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Ecological Assessment: Land at Rogers Farm, Bush Bank, Hereford, HR4 8EP.

National Grid Reference 344940, 252470

Site Visit: 9th May 2014
Report Submitted: 16th June 2014

Ref: B/1160/14.1

Client:
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1. SUMMARY

On 9th May 2014 an Ecological Assessment was carried out of a proposed development site known as 'Land at Rogers Farm', Bush Bank, Hereford, HR4 8EP.

The Ecological Assessment comprised a Desk Study, an Extended Phase One Habitat Survey, an Initial Bat Survey, an Initial Kingfisher Survey, an Initial Otter Survey, an Initial Water Vole Survey and a Great Crested Newt Assessment.

Historical biodiversity records were purchased from the Herefordshire Biological Records Centre.

Dr. R. M. Jones, experienced field biologist, surveyor, Natural England licensed bat worker (Licence numbers 20131191 and CLS01310) and Natural England licensed newt worker (Licence number CLS001310) carried out the assessment/survey.

The Ecological Assessment was requested by Berrys, on behalf of Mr. G. Williams, to inform a planning application for the construction of a poultry unit on Land at Rogers Farm.

Desk Study

There are no County Wildlife Sites or other wildlife designated sites within 2km of the proposed development site.

There are records of Badger, Bat, Bird, Dormouse, Great crested newt, Hedgehog, Polecat, Slow-worm and Vascular plant within 2km of Land at Rogers Farm.

There are no records of protected flora or fauna directly on the proposed development site.

It is not considered that development of Land at Rogers Farm will adversely affect the conservation status protected species recorded within the locality.

Habitat

Briefly, the proposed development site consists of intensively managed arable fields bounded by species poor hedgerows.

The habitat of the proposed development site is of low ecological value.

Bat

Trees on/bounding Land at Rogers Farm were assessed for their potential to be used by bats for roosting purposes.

Four trees on/bounding the proposed development site were identified as potentially providing bat roost habitat.

Should proposed development plans require the removal of identified (potential) bat roosting trees, or parts of them – further bat survey work will be necessary. Recommendations for further bat survey work are made.

Mitigation (external lighting) for bats is recommended.

Kingfisher, Otter and Water vole

An open drainage ditch is situated within the west boundary of the proposed development site.

The drainage ditch was surveyed for physical evidence of Kingfisher, Otter and Water vole.

No physical evidence of Kingfisher, Otter or Water vole was found along the stretch of the drainage ditch in the immediate vicinity of Land at Rogers Farm.

Kingfisher, Otter and Water vole do not provide a constraint on the proposed development and no further survey work for these species is recommended.

Great crested newt

There are no known/mapped ponds within 250m of the proposed development site.

Should the proposed development be permitted, it is not considered likely that Great crested newts would be adversely affected.

Biodiversity Compensation/Enhancement

Compensation and Enhancement measures for wildlife are recommended.

2. INTRODUCTION

Star Ecology was commissioned by Berrys to conduct an Ecological Assessment of a proposed development site known as 'Land at Rogers Farm', Bush Bank, Hereford, HR4 8EP.

From this point forward the proposed development site 'Land at Rogers Farm' is referred to as 'The Site'.

Dr. R. M. Jones, experienced field biologist, surveyor, Natural England licensed bat worker (Licence numbers 20131191 and CLS01310) and Natural England licensed newt worker (Licence number CLS001310) carried out the assessment/survey.

The Ecological Assessment was requested by Berrys, on behalf of Mr. G. Williams, to inform a planning application for the construction of a poultry unit on The Site.

An open drainage ditch is situated within the west boundary of The Site.

There are three mapped ponds within 500m of The Site.

The Ecological Assessment comprised a Desk Study, an Extended Phase One Habitat Survey, an Initial Bat Survey, an Initial Kingfisher Survey, an Initial Otter Survey, an Initial Water Vole Survey and a Great Crested Newt Assessment.

2.1 Site Description

Briefly, The Site consists of:
- an intensively managed arable field;
- a small area, field-corner, of improved grassland;
- two sections of two intensively managed arable fields; and,
- 'typical' managed agricultural hedgerows.

The Site is approximately 2.25 hectares in size.

The Site is immediately neighboured by:
- the Rogers Farm building and yard complex;
- intensively managed arable fields; and,
- the A4110 highway.

An open drainage ditch flows south to north within the west boundary of The Site. At the time of survey the drainage ditch contained running water approximately 20mm in depth.

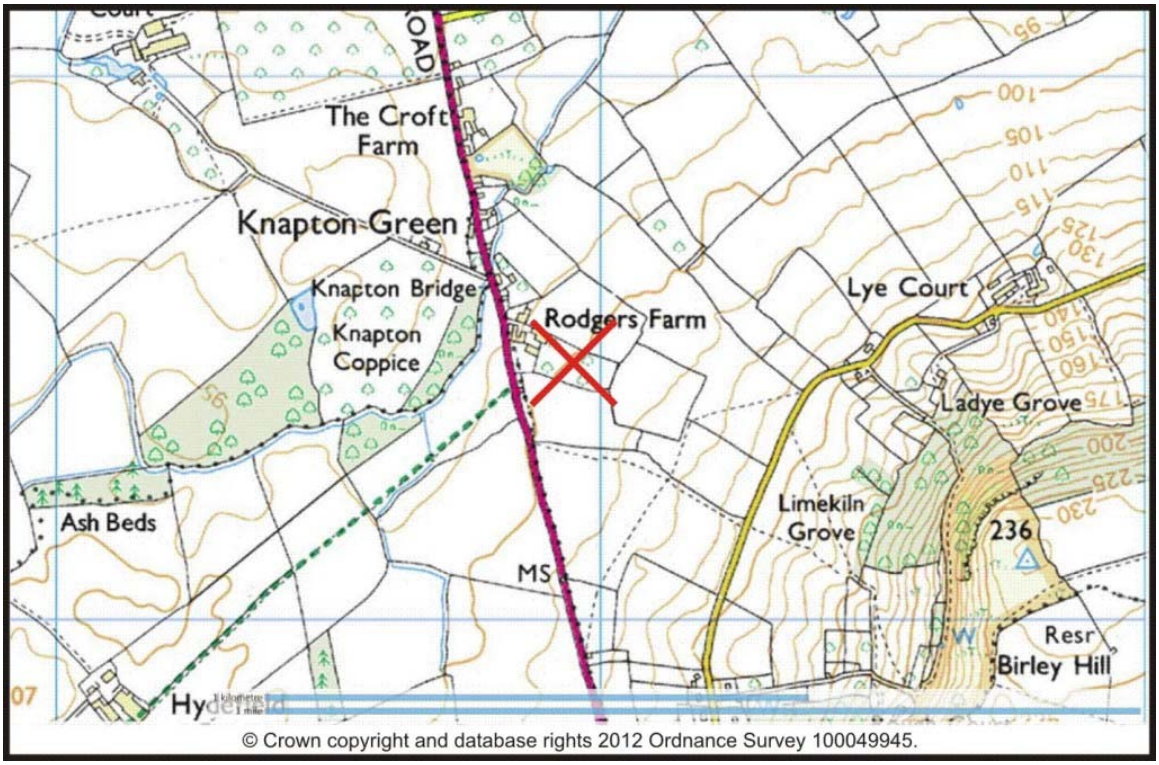
The landscape surrounding The Site consists of agricultural and residential properties, agricultural fields, orchards and woodlands.

The surrounding landscape is well connected by highways, hedgerows and open drainage ditches.

Map 1. Location of The Site.

Map 2. Location of The Site and surrounding habitat types.
Please note: the aerial photograph of habitat types is a 'screenshot' from Google Maps.

Map 1. Location of The Site (indicated by a red cross).



Map 2. Location of The Site (indicated by a red cross) and surrounding habitat types.

2.2 Proposed Development

For ease of reference The Site has been divided into two areas:
- Area A, at the north; and,
- Area B, at the south.

The approximate boundaries of Area A and Area B are shown on Map 3.

Map 3. Location of Area A and Area B.

It is understood from Berrys that there is a proposal to:
- construct a poultry unit on Area A; and,
- construct a new vehicle access and driveway within Area B.

