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Humber Bridge Garden Centre, Barton-Upon-Humber, North Lincolnshire

PRELIMINARY ECOLOGICAL APPRAISAL

August 2024

	Staff Member	Position
Habitat Survey and Preliminary Ecological Appraisal :	Daniel Lombard BSc MCIEEM Abi Catherall MSc	Ecologist
Principal Author(s) :	Daniel Lombard BSc MCIEEM Abi Catherall MSc	Ecologist

DOCUMENT CHECKING

Revision	Date	Status	Checked
1	22/09/2024	Draft for internal review.	Daniel Lombard B Sc MCIEEM
2	27/09/2024	Draft for client review.	Chris Toohie MSc MCIEEM
3	10/10/2024	Submission of non-draft version for client.	Chris Toohie MSc MCIEEM
This report contains sensitive information concerning protected species and caution should be exercised when copying and distributing to third parties.			

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1.0 EXECUTIVE SUMMARY

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1.2 In order to accomplish the brief, a desk top study, external consultation, a habitat classification field survey and preliminary ecological appraisal was undertaken by Wold Ecology staff.

1.3 The habitats within the Application Site comprise a section of amenity grassland, located in a rural environment.

1.4 The proposed development involves site clearance and the erection of a small workshop including services and infrastructure.

1.5 The field survey and ecological appraisal targeted the following species and habitats relevant to the Application Site and the development proposal. The field surveys and preliminary ecological appraisal results are summarised below:

		Application Site Status
Proceed with caution, timing constraints	**Breeding Birds**	The site is suitable for nesting birds with various designations. Any tall/dense vegetation to be removed should be cleared outside of the bird nesting season (i.e. clearance should be undertaken between mid-September and early 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.
Proceed with caution	**Working adjacent to watercourses**	Potential discharge of foul water into the adjacent watercourses should be addressed by Land Drainage Consultant. A working adjacent to watercourses method statement is included in section 9.0.
Proceed with caution	**Habitats**	The Humber Estuary SAC/SPA/RAMSAR is located 1.4km south-west of the Application Site. A drainage engineer must be consulted to determine if water discharges will have a negative impact on the Humber Estuary, and ways in which to mitigate any identified impacts. There are no Statutory or non-statutory sites located within or adjacent to the Application Site. No Biodiversity Action Plan habitats are located within or adjacent to the Application Site.
Habitats Regulation Assessment	**Habitats**	Whilst there are no statutory or non-statutory sites located within the Application Site, impacts to habitats and to species on the adjacent Skipwith Common SAC/SSSI/NNR should be addressed in a Habitats Regulation Assessment.
	Invasive non-native species	No invasive species recorded on site.
	Bats	No further surveys recommended.

	Birds	Merge cells
No	**Badger**	
	Great crested newt	
	Reptiles	No further surveys recommended.
	Water vole	No further surveys recommended.
	Otter	No further surveys recommended.
	White clawed	No further surveys recommended.
	Fish	No further surveys recommended.
	Habitats	There are no Statutory or non-statutory sites located within or adjacent to the Application Site. No Biodiversity Action Plan habitats are located within or adjacent to the Application Site.
Impact Assessment **No further assessments**	**EcIA**	DELETE IF FURTHER SURVEYS ARE RECOMENDED No further surveys beyond the desk study and field survey are necessary to allow an assessment of ecological effects and to design appropriate mitigation. There is sufficient information available about the design of the project to allow a full assessment of ecological effects, and no significant ecological effects are predicted.

1.6 This report is valid until **February 2026**. After this time, additional surveys need to be undertaken to confirm that the status of the site for protected species, site habitat composition and conclusions within this report have not changed.

1.7 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 Ltd if you do not wish the species accounts and grid references to be shared.

2.0 INTRODUCTION

2.1 In August 2024, Wold Ecology was commissioned by the Humber Bridge Garden Centre to undertake a UK Habitat Classification (version 2) and a preliminary ecological appraisal at the Humber Bridge Garden Centre, (national grid reference centroid TA 02207 23324) in Barton-Upon-Humber North Lincolnshire.

2.2 An ecological assessment is a requirement of the Local Planning Authority (LPA), as part of the planning application process. This is specified in the following government policy:

- National Planning Policy Framework (NPPF): Conserving and Enhancing the Natural Environment.

2.3 **Paragraph 180** of the National Planning Policy Framework (NPPF) states: Planning policies and decisions should contribute to and enhance the natural and local environment by:

(a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

(b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;

(c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;

(d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

(e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and

(f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

2.4 Habitats and Biodiversity of the NPPF also states :

Paragraph 185 - To protect and enhance biodiversity and geodiversity, plans should:

(a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation and

(b) Promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

Paragraph 186 - When determining planning applications, local planning authorities should apply the following principles:

(a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

(b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

(c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons, and a suitable compensation strategy exists; and

(d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

Paragraph 187 - The following should be given the same protection as habitats sites:

(a) potential Special Protection Areas and possible Special Areas of Conservation;

(b) listed or proposed Ramsar sites ; and

(c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

2.5 The Habitats Directive requires Member States to implement two main types of measures. The first relates to the conservation of habitat types and of habitats of species (Articles 3–11 of the Habitats Directive) and involves the designation of protected sites as part of the EU network called Natura 2000.

2.6 The second type of measures concerns the protection of species (Articles 12–16) and applies across their entire natural range within Member States, both inside and outside Natura 2000 sites. Article 12 requires the protection of the animal species listed in Annex IV(a) of the Directive. It addresses direct threats to the species by prohibiting their deliberate capture, killing or disturbance, deliberate destruction or taking of their eggs, or the deterioration or destruction of their breeding sites or resting places. Annex IV(a) encompasses a wide variety of animal species, from large, wide-ranging species, like wolves and bears, to species with very small home ranges, such as butterflies, beetles or amphibians.

2.7 In addition, an ecological assessment is also required so that the local authority comply with the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and to have regard to the purpose of conserving biodiversity in the exercise of their functions (Natural Environment and Rural Communities (NERC) Act 2006).

2.8 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, during 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 as detailed below.

2.9 The LPA would have to consider whether Natural England was likely to grant a European protected species licence for the development; and in so doing the LPA would have to consider the three derogation tests:

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 LPA 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'.

3.0 COMPANY PROFILE

3.1 Wold Ecology Ltd was established in 2006 and are experienced in providing a bespoke service for environmental management and ecological assessments. Wold Ecology Ltd employs several experienced and qualified staff/associates to undertake specialist ecological contracts.

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

- European Protected Species Surveys and Natural England Licenses.
- Ecological Impact Assessments and Preliminary Ecological Appraisals.
- Biodiversity Net Gain and Condition Assessments.
- Ecological Construction Method Statements and Ecological Enhancements Plans.
- Ecological Clerk of Works.

3.3 Surveyor Profile – Daniel Lombard B Sc., MCIEEM.

3.3.1 Qualifications.

- B Sc. Environmental Science.
- Great Crested Newt License – 2015-17182-CLS-CLS
- Bat License – 2015-11490-CLS-CLS
- Bird Ringing A Licence – A/6298

3.3.2 Professional Membership.

- Full member of the Chartered Institute of Ecology and Environmental Management.

3.4 Surveyor Profile – Abi Catherall M Sc.

3.4.1 Qualifications.

- M Sc. Species Identification & Survey Skills
- Class 2 bat license – 2023-11467-CL18-BAT

3.4 A detailed surveyor profile is included in Appendix 3.

3.5 Daniel Lombard meets the criteria for a suitably qualified ecologist by:

- Holding a Bachelor of Science degree (hons) in Environmental Science;
- Being employed as a practising ecologist since 2007, with over 10 years' relevant experience and;
- Being a full member of the Institute of Ecology and Environmental Management (this makes him subject to peer review and bound by a professional code of conduct).

3.6 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 HABITAT SURVEY METHODOLOGY

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

- A desktop study and consultation.
- Field survey including accessible adjacent land up to 1km.
- The scope of the ecology survey is proportionate to the scale of the likely ecological effects and in this case, 2km from the Application Site.
- A UK Habitat Classification survey.
- Preliminary ecological appraisal.

4.2 This report describes the findings of the field survey and desktop study whilst identifying the requirement for further ecological surveys to ensure that a comprehensive study is undertaken.

4.3 Where Ecological Impact Assessments (EcIA) is not part of an Environmental Impact Assessment, the views of the competent authority, standing advice and use of a Preliminary Ecological Appraisal can assist with the scoping of a potential EcIA.

4.4 Consultation with local planning ecologists confirmed that EcIA's are only usually required when developments are likely to have significant ecological impact effects and that developments of this size are unlikely to require a specific EcIA. Wold Ecology Ltd have undertaken over 450 Preliminary Ecological Appraisals between 2015 and 2023 for similar sites and schemes; this report format and content within has been accepted by planning ecologists during this time period without the request for an additional EcIA. This report format, which is also commonly used by ecological consultants, is widely accepted in support of planning applications.

4.5 Where further ecological surveys have been recommended, the impact assessment will be included within those specific reports.

4.6 Whilst an EcIA on its own is not a statutory requirement, the following principles which underpin EcIA are considered within this assessment:

- Avoidance - Seek options that avoid harm to ecological features (for example, by locating on an alternative site).
- Mitigation - Adverse effects should be avoided or minimised through mitigation measures, either through the design of the project or subsequent measures that can be guaranteed – for example, through a condition or planning obligation.
- Compensation - Where there are significant residual adverse ecological effects despite the mitigation proposed, these should be offset by appropriate compensatory measures.
- Enhancements - Seek to provide net benefits for biodiversity over and above requirements for avoidance, mitigation or compensation.
- Determine the importance of ecological features affected, through survey and/or research;
- Assess impacts potentially affecting important features.

4.7 A field survey was undertaken at the Application Site on 28th August2024. During the site visit, the whole of the Application Site and accessible neighbouring land was examined in detail.

Date of each survey visit	Type of survey	Weather
28/08/24	Habitat classification field survey	19°C, 30% cloud. Beaufort 2 SW.

4.8 The habitats within the Application Site were mapped according to the techniques described in the publication *UK Habitat Classification version 2* (UKHab Ltd 2023). The CIEEM 'Guidelines for Preliminary Ecological Appraisal - Second Edition' (December 2017) state that this is an appropriate habitat classification system.

