

Land off Kings Road, Immingham

Preliminary Ecological Appraisal

Air Products

AECOM Project Number: 60673509

August 2022

Quality information

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Executive Summary

<p>Site Details</p>	<p>Land off Kings Road, Immingham (central grid reference TA 198 146)</p> <p>Total Site equating to approximately 21 hectares (ha)</p>
<p>Scheme Details</p>	<p>Construction of an ammonia storage and production facility</p>
<p>Ecological Features that may be affected by the Scheme</p>	<p><u>Designated Sites:</u></p> <ul style="list-style-type: none"> • Humber Estuary Special Protection Area (SPA)/ Special Area of Conservation (SAC)/ Ramsar/ Site of Special Scientific Interest (SSSI) • Laporte Road Brownfield Site Local Wildlife Site (LWS) <p><u>Habitats:</u></p> <ul style="list-style-type: none"> • Abandoned arable cultivated farmland currently comprising overgrown tall poor semi-improved grassland and scattered scrub, species-poor unmanaged hedgerows and ditches overgrown with common reed. The hedgerows and ditches provide important habitat for wintering birds. • Some development enabling work has been undertaken in the northern section of the Site in 2014/2015 to create a new road access off Kings Road, and to install drainage. <p><u>Protected Species:</u></p> <ul style="list-style-type: none"> • Breeding birds – mosaic of suitable habitats within the Site boundary (grassland and scrub) suitable to support nesting birds. • Otter and water vole – ditches on the Site hold some suitability to support these species however the foraging resource is considered to be sub-optimal because they are heavily overgrown with common reed (<i>Phragmites australis</i>).
<p>Recommendations for further survey and assessment</p>	<ul style="list-style-type: none"> • Habitats Regulations Assessment (HRA) – habitats within the Site are unsuitable to support SPA/ Ramsar waterbirds because of the vegetation is tall and no visual connectivity with Humber Estuary. The land is therefore not considered to be functionally linked to the Humber Estuary SPA/ Ramsar. However, there may be potential for indirect effects on qualifying habitats within the Humber Estuary SAC/ Ramsar via changes in air quality arising from the Scheme. • Breeding birds – five surveys between March and June to identify and map breeding species, and to inform avoidance/ mitigation/ enhancement • Otter and water vole – surveys of ditches within the Site boundary in April/ May or September
<p>Recommendations for Mitigation</p>	<ul style="list-style-type: none"> • Retention of ditches, reedbed habitat and hedgerows where possible. • Enhancement of retained habitat by the introduction of floristically diverse and tussocky. • Creation of species-rich grassland on ditch banks (where retained) • Likely to require mitigation for breeding birds during construction phase (including the requirement to remove vegetation/undertake initial site clearance works outside the breeding bird season March to September inclusive).
<p>Opportunities for Biodiversity Enhancements</p>	<p>There are likely to be limited opportunities for biodiversity enhancements within the Site boundary given the industrial nature of the Scheme and the various safety requirements that will be embedded within the design of the infrastructure/ buildings.</p> <p>Opportunities to meet the planning policy and legislative requirements in respect of biodiversity enhancement (see Appendix B) should be explored as the Scheme design progresses.</p>

1. Introduction

Background

- 1.1 This Preliminary Ecological Appraisal report (PEAR) has been prepared by AECOM on behalf of Air Products (the client), to assess the ecological constraints in connection with the proposed Immingham Green Energy Terminal (IGET) (hereafter referred to as the Scheme). The Scheme is located adjacent to Kings Road, Immingham, as shown by the red line boundary on Figure 1 in [Appendix A](#). All land situated within this red line boundary is hereafter referred to as the Site.
- 1.2 The assessment of ecological constraints has been undertaken with reference to current good practice¹ and forms part of the technical information commissioned by Air Products in connection with the Scheme. The PEAR addresses relevant wildlife legislation and planning policy as summarised in [Appendix B](#) and is consistent with the requirements of *British Standard 42020:2013 Biodiversity. Code of Practice for Planning and Development*.
- 1.3 This PEAR is intended for advice in respect of Scheme design and construction, site layout and / or site investigation. Further ecological surveys and / or ecological impact assessment (EclA) (including detailed mitigation measures) may be required to support a planning application or to contribute to an Environmental Impact Assessment (EIA) once the Scheme proposals have been finalised and any required surveys have been completed.
- 1.4 At the time of preparing this PEA report, the Scheme was still being developed, therefore and was subsequently extended to include a new jetty, various landside works off Laporte Road and Queens Road respectively and a connecting pipeline. As set out in the Scoping Report which has been prepared for the Scheme, this PEA report pertains only to the land off Kings Road, which is referred to as the 'West Site' in the wider IGET Scheme description.

The Site

- 1.5 The Site is located on the periphery of Immingham Docks and is centred on Ordnance Survey National Grid Reference TA 200146. The Site comprises approximately 21ha of former arable cultivated land bounded (as determined by Google Earth aerial map regression) by industrial land to the north and east, a landfill to the south and the A1173 (Kings Road) to the west.
- 1.6 The Site is identified in the North East Lincolnshire Local Plan² for employment development as Site ELR001 "Imm-Port Enterprise Zone". Some development enabling works were completed on the Site (drainage and road infrastructure) in 2014/ 2015 relating to a planning consent for industrial/ port-related development (Planning Reference: DM/1027/13/OUT), although no further development of the Site has since been progressed.

Purpose of the Preliminary Ecological Appraisal

- 1.7 The approach and methodology followed to inform this PEAR is provided in [Appendix C](#). This PEAR presents ecological information obtained during the following:

¹ CIEEM (2017). *Guidelines for Preliminary Ecological Appraisal, 2nd edition*. Chartered Institute of Ecology and Environmental Management, Winchester.

² North East Lincolnshire Council (adopted 2018) North East Lincolnshire Local Plan 2013 to 2032. Available online at: <https://www.nelincs.gov.uk/assets/uploads/2018/05/20180518-AdoptedLocalPlan2018-WEB.pdf>

- desk-study undertaken during March 2022 to obtain records of designated sites, notable habitats³ and protected and notable species⁴ within 2km of the Site (the area covered by the desk study is hereafter referred to as the Study Area);
- wintering bird survey of the Site undertaken on four dates (17th and 21st February and 17th and 21st March 2022) to determine if waterbirds of international and national importance associated with the Humber Estuary designations could utilise the Site for high tide roosting (i.e. whether it is functionally linked land); and an,
- extended Phase 1 habitat survey of the Site conducted on the 21st March 2022 to determine the presence/potential presence of Important Ecological Features (IEF)⁵.

1.8 The purpose of the PEAR is to provide a high-level ecological appraisal of the Site, specifically to:

- establish ecological baseline conditions and determine the presence of IEFs (or those that could be present), as far as is possible;
- identify potential ecological constraints to the Scheme and make initial recommendations to avoid impacts on IEFs, where possible;
- identify requirements for mitigation, where possible, including mitigation measures that will be required and those that may be required (depending on results of further surveys or final Scheme design);
- establish any requirements for more detailed surveys; and,
- identify any opportunities offered by the Scheme to deliver biodiversity enhancements.

1.9 The methodology followed for undertaking the desk study and field surveys is detailed in [Appendix C](#), including any limitations to the assessment.

³Notable habitats are taken as principal habitats for the conservation of biodiversity listed under Section 41 of the *Natural Environment and Rural Communities Act 2006*; habitats listed under the Lincolnshire Biodiversity Action Plan (BAP); hedgerows identified as being 'important' under the wildlife criteria of the *Hedgerow Regulations 1997*, ancient woodlands and veteran trees.

⁴Notable species are taken as principal species for the conservation of biodiversity listed under Section 41 of the *Natural Environment and Rural Communities Act 2006*; any species listed in an IUCN Red Data Book; and any other species listed under the Lincolnshire BAP.

⁵ Important Ecological Features are habitats, species, ecosystems and their functions and processes that are of conservation importance and could potentially be affected by the Scheme.

2. Ecological Baseline, Constraints and Recommendations

- 2.1 The following sections detail the results of the desk and field-based studies undertaken to inform this PEAR. Where necessary, recommendations for mitigation measures to protect known IEFs, or further surveys to determine the presence or likely absence of IEFs, are provided.
- 2.2 With regard to background ecology data, ‘recent’ records are considered to be those no older than 10 years from the date of the desk study. Records outside of this period are historical and have only been reported where more recent records for a feature do not exist. Exceptions to this are detailed in the appropriate sections below.
- 2.3 In addition to desk-study data requested from the Lincolnshire Environmental Records Centre (LERC), documents pertaining to a planning application on the Site from 2013 were examined for relevant ecological records (Planning Reference: DM/1027/13/OUT). An Environmental Statement was prepared for the application by ECUS in December 2013 and reported the results of a Phase 1 Habitat survey and protected species surveys for breeding and wintering birds, badger, otter and water vole⁶.

Designated Sites

Desk Study

- 2.4 Table 1 summarises the designated sites situated within the Study Area. These are shown in Lincolnshire Desk Study Record Report ([Appendix E](#)).

Table 1. Designated Sites within the Study Area

Designated Site	Reason for Designation	Location of Designated Site ⁷
Statutory		
Humber Estuary Special Protection Area (SPA)	<p>Article 4.1 qualification - bird species regularly occurring in numbers of 1% or more of the Great Britain populations</p> <p><u>Wintering:</u></p> <ul style="list-style-type: none"> - Avocet <i>Recurvirostra avosetta</i> - Bittern <i>Botaurus stellaris</i> - Hen harrier <i>Circus cyaneus</i> - Golden plover <i>Pluvialis apricaria</i> - Bar-tailed godwit <i>Limosa lapponica</i> <p><u>Passage:</u></p> <ul style="list-style-type: none"> - Ruff <i>Philomachus pugnax</i> <p><u>Breeding:</u></p> <ul style="list-style-type: none"> - Bittern <i>Botaurus stellaris</i> - Marsh harrier <i>Circus aeruginosus</i> - Avocet <i>Recurvirostra avosetta</i> - Little tern <i>Sternula albifrons</i> <p>Article 4.2 qualification - bird species regularly occurring in numbers of 1% or more of the biogeographical populations of migratory species</p> <p><u>Wintering:</u></p> <ul style="list-style-type: none"> - Shelduck <i>Tadorna tadorna</i> - Knot <i>Calidris canutus</i> 	1.1 km north-east

⁶ ECUS (2013) *Kings Road Industrial Development, Immingham. Environmental Impact Assessment: Environmental Statement Volume One*. ECUS, Sheffield.

