



# WOLD ECOLOGY LTD

2 Redwood Gardens, Driffield, East Riding of Yorkshire. YO25 6XA.  
www.woldecology.co.uk

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## Snaith, East Yorkshire EXTENDED PHASE 1 HABITAT SURVEY

September 2015

	Staff Member	Position
Extended Phase 1 Habitat Survey :	Bill Meek B Sc	Ecologist
Report prepared by :	Chris Toohie MSc MCIEEM Bill Meek B Sc	Ecologist
Signed off by :	Chris Toohie MSc MCIEEM	
<b>Notes.</b>	<b>This report contains sensitive information concerning protected species and caution should be exercised when copying and distributing to third parties.</b>	

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## 1.0 EXECUTIVE SUMMARY.

- 1.1 In September 2015, Wold Ecology was commissioned by Harron Homes to undertake an Extended Phase 1 Habitat Survey on land to the south east of Snaith village between Butt Lane and Snaith Road (national grid reference SE 64715 21770) in East Yorkshire.
- 1.2 In order to accomplish the brief, a desk top study, consultation and an extended Phase 1 field survey was undertaken by Wold Ecology staff.
- 1.3 The habitats within the Application Site comprises two arable fields bounded by hedgerows. There are no statutory or non-statutory sites within the site boundary.
- 1.4 The proposed development involves site clearance and the erection of a residential housing estate including infrastructure, soft landscaping and hard landscaping.
- 1.5 The surrounding habitat is potentially important and the development area may impact upon mobile species. Consequently, the extended phase 1 assessment targeted the following species relevant to the Application Site and proposed development:
- Bats
  - Great crested newts
  - Badger
  - Birds
  - Reptiles
  - Hedgehogs
- 1.6 The ecological survey concludes that the proposed development is unlikely to impact upon any protected species or associated habitats. However, the report recommends a number of measures which should be adopted to ensure potential adverse impacts to wildlife are avoided:
- **Wold Ecology does not recommend any further specific bird surveys. However, any trees, hedges and vegetation to be removed should be cleared outside of the bird nesting season (i.e. clearance should be undertaken between September and February inclusive) or be carefully checked by an ecologist to confirm no active nests are present - prior to removal during the summer period. If nesting birds are found during the watching brief, works will need to stop until the young have fledged.**
- 1.7 The data collected to support the output of this report is valid for 18 months. This report is valid until **March 2017**. After this time, additional surveys need to be undertaken to confirm that the status of the site, for European protected species, has not changed.
- 1.8 Species list within this report may be forwarded to the local biodiversity records centre to be included on their national database. No personal information will be sent. Please contact Wold Ecology if you do not wish the species accounts and six figure grid references to be shared.

## 2.0 INTRODUCTION

2.1 In September 2015, Wold Ecology was commissioned by Harron Homes to undertake an Extended Phase 1 Habitat Survey on land to the south east of Snaith village between Butt Lane and Snaith Road (national grid reference SE 64715 21770) in East Yorkshire.

2.2 An ecological assessment is a requirement of the Local Authority Planning Department, as part of the planning application process. This is specified in the following legislation:

- Department for Communities & Local Government Circular 06/2005 Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System.
- National Planning Policy Framework (NPPF): Biodiversity and Geological Conservation – national planning policy relation to biodiversity. NPPF Biodiversity and Geological Conservation gives further direction with respect to biodiversity conservation and land use change/development. NPPF states that not only should existing biodiversity be conserved but importantly that habitats supporting such species should be enhanced or restored where possible. The policies contained within NPPF may be material to decisions on individual planning applications.

2.3 In addition, an ecological assessment is also required so that the local authority comply with the Habitats and Species Regulations 2010 and to have regard to the purpose of conserving biodiversity in the exercise of their functions (Natural Environment and Rural Communities (NERC) Act 2006).

2.4 Planning authorities must determine whether the proposed development meets the requirements of Article 16 of the EC Habitats Directive before planning permission is granted (where there is a reasonable likelihood of European Protected Species being present). Therefore in the course of its consideration of a planning application, where the presence of a European protected species is a material consideration, the planning authority must satisfy itself that the proposed development meets three tests as set out in the Directive.

2.5 The Local Authority must be satisfied that the proposed development must meet a purpose of:

- a) 'Preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment'.

In addition the authority must be satisfied that:

- (b) 'That there is no satisfactory alternative'
- (c) 'That the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range'.

## 2.6 Case Law - Woolley v Cheshire East Borough, 5th June 2009.

2.6.1 The ruling states that if it is clear or perhaps very likely that the requirements of the Directive cannot be met because there is a satisfactory alternative or because there are no conceivable "other imperative reasons of over-riding public interest" then the authority should act on that and refuse permission."

2.6.2 In addition, the judgement also clarified that it was not sufficient for planning authorities to claim that they had discharged their duties by imposing a condition on a consent that requires the developer to obtain a licence from Natural England. Natural England considers it essential that appropriate survey information supports a planning application prior to the determination. Natural England does not regard the conditioning of surveys to a planning consent as an appropriate use of conditions.

2.7 In order to fulfil the brief, the following has been undertaken:

- A desktop study and consultation.
- An Extended Phase 1 Habitat Assessment.

2.8 This report describes the findings of the field survey work, the desktop study and identifies further surveys to ensure that a comprehensive study is undertaken.

### 3.0 COMPANY PROFILE

3.1 Wold Ecology Ltd is a well-established, professional company whose staff has over 30 years' experience in providing a bespoke service for environmental management. Wold Ecology employs a number of experienced and qualified associates to undertake specialist survey work. Professional service is of primary importance and Wold Ecology only employs staff who can demonstrate knowledge and expertise to an exceptional standard.

3.2 Wold Ecology provides a wide range of specialised advice aimed at integrating business with nature. We specialise in ecological surveys, land management planning and site assessments, these include:

- **European Protected Species Surveys**  
Bats, Birds, Great Crested Newts, Water Vole, Badger, Crayfish and Fungi surveys. Phase 1 and Phase 2 NVC Habitat Surveys, Landscape Character Assessment and Environmental Impact Assessments.
- **Environmental Grant Applications**  
Natural England Higher Level Scheme, Farm Environmental Plans, English Woodland Grant Scheme and Heritage Lottery Funding, Breathing Places.
- **Land Management**  
Management Plans, Landscape Designs, Monitoring and Site Evaluation.
- **Practical Conservation.**  
Habitat Creation, Tree Planting, Maintenance Programmes and Access Management.

### 3.3 Ethical Policy.

3.3.1 Wold Ecology provides a dedicated countryside management service in compliance with all relevant Local Agenda 21 directives and Biodiversity Action Plans.

3.3.2 We aim to raise awareness of current environmental issues amongst our clients, including UK and European legislation, industry guidelines such as BREEAM/CODE and case studies.

3.3.3 We strive to deliver the highest standards of ecological assessment and management.

3.3.4 We aim to purchase, wherever possible, environmentally friendly products and services, in order to limit negative effects on the environment.

3.3.5 Wold Ecology is committed to working towards the conservation of our natural heritage. Wold Ecology support The Wolds Barn Owl Study Group, Driffild Millennium Green and RSPB projects with volunteer staff time and financial resources. Wold Ecology has adopted an important site for nature conservation on Flamborough Head. North Marsh is owned by a local farmer and is an integral part of an exciting Higher Level Stewardship Scheme, supported by Natural England and RSPB. Richard Baines and Chris Toohie have provided free advice and practical conservation work for nearly 10 years on this site. The recent work on the marsh and the return of scarce breeding birds, such as Corn Bunting, has given a huge sense of achievement for all concerned.

- 3.3.6 Wold Ecology is an Associate Member of the RSPB, Bat Conservation Trust Benefactor and Corporate Member of the Yorkshire Wildlife Trust.
- 3.4 Surveyor Profile - Bill Meek BSc
- 3.4.1 Expertise.
- Competent to survey vascular plants, bryophytes, mammals, reptiles, amphibians, birds, butterflies and moths, dragonflies and damselflies, grasshoppers and crickets, carabid and cerambycid beetles, hoverflies and social hymenoptera.
- 3.4.2 Qualifications.
- BSc (Hons) Ecology
  - HND Countryside Management
- 3.4.3 Career Summary.
- For fourteen years, Bill worked as a Scientific Officer, later Higher Scientific Officer, at the Natural Environment Research Council's Centre for Ecology and Hydrology, at Monks Wood in Cambridgeshire. He spent that time working on large scale field surveys and habitat restoration experiments in many parts of the UK, and was one of the Institute's foremost all-round naturalists and field surveyors. His field survey experience includes a two-year botanical survey of the Salisbury Plain Training Area, incorporating an invertebrate survey of the Plain's proposed 'Southern Range Road'; a one-year botanical survey of the Castlemartin Ranges in Pembrokeshire, and eleven years' study into the creation of wildlife habitat on farmland, which has involved him in experimental design and the scientific recording of mammals, birds, invertebrates and plants on many types of farmland across eleven counties of England. The results of Bill's work have been important in informing the management prescriptions for the new Environmental Stewardship Scheme. Bill has led wildlife holidays in Spain and Greece, and has also fronted expert botanical excursions into the Salisbury Plain Training Area.
- 3.4.4 Recent Project Experience.
- As director of Midfield Ecology, Bill is involved with ongoing habitat restoration projects and field surveys sponsored by Defra, Defence Estates Organisation and Syngenta, working in collaboration with the Centre for Ecology and Hydrology and Wildlife Farming Company. In addition, he is continuing to take on small private ecological contracts (mostly field surveys) where time allows. Bill continues to contribute to the British Trust for Ornithology's (BTO) BBS and Atlas surveys, and is an active recorder for the BSBI.
- 3.5 Chris Toohie M Sc. MCIEEM has read and reviewed the report and confirms that it:
- Represents sound industry practice
  - Reports and recommends correctly, truthfully, and objectively
  - Is appropriate, given the local site conditions and scope of works proposed
  - Avoids invalid, biased, and exaggerated statements

#### 4.0 SURVEY METHODOLOGY.

- 4.1 A Phase 1 Habitat Survey was undertaken on 13<sup>th</sup> September 2015. During the site visit, the whole of the Application Site and accessible neighbouring land was examined in detail.

Survey	Date	Time		Wind Speed	Wind Direction	Temperature		Rainfall	Cloud Cover
		Start	Finish			Start	Finish		
Field	13/09/15	1000	1430	Still	N/A	14°C	15°C	None	30%

- 4.2 The habitats within the Application Site were mapped (see Appendix 2) according to the techniques described in the publication *Handbook for Phase 1 Habitat Survey* (JNCC 2010).
- 4.3 Target notes (if applicable) provide descriptions of the main habitats found on the site, including information about species composition, habitat structure, evidence of management, habitats too small to map and transitional or mosaic habitats.
- 4.4 Sufficient detail on the composition of the vegetation was obtained from the Phase 1 Habitat Survey, which enabled it to be successfully characterised and assessed.
- 4.5 During the site visit, notes were made of features of potential value to other groups such as birds, mammals, amphibians, reptiles or invertebrates, paying particular attention to species protected by law.