4.9 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.

4.10 Sufficient detail on the composition of the vegetation was obtained from the field survey, which enabled it to be successfully characterised and assessed.

4.11 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:

Species/Group	Indicative habitat	Field signs (in addition to sightings)
Bats	Roosts - Trees, buildings, bridges, caves etc. Foraging and commuting areas - e.g. Parkland, waterbodies, wetlands, woodland, hedgerows and linear features.	Potential roost sites. Droppings, urine splashes, staining and feeding remains.
Badger	Habitat mosaic in rural and many urban habitats.	Excavations and tracks, sett entrances, latrines, hairs, well-worn paths, prints, scratch marks on trees.
Otter	Rivers, streams, canals, ponds, lakes, ditches, drains and coastal areas.	Holts (or dens), prints, spraints, slide marks into watercourses and feeding signs.
Water Vole	Rivers, streams, canals, ponds, lakes, ditches, drains and marshes.	Burrow entrances, prints, distinctive latrine areas and feeding signs.
Birds	Habitat mosaic. Natura 2000 sites/SPA/SAC/Ramsar.	Nests, droppings below nest sites (especially in buildings of trees); tree holes.
Reptiles	Habitat mosaic.	Sloughed skins.
Great Crested Newt	Ponds within 250m of suitable habitat within the site boundary. Habitat Suitability Index (HSI assessment).	Egg wraps and animals (depending on time of year).

4.12 The field survey and ecology report reflect relevant guidance from the following CIEEM documents:

- Guidelines for Preliminary Ecological Appraisal - Second Edition, December 2017.
- Guidelines for Ecological Impact Assessment in The UK And Ireland - Terrestrial, Freshwater, Coastal and Marine (September 2018).

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 UK Habitat Classification 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 overlooked.

5.2 This report will serve to indicate the possible value of the site in nature conservation terms based upon the initial field survey and desk top data gathered. As with any survey of this kind, it cannot be 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; in some instances, neighbouring land was studied from vantage points and public land, maps within the public domain and aerial photography, it is possible that habitats important to the ecology of the Application Site may not have been recorded fully.

5.4 It is not always possible to identify every pond within 250m of an Application Site and whilst every effort was made to access all ponds, Wold Ecology Ltd do not guarantee that every pond within 250m have been included within this assessment.

5.5 Invasive Non-Native Species (INNS) are species listed on Schedule 9 of the Wildlife and Countryside Act (1981), for which it is an offence to cause or allow it to grow in the wild. It is not always possible to conclude absence from a preliminary survey alone due to factors including:

- Season.
- Accessibility.
- Recent ground clearance.
- 3rd party attempts to hide evidence or undisclosed treatment programmes.

5.6 However, a UK Habitat Classification survey and preliminary ecological appraisal of this nature, supported by a thorough desk top survey, is sufficient to make a number of informed assumptions about the ecology of the site.

6.0 DESK TOP STUDY

6.1 General description

6.1.1 The Application Site is located adjacent to the southern bank of the River Humber, in a rural location in Lincolnshire. The Application Site is approximately 0.06ha and is immediately surrounded by a garden centre and amenity grassland that is cut regularly. Habitats within the Application Site comprises an area of amenity grassland, located in a rural environment.

6.1.2 Habitats within 2km surrounding the Humber Bridge Garden Centre is primarily low-lying agricultural land dominated by arable production with some grazed pasture and the River Humber; a series of flooded former clay pits, some of which are maintained as nature reserves are also present. Woodland cover within 2km is limited and occurs as fox coverts, riparian woodland, semi natural woodland, shelterbelts and plantations adjacent to farms and small holdings. In addition, the Humber Estuary (100m north) and associated riverine habitats provide habitat connectivity to the wider countryside.

6.1.3 A summary of the surrounding habitat is (radius of < 2km from the site):

- Buildings – farm buildings and residential properties
- Humber Bridge
- Hedgerow
- Mature trees and woodland
- Arable
- Mature private gardens
- Ponds and watercourses
- Far Ings National Nature Reserve
- Waters Edge Country Park
- Pasture Wharf Nature Reserve
- Humber Estuary SPA/SAC/Ramsar/SSSI
- Grazed pasture

NORTH

Scale: 1:25,000

Figure 1: Location Map

Site Location

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6.2 Desktop Study.

6.2.1 Natural England, the Greater Lincolnshire Nature Partnership (GNLP), www.magic.gov.uk, social media, local authority planning portal and Wold Ecology employees, field surveyors and network of associate ecologists were consulted in order to obtain any ecological information that they hold of relevance to the Application Site and surrounding area.

6.2.2 The desk top study identifies land parcels of nature conservation value within 2 km 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) or equivalent
- Natural England Habitat Inventories
- Natural Character 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 The following Statutory Sites lie within 2 km of the Application Site (see figure 2):

Designation	Site Name	Distance (m)
SAC	Humber Estuary	75
SPA		
RAMSAR		
SSSI		

Map Ref	Site Name	Distance (m)
NNR	Far Ings	5
LNR		

Map Ref	Site Name	Distance (m)
LNR	Water Edge	335

6.2.3.2 The Humber Estuary is described by Natural England as:

- Description - The Humber is the second-largest coastal plain estuary in the UK, comprising of extensive wetland and coastal habitats and covers 370 km^2. The inner estuary supports extensive areas of reedbed, with areas of mature and developing saltmarsh backed by grazing marsh in the middle and outer estuary. It is designated as a Special Area of Conservation (SAC),

Special Protection Area (SPA), Ramsar Site and has numerous Sites of Special Scientific Interest (SSSI). On the north Lincolnshire coast, the saltmarsh is backed by low sand dunes with marshy slacks and brackish pools.

- Qualifying features - The Humber Estuary SAC and SPA host the following habitats: Atlantic salt meadows *Glauco-Puccinellietalia maritimae*; coastal lagoons; dunes with *Hippophae rhamnoides*; embryonic shifting dunes; estuaries; mudflats and sandflats not covered by seawater at low tide; fixed dunes with herbaceous vegetation (grey dunes); *Salicornia spp.* and other annuals colonising mud and sand; sandbanks which are slightly covered by sea water all the time; shifting dunes along the shoreline with *Ammophila arenaria* (white dunes). The site also hosts the following species: grey seal *Halichoerus grypus*; river lamprey *Lampetra fluviatilis* and sea lamprey *Petromyzon marinus*.
- The site supports the following species: avocet *Recurvirostra avosetta*; bar-tailed godwit *Limosa lapponica*; bittern *Botaurus stellaris*; black-tailed godwit *Limosa limosa*; dunlin *Calidris alpina*; golden plover *Pluvialis apricaria*; hen harrier *Circus cyaneus*; knot *Calidris canutus*; little tern *Sternula albifrons*; marsh harrier *Circus aeruginosus*; redshank *Tringa totanus*; ruff *Philomachus pugnax*; shelduck *Tadorna tadorna*, as well as for its waterbird assemblage.

6.2.3.3 Humber Estuary SSSI is described by Natural England as:

- **Reasons for Notification:** The Humber Estuary is a nationally important site with a series of nationally important habitats. These are the estuary itself (with its component habitats of intertidal mudflats and sandflats and coastal saltmarsh) and the associated saline lagoons, sand dunes and standing waters. The site is also of national importance for the geological interest at South Ferriby Cliff (Late Pleistocene sediments) and for the coastal geomorphology of Spurn. The estuary supports nationally important numbers of 22 wintering waterfowl and nine passage waders, and a nationally important assemblage of breeding birds of lowland open waters and their margins. It is also nationally important for a breeding colony of grey seals *Halichoerus grypus*, river lamprey *Lampetra fluviatilis* and sea lamprey *Petromyzon marinus*, a vascular plant assemblage and an invertebrate assemblage.
- **General description:**
- **Estuary** - The Humber Estuary is a large macro-tidal coastal plain estuary with high suspended sediment loads, which feed a dynamic and rapidly changing system of accreting and eroding intertidal and subtidal mudflats, sandflats, saltmarsh and reedbeds. The estuary supports a full range of saline conditions from the open coast to the limit of saline intrusion on the tidal rivers of the Ouse and Trent. The range of salinity, substrate and exposure to wave action influences the estuarine habitats and the range of species that utilise them. These include a breeding bird assemblage, winter and passage waterfowl, river and sea lamprey, grey seals, vascular plants and invertebrates.
- The extensive mud and sand flats support a range of benthic communities, which in turn are an important feeding resource for birds and fish. Wave exposed sandy shores are found in the outer/open coast areas of the estuary. These change to the more moderately exposed sandy shores and then to sheltered muddy shores within the main body of the estuary and up into the tidal rivers.
- The lower saltmarsh of the Humber is dominated by common cordgrass *Spartina anglica* and annual glasswort *Salicornia communities*. Low to mid marsh communities are mostly represented by sea aster *Aster tripolium*, common saltmarsh grass *Puccinellia maritima* and sea purslane *Atriplex portulacoides* communities. The upper portion of the saltmarsh community is atypical,

dominated by sea couch *Elytrigia atherica* (*Elymus pycnanthus*) saltmarsh community. In the upper reaches of the estuary, the tidal marsh community is dominated by the common reed *Phragmites australis* fen and sea club rush *Bolboschoenus maritimus* swamp with the couch grass *Elytrigia repens* (*Elymus repens*) saltmarsh community. On the southern coastal fringe of the estuary on the north Lincolnshire coast, a wide range of saltmarsh communities are present. Good height zonations are found, with levee development along creeks creating extensive depressions holding waterlogged saltmarsh types. Upper saltmarsh is common here. These saltmarsh communities are an integral part of the functioning dynamic estuarine system. They provide nutrients for the mudflats and sandflats, and feeding and roosting areas for nationally important numbers of ducks, geese and waterfowl.

