Land off Middlecliffe Lane,

Barnsley

Ecological Appraisal Report

October 13, 2017

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ECOLOGICAL APPRAISAL REPORT

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Table of Contents

Executive Summary

An Ecological Desk Study, Extended Phase 1 Habitat Survey, Badger Survey, and Initial Bat Survey were undertaken on a piece of land off Middlecliffe Lane, Middlecliffe, Barnsley. The site is currently a horse-grazed field with access track and plans are to convert it into a ten plot traveler site.

A single candidate Local Wildlife Site (cLWS); Houghton Marshes; is present within the 1.5 km desk study area. The development of the site will have no impact on this non-statutory designated site.

Habitats at the site are predominantly improved grassland with patches of tall ruderal, dense scrub and scattered trees. Small areas of semi-improved rank grassland are present along the access track towards the north of the site. All habitats are of low or negligible ecological value.

No evidence of badger *Meles meles* was recorded on site and only a single record, over 1 km from the site, was returned from the desk study. The development will have no impact on badgers.

A single building was assessed for its bat roost potential and was deemed to be of low potential and unlikely to support roosting bats. None of the trees on site are suitable for roosting bats. Bats could be using the site for occasional foraging but the habitat is sub-optimal and alternative foraging areas are available in the locality (e.g the woodland to the south). It is unlikely the loss of this habitat will have a significant impact on bats.

The dense scrub and scattered trees could be used by nesting birds. It is recommended any vegetation clearance is undertaken outside the bird nesting season (avoid March-August inclusive) to avoid impacts on nesting birds.

The desk study revealed records for common amphibians and adder *Vipera berus*. However habitats at the site are either sub-optimal or not suitable for these species. No records of great crested newt *Triturus cristatus* were found within 1.5 km of the site and as habitat at the site is either sub-optimal or not suitable for this species they are not considered a constraint to this development.

1. INTRODUCTION

AB Ecology were commissioned to undertake an ecological appraisal in connection with the proposed development of a traveler site off Middlecliffe Lane near Barnsley, hereafter referred to as the 'site'. The site is located at Ordnance Survey National Grid Reference SE 431 048.

1.1 SCOPE OF THE STUDY

The site consists of a horse grazed field and access track. The majority of the site is improved grassland with areas of tall ruderal and dense scrub. Some immature scattered trees are present within the horses' field and along the access track. A water treatment centre is present at the end of the current access track but this will not be affected by the development. Neighbouring land includes sheep grazed pasture to the west, residential properties to the north and north-west, woodland to the south and an arable field to the east.

Proposed plans involve converting the site into a ten plot traveler site with an upgraded and extended access track.

This report considers the existing baseline ecological features of the area within the site boundary (See Drawing 1) and provides an ecological appraisal of the site in relation to the proposed development.

A summary of the legislation in respect of any potential protected/notable species that could be present within the local area can be found in Appendix A.

1.2 OBJECTIVE

The objectives of the assessment were as follows:

- To undertake an Ecological Desk Study to obtain existing information on designated sites and protected and notable species within 1.5 km of the site;
- To undertake an Extended Phase 1 Habitat Survey to map key habitats and highlight the potential for protected species within the site;
- To undertake a Badger Survey of the site to determine if this species is present and may be affected by the development;
- To undertake an Initial Bat Survey to determine the likelihood of bats roosting on site;
- To produce a report which details the findings of the aforementioned surveys and highlights any key ecological issues of the proposed development; and
- To advise on any further ecological surveys that may be required and any mitigation measures required, if necessary.

1.3 STUDY LIMITATIONS

Species lists included in the Extended Phase 1 Habitat Survey Target Notes (Appendix C) are not necessarily an exhaustive inventory of all species occurring at the site. They are intended to illustrate the general species richness of a particular area, and draw attention to any species that may be considered uncommon or unusual. Species may have been missed on the basis of seasonal flowering periods.

2. METHODOLOGY

2.1 DESK STUDY

A desk study was carried out in September 2017 to identify existing records of sites of nature conservation interest and of protected or notable species within 1.5 km of the centre of the site (National Grid Reference SE 431 048).