⁷Where designated sites are situated outside of the Site boundary, the distance and direction is given at the closest point of the designated site from the Site

Designated Site	Reason for Designation	Location of Designated Site ⁷
	<ul style="list-style-type: none"> – Dunlin <i>Calidris alpina</i> – Black-tailed godwit <i>Limosa limosa</i> – Redshank <i>Tringa totanus</i> <p>Passage:</p> <ul style="list-style-type: none"> – Knot – Dunlin – Black-tailed godwit – Redshank <p>Article 4.2 qualification – used regularly by over 20,000 waterbirds in any season Area regularly supports 153,934 individual waterbirds⁸ (five-year peak mean 1996/97 – 2000/01) in the non-breeding season.</p>	
Humber Estuary Ramsar	<p>Criterion 1: Site is a representative example of a near-natural estuary with the following component habitats: dune systems and humid dune slacks, estuarine waters, intertidal mud and sand flats, saltmarshes, and coastal brackish/ saline lagoons.</p> <p>Criterion 3: Breeding colony of grey seals (<i>Halichoerus grypus</i>) (at Donna Nook) Breeding natterjack toad <i>Bufo calamita</i> (at Saltfleetby-Theddlethorpe)</p> <p>Criterion 5: Supports a waterfowl assemblage of international importance.</p> <p>Criterion 6: Supports the following species/ populations occurring at levels of international importance: Wintering:</p> <ul style="list-style-type: none"> – Shelduck – Golden plover – Red knot – Dunlin – Black-tailed godwit – Bar-tailed godwit – Common redshank <p>Criterion 8: Migratory river <i>Lampetra fluviatilis</i> and sea lamprey <i>Petromyzon marinus</i></p>	1.1 km north-east
Humber Estuary Special Area of Conservation (SAC)	<p>Habitats that are a primary reason for selection of this site:</p> <ul style="list-style-type: none"> – Estuaries – Mudflats and sandflats not covered by seawater at low tide <p>Habitats and species present as a qualifying feature, but not a primary reason for selection of this site:</p> <ul style="list-style-type: none"> – Sandbanks which are slightly covered by sea water all the time – Coastal lagoons – Salicornia and other annuals colonizing mud and sand – Atlantic salt meadows <i>Glauco-Puccinellietalia maritimae</i> – Embryonic shifting dunes – Shifting dunes along the shoreline with <i>Ammophila arenaria</i> – Fixed coastal dunes with herbaceous vegetation – Dunes with <i>Hippophya rhamnoides</i> 	1.1km north-east

⁸ Waterbirds as defined by the Ramsar Convention

Designated Site	Reason for Designation	Location of Designated Site ⁷
	<ul style="list-style-type: none"> – Sea lamprey – River lamprey – Grey seal 	
Humber Estuary Site of Special Scientific Interest (SSSI)	<p>A component of the Humber Estuary SAC/ SPA/ Ramsar. Designated for its nationally important estuary habitats, including intertidal mudflats, sandflats and coastal saltmarsh that support:</p> <ul style="list-style-type: none"> – nationally important numbers of wintering and passage wildfowl and waders – nationally important assemblage of breeding birds associated with open lowland waters and their margins – breeding grey seal – sea lamprey – river lamprey – vascular plant assemblage – invertebrate assemblage 	1.1 km north-east
Laporte Road Brownfield Site Local Wildlife Site (LWS)	<p>Former industrial site (approximately 3 ha) now species-rich brownfield habitat.</p> <ul style="list-style-type: none"> – Designated for its open mosaic habitats on previously developed land that qualify under criterion BM1 (Brownfield Mosaic) of the Lincolnshire Local Wildlife Site Selection Criteria. – Diverse assemblage of breeding birds and butterflies. – Water vole population on north-western boundary ditch (North Beck Drain). 	1.1 km east

Constraints and Recommendations

- 2.5 The habitat within the Site is dominated by tall-swarded grassland (see Section 2.13) having been taken out of agricultural cultivation approximately 10 years ago. Consequently, the habitats within the Site boundary are not suitable for high tide roosting/ loafing/ feeding waterbirds from the nearby Humber Estuary SPA/ Ramsar. This is because there is insufficient scanning distance for waterbirds to observe approaching ground-based predators, and they therefore typically avoid taller swarded grassland.
- 2.6 Nevertheless, to support the assessment, wintering bird surveys were undertaken in February and March 2022 to determine whether the habitats were used by SPA/ Ramsar waterbirds (and thus merited a detailed suite of wintering bird surveys). No waterbirds were recorded within the Site boundary. Although the survey period clearly did not span a full winter season, when considered alongside the unsuitability of the habitat for high tide roosting, loafing and feeding waterbirds, it is concluded that the land within the Site is not functionally linked to the Humber Estuary SPA/ Ramsar. This is consistent with the findings of previous wintering bird surveys undertaken within the Site in winter 2011/ 12 for a planning application for development (DM/1027/13/OUT), which also concluded that the land was not functionally linked to the Humber Estuary SPA/ Ramsar (even when the land was under a more regular cultivation regime and thus would be potentially more suitable for waterbirds).
- 2.7 There is no suitable habitat within the Site for breeding SPA/ Ramsar species bittern, marsh harrier or avocet. Marsh harrier has been previously recorded overflying the Site in 2013 (for planning application DM/1027/13/OUT) but there are no extensive areas of reedbed/ marsh habitat that would be suitable nesting habitat; the reedbed habitat within the Site is restricted to narrow bands within/ on the margins of the ditches.
- 2.8 Potential air quality pathways by which the Scheme could impact the designated terrestrial habitats of the Humber Estuary SAC/ Ramsar/ SSSI may warrant further investigation. A HRA may be required to determine whether there are any likely significant effects on the Humber Estuary SPA/ Ramsar site features of importance.
- 2.9 Given the distance of the Laporte Road Brownfield Site LWS from the Scheme, and the lack of habitat connectivity between the two, it is concluded that there will be no direct impacts on the LWS. Potential indirect effects upon the LWS from potential emissions to air may need to be considered.

Habitats

Desk Study

- 2.10 Table 2 summarises the records of notable habitats and protected or notable flora⁹ (including veteran trees¹⁰) within the Study Area.

Table 2. Notable Habitats and Protected and Notable Flora within Study Area

Habitat/ Flora Feature	Reason for Conservation Interest	Location of Habitat/ Flora ¹¹
Deciduous woodland	Priority Habitat Inventory (Natural Environment and Communities [NERC] Act S41)	160 m south-west (small area off woodland on west side of A1173) 515 m north-east ('Long Strip' woodland, off Laporte Road)
Intertidal mudflats	Priority Habitat Inventory (Natural Environment and Communities [NERC] Act S41)	1.2 km north-east (coastal habitats within Humber Estuary SAC/ SPA/ Ramsar/ SSSI)

Field Survey

- 2.11 Summary descriptions of the habitats within the Site are provided below and shown on Figure 1, with specific features highlighted by Target Notes (TNs). TN descriptions and photographs are provided in [Appendix D](#).
- 2.12 The Site comprises three distinct fields separated by ditches/ hedgerows and was formally cultivated until its abandonment from agricultural production approximately 10 years ago. Some initial enabling activities have been undertaken in the northern portion of the Site (off King's Road) to create a new access road and interconnecting roads/ pavements/ drainage infrastructure (in around 2014/ 15); this is Phase 1 of the consented outline development (Planning Reference: DM/1027/13/OUT) of Site E1/3 in the NELC Local Plan.

Poor Semi-improved Grassland

- 2.13 Cultivated land which has been set-aside (taken out of agricultural productivity) for at least 10 years is the predominant habitat within the Site, which has reverted to rank grassland with tall ruderals. The vegetation comprises a mixture of common tall grass and ruderal plant species that mainly includes false oat-grass (*Arrhenatherum elatius*), tall fescue (*Schedonorus arundinaceus*), tufted hair-grass (*Deschampsia cespitosa*), meadow foxtail (*Alopecurus pratensis*), great willowherb (*Epilobium hirsutum*), common fleabane (*Pulicaria dysenterica*), bristly oxtongue (*Helminthotheca echioides*), broad-leaved dock (*Rumex obtusifolius*), curled dock (*Rumex crispus*), wild teasel (*Dipsacus fullonum*) and spear thistle (*Cirsium vulgare*).
- 2.14 Around areas with impeded drainage and/or bare ground the following plant species were prevalent: hard rush (*Juncus inflexus*), brown sedge (*Carex disticha*), creeping bent (*Agrostis stolonifera*), smooth meadow-grass (*Poa pratensis*), colt's-foot (*Tussilago farfara*), dandelion (*Taraxacum officinalis* agg.), smooth tare (*Ervum tetrasperma*), common vetch (*Vicia sativa*) and cut-leaved crane's-bill (*Geranium dissectum*).

Scattered Scrub

- 2.15 Goat willow (*Salix caprea*) scrub and smaller patches of bramble (*Rubus fruticosus* agg.) have colonised the western and eastern parts of the Site; it is assumed from a review of aerial photography that these fields have been left undisturbed for longer than the central field, which is still mainly grassland habitat.

Swamp

- 2.16 Areas dominated by common reed and so is consistent with swamp habitat occurs in most of the ditches and within land the Site.

⁹ For this assessment 'flora' includes: vascular and non-vascular plants, fungi and lichens.

¹⁰ For this assessment the definition of a veteran tree is taken from Annex 2 of the National Planning Policy Framework (glossary): "A tree which, because of its great age, size or condition is of exceptional value for wildlife, in the landscape, or culturally."

¹¹ Where features are situated outside of the Site boundary, the distance and direction is given at the closest point of the designated site from the Site

Ditches

- 2.17 There are a number of man-made ditches alongside the road infrastructure in the northern part of the Site that link up to the wider ditch network (as shown in Appendix D photograph TN3). Based on a review of historical aerial photography, these ditches appear to have been created as part of the Site enabling works around five years ago. These have now become overgrown with dense stands of common reed. There are also two ditches present which form boundaries between the three fields (running north to south), which are also overgrown with dense stands of common reed. The ditches are approximately 1.5m wide, with fluctuating water depth (between 10cm and 60cm) and very slow flow.
- 2.18 There is a ditch present along the southern boundary of the Site (between the fields and the adjacent landfill), which is approximately 1.5 m wide. This ditch supports no aquatic or emergent vegetation predominately due to shading from overhanging hedgerow present on the south side of the ditch.

Hedgerows

- 2.19 Species-poor hedgerows occur alongside the southern boundary and central ditches that form the field boundaries. Hawthorn (*Crateagus monogyna*) is the dominant species, with blackthorn (*Prunus spinosa*) occasional and dog rose (*Rosa canina* agg.) rare. The unmanaged hedgerows (approximately 3m tall and 3m wide) are insufficiently species-rich and lack supporting features that would result in them being potentially classified as 'Important' hedgerows, as defined by The Hedgerows Regulations 1997 criteria.

Constraints and Recommendations

- 2.20 The deciduous woodland and intertidal mudflat Priority Habitats are sufficiently distant from the Site that they will not be directly affected. However, potential pathways by which they could be affected by changes in air quality may require further investigation within an ecological impact assessment.
- 2.21 No habitats of principal importance were recorded at the Site. The Scheme will result in the removal of scrub, hedgerows and ditches that support common reed, although it is assumed that the existing drainage ditches associated with the road infrastructure in the north of the Site will be retained as part of the Site drainage strategy.

Badger

Desk Study

- 2.22 There are no recent records of badger within the Study Area. Badger surveys of the Site in 2011 and 2013 for planning application DM/1027/13/OUT did not record any evidence of badger within the Study Area.

Field Survey

- 2.23 It is possible that badgers may occasionally visit the Site, as the grassland and scrub provide suitable foraging habitat, however no evidence of their presence was recorded within the Site.

Constraints and Recommendations

- 2.24 The Site is surrounded by roads and badgers are vulnerable to road traffic injury or fatality, therefore reducing the likelihood of badger being present. In summary, badger is not considered to be a constraint to the Scheme.

Bats

Desk Study

- 2.25 There are no recent records of bats within the Study Area. No bat activity surveys were undertaken for the 2013 planning application on this Site (Ref: DM/1027/13/OUT) because the habitats were concluded to be sub-optimal for foraging bats mainly as a result of the lack of connectivity between the habitats on Site, and suitable bat foraging/ commuting habitat in the wider local area.

Field Survey

- 2.26 It is possible that bats may forage/commute over the Site; however, any such usage by foraging bats would reasonably be by low numbers of common bat species, given the low quality of the habitats present. The grassland is not particularly diverse to provide opportunities for a high invertebrate faunal assemblage to attract feeding bats, and the Site is relatively open and exposed. There is limited habitat connectivity via the surrounding hedgerow network to any other habitats of high quality for foraging/commuting bats, and this further reduces the likelihood that the habitats would be well used by bats.
- 2.27 The shrubs and trees within the Site boundary are not sufficiently mature to support features that may be suitable for roosting bats. There are no buildings or other structures within the Site boundary, and therefore roosting bats are not considered to be a constraint to the Scheme.

Constraints and Recommendations

- 2.28 It is recommended that Scheme is designed, where possible, to avoid light spillage on to any sections of retained hedgerows and ditches surrounding the Site to avoid displacement over habitat that could be used for foraging by bats.
- 2.29 Further bat activity surveys are not considered warranted to inform the planning application, due to the overall appraisal of the Site likely value for bats. It is unlikely that the Site is used on anything other than an occasional and transient basis by small numbers of common species of bats. This is on the basis that the habitats are generally of low quality for foraging and commuting bats and are poorly connected to bat foraging/commuting habitat in the wider local area. Therefore, potential effects of the Scheme would not be considered to be greater than at Site level.

Otter

Desk Study

- 2.30 There is one recent record of otter within the Study Area (specific location is withheld from LERC data). Otter surveys of the Site in 2011 and 2013 (excluding the newer ditches around the new road infrastructure, which had not been created at that time) for planning application DM/1027/13/OUT did not record any evidence of this species within the Site.

