undertaken on 7 October 2016 by experienced ecologists.

The site comprised a field of scrub with scattered semi-mature trees, a wet ditch and a patch of marshy grassland. The site is surrounded by residential properties and roads, with a farmed landscape beyond the village. The site was densely vegetated and contained areas of marshy ground, and therefore survey access was restricted to certain points within the site.

None of the trees on site were mature enough to have developed suitable features for roosting bats. There were no buildings or other structures on site which could provide potential roost sites, but there was a record of a maternity roost of common pipistrelles in a house 65 m to the south of the site.

The scrub, marshy grassland, trees and hedgerows on site may provide foraging habitat for bats, and the habitats may be particularly valuable to the nearby maternity colony. It is therefore recommended that at least 3 bat activity transects are undertaken during the breeding season of May to August inclusive.

No evidence of badger activity was found on site or along the edges of the site and large parts of the site generally appeared of low potential for badgers due to wet ground. However, as badger activity can change, a pre-commencement badger survey of the site and surrounds should also be undertaken to check for any setts.

The scrub and species-poor hedgerow to the east had low potential for supporting dormouse due to lack of connectivity to the wider area. Furthermore, the species is rare in the county, and it is considered unlikely to occur on site. No further survey is necessary.

The wet ditch on site comprised sub-optimal habitat for water vole due to limited vegetation, low banks and small amount of water. As the ditch is not connected to a wider network of ditches or wetland areas, it is unlikely for this species to occur on site. No further survey is necessary.

The site provides potential nesting and foraging habitat for birds. The scrub, trees and hedgerows may support nesting birds between March and August inclusive. Vegetation clearance should be planned outside of the bird breeding season (September to February) or be subject to checks for nesting birds.

The scrub and marshy grassland may provide potential foraging habitat for common reptiles, in particular grass snake. As the majority of vegetation will be removed, it is recommended that reptile presence/absence surveys are undertaken between April and September.

The site contained habitats which were potentially suitable for great crested newts. There were two ponds near each other, within 500 m of the site. One of these was a raised garden fish pond within 175 m of the site which had records of small numbers of great crested newts. The other was a garden

pond around 165 m away, which was found not to support great crested newts in 2013. There was significant residential clutter between the site and the ponds, and for this reason it is considered low risk for great crested newts to reach the site. It is recommended that the works proceed under Reasonable Avoidance Measures.

There was a patch of Japanese knotweed on site which requires treating in accordance with the Japanese Knotweed Code of Practise. No other invasive species were noted during the walkover.

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# 1.0 Introduction

# Background

- 1.1 Absolute Ecology LLP was commissioned to undertake an Preliminary Ecological Assessment of land off Sytch Road, Brown Edge, Staffordshire, ST6 8QR (SJ907532).
- 1.2 The Assessment was undertaken on 7 October 2016 by Eleanor Weir and David Allen. Eleanor is an experienced ecologist who is a full member of the Chartered Institute of Ecology & Environmental Management (CIEEM). Eleanor has 14 years of experience as a consultant and holds survey licences for bats, great crested newts, dormouse and barn owl. David is an ecologist who holds a great crested newt licence and has 6 years of experience as an ecological consultant, working on a range of development projects.
- 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 due 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 site off Sytch Road is located in the village of Brown Edge, a residential area of Staffordshire Moorlands. It is approximately 5 km north of the conurbation of Stoke-on-Trent. The site is a field which is mainly scrub, with damp area of marshy grassland, scattered young trees and a ditch which is culverted at the west end of the site. The site is surrounded by residential development, including a playground, gardens and a garage.

# 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 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 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 7<sup>th</sup> October 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

The field was not accessible for close inspection in many areas, due to density of scrub and very wet boggy ground to the south which was assessed to be potentially risky to enter. There were various entry points which allowed access to a certain point, and binoculars were used to view parts where it was not possible to proceed any further.

Habitats within 30 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 access.