To ensure that the information reported in this desk study is current, only data from surveys conducted within the last fifteen years were considered. It should be noted that desk studies do not provide an exhaustive list of all ecological information for any area, and so cannot be relied on as the only source of information for any study area in question. They are, however, very useful in combination with field based surveys to identify features of nature conservation interest that might be associated with a site. The following organisations/web resources were consulted during the desk study:

- Local Records Centre [Barnsley Biological Records Centre]; and
- Multi-Agency Geographic Information Centre (MAGIC) [online].

2.2 EXTENDED PHASE 1 HABITAT SURVEY

An Extended Phase 1 Habitat Survey was undertaken by a suitably qualified ecologist[1] on 26 September 2017 to record the habitats and vegetation on site. The land within the site boundary was surveyed and mapped (refer to Drawing 1).

This followed the standard methodology set out by the Joint Nature Conservation Committee (JNCC, 2010). Key features identified during the Extended Phase 1 Habitat Survey are summarised in the form of Target Notes (refer to Appendix C). Nomenclature for plant species names is taken from Stace (2010).

2.3 BADGER SURVEY

On 26 September a suitably qualified ecologist surveyed the site for evidence of badger *Meles meles* activity, adopting the standard methodology (Harris *et al.,* 1989). Areas of suitable habitat, especially boundary features (ditches, woodland edge and fence lines) formed the focus of searches for evidence of badgers. Evidence includes key field signs such as setts, latrines, footprints, snuffle holes (created when foraging), track-ways and hairs (often found outside sett entrances or caught on fencing).

2.4 BATS

2.4.1 Initial Bat Survey

A single building within the survey area was assessed externally and internally by a suitably experienced ecologist[2] to determine its potential for roosting bats. The survey was commensurate with good practice, following the guidance set out in the *Bat Workers Manual* (Mitchell-Jones & McLeish, 2004) and in *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collins, 2016). This initial assessment was conducted on 26 September 2017, during daylight hours. The

[1] Adele Antcliff MSc., BSc. (Hons), MCIEEM.
[2] Adele Antcliff MSc., BSc. (Hons), MCIEEM Class 2 Bat Licence Number 2015-13206-CLS-CLS

building was graded high, moderate, low or negligible for its suitability for roosting bats (see Table 1). Features providing bat roost potential could include the following:

- gaps under roof tiles;
- gaps behind the barge board;
- holes in the roof or gable end; and
- gaps under the eaves.

No mature trees suitable for roosting bats were present within the site boundary and therefore no trees were assessed as part of this survey.

Table 1: Criteria for Bat Roost Potential Assessment

Bat Roost Potential	Description
Negligible	The structure has no importance to roosting bats and no features have been identified which roosting bats could utilise. The surveyor would be surprised to find any bats roosting here.
Low	Superficially the structure may have some interest to roosting bats, but it is considered sub-optimal to the extent that the surveyor would not anticipate bats to favour it. The structure appears unsuitable for maternity colonies and would only support low numbers of bats if any at all.
Moderate	A structure that has some potential for roosting bats, but is less than ideal in some way. The surveyor would neither expect, nor be surprised to find a bat in a structure categorised as having moderate bat potential.
High	A structure with 'ideal' features which, in the experience of the surveyor, is wholly appropriate for use by roosting bats. For example, it has no obstructions below cavity entrances, the cavity is upward leading, the tree/structure has a high degree of connectivity with likely navigation routes, and surrounding habitat offers good foraging potential. The structure might be particularly prominent and likely to be noticed by navigating bats.
Confirmed	Positive signs of bats are found, i.e. individual bats, bat droppings or existing records of a bat roost are directly associated with this structure.

3. RESULTS

3.1 DESK STUDY

3.1.1 Designated Sites

The desk study revealed that no statutory designated sites lie within 1.5 km of the site. A single candidate Local Wildlife Site (cLWS); Houghton Marsh; lies approximately 950 m north-west of the site. As this is only a candidate site no details of the habitats or reasons for designation are available. However, a number of protected species have been recorded on the cLWS, including common pipistrelle *Pipistrellus pipistrellus*, harvest mouse *Micromys minutus*, water vole *Arvicola*

terrestris, hen harrier *Circus cyaneus*, graylag goose *Anser anser*, reed bunting *Emberiza schoeniclus* and lapwing *Vanellus vanellus*.

No other non-statutory designated sites were recorded within the desk study area.

3.1.2 Species

Barnsley Biological Records Centre provided records of species of nature conservation interest located within the 1.5 km desk study area. The project applicable records have been filtered from the records provided by the local records centre and the most recent (post 2002), are summarised in Appendix B, along with their relevant statutory protection and conservation status where applicable.