- **Saline lagoons** - Within the Humber Estuary SSSI there are good examples of four of the five physiographic types of saline lagoon. These are the isolated lagoon at Humberston Fitties, the silled lagoon at Northcoates 'Point A', the percolation lagoon at Northcoates 'Point B', and the sluiced lagoons at Blacktoft Sands. These lagoons support a number of notable lagoon specialist species including the lagoon sand shrimp *Gammarus insensibilis*, the amphipod *Gammarus chevreuxi*, the chironomid midge *Glyptotendipes barbipes* and a breeding colony of avocets *Recurvirostra avosetta.*
- **Sand dunes** - The sand dunes within the Humber Estuary are features of the outer estuary on both the north and south banks particularly on Spurn and along the Lincolnshire coast south of Cleethorpes. Examples of both strandline, foredune, mobile, semi-fixed dunes, fixed dunes and dune grassland occur on both banks of the estuary and along the coast. Native sea buckthorn *Hippophae rhamnoides* scrub also occurs on both sides of the estuary. The nationally scarce, bulbous meadow grass *Poa bulbosa* is found on the sand dunes at Cleethorpes, and the nationally scarce suffocated clover *Trifolium suffocatum* is found at Spurn.
- **Standing waters** - The most extensive area of standing waters on the Humber occurs at Barton and Barrow. The complex of disused clay pits vary in size and salinity and are a mosaic of open waters. Similar pits occur at other locations on the estuary, such as at Faxfleet and Haverfield Pits. The pits support important breeding birds such as marsh harriers *Circus aeruginosus* and bittern *Botaurus stellaris* and provide roosting and feeding areas for waterfowl.
- **Wintering and passage waterfowl species** - The estuary regularly supports 22 species of wintering waterfowl in nationally important numbers. These are bittern, dark-bellied brent goose *Branta bernicla bernicla*, shelduck *Tadorna tadorna*, wigeon *Anas penelope*, teal *Anas crecca*, pochard *Aythya ferina*, scaup *Aythya marila*, goldeneye *Bucephala clangula*, oystercatcher *Haematopus ostralegus*, avocet, ringed plover *Charadrius hiaticula*, golden plover *Pluvialis apricaria*, grey plover *Pluvialis squatarola*, lapwing *Vanellus vanellus*, knot *Calidris canutus*, sanderling *Calidris alba*, dunlin *Calidris alpina*, black-tailed godwit *Limosa limosa*, bar-tailed godwit *Limosa lapponica*, curlew *Numenius arquata*, redshank *Tringa totanus* and turnstone *Arenaria interpres.*
- In addition, nine species of passage waders regularly occur in nationally important numbers on the Humber Estuary. These are: ringed plover, grey plover, sanderling, dunlin, ruff *Philomachus pugnax*, black-tailed godwit, whimbrel *Numenius phaeopus*, redshank and greenshank *Tringa nebularia.*
- Wintering waterfowl and passage waders are widely distributed throughout the site, the distribution of individual species reflecting habitat distribution and species ecology. For example, the sandier sediments of the outer estuary are characterised by an assemblage including knot and grey plover, while the

largest concentrations of wigeon are found in the saltmarshes of the upper estuary. At high tide, large mixed flocks are concentrated into key roost sites which are at a premium due to the combined effects of extensive historical land claim, coastal squeeze and the acute lack of grazing marsh and grassland on both banks of the estuary.

- **Breeding bird assemblage of lowland open waters and their margins** - The Humber Estuary supports a breeding bird assemblage of lowland open waters and their margins, including nationally important numbers of bittern, marsh harrier *Circus aeruginosus*, avocet and bearded tit *Panurus biarmicus*. Breeding bitterns first returned to the estuary in 2000, following an absence of over 20 years, and breeding avocets were first recorded here in 1992. The numbers of avocets in particular have increased substantially in recent years. The following species also contribute to the assemblage: little grebe *Tachybaptus ruficollis*, great crested grebe *Podiceps cristatus*, mute swan *Cygnus olor*, shelduck, gadwall *Anas strepera*, shoveler *Anas clypeata*, pochard, tufted duck *Aythya fuligula*, water rail *Rallus aquaticus*, little ringed plover *Charadrius dubius*, snipe *Gallinago gallinago*, redshank, common tern *Sterna hirundo*, cuckoo *Cuculus canorus*, kingfisher *Alcedo atthis*, yellow wagtail *Motacilla flava*, grasshopper warbler *Locustella naevia*, sedge warbler *Acrocephalus schoenobaenus*, reed warbler *Acrocephalus scirpaceus*, and reed bunting *Emberiza schoeniclus*. The distribution of the breeding species that make up the assemblage is concentrated within (although not restricted to) the clay pits, lagoons and reedbeds at Far Ings – Barton, Read's Island and Blacktoft Sands.
- **Grey seals** - The Humber Estuary supports one of the largest grey seal breeding colonies in England with a high rate of pup production compared to other UK sites.
- **River lamprey and sea lamprey** - The Humber Estuary acts as an important migration route for both river lamprey and sea lamprey between coastal waters and their spawning areas. Both species are present in the estuary to some degree all year round, although numbers increase during summer and autumn periods when migration takes place.
- **Vascular plant assemblage** - The site supports an important vascular plant assemblage, including at least ten nationally scarce species. These are characteristic of coastal and wetland habitats. They are bulbous foxtail *Alopecurus bulbosus*, bulbous meadow-grass, divided sedge *Carex divisa*, sea buckthorn, slender hare's-ear Bupleurum tenuissimum, spiral tasselweed *Ruppia cirrhosa*, rush-leaved fescue *Festuca arenaria*, curved hard-grass *Parapholis incurva*, suffocated clover and sea clover *Trifolium squamosum*. Common couch sub-species *Elytrigia repens ssp. arenosa* has also been included as a notable taxon. In addition, the Humber is of phytogeographical interest, with several scarce species of vascular plant occurring at or close to the northern or southern limits of their range on the east coast of Britain. Invertebrate assemblage Assemblages of terrestrial and aquatic invertebrates are well represented across the Humber Estuary and its hinterlands. These include many scarce and threatened species across a range of taxa, especially the Coleoptera and Lepidoptera. For example, the sand dunes at Spurn support the ground beetle *Amara lucida*, the white colon moth *Sideridis albicolon* and the shore wainscot moth *Mythimna litoralis*. Saltmarshes such as those at Welwick provide foraging grounds for the solitary bee *Colletes halophilus*, which is closely associated with the flowers of sea aster *Aster tripolium*. Sea aster is also the larval food plant for the starwort moth *Cucullia asteris*. Further upstream, brackish and freshwater reedbeds support the reed-beetle *Donacia clavipes* and the silky wainscot moth *Chilodes maritimus*, both of which are associated with

common reed. Areas of willow *Salix spp.* scrub within reedbeds are also important and are the larval food plant of the cream-bordered green-pea moth *Earias clorana*. Fully aquatic species include the water beetles *Agabus conspersus* and *Helophorus fulgidicollis*.

6.2.3.4 Impact Risk Zones for the Humber Estuary

Planning Application	Description	Relevance to the Application Site
Infrastructure	Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.	No
Wind & Solar Energy Minerals, Oil & Gas	Planning applications for quarries, including new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.	No
Rural Non-Residential Rural Residential Residential	Residential development of 100 units or more. Any residential development of 50 or more houses outside existing settlements/urban areas.	No
Air Pollution	Any industrial/agricultural development that could cause AIR POLLUTION (including industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t).	No
Combustion	General combustion processes >20MW energy input. Including: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.	No
Waste	Landfill. Including: inert landfill, non-hazardous landfill, hazardous landfill.	No
Composting	Any composting proposal with more than 500 tonnes maximum annual operational throughput. Including: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.	No
Discharges	Any discharge of water or liquid waste of more than 20m³/day to ground (i.e. to seep away) or to surface water, such as a beck or stream.	No
Water Supply	Large infrastructure such as warehousing / industry where net additional gross internal floorspace is > 1,000m² or any development needing its own water supply .	No

6.2.3.5 The Statutory Sites will not be directly impacted by the Application Site, which is small in size and occurs within an existing developed area of land. Consequently, the impact to the Statutory Sites is considered to be negligible.

6.2.4 Non-statutory Sites

6.2.4.1 The following Non-statutory Sites lie within 2 km of the Application Site (see figures 3 and 4):

6.2.4.1.1 Local Wildlife Sites (LWS)

Site Code	Site Name	Distance (m)
1.	A15/A1077 Road Verges	900
2.	Barton Broads	1000m
3.	Barton Cliff New Quarry	1740
4.	Far Ings	1400
5.	Waters' Edge	730
6.	Westfield Road Verge	1850

6.2.4.1.2 Lincolnshire Wildlife Trust Reserves

Site Code	Site Name	Distance (m)
1.	Far Ings	1400
2.	Pasture Wharf	1380

6.2.4.2 The Non-statutory Sites will not be impacted on due to the small-scale nature of the proposed development and the distance between the Application Site. Consequently, the impact to Non-statutory Sites is considered to be negligible.