#### 5.0 LIMITATION OF FIELD SURVEY.

- 5.1 Whilst the majority of the Application Site was examined at the macro scale, many species will have been overlooked at the micro level because it is not the purpose of a phase 1 habitat survey to classify all taxa occurring in the Application Site. In addition, whilst the actual timing of the survey was adequate to classify the habitat types, there is undoubtedly a strong seasonal element to the presence of species within the site and species occurring outside of the survey period will have been missed.
- 5.2 This report will serve to indicate the possible value of the site in nature conservation terms based upon the survey and desk top data gathered. As with any survey of this kind, it cannot be seen as a definitive description of the site and its associated habitats and species.
- 5.3 Access was only granted within the Application Site and land owned by the client; neighbouring land was only studied from vantage points, maps and aerial photography and it is possible that habitats important to the ecology of the Application Site may not have been recorded fully.
- 5.4 However, a phase 1 habitat survey of this nature, supported by a thorough desk top survey, is sufficient to make a number of general assumptions about the ecology of the site.

## **6.0 SURVEY RESULTS.**

### **6.1 General Description.**

6.1.1 The Application Site is located in a rural location on the south eastern periphery of Snaith Village; the Application Site is located between the villages of Snaith and West Cowick. The Application site comprises two adjoining fields between Snaith Lane to the north and Butt Lane to the east. The wider habitat is characterised by well drained, flat, low lying arable fields and is relatively exposed with limited tree cover. Road networks are abundant within 2km of the Application Site, most notably the M62 approximately 1km south of the site.

6.1.2 Woodland cover in the locality is limited and occurs as small shelterbelts and plantations adjacent to farms and small holdings. Habitat connectivity is provided by hedgerows, hedgerows with trees and ditches that drain the predominant arable land. The River Aire runs approximately 1km north of the Application Site and provides habitat connectivity to the wider countryside.

6.1.3 A summary of the surrounding habitat is as follows (radius of < 2km from the Application Site):

- Buildings – farm buildings and residential properties
- Hedgerow
- Mature trees and woodland
- Arable
- Mature private gardens
- Ponds and watercourses
- River Aire
- Carr Drain
- Ings Drain
- Marsh Drain
- Black Drain
- Grazed pasture
- M62 corridor

### **6.2 Desktop Study.**

6.2.1 Natural England, East Riding of Yorkshire Council, the North & East Yorkshire Ecological Data Centre (NEYEDC) and the National Biodiversity Network (NBN) were consulted in order to obtain any ecological information that they hold of relevance to the Application Site.

6.2.2 The desk top study identifies land parcels of nature conservation value within 2 km locality of the Application Site. Relevant extracts from associated documentation are highlighted below. The following data resources were searched:

- Sites of Special Scientific Interest (SSSI)
- Special Protection Areas (SPA)
- National Parks
- National Reserves
- Special Areas of Conservation (SAC)
- Ramsar sites
- Areas of Outstanding Natural Beauty (AONB)

- Local Nature Reserves (LNR)
- Local wildlife sites (LWS)
- Natural England Habitat Inventories
- Natural Area documentation
- European protected species records
- UK Biodiversity Action Plan habitats and species records
- Local Biodiversity Action Plan habitats and species records
- Notable species records

### 6.2.3 Statutory sites

6.2.3.1 There are no statutory sites within 2 km of the Application Site.

### 6.2.4 Local Wildlife Sites (LWS).

6.2.4.1 The following local wildlife sites lie within 2 km of the Application Site;

North Yorkshire

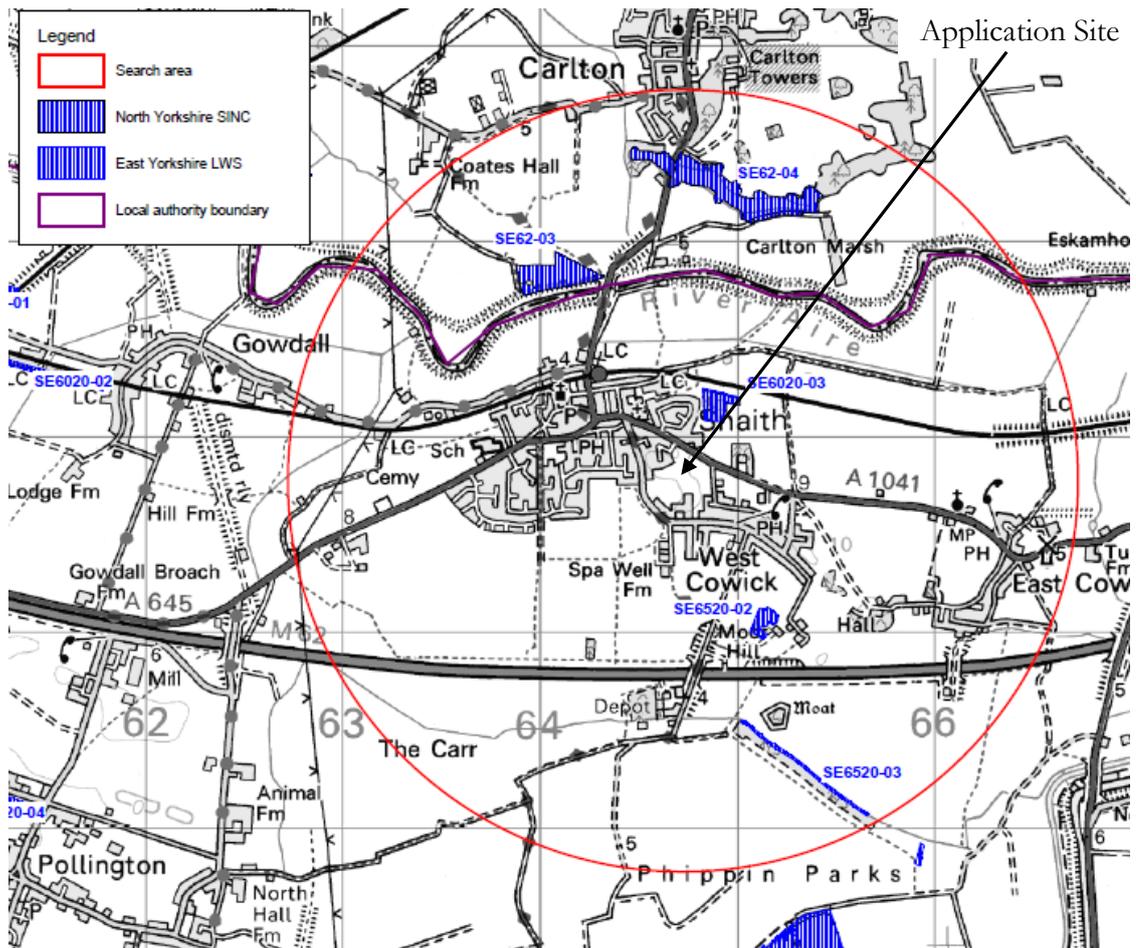
<i>Site Code</i>	<i>Site Name</i>	<i>Grid Reference</i>	<i>SINC status</i>
SE62-03	Meadows near River Aire	SE 640 228	SINC
SE62-04	Carlton Park Pond	SE 649 232	SINC

### 6.2.4.2 East Yorkshire

<i>Site Code</i>	<i>Site Name</i>	<i>Grid reference</i>	<i>LWS Status</i>
SE6020-03	Snaith Pit	SE 649 222	Candidate LWS
SE6520-02	West Cowick Road	SE 651 210	Deleted LWS
SE6520-03	Oaks Wood, Phippin Parks	SE 653 203	Candidate LWS

6.2.4.3 There are no non-statutory sites within 150m of the Application site. Consequently, the non-statutory sites will not be impacted on by the proposed development due to the distance between the Application Site and the nearest land parcels of nature conservation value site which is greater than 150 metres.

Figure 1 - Map of non-statutory sites and survey area. 1:25,000



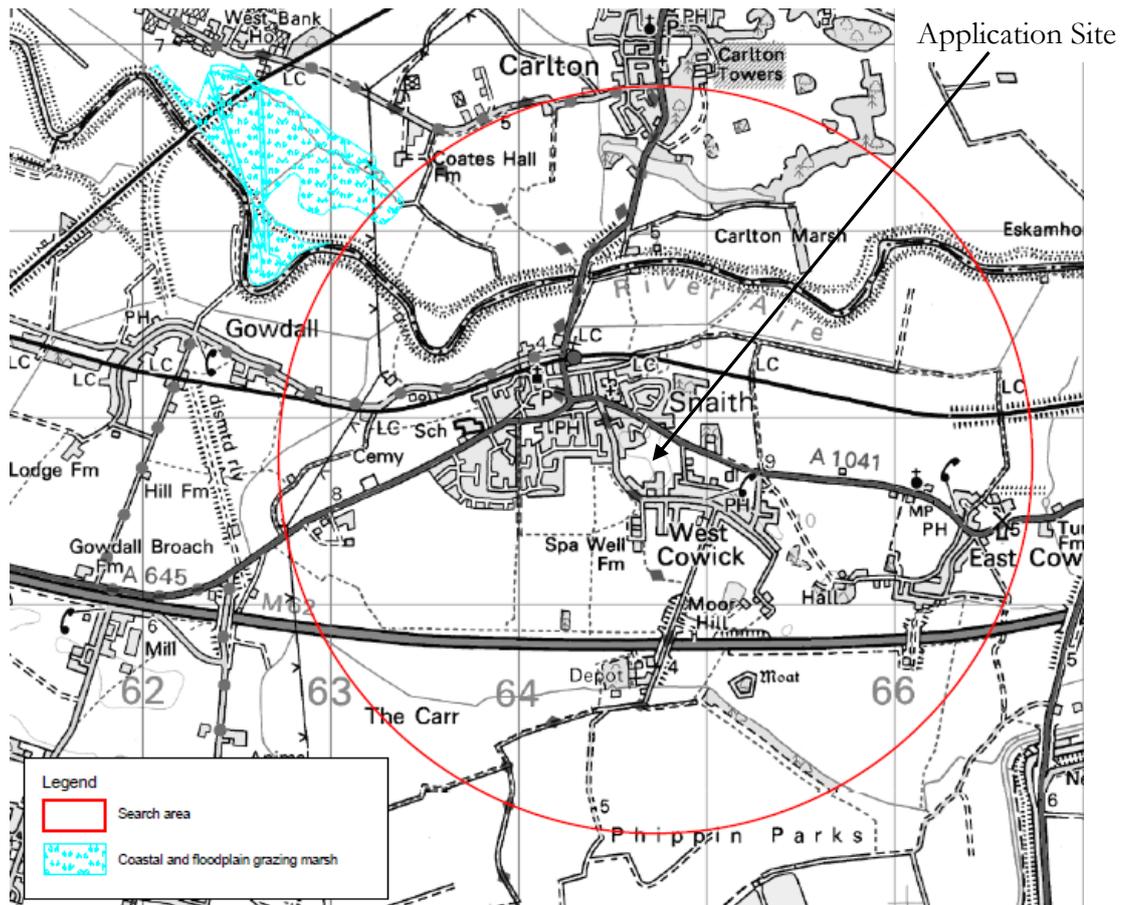
### 6.2.5 Natural England Habitat Inventories

6.2.5.1 All the Natural England Habitat Inventories were searched, including the woodland inventory and grassland inventory. The following areas of notable habitat from the Habitat Inventories list were found within 2 km of the Application Site.

<i>Designation</i>	<i>Name or location of site</i>	<i>Grid Reference</i>
Coastal and floodplain grazing marsh	Between Gowdall and Carlton	SE 633 231

6.2.5.2 There are no Natural England Habitats within 1.5km of the Application site. Consequently, the Natural England Habitat sites will not be impacted on by the proposed development due to the distance between the Application Site and the Natural England Habitat which is greater than 150 metres.