It is understood that the proposed position of the new vehicle access and driveway, within Area B, has yet to be confirmed.

3. DESK STUDY

3.1 Method

A data search was commissioned from Herefordshire Biological Records Centre (HBRC) for records of priority/protected species and wildlife sites within a 2km radius of The Site.
This was achieved by searching for records within 2km of National Grid Reference (NGR) 344940, 252470.

3.2 Results

HBRC provided records to Star Ecology on 14th May 2014.

A graphical representation of biodiversity records obtained from the Herefordshire Biological Records Centre is contained in Appendix 1.

3.2.1 County Wildlife Sites and/or Designated Sites

There are no County Wildlife Sites or other wildlife designated sites within 2km of The Site.

3.2.2 Badger

Legislation
Badgers (*Meles meles*) and their setts are protected by The Protection of Badgers Act 1992.

Under this legislation it is illegal to:

- wilfully kill, injure or take, or attempt to kill, injure or take, a Badger;
- cruelly ill-treating a Badger, digging for Badgers, using Badger tongs, using a firearm other than the type specified under the exceptions within the Act;
- interfere with a Badger sett by damaging, destroying, obstructing, causing a dog to enter a sett, disturbing an occupied sett - either by intent or by negligence;
- sell or offer for sale a live Badger, having possession or control of a live Badger;
- mark, attach a ring, tag, or other marking device to a Badger.

A Natural England Badger Disturbance Licence may be required for development works affecting Badgers.

Record
The HBRC has three records of Badger within 2km of The Site, collected in years 2008, 2011 and 2012, respectively.

3.2.3 Bat

Legislation
All bat species (*Rhinolophidae* and *Vespertilionidae*) are protected under the Wildlife and Countryside Act 1981, the Countryside and Rights of Way Act 2000 and the Conservation of Habitats and Species Regulations 2010.

Under this legislation it is illegal to:

- deliberately capture or kill a bat;
- deliberately disturb any such animal;
- damage or destroy a breeding site or resting place of a bat;
- keep, transport, sell or exchange, or offer for sale or exchange, any live or dead bat, or any part of, or anything derived from such a wild animal.
- intentionally or recklessly obstruct access to a bat roost.
- deliberately disturb any bat, in particular any disturbance which is likely to (i) impair their ability to survive, breed, reproduce or to rear or nurture their young; or in the case of hibernating or migratory species, to hibernate or migrate; or (ii) to affect significantly the local distribution or abundance of the species to which they belong.

A bat roost may be any structure a bat uses for breeding, resting, shelter or protection. Roost sites are protected whether or not bats are in occupation, as they may be re-used by bats.
All species of bat are priority species in the UK Biodiversity Action Plan (HM Government 1994 et seq.) and are Species of Principal Importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

A European Protected Species (EPS) Development Licence from Natural England may be required for development works affecting bats.

Records
The HBRC has 80 records of Bat within 2km of The Site.

Of the records of bat collected within 2km of The Site:
- the earliest record was collected in year 1987
- the latest record was collected in year 2008
- there is one record of Noctule (*Nyctalus noctula*)
- there are two records of Leisler's Bat (*Nyctalus leisleri*)
- there are two records of Natterer's bat (*Myotis nattereri*)
- there are four records of unidentified bat (*Chiroptera*)
- there are four records of Long-eared bat (*Plecotus* sp.)
- there are four records of Whiskered bat (*Myotis mystacinus*)
- there are five records of 'Pipistrellus' (*Pipistrellus* sp.)
- there are six records of (unidentified) Myotis bats (*Myotis* sp.)
- there are 11 records of Brown Long-eared bat (*Plecotus auritus*)
- there are 13 records of Soprano pipistrelle (*Pipistrellus pygmaeus*)
- there are 28 records of Common pipistrelle (*Pipistrellus pipistrellus*)

3.2.4 Bird

The HBRC has 161 records of Bird within 2km of The Site.

The earliest record was collected in year 1990 and the latest was collected in year 2009.

Of the species of Bird recorded within 2km of The Site, five, namely Barn Owl (*Tyto alba*), Brambling (*Fringilla montifringilla*), Common Crossbill (*Loxia curvirostra*), Northern Goshawk (*Accipiter gentilis*) and Red Kite (*Milvus milvus*), are fully protected under the Wildlife and Countryside Act 1981 (as amended).

3.2.5 Dormouse

Legislation
The Common (or Hazel) Dormouse (*Muscardinus avellanarius*) is protected under the Wildlife & Countryside Act 1981 (as amended) and the Conservation (Natural Habitats &c.) Regulations 1994 (as amended), which implements the EC Directive 92/43/EEC in the United Kingdom.

Under this legislation, it is illegal to:

- intentionally kill, injure, or capture Dormice;
- intentionally or recklessly damage, destroy or obstruct access to areas used by Dormice for shelter or protection;
- intentionally or recklessly disturb Dormice while they are occupying a structure or place which is used by them for shelter or protection.

A Natural England licence may be required for development works affecting Dormouse.

Records
The HBRC has 31 records of Dormice within 2km of The Site.

The earliest record was collected in year 1977 and the latest was collected in year 2004.

The closest record of Dormouse to The Site is approximately 560m Euclidean distance southeast.

3.2.6 Great crested newt

Legislation
The Great crested newt (*Triturus cristatus*) is protected under the Wildlife & Countryside Act 1981(as amended) and the Conservation of Habitats and Species Regulations 2010.

The Conservation of Habitats and Species Regulations 2010 (the "Habitats Regulations") consolidate and update the Conservation (Natural Habitats, &c.) Regulations 1994.

Under this legislation, it is illegal to:

- intentionally kill, injure, or capture Great crested newts or their young; (this includes the eggs of Great crested newts);
- intentionally or recklessly damage, destroy or obstruct access to areas used by Great crested newts for shelter or protection (which is taken to include water-bodies used by the newts);
- intentionally or recklessly disturb Great crested newts while they are occupying a structure or place which is used by them for shelter or protection.

A European Protected Species (EPS) development Licence from Natural England may be required for development works affecting Great crested newts.

Records
The HBRC has one record of Great crested newt within 2km of The Site.

The record was collected in year 2003 approximately 800m Euclidean distance northeast from The Site.

3.2.7 Hedgehog

Legislation and policy
(European) Hedgehog (*Erinaceus europaeus*) are:
- listed on Appendix III of the Bern Convention;
- protected from harm under Schedule 6 of the Wildlife and Countryside Act 1981;
- are Species of Principal Importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006;
- listed as a Priority Species for conservation action under the United Kingdom Biodiversity Action Plan.

Records
The HBRC has nine records of Hedgehog within 2km of The Site.
The earliest record was collected in year 2004; the most recent in year 2012.

The closest record of Hedgehog to The Site is approximately 500m Euclidean distance northwest.

3.2.8 Polecat

Legislation and policy
(European) Polecat (*Mustela putorius*) are:
- protected from harm under Schedule 6 of the Wildlife and Countryside Act 1981;
- protected from trapping or capture under Schedule 6 of the Conservation of Habitats and Species Regulations 2010;
- are Species of Principal Importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006;
- listed as a Priority Species for conservation action under the United Kingdom Biodiversity Action Plan.

Records
The HBRC has two records of Polecat within 2km of The Site, one collected in year 1983 and a record collected in year 1992.

The closest record of Polecat to The Site is approximately 50m Euclidean distance west.

3.2.9 Slow-worm

Legislation
Slow-worm (*Anguis fragilis*) have protection under the Wildlife and Countryside Act 1981 (as amended) and the Countryside and Rights of Way Act 2000.
Their inclusion on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) gives 'partial protection' (i.e. only parts of section 9 apply). In addition to restrictions with respect to trade (prohibition of sale and advertising for sale, etc.) they are also protected from intentional killing or injury.
Natural Environment and Rural Communities Act 2006 lists Slow-worm as a species of principle importance.
Slow-worm are listed as priority species under the UK Biodiversity Action Plan.

Record
The HBRC has one record of Slow-worm within 2km of The Site.
The record was collected in year 2005 and is approximately 1.6km southwest from The Site.

3.2.10 Vascular plant

The HBRC has 52 records of Vascular plant within 2km of The Site.