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

#### Nomenclature

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

# 3.0 Legislation

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

# 4.0 Results

# **Desk Study**

- 4.1 There is one statutory designated site within 2 km of the site, which was a Local Nature Reserve (LNR). This is Marches Hill Common Local Nature Reserve (LNR) which lies approximately 1.25 km to the north of the site.
- 4.2 There are no statutory designated sites for bats within 5 km of the site.
- 4.3 There are 17 non-statutory sites within 2 km of the site. These include 11 Local Wildlife Sites (LWS), 3 Biological Alert Sites (BAS), 2 Ancient and Semi-Natural Woodlands and 1 Regionally Important Geological and Geomorphological sites (RIGS).
  - The closest non-statutory site is Tinster Wood (LWS), 750 m to the south east of the site, a semi-natural broad leaved woodland.
  - Ball End Wood (LWS), 1 km to the south, a semi-natural, possibly ancient woodland with grazed scrub and grassland.
  - Stonehay Wood, 1 km to the west of the site, classed as an Ancient and Semi-Natural Woodland.

Due to their distance, it is unlikely that there would be any impacts on the above protected sites from any development proposals on site.

SER provided the following records for protected and notable species within 2 km of the site boundary:

- There were numerous records of bats within 2 km, including common pipistrelle *Pipistrellus pipistrellus*, brown long-eared *Plecotus auritus*, Daubenton's Bat *Myotis daubentonii* and noctule *Nyctalus noctula*. The nearest record was of a maternity roost of common pipistrelles at a house, 65 m to the south of the site. The records show this roost had been monitored between 1991 and 2011, with a top count of 54 bats during the summer.
- There were records of badger *Meles meles* within 2 km of the site; although none related to the site, 1 badger was observed 140 m from the site in 1995.
- There were records of water vole *Arvicola amphibius* within 2 km of the site, although all were over 1 km from the site.
- There was 1 unconfirmed record of a dormouse *Muscardinus avellanarius*, over 1 km from the site.
- There was 1 record of *otter Lutra lutra*, over 1 km from the site.
- There was 2 records of polecat *Mustela putorius*, with one recorded 500 m from the site (including a record 1750 m from the site which was unconfirmed)
- SER returned 36 records of grass snake *Natrix natrix*, which were a mixture of old and more recent records. There were several old records of common lizard *Zootoca vivipara* and slow-worm *Anguis fragilis*, the most recent being from 1983. There were also 3 records of adder *Vipera berus* (1 recent). The closest records were of grass snake and adder from 2008, 779

m from the site at a pond near Ball Edge and a slow-worm from 1984, 353 m from the site.

- There were 6 records of great crested newt *Triturus cristatus* although all recent records were over 1.9 km away from the site. There was 1 record from 1993, 779 m from the site. Most of the records related to known populations around Chatterley Whitfield.
- There were 4 records of White-clawed Crayfish *Austropotamobius pallipes*, all records were over 1.8 km from the site. The most recent record was from 1999.

SER returned a large number of bird records. Species which may be relevant to the habitats present on site are shown in Table 2.

Species	Scientific name	Special protection (see Appendix 3)	Status in UK <sup>1</sup>	Biodiversity Action Plan (BAP) Species
Barn Owl	Tyto alba	Schedule 1	Amber List	Staffordshire BAP
Black Redstart	Phoenicurus ochruros	Schedule 1	Red List	
Brambling	Fringilla montifringilla	Schedule 1		
Fieldfare	Turdus pilaris	Schedule 1	Red List	
Kestrel	Falco tinnunculus		Amber List	
Kingfisher	Alcedo atthis	Schedule 1	Amber List	
Peregrine Falcon	Falco peregrinus	Schedule 1		
Redwing	Turdus iliacus	Schedule 1	Red List	
Short eared owl	Asio flammeus		Amber List	

Table 1: Records of relevant bird species within 2 km.

<sup>&</sup>lt;sup>1</sup> BTO Birds of Conservation Concern 3: Red List species have suffered severe recent population declines, Amber List species are in moderate population decline.