Figure 2 - Map of notable habitats listed in the Habitats Inventory. 1:25,000 N↑



### 6.3 Natural Character Areas

- 6.3.1 National Character Areas (NCAs) divide England into 159 distinct natural areas. Each is defined by a unique combination of landscape, biodiversity, geodiversity and cultural and economic activity. Their boundaries follow natural lines in the landscape rather than administrative boundaries, making them a good decision making framework for the natural environment. As part of its responsibilities in delivering the Natural Environment White Paper, Biodiversity 2020 and the European Landscape Convention, Natural England is revising its National Character Area profiles to make environmental evidence and information easily available to a wider audience.
- 6.3.2 NCA profiles are guidance documents which will help to achieve a more sustainable future for individuals and communities. The profiles include a description of the key ecosystem services provided in each character area and how these benefit people, wildlife and the economy. They identify potential opportunities for positive environmental change and provide the best available information and evidence as a context for local decision making and action.
- 6.3.3 The Application Site occurs in NCA 39 ‘The Humberhead Levels’. The Humberhead Levels is a flat, low-lying and large scale agricultural landscape bounded to the west by the low ridge of the Southern Magnesian Limestone and to the east by the Yorkshire Wolds (north of the Humber) and the Northern Lincolnshire Edge with Coversands (south of the Humber). To the north it merges into the slightly undulating landscape of the Vale of York, at the line of the Escrick

Moraine, and in the south it merges in to the Trent and Belvoir Vales and Sherwood.

6.3.4 The following Statements of Environmental Opportunity are relevant to the Application Site.

- **SEO 2:** Manage the agricultural landscape to retain its distinctive character and its productivity, while improving its contribution to biodiversity, the protection of vulnerable soils and palaeo-environmental evidence, and the water resource.
- **SEO 3:** Manage the landscape features such as semi-natural habitats and historic field patterns that reveal local variations in landscape character, often arising from underlying soils and history of drainage, to enhance people's understanding and enjoyment of the landscape.
- **SEO 4:** Protect the open and expansive character of the landscape, its cultural features and sense of remoteness, by ensuring that new development is sensitively located, accommodates green infrastructure, retains long views and makes a positive contribution to biodiversity.

### 6.3.5 Natural Areas

6.3.5.1 Natural Areas are a way of looking at the natural environment around us. Using specialist knowledge of wildlife and natural features, English Nature has identified over 140 areas, covering the land surface and coast of England, each of which can be characterised by its unique combination of wildlife, landform, land use and human history. The boundaries of these Natural Areas often vary from existing administrative boundaries and provide the framework for much of English Nature's work, and are key to achieving, enabling and promoting nature conservation in England. Natural Areas define local needs in light of national priorities, also providing a focus for Local Biodiversity Action Plans. The Application Site lies within Natural Area 22 – The Humberhead Levels.

#### 6.3.5.2 Natural Area 22 (as described by English Nature 1997)

6.3.5.2.1 This totally lowland Natural Area encompasses the open flat plain dominated by the major river systems of the Ouse and Trent which feed the western end of the Humber Estuary. Parts are now below sea-level, and are maintained as agricultural land by pumping. The Isle of Axholme, as the name suggests, stands uniquely out above the otherwise flat land. The Natural Area contains a patchwork of fields, some small, some large, bounded by dykes and occasionally by hedgerows. At the heart there is a peaty wilderness, internationally important for its nature conservation features, and renowned for its specialised plants and animals.

6.3.5.2.2 Doncaster, Selby and Goole are the main urban areas, the remainder of the Natural Area being sparsely populated with small towns, villages and isolated farmhouses. The cooling towers of the power stations provide a strong visual impact above the flat ground. of sand and gravel deposits are a focus for geological study and conservation.

6.3.5.2.3 The farmed landscape

6.3.5.2.3.1 Farming patterns develop according to the geology, shape of the land and climate. While climate and shape of the land is reasonably uniform, with the possible exception of the Isle of Axholme, the varying distribution of the Lake Humber clays and the alluvial deposits provide the loose division between grasslands and arable

fields. There is a broad north-south split in which grasslands and small hedge-lined fields are more common in the northern half. To the south, fields are larger, hedges few, and cash-crops are grown.

6.3.5.2.3.2 Unimproved grasslands, with their flowers and birds, and blossom covered hedgerows are now rare. It is arable farming which dominates, taking advantage of the fertile alluvial soils. These fields are now well drained as a result of extensive pumped drainage systems. The methods used to cultivate these fields offer little space or time for the survival of wildlife. What remains is largely confined to the drainage channels and ditches, providing water is present throughout the year and that the management is favourable.

6.3.5.2.4 The hedgerows

6.3.5.2.4.1 Hedgerows once formed a chequerboard pattern across the open landscape. Many of these have now been removed as they impede the progress of large machines and are expensive to maintain. However, they are still fairly common north of Doncaster on the Lake Humber clays, where the landscape is on a smaller scale and has a more enclosed feel. The hedges are generally of hawthorn, which provide a welcome fragrant display of creamy white flowers in springtime. This provides an important early nectar source for insects such as bees. A crop of red berries follows which supplement the diet of some birds in autumn and winter. They provide corridors along which little owls and barn owls hunt in search of voles and mice.

6.3.5.2.4.2 Those hedgerows that remain provide an important addition to the Natural Area, particularly as woodland is scarce. In prehistoric times, the Humberhead Levels would have been largely covered in trees before sea levels rose and the ground became waterlogged. Thereafter, woodland would have occurred as the carr component of fen, until the drainage of the seventeenth century. The economics of forestry do not compare well with those of arable farming on such a rich soil, and there are few plantations. Small patches of carr woodland do occur made up of scrubby grey willow, birch and alder and older patches of ash, field maple and oak. Alder woodland is quite rare nationally, making the few local examples of greater importance.

6.3.5.2.4.3 There has been a loss of hedgerows and hedgerow trees in the past due to agricultural economics. There have been grants available for hedgerow removal. Planting of new hedgerows may use inappropriate species. There is lack of survey information on hedgerows. Existing hedgerows are often not managed in a way that benefits wildlife, and there has been a loss of traditional skills such as hedge laying. Many have become neglected. Field margins and headlands are now being encouraged and aided by countryside stewardship.

6.3.5.2.5 General issues

6.3.5.2.5.1 This profile has described the nature conservation features of the Natural Area and why they are so special. The issues which are faced by particular habitats have also been listed. In addition, there are issues which effect the nature conservation value of the Natural Area as a whole. These are listed below.

- Adjacent land use may affect the nature conservation interest of particular features, in particular where raised mire and fen, which need high water tables, is surrounded by farmland which is actively drained. This may make it more difficult to maintain the requisite amount of water on site.

- There is a less than full appreciation of the importance of the habitats, wildlife and the preserved environmental record in the Natural Area amongst some decision-makers.
- There is a lack of an appropriate body to take responsibility for palaeoecological interests.
- There is a common consensus to plant trees which are not appropriate to the Natural Area.

#### 6.4 European Protected Species records

6.4.1 Badger *Meles meles* is recorded in the surrounding 10km grid square SE62 (source – NBN Gateway 2015).

6.4.2 Bats

- Currently, there is no pre-existing information on bats at the site.
- Data for the 10km grid square SE62 shows records of noctule *Nyctalus noctula*, Daubenton's bat *Myotis daubentonii*, brown long-eared bat *Plecotus auritus* soprano pipistrelle *Pipistrellus pygmaeus* and common pipistrelle *Pipistrellus pipistrellus* (source – NEYEDC and NBN Gateway 2015).

6.4.3 Great crested newt *Triturus cristatus* is recorded in the surrounding 10km grid square SE62, with locations noted within 2km of the Application Site (source – NBN Gateway 2015).

6.4.4 Water vole *Arvicola amphibius* is recorded in the surrounding 10km grid square SE62 (source – NEYEDC and NBN Gateway 2015).

6.4.5 Otter *Lutra lutra* is recorded in the surrounding 10km grid square SE62 (source – NEYEDC and NBN Gateway 2015).

6.4.6 Grass snake *Natrix natrix* is recorded in the surrounding 10km grid square SE62 (source – NBN Gateway 2015).

#### 6.4.7 UK Biodiversity Action Plan Species records

6.4.7.1 The following UK Biodiversity Action Plan species have been recorded within 2km of the Application Site:

- Kestrel *Falco tinnunculus*
- Grey partridge *Perdix perdix* (BAP Species)
- Quail *Coturnix coturnix*
- Lapwing *Vanellus vanellus* (BAP Species)
- Snipe *Gallinago gallinago*
- Common gull *Larus canus*
- Black-headed gull *Chroicocephalus ridibundus*
- Herring gull *Larus argentatus* (BAP Species)
- Stock dove *Columba oenas*
- Swift *Apus apus*
- Sand martin *Riparia riparia*
- Swallow *Hirundo rustica*
- House martin *Delichon urbicum*
- Meadow pipit *Anthus pratensis*

- Skylark *Alauda arvensis* (BAP Species)
- Yellow wagtail *Motacilla flava* (BAP Species)
- Dunnock *Prunella modularis* (BAP Species)
- Fieldfare *Turdus pilaris*
- Song thrush *Turdus philomelos* (BAP Species)
- Redwing *Turdus iliacus*
- Common whitethroat *Sylvia communis*
- Starling *Sturnus vulgaris* (BAP Species)
- House sparrow *Passer domesticus* (BAP Species)
- Tree sparrow *Passer montanus* (BAP Species)
- Linnet *Carduelis cannabina* (BAP Species)
- Yellowhammer *Emberiza citrinella* (BAP Species)
- Corn bunting *Emberiza calandra* (BAP Species)
- Reed bunting *Emberiza schoeniclus* (BAP Species)
- Hedgehog *Erinaceus europaeus* (BAP Species)
- Brown hare *Lepus europaeus* (BAP Species)
- Harvest mouse *Micromys minutus* (BAP Species)
- Common toad *Bufo bufo* (BAP Species)

#### 6.4.8 Phase 1 Field Survey Results

6.4.8.1 The following habitat types were recorded within the Application Site:

- Arable - J1.1
- Intact Species Poor Hedge - J2.1.2
- Improved grassland - B4

6.4.8.2 Arable

6.4.8.2.1 The Application Site is dominated by tilled agricultural land currently used for cereal crop production. This land is subject to ploughing (annually), sowing, rolling, fertilizer application (organic or inorganic) and treatment with fungicide, herbicide and/or insecticide. Agricultural management like this significantly reduces the overall value of the habitat to flora and fauna, as does the crop monoculture. The soil is evidently loamy and clay based but does not show any significant areas of standing water. No notable vegetation communities were noted within this habitat.