Field Survey

- 2.31 It is possible that otters visit the Site as a place for rest or shelter given that they are likely present in the nearby Humber Estuary, but no sign of their presence or suitable breeding features were identified. The ditches within the Site boundary are shallow and likely to be predominantly dry most of the time (due to being heavily overgrown with common reed) and therefore would not be expected to support sufficient fish to provide prey for foraging otter such that they would be expected to regularly visit the Site.

Constraints and Recommendations

- 2.32 The Site is surrounded by roads and otters are vulnerable to road traffic injury or fatality, therefore reducing the likelihood of otter being present. Given the overall consideration of the desk study and field survey results otter is not considered to be a constraint to the Scheme.

Water Vole

Desk Study

- 2.33 There are two recent records of water vole within the Study Area. The closest / most relevant of these records is associated with a ditch on the north side of Kings Road, which is approximately 55 m from the Site boundary (on the opposite side of the road from the Site).
- 2.34 Water vole surveys of the ditches on the Site in 2011 and 2013 (excluding the newer ditches around the new road infrastructure, which had not been created at that time) conducted to support planning application DM/1027/13/OUT did not record any evidence of this species within the Site.

Field Survey

- 2.35 No signs of water vole presence were recorded during the initial inspections of the ditches. The ditches at the Site are subject to great fluctuation in water level. Some ditch sections support dense stands of common reed and the remainder support sparse or no emergent vegetation due to shading from overhanging hedgerow vegetation.

Constraints and Recommendations

- 2.36 The ditches at the Site are concluded to be sub-optimal to support water vole because of fluctuating (low) water level and sparsity of suitable foraging plants. However, due to the proximity of the nearest recent record of this species to the Site, it is recommended that a detailed water vole survey is undertaken to fully determine presence/ likely absence, and thus to identify whether this species is a constraint to the Scheme. Water vole surveys, in accordance with guidance, should be undertaken between April and September when signs of this species' presence is typically more evident.

Great Crested Newt

Desk Study

- 2.37 There are no recent records of great crested newt within the Study Area. On a review of present of potential waterbodies which may provide breeding sites for this species, Ordnance Survey mapping indicates that there are several waterbodies in a wetland complex to the south of the Site within the adjacent landfill site (approximately 100 m south of the Site boundary). Although the status of these waterbodies cannot be confirmed as were not accessible, it is likely that they would still be present, as they are likely to be required to facilitate the drainage of the landfill site drainage, however, may be subject to continual change and disturbance and are unlikely to be optimal to support this species. Surveys of these wetland areas conducted in 2011 and 2013 for planning application DM/1027/13/OUT did not identify great crested newt.

Field Survey

- 2.38 There are no ponds present within the Site boundary. The ditches within the Site boundary are subject to seasonal fluctuations in water levels and have been observed during the course of other surveys on the Site to regularly dry out in the spring/ early summer. They are therefore unsuitable for breeding great crested newt because they do not regularly hold sufficient water or aquatic vegetation to enable successful breeding activity (the larvae of this species are entirely aquatic until late summer).
- 2.39 The wetland complex to the south within the landfill site was evaluated to be sub-optimal for great crested newts in 2013 due to the presence of fish, waterfowl, poor water quality and a lack of egg laying material. As great crested newt was not recorded in 2013, and there are major barriers¹² to great crested newt dispersal onto the landfill site, it is reasonable to conclude that it is unlikely that the species will have colonised this habitat (if it is still present) in the intervening period.

Constraints and Recommendations

- 2.40 Due to the lack of records in the local area, including from nearest pond(s) to the Site, and the lack of suitable breeding habitat within the Site, it is reasonable to conclude that great crested newt is absent from within the Site and does not pose a constraint to the Scheme. No further surveys for great crested newt are therefore considered necessary.

¹² The following constitute major barriers to dispersal and are unlikely to be traversed by great crested newts: rivers and larger streams; main roads such as A-roads, motorways or any other road with high traffic volume (i.e. high traffic volume during the night when great crested newt are more likely to be dispersing/commuting); and major urban infrastructure including extensive areas of hardstanding and buildings and dense networks of minor roads with little green space.

Reptiles

Desk Study

- 2.41 There are no records of common lizard (*Zootoca vivipara*), slow worm (*Anguis fragilis*), adder and grass snake (*Natrix helvetica*) within the Study Area. An appraisal of the Site for the 2013 planning application DM/1027/13/OUT concluded that the Site was unsuitable for reptiles, and no reptile surveys were undertaken.
- 2.42 The Site is outside the geographical range of known populations of smooth snake (*Coronella austriaca*), which are confined to heathlands in the south of England, and sand lizard (*Lacerta agilis*), which are restricted to sandy heathlands in Surrey, Dorset and Hampshire and coastal sand dunes in Merseyside. These species are therefore not considered further.

Field Survey

- 2.43 The Site is appraised to be sub-optimal for reptiles as it is dominated by tall rank grassland/ scattered scrub and lacks the mosaic of bare ground, variations in topography and areas of refuge favoured by reptiles. Furthermore, the historic land use of the Site and relatively isolated nature of the Site in the wider landscape also reduce its suitability to support reptiles. The ditches within the Site boundary are heavily overgrown and appear to regularly dry out, and therefore they are appraised as being of low suitability to support aquatic prey species (e.g., frogs or fish) for grass snake.

Constraints and Recommendations

- 2.44 Whilst the habitats have changed since the 2013 Site appraisal due to the further development of rank grassland and scrub since the abandonment of agricultural management, they remain sub-optimal for reptiles. There are also no known populations of reptiles in the wider local area that have habitat connectivity to the Site and that could potentially have colonised the Site in the intervening period. No further surveys for reptiles are considered warranted, as based upon these factors combined it is reasonable to conclude that reptiles are likely absent from the Site and are not considered to be a constraint to the Scheme.

Breeding Birds

Desk Study

- 2.45 There are recent records for 32 notable¹³ bird species within the Study Area. These include 5 species listed on Annex I of the EC Birds Directive, 13 species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), 15 Species of Principal Importance (SPI), and respectively 16 Red List and 7 Amber List species included in the Birds of Conservation Concern 5 (BoCC5). The records also include 14 species of bird that are priority species in Lincolnshire listed on the Lincolnshire BAP.
- 2.46 Previous breeding bird surveys of the Site conducted in 2013 to support the planning application DM/1027/113/OUT recorded the following breeding species on the Site:
- Grassland habitat: ground nesting skylark (*Alauda arvensis*) and meadow pipit (*Anthus pratensis*)
 - Ditches: reed warbler (*Acrocephalus scirpaceus*), sedge warbler (*Acrocephalus schoenobaenus*) and reed bunting (*Emberiza schoeniclus*).
 - Boundary hedgerows: blackcap (*Sylvia atricapilla*), chiffchaff (*Phylloscopus collybita*), willow warbler (*Phylloscopus trochilus*), whitethroat (*Sylvia communis*), lesser whitethroat (*Sylvia curruca*), tree sparrow (*Passer montanus*), yellowhammer (*Emberiza citrinella*), linnet (*Carduelis cannabina*) and song thrush (*Turdus philomelos*).

¹³ Notable bird species are taken as those listed: on Annex I of the EC Birds Directive (2009/147/EC); on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended); as Species of Principal Importance (SPI) for the Conservation of Biodiversity in England listed in Section 41 of the Natural Environment and Rural Communities Act 2006; as Red or Amber in the Birds of Conservation Concern (BoCC) 4 (Eaton MA, Aebischer NJ, Brown AF, Hearn RD, Lock L, Musgrove AJ, Noble DG, Stroud DA and Gregory RD (2015). Birds of Conservation Concern 5: The population status of our birds populations. *British Birds* 114, 723-747); bird species or groups listed under the Lincolnshire BAP.

Field Survey

- 2.47 The Site supports grassland, scrub, hedgerows and ditches which will provide opportunities for nesting for a range of general species, including some of those that were recorded on the Site over the winter months (see Wintering Birds section), and those that were previously recorded on the Site in the 2013 survey.

Constraints and Recommendations

- 2.48 Given that the habitats have changed since they were managed, breeding bird surveys were undertaken between March and June 2022 to update the findings of previous now dated surveys of the Site, which at the timing of writing this PEAR will be analysed. This will enable any species-specific mitigation to be identified, as well as to inform the ecological impact assessment and targets for on-site habitat retention/enhancement.
- 2.49 As discussed in respect of the Humber Estuary SPA/ Ramsar designated site, it is not considered that there is any suitable nesting habitat within the Site for the qualifying breeding species bittern, marsh harrier or avocet, although marsh harrier may use the habitats for foraging at times.

Wintering Birds

Desk Study

- 2.50 There are recent records for 32 notable¹⁴ bird species within the Study Area. These include 5 species listed on Annex I of the EC Birds Directive, 13 species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), 15 Species of Principal Importance (SPI), and respectively 16 Red List and 7 Amber List species included in the Birds of Conservation Concern 5 (BoCC5). The records also include 14 species of bird that are priority species in Lincolnshire listed on the Lincolnshire BAP.

Field Survey

- 2.51 Wintering bird surveys were undertaken on four occasions during February and March 2022. The purpose of the surveys was to determine whether the land could be potentially functionally linked to the Humber Estuary SPA/ Ramsar, and thus merit further wintering bird surveys to cover a full passage/ wintering season. However, no SPA/ Ramsar waterbirds were recorded within the Site during the surveys. As discussed above in respect of the Humber Estuary SPA/ Ramsar, the habitats within the Site boundary are too overgrown to support high tide roosting waterbirds, and this was supported by the findings of the limited wintering bird surveys undertaken as detailed below.
- 2.52 During the four winter bird survey visits conducted between 17 February and 21 March 2022, a total of 22 bird species were recorded at the Site. This included 5 SPIs, 5 Red List and 7 Amber List BoCC5 species. These are listed in Table 3.

¹⁴ Notable bird species are taken as those listed: on Annex I of the EC Birds Directive (2009/147/EC); on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended); as Species of Principal Importance (SPI) for the Conservation of Biodiversity in England listed in Section 41 of the Natural Environment and Rural Communities Act 2006; as Red or Amber in the Birds of Conservation Concern (BoCC) 4 (Eaton MA, Aebischer NJ, Brown AF, Hearn RD, Lock L, Musgrove AJ, Noble DG, Stroud DA and Gregory RD (2015). Birds of Conservation Concern 5: The population status of our birds populations. *British Birds* 114, 723-747); bird species or groups listed under the Lincolnshire BAP.

Table 3. Birds Recorded at the Site between February and March 2022

Common Name	Scientific Name	BTO Species Code	Schedule 1 Species	NERC section 41	Visit 1	Visit 2	Visit 3	Visit 4
					04/02/2022	28/02/2022	17/03/2022	21/03/2022
Blackbird	<i>Turdus merula</i>	B.			7	5	3	1
Blue Tit	<i>Cyanistes caeruleus</i>	BT					1	
Carrion crow	<i>Corvus corone</i>	C.			3	2		
Chaffinch	<i>Fringilla coelebs</i>	CH					1	
Dunnock	<i>Prunella modularis</i>	D.	✓		1		2	2
Goldfinch	<i>Carduelis carduelis</i>	GO			2	2	2	2
Great Tit	<i>Parus major</i>	GT			1	1	1	2
Linnet	<i>Linaria cannabina</i>	LI	✓				1	2
Long-tailed Tit	<i>Aegithalos caudatus</i>	LT			6	1	2	2
Magpie	<i>Pica pica</i>	MG			3	4	3	2
Meadow Pipit	<i>Anthus pratensis</i>	MP			4	2	2	4
Pheasant	<i>Phasianus colchicus</i>	PH			1	1	1	1
Redwing	<i>Turdus iliacus</i>	RE	✓		2	10		1
Reed Bunting	<i>Emberiza schoeniclus</i>	RB	✓		4	1		4
Robin	<i>Erithacus rubecula</i>	R.			2	3	1	1
Skylark	<i>Alauda arvensis</i>	S.	✓		1	1	2	1
Snipe	<i>Gallinago gallinago</i>	SN			1	5		1
Starling	<i>Sturnus vulgaris</i>	SG	✓		7			
Woodpigeon	<i>Columba palumbus</i>	WP			7	3	6	28
Woodcock	<i>Scolopax rusticola</i>	WK			4			1
Wren	<i>Troglodytes troglodytes</i>	WR			4	2	4	4
Yellowhammer	<i>Emberiza citrinella</i>	Y.	✓			1		1

2.53 Table 4 summarises the features that were frequently found to provide places of shelter/foraging habitat for small numbers of notable species at the Site (as shown on Figure 2).