The desk-study records include records for common amphibian species (common frog *Rana temporaria*, common toad *Bufo bufo* and smooth newt *Triturus vulgaris*), adder *Vipera berus*, numerous bird species, badger, pipistrelle bats *Pipistrellus* sp., hedgehog *Erinaceus europaeus* otter *Lutra lutra* and water vole *Arvicola terrestris.*

3.2 Extended Phase 1 Habitat Survey

The results of the Extended Phase 1 Habitat Survey are shown on Drawing 1 and are supplemented by the Target Notes in Appendix C. The habitats are described below. The site comprised the following broad habitat types:

- Improved grassland;
- Tall ruderal vegetation;
- Scattered trees;
- Dense scrub;
- Semi-improved grassland;
- Buildings; and
- Bare ground.

Improved Grassland

The majority of the site is a horse grazed, improved grassland, field (Target Note 1). The grasses are cropped short through heavy grazing and include creeping bent *Agrostis stolonifera* and Yorkshire fog *Holcus lanatus*. White clover *Trifolium repens* and creeping buttercup *Ranunculus repens* were also present, as was frequent common chickweed *Stellaria media* and greater plantain *Plantago major*.

Tall Ruderal Vegetation

Within the improved field (Target Note 1) are patches of tall ruderal vegetation, primarily dense patches of common nettle *Urtica dioica* and broad-leaved dock *Rumex obtusifolius*.

Tall ruderal species are also present within the semi-improved grassland along the access track (Target Note 4).

Scattered Trees

Immature scattered trees are present around the improved field (Target Note 2). These are primarily silver birch *Betula pendula*, hawthorn *Crataegus monogyna* and elder *Sambucus nigra* with some ash *Fraxinus excelsior* and dog-rose *Rosa canina*. Due to their maturity and small size they are unlikely to be used by roosting bats but they may offer some potential to nesting birds and invertebrates.

Dense Scrub

Small patches of dense blackthorn scrub *Prunus spinosa* are present on the boundaries of the horse grazed field (Target Note 3). This is likely to offer suitable habitat to invertebrates and nesting and foraging birds.

Patches of dense scrub, including bramble *Rubus fruticosus* agg., ivy *Hedera helix*, hawthorn and blackthorn, are also present along the access track and along the borders of the water treatment works (Target Note 4).

Semi-improved Grassland

Towards the north of the site and along the access track, are areas of tall, rank, semi-improved grassland (Target Note 4). Grasses recorded in this area include tufted hair-grass *Deschampsia cespitosa*, Yorkshire fog, creeping bent, cock's-foot *Dactylis glomerata* and false oat-grass *Arrhenatherum elatius*. This area appears unmanaged and patches of tall ruderal and dense scrub is developing which include areas of dense bracken *Pteridium aquilinum*, ivy, bramble and large bindweed *Calystegia sylvatica.* Rosebay willowherb *Chamerion angustifolium,* common ragwort *Senecio jacobaea*, mugwort *Artemisia vulgaris*, broad-leaved dock and common hogweed *Heracleum sphondylium* were also recorded. A number of non-native garden escapees were recorded. The plant species recorded are common and widespread however this habitat could be used by invertebrates, foraging birds and small mammals, including bats.

Buildings

A single building is present on the site (Target Note 5). This is a small brick built storage shed with a tiled, pitched roof. The building is in a state of disrepair with gaps where windows and door are missing, and numerous holes in the roof.

Bare Ground

Around the building, and along the access into the horse grazed field are small areas of bare ground. This area around the building is highly disturbed by the horses and is completely shaded by the trees on the neighboring property and is of negligible ecological value.

3.3 BADGER SURVEY

No evidence of badger was found during the survey, this includes setts and signs of foraging such as footprints, snuffle holes and hairs.

3.4 BATS

3.4.1 Initial Bat Survey

A single building was assessed for its potential to support roosting bats. This is a small brick built building with a slate tiled, pitched roof (Target Note 5). Many of the tiles were missing and access

is possible into the building for bats. However, surrounding foliage from neighboring trees prevents a clear access path for bats into the building. There are cracks and crevices suitable for bats in the building but no signs of bats were recorded and the building was considered to have low bat roost potential.