6.4.8.3 Intact Species Poor Hedge

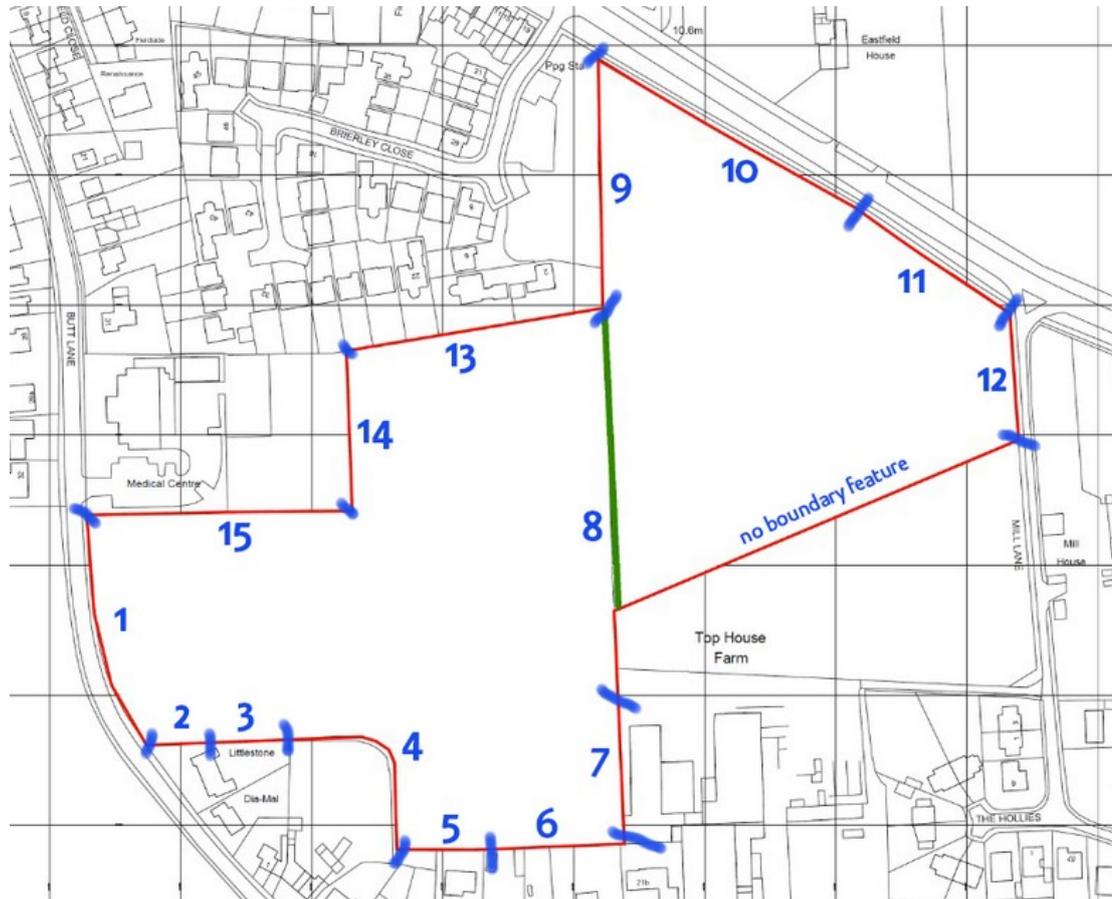
6.4.8.3.1 Although many of the hedgerows are well-structured and contain an abundance of berries for birds, in only two sections (4 and 9) do they arguably meet the criteria for recognition as a 'species-rich hedgerow' in the Biodiversity Action Plan (4+ woody species per 30m if in the north of England, not including bramble and ivy). However, this diversity is only achieved because of the inclusion of planted garden trees, the hedgerow also marking the boundaries of residential properties. It is assumed for the purposes of this survey that garden trees, even if natives, are not part of the definition of a species-rich hedgerow.

6.4.8.3.2 All hedgerows have a narrow strip of vegetation at their base, although all contain common grasses and weeds of highly fertile soil, or scramblers such as bramble *Rubus fruticosus* agg. No protected plant species was found although mistletoe in the

perimeter hedge (section 4) was of interest. Each section of hedge/boundary is detailed individually (see map).

Section	Notes
1	Roadside, no hedge. Mesotrophic grass verge ( <i>Dactylis</i> , <i>Poa</i> , <i>Arrhenatherum</i> , <i>Elytrigia</i> dominant with much dandelion <i>Taxacarium officinale</i> etc.)
2	Clipped <i>Leylandii</i> hedge
3	Garden fence, strip of vegetation comprising weeds of fertile ground
4	Hedgerow 5m tall x 2m wide. Well-structured and apparently unmanaged, with no gaps. Hawthorn <i>Crataegus monogyna</i> , elder <i>Sambucus nigra</i> , wild cherry (garden plant) <i>Prunus avium</i> , plum <i>Prunus domestica</i> (garden plant), with mistletoe <i>Viscum album</i> , bramble <i>Rubus fruticosus</i> , mature ivy <i>Hedera helix</i> .
5	Hedge 3-5m tall (variable) x 1.5m wide, well-structured and apparently unmanaged. Hawthorn, holly <i>Ilex aquifolium</i> , damson <i>Prunus domestica</i> ssp <i>insititia</i> (garden plant) bramble.
6	Garden fences/walls with a 2m skirt of ruderal weed species.
7	Hedge 6m tall x 3m wide. Well-structured and apparently unmanaged, with no gaps. hawthorn, holly, elder, bramble, ivy. A dead elder contains a hole which may be used by birds (e.g. tits) for breeding.
8	Hedge 2-3m tall x 2m wide, dense, unbroken except for one gap for vehicle access. Hawthorn elder, ash <i>Fraxinus excelsior</i> , bramble, mature ivy, white bryony <i>Bryonia dioica</i> . Telegraph poles and overhead wires along the line of the hedge.
9	Hedge 3-6m tall (variable) x 3m wide. Well-structured, no gaps. Hawthorn, elder, bramble, holly, white bryony, dog rose <i>Rosa canina</i> . Trees (some of garden origin): silver birch <i>Betula pendula</i> , grey willow <i>Salix cinerea</i> , wild cherry, field maple <i>Acer campestre</i> , sycamore <i>Acer pseudoplatanus</i> . A sycamore within the hedge did not appear to contain any significant holes or hollows.
10	Hedge 2m tall x 1.5m wide. A roadside hedge, neatly shaped, with no gaps. Hawthorn, elder, mature ivy, bramble, dog rose. Trees – a single immature sycamore.
11	Hedge 3m tall x 1.5m wide. A roadside hedge, neatly shaped, with no gaps. Predominantly wild plum. Mature ashes in corner of field (apparently three but possibly from the same original stool), containing no significant visible holes or hollows.
12	Hedge 2-4m tall (variable) x 1.5m wide. Dense and well-structured, with no gaps. hawthorn, elder, bramble, dog rose, ivy.
13	Backs of gardens – very variable, fences/hedges c2m tall, occasional trees. All vegetation must be considered garden origin, although bramble, ash, grey willow, field maple, Sweetbriar <i>Rosa rubiginosa</i> may be exceptions. Also: apple <i>Malus domestica</i> , laurel <i>Prunus laurocerasus</i> , tree mallow <i>Lavatera arborea</i> , damson, spruce <i>Picea abies</i> , holly, beech <i>Fagus sylvatica</i> (hedge), wild cherry, guelder rose <i>Viburnum opulus</i> , silver birch.
14	No hedge. Grass border of varying width. <i>Arrhenatherum</i> / <i>Elytrigia</i> -dominated; creeping thistle <i>Cirsium arvense</i> .

Figure 3 - Showing sections of hedgerow relating to the above table



#### 6.4.8.4 Improved grassland

- 6.4.8.4.1 The two sections of boundary adjacent to the Medical Centre (hedge sections 14 and 15 above) comprise very rank, unmanaged mesotrophic grassland which also extends off-site. This vegetation lends itself to MG1 of the National Vegetation Classification. This is the standard grassland type of fertile waysides in lowland England and has a low conservation priority despite providing habitat for small mammals such as mice, voles and shrews. False-oat grass *Arrhenatherum elatius* is the dominant grass species with much couch *Elytrigia repens*. There are occasional herbs tolerant of competition, such as creeping thistle *Cirsium arvense*.
- 6.4.8.4.2 The east-west section is very slightly more species-rich with red fescue *Festuca rubra* and wild oat *Avena fatua*, but is still a rank mesotrophic grassland with a low conservation priority.
- 6.4.8.4.3 The roadside verge (section 1 above) appears to be periodically mown, although was uncut at the time of survey. Although relatively rich in grass species including smooth meadow grass *Poa pratensis*, annual meadow grass *Poa annua*, false oat *Arrhenatherum elatius*, cocksfoot *Dactylis glomerata*, ryegrass *Lolium perenne* and couch, this grassland is considered to be improved, with a low conservation priority. The herb flora has a strong 'weedy' or ruderal element, with abundant dandelion *Taraxacum officinale* agg. and prickly sow thistle *Sonchus asper*.

- 6.4.9 The following species were recorded during the field survey:
- Blackbird *Turdus merula*
  - Robin *Erithacus rubecula*
  - Wren *Troglodytes troglodytes*
  - Woodpigeon *Columba palumbus*
  - Dunnock *Prunella modularis*
  - Magpie *Pica pica*
  - Rook *Corvus frugilegus*
  - Banded snail *Cepaea nemoralis*
- 6.4.10 The surrounding habitat is potentially important and the development area may impact upon mobile species. Consequently, the extended phase 1 assessment targeted the following species relevant to the Application Site and proposed development:
- Bats
  - Great crested newt
  - Badger
  - Reptiles
  - Birds
  - Hedgehog
- 6.5 Bats**
- 6.5.1 The bat survey involved an initial walkover of the Application Site to assess the overall habitat quality for bats. This included the identification of key potential foraging habitat and potential flight corridors. This survey also targeted any potential or actual roost sites and evidence of actual bat use i.e. droppings, feeding signs.
- 6.5.2 Trees were assessed for features associated with arboreal bat species, in this region predominantly Daubenton's bat, Natterer's bat, noctule, common pipistrelle, soprano pipistrelle and brown long-eared. Such features typically consist of:
- Woodpecker holes
  - Trunk and bough splits
  - Tear outs
  - Flush cuts
  - Frost damage
  - Wounds
  - Cankers
  - Dense ivy growth
  - Areas of but rot
  - Dry knot holes
  - Impact shatters
  - Dense epicormic growth.
- 6.5.4 Conclusions
- 6.5.4.1 No potential roost sites exist within the Application Site, predominantly due to an

absence of buildings and the lack of suitable features within the trees. The wider area supports a number of woodland habitats, mature gardens and grasslands which offer alternate foraging and commuting habitat for bats. The site is exposed and heavily farmed, consequently, the Application Site is sub optimum for foraging and commuting bats and is not considered integral to the favourable population status of local bat populations.

6.5.5 **Wold Ecology does not recommend any further surveys for bats.**

**6.6 Great crested newt.**

6.6.1 No records of great crested newt occur within 2km of the Application Site. The desktop study failed to identify any known locations for great crested newt populations.

6.6.2 The entire Application Site was assessed for its potential to support great crested newts, whilst conducting a walkover survey. In addition aerial photographs, maps and physical searches of the surrounding landscape gave an impression of how the Application Site is connected to wider sites and potentially great crested newt populations.

6.6.3 Refuge search.

6.6.3.1 Amphibians can take refuge under logs, bark and stones whilst in terrestrial habitat. All available features within the Application Site were turned over to search for the presence of amphibians. This method is not an effective method of presence/absence; however, it can be used as a general indication of amphibians within an area. Despite the time of year amphibians are occasionally found outside of hibernacula in such situations, especially during mild damp weather such as that prior and during the field survey.

6.6.4 Results.

6.6.4.1 No ponds or permanent water bodies suitable for breeding great crested newts were observed within the Application Site. The wider habitat is largely well drained and dominated by arable land with housing.

6.6.4.2 A single farm pond is located 230m south of the Application Site, the pond is c30m long by 15m wide at the widest point. It was dry at the time of survey (13 September 2015) and the whole area of the pond was overtaken by Bulrush *Typha latifolia*; this suggests that the pond is dry throughout much of the year and is in the early stages of succession. Consequently, the pond has reduced value for amphibians.