3.3 Conclusions

There are no County Wildlife Sites or other wildlife designated sited within 2km of The Site.

The HBRC does not hold records for wildlife directly on The Site.

Records indicate that there may be protected species, particularly Bat, Bird, Hedgehog and Polecat, within the vicinity of The Site.

Development of The Site will need to be carried out in a manner that will not negatively impact the status of protected fauna within the vicinity of The Site.

4. EXTENDED PHASE ONE HABITAT SURVEY

An Extended Phase One Habitat Survey (JNCC, 1993) of The Site was carried out on 9th May 2014.

The Extended Phase One Habitat Survey was carried out by Dr. R. M. Jones, experienced field biologist and surveyor.

4.1 Survey Objectives

a) To determine if The Site contains flora of significant ecological value.
b) To determine if The Site contains fauna of significant value and/or Protected Species.

4.2 Method

To fulfil the brief of undertaking an ecological assessment of The Site an Extended Phase One Habitat Survey was conducted (JNCC, 1993).
This is a standard technique for classifying and mapping British habitats.
The aim is to provide a record of habitats that are likely to be ecologically important.

Where appropriate, the extent of each habitat type was mapped, and details of relative plant species abundance within homogenous areas were recorded.
If appropriate, species abundance was measured on the DAFOR scale (Dominant, Abundant, Frequent, Occasional and Rare).

In order to allow efficient reporting of the boundaries on or immediately adjacent to The Site; where appropriate boundaries (such as hedges, fences and walls) were recorded and described individually.

In order to allow efficient reporting of trees on or immediately adjacent to The Site; where appropriate individual trees were recorded and described individually.

Please note:
A separate and thorough Tree Survey and/or Arboricultural Assessment (such as a tree survey to BS5837:2012 “Trees in relation to design, demolition and construction. Recommendations”) or similar was not carried out by Star Ecology.

During the Extended Phase One Habitat Survey the presence, or potential presence, of protected species, such as Badger and reptiles, was recorded on The Site.
Surveyor accessible land within approximately 100m of The Site was also surveyed.
Incidental records of birds present on The Site were made throughout the survey.

Where appropriate, Target Note descriptions were recorded for features of nature conservation importance and/or extra-ordinary features of The Site. These include areas of valued vegetation and places that might support notable animal species.

4.3 Limitations

It is not considered that there are any significant limitations to the survey.

4.4 Results

4.4.1 Climate Conditions

During the surveys weather conditions were constant, dry and bright. There was no breeze.

4.4.2 Habitat types

Appendix 2 contains an Extended Phase 1 Habitat Survey Map.
Appendix 3 contains a photographic record of the survey.

The following habitat types and their respective hierarchical alphanumeric codes were recorded at The Site:

Scattered scrub (A2.2)
Within Area B; there is a small area of scattered scrub within an (arable) field margin.
The scattered scrub comprises:

- Bramble (*Rubus fruticosus* agg.)
- Field Maple (*Acer campestre*)
- Hawthorn (*Crataegus monogyna*)
- Hazel (*Corylus avellana*)
- Honeysuckle (*Lonicera periclymenum*)
- Spruce trees (*Picea* sp(p).)

Broadleaved parkland/scattered trees (A3.1)
There are two Common Ash (*Fraxinus excelsior*) trees and two Oak (*Quercus* sp.) trees on, or bounding, The Site.

Improved grassland (B4)
Within Area B; there is a small area of Perennial Rye-grass (*Lolium perenne*) dominated improved grassland. The grassland is within a field corner between an access track and an area of arable land. Broad-leaved Dock (*Rumex obtusifolius*) and Buttercup (*Ranunculus* sp(p).) are frequent. At the time of survey the sward height of the grassland was approximately 150mm.

Running water (G2)
An open drainage ditch flows south to north within the west boundary of Area B. At the time of survey the drainage ditch contained running water approximately 20mm in depth.
Common Nettle (*Common Nettle*) dominated tall ruderal vegetation and/or intact species poor hedge (J2.1.2) grow on the banks of the ditch.

Arable (J1.1)
The majority of The Site consists of areas of cultivated and intensively managed Wheat (*Triticum aestivum*). Common Nettle dominated Tall ruderal (C3.1) vegetation, improved (B4) and/or semi-improved (neutral) grassland (B2.2) grow within field margins. Field margins are approximately 0.5 to 2m wide.

Intact species poor hedge (J2.1.2)
'Typical' Hawthorn dominated agricultural hedgerows form boundaries. Blackthorn (*Prunus spinosa*), Elder (*Sambucus nigra*) and Hazel are frequent. Dogrose (*Rosa canina* agg.) and Holly (*Ilex aquifolium*) are occasional. Common Dogwood (*Cornus sanguinea*) is rare.
The hedges appear to be annually trimmed; the majority being between approximately 1.2m and 1.5m in height. The hedge that forms the east boundary of Area A is approximately 4m in height.

Fence (J2.4)
There are various 'typical' agricultural stock-proof fences on or bounding The Site.

Wall (J2.5)
A concrete-block wall and a box-profile-sheet 'wall' – of adjacent agricultural buildings – forms part of the west boundary.

Bare ground/Hardstanding (J4)
There is a compacted aggregate vehicle access track within The Site.
Common grasses and ephemeral/short perennial weeds (J.3) grow within the track.

4.4.3 Target Notes

Four Target Notes were recorded on The Site.

4.4.3.1 Target Note 1

A semi-mature Common Ash tree stands at approximate NGR 344997, 252488. Mature, but sparse, Ivy (*Hedera helix*) grows on the tree. There are numerous crevices between the Ivy and the structure of the tree which may, potentially, be used by low numbers (<5) of crevice dwelling bats for roosting purposes.

4.4.3.2 Target Note 2

A mature Common Ash tree stands at approximate NGR 344852, 252458.
Mature and dense Ivy covers the main stem and limbs of the tree. Bats may potentially roost within crevices within the Ivy and/or between the Ivy and the tree. In addiction the Ivy growth may conceal features within the structure of the tree (such as rot-holes) that may potentially provide bat roosting opportunity.

These features may each provide roosting opportunity for low numbers (<5) of crevice dwelling bats.

4.4.3.3 Target Note 3

A mature Oak tree stands at approximate NGR 344860, 252410.
Mature, but sparse, Ivy covers the main stem and limbs of the tree. There are numerous crevices between the Ivy and the structure of the tree which may, potentially, be used by low numbers (<5) of crevice dwelling bats for roosting purposes.

The tree may provide roosting opportunity for low numbers (<5) of crevice dwelling bats.

4.4.3.4 Target Note 4

A mature Oak tree stands at approximate NGR 344883, 252333.
Mature and dense Ivy covers the main stem and limbs of the tree. Bats may potentially roost within crevices within the Ivy and/or between the Ivy and the tree. In addiction the Ivy growth may conceal features within the structure of the tree (such as rot-holes) that may potentially provide bat roosting opportunity.

These features may each provide roosting opportunity for low numbers (<5) of crevice dwelling bats.

4.4.4 Fauna

4.4.4.1 Badger

Legislation
Badgers (*Meles meles*) and their setts are protected by The Protection of Badgers Act 1992.

Under this legislation it is illegal to:

- wilfully kill, injure or take, or attempt to kill, injure or take, a Badger;
- cruelly ill-treating a Badger, digging for Badgers, using Badger tongs, using a firearm other than the type specified under the exceptions within the Act;
- interfere with a Badger sett by damaging, destroying, obstructing, causing a dog to enter a sett, disturbing an occupied sett - either by intent or by negligence;
- sell or offer for sale a live badger, having possession or control of a live Badger;
- mark, attach a ring, tag, or other marking device to a Badger.

A Natural England Badger Disturbance Licence may be required for development works affecting Badgers.

Relevant factors
There are records of Badger within 2km of The Site (Desk Study – Section 3).

No evidence of Badger was found on The Site or within surveyor accessible land within approximately 100m of it.

4.4.4.2 Hedgehog

Legislation and protection
(European) Hedgehog (*Erinaceus europaeus*) are:
- listed on Appendix III of the Bern Convention;
- protected from harm under Schedule 6 of the Wildlife and Countryside Act 1981;
- are Species of Principal Importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006;
- listed as a Priority Species for conservation action under the United Kingdom Biodiversity Action Plan.