4. EVALUATION AND RECOMMENDATIONS

4.1 DESIGNATED SITES

Houghton Marsh candidate LWS is located over 1 km west of the development site. It is isolated from the site by main roads, agricultural land and residential areas. There is no pathway connecting the development site and designated site and the habitats on the development site are unlikely to support the species present on the LWS. Therefore development of the traveler site will have no impact upon the candidate LWS and it is not considered further in this assessment.

4.2 HABITATS

All the habitats on the site are of negligible or low ecological value. None of the habitats are Local Biodiversity Action Plan (LBAP) habitats (Barnsley Biodiversity Trust, 2009) although the scattered trees and dense scrub could support populations of invertebrate species, birds and small mammals and should be retained wherever possible. If these habitats are to be lost, it is unlikely to have a significant effect on the biodiversity of the area.

4.3 SPECIES

4.3.1 Badger

A single record of badger was recorded approximately 1 km from the site. No evidence or signs of badger were recorded during the survey and the habitat at the site is sub optimal for this species. This species is not considered further in this assessment.

4.3.2 Bats

Four records of pipistrelle bats were recorded within the desk study area. A single building is present on the site with low potential to support roosting bats. No trees suitable for roosting bats are present and the habitat is sub optimal for foraging bats. It is unlikely the planned development will have a significant impact on bats and this species is not considered further in this assessment.

4.3.3 Birds

Numerous records of birds were returned from the desk study including eight Schedule 1 species (barn owl *Tyto alba*, kingfisher *Alcedo atthis,* quail *Coturnix coturnix*, greylag goose, common scoter *Melanitta nigra*, green sandpiper *Tringa ochropus*, black-tailed godwit *Limosa limosa* and hen harrier). A large wetland (Dearne Valley RSPB reserve) is present just over 1.5 km to the south/south-west of the site and it is likely that many of these species were recorded here. Habitats at the site are not suitable for these species to breed and it is unlikely they will be present on the site.

A number of common bird species were observed at the site including magpie *Pica pica*, robin *Erithacus rubecula* and great tit *Parus major* and it is possible that they will be nesting in the scattered trees and dense scrub on the site. All species of bird are protected under the Wildlife

and Countryside Act (1981) HMSO (1981), making it an offence to intentionally or recklessly destroy active nests and eggs. To minimise potential harm or disturbance to nesting birds it is recommended that all vegetation clearance is undertaken outside the bird nesting season (March-August inclusive) where possible. If it is not possible to avoid the bird nesting season then the vegetation should be checked by an ecologist immediately prior to clearance. It should be noted that if nesting birds are found, clearance work would have to be postponed until after the young have fledged.

4.3.4 Other protected species

A small number of amphibian and reptile records were returned from the desk study. These included common frog, common toad, smooth newt and adder. No records of great crested newt were found within 1.5 km of the site. Habitat at the site is not suitable for these species as no waterbodies are present and the terrestrial habitat is of poor quality and it is unlikely they will be present at the site, therefore they are not considered further.

The desk study revealed records of otter and water vole approximately 1 km from the site. The habitat at the site is not suitable for either species and therefore they will not be present and need not be considered further.

Hedgehog have been recorded very close to the site (approximately 100 m west) and it is likely that they use the site for foraging. Development should seek to avoid impacts to this species. If new fences are to be installed they should have gaps at the base to allow hedgehogs to freely move on and off the site. Any clearance of piles of vegetation and leaves should be checked to ensure hedgehogs are not sheltering there, prior to removal.