Table 4. Habitats Features that support Notable Wintering Birds at the Site

Habitat Feature	Bird Species
Hedgerows	Thrushes and woodcock
Scattered scrub	Reed bunting
Grassland with ephemeral pools	Snipe
Grassland with tussocks	Skylark and meadow pipit

Constraints and Recommendations

- 2.54 The land within the Site boundary can reasonably be concluded to be not functionally linked to the Humber Estuary SPA/ Ramsar due to habitats present and results of the wintering (and breeding) bird surveys conducted. The presence of tall and overgrown vegetation restricts the required scanning distances that high tide feeding, roosting and loafing waterbirds prefer in terrestrial habitats.
- 2.55 The Scheme will require the removal of scrub, hedgerow and poor semi-improved grassland habitats. This will result in the displacement of common wintering birds including a low number of notable species that frequent the Site to similar adjacent habitats. The displacement of low number of birds including notable species that frequent the Site to similar adjacent habitats is not considered a constraint to the Scheme.

Terrestrial Invertebrates

Desk Study

- 2.56 There are 10 recent records of notable¹⁵ terrestrial invertebrates within the Study Area. The closest of these records is associated with white-letter hairstreak which is approximately 360m from the Site boundary.

Field Survey

- 2.57 Elm (*Ulmus* spp.) the larval foodplant of white-letter hairstreak (*Satyrrium w-album*) was not recorded at or adjacent to the Site. None of the habitats at the Site appear to be of particular importance for terrestrial invertebrates of conservation interest given the low floristic diversity of the rank grassland and scrub which would reduce food and larvae resources. However, it is possible that some unobtrusive rare/notable invertebrate species are present.

Constraints and Recommendations

- 2.58 It is recommended that an updated appraisal of the Site for its suitability to support rare/ notable invertebrates is undertaken in summer by an appropriately experienced specialist surveyor.

Other Species

- 2.59 The ditches within the Site boundary are not suitable for white-clawed crayfish (*Austropotamobius pallipes*) and therefore this species is not considered further.
- 2.60 No protected or notable species of plant, or evidence of non-native invasive plant species was recorded during the Phase 1 Habitat Survey.
- 2.61 Given the overgrown nature of the grassland habitat, it is considered unlikely that brown hare (*Lepus europeus*) would be present and breeding on the Site.
- 2.62 The habitats on the Site are potentially suitable for hedgehog (*Erinaceus europaeus*), although given the relatively isolated nature of the Site within the industrial area of the Port of Immingham and the barriers posed by the surrounding road network, any such usage would be likely on a transient and occasional basis only. This species is not considered to represent a constraint to the Scheme, and any potential risk of killing/ injury of hedgehog during clearance works for construction can be adequately mitigated through a precautionary working method statement.

¹⁵ Notable terrestrial invertebrates are taken as principal species for the conservation of biodiversity listed under Section 41 of the Natural Environment and Rural Communities Act 2006; any invertebrate listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended); any invertebrate listed under Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended); any invertebrate listed in the IUCN Invertebrate Red Data Book (1991); and any invertebrate listed under a Lincolnshire BAP.

3. Opportunities for Biodiversity Enhancements

General Recommendations

- 3.1 There are likely to be limited opportunities for biodiversity enhancements within the Site boundary given the industrial nature of the Scheme and the various safety requirements that will be embedded within the design of the infrastructure/ buildings. Opportunities to meet the planning policy and legislative requirements in respect of biodiversity enhancement (see Appendix B) should be explored as the Scheme design progresses.

Biodiversity Net Gain

- 3.2 It is government policy that planning decisions should minimise impacts on and provide net gain for biodiversity (National Planning Policy Framework 2019). In addition, the Environment Act 2021 includes provisions to make biodiversity net gain (BNG) a mandatory requirement within the planning system in England requiring all relevant developments to achieve a minimum 10% net gain in biodiversity units relative to the Site's baseline biodiversity value, it is anticipated the secondary legislation mandating the need for 10% net gain will be in place by November 2023 for development within the Town & Country Planning Act, and November 2025 for Nationally Significant Infrastructure Projects (NSIPs). Current guidance indicates that NSIPs accepted for examination before the specified commencement date would not be required to deliver mandatory biodiversity net gain (though they could deliver it in response to policy or voluntary commitments).
- 3.3 A BNG assessment requires the completion of specific BNG metric (currently DEFRA Metric 3.1)¹⁶ which involves an initial assessment of the 'baseline units' of the Site by completion of habitat condition assessments (which are required to be conducted at the optimal period for most habitats between approximately May and August). In turn the information regarding the footprint and type of loss (permanent/ temporary) of habitats as a result of the proposals/development is then used to determine the net loss of units to inform appropriate compensation and enhancement.
- 3.4 A BNG assessment may be required to support a planning application where habitat losses are predicted, however this should be determined through consultation with the relevant planning authority to account for the evolving local planning policies.

¹⁶ Biodiversity Net Gain Defra Metric 3.1: <http://publications.naturalengland.org.uk/publication/6049804846366720>

4. Conclusion

- 4.1 The Site comprises three distinct fields separated by ditches/ hedgerows that were formerly under arable cultivation, and which have developed into rank, species-poor grassland and scrub through natural succession following the abandonment of arable cultivation around ten years ago. Some development enabling work has been undertaken (approximately 5 years ago) in the northern part of the Site to create a new access road off Kings Road, and interconnecting roads/ pavements/ drainage infrastructure; this is Phase 1 of the consented outline development (Planning Reference: DM/1027/13/OUT) of Site E1/3 in the NELC Local Plan.
- 4.2 The Site is evaluated to be of low ecological value and was found to have limited potential to support protected or notable species. As detailed in Section 2 of this PEAR based upon the findings of the desk study and field surveys combined have determined the status of specific protected species at the Site of which those other than those listed in Table 5 have been scoped out as a constraint to the Scheme.
- 4.3 Where the status of species or the potential value of the Site for species/species groups cannot be fully determined without additional survey recommendations for these are summarised in Table 5. These recommendations are proposed to seek to collate sufficiently robust ecological baseline information upon which would likely be required to support a future planning application for the Scheme.

Table 5. Summary of Further Survey Recommendations

Feature	Recommendation	Timing
Water vole	Presence/ absence survey of ditches on Site. Methodology involves one initial survey in spring (or autumn) period, where no evidence is recorded or the ditched could not be scoped out as a result of the initial survey, a further survey in autumn (or following spring) period would be required. Where presence is recorded during initial survey the second survey would not be required.	Spring: mid-April-June, Autumn: August- end of September
Breeding birds	Five survey visits to map breeding bird territories in accordance with Common Bird Census methodology (Marchant, 1983 ¹⁷).	March – end of June
Terrestrial invertebrate habitat appraisal	Walkover survey to appraise suitability for rare/ notable species and record any species incidentally observed	Appraisal could be conducted between May and September Optimal period would be June/ July

Validity of Data

- 4.4 Due to the mobility of animals and the potential for colonisation of the Site, combined with the time which may elapse before the Scheme is progressed, it is recommended that in the absence of completion of any of the above surveys within 12 months of this date of this report (by July 2023) that an updated ecological survey would be required to reaffirm the findings and recommendations made in this PEAR.

¹⁷ Marchant, J.H. (1983). *BTO Common Bird Census Instructions*. British Trust for Ornithology, Thetford.

Appendix A Figures

Figure 1. Habitat Survey Map

Figure 2. Winter Bird Survey Map



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 - Intact Hedge - Species-Poor
 - +— Hedge With Trees - Species-Poor
 - Fence
 - Ditch
 - x Scrub - Scattered
 - Swamp
 - Hardstanding
 - A Cultivated/Disturbed Land - Arable

NOTES
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ISSUE PURPOSE
FINAL
PROJECT NUMBER
60673509
FIGURE TITLE
Habitat Survey Results

FIGURE NUMBER
Figure 1

1:3,000 @ A3



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Appendix B Relevant Legislation and Planning Policy

Legislation

- 4.5 The UK is no longer a member of the European Union (EU). EU legislation as it applied to the UK on 31 December 2020 is now a part of UK domestic legislation. EU legislation which applied directly or indirectly to the UK before 11.00 p.m. on 31 December 2020 has been retained in UK law as a form of domestic legislation known as 'retained EU legislation'.
- 4.6 The Secretary of State for the Environment, Food and Rural Affairs and Welsh Ministers have made changes to parts of the *Conservation of Habitats and Species Regulations 2017* (referred to as the 2017 Regulations) so that they operate effectively. Most of these changes involve transferring functions from the European Commission to the appropriate authorities in England. All other processes or terms in the 2017 Regulations remain unchanged and existing guidance is still relevant.

Designated Sites

Special Protection Areas (SPA) / Special Areas of Conservation (SAC)

- 4.7 These sites in the UK no longer form part of the EU's Natura 2000 ecological network. The *Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019* (referred to as the 2019 Regulations) have created a national site network on land and at sea, including both the inshore and offshore marine areas in the UK. The national site network includes:
- existing SACs and SPAs
 - new SACs and SPAs designated under these Regulations
- 4.8 Any references to Natura 2000 in the 2017 Regulations and in guidance now refers to the new national site network.
- 4.9 Formal Appropriate Assessment is required to be undertaken by the competent authority before undertaking, or giving consent, permission or other authorisation for any work which are likely to have a significant effect on such a site.

Wetland of International Importance (Ramsar site)

- 4.10 Designated under the *Convention on Wetlands of International Importance especially as Waterfowl Habitat 1971* (the Ramsar Convention), in the UK, these sites are treated as having the same level of protection as SPA's and SAC's.

Sites of Special Scientific Interest

- 4.11 Under the *Wildlife and Countryside Act 1981* (as amended), it is an offence to carry out or permit to be carried out any operations likely to damage the Site of Special Scientific Interest (SSSI). These operations are listed in the SSSI notification.
- 4.12 Owners, occupiers, public bodies and statutory undertakers must give notice and obtain the appropriate consent under S.28 of the *Wildlife and Countryside Act 1981* (as amended), before undertaking operations likely to damage a SSSI.

Locally Designated Sites

- 4.13 Local Wildlife Sites are sites with 'substantive nature conservation value'. They are defined areas, identified and selected for their nature conservation value, based on important, distinctive and threatened habitats and species with a region.
- 4.14 They are usually selected by the relevant Wildlife Trust, along with representatives of the local authority and other local wildlife conservation groups.
- 4.15 The LWS selection panel, select all sites that meet the assigned criteria, unlike SSSIs, which for some habitats are a representative sample of sites that meet the national standard. Consequently, many sites of

SSSI quality are not designated and instead are selected as LWSs. Consequently, LWSs can be amongst the best sites for biodiversity.

Protected Species

Bats / Otter / Great Crested Newt

- 4.16 These species, known as European Protected Species, are protected under Regulation 43 of the 2017 Regulations as amended by the 2019 Regulations. This makes it an offence to deliberately capture, injure or kill an animal; deliberately disturb an animal; or damage or destroy a breeding site or resting place used by an animal.
- 4.17 Deliberate capture or killing is taken to include “accepting the possibility” of such capture or killing. Deliberate 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 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.
- 4.18 Where development works are at risk of causing one or more of the offences listed above, a mitigation licence from Natural England can be obtained to facilitate the works that would otherwise be illegal.
- 4.19 These species are also protected under Schedule 5 of the *Wildlife and Countryside Act 1981* (as amended). This makes it an offence to intentionally or recklessly obstruct access to any structure or place used for shelter or protection or disturb an animal in such a place.
- 4.20 Lower levels of disturbance not covered by the *Conservation of Habitats and Species Regulations 2017* remain an offence under the *Wildlife and Countryside Act 1981* although a defence is available where such actions are the incidental result of a lawful activity that could not reasonably be avoided.