6.6.4.3 No known great crested newt populations were recorded within 2km of the Application Site. The surrounding arable landscape significantly hampers great crested newt dispersal into the area, without the aid of humans. Great crested newts tend not to occur within areas of arable land unless it is directly adjoined to a breeding pond, unlike in the Application Site. Arable land is open, well drained with limited refugia leading to a significant risk of predation. The use of pesticides, lack of vegetation diversity and lack of refuge leads to poor invertebrate habitat and therefore poor foraging habitat.

6.6.4.4 The hedges and grassy margins offer the only suitable terrestrial habitat on site,

however given the poor connectivity to the wider area and lack of nearby records it is unlikely the great crested newts will be found within the boundaries of the Application Site. Without suitable aquatic habitats nearby there is little reason to travel away from viable habitats into the Application Site.

6.6.4.5 Whilst it is not always possible to demonstrate site absence from a single scoping survey, with the evidence collected from a habitat survey, the likelihood of the presence of great crested newts in the Application Site is decreased. Key attributes to the reduced probability of great crested newts being present are:

- There is no current knowledge of great crested newts within the Application Site.
- No ponds exist within the Application Site and no suitable breeding ponds were observed within the surrounding area (<500m).
- The Application Site primarily comprises arable land which inhibits dispersal by reducing areas of shelter, foraging grounds and leaving amphibians open to predation and desiccation. Consequently, Application Site is poor quality terrestrial habitat for amphibians.
- The open exposed nature of the site with its limited plant diversity and improved grass with limited refugia results in a poor invertebrate habitat. Great crested newts predominantly prey on slugs, insects, spiders and earthworms. They tend to forage in woodland, scrub, rough grassland and wetland areas largely due to the large diversity and abundance of invertebrates which these areas attract.
- Currently, the Application Site consists of very limited suitable terrestrial great crested newt habitat, with limited refugia and hibernacula and contains no suitable aquatic habitat for breeding. This is essentially an "island" within a wider area of sub-urban housing and hard standing dominated by sub-optimum habitat
- Great crested newts favour overwintering sites adjacent to or within tree cover. This offers more shelter through the winter and limits the severity of frost. The lack of tree cover and refugia reduce the likelihood of this species using the site to hibernate as well as the lack of a close breeding pond.
- The hedgerows are fragmented and have no potential refugia or hibernacula.
- Great crested newts require areas of refuge such as cracks and crevices in the ground, old small mammal burrows, gaps beneath tree stumps and the bases of tussocks to shelter under during the day. The open well maintained nature of the site currently lacks these features, making it less suitable for the species.
- No records of great crested newt exist within 2km of the Application Site.

6.6.4.6 **In conclusion, Wold Ecology does not recommend any further great crested newt survey work.**

## 6.7 Reptiles

6.7.1 The desktop study identified grass snakes as the only reptile species which is found within the wider area. Grass snakes are moderately localised in East Yorkshire.

### 6.7.2 Results

6.7.2.1 No direct observations or field signs of reptiles was recorded on site. It is unlikely to observe reptiles on phase 1 surveys without appropriate survey methodology, especially where populations are small or sparse. A full walkover was undertaken to assess the sites potential to support reptiles.

6.7.3 The Application Site is considered to be unsuitable for reptiles for the following reasons: -

- Reptiles thermoregulate in sheltered locations, predominantly in close proximity to cover such as rank or shrubby vegetation, large rocks, walls and tree stumps in which they can quickly escape. The Application Site primarily consists of open exposed habitat, with limited and largely insufficient thicker marginal vegetation, making reptiles prone to predation.
- Compost heaps, rotten logs and decaying vegetation provide important breeding, foraging and thermoregulation habitat for slow worm and grass snake. None of which are present in sufficient quantity within the Application Site.
- Reptiles use cracks, crevices and small mammal burrows to access underground refugia and hibernacula. These habitat features are limited within the Application Site, reducing the value to reptiles.
- The lack of the above features, with a sufficient depth to remain frost free reduces the potential for reptiles to hibernate within the Application Site.
- Reptiles are typically not very wide ranging species, instead staying in optimum habitat. Such optimum habitat does not occur within or around the Application Site reducing the likelihood of animals passing through the site.
- This past management is likely to have resulted in the site being sub-optimum for a long time period, reducing the likelihood of viable populations persisting.
- The open nature of the Application Site leaves reptiles open to predation from key predators including crows, kestrels, hedgehogs, domestic cats and foxes.
- The site is small, surrounded by disturbed land and fragmented from optimum reptile habitat in the wider area.
- The poor value of the site to amphibians (grass snakes chief food source) further limit the sites importance to grass snakes.

6.7.4 **Wold Ecology does not recommend any further reptile surveys.**

## 6.8 Birds

6.8.1 All bird species recorded by either sight, song or call were noted, in addition particular attention was given to key species of conservation concern and which habitat within the Application Site they were recorded using. All active (and disused) nests, territorial, breeding and foraging birds were recorded in further detail to analyse how breeding birds use the Application Site. In winter foraging birds, roosting birds and large aggregations of birds using a specific habitat are noted. In addition the habitat is assessed for its value to specific species, so that the likelihood of breeding can be analysed.

6.8.2 The following survey followed guidance and methods recommended within *Bird Monitoring Methods, a manual of techniques for key UK species* Gilbert et.al RSPB 1998, *Common Standards Monitoring Guidance for Birds* JNCC 2004 and *Survey Techniques Leaflet 8*.

### 6.8.3 Schedule 1 Listed Birds

6.8.3.1 Wold Ecology assessed the site for the following schedule 1 listed species recorded in Yorkshire, which have the potential to breed within the Application Site and/or surrounding adjacent local area, or breed elsewhere whilst using the Application Site to forage or roost:

Species recorded within 2km	Suitability of Application Site for breeding
Barn Owl <i>Tyto alba</i>	No cavities for nesting present, limited foraging habitat. Unlikely to be significant to local breeding birds.
Common Quail <i>Coturnix coturnix</i>	Scarce breeder - Unlikely to use the habitats currently found within the Application Site. Preference for denser vegetation i.e. clover leys.

**6.8.3.2 The Application Site is of low value to schedule 1 listed species. This is primarily due to the intensively managed/disturbed nature of the application site, lack of suitable or extensive habitats in the locality and adjacent trees with no features to support nesting Schedule 1 listed species.**

6.8.4 Breeding Birds (Non-Schedule 1)

6.8.4.1 Impacts related to breeding birds are essentially related to the temporary loss of habitat which is utilised by breeding species. Related to this is the risk that birds could be nesting within impacted habitats at the time that construction work is programmed to start. Of particular relevance to this project are small passerine species, particularly those associated with the hedgerows.

6.8.4.2 Wintering Birds

6.8.4.2.1 The Application Site is not considered to be valuable to wintering birds like wildfowl and waders. The Application Site is not in close proximity to suitable aquatic habitats. The only impact typically of any relevance to wintering birds are those associated with the temporary loss of food sources. This is principally associated with the loss of sections of hedgerow and scrub which provide a potential source of food to a range of wintering species. However, these habitats

are abundant within the wider area and are not thought to be of significant importance to birds.

6.8.5 **Wold Ecology does not recommend any further bird surveys.**

## 6.9 **Badgers**

6.9.1 All features of potential value to badgers are surveyed; including areas of woodland (including plantation), small copses, hedgerows, embankments and rock outcrops. Well-worn animal paths and footpaths were inspected for badger footprints and links to setts.

6.9.2 The surveyor observations included any areas where there were noticeable changes in the topography providing sloping ground into which the badgers could excavate setts. The following field signs will indicate the presence of badgers.

- Badger setts and associated soil excavation
- Badger latrines and dung pits
- Badger prints
- Badger hairs
- Badger paths
- Evidence of badger foraging activity

6.9.3 Results.

6.9.3.1 No main setts, annexe setts, subsidiary setts or outlier setts were located within 50 metres of the development area boundaries or within the Application Site. Badgers have a preference for excavating setts on well drained calcareous grits and upper chalks rather than middle chalks and clays, although exceptions to this rule occur where no similar geology is present. Badgers often show a preference to sett excavation in woodland and scrub. Tree cover in the Application Site is limited to widely spaced hedgerow trees. Suitable habitat outside of the Application Site was also extensively searched.

6.9.3.2 A key consideration in relation to badgers is with respect to the temporary severance of regularly used paths and associated habitat and the possible disturbance or, in a worst-case scenario, damage to a badger sett. In relation to setts, the level of significance would be greatest in relation to impacts to large and permanently occupied setts. Since the Application Site currently has no evidence of any badger setts, it is only the risk of severance of well used dispersal routes which is likely to have an impact. None of which were observed within the Application Site.

6.9.3.3 **No further surveys or mitigation are required for badgers.**

## 6.10 Hedgehog

### 6.10.1 Legislation

6.10.1.1 Although the Hedgehog *Erinaceus europaeus* only receives partial protection under the Wildlife and Countryside Act 1981 (as amended), its numbers have declined dramatically over the past two decades, resulting in the suggested proposal of upgrade to a higher level of protected status. The British population has declined by 25% over the past 10 years. The reasons for the decline are thought to be complex but include the loss of hedgerows and permanent grasslands as well as agricultural intensification.

### 6.10.2 Survey Methodology

6.10.2.1 All features of potential value to hedgehogs are surveyed; including areas of thick vegetation, outbuildings, lawns, grassland, scrub, woodland and hedge bases. Evidence of breeding nests, hibernation nests and loafing nests were searched for in areas of suitable cover.

6.10.2.2 Well-worn animal paths, pool edges and footpaths were inspected for hedgehog footprints. Open areas were inspected for hedgehog droppings, particularly amenity grassland. Additionally, the surrounding road system was surveyed for road casualties.

6.10.2.3 The following field signs will indicate the presence of hedgehogs.

- Nests within dense vegetation, or under sheds/outbuildings
- Hedgehog droppings
- Hedgehog prints
- Road casualties.

### 6.10.3 Results.

6.10.3.1 No active or unused hedgehog nests were found within the hedge base within the Application Site. Most of the Application Site is too open to support nesting behaviour, although the hedgerow bases offers suitable habitat.

6.10.3.2 **No evidence of hedgehogs was recorded, consideration to hedgehogs should be given during site clearance and during construction.**

## **7.0 EVALUATION OF SURVEY RESULTS.**

### **7.1 Overall Approach to Assessment.**

7.1.1 The overall approach to assessment followed in this report can be summarised as: A baseline identification of the nature conservation interest within the ecological Application Site by establishing levels of interest for ecological features measured against definable criteria. The term Valued Ecological Receptor (VER) is used to describe the species, communities, habitats or sites selected for detailed study during the process of the ecological assessment.

### **7.2 Evaluation Criteria.**

7.2.1 The thorough evaluation of the ecological importance of a site is essential in order to assess the significance of the ecological assessment

7.2.2 The evaluation criteria are given in detail in Appendix 6. Their aim is to consider the habitats, communities and species present on site in relation to the following:

- The legislative framework (e.g. the Wildlife and Countryside Act 1981, Habitats and Species Regulations 2010 and the EC Directive on the Conservation of Habitats and Wild Fauna and Flora (92/43/EEC) for the presence of protected species and habitats).
- Nature conservation designations, including national site designations (Sites of Special Scientific Interest, National Nature Reserves etc), local designations (Sites of Importance for Nature Conservation, Local Nature Reserves, County Wildlife Sites etc).
- Accepted criteria for species rarity and declining populations, and rarity of habitat types or communities, including species and habitats identified in the British Red Data Books, national biodiversity action plan, and species and habitats identified in regional or local biodiversity action plans where available.
- Accepted criteria for overall site evaluation (including rarity, diversity, naturalness, historical factors and issues relating to landscape ecology).