5. REFERENCES

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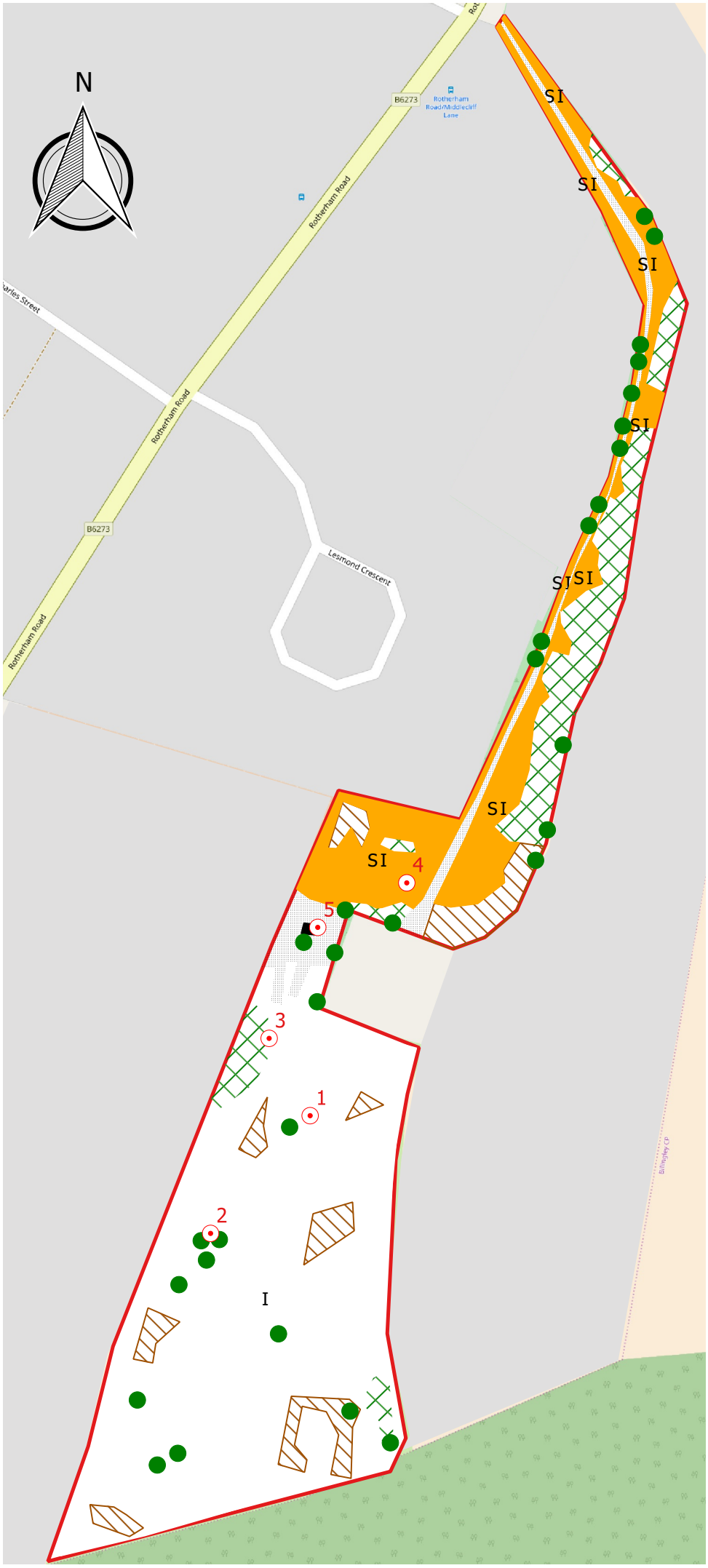
Drawings

Drawing 1: Extended Phase 1 Habitat Survey



Legend

- Site Boundary

Habitats

- Building
- Bare Ground
- Dense Scrub
- I — Improved Grassland
- SI — Semi-improved Grassland
- Tall Ruderal
- Scattered Trees
- Target Notes

Base map from Openstreetmap 2017. Scale @A4 1:2500

Client: Mr M Collins	
Project: Land off Middlecliffe Lane	
Title: Extended Phase 1 Habitat Survey	
Project Number: 2017_022	Date: 13-10-2017
AB Ecology	Drawing No: 1

Appendix A

Legislation

WILDLIFE LEGISLATION

Species Protection

A level of statutory protection is afforded to specific species, largely as a consequence of dramatic declines in populations caused by habitat loss and/or degradation (both direct and indirect impacts) and persecution. In England the various statutes which provide this protection include the following:

- The Wildlife & Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000);
- The Conservation of Habitats and Species Regulations 2010 (as amended);
- Natural Environment and Rural Communities Act (NERC) 2006;
- The Protection of Badgers Act 1992; and
- Wild Mammals (Protection) Act 1996.

These are further described for specific protected species surveyed for or expected at the Site below.

National Planning Policy Framework (NPPF)

The NPPF sets out, amongst other points, how at an overview level the 'planning system should contribute to and enhance the national and local environment by:

- ….recognising the wider benefits of ecosystem services;
- Minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Governments' commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures…..