### Habitats

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

#### Scrub (Plate 1)

4.5 The site was largely dominated by a dense covering of scrub mingled with scattered young willow and tall ruderals. Scrub comprised abundant impenetrable bramble *Rubus fruticosus*, with occasional hawthorn *Crataegus monogyna*, goat willow *Salix caprea*, crack willow *Salix fragilis*, and rarely occurring young ash *Fraxinus excelsior*, sycamore *Acer pseudoplatanus*, silver birch *Betula pendula*, holly *llex aquifolium* and European gorse *Ulex europaeus*. The scattered tall ruderals within the scrub included frequent to abundant rosebay willowherb *Chamerion angustifolium*, wild raspberry *Rubus idaeus*, bracken *Pteridium sp.* and nettle *Urtica dioica*. Where there were open patches within the scrub, there was occasional to frequent soft-rush *Juncus effusus*, broad-leaved dock *Rumex obtusifolius*, meadow buttercup *Ranunculus acris*, hogweed *Heracleum sphondylium*, marsh thistle *Cirsium palustre*, creeping buttercup *Ranunculus repens*, ground elder *Aegopodium podagraria*, teasel *Dipsacus fullonum*, and hedge bindweed *Calystegia sepium* on some shrubs. Grasses included small areas of creeping bent *Agrostis stolonifera*, common bent *Agrostis capillaris* and rough-stemmed meadow-grass *Poa trivialis*.

#### Marshy grassland

4.6 There was a damp area of marshy grassland to the south (Target Note 1, Plates 5 & 6) which was water saturated and very boggy underfoot, dominated by very large tumps of greater tussock sedge *Carex paniculata* with frequent rosebay willow herb and soft-rush occurring in this area. A patch of *Typha* sp. appeared to be present but it was not possible to reach this area for close inspection.

#### Species-poor hedgerow

4.7 There was a section of tall species-poor hedgerow to the west (Plate 4). This hedgerow was dominated by hawthorn and occasional holly. The hedge had been cut to the outside of the site, but the top of the hedge had not been cut for a number of years.

#### Wall

4.8 There was an old wall made from local stone forming the northern boundary, which had largely collapsed (Target Note 3, Plate 2 & 3). The wall was often covered with bramble and wild raspberry. There were frequent shrubs of elder *Sambucus nigra* and buddleia *Buddleja davidii*.

#### Wet Ditch

4.9 There was a wet ditch along the southern edge of the site which was culverted at either end where it entered and left the site. The ditch could not be accessed along the central part, but it was observed to contain a very small amount of water to the east (upstream – Plate 7) with increased flow to the west (downstream), indicating some drainage in the water course along its length.

#### Invasive Species

4.10 There was a stand of Japanese knotweed in the west edge of the site (Target Note 2, Plate 8).

### Fauna

Bats

- 4.11 SER provided numerous records of bat species within 2 km of the site. The most relevant record is that of a maternity roost of common pipistrelle bats in a house 65 m to the south. There are no buildings on site and none of the trees were mature enough to contain features which could be used by roosting bats.
- 4.12 The site provides potentially valuable foraging habitat for a range of bat species. The damp sheltered nature of the site is likely to provide a range of invertebrate prey which may be particularly important to any bats roosting nearby, particularly for the maternity colony to the south.

#### Badgers

4.13 SER provided records of Badger within 2 km of the site, although there were no sett records within 1 km. There was no evidence of badger using the site or any evidence of badger setts as far as could be inspected. There were no badger paths found entering the site, or evidence of badger activity (such as latrines or snuffle holes) around the perimeter to suggest that badgers were entering the site. The majority of the site is assessed to be sub-optimal for badgers to make setts in, due to the wet ground. The sloping bank to the north of the site is likely to be drier and potentially more suitable for badgers.

#### Dormice

4.14 There was a record of a dormouse 1.1 km from the site, although this record is unconfirmed, and generally it is known that the species is rarely found in the county. The potential for the site to support Dormice is low. The hedgerow and scrub provides limited species-poor habitat and was not well connected to the wider area. No significant areas of woodland are evident in the surrounding area and it is considered that Dormice are likely to be absent from the site.

#### Water Voles and Otters

- 4.15 There are records of Water Voles and Otters within 2 km of the site. The small wet ditch along the southern boundary was assessed to be of low potential for water vole due to the current low water levels and likely variable levels of water draining off the site; low banks; the isolation of the ditch from other ditch networks (culverted at west end) and the small area of habitat present. No evidence of water vole could be seen where the ditch could be accessed for inspection at each end.
- 4.16 Generally Water Voles prefer sites with wide swathes of riparian vegetation, both growing from the banks and from the water. This serves as both their food and shelter. Water Voles also prefer slow-flowing, relatively deep (over 1 m depth) water courses (Strachan & Moorhouse, 2006). The water within the ditch was shallow on the day of the survey with no aquatic vegetation observed; conditions that Water Voles tend to avoid.