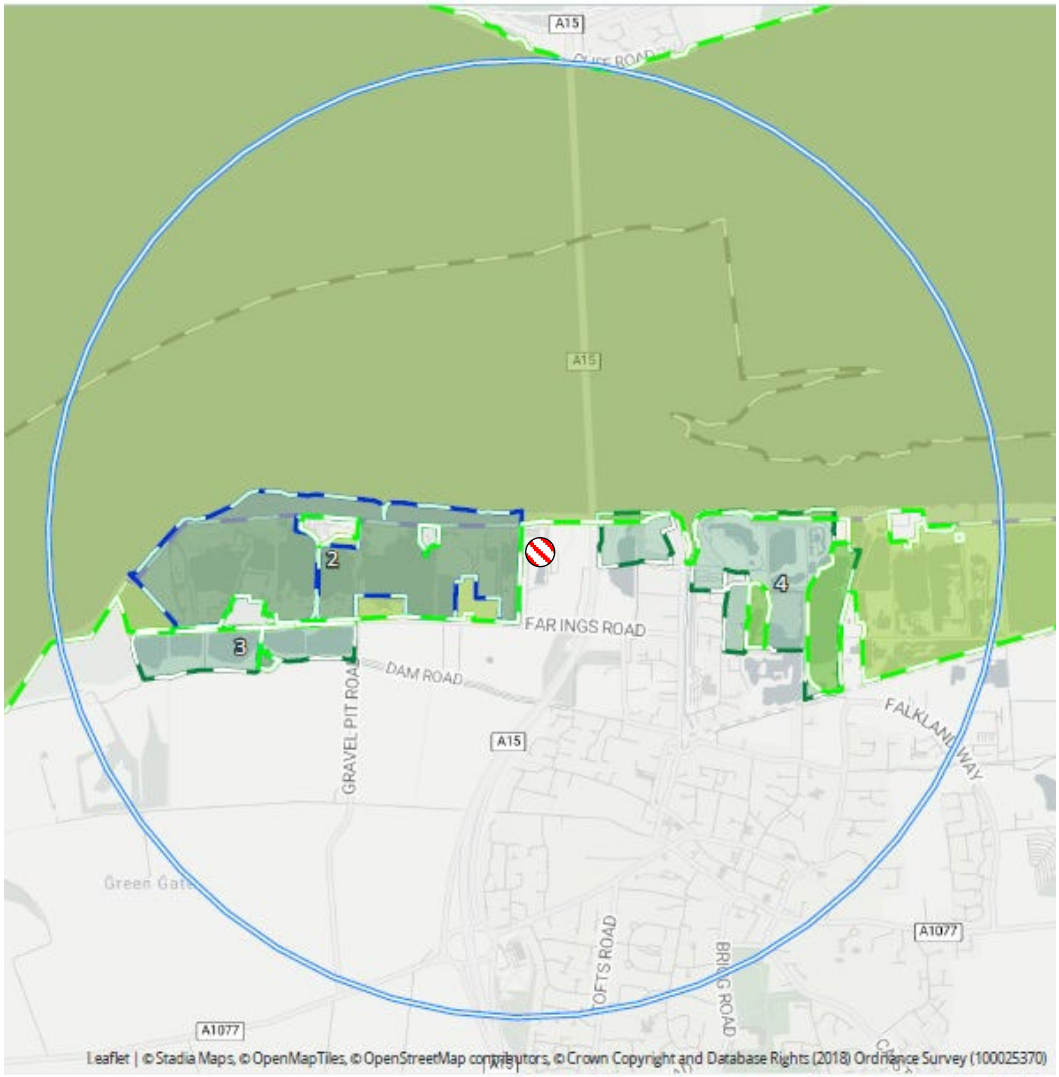
6.2.5 Natural England Habitat Inventories

6.2.5.1 All the Natural England Priority 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 (see Figure 5).

In Application Site	Site Name
No	Coastal saltmarsh
No	Eutrophic standing waters
No	Lowland mixed deciduous woodland
No	Lowland fens
No	Intertidal mudflats
No	Reedbeds
No	Rivers
No	Lowland Meadows
No	Lowland calcareous grassland
No	Wet Woodland

6.2.5.2 The Natural England Priority Habitats will not be impacted on due to the small-scale nature of the proposed development. No areas of priority habitat will be damaged or lost as part of the proposed development. Consequently, the impact to the Natural England Priority Habitat is considered to be negligible.

NORTH



Space restrictions on the map may result in some sites not being labelled.

- Site of Special Scientific Interest
- National Nature Reserve
- Local Nature Reserve
- Special Protection Area
- Special Area of Conservation
- Ramsar Site
- Search area
- LERC boundary

Figure 2: Statutory Site Map

KEY

Application Site

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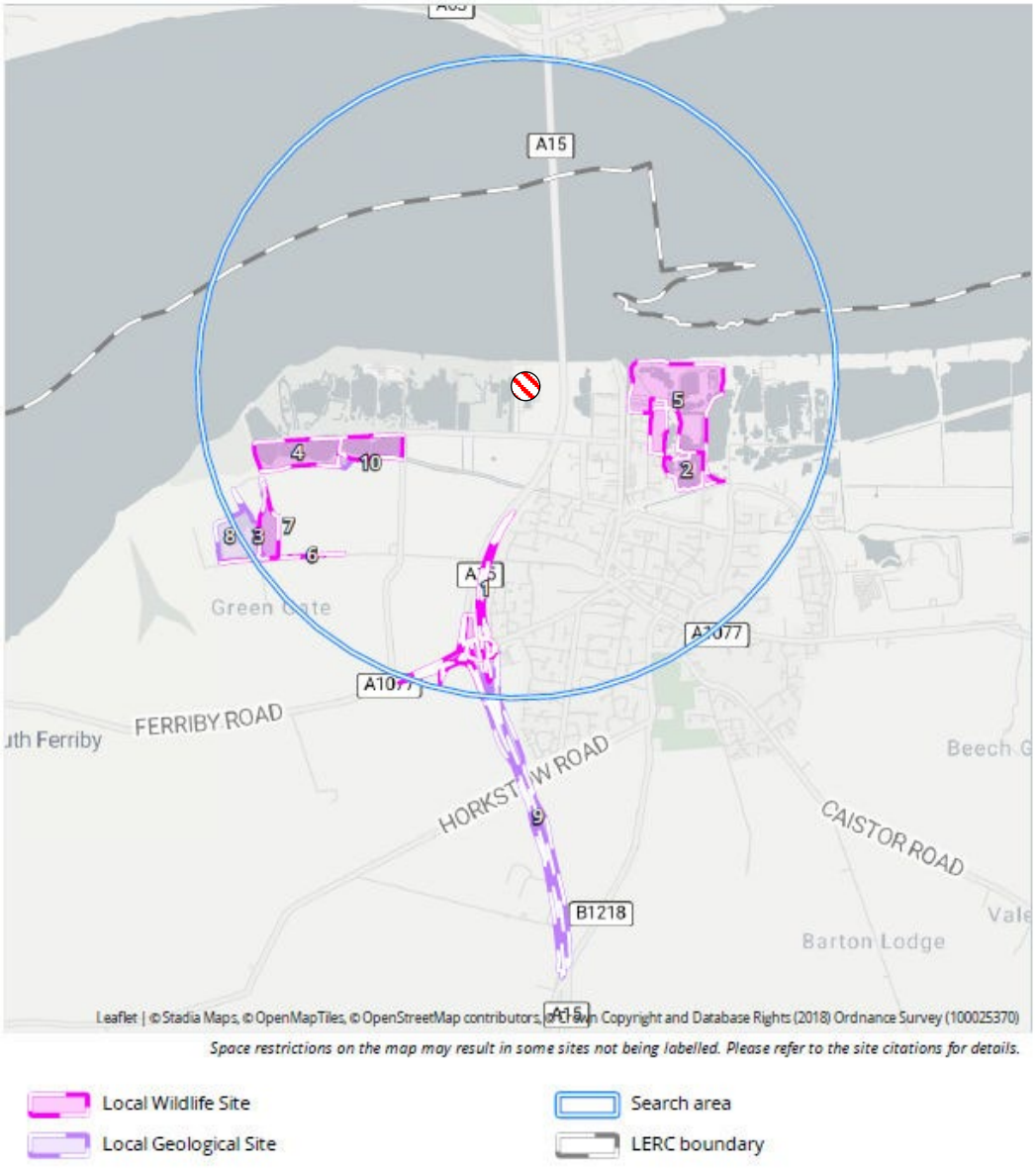
NORTH

Figure 3: Non-Statutory Site Map

KEY

Application Site



Space restrictions on the map may result in some sites not being labelled. Please refer to the site citations for details.

Local Wildlife Site
Local Geological Site
Search area
LERC boundary

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Figure 4: Other Sites

KEY

Application Site

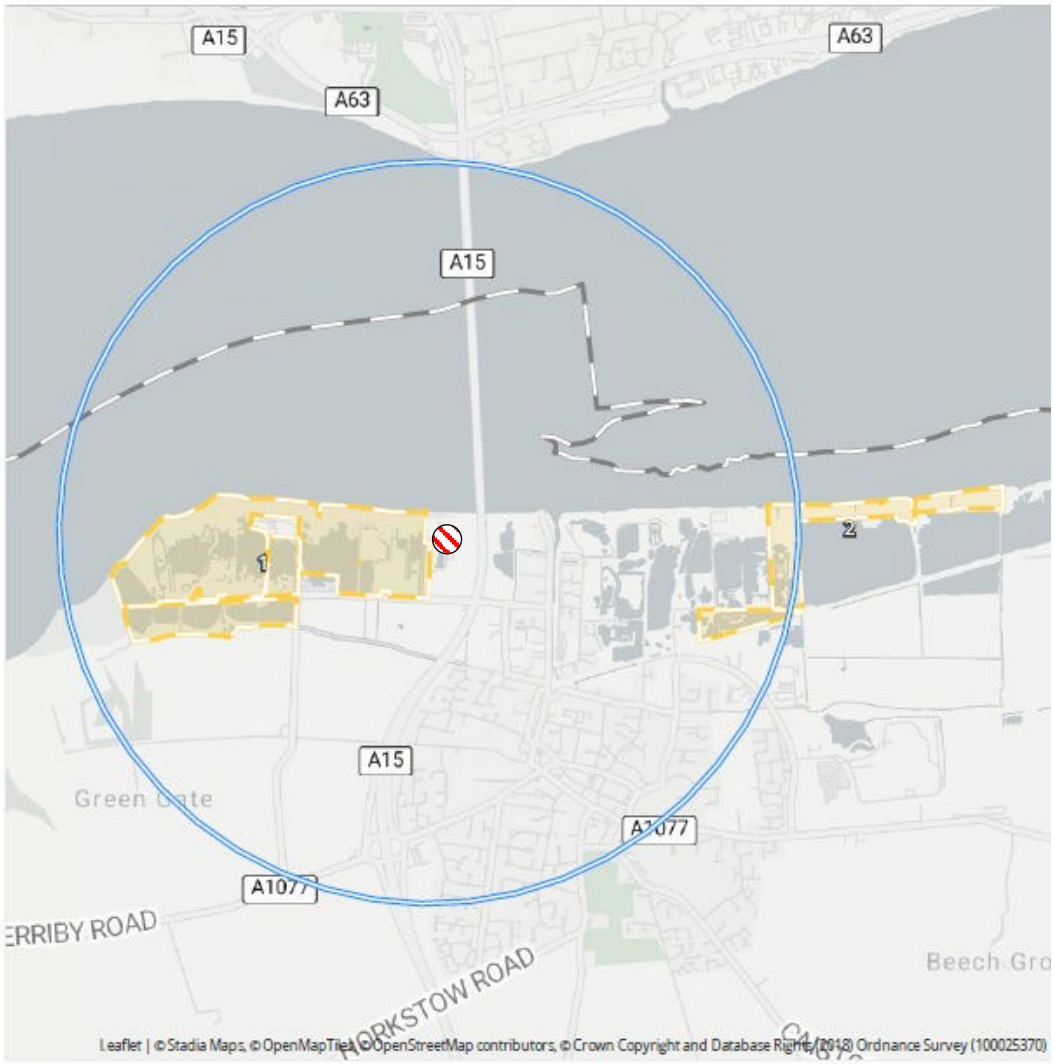

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Figure 5:Natural England Priority Habitats Map.