Consideration
Vegetation along the banks of the open drainage ditch within the west boundary of Area B, the area of scattered scrub, hedgerows and field margins may be used by Hedgehog for foraging and/or nesting purposes.

4.4.4.3 Reptile

Legislation
Four reptile species, Adder (*Vipera berus*), Grass snake (*Natrix natrix*), Slow-worm (*Anguis fragilis*) and Viviparous (or Common) Lizard (*Lacerta vivipara*), have protection under the Wildlife and Countryside Act 1981 (as amended) and the Countryside and Rights of Way Act 2000.
Their inclusion on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) gives 'partial protection' (i.e. only parts of section 9 apply). In addition to restrictions with respect to trade (prohibition of sale and advertising for sale, etc.) they are also protected from intentional killing or injury.
Natural Environment and Rural Communities Act 2006 lists all reptile species as a species of principle importance.
Reptiles are listed as priority species under the UK Biodiversity Action Plan.

Relevant factors
There is a record of Slow-worm within 2km of The Site (Desk Study – Section 3).

Considering the location and habitat of The Site and the surrounding habitat; it is not considered likely that reptiles would reside on The Site.

4.4.4.4 Small Breeding Birds

Legislation
Nesting birds are protected by the Wildlife and Countryside Act 1981.
Under the Wildlife and Countryside Act 1981, all birds are protected while breeding. It is an offence, with certain exceptions to:

- intentionally kill, injure or take any wild bird;
- intentionally take, damage or destroy the nest of any wild bird while it is in use or being built;
- intentionally take or destroy the egg of any wild bird.

Consideration
Trees and hedges on and bounding The Site provide potential Small Breeding Bird nesting habitat.

4.4.4.5 Other fauna

Evidence of Rabbit (*Oryctolagus cuniculus*) was noted along boundaries.

4.5 Conclusion

The flora of The Site has a low ecological value. However the hedgerows and the drainage ditch and vegetation growing on its banks provide valuable wildlife habitats within an agricultural environment.

Furthermore:

- The open drainage ditch within the west boundary of Area B may provide a valuable wildlife corridor within the local landscape.
- A total of four Target Notes, recording bat roosting potential, have been recorded on The Site.
- Vegetation on and bounding The Site may be used by Small Breeding Birds for nesting purposes.
- (Parts of) The Site may be used by Hedgehog.

Trees on The Site and those within its immediate vicinity have been subject to an Initial Bat Survey (Section 5).

The open drainage ditch situated within the west boundary of Area B may be used by Kingfisher, Otter and/or Water vole.
The drainage ditch has been subject to an Initial Kingfisher Survey (Section 6), an Initial Otter Survey (Section 7), and an Initial Water Vole Survey (Section 8).

5. INITIAL BAT SURVEY

5.1 Introduction

On 9th May 2014 an Initial Bat Survey was carried out on the trees on (and bounding) The Site.

Dr. R. M. Jones, experienced field biologist, surveyor and Natural England licensed bat worker (Licence numbers 20131191 and CLS01310) carried out the Initial Bat Survey.

There are records of bat within the vicinity of The Site (Desk Study – Section 3).

5.2 Legislation

All bat species (*Rhinolophidae* and *Vespertilionidae*) are protected under the Wildlife and Countryside Act 1981, the Countryside and Rights of Way Act 2000 and the Conservation of Habitats and Species Regulations 2010.

Under this legislation it is illegal to:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats;
- damage or destroy bat roosts or resting places of bats;
- keep, transport, sell or exchange, or offer for sale or exchange, any live or dead bat, or any part of, or anything derived from such a wild animal.
- intentionally or recklessly obstruct access to a bat roost.
- deliberately disturb any bat, in particular any disturbance which is likely to (i) impair their ability to survive, breed, reproduce or to rear or nurture their young; or in the case of hibernating or migratory species, to hibernate or migrate; or (ii) to affect significantly the local distribution or abundance of the species to which they belong.

A bat roost may be any structure a bat uses for breeding, resting, shelter or protection. Roost sites are protected whether or not bats are in occupation, as they may be re-used by bats.
All species of bat are priority species in the UK Biodiversity Action Plan (HM Government 1994 et seq.) and are Species of Principal Importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

A European Protected Species (EPS) development Licence from Natural England may be required for development works affecting bats.

5.3 Survey objectives

a) To ascertain if trees on and/or bounding The Site contain features that may potentially be used by bats for roosting purposes.
b) Should potential roosting features be identified, if the trees/roosting feature(s) may be negatively affected by the proposed development - to recommend further bat survey work (e.g. Dusk Bat Emergence Surveys).

5.4 Method

Trees were surveyed for their potential to be used by bats for roosting purposes. Trees were surveyed from the ground by unaided human visual perception and, where required, the aid of close-focusing (Zeiss 10x42) binoculars and/or torches, including a Fenix RC40 3800 lumen torch.

5.4.1 Limitations of the Initial Bat Survey

Considering the trees surveyed; it is not considered that there are any significant constraints on the survey.
Adequate visibility of tree structures was obtained.

5.5 Results

Four trees were identified as potentially providing bat roosting habitat:

- A semi-mature Common Ash tree stands at approximate NGR 344997, 252488. Mature, but sparse, Ivy (*Hedera helix*) grows on the tree. There are numerous crevices between the Ivy and the structure of the tree which may, potentially, be used by low numbers (<5) of crevice dwelling bats for roosting purposes.
  The location of the tree is recorded as Target Note 1 in the Extended Phase One Habitat Survey (Section 4) and is indicated on the Extended Phase One Habitat Map contained in Appendix 3.

- A mature Common Ash tree stands at approximate NGR 344852, 252458. Mature and dense Ivy covers the main stem and limbs of the tree. Bats may potentially roost within crevices within the Ivy and/or between the Ivy and the tree. In addiction the Ivy growth may conceal features within the structure of the tree (such as rot-holes) that may potentially provide bat roosting opportunity.
  These features may each provide roosting opportunity for low numbers (<5) of crevice dwelling bats. The location of the tree is recorded as Target Note 2 in the Extended Phase One Habitat Survey (Section 4) and is indicated on the Extended Phase One Habitat Map contained in Appendix 3.

- A mature Oak tree stands at approximate NGR 344860, 252410. Mature, but sparse, Ivy covers the main stem and limbs of the tree. There are numerous crevices between the Ivy and the structure of the tree which may, potentially, be used by low numbers (<5) of crevice dwelling bats for roosting purposes.
  The tree may provide roosting opportunity for low numbers (<5) of crevice dwelling bats. The location of the tree is recorded as Target Note 3 in the Extended Phase One Habitat Survey (Section 4) and is indicated on the Extended Phase One Habitat Map contained in Appendix 3.

- A mature Oak tree stands at approximate NGR 344883, 252333. Mature and dense Ivy covers the main stem and limbs of the tree. Bats may potentially roost within crevices within the Ivy and/or between the Ivy and the tree. In addiction the Ivy growth may conceal features within the structure of the tree (such as rot-holes) that may potentially provide bat roosting opportunity.
  These features may each provide roosting opportunity for low numbers (<5) of crevice dwelling bats. The location of the tree is recorded as Target Note 4 in the Extended Phase One Habitat Survey (Section 4) and is indicated on the Extended Phase One Habitat Map contained in Appendix 3.

No other trees on or immediately adjacent to The Site were identified as providing bat roosting opportunity.

5.6 Conclusion

In accordance with the Bat Conservation Trust's 'Bat Surveys – Good Practice Guidelines' (Hundt, 2012), with the exception of four trees delineated as Target Note 1, Target Note 2, Target Note 3 and Target Note 4, respectively; trees on or immediately adjacent to The Site are Category 3 'trees with no potential to support bats'.

Four trees, delineated as Target Note 1 Target Note 2, Target Note 3 and Target Note 4, respectively, (may) have the potential to be used by bats for roosting purposes. In accordance with the Bat Conservation Trust's 'Bat Surveys – Good Practice Guidelines' (Hundt, 2012): these trees may be Category 1 trees 'with definite bat potential (for use by single bats)'.