### **7.3 Evaluation of Survey Results.**

7.3.1 The field survey work did not identify the presence of any habitats or plant species considered rare in the United Kingdom.

Rarity is defined in this report as:

Rare—species not recorded in more than 100, 10 x 10 km grid-squares in the British Isles.

Very Rare—species not found in more than 15 different 10 x 10 km grid-squares in the British Isles.

## 7.4 Habitats

### 7.4.1 Biodiversity Action Plans (BAP) and Species and Habitats of Principal Importance for the Conservation of Biological Diversity

7.4.1.1 In 1995, 'Biodiversity: The UK Steering Group Report' was published, which aimed to conserve and enhance biological diversity within the UK, including action plans for 38 key habitats and for 402 of our most threatened species. These plans describe the status of each habitat and species, outline the threats they face, set targets and objectives for their management, and propose actions necessary to achieve recovery. The Biodiversity Action Plans (BAP) have recently been updated, new ones added and others removed, so there are now 1,149 species and 65 habitats that have been listed as priorities for conservation action. A list of these UK BAP species and habitats can be found at <http://www.ukbap.org.uk/NewPriorityList.aspx>.

7.4.1.2 In addition there are approximately 150 Local Biodiversity Action Plans (LBAP), normally at county level. These plans usually include actions to address the needs of the UK priority habitats and species in the local area, together with a range of other plans for habitats and species that are of local importance or interest.

7.4.1.3 The following BAP Habitats are recorded on site.

UK BAP broad habitat.	UK BAP priority habitat.	Habitat present within the Application Site.
Rivers and Streams	Rivers	N
Standing Open Waters and Canals	Oligotrophic and Dystrophic Lakes	N
	Ponds	N
	Mesotrophic Lakes	N
	Eutrophic Standing Waters	N
	Aquifer Fed Naturally Fluctuating Water Bodies	N
Arable and Horticultural	Arable Field Margins	N
Boundary and Linear Features	Hedgerows	Y
Broadleaved, Mixed and Yew Woodland	Traditional Orchards	N
	Wood-Pasture and Parkland	N
	Upland Oakwood	N
	Lowland Beech and Yew Woodland	N
	Upland Mixed Ashwoods	N
	Wet Woodland	N
	Lowland Mixed Deciduous Woodland	N
	Upland Birchwoods	N
Coniferous Woodland	Native Pine Woodlands	N
Acid Grassland	Lowland Dry Acid Grassland	N
Calcareous Grassland	Lowland Calcareous Grassland	N
	Upland Calcareous Grassland	N
Neutral Grassland	Lowland Meadows	N
	Upland Hay Meadows	N
Improved Grassland	Coastal and Floodplain Grazing Marsh	N
Dwarf Shrub Heath	Lowland Heathland	N
	Upland Heathland	N
Fen, Marsh and Swamp	Upland Flushes, Fens and Swamps	N

	Purple Moor Grass and Rush Pastures	N
	Lowland Fens	N
	Reedbeds	N
Bogs	Lowland Raised Bog	N
	Blanket Bog	N
Montane Habitats	Mountain Heaths and Willow Scrub	N
Inland Rock	Inland Rock Outcrop and Scree Habitats	N
	Calaminarian Grasslands	N
	Open Mosaic Habitats on Previously Developed Land	N
	Limestone Pavements	N
Supralittoral Rock	Maritime Cliff and Slopes	N
Supralittoral Sediment	Coastal Vegetated Shingle	N
	Machair	N
	Coastal Sand Dunes	N
<b>Marine Habitats</b>		<b>N</b>

## 7.4.2 Hedgerows

### 7.4.2.1 Description

7.4.2.1.1 A hedgerow is defined as any boundary line of trees or shrubs over 20m long and less than 5m wide, and where any gaps between the trees or shrub species are less than 20m wide (Bickmore, 2002). Any bank, wall, ditch or tree within 2m of the centre of the hedgerow is considered to be part of the hedgerow habitat, as is the herbaceous vegetation within 2m of the centre of the hedgerow. All hedgerows consisting predominantly (i.e. 80% or more cover) of at least one woody UK native species are covered by this priority habitat, where each UK country can define the list of woody species native to their respective country. Climbers such as honeysuckle and bramble are recognised as integral to many hedgerows, however they require other woody plants to be present to form a distinct woody boundary feature, as such they are not included in the definition of woody species. The definition is limited to boundary lines of trees or shrubs, and excludes banks or walls without woody shrubs on top of them.

7.4.2.1.2 Based on an analysis of Countryside Survey data, using the threshold of at least 80% cover of any UK native woody species, it is estimated that 84% of countryside hedgerows in GB would be included. Hedgerows are a primary habitat for at least 47 species of conservation concern in the UK, including 13 that are globally threatened or rapidly declining, more than for most other key habitats. They are especially important for butterflies and moths, farmland birds, bats and dormice (where locally present).

7.4.2.1.3 Since 1945 there has been a continual decline in both the quantity and quality of the UK's native hedgerows either through removal or poor management practices. The Environment Act 1995 introduced an enabling power to protect important hedgerows in Britain. Land managers are required to consult local authorities before hedgerows can be removed. Article 10 of the EC Habitats Directive requires member states to encourage the management of linear features such as hedgerows in their planning and development policies and, in particular, with a view to improving the ecological coherence of the Natura 2000 network. This is supported by the Habitats and Species Regulations 2010, which recognises the importance of

these features for the migration, dispersal and genetic exchange of wild species. NPPF further encourages the development of policies for the management of hedgerows.

- 7.4.2.1.4 UKBAP targets for hedgerows are:
- Maintain the net extent of hedgerows across the UK
  - Maintain the overall number of individual, isolated hedgerow trees and the net number of isolated veteran trees;
  - Ensure that hedgerows remain, on average, at least as rich in native woody species
  - Achieve favourable condition of 348,000 km (50%) by 2015
  - Reverse the unfavourable condition of over-managed hedgerows across the UK by reducing the proportion of land managers who trim most of their hedges annually
  - Halt further decline in the condition of herbaceous hedgerow flora in Great Britain by 2010 (and improve their condition by 2015)
  - Improve the condition of the hedgerow tree population by increasing numbers of young trees (1-4 years) in Great Britain to 80,000 by 2015 and
  - Achieve a net increase in the length of hedgerows of an average of 800 km per year in Great Britain to 2015.
- 7.4.2.1.5 If applicable, hedges should be removed outside of the bird nesting season (i.e. clearance should be undertaken between September and February inclusive) or be carefully checked by an ecologist to confirm no active nests are present - prior to removal during the summer period. If nesting birds are found during the watching brief, works will need to stop until the young have fledged. **Permission should be granted from the planning authority prior to removing a hedge unless planning permission is granted.**
- 7.4.2.1.6 During the construction period, it is important that a root protection exclusion zone is in place adjacent to any hedgerow to be retained. This must be at least 5m from the centre of the hedge and must be kept free of plant and storage of building supplies.
- 7.4.2.1.7 Hedge cutting should occur outside of the bird nesting season (i.e. clearance should be undertaken between September and February inclusive) or be carefully checked by an ecologist to confirm no active nests are present - prior to removal during the summer period. Cutting the hedge in late January/early February will provide maximum quantities of food for birds over winter.

## 7.5 Species

### 7.5.1 Bats

#### 7.5.1.1 Lighting

7.5.1.3.1 Lighting has a detrimental effect on bat activity; many bats will actually avoid areas that are well lit. Lighting can cause habitat fragmentation by preventing bats from commuting between roosts and foraging grounds (A.J Mitchell-Jones 2004).

The principles are:

- Reduce or remove the UV component of light emitted. To achieve this, a lamp that does not emit UV or a filtration product is recommended
- External lighting requirements will be carefully designed to avoid light spillage affecting foraging bats and bat box entrances. Thus creating a dark and green infrastructure and can be achieved by using hoods, cowls, shields and louvers. Planting or manmade barriers can also protect against light spillage.
- Security lighting will be on a short timer and motion sensitive to large objects only.
- Use of timers to reduce the hours lit and tailors this specifically to wildlife affected.
- Lights will not be mounted where they will shine directly on to the surrounding habitat used by foraging bats i.e. nearby scrub/hedgerows.

#### 7.5.1.4 Habitat enhancements

7.5.1.4.1 Freshwater, woodland, grassland, urban gardens, trees and amenity green space are suitable foraging habitats for bats whilst linear habitats such as hedgerows and streams are particularly important commuting routes between roosts and foraging ground. It is recommended that the natural landscape remains largely unchanged and as many mature trees are retained on the site to continue to provide cover and feeding grounds. Landscaped areas can provide good foraging grounds for bats. Areas can be improved by growing night-scented flowers and other flowers favoured by insects. More information on suitable planting to encourage bats obtained from The Bat Conservation Trust ([www.bats.org](http://www.bats.org)). Suitable species include:

- Foxglove *Digitalis purpurea*
- Cowslip *Primula veris*
- Red campion *Silene dioica*
- Marjoram *Origanum vulgare*
- Ox-eye daisy *Leucanthemum vulgare*
- Red clover *Trifolium pratense*
- Evening primrose *Oenothera biennis*.
- Honeysuckle *Lonicera perichlymenum*.
- Wild Clematis *Clematis virginiana*

## 7.5.2 Birds

7.5.2.1 It is concluded that the study site is a good habitat for agricultural bird species with various designations. There is nesting potential for a range of bird families such as finches, tits, sparrows, thrushes, chats and raptors at the site. Several simple management prescriptions can improve the site for breeding bird species.

7.5.2.2 Any hedgerows to be removed should be cleared outside of the bird nesting season (i.e. clearance should be undertaken between September and February inclusive) or be carefully checked by an ecologist to confirm no active nests are present - prior to removal during the summer period. If nesting birds are found during the watching brief, works will need to stop until the young have fledged. Since a number of nests are active, work will need to wait until fledging has occurred, then trees should be removed immediately to avoid other nests being created.

7.5.2.3 In order to increase nesting opportunities for birds, it is recommended that 4 Schwegler bird boxes are erected throughout the site. A summary of recommended bird boxes are listed below:

Name	Description	Number
Schwegler Nest Box 1B	Entrance hole 32 mm.	2
Schwegler Nest Box 1B	Entrance hole 26 mm.	2

7.5.2.4 Boxes should be placed so that the entrance does not face the prevailing wind, rain and strong sunlight. The sector from north to south east should be used, with south facing boxes positioned in more shaded areas. Boxes should be positioned facing east on the new buildings. Boxes should also be angled downwards to stop rain blowing into them.

7.5.2.5 Many species will use boxes at a wide variety of heights however to give the box protection in areas with a lot of human or mammalian predator activity they should be placed approximately 3-4 metres above ground level. A clear flight path should be available to and from the nest box.

7.5.2.6 Boxes should be placed at a density of approximately 10 per hectare within woodland like that on the site. This will help ensure that competition is not too great for more timid species such as marsh tits and coal tits. Metal plates should be fitted to the front of the boxes to stop grey squirrels and brown rats enlarging the entrance holes and predated the nestlings and eggs.