KEY

Application Site

Space restrictions on the map may result in some sites not being labelled.

- Coastal saltmarsh
- Eutrophic standing waters
- Intertidal mudflats
- Lowland calcareous grassland
- Lowland fens
- Lowland meadows
- Lowland mixed deciduous woodland
- Reedbeds
- Rivers
- Wet woodland
- Search area
- LERC boundary

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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.

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 lies within Natural Character Area 41 Humber Estuary and is summarised below:

6.3.3.1 The Humber Estuary National Character Area (NCA) focuses on the open and expansive waters of the Humber where it flows in to the North Sea and the adjacent low-lying land. Several major rivers flow into the Humber, including the Trent, Don, Aire, Ouse and Hull, thus draining one-fifth of England. This is a low-lying estuarine landscape, with extensive stretches of intertidal habitats including mudflats, salt marsh and reedbeds, coastal dunes and wetlands along the side of the estuary. The estuary is of international significance, as a Ramsar site and is designated as a Special Protection Area for the large flocks of overwintering, migratory and breeding birds. The estuary is also designated as a Special Area of Conservation for its geomorphology and range of intertidal habitats, its lampreys and breeding colonies of grey seals. The area is particularly important for its dynamic geomorphological processes, the most notable of which form the ever-changing, long, remote Spurn peninsula, now designated as Heritage Coast.

6.3.3.2 The adjacent land has largely been reclaimed, resulting in large fields bounded by ditches, which form high-quality arable cropping land. There is very little woodland in the rural areas, where the many ditches form important networks linking the few other semi-natural habitats.

6.3.3.3 There are strong contrasts within this landscape. Much of it is open and expansive, with long views and tranquil and remote places, such as Spurn Point, Blacktoft and Skitter Ness, or quiet rural areas dominated by farming. These areas contrast with the large towns such as Hull and Immingham, with the industrial complexes, and with the estuary itself which is a busy trading route.

6.3.3.4 Key challenges include integrating the development pressures associated with the towns and ports with the protection and enhancement of the landscape and the internationally significant habitats and species. Rising sea levels are another challenge which, when combined with flood flows in the many big rivers that flow into the estuary, can cause major flood events. Addressing the coastal squeeze that is affecting the important intertidal habitats is another challenge, as is understanding and allowing the natural dynamic estuarine processes, in particular those that shape the Spurn peninsula.

6.3.4 There are no relevant Statements of Environmental Opportunities that are relevant to the Application Site.

6.4 European Protected Species records (relevant to the Application Site)

6.4.1 Badger

- Badger *Meles meles* is recorded within the 2km radius surrounding the Application Site (source – GNLP 2024 and Wold Ecology network pers comm).

6.4.2 Bats

- Currently, there is no pre-existing information on bats at the site.
- There are records of brown long-eared *Plecotus auritus*, noctule *Nyctalus noctula*, Daubenton's bat *Myotis daubentonii*, Nathusius's pipistrelle *Pipistrellus nathusii*, soprano pipistrelle *Pipistrellus pygmaeus* and common pipistrelle *Pipistrellus pipistrellus* within the surrounding 5km radius of the Application Site (source – GNLP 2024 and Wold Ecology network pers comm). Wold Ecology bat records date from 2006 and include over 2000 bat activity surveys.
- There are no known Natural England development licenses relating to bats within 2km of the Application Site (source – www.magic.gov.uk).

6.4.3 Great crested newts

- Great crested newt *Triturus cristatus* is recorded within the surrounding 2km radius with records at:

Location	Distance from site	Direction
Water's Edge	984m	E
source – GNLP 2024 and Wold Ecology network pers comm		

- There are no Natural England eDNA records within 2km of the Application Site (source - https://naturalengland-defra.opendata.arcgis.com/datasets/great-crested-newts-edna-pond-surveys-for-district-level-licensing-england
- There are no Natural England great crested newt class survey licence returns within 2km of the Application Site (source – magic.defra.gov.uk).
- There are no great crested newt Natural England development licenses within 2km of the Application Site (source – www.magic.gov.uk).

6.4.4 Water vole

- Water vole *Arvicola amphibious* is recorded within the 2km radius surrounding the Application Site (source – GNLP 2024 and Wold Ecology network pers comm).

6.4.5 Otter

- Otter *Lutra lutra* is recorded within the 2km radius surrounding the Application Site (source – GNLP 2024 and Wold Ecology network pers comm).

6.4.6 Reptiles

- There are no reptile records within 2km of the Application Site (source – GNLP 2024 and Wold Ecology network pers comm).

7.0 FIELD SURVEY RESULTS

7.1 The following habitat types were recorded within the Application Site (refer to figure 6):

UK Habitat Classification Habitat (level 3)	Level 4 name	Level 4 Code	Level 5 Name	Level 5 Code	Secondary Habitat Code(s)
Modified Grassland	-	-	-	**-**	107, 108

NORTH

Figure 6: UK Habitat Classification Map

g4 - modified grassland

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7.2 Modified grassland

7.2.1 The entire area within the redline boundary provided by the client comprises short, regularly mown amenity grassland. This grassland comprises lush grass that is cut regularly throughout the growing season. It does not appear to be subjected to regular weed removal and applications of fertilisers and herbicides. This habitat has a slight south facing aspect and is well drained and subjected to occasional pedestrian disturbance.

7.2.2 Species composition is relatively poor and botanical species observed includes annual meadow grass *Poa annua*, perennial ryegrass *Lolium perenne*, common ragwort *Jacobaea vulgaris*, white clover *Trifolium repens*, ribwort plantain *Plantago lanceolata*, bristly oxtongue *Helminthotheca echioides*, lesser burdock *Arctium minus*, selfheal *Prunella vulgaris*, cats-ear *Hypochaeris radicata*, hedge parsley *Torilis japonica*, scentless mayweed *Tripleurospermum inodorum* and spear thistle *Cirsium vulgare*. All species are common and widespread in amenity grasslands with a reduced ecological value due to management and soil fertility.

7.2.3 Condition Assessment.

Condition Assessment Criteria		Condition Achieved (Y/N)
1	There must be 6-8 species per m2. If a grassland has 9 or more species per m2 it should be classified as a medium distinctiveness grassland habitat type. **NB - this criterion is essential for achieving moderate condition.**	No
2	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	No
3	Some scattered scrub (including bramble) may be present, but scrub accounts for less than 20% of total grassland area. Note - patches of shrubs with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Yes
4	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	Yes
5	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).	Yes
6	Cover of bracken less than 20%.	Yes
7	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981).	Yes
	Essential criterion 1 achieved (Y/N)	**No**
	Number of criteria passed	**5**

Condition Assessment Result (out of 7 criteria)	Condition Assessment Score	Score Achieved ×/✓
Passes 6 or 7 criteria including passing essential criterion A	Good (3)	
Passes 4 or 5 criteria including passing essential criterion A	Moderate (2)	
Passes 3 or fewer criteria; OR Passes 4 - 6 criteria (excluding criterion A)	Poor (1)	✓

7.2.4 The condition assessment for grassland is poor.

7.3 The following species of fauna were recorded during the field survey:

- Blackbird *Turdus merula*
- Goldfinch *Carduelis carduelis*
- Woodpigeon *Columba palumbus*
- Pied wagtail *Motacilla alba*
- Dunnock *Prunella modularis*
- Carrion crow *Corvus corone*
- Magpie *Pica pica*

8.0 SPECIES APPRAISAL

8.1 The habitats within and surrounding the Application Site are potentially important, and the development area may impact upon mobile species. Consequently, the field survey and preliminary ecological appraisal targeted the following species relevant to the Application Site and proposed development:

- Bats
- Great crested newt
- Badger
- Reptiles
- Birds
- Hedgehog

8.2 Bats

8.2.1 Legislation

8.2.1.1 All bats and their roosts are fully protected under the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000) and are further protected under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

8.2.1.2 The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, provision 43 states an offence is committed if a person:

(a) Deliberately captures, injures, or kills any wild animal of a European protected species (i.e. bats),
(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.

8.2.1.3 Section 9 of the Wildlife and Countryside Act (1981) states:

- It is an offence for anyone without a licence to kill, injure, disturb, catch, handle, possess or exchange a bat intentionally. It is also illegal for anyone without a licence to intentionally damage or obstruct access to any place that a bat uses for shelter or protection.

8.2.1.4 Bat roosts are protected throughout the year, whether or not bats are occupying a roost site.

8.2.2 Field Survey Methodology

8.2.2.1 The daytime assessment identified whether the site had any signs of occupancy and/or bat usage. This took the form of a methodical external search for actual roosting bats and their signs. Specifically, the visual survey involved the following:

8.2.3 Field Survey Results

8.2.3.1 No trees, buildings or other structures with potential to support roosting bats occur within the boundaries of the Application Site. Consequently, the impact to roosting bats within trees is considered to be neutral.

8.2.4 **Site Status Assessment**

8.2.4.1 As no roost sites are present within the site, the impact to roosting bats is considered to be **neutral**.

8.2.4.2 Wold Ecology concludes that habitats within 3km comprise primary and secondary bat habitats and habitat features including tree lines, hedgerows, scrub, watercourses and woodlands which are important habitat features. These primary and secondary bat habitats are located within 100m of the Application Site and are connected to the Application Site by /riparian habitats/scrub and tree cover; these habitats are considered to have moderate suitability for commuting and foraging bats. Habitats within 3km of the Application Site are considered to be important to the favourable population status of local bat populations. However, these habitats will remain and due to the small scale nature of the development, the impact to foraging and commuting bats is considered to be **neutral**.