#### Other mammals

4.17 SER returned two records of Polecat exist within 2 km, as well as several records of hedgehog. With regard to polecat, the dense scrub and marshy grassland provides potential habitat with plenty of cover although there were no rabbit populations noted on site. Hedgehog could occur on along the drier edges of the site.

#### Birds

- 4.18 Numerous records of birds including barn owl, field fare and brambling were provided by SER. Only a blue tit was heard during the site walkover.
- 4.19 The scrub, hedgerows and semi-mature trees provide potential foraging and nesting habitat for a range of common bird species.

#### Reptiles

- 4.20 SER returned numerous records of grass snake within 2 km, as well as several records of adder, common lizard and slow worm (although most of these were old records). The scrub mosaic and marshy grassland has potential to support grass snake *Natrix natrix* in particular, which favour damp grasslands to forage for amphibians and small mammals. The general aspect of the site is south facing which increases basking potential although there were not many open areas due to the scrub cover. The collapsed stone wall on the northern boundary could support common lizard and grass snake by providing shelter, basking and hibernation sites.
- 4.21 Although the site was surrounded by gardens and amenity grassland and was not immediately connected to other good reptile habitat, grass snakes in particular are known to range widely and can cross small roads to reach suitable foraging grounds.

#### Amphibians

- 4.22 SER provided 1 record of great crested newt within 2 km of the site; this was a record of a newt 779 m to the south, dating from 1993. There is also a recent survey record (2013) known to the authors of 2 great crested newts found in a raised garden fish pond, 175 m to the north (Figure 2). The habitat between this pond and the site is highly cluttered with houses, gardens and hardstanding reducing likelihood of any dispersing newts reaching the site. There was a second small garden pond near to the fish pond which was surveyed in 2013 but was not found to contain any great crested newts.
- 4.23 One other pond is shown on OS maps 125 m to the west, but aerial maps show this pond no longer appears to exist. The record of newts to the north therefore suggests it is an isolated record and not part of a meta-population where it would be more likely for newts commute between ponds.
- 4.24 Standing water on site was minimal at the time of the survey as far as could be inspected, and the water in the wet ditch was running water which is not suitable for breeding great crested newts. The boggy ground suggested a high water table on site, and it is therefore possible that at some parts of the year or after heavy rain there could be ephemeral standing water on site. The scrub, marshy grassland and dilapidated stone walls provide potential terrestrial habitat for great crested newts and other amphibians.

#### Invertebrates

- 4.25 SER provided records of a variety of moth, bees and butterflies, although most were over 1 km from the site. There were also several records of white-clawed crayfish within 2 km.
- 4.26 The habitats on site are generally common and do not provide much potential for rare invertebrate species although the site is likely to support a greater diversity of invertebrates than the highly managed gardens and amenity grassland areas surrounding the site.

4.27 The wet ditch is unlikely to support white-clawed crayfish due to the low levels of water and isolation from other watercourses or ditches.

# 5.0 Development Constraints and Recommendations

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

### **Designated Sites**

- 5.2 There is one designated statutory site within 2 km of the site. Marches Hill Common Local Nature Reserve (LNR) which lies approximately 1.25 km to the north of the site is unlikely to be affected by any proposals due to the distance from the site.
- 5.3 There are 17 non-statutory sites within 2 km of the site. The closest non-statutory site is Tinster Wood (LWS), 750 m to the south east of the site, a semi-natural broad leaved woodland. Due to the distance from the site, there are unlikely to be any impacts on non-statutory designated sites.

### Habitats

5.4 The site is largely covered by scrub and tall ruderal herbs which are common and widespread. The small area of marshy grassland dominated by large tumps of greater tussock sedge is likely to be the area of most botanical interest, with this species being uncommon in Staffordshire and possibly a remnant of a larger area of wetland. However, the existing area of marshy grassland on site is very limited and isolated, and is becoming succeeded by scrub and trees.