The NPPF states that this should be achieved through local planning development frameworks and gives recommendations for criteria based policies which recognise the hierarchy of designates sites which range from internationally important habitat, to sites of importance at a local level and ensure that protection is 'commensurate with their status and gives appropriate weight to their importance and the contribution that they make to wider ecological networks',

A list of principles which local planning authorities should follow when determining planning applications is included in the NPPF which includes the following;

- If significant harm resulting from a development cannot be avoided…..adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- …..opportunities to incorporate biodiversity in and around developments should be encouraged;
- Planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland, unless then need for, and benefits of, the development in that location clearly outweighs the loss…..

Species of Principle Importance in England

The Natural Environment and Rural Communities (NERC) Act came into force on 1st October 2006. Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The list has been drawn up in consultation with Natural England, as required by the Act.

The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under Section 40 of the NERC Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions

There are 943 species of principal importance included on the S41 list. These are the species found in England which were identified as requiring action under the UK Biodiversity Action Plan (UK BAP) and which continue to be regarded as conservation priorities under its successor, the UK Post-2010 Biodiversity Framework.

Badger

The badger *Meles meles* is protected in the UK under the Protection of Badgers Act 1992 (as amended). The law offers considerable protection to both badgers and badger setts. Not only is it an offence to cruelly ill treat, kill or take badgers, but it is also illegal to damage or disturb the badger sett, obstruct the access or entrance, or cause a dog to enter the sett while the sett is still occupied. The definition of ill treatment is no longer limited to the direct killing of badgers, but can be taken to include the destruction or severance of large areas of foraging territory.

Licences to disturb badger setts in respect of development may be issued by Natural England, if the applicants can convince the licensing authority of the necessity for the proposed action. Latest guidance[1] provides a degree of clarity on activities which may need a licence. Natural England advice identifies that badgers can be relatively tolerant of moderate levels of noise and activity around their setts and that even moderate levels of 'disturbance' may not actually disturb the badger occupying the sett. Therefore licences should only be sought were the activity will in fact disturb a badger, such as high levels of noise/activity around a sett, damaging a sett or obstructing access to a sett. Former Natural England guidance[2] still remains useful in terms of categorising development activities within a given range of a sett which may require a licence:

- using very heavy machinery (generally tracked vehicles) within 30 metres of any entrance to an active sett;
- using lighter machinery (generally wheeled vehicles), particularly for any digging operation, within 20 metres; and
- light work such as hand digging or scrub clearance within 10 metres.

Some activities such as the use of explosives or pile driving may cause disturbance at greater distances and require individual consideration. Penalties for offences under the Act are up to six months in prison and a fine of £5,000 for each offence.

[1] Natural England (2009) *Interpretations of 'Disturbance' in relation to badgers occupying a Sett.*
[2] English Nature (2002) *Badgers and Development*.

Bats

All species of bat and their roost are protected under UK and European legislation. Bats are included in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), the Countryside and Rights of Way Act 2000 and Regulation 40 and Schedule 2 of The Conservation of Habitats and Species Regulations 2010. It is an offence to:

- Deliberately capture, injure or kill a bat;
- Damage or destroy a breeding site or resting place of a bat; and
- Disturb a bat, including disturbance of a bat in such a way as to be likely to affect:

  i) the ability of bats to survive, reproduce or breed, or to rear or nurture their young;

  ii) their ability to hibernate or migrate; and

  iii) to significantly affect the local distribution or abundance of bats.

Provisions are made within the UK legislation to allow for disturbance of bats or their roosts to take place under licence where works affect any bat species. The licence is issued by the appropriate statutory authority, which in England is Natural England (NE). Licences can only be granted if there is no satisfactory alternative or if the action authorised will not be detrimental to the maintenance of the population of the species at a favourable conservation status in their natural range. Licences can be issued for scientific, research purposes (including survey work), and for the disturbance of bats in relation to a development.

Birds

All birds are protected under the Wildlife and Countryside Act 1981 (as amended), making it an offence, with certain exceptions (e.g. game birds), to intentionally:

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

Schedule 1 of the Act contains a list of birds which are conferred extra protection and for which all offences carry harsher penalties. Under the legislation it is illegal to: intentionally or recklessly disturb a Schedule 1 bird while it is building a nest or is in or near a nest containing eggs or young; and intentionally or recklessly disturb dependent young of such a bird. Examples of species covered under Schedule 1 include: barn owl *Tyto alba*, kingfisher *Alcedo atthis* and little-ringed plover *Charadrius dubius*.