8.2.4.3 Primary and secondary bat habitats in relation to core sustenance zones

Bat species	Primary habitats/features	Secondary habitats
Noctule		Found in a range of habitats foraging in the open or often over trees, pasture and water
Leisler's	Sympathetically managed pasture appears to be a preferred foraging habitat in both Great Britain and Ireland (Shiel and Fairley, 1999; Waters et al., 1999), Use is also made of woodland edges and tree-lined roads (Waters et al., 1999; Russ and Montgomery, 2002).	Drainage channels, lakes, rivers, canals, coniferous forests, parkland
Common pipistrelle	The common pipistrelle bat forages over sympathetically managed grazed pasture and deciduous woodland.	
Soprano pipistrelle	The soprano pipistrelle bat is frequently reported to make particular use of riparian habitat (Davidson-Watts and Jones, 2006; Nicholls and A. Racey, 2006; Lintott et al., 2016	In woodlands edges
Nathusius's pipistrelle	Riparian habitats, large freshwater lakes, estuaries and canals. Broad-leaved & mixed woodland edges and parkland.	Managed gardens and fields around lakes
Whiskered bat	Studies indicate a preference for, mixed or broadleaved woodland, hedgerows, sympathetically grazed pasture riparian vegetation and wetlands.	Orchards
Brandt's bat	Woodland, particularly damp areas close to water (Taake, 1984).	Sympathetically grazed pasture.
Brown long-eared bat	The species is strongly associated with trees, particularly broadleaved preferring woodland with a cluttered understorey, (Murphy *et al,* 2012)	Will forage in mixed woodland and also forages around trees in more open habitats, including parks, orchards and gardens (Dietz and Keifer, 2016).
Natterer's bat	The species is commonly associated with trees, particularly broadleaved woodland, but also makes use of tree-lined river corridors, trees in parkland, and hedgerows adjacent to pasture (Parsons and Jones, 2003; Smith and Racey, 2008; Zeale et al., 2016).	It also forages over grassland
Daubenton's bat	The species is strongly associated with riparian habitats. It prefers large waterways with abundant woodland in the local environment (Langton et al., 2010) and, at least in upland riverine environments, it appears to select locations with trees on both banks (Warren et al., 2000)	Also forages in woodland
Alcathoe bat	Little evidence on its habitat preferences in Great Britain. However, the species is usually captured in areas with extensive semi-ancient woodland ((Jan et al., 2010; Daniel Whitby, pers. comm.); Daniel Whitby, pers. comm.).	No specific needs known

8.2.5 Biodiversity Gains and Recommendations

8.2.5.1 Specially designed bat boxes can be located on site. Schwegler Bat Boxes are recommended and well tested boxes. The following bat boxes provide additional roost habitats and are available from Wold Ecology:

- Bat Tube (**1FR** and **2FR**) system. The tube is designed to meet behavioural requirements of the types of bats that roost in buildings i.e. pipistrelle spp. This design can be installed flush to external walls and beneath a rendered surface.

8.2.5.2 The majority of these boxes are self-cleaning as they are designed so that the droppings fall out of the entrance. This reduces the possibility of smell during the summer months. For more information on designs and installation of bat boxes see: www.schwegler-natur.de and www.bct.org.uk.

8.2.5.3 Wold Ecology recommends that at least 1 bat box is sited on the new building on site. Bat boxes should be erected on south, east or west elevations; 3-5 metres above ground level or close to roof lines.

8.2.6 Lighting

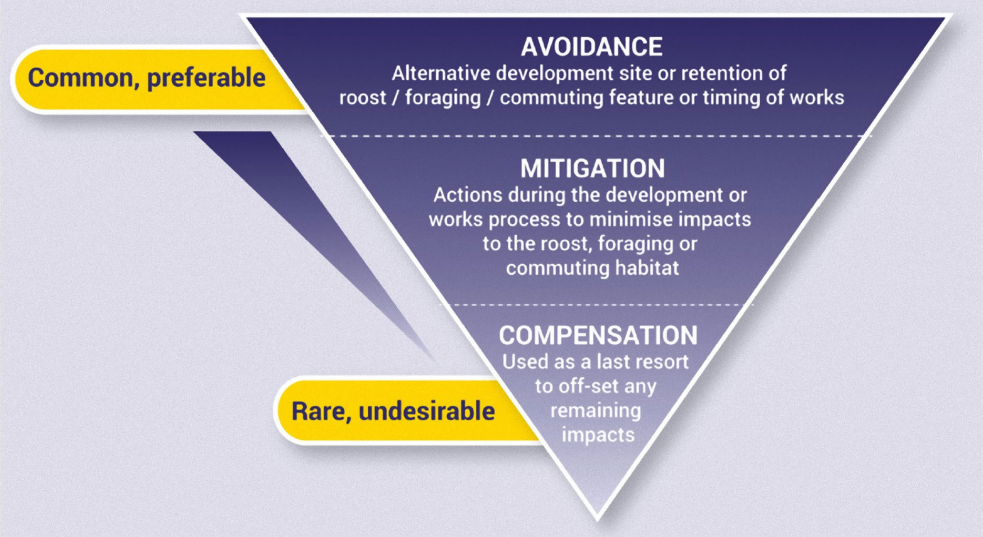
8.2.6.1 Illuminating a bat roost can cause disturbance and this may result in the bats deserting the roost, or even becoming entombed within it. Lighting would therefore be considered an obstruction under the legislation protecting bats and their roosts. Light falling on a roost access point will at least delay bats from emerging, and this shortens the amount of time available to them for foraging.

8.2.6.2 In addition to causing disturbance to bats at the roost, artificial lighting can also affect the feeding behaviour of bats. Many night-flying species of insect that bats hunt are attracted to light, especially those light sources that emit an ultraviolet component (Light Emitting Diodes (LEDs) have removed this) or have a high blue spectral content (this can include LEDs).

8.2.6.3 The slower-flying, broad winged species (relevant to the north of England) have been shown to avoid commuting and foraging routes illuminated with a variety of different street luminaires such as:

- Brown long-eared.
- Myotis species (which include Brandt's, whiskered, Daubenton's and Natterer's).

8.2.6.4 The mitigation hierarchy applies to lighting design: impacts to biodiversity should be avoided in the first instance through design and where this has been clearly demonstrated not to be possible, appropriate mitigation needs to be put in place. Compensation is the least desirable option, so all other avenues should first be explored and ruled out. In parallel, opportunities to design lighting betterment for biodiversity should be sought wherever possible. Subsequently, planning authorities should seek sufficient information to provide confidence that the mitigation hierarchy has been appropriately applied.



8.2.6.5 It is recommended that a competent lighting consultant is employed to design a lighting plan based on the following principles highlighted in the 'Bats and Artificial Lighting' at Night (BCT and Institution of Lighting Professionals, 2023):

- All luminaires should lack UV elements when manufactured. Metal halide, compact fluorescent sources should not be used
- LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability
- A warm white light source (2700Kelvin or lower) should be adopted to reduce blue light component
- Light sources should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone, 2012)
- Internal luminaires can be recessed (as opposed to using a pendant fitting) where installed in proximity to windows to reduce glare and light spill Waymarking inground markers (low output with cowls or similar to minimise upward light spill) to delineate path edges.
- Column heights should be carefully considered to minimise light spill and glare visibility. This should be balanced with the potential for increased numbers of columns and upward light reflectance as with bollards.
- Only luminaires with a negligible or zero Upward Light Ratio, and with good optical control, should be considered.
- Luminaires should always be mounted horizontally, with no light output above 90° and/or no upward tilt.
- Where appropriate, external security lighting should be set on motion sensors
- and set to as short a possible a timer as the risk assessment will allow. For most general residential purposes, a 1 or 2 minute timer is likely to be appropriate.
- Use of a Central Management System (CMS) with additional web-enabled devices to light on demand.
- The use of bollard or low-level downward-directional luminaires is strongly discouraged. This is due to a considerable range of issues, such as unacceptable glare, poor illumination efficiency, unacceptable upward light output, increased upward light scatter from surfaces and poor facial recognition which makes them unsuitable for most sites. Therefore, they should only be considered in specific cases where the lighting professional and project manager are able to resolve these issues.

- Only if all other options have been explored, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed. However, due to the lensing and fine cut-off control of the beam inherent in modern LED luminaires, the effect of cowls and baffles is often far less than anticipated and so should not be relied upon solely.

8.2.6.6 At this site, new lighting design will ensure lights will **not** be mounted where they will shine directly on to bat boxes, or the surrounding wetland habitat used by foraging and commuting bats. A light intrusion lux level besides wetland habitats along the west boundary will be 1 lux or below.

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

8.3 Great crested newt.

8.3.1 Legislation

8.3.1.1 The great crested newt is protected under European and British legislation. Under European legislation it is protected under EC Directive (92/43/EEC) 'The Conservation of Natural Habitats and of Wild Fauna and Flora', being listed under Annexes IIa and IVa. This is implemented in Britain under the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000) and is further protected under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. This prohibits the intentional killing of newts, the deliberate taking or destruction of eggs, damage or destruction of a breeding site or resting place, intentional/reckless damage to or obstruction of a place used for shelter or protection, possession of a great crested newt and any form of trade of great crested newts.

8.3.1.2 Under British legislation, the great crested newt is given full protection under section 9 of the Wildlife and Countryside Act 1981 (as amended). This Act transposes into UK law the Convention on the Conservation of European Wildlife and Natural Habitats (commonly referred to as the 'Bern Convention'). This prohibits the intentional killing, injuring or taking, possession or disturbance of great crested newts whilst occupying a place used for shelter or protection and the destruction of these places. Protection is given to all stages of life (e.g. adults, sub-adults, larvae, and ovae).

8.3.1.3 In combination the above legislation prohibits the following:

- Intentionally kill, injure or take a great crested newt;
- Possess or control any live or dead specimen or anything derived from a great crested newt;
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt;
- Intentionally or recklessly disturb a great crested newt while it is occupying a structure or place which it uses for that purpose;
- Deliberately capture or kill a great crested newt;
- Deliberately disturb a great crested newt;
- Deliberately take or destroy eggs of a great crested newt;
- Damage or destroy a breeding site or resting place of a great crested newt.