Water Vole

- 4.21 Water voles are protected under the *Wildlife and Countryside Act 1981* (as amended). There are no licensing purposes that explicitly cover development or other construction activities which could have an impact on water voles.
- 4.22 When development work is proposed in or near an area which is either known to or likely to contain water voles, then the developer will need to implement suitable mitigation to prevent impacts to water voles. The preferred mitigation option is to leave water voles *in situ*, with the development works adopting avoidance measures through redesign of the proposals.
- 4.23 Where impacts cannot be avoided, operations aimed at displacing water voles from a development site are now no longer covered by the “*incidental result of an otherwise lawful action*” defence in the *Wildlife and Countryside Act 1981* (as amended). Displacement of water voles now needs to be undertaken under a licence.
- 4.24 In England, small scale (limited to continuous lengths of bank not exceeding 50 m) displacement of water voles can be carried out at certain times of the year (February to April) for the purposes of conservation under a Class Licence by a registered person. For larger scale displacements or displacements outside of this period, displacement can be undertaken under a site-specific conservation licence.
- 4.25 Where it is considered that the best outcome for water voles is capture and translocation to a different location then this action is considered by Natural England to be outside the scope of the defence as the intentional capture of water voles is unlikely to be considered ‘incidental’. In these circumstances there may be genuine grounds for issuing a conservation licence for the purpose of translocating the water vole population to suitable alternative habitat.

Nesting Birds

- 4.26 All wild birds are protected under the *Wildlife and Countryside Act 1981* (as amended), with some species afforded greater protection under Schedule 1 of the *Wildlife and Countryside Act 1981* (as amended). In addition to the protection from killing or taking that all birds receive, Schedule 1 birds and their young must not be disturbed at the nest.
- 4.27 There are no licensing purposes that explicitly cover development activities affecting wild birds.

Common Species of Reptile (common lizard, slow worm, grass snake and adder)

- 4.28 Common species of reptile are protected against intentional killing and injury under Schedule 5 of the *Wildlife and Countryside Act 1981* (as amended). There is no requirement for a licence where development works affect common species of reptiles. Instead, Natural England advise¹⁸ that where reptiles are present, they should be protected from any harm that might arise during the development works through appropriate mitigation.

Badger

- 4.29 Badgers and their setts are protected under the *Protection of Badgers Act 1992* (as amended). This makes it an offence to wilfully kill, injure or take a badger; or intentionally or recklessly damage, destroy or obstruct access to a badger sett or disturb a badger in its sett.
- 4.30 It is not illegal to carry out disturbance activities near setts that are not occupied, i.e. those that do not show signs of current use.
- 4.31 Where required, licences for development activities involving disturbance or sett interference or closure are issued by Natural England. Licences for activities involving watercourse maintenance, drainage works or flood defences are issued under a separate process.
- 4.32 When assessing the requirement for a licence in respect of development, Natural England¹⁹ state that badgers are relatively tolerant of moderate levels of noise and activity around their setts, and that a low or moderate level of apparent disturbing activity at or near to badger setts does not necessarily disturb the badgers occupying those setts.
- 4.33 Licences are normally not granted from December to June inclusive (the badger breeding season) because dependent cubs may be present within setts.

Species and Habitats of Principal Importance for the Conservation of Biodiversity

- 4.34 Section 40 of the Natural Environment & Rural Communities Act (NERC) 2006 sets out the duty for public authorities to conserve biodiversity in England.
- 4.35 Habitats and species of principal importance for the conservation of biodiversity are identified by the Secretary of State for England, in consultation with Natural England, are referred to in Section 41 of the NERC Act for England. The list, known as the 'England Biodiversity List', of habitats and species can be found on the Natural England web site.
- 4.36 The 'England Biodiversity List' is used as a guide for decision makers such as public bodies, including local and regional authorities, in implementing their duty under Section 40 of the NERC Act 2006 to have regard to the conservation of biodiversity in England when carrying out their normal functions.

Hedgerows

- 4.37 Under The Hedgerows Regulations 1997, it is against the law to remove or destroy certain hedgerows without permission from the local planning authority. In general, permission will be required before removing hedges that are at least 20 metres in length, over 30 years old and contain certain species of plant. The local planning authority will assess the importance of the hedgerow using criteria set out in the regulations.

Planning Policy

National Planning Policy Framework, 2019

- 4.38 The National Planning Policy Framework (NPPF) sets out the Governments planning policies for England and how these are expected to be applied by Local Authorities within their Local Development Frameworks (LDF). Chapter 15 of the NPPF '*Conserving and enhancing the natural environment*' sets out the requirements to consider biodiversity in planning decisions.

¹⁸Reptiles: guidelines for developers, English Nature 2004

¹⁹ Interpretation of 'Disturbance' in relation to badgers occupying a sett, Natural England (2009)

Local Planning Policy

4.39 The local planning policies are detailed in the North East Lincolnshire Local Plan document, adopted in 2018. Policies relevant to the Scheme are outlined in the table below.

Policy Document	Policy Number	Policy Detail
North East Lincolnshire Local Plan 2018	Policy 9 - Habitat Mitigation - South Humber Bank	<p>1. Within the Mitigation Zone identified on the Policies Map (covering an area of agricultural land on the South Humber Bank between Pyewipe and Immingham), proposals which adversely affect the Humber Estuary SPA/Ramsar site due to the loss of functionally linked land will normally be required to provide their own mitigation in order to comply with the requirements of the Habitats Regulations.</p> <p>2. The Strategic Mitigation sites, circa 120ha, identified on the Policies Map, represent those sites which have been identified to deliver appropriate mitigation which will address the adverse impacts of development within the Mitigation Zone at a strategic level. The identified Mitigation Sites will be safeguarded against development, and appropriate habitat will be delivered and managed on these sites in accordance with the North East Lincolnshire South Humber Gateway Ecological Mitigation Delivery Plan.</p> <p>3. Development proposals on greenfield land²⁰ within the Mitigation Zone will be required to make contributions towards the provision and management of the mitigation sites identified on the Policies Map. Where landowners have contributed to the implementation strategy through the donation of land, the required contribution will be reduced by an equivalent value.</p> <p>4. The Council will secure such contributions, based on a proportional approach relating to the site area. The formula for the calculation of the relevant contribution is as follows:</p> <p>Contribution (£) = SA x (£MC/ha)</p> <ul style="list-style-type: none"> The Mitigation Contribution (£MC/ha) will be £11,580/ha. This contribution is not index linked. The Contribution shall be paid when development commences on site, or through agreement with the Council where a phase approach to delivery is accepted by the Council. <p>5. All other planning requirement will also be expected to be met.</p> <p>6. On an exceptional basis independent alternative mitigation proposals will be considered on sites within the identified Mitigation Zone. Proposals should be supported by evidence that demonstrates that the alternative mitigation contributes to the overall mitigation strategy and ensures that the development avoids adverse effects on the integrity of the SPA/Ramsar site, alone or in combination. It will be a requirement of any planning consent that mitigation is implemented prior to the commencement of development.</p>
	Policy 41 - Biodiversity and Geodiversity	<p>1. The Council will have regard to biodiversity and geodiversity when considering development proposals, seeking specifically to:</p> <ol style="list-style-type: none"> establish and secure appropriate management of, long-term mitigation areas within the Estuary Employment Zone, managed specifically to protect the integrity of the internationally important biodiversity sites (see Policy 9'Habitat Mitigation - South Humber Bank'); designate Local Wildlife Sites (LWSs) and Local Geological Sites (LGSs) in recognition of particular wildlife and geological value; protect manage and enhance international, national and local sites of biological and geological conservation importance, having regard to the hierarchy of designated sites, and the need for appropriate buffer zones; minimise the loss of biodiversity features, or where loss is unavoidable and justified ensure appropriate mitigation and compensation measures are provided; create opportunities to retain, protect, restore and enhance features of biodiversity value, including priority habitats and species; and, take opportunities to retain, protect and restore the connectivity between components of the Borough's ecological network. <p>2. Any development which would, either individually or cumulatively, result in significant harm to biodiversity which cannot be avoided, adequately mitigated or as a last resort compensated for, will be refused.</p>

Local Biodiversity Action Plans

4.40 The Lincolnshire Biodiversity Plan (Collop, 2011)²¹ was drafted by the Lincolnshire Biodiversity Partnership in 2011, and outlines biodiversity conservation objectives within the region and identifies priorities for action for priority habitats, species, locally important wildlife, and sites.

²⁰ Exceptionally brownfield sites may be required to contribute if evidence identifies that SPA/Ramsar birds have been using the site in significant numbers.

²¹ Collop, C. (ed.), (2011). Lincolnshire Biodiversity Action Plan. 2011-2020 (3rd edition). Lincolnshire Biodiversity Partnership, October 2011. Available online at: <http://www.southkesteven.gov.uk/CHttpHandler.ashx?id=7371&p=0>

Appendix C Methodology

Desk Study

Background Records Search

- 4.41 The preliminary ecological assessment includes a desk study to obtain background records relevant to a Site and the Scheme. The data obtained provides contextual information for the scope of field surveys, to aid the evaluation of field survey results, and to provide supplementary information where complete field survey coverage is not possible.
- 4.42 The Study Area is dependent upon the nature, timing and scale of the Scheme, as well as the location of the Site and the surrounding landscape. These variables all contribute to what is referred to as the Zone of Influence (Zoi) of the Scheme, which is the area over which ecological features may be affected by biophysical changes because of the works and associated activities.
- 4.43 In March 2022 the Lincolnshire Environmental Records Centre (LERC) was contacted to obtain the following ecological data:
- Records of non-statutory designated sites (LWS's) within 2 km of the Site boundary;
 - Records of legally protected and notable species (fauna and flora) within 2 km of the Site boundary, including Species of Principal Importance for the Conservation of Biodiversity listed under Section 41 of the Natural Environment & Rural Communities Act 2006 in the England Biodiversity List²².
- 4.44 The Multi-Agency Geographic Information for the Countryside (MAGIC) website (www.magic.gov.uk) was reviewed for the following information:
- Designated sites of nature conservation importance (statutory sites only) within 2 km of the Site; and,
 - Notable habitats within 2 km of the Site, these being areas of ancient woodland and 'Habitats of Principal Importance for the Conservation of Biodiversity' included in the England Biodiversity List.

Great Crested Newt Pond Search

- 4.45 Ordnance Survey maps and the *Where's the Path* website (<https://wtp2.appspot.com/wheresthepath.htm>) have been used to identify the presence of water bodies within 250 m of the Site boundary, in order to help establish if the land within and immediately surrounding the Site could be used by great crested newts. This species can use suitable terrestrial habitat up to 500 m from a breeding pond²³, though there is a notable decrease in great crested newt abundance beyond 250 m from a breeding pond²⁴.

Field Survey

Extended Phase 1 Habitat Survey

- 4.46 The preliminary ecological assessment includes a walkover survey of the Site, broadly following the Phase 1 habitat survey methodology as set out in Joint Nature Conservation Committee guidance (JNCC, 2010)²⁵. This survey method records information on habitat types and is 'extended' to record any evidence of and potential for protected or notable species to be present. Plant names recorded during the survey follow Stace (2019)²⁶.
- 4.47 During the walkover survey, the following protected or notable species are considered:

²² Section 40 of the Natural Environment & Rural Communities Act 2006 requires that every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity. The Secretary of State has drawn up, in accordance with Section 41 of the Act and in consultation with Natural England, a list of habitats and species of principal importance for the conservation of biodiversity in England that is known as the [England Biodiversity List](#)

²³ Great Crested Newt Mitigation Guidelines (English Nature, 2001).

²⁴ Natural England. An assessment of the efficiency of capture techniques and the value of different habitats for the great crested newt (ENRR576) <http://publications.naturalengland.org.uk/publication/134002>.

²⁵ Joint Nature Conservation Committee (2010) *Handbook for Phase 1 habitat survey - a technique for environmental audit*.

²⁶ Stace, C E (2019) *New Flora of the British Isles, 4th Edition*. Cambridge University Press.