Appendix B

Desk Study Results

Species Group	Common Name	Latin Name	Year (No. of records)	Closest Distance from Site	Wildlife and Countryside Act		S. 41 Species (NERC 2006)	Barnsley Local Biodiversity Action Plan (LBAP)	Other
					Sch 1	Sch 5			
Amphibians	Common toad	*Bufo bufo*	2007 (1)	0.1 km		X*	X		
	Common frog	*Rana temporaria*	2007 (2)	0.1 km		X*			
	Smooth newt	*Triturus vulgaris*	2010(1)	1.25 km		X*			
Birds	Barn owl	*Tyto alba*	2007 (1)	0.6 km	X			X	BoCC*[1]: Green
	Black-tailed godwit	*Limosa limosa*	2009 (1)	1.5 km	X		X		BoCC: Red
	Bullfinch	*Pyrrhula pyrrhula*	2007-2012 (4)	0.2 km			X		BoCC; Amber
	Common scoter	*Melanitta nigra*	2009 (1)	1.5 km	X				BoCC: Red
	Cuckoo	*Cuculus canorus*	2007-2009 (2)	1.5 km			X		BoCC: Red
	Dunnock	*Prunella modularis*	2007-2017 (13)	0.3 km			X		BoCC: Amber
	Grasshopper warbler	*Locustella naevia*	2007-2009 (2)	1.5 km			X		BoCC; Red
	Green sandpiper	*Tringa ochropus*	2009 (1)	1.5 km	X				BoCC; Amber
	Grey partridge	*Perdix perdix*	2007-2017 (6)	0.8 km			X	X	BoCC: Red
	Greylag goose	*Anser anser*	2007-2012 (2)	1.3 km	X				BoCC: Amber

Species Group	Common Name	Latin Name	Year (No. of records)	Closest Distance from Site	Wildlife and Countryside Act		S. 41 Species (NERC 2006)	Barnsley Local Biodiversity Action Plan (LBAP)	Other
					Sch 1	Sch 5			
	Hen harrier	*Circus cyaneus*	2012 (1)	1.2 km	X		X		BoCC: Red
	House sparrow	*Passer domesticus*	2003-2017 (20)	0.11 km			X		BoCC; Red
	Kestrel	*Falco tinnunculus*	2007-2017 (7)	0.3 km				X	BoCC; Amber
	Kingfisher	*Alcedo atthis*	2009 (2)	1.5 km	X				BoCC; Amber
	Lapwing	*Vanellus vanellus*	2005-2014 (8)	1.3 km			X	X	BoCC; Red
	Linnet	*Carduelis cannabina*	2007-2017 (7)	0.57 km			X		BoCC; Red
	Mistle thrush	*Turdus viscivorus*	2009-2017 (3)	0.6 km					BoCC; Red
	Quail	*Coturnix coturnix*	2007 (1)	1.5 km	X				BoCC; Amber
	Reed bunting	*Emberiza schoeniclus*	2011-2012 (8)	1.3 km			X		BoCC; Amber
	Skylark	*Alauda arvensis*	2005-2017 (13)	0.5 km			X	X	BoCC: Red
	Starling	*Sturnus vulgaris*	2007-2009 (5)	1.5 km			X		BoCC; Red

Species Group	Common Name	Latin Name	Year (No. of records)	Closest Distance from Site	Wildlife and Countryside Act		S. 41 Species (NERC 2006)	Barnsley Local Biodiversity Action Plan (LBAP)	Other
					Sch 1	Sch 5			
	Song thrush	*Turdus philomelos*	2009-2017 (4)	0.11 km			X		BoCC; Red
	Tree sparrow	*Passer montanus*	2007-2017 (3)	0.8 km			X	X	BoCC; Red
	Yellow wagtail		2007-2008 (3)	1.5 km			X		BoCC: Red
	Yellowhammer	*Emberiza citrinella*	2007-2017 (9)	0.3 km			X		BoCC: Red
Invertebrates	Small heath butterfly	*Coenonympha pamphilus*	2010 (1)	0.8 km			X		
	Cinnabar moth	*Tyria jacobaeae*	2017 (1)	0.12 km			X		
Mammals	Badger	*Meles meles*	2013 (1)	1 km					Protection of Badgers Act (1992)
	Harvest mouse	*Micromys minutus*	2012 (2)	1.3 km			X		
	Hedgehog	*Erinaceus europaeus*	2013-2016 (3)	0.11 km			X	X	
	Otter	*Lutra lutra*	2005 (2)	1.1 km		X	X	X	