## 7.5.3 Hedgehogs

7.5.3.1 Care must be taken whilst carrying out vegetation clearance, or strimming. A thorough check of the vegetation prior to removal will help ensure that no hedgehogs are injured or killed during development works. Sleeping hedgehogs frequently suffer severe injuries from strimmers.

7.5.3.2 Avoid setting fire to piles of vegetation unless they have been turned, checked or moved immediately prior to burning. Hedgehogs often get killed or injured in fires during vegetation removal and during early November.

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9.0

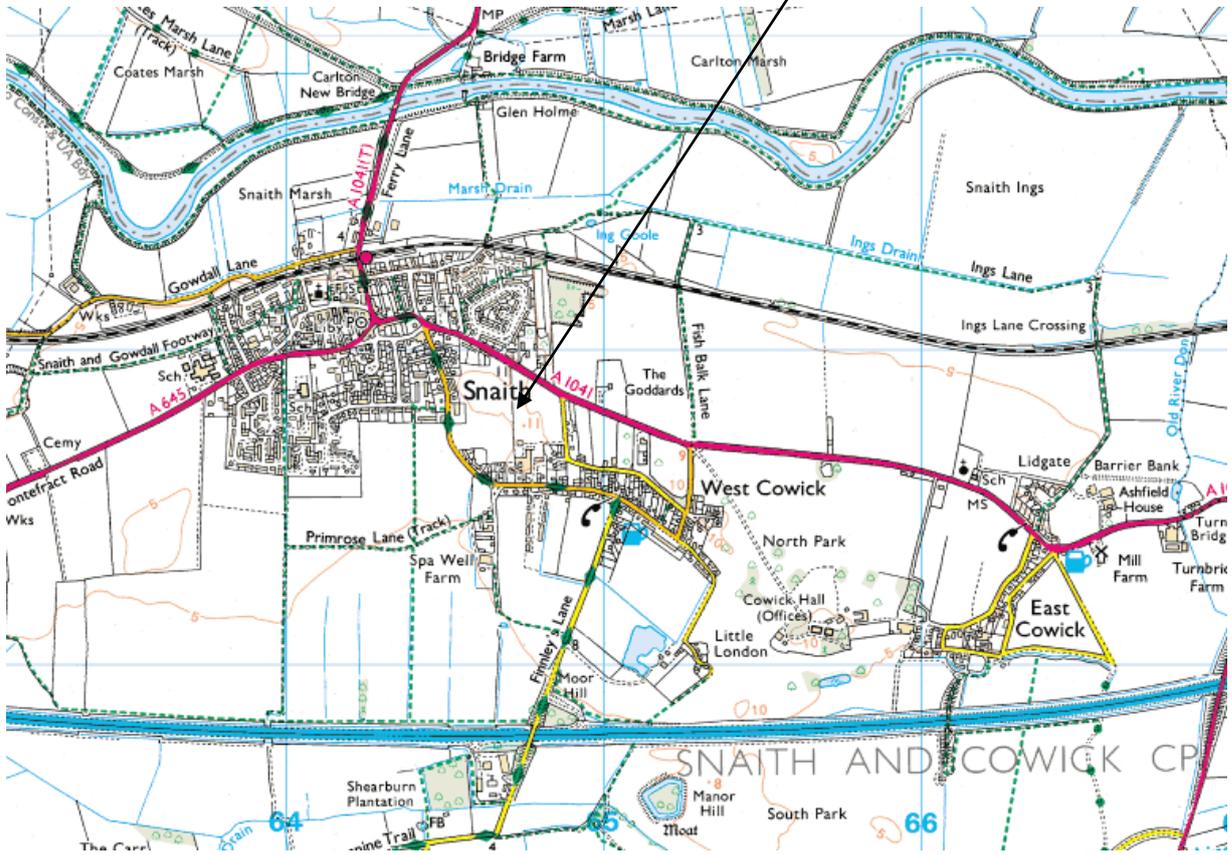
APPENDICES

9.1

Appendix 1 – Location map

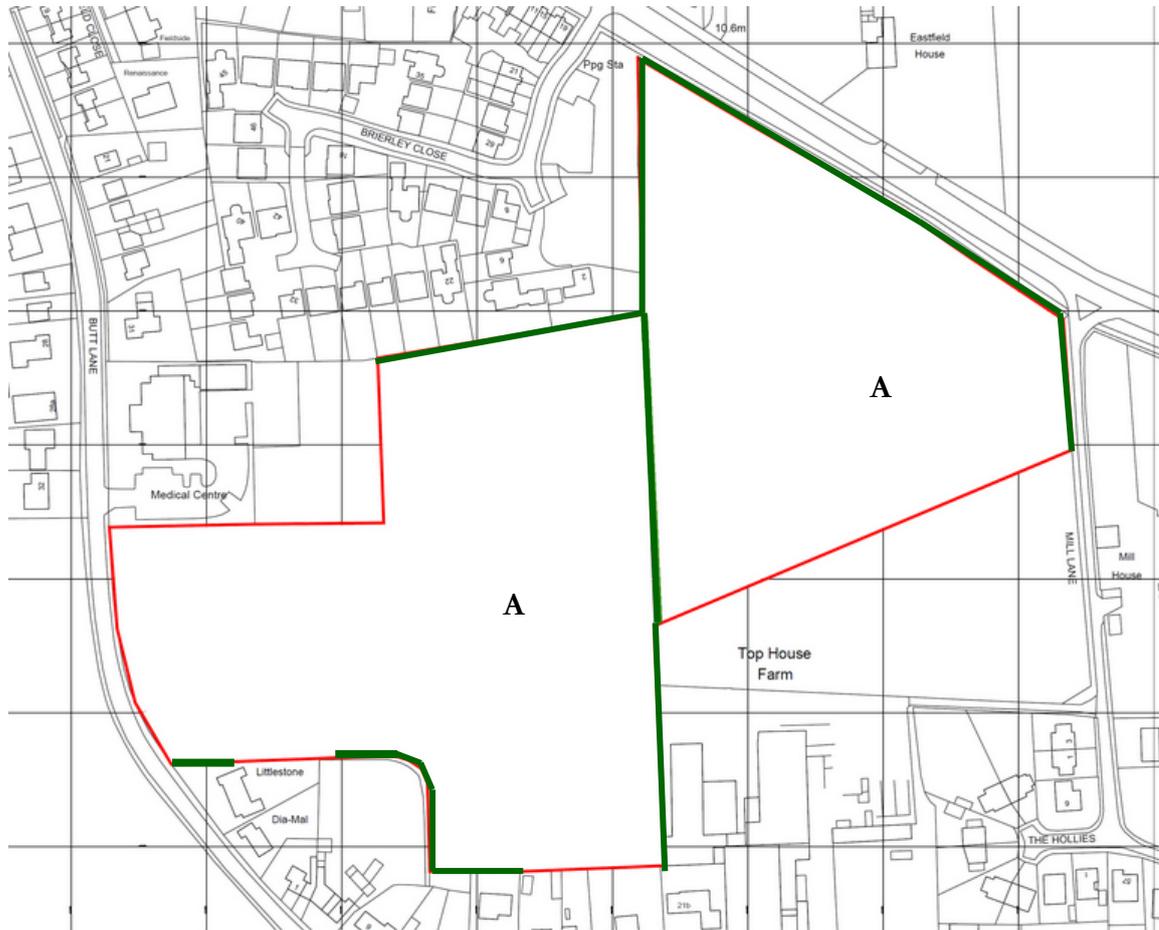


Application Site



9.2 Appendix 2 - Phase 1 Map

Not to scale. N↑



**KEY.**

- A Arable.
- Hedgerow.
- Site boundary.

**NB – Improved grassland margins are too small to map.**

### 9.3 Appendix 3 – Summary of desktop study

<b>Organisation.</b>	<b>Response Summary.</b>	<b>Date.</b>
Natural England.	Local designations.	September 2015
Natural England.	UKBAP species and habitats within 2 km of the Application Site.	September 2015
North and East Yorkshire Ecological Data Centre.	Species lists within 2 km of the Application Site.	September 2015
National Biodiversity Network.	Species lists within 2 km of the Application Site.	September 2015
East Riding of Yorkshire Council.	Species lists within 2 km of the Application Site.	September 2015
Selby District Council.	Species lists within 2 km of the Application Site.	September 2015

### 9.4 Botanical list

<b>SCIENTIFIC NAME</b>	<b>COMMON NAME</b>
<b>TREES AND SHRUBS</b>	
<i>Acer campestre</i>	Field Maple
<i>Acer pseudoplatanus</i>	Sycamore
<i>Betula pendula</i>	Silver Birch
<i>Crataegus monogyna</i>	Hawthorn
<i>Fagus sylvatica</i>	Beech
<i>Fraxinus excelsior</i>	Ash
<i>Hedera helix</i>	Ivy
<i>Ilex aquifolium</i>	Holly
<i>Cupressocyparis leylandii</i>	Leylandii
<i>Lavatera</i> sp.	Tree Mallow
<i>Malus domestica</i>	Apple
<i>Picea</i> sp.	Spruce
<i>Prunus avium</i>	Wild Cherry
<i>Prunus domestica</i>	Wild Plum
<i>Prunus domestica</i> ssp <i>insititia</i>	Damson
<i>Prunus laurocerasus</i>	Laurel
<i>Rosa canina</i>	Dog Rose
<i>Rosa rubiginosa</i>	Sweetbriar
<i>Rubus fruticosus</i> agg.	Bramble
<i>Salix cinerea</i>	Grey Willow
<i>Sambucus nigra</i>	Elder

<i>Viburnum opulus</i>	Guelder Rose
<i>Viscum album</i>	Mistletoe
<b>GRASSES, SEDGES, FERNS ETC</b>	
<i>Agrostis stolonifera</i>	Creeping Bent
<i>Anisantha sterilis</i>	Barren Brome
<i>Arrhenatherum elatius</i>	False-oat
<i>Dactylis glomerata</i>	Cocksfoot
<i>Elytrigia repens</i>	Couch
<i>Festuca rubra s.l.</i>	Red Fescue
<i>Holcus lanatus</i>	Yorkshire Fog
<i>Lolium perenne</i>	Ryegrass
<i>Poa annua</i>	Annual Meadow Grass
<i>Poa pratensis s.l.</i>	Smooth Meadow Grass
<i>Poa trivialis</i>	Rough-stalked Meadow Grass
<b>HERBS</b>	
<i>Anthriscus sylvestris</i>	Cow Parsley
<i>Artemisia vulgaris</i>	Mugwort
<i>Atriplex patula</i>	Common Orache
<i>Balota nigra</i>	Black Horehound
<i>Bryonia dioica</i>	White Bryony
<i>Chamerion angustifolium</i>	Rosebay
<i>Cirsium arvense</i>	Creeping Thistle
<i>Conium maculatum</i>	Hemlock
<i>Epilobium montanum</i>	Broad-leaved Willowherb
<i>Euphorbia peplus</i>	Petty Spurge
<i>Fallopia convolvulus</i>	Black Bindweed
<i>Galium aparine</i>	Cleavers
<i>Geranium dissectum</i>	Cut-leaved Cranesbill
<i>Lamium album</i>	White Deadnettle
<i>Lamium purpureum</i>	Red Deadnettle
<i>Lapsana communis</i>	Nipplewort
<i>Malva sylvestris</i>	Common Mallow
<i>Matricaria recutita</i>	Scented Mayweed
<i>Papaver rhoeas</i>	Common Poppy
<i>Polygonum arenastrum</i>	Equal-leaved Knotgrass
<i>Rumex obtusifolius</i>	Broad-leaved Dock
<i>Senecio jacobaea</i>	Common Ragwort
<i>Senecio vulgaris</i>	Groundsel
<i>Sinapis arvensis</i>	Charlock
<i>Sisymbrium officinale</i>	Hedge Mustard
<i>Sonchus asper</i>	Prickly Sowthistle

<i>Sonchus oleraceus</i>	Smooth Sowthistle
<i>Stachys sylvatica</i>	Hedge Woundwort
<i>Taraxacum officinale agg.</i>	Dandelion
<i>Tripleurospermum inodorum</i>	Scentless Mayweed
<i>Urtica dioica</i>	Nettle
<i>Veronica persica</i>	Field Speedwell

## 9.5 Appendix 5 - Protected Species Legislation

The following provides background to the current legislation in England - for full details reference should be made to the relevant legislation. A number of wild animals are classified as Protected Species as they are protected by various pieces of legislation. The most commonly encountered Protected Species of animal are listed in the table below. This table summarises which sections of legislation each species is protected by and the legislative text is provided on the following pages.