6. INITIAL KINGFISHER SURVEY

6.1 Introduction

An open drainage ditch is situated within the west boundary of Area B.
On 9th May 2014 the drainage ditch was surveyed for the presence of Kingfisher.

6.2 Legislation and protection

Kingfisher are fully protected under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended).

It is an offence, with certain exceptions to:

- kill, injure or take Kingfisher;
- take, damage or destroy a Kingfisher nest;
- take, damage or destroy Kingfisher eggs or young;
- intentionally or recklessly disturb Kingfisher close to their nest during the breeding season.

Kingfisher are on the 'amber list' of conservation due to their unfavourable conservation status in Europe (Eaton *et al*. 1993).

6.3 Survey objectives

a) To ascertain if the drainage ditch is used by Kingfisher for breeding purposes.
b) Should evidence of Kingfisher be found and the drainage ditch is to be negatively affected by the proposed development - to make recommendations as to how the development may be carried out to negate its impact on Kingfisher and how Kingfisher may be compensated in the future. Further Kingfisher survey(s) may be necessary.

6.4 Method

Both banks of approximately 300m of the drainage ditch were surveyed for the presence of Kingfisher nest tunnels and chambers.

6.5 Result

No evidence of Kingfisher was found.

6.6 Conclusions

No further Kingfisher survey is considered necessary to inform the proposed development.
Kingfisher do not impose a constraint on the proposed development.

7. INITIAL OTTER SURVEY

7.1 Introduction

An open drainage ditch is situated within the west boundary of Area B.
On 9th May 2014 the drainage ditch was surveyed for the presence of Otter (*Lutra lutra*).

7.2 Legislation

Otter (*Lutra lutra*) are protected under Schedule 5 (Section 9) of the Wildlife and Countryside Act 1981 (as amended) and under The Conservation of Habitats and Species Regulations 2010.

Otters and their resting places are fully protected.

It is an offence to:

- deliberately kill, injure or take Otter;
- damage, destroy or obstruct Otter breeding or resting places;
- disturb Otter in their breeding or resting places.

A Natural England Licence may be required for development works affecting Otter.

7.3 Survey objectives

a) To ascertain if the drainage ditch is used by Otter.
b) Should evidence of Otter be found and the drainage ditch is to be negatively affected by the proposed development - to make recommendations as to how the development may be carried out to negate its impact on Otter and how Otter may be compensated in the future. Further Otter survey(s) may be necessary.

7.4 Method

Both banks of approximately 300m of the drainage ditch were surveyed for the presence of Otter prints, spraints, potential resting places and holts.

7.5 Result

No evidence of Otter was found.

7.6 Conclusions

No further Otter survey is considered necessary to inform the proposed development.
Otter do not impose a constraint on the proposed development.

8. INITIAL WATER VOLE SURVEY

8.1 Introduction

An open drainage ditch is situated within the west boundary of Area B.
On 9th May 2014 the drainage ditch was surveyed for the presence of Water vole (*Arvicola amphibius*).

8.2 Legislation

Water vole are protected under the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000).

Under this legislation, it is illegal to:

- intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection;
- intentionally or recklessly disturb Water voles whilst occupying a structure or place used for that purpose;
- intentionally kill, injure or take Water voles;
- possess or control live or dead Water voles or derivatives;
- sell water voles or offer or expose for sale or transport for sale;
- publish or cause to be published any advertisement which conveys the buying or selling of Water voles.

8.3 Survey Objectives

a) To ascertain if the drainage ditch is used by Water vole.
b) Should evidence of Water vole be found and the drainage ditch is to be negatively affected by the proposed development - to make recommendations as to how the development may be carried out to negate its impact on Water vole and how Water vole may be compensated in the future. Further Water vole survey(s) may be necessary.

8.4 Method

Both banks of approximately 300m of the drainage ditch were surveyed for the presence of Water vole prints, latrines, burrows, grazed 'lawns' alongside aquatic margins, and feeding stations.

8.5 Result

No evidence of Water vole was found.

8.6 Conclusions

No further Water vole survey is considered necessary to inform the proposed development.
Water vole do not impose a constraint on the proposed development.

9. GREAT CRESTED NEWT ASSESSMENT

9.1 Introduction

On 9th May 2014 a Great Crested Newt Assessment was carried out to ascertain the likelihood of the proposed development of The Site affecting Great crested newts.

Dr. R. M. Jones, experienced field biologist, surveyor and Natural England licensed Great crested newt worker (Licence number CLS001310) carried out the Great Crested Newt Assessment.

There are historical records of Great crested newt within 2km of The Site (Desk Study - Section 3).

There are three mapped ponds within 500m of The Site:

- Pond 1: a small woodland pond at approximate NGR 344895, 252835; approximately 300m Euclidean distance north of The Site.
- Pond 2: a large farm-yard pond at approximate NGR 344785, 252860; approximately 340m Euclidean distance northwest of The Site.
- Pond 3: a field pond at approximate NGR 344460, 252570; approximately 370m Euclidean distance west of The Site.

Surveyor access to Ponds 1–3 was not sought or obtained. It is not know if Ponds 1–3 are still in existence.

9.2 Legislation

The Great crested newt (*Triturus cristatus*) is protected under the Wildlife & Countryside Act 1981(as amended) and the Conservation of Habitats and Species Regulations 2010.

Under this legislation, it is illegal to:

- intentionally kill, injure, or capture Great crested newts or their young; (this includes the eggs of Great crested newts);
- intentionally or recklessly damage, destroy or obstruct access to areas used by Great crested newts for shelter or protection (which is taken to include water-bodies used by the newts);
- intentionally or recklessly disturb Great crested newts while they are occupying a structure or place which is used by them for shelter or protection.

A European Protected Species Licence from Natural England may be required for development works affecting Great crested newts.

9.3 Consideration

Pond 1, Pond 2 and Pond 3 are too far from The Site for them to be of significant concern.

Research undertaken by Natural England (previously English Nature) (English Nature, 2006) indicates the distances from breeding ponds within which Great crested newts are most likely to be encountered.

In relation to the appropriate use of Great crested newt mitigation measures, Natural England (English Nature, 2006) determines:

"The most comprehensive mitigation, in relation to avoiding disturbance, killing or injury is appropriate within 50m of a breeding pond. It will also almost always be necessary to actively capture newts 50-100m away. However, at distances greater than 100m, there should be careful consideration as to whether attempts to capture newts are necessary or the most effective option to avoid incidental mortality. At distances greater than 200-250m, capture operations will hardly ever be appropriate."

9.3.1 Rapid Risk Assessment Tool

Natural England's valuation of habitats according to distance from Great crested newt breeding ponds has been adopted within the Natural England European Protected Species Licence application form for Great crested newts and within their 'rapid risk assessment' tool (contained in the Microsoft Excel document 'wmla14-2_tcm6-4103.xls').

9.3.1.1 Development of the whole of The Site

If it is hypothesised that Great crested newts use Pond 1 and/or Pond 2 and/or Pond 3 for breeding purposes; the Natural England 'rapid risk assessment' tool (contained in the Microsoft Excel document 'wmla14-2_tcm6-4103.xls') shows the potential affect of developing the whole of The Site (i.e. 2.25 hectares) on Great crested newts is:

- 'Green: Offence Highly Unlikely'.
- Notional offence probability score 0.04.

9.4 Conclusion

There is a record of Great crested newt within 2km of The Site (Section 3).

There are no known/mapped ponds within 250m of The Site that may potentially be used by Great crested newt for breeding purposes.

It is not considered likely that development of The Site will affect Great crested newts.

Considering the scale and location of the proposed development; no further Great crested newt survey is considered necessary to inform the proposed development.

10. ECOLOGICAL ASSESSMENT CONCLUSIONS

10.1 Desk Study (Section 3)

There are no County Wildlife Sites or other wildlife designated sites within 2km of The Site.

There are no records of protected flora or fauna directly on The Site; however, there are records of Badger, bat, bird, Dormouse, Great crested newt, Hedgehog, Polecat, Slow-worm and Vascular plant within 2km of The Site.