- **Badger:** the survey involves searching for signs of badger activity including setts, tracks, snuffle holes and latrines, following the methodology detailed in *Scottish Badgers (2018)*²⁷ and Harris et al (1989)²⁸;
- **Bats:** the survey involves searching for potential roosting sites for bats within trees and structures (such as buildings, bridges or underground features such as mines) and categorising the potential of those trees or structures to support roosting bats (negligible to high, or confirmed roost), in accordance with Bat Conservation Trust (BCT) guidance (2016)²⁹;
- **Otter:** the survey involves assessing the potential of watercourses and water bodies, and adjacent terrestrial habitat within the Survey Area to support otter, following RSPB (1994)³⁰ and Chanin, P. (2003)³¹ guidance;
- **Water vole:** the survey involves assessing the potential of watercourses and water bodies within the Survey Area to support water vole, following The Mammal Society (2016)³² guidance;
- **Birds:** the survey involves assessing the potential of habitats within the Survey Area to support breeding, wintering or migrating birds, either individually notable species or assemblages of both common and rarer species;
- **Great crested newt:** the survey involves assessing the potential of habitats within the Survey Area to support great crested newt, following English Nature (2001)³³ and Froglife (2001)³⁴ guidance;
- **Reptiles:** the survey involves assessing the potential of habitats within the Survey Area to support reptiles (typically adder, grass snake, common lizard and slow worm only, though in some locations and habitat types (most notably heathland) may also include smooth snake and sand lizard), following Froglife (1999)³⁵ and JNCC (2003)³⁶ guidance;
- **Notable species of invertebrate:** the survey involves assessing the potential of habitats within the Survey Area to support notable species of invertebrates, both terrestrial and aquatic (including white-clawed crayfish);
- **Protected or Notable species of plants:** the survey involves recording protected or notable plant species;
- **Other notable species:** the survey involves assessing the potential of habitat within the Survey Area to support other Notable Species, such as hedgehog, brown hare, polecat or common toad;
- **Non-native invasive plant species:** the survey involves recording evidence of the presence of invasive plants listed on Schedule 9 of the *Wildlife and Countryside Act 1981* (as amended) and subject to strict legal control.

Wintering Bird Survey

4.48 Surveys of wintering birds using the Site were undertaken to assess whether land is functionally linked to the Humber Estuary SPA/Ramsar site (and thus afforded additional protection in the planning process). The survey was based on methods following Bibby *et al* (2000)³⁷ and Gilbert *et al*, (1998)³⁸, with all areas within 50m of the Site. The surveys were undertaken twice per month for a period of 2 hours either side of high tide, with surveys alternating between early in the morning, commencing just after sunrise and late afternoon, finishing before dusk in February and March 2022. This approach helped to establish the

²⁷ Scottish Badgers (2018). *Surveying for Badgers: Good Practice Guidelines*. Version 1.

²⁸ Harris, S. Cresswell, P. and Jefferies, D. (1989). *Surveying Badgers*.

²⁹ Collins, J.(ed) (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edition). The Bat Conservation Trust. London.

³⁰ Ward, D. Holmes, N. Jose, P. (1994). *The New Rivers and Wildlife Handbook*. Royal Society for the Protection of Birds. Bedfordshire.

³¹ Chanin, P (2003b). *Monitoring the Otter Lutra lutra*. Conserving Natura 2000 Rivers Monitoring Series No 10. English Nature, Peterborough.

³² Dean, M. Strachan, R. Gow, D. Andrews, R. (2016). *The Water Vole Mitigation Handbook (The Mammal Society Guidance Series)*. Eds Fiona Mathews and Paul Chanin. The Mammal Society. London.

³³ English Nature (2001). *The Great Crested Newt Mitigation Guidelines*.

³⁴ Froglife (2001). *The Great Crested Newt Conservation Handbook*.

³⁵ Froglife (1999). *Reptile Survey: An introduction to planning, conducting and interpreting surveys for snake and lizard conservation*. Froglife Advice Sheet 10. Froglife, Halesworth.

³⁶ Joint Nature Conservation Committee (2003). *Herpetofauna Workers Manual*.

³⁷ Bibby *et al* (2000). *Bird Census Techniques*. Academic Press, London.

³⁸ Gilbert *et al* (1998). *Bird Monitoring Methods: A Manual of Techniques for Key UK Species*. The Royal Society for the Protection of Birds, Sandy.

overall use of the Site by different species groups, particularly any species which may arrive at or after dusk to roost overnight.




- 4.49 On each survey visit the route was walked at a slow pace with start and finish times noted. All birds seen and heard will be recorded directly onto a base map of the Site. Registrations of birds were recorded using standard British Trust for Ornithology (BTO) two letter species codes. All bird species were recorded and mapped across the Site. Each survey visit was undertaken to coincide with high tide at the adjacent Immingham Docks during appropriate weather conditions (dry with a wind speed <F5) for recording birds survey. The times and dates of the surveys and the weather conditions are set out in the table below.

Visit Number	Date	High Tide Time	Sunrise/Sunset	Survey Times	Weather Conditions
1	04/02/2022	08:14	07:40	07:14 – 09:14	F3SW, 4°C, dry, good visibility, cloud cover 7/8.
2	28/02/2022	16:14	17:40	12:35 – 16:35	F3S, 10°C, dry (then rain from 15:00), cloud cover 8/8.
3	17/03/2022	17:33	18:08	12:30 – 14:30	F4SW, 13°C, dry, good visibility, cloud cover 2/8.
4	21/03/2022	07:53	06:01	06:50 – 08:50	F1SE, 4 to 11°C, dry, good visibility, cloud cover 2/8.

Limitations and Assumptions

- 4.50 This PEA report pertains only to the land off Kings Road, which is referred to as the 'West Site' in the wider IGET Scheme as detailed in the Scoping report for the Scheme.
- 4.51 The aim of a desk study is to help characterise the baseline context of a Scheme and provide valuable background information that would not be captured by a single site survey alone. Information obtained through desk study is dependent upon people and organisations having made and submitted records for the area of interest. As such, a lack of records for a particular habitat or species does not necessarily mean that it does not occur in the study area. Likewise, the presence of records for particular habitats and species does not automatically mean that these still occur within the area of interest or are relevant in the context of the Scheme.
- 4.52 Where habitat boundaries coincide with physical boundaries recorded on OS maps the resolution is as determined by the scale of mapping. Elsewhere, habitat mapping is as estimated in the field and/or recorded by hand-held Global Positioning System (GPS). Where areas of habitat are given these are approximate and should be verified by measurement on site where required for design or construction. While indicative locations of trees are recorded this does not replace requirements for detailed specialist arboricultural survey to British Standard 5837:2012 Trees in Relation to Design, Demolition and Construction.

Appendix D Target Notes and Photographs

Target Note	Description	Photograph(s)
TN1	Grassland which has established on the formerly cultivated fields that has established .	 A wide-angle photograph showing a large, flat field of established grassland. The vegetation is a mix of green and brown, indicating a naturalized area. In the background, there are some utility poles and a distant hill under a clear blue sky.
TN2	Example of scattered scrub which has established throughout the Site within the grassland.	 A photograph showing a field of tall, dry, golden-brown grasses. Scattered throughout the field are clumps of taller, darker scrub vegetation. In the background, there are some structures and utility poles under a clear blue sky.
TN3	Ditch supporting common reed.	 A photograph showing a ditch or waterway filled with tall, brown, common reeds. The reeds are dense and reach a significant height. The background shows a flat landscape under a blue sky with some light clouds.

Appendix E Lincolnshire Desk Study Record Report


LERC Search Summary Report

Grid Reference: TA 20056 14641
Buffer: 2km

Date of publication: 17/03/2022
Expires: 17/03/2023

Achieving more for nature

Report Details

Produced for	Nicole Mallett, AECOM
Search area	

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This report summarises a search of statutory sites, non-statutory sites, other sites, habitats and species within the specified area; where no information is returned for a section, it is excluded from this summary report.

About the Lincolnshire Environmental Records Centre

The Lincolnshire Environmental Records Centre (LERC) collates wildlife and geological information for Greater Lincolnshire from various sources and makes it available for various uses. This data is crucial to aid conservation management of sites, to help organisations prioritise action, and to understand the distribution of species and trends over time. For more information on LERC or to request a data search, visit the website at <https://glnp.org.uk/partnership/lerc/>



Lincolnshire Environmental Records Centre is an ALERC accredited LRC, meeting the standard level criteria. For more information on accreditation, see the ALERC website at <http://www.alerc.org.uk/alerc-accreditation.html>

Statutory Sites

Statutory sites are those afforded legal protection aimed at preventing activities that may damage features of interest. Further information on these sites is available from [Natural England](#) (SSSIs, NNRs, LNRs, SPAs, SACs, Ramsars) and [The National Association for Areas of Outstanding Natural Beauty](#) (AONBs).




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Code	Designation	Status	Name
1	SSSI	Notified	Humber Estuary
2	SPA	Classified	Humber Estuary
3	SAC	Designated	Humber Estuary
4	Ramsar	Listed	Humber Estuary

Statutory Sites within the search area



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

-  Site of Special Scientific Interest
-  Special Protection Area
-  Special Area of Conservation

-  Ramsar Site
-  Search area
-  LERC boundary

Non-statutory sites

The GLNP works directly with local authorities to coordinate the Local Sites system in Greater Lincolnshire. Sites are selected by the Nature Partnership, based on recommendations made by its expert working groups known as the LWS Panel and LGS Panel. The Register of Local Sites is then submitted for inclusion within local authority planning policy.

These sites are recognition of wildlife or geological value and are a testament to the land management that is already being undertaken on them. Identifying these sites helps local authorities meet their obligations under legislation and government guidance, including reporting on the number of sites in positive management for Single Data List Indicator 160-00.

Code	Designation	Status	Name
1	LWS	Selected	Laporte Road Brownfield Site

Non-statutory sites within the search area



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

 Local Wildlife Site

 LERC boundary

 Search area

Habitats

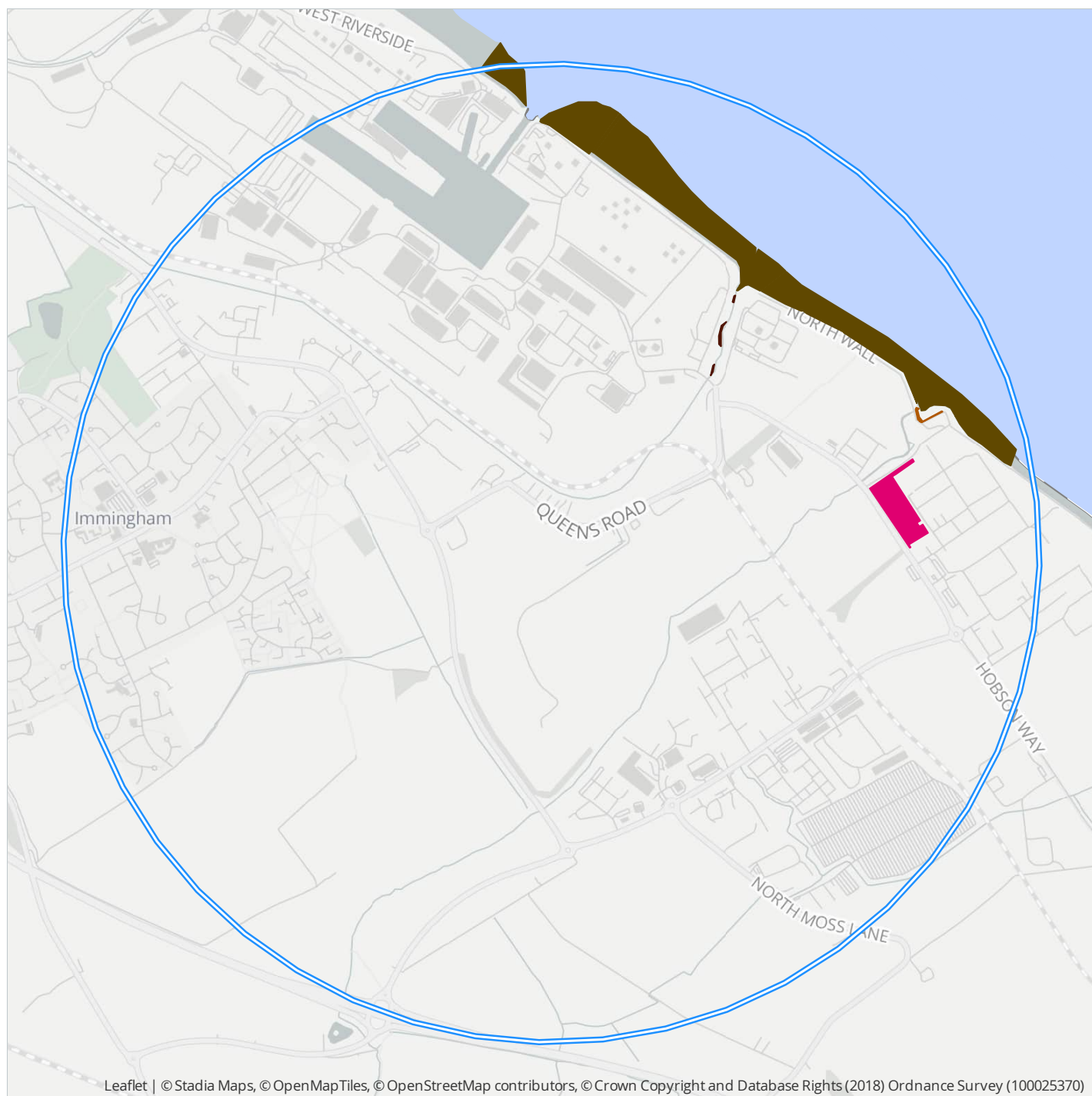
Priority habitats are those identified as being the most threatened and requiring conservation action in the UK. The most-recent list of UK priority species and habitats was published in August 2007 following a 2-year review of the process and priorities, representing the most comprehensive analysis of such information ever undertaken in the UK.