8.3.1.4 The great crested newt is therefore described as 'fully protected'.

8.3.2 Field Survey Methodology

8.3.2.1 A habitat assessment was completed on the proposed development area and surrounding land (250 metres radius) accessible at the time of the survey. The assessment combined Great Crested Newt Mitigation Guidelines (English Nature 2001) and Evaluating the Suitability of Habitat for the Great Crested Newt (R. S. Oldham, J. Keeble, M. J. S. Swan and M. Jeffcote, undated) methodology.

8.3.2.2 The entire Application Site was assessed for its potential to support great crested newts, whilst conducting the field survey. In addition, aerial photographs, maps and physical searches of the surrounding landscape identified how the Application Site is connected to ponds within the locality and potentially, great crested newt populations.

8.3.2.3 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.

8.3.3 Field Survey Results

8.3.3.1 Multiple wetland areas occur within 250m of the Application Site, in association with former clay pits which are now managed as nature reserves. These habitats all contain fish populations and are considered unlikely to support great crested newts which show a high level of intolerance to fish, primarily as fish predate great crested newts and their larvae. Additionally, fish negatively alter prey composition, aquatic macrophyte growth and water quality all important for great crested newt biology.

8.3.3.2 No ponds or permanent water bodies suitable for breeding great crested newts were observed within the Application Site, the field survey and analysis of maps suggests that the nearest suitable pond is located over 500m from the Application Site. The wider habitat is largely well drained except for flooded clay pits containing fish. Fish ponds are typically sub-optimum great crested newt habitat and have reduced potential for great crested newt; they are not considered to be of any significance to the species. Key attributes to the decreased probability of great crested newts being present within fish ponds are:

- High density of stocked fish, which predate great crested newt larvae, eggs, and adults. The London Essex and Hertfordshire Amphibian and Reptile Trust state that 'Despite the natural protection of a poisonous secretion which makes the adults unpalatable to most predators, the larvae are highly vulnerable to fish predation. Entire colonies can be impacted upon by the introduction of fish'. It is unlikely that fishponds support great crested newts.
- Sticklebacks were noted within the ponds. Sticklebacks are voracious predators of great crested newt larvae (Frazer 1989, & Jehle et al 2011), which influences breeding site selection and distribution (Cooke & Frazer 1976, & Jehle et al 2011).
- Decrease macrophyte growth due to fish disturbance and foraging and decreased water turbidity.
- Increased water turbidity due to fish disturbance and associate high nitrate input.

- Fish likely to predate large numbers of the invertebrates important for great crested newt reproduction and adult diet.
- Poor vegetation structure, creating cold micro-climate and lack of sunlight penetration.

8.3.4 Site Status Assessment

8.3.4.1 Whilst it is not always possible to demonstrate site absence from a single site survey, with the evidence collected from a habitat survey and desk top study, 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:

- No records of great crested newt exist within 500m of the Application Site.
- There is no current knowledge of great crested newts within the Application Site.
- No suitable ponds exist within the Application Site.
- No ponds were observed within 250m of the Application.
- The Application Site primarily comprises short grassland 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 sub-optimum 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 grassland, buildings and hard standing dominated by sub-optimum habitat

8.3.5 **Wold Ecology does not recommend any further surveys for great crested newts.**

8.3.6 However, due to the large numbers of wetlands in the area, there is the risk of other amphibians tolerant of fish (e.g. common toad *Bufo bufo*) being present within the surrounding area, it is therefore recommended that an amphibian method statement is implemented.

8.3.7 Amphibian Method Statement

8.3.7.1 This method statement (MS) has been designed to ensure the avoidance of disturbance, killing or injuring amphibians by taking all reasonable steps to ensure works do not impact upon amphibians. This Method Statement will ensure that:

- Reasonable steps are taken to ensure that the risk of amphibians being killed or injured is minimal.
- Amphibians are not to be significantly disturbed by the works.

8.3.7.2 Summary of method statement:

- Hand search.
- Toolbox talk, and safe working practices employed.

- Safe working practices

8.3.7.3 A hand search will be undertaken each morning prior to the start of any ground works and the following will be implemented:

- A suitably qualified, experienced, and licensed ecologist shall be appointed to act as an ecological clerk of works (ECoW) to supervise all work associated with site clearance and to ensure that the recommendations in this method statement are implemented correctly.
- During the active growing period, the vegetation within the construction zone will receive a careful application of an approved herbicide. This is in order to reduce shelter and cover; thus, making the construction zone poor quality for amphibians by reducing areas of shelter, foraging grounds, and leaving amphibians open to predation and desiccation.
- Cutting vegetation by hand, strimming, or mowing of vegetation may be acceptable as a technique to encourage amphibians to move out of habitats. However, there is little evidence to show that this is very effective. Vegetation cutting is acceptable so long as amphibians are not endangered; generally, there is reduced likelihood of encountering amphibians exposed and above ground during the day, but it is recommended that to minimise chances of killing amphibians where vegetation is dense, cutting should be carried out during periods of hot, dry weather and to leave a sward height of around 15cm.
- Prior to machinery entering the site, the access route and any optimum areas of terrestrial amphibian habitat (log piles, rubble etc.) will be hand searched by the ECoW to look for any resting amphibians.
- Once the areas have been hand searched and after confirmation by the ECoW that no amphibians are present the machinery can enter site and begin site clearance.
- Excavated materials—these will not be tipped onto areas of potential value to amphibians. Tipping areas are to be approved and searched by the ECoW prior to being used.
- No destructive works can be completed if the overnight air temperature is below 5^0C prior to the works commencing. The ECoW will advise on whether the prevailing weather conditions are suitable for the works proposed to be completed.
- The contractors and those involved with building works should take care not to provide temporary refugia for amphibians. Temporary refugia include stacking of sundries in plastic bags, leaving piles of rubble and the use of tarpaulins/plastic sheets. These all should be stacked on pallets (Off-Ground).
- Any trenches or deep pits within the development site should be infilled on the same day, securely covered up or provide a means of escape should amphibians enter. A means of escape could include a roughened plank of wood or similar, placed in the trench as a ramp to the surface. This is particularly important if the trench/pit is liable to fill with water.
- Any trenches/pits will be inspected each morning to ensure no amphibians have become trapped overnight.
- Amphibians that are encountered should be released into adjacent well vegetated habitats where they are not open to predation. Amphibians should not be put into ponds.
- Open pipework left overnight should be blanked off at the end of each working day.

8.4 Birds

8.4.1 Birds are afforded various levels of protection and levels of conservation status on a species by species basis. The most significant general legislation for British birds lies within Part 1 of the Wildlife and Countryside Act 1981 (as amended). Under this legislation, it is an offence to, kill, injure or take any wild bird, take, damage or destroy the nest of any wild bird while that nest is in use or being built, take or destroy an egg of any wild bird.

8.4.2 Schedule 1 Birds

8.4.2.1 Schedule 1 birds are rare or scarce species afforded the same protection as above (8.4.1.1), but also have additional protection under Part 1 of the Wildlife and Countryside Act 1981 (as amended). This further protection protects these species from being intentionally or recklessly disturbed whilst nesting, either at or close to the nest site.

8.4.3 Planning consent for a development does not provide a defence against prosecution under this act.

8.4.4 Field Survey Methodology

8.4.4.1 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.

8.4.4.2 The 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*.

8.4.4.3 Wold Ecology assessed the site for schedule 1 listed species recorded having bred or attempted to breed in Yorkshire (Wold Ecology, GNLP), 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.

8.4.5 Field Survey Results

8.4.5.1 Schedule 1 Listed Birds

8.4.5.1.1 Summary of the Application Site's suitability to support schedule 1 birds:

Species recorded within 2km	Suitability of Application Site
Bittern *Botaurus stellaris*	No reedbed habitat present within the boundaries of the Application Site. Adjacent areas of reedbed screened from the site by fencing and dense scrub. Local birds likely habituated to low level disturbance associated with the existing garden centre and brick works. Mowing of the grassland ensures this habitat is of negligible value to foraging birds.
Marsh Harrier *Circus aeruginosus*	
Bearded Tit *Panurus biarmicus*	
Hobby *Falco subbuteo*	No suitable trees present within ore adjacent to the Application Site for nesting. Mowing of the grassland

	ensures this habitat is of negligible value to foraging birds.
Cetti's Warbler *Cettia cetti*	No suitable habitat within the Application Site. Potential to nest in adjacent scrub and wetland habitats, this is fenced off from the Application Site. Local birds likely habituated to low level disturbance associated with the existing garden centre and brick works. Mowing of the grassland ensures this habitat is of negligible value to foraging birds.
Barn Owl *Tyto alba*	No cavities suitable for nesting within or adjacent to the site. Mowing of the grassland ensures this habitat is of negligible value to foraging birds.

8.4.5.2 None-schedule 1 birds - breeding birds

8.4.5.2.1 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. The small sized site composing short amenity grassland bounded by buildings and regular disturbance is of negligible value to nesting birds.

8.4.5.3 None-schedule 1 birds - wintering birds

8.4.5.3.1 The Application Site is not considered to be valuable to wintering birds like wildfowl and waders. The Application Site is too enclosed with buildings, fencing and is bounded by a garden centre and brick works causing regular disturbance, reducing the value of the habitat for these species groups.

8.4.5.3.2 The proposed works are not considered to have a negative impact on birds using the adjacent Humber Estuary as the Application Site is screened by existing buildings to the north and east, as well as tall scrub to the west, reducing visual disturbance. The site lies 75 metres from the estuary and is only likely to generate low levels of noise during the construction and operation phases. Consequently, due to the distance of 75m to the estuary and small scale development proposal in an existing commercial area, noise impacts are considered to be negligible.

8.4.6 **Wold Ecology does not recommend any further surveys for birds.**

8.4.7 Biodiversity Gains and Recommendations

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

Name	Description	Number
Schwegler swift box #16S	Building box for eaves	2

8.4.7.4 Boxes should be placed so that the entrance does not face the prevailing wind, rain and strong sunlight. The sector from north to southeast should be used, with south facing boxes positioned in more shaded areas.

8.4.7.5 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.