### **Potential Impacts of Works**

- 5.5 There site is proposed for a residential development of 21 houses, and potential impacts are likely to include the following:
  - 5.6 Removal of scrub, marshy 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.
  - 5.7 Although no badger setts were observed on site, badger activity can change over a short time. If any setts are created on or adjacent to site prior to works, tunnels could be affected by ground works and vegetation removal and badgers could be harmed.
  - 5.8 Loss of scrub, 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).
  - 5.9 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.
  - 5.10 In the unlikely event that great crested newts were present on site, they could be killed or injured during removal of vegetation or ground works. They would also suffer loss of habitat.

### Recommendations

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

#### Bats

- 5.12 The site comprises a sheltered field of scrub, marshy grassland and trees which may be valuable to foraging bats, particularly as there is a record of a maternity roost nearby. There may also be impacts on bats if there is an increase in light spill or any severance of hedgerows.
- 5.13 Given the record of the nearby maternity roost, it is recommended that bat transects are undertaken to assess the level of bat activity on site, prior to any planning application being made. At least three bat activity transects should be undertaken within the breeding season (May to August) with at least 2 weeks between surveys.
- 5.14 Due to the density of the vegetation and boggy ground, any transects undertaken will be limited in extent within the site; listening points will need to be carefully planned at safe accessible locations, with the majority of the transect being along the site edges.

#### Badgers

5.15 No badger activity was observed on the site at the time of the survey, and the majority of the site was of low potential for a badger sett due to wet ground. However, as there was a scrubby bank present to the north, and as activity patterns of this species can change over a short time, it would be prudent to undertake an updated check for badger activity prior to construction or vegetation clearance. Badger surveys can be undertaken at any time of year.

#### 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, hedgerows, scrub and marshy grassland during the bird breeding season (March to August inclusive). If vegetation removal cannot avoid 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.
- 5.18 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.

#### Reptiles

- 5.19 A reptile survey of the site 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.
- 5.20 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.

#### Great crested newts

- 5.21 Although there is one pond with a record of great crested newt within 175 m of the site, it is considered to be low risk for great crested newts to reach the site due to the low population present (Maximum of 2 adults found during any one survey) and significant 'clutter' of residential infrastructure which is likely to form a barrier between the site and the pond (Figure 2). There are no other ponds noted within 500 m and therefore it is unlikely that the recorded newts are part of a wider metapopulation, which also reduces the likelihood that adults would be dispersing between ponds.
- 5.22 Nonetheless, as the site contains potentially suitable terrestrial habitat for great crested newts, it is recommended that works are undertaken using Reasonable Avoidance Measures (RAM). A Method Statement should be produced which details careful working methodology to ensure risks to newts are minimised, including hand search of any suitable refuges (e.g. stone walls, rubble piles).
- 5.23 In the unlikely event that any great crested newts are found during works, work would need to stop and a licence may be required from Natural England.

#### Japanese knotweed

- 5.24 Approved measures to control and treat the stand of Japanese knotweed should proceed as soon as possible. Eradication of this invasive species can sometimes take several years and must be undertaken according to The Knotweed Code of Practice to ensure an offence is not committed by allowing the plant to spread in the wild.
- 5.25 Further government advice including the link to The Knotweed Code of Practice can be found here: https://www.gov.uk/guidance/prevent-japanese-knotweed-from-spreading

# 6.0 References

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#### Websites used:

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

Staffordshire Biodiversity Action Plan: <a href="http://www.sbap.org.uk/">http://www.sbap.org.uk/</a>

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

#### Figure 1: Extended Phase I Habitat Survey





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### Table 2: Target Notes (shown on Figure 1)

Number	Target Note		
1	Marshy grassland with greater tussock sedge, willowherbs and Typha species		
2	Stand of Japanese Knotweed		
3	North western boundary formed by a collapsed wall, scrub covered in places. Potential to provide shelter and hibernacula for reptiles and amphibians.		

Figure 2: Pond Location Map



# 8.0 Photographic Plates

Plate 1: General view of site looking west.



Plate 2: Northern boundary. Collapsed wall covered by bramble.







Plate 4: Tall hedgerow, western boundary.





Plate 5: View of marshy grassland, looking east.

Plate 6: Large tumps of greater tussock sedge







Plate 8: Stand of Japanese knotweed