The data presented is the most up-to-date of the data collated by the GLNP and mostly comes from surveys of Local Sites; further historic data and non-Priority habitat data may also be available. Absence of information doesn't mean that the Priority habitat isn't present merely that no information is held.








A number of different datasets have been consulted to produce this report - a summary of attribution statements is available at <https://glnp.org.uk/images/uploads/services/lincolnshire-environmental-records-centre/habitat%20attribution.pdf>.

Type	Habitat	Survey Date	Area (ha)
Priority Habitat	Coastal saltmarsh	2001	0.07
Priority Habitat	Intertidal mudflats	2003 - 2009	28.63
Priority Habitat	Open mosaic habitats on previously developed land	2015	2.93
Priority Habitat	Reedbeds	2015	0.1
Priority Habitat	Rivers	2010 - 2011	10440.42

Habitats within the search area



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

- | | | | |
|---|---|---|---------------|
|  | Coastal saltmarsh |  | Rivers |
|  | Intertidal mudflats |  | Search area |
|  | Open mosaic habitats on previously developed land |  | LERC boundary |
|  | Reedbeds | | |

Species

Lincolnshire Environmental Records Centre holds records on the following species within or overlapping the search area. Data shown is as held by LERC; past records of presence of a species does not guarantee continued occurrence and absence of records does not imply absence of a species, merely that no records are held. Confidential data, zero abundance records, data at poorly defined geographic resolutions and data pending validation and/or verification are also excluded from this report. A number of different datasets have been consulted to produce this report - a summary of attribution statements is available at <https://glnp.org.uk/images/uploads/services/lincolnshire-environmental-records-centre/species%20attribution.pdf>

Amphibian (4 taxa)

Common Frog, <i>Rana temporaria</i>	3	1977 - 2004	Protected
Common Toad, <i>Bufo bufo</i>	4	2004 - 2012	Protected, Priority
Great Crested Newt, <i>Triturus cristatus</i>	1	1976 - 1976	Protected, Priority, Local Priority
Smooth Newt, <i>Lissotriton vulgaris</i>	2	2004 - 2004	Protected, Local Priority

Bird (62 taxa)

Avocet, <i>Recurvirostra avosetta</i>	2	2003 - 2019	Protected
Barn Owl, <i>Tyto alba</i>	7	1999 - 2017	Protected, Local Priority
Black-tailed Godwit, <i>Limosa limosa</i>	55	1995 - 2020	Protected
Brambling, <i>Fringilla montifringilla</i>	4	2010 - 2011	Protected
Bullfinch, <i>Pyrrhula pyrrhula</i>	48	1979 - 2020	Local Priority
Canada Goose, <i>Branta canadensis</i>	17	2007 - 2020	Non-native
Cattle Egret, <i>Bubulcus ibis</i>	1	2016 - 2016	Non-native
Cetti's Warbler, <i>Cettia cetti</i>	1	2020 - 2020	Protected
Collared Dove, <i>Streptopelia decaocto</i>	122	2004 - 2020	Non-native
Corn Bunting, <i>Emberiza calandra</i>	1	1977 - 1977	Local Priority
Cuckoo, <i>Cuculus canorus</i>	13	1975 - 2020	Priority
Curlew, <i>Numenius arquata</i>	196	1989 - 2020	Priority, Local Priority
Fieldfare, <i>Turdus pilaris</i>	40	1978 - 2019	Protected
Gadwall, <i>Mareca strepera</i>	100	2019 - 2020	Non-native
Goldeneye, <i>Bucephala clangula</i>	1	1998 - 1998	Protected
Grasshopper Warbler, <i>Locustella naevia</i>	4	2004 - 2010	Priority
Green Sandpiper, <i>Tringa ochropus</i>	49	2004 - 2020	Protected
Greenshank, <i>Tringa nebularia</i>	18	2001 - 2020	Protected
Grey Partridge, <i>Perdix perdix</i>	4	2005 - 2020	Priority, Local Priority, Non-native
Greylag Goose, <i>Anser anser</i>	91	2010 - 2020	Protected
Hen Harrier, <i>Circus cyaneus</i>	1	2009 - 2009	Protected
Hobby, <i>Falco subbuteo</i>	5	2001 - 2010	Protected
House Sparrow, <i>Passer domesticus</i>	140	1977 - 2017	Priority, Local Priority

Bird (62 taxa)

Kingfisher, <i>Alcedo atthis</i>	5	1999 - 2020	Protected
Lapwing, <i>Vanellus vanellus</i>	153	1979 - 2020	Priority, Local Priority
Linnet, <i>Linaria cannabina</i>	110	1977 - 2020	Local Priority
Little Gull, <i>Hydrocoloeus minutus</i>	2	2013 - 2020	Protected
Little Ringed Plover, <i>Charadrius dubius</i>	6	2002 - 2020	Protected
Marsh Harrier, <i>Circus aeruginosus</i>	1	2012 - 2012	Protected
Merlin, <i>Falco columbarius</i>	1	1998 - 1998	Protected
Mute Swan, <i>Cygnus olor</i>	51	2007 - 2020	Non-native
Osprey, <i>Pandion haliaetus</i>	2	2016 - 2020	Protected
Peregrine, <i>Falco peregrinus</i>	32	2002 - 2020	Protected
Pheasant, <i>Phasianus colchicus</i>	61	2005 - 2020	Non-native
Pink-footed Goose, <i>Anser brachyrhynchus</i>	12	1999 - 2019	Non-native
Pochard, <i>Aythya ferina</i>	5	2007 - 2020	Non-native
Purple Sandpiper, <i>Calidris maritima</i>	1	2016 - 2016	Protected
Red Kite, <i>Milvus milvus</i>	2	2009 - 2015	Protected
Red-legged Partridge, <i>Alectoris rufa</i>	2	2011 - 2017	Non-native
Redshank, <i>Tringa totanus</i>	195	1978 - 2020	Local Priority
Redwing, <i>Turdus iliacus</i>	40	1974 - 2017	Protected
Reed Bunting, <i>Emberiza schoeniclus</i>	99	1975 - 2020	Priority, Local Priority
Ring Ouzel, <i>Turdus torquatus</i>	3	2011 - 2017	Priority
Rock Dove, <i>Columba livia</i>	6	2007 - 2020	Non-native
Rose-coloured Starling, <i>Pastor roseus</i>	1	2015 - 2015	Non-native
Ruff, <i>Calidris pugnax</i>	1	1995 - 1995	Protected
Scaup, <i>Aythya marila</i>	1	2007 - 2007	Protected, Priority
Skylark, <i>Alauda arvensis</i>	126	1979 - 2020	Local Priority
Snipe, <i>Gallinago gallinago</i>	33	1998 - 2020	Local Priority
Snow Bunting, <i>Plectrophenax nivalis</i>	3	1989 - 2009	Protected
Song Thrush, <i>Turdus philomelos</i>	38	2004 - 2017	Local Priority
Spoonbill, <i>Platalea leucorodia</i>	2	2020 - 2020	Protected
Spotted Flycatcher, <i>Muscicapa striata</i>	1	2011 - 2011	Priority
Starling, <i>Sturnus vulgaris</i>	233	1978 - 2020	Local Priority
Swift, <i>Apus apus</i>	31	2005 - 2020	Local Priority
Tree Sparrow, <i>Passer montanus</i>	36	1977 - 2017	Priority, Local Priority
Turtle Dove, <i>Streptopelia turtur</i>	8	2003 - 2011	Priority, Local Priority
Whimbrel, <i>Numenius phaeopus</i>	1	2020 - 2020	Protected
Wigeon, <i>Mareca penelope</i>	11	2004 - 2020	Non-native

Bird (62 taxa)

Wood Sandpiper, <i>Tringa glareola</i>	2	2002 - 2020	Protected
Yellow Wagtail, <i>Motacilla flava</i>	31	2004 - 2020	Local Priority
Yellowhammer, <i>Emberiza citrinella</i>	108	1977 - 2020	Priority, Local Priority

Bony Fish (Actinopterygii) (2 taxa)

Common Carp, <i>Cyprinus carpio</i>	19	1988 - 1995	Non-native
Crucian Carp, <i>Carassius carassius</i>	11	1988 - 1995	Non-native

Conifer (6 taxa)

Austrian Pine, <i>Pinus nigra</i>	3	2009 - 2019	Non-native
European Larch, <i>Larix decidua</i>	1	2015 - 2015	Non-native
Lawson's Cypress, <i>Chamaecyparis lawsoniana</i>	1	1997 - 1997	Non-native
Leyland Cypress, <i>Cupressus macrocarpa</i> x <i>Xanthocyparis nootkatensis</i> = <i>X Cuprocyparis leylandi</i>	4	2010 - 2019	Non-native
Monkey-puzzle, <i>Araucaria araucana</i>	1	2009 - 2009	Non-native
Norway Spruce, <i>Picea abies</i>	2	2010 - 2015	Non-native

Flowering Plant (139 taxa)

Alsike Clover, <i>Trifolium hybridum</i>	2	2009 - 2019	Non-native
American Willowherb, <i>Epilobium ciliatum</i>	5	2009 - 2019	Non-native
Apple, <i>Malus pumila</i>	12	2008 - 2019	Non-native
Balm-of-Gilead, <i>Populus balsamifera</i> x <i>deltoides</i> = <i>P. x jackii</i>	1	2019 - 2019	Non-native
Barren Brome, <i>Bromus sterilis</i>	20	1993 - 2019	Non-native
Beaked Hawk's-beard, <i>Crepis vesicaria</i>	15	1993 - 2015	Non-native
Black Horehound, <i>Ballota nigra</i>	2	2015 - 2019	Non-native
Black-bindweed, <i>Fallopia convolvulus</i>	7	1993 - 2019	Non-native
Black-grass, <i>Alopecurus myosuroides</i>	9	1993 - 2019	Non-native
Bluebell, <i>Hyacinthoides non-scripta</i> x <i>hispanica</i> = <i>H. x massartiana</i>	1	2019 - 2019	Non-native
Bread Wheat, <i>Triticum aestivum</i>	4	2009 - 2019	Non-native
Bristly Oxtongue, <i>Picris echioides</i>	54	1988 - 2019	Non-native
Broad Bean, <i>Vicia faba</i>	1	2014 - 2014	Non-native
Broad-leaved Cockspurthorn, <i>Crataegus persimilis</i>	1	2019 - 2019	Non-native
Bugloss, <i>Anchusa arvensis</i>	1	2014 - 2014	Non-native
Butterfly-bush, <i>Buddleja davidii</i>	16	1997 - 2019	Non-native
Buttonweed, <i>Cotula coronopifolia</i>	1	2015 - 2015	Non-native
Canadian Fleabane, <i>Conyza canadensis</i>	11	2008 - 2019	Non-native
Canary-grass, <i>Phalaris canariensis</i>	1	2009 - 2009	Non-native
Charlock, <i>Sinapis arvensis</i>	15	1993 - 2019	Non-native