Legislation	Schedule 5 Wildlife and Countryside Act 1981 (As amended) Part 1					EPS	PBA	
	S1 (1)	S1 (4 & 5)	S9 (1)	S9 (2)	S9 (4)(a)			S9 (4)(b)
Adder <i>Vipera berus</i>			✓*				✓	
Common lizard <i>Zootoca vivipara</i>			✓*				✓	
Grass snake <i>Natrix natrix</i>			✓*				✓	
Slow worm <i>Anguis fragilis</i>			✓*				✓	
Smooth snake <i>Coronella austriaca</i>			✓	✓	✓	✓	✓	✓
Sand lizard <i>Lacerta agilis</i>			✓	✓	✓	✓	✓	✓
Great Crested Newt <i>Triturus cristatus</i>			✓	✓	✓	✓	✓	✓
Natterjack Toad <i>Epidalea calamita</i>			✓	✓	✓	✓	✓	✓
All UK bats Chiroptera			✓	✓	✓	✓	✓	✓
Water vole <i>Arvicola amphibious</i>			✓	✓	✓	✓	✓	
Otter <i>Lutra lutra</i>			✓	✓	✓	✓	✓	✓
Dormouse <i>Muscardinus avellanarius</i>			✓	✓	✓	✓	✓	✓
Badger <i>Meles meles</i>								✓
Red Squirrel <i>Sciurus vulgaris</i>			✓	✓	✓	✓	✓	
Pine Marten <i>Martes martes</i>			✓	✓	✓	✓	✓	
Scottish Wildcat <i>Felis silvestris silvestris</i>			✓	✓	✓	✓	✓	✓
White-clawed crayfish <i>Austropotamobius pallipes</i>			✓				✓	
All Nesting birds	✓							

Specific Nesting birds i.e. Barn Owl, Black Redstart	✓	✓							
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S = Section

() = Paragraph

EPS = European Protected Species i.e. listed under Regulation 40 of the Conservation (Natural Habitats &c.) Regulations 2010

PBA = Protection of Badgers Act 1992

\* = Only part of this section

## Legislative Text

### Wildlife and Countryside Act 1981 (as amended)

Since its original enactment, the Wildlife and Countryside Act has been subject to many changes (notably via Schedule 12 of the Countryside and Rights of Way Act 2000). These have in particular affected penalties and enforcement. Offences under section 9 of the Act are now 'arrestable'. Enforcement is usually by the Police and less frequently by Natural England. However, section 25(2) of Wildlife and Countryside Act also states that a local authority may institute proceedings. Prosecutions can result in a level five fine (currently £5000) for each offence (and the Act is specific that killing/injuring of each individual animal can constitute a separate offence), the forfeiture of any equipment, etc., used to perpetrate that offence and (under the Countryside and Rights of Way Act 2000) up to six months imprisonment.

The Wildlife and Countryside Act 1981 (as amended), transposes into domestic law the Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention). It is an offence under the various sections of Part 1 of the Act to -

**S.1(1)** intentionally kill, injure, or take any wild bird or their eggs or nests.

**S.1(4)** intentionally or recklessly kill, injure, or take any wild bird listed on Schedule 1 of the Act, or their eggs or nests (special penalties apply if convicted) (For a full list of Schedule 1 bird species see the full text of the Wildlife and Countryside Act 1981 [as amended])

**S.1(5) (a)** disturb any wild bird listed on Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young; or  
**(b)** disturb dependent young of such a bird

**S.9(1)** intentionally or recklessly kill, injure or take any wild animal included in Schedule 5 (certain reptiles are only protected from killing and injuring);

**S.9(2)** be in possession or control of any live or dead wild animal included in Schedule 5 or any part or derivative;

**S.9(4) (a)** intentionally or recklessly damage or destroy, or obstruct access to, any structure or place used by a Schedule 5 animal for shelter or protection;

**S.9(4) (b)** disturb any such animal while it is occupying such a structure or place which it uses for that purpose

**S.9(5) (a)** sell, offer for sale, possess or transport any live or dead wild animal included in Schedule 5 for the purpose of sale or any part or derivative;

**S.9(5) (b)** advertise for buying or selling such things.

### **European Protected Species (EPS)**

EPS and their breeding sites or resting places are protected under Regulation 41 of the Conservation of Habitats & Species Regulations Regulations, 2010. These Regulations transpose Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive) into national law.

A person who—

- (a) deliberately captures, injures or kills any wild animal of a European protected species,
- (b) deliberately disturbs wild animals of any such species,
- (c) deliberately takes or destroys the eggs of such an animal, or
- (d) damages or destroys a breeding site or resting place of such an animal, is guilty of an offence.

For the purposes of paragraph (b), disturbance of animals includes in particular any disturbance which is likely—

- (a) to impair their ability—
  - (i) to survive, to breed or reproduce, or to rear or nurture their young, or
  - (ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate; or
- (b) to affect significantly the local distribution or abundance of the species to which they belong.

(However, please note that the existing offences under the Wildlife and Countryside Act, which cover obstruction of places used for shelter or protection (for example, a bat roost), disturbance and sale, still apply to EPS.)

These actions can be made lawful through the granting of licenses by the appropriate authorities, e.g. Natural England. Licenses may be granted for a number of purposes (such as science and education, conservation, preserving public health and safety), but only after the appropriate authority is satisfied that there are no satisfactory alternatives and that such actions will have no detrimental effect on the wild population of the species concerned.

### **Protection of Badgers Act 1992 (PBA)**

The main legislation protecting badgers is the Protection of Badgers Act 1992. This Act consolidates all previous legislation including the Badgers Act 1973 (as amended) and the Badgers (Further Protection) Act 1991. Under the 1992 Act it is an offence to-

- destroy a sett;
- interfere with a badger sett by damaging a sett or any part thereof;
- obstruct access to a sett;
- disturb a badger while occupying a sett;
- wilfully kill, injure, take or attempt to kill, injure or take a badger;
- dig for a badger;
- possess a dead badger or any part of a badger;
- cruelly ill-treat a badger;
- use badger tongs in the course of killing, taking or attempting to kill a badger;
- sell or offer for sale or control any live badger;
- mark, tag or ring a badger;
- cause a dog to enter a sett;

The 1992 Act defines a badger sett as: “any structure or place which displays signs indicating current use by a badger”. Since development operations may take place over a protracted period, Natural England recommends that licences be sought for developments that may affect seasonally-used setts as well as main setts. Natural England considers a good guide to be that if a sett has shown signs of occupation within the past twelve months it is considered active.

The Protection of Badgers Act 1992 allows for licences to be issued for a number of purposes, including development under the Town and Country Planning Act 1990 and to prevent serious damage to property. Licences to interfere with badger setts or disturb badgers for development are issued by the Government’s statutory nature conservation agencies, e.g. Natural England.

## 9.6 Appendix 6 – Identification of Legal and Planning Policy Issues in England

### *Scope of Assessment*

The first step is to identify any biodiversity features found on the site that are subject to legal or policy controls, as follows:

#### *Designated Sites*

The location of the site is compared to the distribution of sites with a statutory or non-statutory nature conservation designation using information derived from the desk study. Consideration is given to designated sites that could be affected directly or indirectly by the proposed development.

#### *Habitats outside Designated Sites*

The habitats known to occur on the site are compared to those which receive some protection, in law or policy, outside of designated sites i.e. hedgerows, uncultivated land and semi-natural areas, habitats listed as Priorities in the UKBAP, habitats listed as Habitats of Principal Importance for the Conservation of Biodiversity by the Secretary of State and habitats listed as requiring action in the Local Biodiversity Action Plan.

#### *Ancient Woodland*

The ancient woodland inventory is checked to determine whether any known ancient woodland occurs either on the site or nearby.

#### *Protected Species*

The species known to occur on the site as a result of the desk study and Phase 1 habitat survey are compared with those listed in nature conservation legislation i.e. the Wildlife and Countryside Act 1981, as amended, the Conservation (Habitats &c) Regulations 1994.

In addition, the species known to occur on the site as a result of the desk study and Phase 1 habitat survey are compared with those listed in animal welfare legislation, i.e. the Badgers Act 1992 and the Wild Mammals (Protection) Act 1996.

#### *Biodiversity Action Plan Priority Species*

The species known to occur on the site are compared with those listed as Priorities in the UKBAP, Species of Principal Importance for the Conservation of Biodiversity by the Secretary of State or requiring action in the Local Biodiversity Action Plan.

#### *Other Species of Conservation Concern*

The species known to occur on the site are compared with other nature conservation listings, such as red data books.

#### *Invasive Plant Species*

The species of plant present on the site are compared with those listed by government agencies as invasive non-natives, with particular attention given to those listed in the Wildlife and Countryside Act.

### ***Review of Legislation and Policy***

If any of the above are found to occur on or near the site and are likely to be affected by the development in any way, the relevant legislation and planning policy (including national, regional, county and borough policies) are examined to determine whether the proposed development is compliant.

### ***Ecological Enhancement***

Planning policy generally requires new developments to be enhanced for biodiversity. The existing proposals are considered to determine whether biodiversity enhancements are offered and whether they are adequate to meet the policy requirements. Again, national, regional, county and borough policies are considered.

### ***Identification of Potential Further Ecological Issues***

Further ecological issues are those which can not be resolved during the desk study and extended Phase 1 habitat survey for any reason, including the following:

- The development is near a designated site and consultation with the relevant regulator is required in order to determine whether further assessment is required;
- Suitable habitat is present on or near the site for a protected species/species of conservation concern and specialist survey techniques are required for their detection;
- Suitable habitat is present on or near the site for a protected species/species of conservation concern and the extended Phase 1 habitat survey was not undertaken at a suitable time of year for their detection;
- A protected species/species of conservation concern was found on or near the

site but further information on population size or distribution is required in order to resolve any legal and planning policy issues (such as obtaining licences).

Discussion of issues raised by 3rd parties, e.g. reports of protected species from the site by local people, may also be discussed under this heading.

The desk study is used as a guide to the protected species/species of conservation in the local area, however, the list is not taken to be exhaustive and it is borne in mind that some species may no longer occur in the locality.

No attempt is made to evaluate the importance of the site for species not yet confirmed to be on or near the site, nor to discuss the implications for the development if the species were to be found on the site.