Species Group	Common Name	Latin Name	Year (No. of records)	Closest Distance from Site	Wildlife and Countryside Act		S. 41 Species (NERC 2006)	Barnsley Local Biodiversity Action Plan (LBAP)	Other
					Sch 1	Sch 5			
	Pipistrelle bat	*Pipistrellus* sp.	2004-2005 (3)	0.5 km		X		X	
	Water vole	*Arvicola terrestris*	2002-2009 (14)	0.9 km		X	**X**	X	
Reptiles	Adder	*Vipera berus*	2008 (2)	1.3 km		X*	X		

* Partial protection only

*[1] BoCC = Birds of Conservation Concern Status (Eaton, 2015)

Appendix C

Target Notes

Target Note 1

Description: Horse grazed field with patches of tall ruderal vegetation. Much of the grasses are cropped short due to horse grazing. Some patches of tall ruderal species are scattered around the field.

Common name	Scientific name	DAFOR[1]
broad-leaved dock	*Rumex obtusifolius*	LD
common nettle	*Urtica dioica*	LD
creeping bent	*Agrostis stolonifera*	A
Yorkshire-fog	*Holcus lanatus*	A
white clover	*Trifolium repens*	A
knot grass	Polygonum aviculare	LA
bramble	*Rubus fruticosus* agg.	LA
creeping buttercup	*Ranunculus repens*	F
greater plantain	*Plantago major*	F
common chickweed	*Stellaria media*	F
creeping thistle	*Cirsium arvense*	O
common ragwort	*Senecio jacobaea*	O
dove's-foot cranes-bill	*Geranium molle*	O
dandelion	*Taraxacum officinale* agg.	R
spear thistle	*Cirsium vulgare*	R
cow parsley	*Anthriscus sylvestris*	R
common daisy	*Bellis perennis*	R
white dead-nettle	*Lamium album*	R

[1] DAFOR scale where D-dominant, A-Abundnat, F-Frequent, O-Ocassion, R-Rare

Target Note 2

Description: Immature scattered trees are present throughout the horse grazed field to the south of the site.

Common name	Scientific name	DAFOR
silver birch	*Betula pendula*	O
hawthorn	*Crataegus monogyna*	O
elder	*Sambucus nigra*	O
ash	*Fraxinus excelsior*	R
dog-rose	*Rosa canina*	R

Target Note 3

Description: Small patches of dense blackthorn *Prunus spinosa* scrub are present on the boundaries of the site.

Target Note 4

Description: Tall rank grassland with ruderal species and patches of dense scrub.

Common name	Scientific name	DAFOR
bracken	*Pteridium aquilinum*	LD
common ivy	*Hedera helix*	LD
tufted hair-grass	*Deschampsia cespitosa*	A
Yorkshire fog	*Holcus lanatus*	A

Target Note 4		
creeping bent	Agrostis stolonifera	A
cock's-foot	*Dactylis glomerata*	A
large bindweed	*Calystegia silvatica*	LA
common ragwort	*Senecio jacobaea*	O
dandelion	*Taraxacum officinale* agg.	O
ribwort plantain	*Plantago lanceolata*	O
white clover	*Trifolium repens*	O
bramble	*Rubus fruticosus* agg.	O
creeping buttercup	*Ranunculus repens*	O
yarrow	*Achillea millefolium*	O
broad-leaved dock	*Rumex obtusifolius*	O
rosebay willowherb	*Chamerion angustifolium*	O
hawthorn	*Crataegus monogyna*	O
common hogweed	*Heracleum sphondylium*	O
mugwort	*Artemisia vulgaris*	O
blackthorn	*Prunus spinosa*	O
false oat-grass	*Arrhenatherum elatius*	O
knotgrass	*Polygonum aviculare*	R
broom	*Cytisus scoparius*	R
spear thistle	*Cirsium vulgare*	R
black medick	*Medicago lupulina*	R

Target Note 5

Description: Small brick built building with a tiled, slate roof. Numerous tiles are missing and large holes allow access into building. Windows and door are missing and gaps are present allowing access into the interior of the building. Building is overhung by neighbouring trees.