Considering the habitat of The Site; it is not envisaged that the proposed development would negatively affect the conservation status of protected fauna or flora recorded within its vicinity.

Badger:
There are records of Badger within 2km of The Site.
It is not envisaged that development of The Site would negatively affect the conservation status of Badger identified within the Desk Study.

Bat:
There are records of bat within 2km of The Site.
It is not envisaged that development of The Site would negatively affect the conservation status of bats identified within the Desk Study.
Trees on (and adjacent to) The Site have been subject to an Initial Bat Survey.
The Site and its boundaries may be used by bats for foraging.
Mitigation for bats is contained in Section 11.1.

Bird:
There are records of birds within 2km of The Site.
The Site offers nesting opportunity for Small Breeding Birds, and it may be used by birds for foraging.
Mitigation for Small Breeding Birds is contained in Section 11.2.

Dormouse:
There are records of Dormouse within 2km of The Site.
It is not envisaged that development of The Site would negatively affect the conservation status of Dormouse identified within the Desk Study.

Great crested newt:
There is a record of Great crested newt within 2km of The Site.
It is not envisaged that development of The Site would negatively affect the conservation status of the Great crested newt identified within the Desk Study.

Hedgehog:
There are records of Hedgehog within 2km of The Site.
The Site may be used by Hedgehog for foraging and/or nesting.
Mitigation for Hedgehog is contained in Section 11.3.

Polecat:
There are records of Polecat within 2km of The Site.
It is not envisaged that development of The Site would negatively affect the conservation status of Polecat identified within the Desk Study.

Slow-worm:
There is a record of Slow-worm within 2km of The Site.
It is not envisaged that development of The Site would negatively affect the conservation status of Slow-worm identified within the Desk Study.

Vascular plant:
There are records of Vascular plants within 2km of The Site.
It is not envisaged that development of The Site would negatively affect the conservation status of Vascular plants identified within the Desk Study.

10.2 Extended Phase One Habitat Survey (Section 4)

The flora of The Site has a low ecological value. However the hedgerows and the drainage ditch and vegetation growing on its banks provide valuable wildlife habitats within an agricultural environment.

Furthermore:
- The open drainage ditch within the west boundary of Area B may provide a valuable wildlife corridor within the local landscape.
- A total of four Target Notes, recording bat roosting potential, have been recorded on The Site.
- Vegetation on and bounding The Site may be used by Small Breeding Birds for nesting purposes.
- (Parts of) The Site may be used by Hedgehog.

Trees on The Site and those within its immediate vicinity have been subject to an Initial Bat Survey (Section 5).

The Site may be used by bats for foraging.
It is recommended that a bat-sensitive external lighting scheme be designed.
Mitigation for bats is contained in Section 11.1.

Should the proposed development be carried out mitigation for Small Breeding Birds should be adhered to.
Mitigation for Small Breeding Birds is contained in Section 11.2.

Vegetation along the banks of the open drainage ditch within the west boundary of Area B, the area of scattered scrub, hedgerows and field margins may be used by Hedgehog for foraging and/or nesting purposes.
Mitigation for Hedgehog is contained in Section 11.3.

Other than the above, the ecological value of fauna of The Site remains low.

10.3 Initial Bat Survey (Section 5)

Trees on The Site and those within its immediate vicinity were identified as possibly providing bat roosting habitat and were subject to an Initial Bat Survey.

The results of the Initial Bat Survey determined that the majority of trees on The Site do not provide bat roosting potential and no physical evidence of bat was found.

However, four trees on The Site (denoted by Target Note 1, Target Note 2, Target Note 3 and Target Note 4) were found to have bat roosting potential.

<u>Scenario A</u>
If the development plans include the retention of all of the identified trees:
- no further bat survey work is deemed necessary to inform the proposed development.
- it is not considered that bats impose a constraint on the proposed development.

- it is not considered necessary that further bat-specific survey work be carried out to inform the proposed development.
- it is not necessary for a European Protected Species Licence for bats to be granted by Natural England to allow the proposed development to lawfully proceed.

Scenario B
If the development plans include the removal of any of the trees, or parts of them, the removal of neighbouring trees and/or the construction of buildings within their canopy areas, further bat survey work should be carried out to inform the proposed development.
In this eventuality - recommended future bat survey of the potential bat roosting trees is contained in Section 12.1.

Mitigation
Irrespective of whether or not the identified trees are to be affected by the proposed development:
- should the proposed development receive planning approval, it is recommended that a bat-sensitive external lighting scheme be designed.
  Mitigation for bats is contained in Section 11.1.

10.4 Kingfisher (Section 6)

An open drainage ditch, situated within the west boundary of Area B, was surveyed for Kingfisher.

No evidence of Kingfisher was found.

Therefore, it is not considered that Kingfisher impose a constraint on the proposed development.

It is not considered necessary that further Kingfisher-specific survey work be carried out to inform the proposed development.

10.5 Otter (Section 7)

An open drainage ditch, situated within the west boundary of Area B, was surveyed for Otter.

No evidence of Otter was found.

Therefore, it is not considered that Otter impose a constraint on the proposed development.

It is not considered necessary that further Otter-specific survey work be carried out to inform the proposed development.

10.6 Water vole (Section 8)

An open drainage ditch, situated within the west boundary of Area B, was surveyed for Water vole.

No evidence of Water vole was found.

Therefore, it is not considered that Water vole impose a constraint on the proposed development.

It is not considered necessary that further Water vole-specific survey work be carried out to inform the proposed development.

10.7 Great crested newt (Section 9)

There is a record of Great crested newt within 2km of The Site.

There are no mapped or known ponds within 250m of The Site.

Therefore, it is not considered that Great crested newt impose a constraint on the proposed development.

It is not considered necessary that further Great crested newt-specific survey work be carried out to inform the proposed development.

10.8 Future ecological value of The Site

Wherever possible, existing hedgerows and trees should be retained.

The ecological value of The Site post-development may be enhanced by:
- the installation of purpose-made bird nesting features;
- the installation of purpose-made bat roosting features; and,
- the planting of hedges and/or the planting of trees.

Recommendations for biodiversity compensation and/or enhancement are contained in Section 13.

11. MITIGATION

11.1 Bat

External Lighting

In order to avoid any unnecessary disturbance to bats in the future, any external lighting to be installed should be low powered and on short-timed Passive Infrared (PIR) sensitive to large objects only.

Usually, 11 watt low energy lights that are PIR activated may be appropriate for such developments.

Lighting should not be in the vicinity of, or shine towards, Bat Boxes, or bat roost openings, or boundary hedges and/or trees.

11.2 Small Breeding Bird

11.2.1 Legislation

Nesting birds are protected by the Wildlife and Countryside Act 1981.
Under the Wildlife and Countryside Act 1981, all birds are protected while breeding. It is an offence, with certain exceptions to:

- intentionally kill, injure or take any wild bird;
- intentionally take, damage or destroy the nest of any wild bird while it is in use or being built;
- intentionally take or destroy the egg of any wild bird.

11.2.2 Mitigation

Vegetation clearance (i.e. the removal of trees, hedges and/or scrub) may only be carried out when no nesting birds are present i.e. between 1st October and 1st March.

Should it be required that vegetation clearance takes place within the bird breeding season, a survey should be carried out by a suitably qualified ecologist to ascertain whether breeding birds are present or not; should no breeding birds be present, it may be possible for vegetation clearance work to commence.

If it is anticipated that the vegetation is to be removed within the bird breeding season (and there are no birds nesting within it) a physical barrier that prevents birds from gaining access to the structure of the vegetation may be installed, ideally in the February preceding the removal.

Recommended physical barriers include:
- multiple-layers of 'orchard protective netting' – commonly used in the horticultural industry; and,
- 'debris netting' – commonly used in the construction and scaffolding industries.

11.3 Hedgehog

11.3.1 Legislation and Protection

(European) Hedgehog (*Erinaceus europaeus*) are:
- listed on Appendix III of the Bern Convention;
- protected from harm under Schedule 6 of the Wildlife and Countryside Act 1981;
- are Species of Principal Importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006;
- listed as a Priority Species for conservation action under the United Kingdom Biodiversity Action Plan.