8.5 Badgers

8.5.1 Legislation

8.5.1.1 Badgers and their setts are protected under the Protection of Badgers Act 1992, which makes it illegal to wilfully kill, injure or take badgers or to interfere with a badger sett, obstructing access to or any entrance of a sett, causing a dog to enter a sett, disturbing a badger when it is occupying a sett, to dig for a badger, to cruelly ill-treat a badger or to possess or control a live badger. Interference with a badger sett is an offence under Section 3 of the Act. This includes recklessly damaging or obstructing a sett whilst clearing land for development.

8.5.1.2 Due to the sensitive nature of publishing badger information in the public domain, details of the badger survey within this report are restricted.

8.5.2 Field Survey Methodology

8.5.2.1 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.

8.5.2.2 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, dung pits and foraging activity
- Badger prints, hairs and paths
- Evidence of badger

8.5.3 Field Survey Results.

8.5.3.1 No main setts, annexe setts, subsidiary setts or outlier setts were located within 50 metres of the Application Site 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. Suitable habitat outside of the Application Site was also extensively searched where accessible.

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

8.6 Reptiles

8.6.1 Legislation

8.6.1.1 The legislation relating to the protection of the more common reptiles (adder *Vipera berus*, grass snake *Natrix helvetica*, common lizard *Zootoca vivipara* and slowworm *Anguis fragilis*) in Britain is contained mainly within the Wildlife and Countryside Act (1981) as amended by the Countryside and Rights of Way Act (2000). Their inclusion on Schedule 5 gives 'partial protection' (i.e. only parts of section 9 apply). Under the Act it is an offence to;

- Intentionally (or recklessly) kill or injure commoner reptile species.

8.6.1.2 The less common reptile species such as sand lizard *Lacerta agilis* and smooth snake *Coronella austriaca* have a higher level of protection under the Wildlife and Countryside Act (1981). However, these species will not be present within the Application Site, owing to their restricted southerly British distribution and the lack of suitable habitat.

8.6.1.3 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) and is further protected under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. 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.

8.6.2 Field Survey Methodology

8.6.2.1 No direct observations or field signs of reptiles was recorded on site. A full walkover was undertaken to assess the sites potential to support reptiles.

8.6.3 Field Survey Results

8.6.3.1 The desktop study did not identify any reptile records within 2km of the Application Site. Reptiles are moderately localised in North Lincolnshire.

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

- There are no records of reptiles within 2km of the Application Site.
- The Application Site and adjacent habitats are heavily disturbed on a daily basis.
- 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.

8.6.4 **Wold Ecology does not recommend any further surveys for reptiles.**

8.7 Hedgehog

8.7.1 Legislation

8.7.1.1 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.

8.7.2 Field Survey Methodology

8.7.2.1 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.

8.7.2.2 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.

8.7.2.3 The following field signs will indicate the presence of hedgehogs:

- Nests within dense vegetation
- Hedgehog droppings and prints
- Road causalities.

8.7.3 Field Survey Results.

8.7.3.1 No active or unused hedgehog nests were found within the Application Site. The Application Site is too open to support nesting behaviour, although may have limited value to foraging individuals. The abundance of alternative habitat in the locality makes dependence on this small site negligible.

8.8 Invasive species

8.8.1 Legislation

8.8.1.1 If invasive plants listed under schedule 9 of the wildlife and countryside act are identified on site, the site owner has a responsibility to prevent them spreading into the wild or causing a nuisance/damage.

8.8.1.2 You must not plant or otherwise cause to grow in the wild any plant listed on schedule 9 of the Wildlife and Countryside Act 1981.

8.8.2 Field Survey Result

8.8.2.1 No invasive species were observed during the field survey. However, this report should not be relied upon as definitive evidence of absence of INNS. This site presents a low risk of supporting undetected INNS based on the following factors:

- There are no potential sources of infection close by
- No recent earthworks or management which may have obscured viable material.
- There is no potential for third party tipping of material on site.
- The Application Site is primarily in private ownership.
- Optimal survey season

8.8.2.2 Should further assurances be needed in relations to INNS, a dedicated Invasive Weed Survey should be commissioned

9.0 HABITATS APPRAISAL

9.1 Biodiversity Action Plans (BAP) Habitats of Principal Importance for the Conservation of Biological Diversity

9.1.1 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 numerous habitats that have been listed as priorities for conservation action. A list of these UK BAP species and habitats can be found at http://jncc.defra.gov.uk/page-5706

9.1.2 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.

9.1.3 In summary, none of the following irreplaceable habitats or UKBAP Habitats (which meet the UKBAP Habitat criterion) were 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	**N**
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**
Marine Habitats		**N**
Irreplaceable Habitats	Ancient woodland	**N**
	Ancient and veteran trees	**N**
	Blanket bog	**N**
	Limestone pavements	**N**
	Coastal sand dunes	**N**
	Spartina saltmarsh swards	**N**
	Mediterranean saltmarsh scrub	**N**
	Lowland fens	**N**

9.2 Management planning

9.2.1 It is recommended that a detailed Ecological Construction Management Plan and a Wildlife Enhancement Plan is produced in order to protect, maintain and enhance the sites ecological value.

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11.0 APPENDICES

11.1 Appendix 1 – Summary of desktop study

Organisation.	Response Summary.	Date.
Natural England.	Local designations.	September 2024
Natural England.	UKBAP species and habitats within 2 km.	September 2024
Greater Lincolnshire Nature Partnership	Species lists within 2 km.	September 2024
www.magic.gov.uk	European Protected species licenses within 2km.	September 2024
Wold Ecology network.	Species lists up to 5 km from the Application Site.	2006 – to present day.

11.2 Appendix 2 - 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)	S9 (5)		
Adder V*ipera berus*			✓*				✓		
Common lizard *Zootoca vivipara*			✓*				✓		
Grass snake *Natrix helvetica*			✓*				✓		
Slow worm *Anguis fragilis*			✓*				✓		
Smooth snake *Coronella austriaca*			✓	✓	✓	✓	✓	✓	
Sand lizard Lacerta agilis			✓	✓	✓	✓	✓	✓	
Great Crested Newt *Triturus cristatus*			✓	✓	✓	✓	✓	✓	
Natterjack Toad *Epidalea calamita*			✓	✓	✓	✓	✓	✓	
All UK bats *Chiroptera*			✓	✓	✓	✓	✓	✓	
Water vole *Arvicola amphibious*			✓	✓	✓	✓	✓		
Otter *Lutra lutra*			✓	✓	✓	✓	✓	✓	
Dormouse *Muscardinus avellanarius*			✓	✓	✓	✓	✓	✓	
Badger *Meles meles*									✓
Red Squirrel *Sciurus vulgaris*			✓	✓	✓	✓	✓		
Pine Marten *Martes martes*			✓	✓	✓	✓	✓		
Scottish Wildcat *Felis silvestris*			✓	✓	✓	✓	✓	✓	
White-clawed crayfish *Austropotamobius pallipes*			✓				✓		
All Nesting birds	✓								
Specific Nesting birds i.e. Barn Owl, Black Redstart	✓	✓							

S = Section
() = Paragraph
EPS = European Protected Species i.e. listed under Regulation 40 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019
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 offense 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 43 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. 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 badges
- 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.

11.3 Appendix 3 - Staff Profiles

Field Surveyor Profile – Daniel Lombard B Sc. (Hons), MCIEEM.

Job title: Senior Ecologist.

Career Summary.

- Daniel has spent all his working life in the environmental sector. He is an experienced and competent field ecologist with proven skills in species identification across a range of biota and an in-depth appreciation of many aspects of biodiversity, ecology and biology.
- Upon leaving University Daniel volunteered with a range of conservation organisations including The Wildlife Trust, North York Moors National Park, BTO and RSPB.
- Daniel is currently involved in a number of local projects in which he has volunteered his time and resources. He is a member of Filey Bird Observatory and acts as the recorder for both Dragonflies and Butterflies within the group.
- Daniel acts as an ecologist giving free advice to the Yorkshire branch of Butterfly Conservation including habitat management plans and field surveys. He also contributes to the BTO bird ringing scheme, helping in the scientific study birds.
- Daniel also contributes to national invertebrate, bird, fungi and mammal recording schemes.

Project Experience.

- Daniel has undertaken over 400 bat activity surveys since 2010 including dawn and dusk surveys at a range of sites across England.
- Daniel specialises in reptile, amphibian, bird and mammal surveys and has undertaken a wide range of surveys for species including otter, water vole, badger, adder, grass snake, common lizard, slow worm and great crested newt. This includes writing and contributing towards mitigation strategies and habitat enhancements where appropriate. He has also contributed to white clawed crayfish surveys.
- Daniel has undertaken over 200 Preliminary Ecological Appraisals and EIA assessments.
- Daniel has undertaken and helped supervise a seabird surveys on the North Yorkshire coastline at an internationally important seabird colony on the behalf or Natural England and the Environment Agency. This has involved leasing with a variety of conflicting stakeholders to mitigate against potential adverse impacts to the colony.

Field Surveyor Profile – Abi Catherall M Sc.

Job title: Ecologist

Career Summary.

- Abi has spent all her working life in the environmental sector. During her degree, she assisted with ecological surveys particularly for major infrastructure projects. Upon leaving university, Abi worked for the local

authority assisting with the management and maintenance of a scenic coastal multi-user trail.

- Abi has volunteered with a range of conservation organisations including The Wildlife Trust, North York Moors National Park and the Forestry Commission.
- Abi is currently involved in a number of local bat projects and is an active member of the North Yorkshire and East Yorkshire Bat Groups. She helps with a range of surveys, walks, bat box checks and hibernation visits.

Project Experience.

- Abi has undertaken over 150 bat activity surveys since 2020 including dawn and dusk surveys at a range of sites across England.
- Abi has undertaken a wide range of surveys for species including dormice, water vole, badger, adder, grass snake, common lizard, slow worm, and great crested newt.
- Abi is also experienced in GIS mapping and is an integral part of the Wold Ecology team.

11.4 Appendix 4 – 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 UK Habitat Classification survey are compared with those listed in nature conservation legislation i.e. the Wildlife and Countryside Act 1981, as amended, and the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

In addition, the species known to occur on the site as a result of the desk study and UK Habitat Classification 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 cannot be resolved during the desk study, UK Habitat Classification survey and preliminary ecological appraisal for any reason, including the following:

- The development is near a designated site and consultation with the relevant regulator is required 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 UK Habitat Classification survey and preliminary ecological appraisal 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 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.