11.3.2 Mitigation

Hedgehog nests may be constructed in and around areas of overgrown/scrub vegetation, under brash piles and/or rubble piles *et cetera*.

Hedgehogs are particularly vulnerable to disturbance between May and October when litters of hoglets are born and during the winter months when they may be hibernating.

Where Hedgehog are known to be present on or within the vicinity of the development site, or there is risk of them being present on the development site: the removal of vegetation, piles of debris *et cetera* should be carried out between March and October (i.e. when Hedgehog are active).
However, should Small Breeding Birds be nesting within vegetation, or there is a risk of their presence: removal of vegetation may only be carried out:
- when birds have vacated their nest(s); or,
- between 1st October and 1st November.

To decrease the risk of disturbing Hedgehogs that may reside within vegetation, piles of debris *et cetera*, wherever possible the material to be removed should be (carefully) inspected by hand for the presence of Hedgehog.

Where no Hedgehog are found:
- clearance work may commence with care and caution and site operatives should maintain vigilance for Hedgehog.
- Should Hedgehog be inadvertently found, work should immediately cease and the instructions below followed.

Where Hedgehog are found:
- between 1st November and 1st March:
- hibernating Hedgehog should be left undisturbed until they naturally awaken and vacate the vegetation, piles of debris *et cetera*. (Development delays will be inevitable until Hedgehog vacate on their own accord).
- between 1st March and 1st November:
- should non-breeding Hedgehog be found; the animal(s) may be carefully removed out of (imminent) harm's way and moved to another suitable place of rest and shelter.
- should a breeding nest (with sow and hoglets) be found, and *not* disturbed; the nest and Hedgehogs within it should be left for a period of approximately 28 days, after which the juvenile Hedgehogs should become independent and the nest should be vacant.
- should a breeding nest (with sow and hoglets) be found and, inadvertently, disturbed: there is a possibility that the sow may abandon the nest risking the survival of the hoglets. Should this be case, professional guidance should be

immediately sought to protect the welfare of the Hedgehog and their long-term survival. (Contact details for professional guidance are provided below).

Hedgehog welfare and protection advice may be sought from:

British Hedgehog Preservation Society
Hedgehog House, Dhustone, Ludlow, Shropshire, SY8 3PL
Telephone: 01584 890 801
Website: http://www.britishhedgehogs.org.uk/

Cuan Wildlife Rescue
4 Barrow Street, Much Wenlock, Shropshire, TF13 6ES
Telephone: 01952 728070
Website: http://www.cuanhouse.org.uk/

12. RECOMMENDED FUTURE SURVEY

12.1 Bat

If any or all of the trees delineated by Target Note 1, Target Note 2, Target Note 3 and Target Note 4, or parts of them, are to be removed:

- It is recommended that an (aerial) inspection of the potential bat roosting feature within the tree(s) be carried out and the structure of (potential) bat roosting crevice and any physical evidence of bats recorded.

- Should it not be possible, or considered adequate, for aerial tree inspections to be carried out: it may be necessary for further bat-specific survey work (e.g. Dusk bat Emergence Surveys) to be carried out to inform the proposed development.

13. BIODIVERSITY COMPENSATION/ENHANCEMENT

13.1 Planning Policy

13.1.1 National Planning Policy Framework

Paragraph 117 of the National Planning Policy Framework states (refer to bullet point three):
"To minimise impacts on biodiversity and geodiversity, planning policies should....promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations...."

Bullet point four of Paragraph 118 of the National Planning Policy Framework states: "opportunities to incorporate biodiversity in and around developments should be encouraged".

13.1.2 Natural Environment and Rural Communities Act (2006)

Section 40 of the Natural Environment and Rural Communities Act (2006) states: "Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity".

Section 40(3) of Natural Environment and Rural Communities Act (2006): "conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat".

13.2 Small Breeding Bird

In order to encourage wildlife to reside on The Site, or within its immediate surrounds, in the future it is recommended that a minimum number of:
- two Schwegler 1B Bird Nest Boxes;
- two Schwegler 3SV with Predator Protection Bird Nest Boxes; and,
- two Schwegler 2H Open Fronted Bird Boxes

(or similar alternatives) be installed on The Site, or within its immediate vicinity, post-development.

Boxes should be installed at a minimum of 4m from the ground and in locations subject to low future disturbance.

13.3 Bat

In order to encourage wildlife to reside on The Site, or within its immediate surrounds, in the future it is recommended that a minimum number of:
- two Schwegler 1FR Bat Tubes or two Wienerberger EcoSurv Bat Boxes (or similar alternatives) are built into an exterior wall(s) of any proposed new buildings; or,

- three Schwegler 2FN Bat Boxes and three Schwegler 2F Bat Boxes (or similar alternatives) are installed on The Site, or within its immediate vicinity, post-development.

Boxes should be installed at a minimum of 4m from the ground and in locations subject to low future disturbance.

13.4 Wildlife Hedge and/or Tree Planting

Wherever possible, hedgerows within or bounding The Site should be retained and all existing (mature) trees should be retained.

New hedgerows may be planted and/or existing hedgerows supplementary planted. Recommendations are provided in Section 13.4.1.

Open spaces to be created within the proposed development may be planted within fruit trees.
Recommendations are provided in Section 13.4.2.

13.4.1 Hedgerow/shrub planting

Open spaces may be planted with shrubs to provide shelter and foraging areas for wildlife.
Ideally, a minimum of four species of shrub should be planted.

Native species of local provenance are preferred.
Ideally, potted stock should be in non-peat compost.

Favourable native plant species that may be incorporated in hedgerow boundaries and/or shrubberies include:

Common English Name	**Scientific Name**
Blackthorn	*Prunus spinosa*
Common Beech	*Fagus sylvatica*
Dogwood	*Cornus sanguinea*
Field Maple	*Acer campestre*
Field Rose	*Rosa arvensis*
Guelder Rose	*Viburnum Opulus*
Hawthorn	*Crataegus monogyna*
Honeysuckle	*Lonicera periclymenum*
Oak	*Quercus robur/ petraea*
Rowan	*Sorbus aucuparia*
Spindle	*Euonymus europaeus*
Wayfaring Tree	*Viburnum lantana*

13.4.2 Standard/Fruit Trees

New native tree planting within (public) open spaces and/or along (retained) boundaries may encourage wildlife to forage on The Site. Trees may be half-standard or standard size. Standard trees provide instant habitat for birds and insects. Species should be those that provide a good mast crop (i.e. seeds), and ideally a mixture of species should be planted.

Tree stakes should be low (maximum 0.60 metres above ground), at an angle to avoid roots, and removed in year three.
The fecundity of trees should be monitored and dead and/or damaged plants suitably replaced.

Ideally, a minimum of three tree species should be planted. Favourable tree species include:

Common English Name	**Scientific Name**
Apple	*Malus sp.*
Cherry	*Prunus var.*
Cobnut / Filbert	*Corylus var.*
Crab-apple	*Malus sylvestris*
Damson	*Prunus var.*
Mountain Ash	*Sorbus aucuparia*
Mulberry	*Morus nigra*
Pear	*Pyrus sp.*
Plum / Greengage	*Prunus var.*
Silver Birch	*Betula pendula*
Small-leafed Lime	*Tilia cordata*
Walnut	*Juglans regia*
Wild Cherry	*Prunus avium*

14. RELEVANT PUBLICATIONS

Bat Conservation Trust and Institute of Lighting Professionals (2008). Bats and Lighting in the UK. *Bats and the Built Environment Series*.

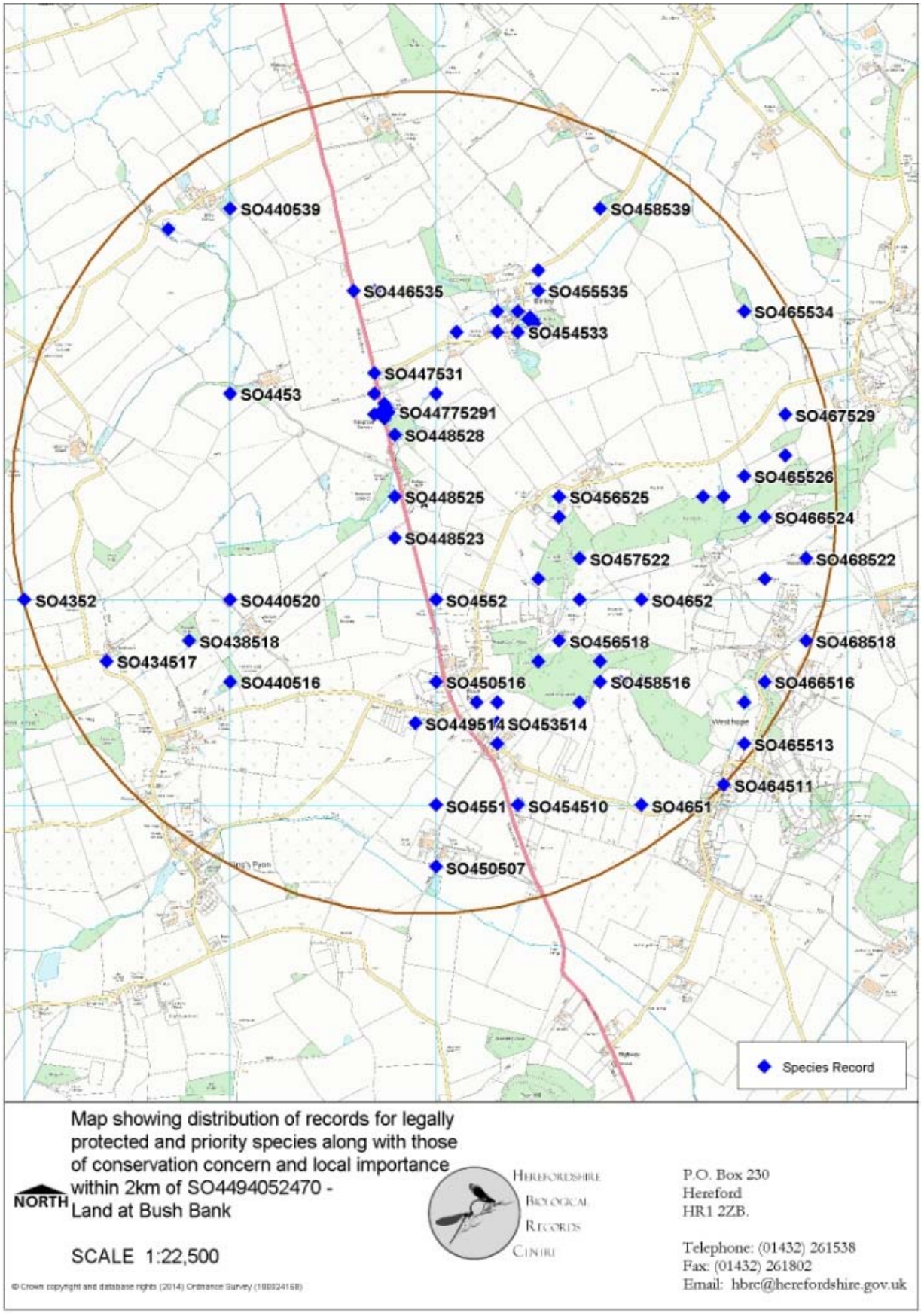
English Nature (2001). *Great crested newt mitigation guidelines – working today for nature tomorrow.* English Nature, Peterborough, England.

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

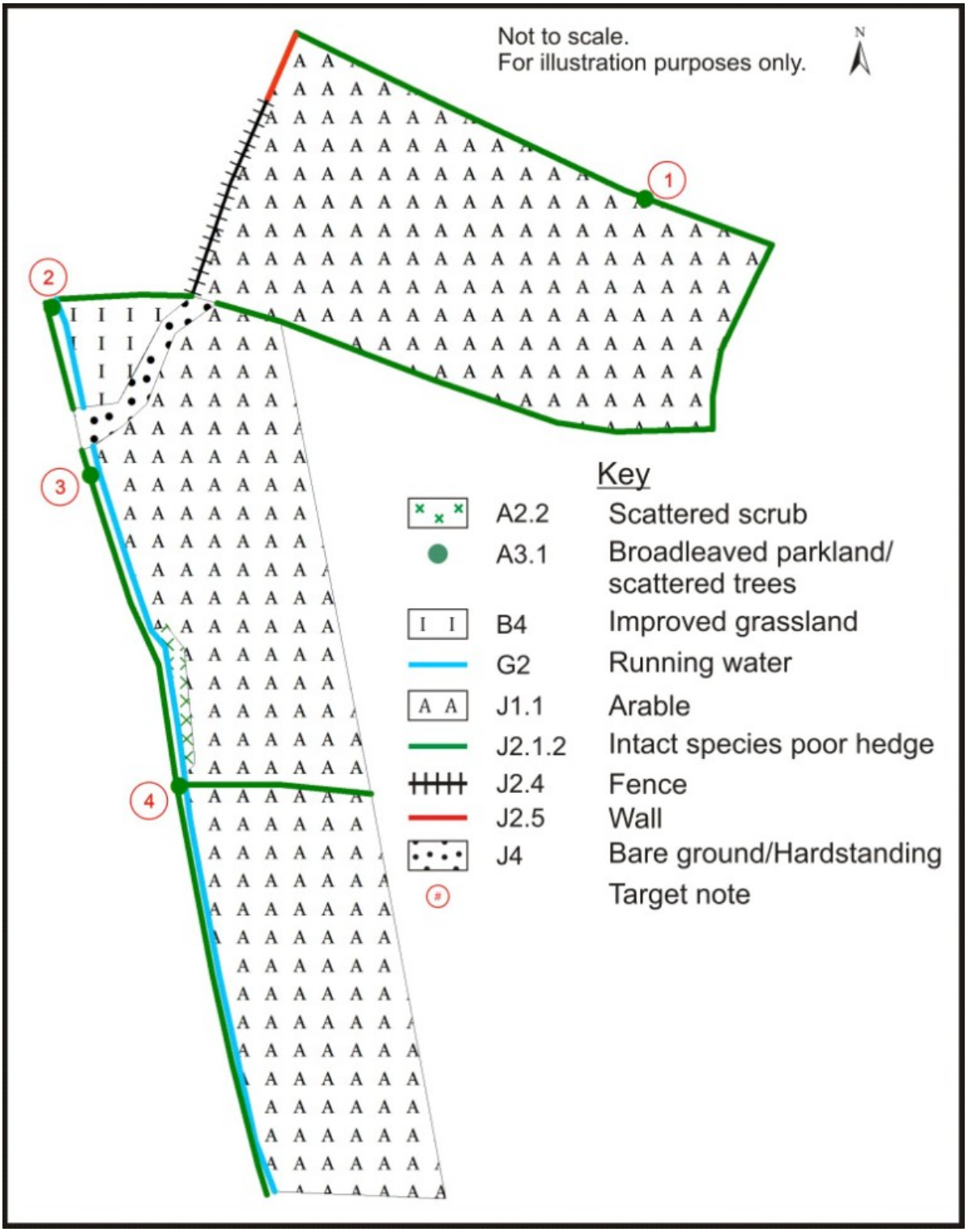
JNCC, (1993). Handbook for Phase 1 Habitat Survey: A technique for environmental audit (reprint). Joint Nature Conservation Committee, Peterborough.

Natural England (2010). European Protected Species Method Statement document wmla142-2_tcm6-4103.xls.

APPENDIX 1 – Herefordshire Biological Records Centre Record Search



APPENDIX 2 – Extended Phase One Habitat Map



APPENDIX 3 – Site Photographs

The Site.
View of Area A.
Upper left: Target Note 1.
Right: Species poor intact hedge.
Looking southeast from northwest.

The Site.
Left: Arable habitat.
Centre: Common Nettle/tall ruderal field margin.
Right: Northwest side of the east boundary hedge of Area A.
Looking north from south.

The Site.
View of part of the west boundary intact species poor hedge.
Upper left: Target Note 2.
Looking north from south.

The Site.
Foreground: Arable habitat
Background: Part of the area of scattered scrub.
Looking northwest from southeast.

Target Note 1.

Target Note 2.

Target Note 3.

Target Note 4.