Flowering Plant (139 taxa)

Cherry Laurel, <i>Prunus laurocerasus</i>	1	2015 - 2015	Non-native
Cherry Plum, <i>Prunus cerasifera</i>	4	2009 - 2009	Non-native
Common Field-speedwell, <i>Veronica persica</i>	18	1993 - 2019	Non-native
Common Fumitory, <i>Fumaria officinalis</i>	4	1993 - 2019	Non-native
Common Mallow, <i>Malva sylvestris</i>	11	1993 - 2019	Non-native
Common Poppy, <i>Papaver rhoeas</i>	11	1993 - 2019	Non-native
Common Vetch, <i>Vicia sativa subsp. segetalis</i>	3	1997 - 2015	Non-native
Cornflower, <i>Centaurea cyanus</i>	1	2014 - 2014	Priority, Non-native
Cornus sanguinea subsp. australis, <i>Cornus sanguinea subsp. australis</i>	2	2015 - 2019	Non-native
Cotton Thistle, <i>Onopordum acanthium</i>	2	1996 - 1996	Non-native
Crown Vetch, <i>Securigera varia</i>	2	2010 - 2015	Non-native
Cut-leaved Crane's-bill, <i>Geranium dissectum</i>	33	1993 - 2019	Non-native
Cut-leaved Dead-nettle, <i>Lamium hybridum</i>	3	1997 - 2014	Non-native
Dotted Loosestrife, <i>Lysimachia punctata</i>	1	2015 - 2015	Non-native
Dwarf Mallow, <i>Malva neglecta</i>	1	2009 - 2009	Non-native
Dwarf Spurge, <i>Euphorbia exigua</i>	1	1993 - 1993	Non-native
Eastern Rocket, <i>Sisymbrium orientale</i>	2	2007 - 2007	Non-native
Equal-leaved Knotgrass, <i>Polygonum arenastrum</i>	2	2009 - 2019	Non-native
Feverfew, <i>Tanacetum parthenium</i>	2	2009 - 2019	Non-native
Field Forget-me-not, <i>Myosotis arvensis</i>	22	1993 - 2019	Non-native
Field Pansy, <i>Viola arvensis</i>	3	1997 - 2007	Non-native
Field Penny-cress, <i>Thlaspi arvense</i>	2	1997 - 2009	Non-native
Flowering Currant, <i>Ribes sanguineum</i>	1	2019 - 2019	Non-native
Foxtail Barley, <i>Hordeum jubatum</i>	2	2015 - 2019	Non-native
Franchet's Cotoneaster, <i>Cotoneaster franchetii</i>	1	2015 - 2015	Non-native
Fumaria officinalis subsp. officinalis, <i>Fumaria officinalis subsp. officinalis</i>	2	2007 - 2007	Non-native
Garden Asparagus, <i>Asparagus officinalis</i>	1	2009 - 2009	Non-native
Garden Candytuft, <i>Iberis umbellata</i>	1	2014 - 2014	Non-native
Garden Lobelia, <i>Lobelia erinus</i>	1	2015 - 2015	Non-native
Garden Privet, <i>Ligustrum ovalifolium</i>	2	2009 - 2019	Non-native
Giant-rhubarb, <i>Gunnera tinctoria</i>	1	2015 - 2015	Non-native
Gooseberry, <i>Ribes uva-crispa</i>	1	1997 - 1997	Non-native
Greater Burdock, <i>Arctium lappa</i>	2	2014 - 2015	Non-native
Greater Periwinkle, <i>Vinca major</i>	2	2009 - 2019	Non-native
Green Alkanet, <i>Pentaglottis sempervirens</i>	1	2019 - 2019	Non-native
Green Field-speedwell, <i>Veronica agrestis</i>	2	1997 - 1997	Non-native
Grey Alder, <i>Alnus incana</i>	3	1997 - 2019	Non-native

Flowering Plant (139 taxa)

Guernsey Fleabane, <i>Conyza sumatrensis</i>	1	2009 - 2009	Non-native
Hare's-tail, <i>Lagurus ovatus</i>	1	2013 - 2013	Non-native
Hedge Mustard, <i>Sisymbrium officinale</i>	25	1993 - 2019	Non-native
Hedgerow Crane's-bill, <i>Geranium pyrenaicum</i>	1	2019 - 2019	Non-native
Hemlock, <i>Conium maculatum</i>	55	1993 - 2019	Non-native
Henbit Dead-nettle, <i>Lamium amplexicaule</i>	1	2011 - 2011	Non-native
Hoary Cress, <i>Lepidium draba</i>	6	1993 - 2019	Non-native
Horse-chestnut, <i>Aesculus hippocastanum</i>	2	2014 - 2015	Non-native
Horse-radish, <i>Armoracia rusticana</i>	6	1997 - 2019	Non-native
Hybrid Black-poplar, <i>Populus nigra x deltoides = P. x canadensis</i>	11	1997 - 2019	Non-native
Hybrid Coralberry, <i>Symphoricarpos microphyllus x orbiculatus = S. x chenaultii</i>	1	2019 - 2019	Non-native
Hybrid Crack-willow, <i>Salix euxina x alba = S. x fragilis</i>	1	2008 - 2008	Non-native
Italian Rye-grass, <i>Lolium multiflorum</i>	7	1993 - 2019	Non-native
Ivy-Leaved Speedwell, <i>Veronica hederifolia subsp. hederifolia</i>	1	2014 - 2014	Non-native
Japanese Honeysuckle, <i>Lonicera japonica</i>	1	2019 - 2019	Non-native
Japanese Knotweed, <i>Fallopia japonica</i>	1	2009 - 2009	Non-native
Japanese Rose, <i>Rosa rugosa</i>	4	2010 - 2019	Non-native
Lamium galeobdolon subsp. argentatum, <i>Lamium galeobdolon subsp. argentatum</i>	1	2019 - 2019	Non-native
Large Bindweed, <i>Calystegia silvatica</i>	9	2008 - 2019	Non-native
Least Duckweed, <i>Lemna minuta</i>	1	2013 - 2013	Non-native
Lepidium draba subsp. draba, <i>Lepidium draba subsp. draba</i>	3	2010 - 2019	Non-native
Lesser Swine-cress, <i>Lepidium didymum</i>	3	2014 - 2015	Non-native
Lilac, <i>Syringa vulgaris</i>	3	1999 - 2019	Non-native
London Plane, <i>Platanus occidentalis x orientalis = P. x hispanica</i>	2	2015 - 2015	Non-native
Long Smooth-headed Poppy, <i>Papaver dubium</i>	3	1997 - 2019	Non-native
Lucerne, <i>Medicago sativa subsp. sativa</i>	1	2015 - 2015	Non-native
Moth Mullein, <i>Verbascum blattaria</i>	1	2019 - 2019	Non-native
Mugwort, <i>Artemisia vulgaris</i>	41	1993 - 2019	Non-native
Narrow-leaved Pepperwort, <i>Lepidium ruderale</i>	4	1993 - 2019	Non-native
Narrow-leaved Ragwort, <i>Senecio inaequidens</i>	13	2010 - 2019	Non-native
Norway Maple, <i>Acer platanoides</i>	2	2009 - 2015	Non-native
Nuttall's Waterweed, <i>Elodea nuttallii</i>	7	1997 - 2015	Non-native
Oil-seed Rape, <i>Brassica napus subsp. oleifera</i>	10	1997 - 2019	Non-native
Opium Poppy, <i>Papaver somniferum</i>	5	1997 - 2015	Non-native
Osier, <i>Salix viminalis</i>	9	1997 - 2019	Non-native
Oxford Ragwort, <i>Senecio squalidus</i>	33	1993 - 2019	Non-native

Flowering Plant (139 taxa)

Petty Spurge, <i>Euphorbia peplus</i>	5	2008 - 2019	Non-native
Pineappleweed, <i>Matricaria discoidea</i>	11	1993 - 2019	Non-native
Prickly Lettuce, <i>Lactuca serriola</i>	14	1997 - 2019	Non-native
Purple Toadflax, <i>Linaria purpurea</i>	7	1997 - 2019	Non-native
Rat's-tail Fescue, <i>Vulpia myuros</i>	17	1993 - 2019	Non-native
Red Dead-nettle, <i>Lamium purpureum</i>	8	1997 - 2019	Non-native
Red Horse-chestnut, <i>Aesculus carnea</i>	1	2019 - 2019	Non-native
Red Valerian, <i>Centranthus ruber</i>	1	2014 - 2014	Non-native
Reflexed Stonecrop, <i>Sedum rupestre</i>	2	1988 - 2009	Non-native
Ribbed Melilot, <i>Melilotus officinalis</i>	3	1993 - 2013	Non-native
Russian Comfrey, <i>Symphytum officinale x asperum</i> = <i>S. x uplandicum</i>	2	2015 - 2019	Non-native
Russian-vine, <i>Fallopia baldschuanica</i>	2	2014 - 2014	Non-native
Salsify, <i>Tragopogon porrifolius</i>	1	2011 - 2011	Non-native
Scented Mayweed, <i>Matricaria chamomilla</i>	10	1993 - 2015	Non-native
Scentless Mayweed, <i>Tripleurospermum inodorum</i>	39	1993 - 2019	Non-native
Shaggy Soldier, <i>Galinsoga quadriradiata</i>	1	2009 - 2009	Non-native
Shepherd's-purse, <i>Capsella bursa-pastoris</i>	19	1993 - 2019	Non-native
Six-rowed Barley, <i>Hordeum vulgare</i>	2	2010 - 2014	Non-native
Slender Speedwell, <i>Veronica filiformis</i>	1	2015 - 2015	Non-native
Small Nettle, <i>Urtica urens</i>	2	1997 - 1997	Non-native
Small Toadflax, <i>Chaenorhinum minus</i>	1	1997 - 1997	Non-native
Snow-in-summer, <i>Cerastium tomentosum</i>	1	1997 - 1997	Non-native
Snowdrop, <i>Galanthus nivalis</i>	5	1999 - 2020	Non-native
Soapwort, <i>Saponaria officinalis</i>	1	2009 - 2009	Non-native
Spreading Cotoneaster, <i>Cotoneaster divaricatus</i>	1	2019 - 2019	Non-native
Stag's-horn Sumach, <i>Rhus typhina</i>	1	2009 - 2009	Non-native
Sticky Groundsel, <i>Senecio viscosus</i>	11	1993 - 2013	Non-native
Sun Spurge, <i>Euphorbia helioscopia</i>	3	1997 - 2014	Non-native
Swedish Whitebeam, <i>Sorbus intermedia</i>	6	1997 - 2019	Non-native
Swine-cress, <i>Lepidium coronopus</i>	1	1997 - 1997	Non-native
Sycamore, <i>Acer pseudoplatanus</i>	20	1993 - 2019	Non-native
Tall Melilot, <i>Melilotus altissimus</i>	12	1994 - 2019	Non-native
Tall Rocket, <i>Sisymbrium altissimum</i>	1	1997 - 1997	Non-native
Wall Barley, <i>Hordeum murinum</i>	11	1993 - 2019	Non-native
Wall Cotoneaster, <i>Cotoneaster horizontalis</i>	1	2019 - 2019	Non-native
Weeping Willow, <i>Salix alba x babylonica</i> = <i>S. x sepulcralis</i>	2	2015 - 2019	Non-native
Weld, <i>Reseda luteola</i>	24	1993 - 2019	Non-native

Flowering Plant (139 taxa)

White Champion, <i>Silene latifolia</i>	14	1993 - 2019	Non-native
White Dead-nettle, <i>Lamium album</i>	25	1993 - 2019	Non-native
White Dogwood, <i>Cornus alba</i>	1	2009 - 2009	Non-native
White Melilot, <i>Melilotus albus</i>	1	2019 - 2019	Non-native
White Poplar, <i>Populus alba</i>	2	2019 - 2019	Non-native
White Stonecrop, <i>Sedum album</i>	4	1988 - 2019	Non-native
White Willow, <i>Salix alba</i>	4	2009 - 2015	Non-native
Wild Plum, <i>Prunus domestica</i>	4	2009 - 2019	Non-native
Wild-oat, <i>Avena fatua</i>	8	1993 - 2019	Non-native

Insect - Butterfly (4 taxa)

Small Heath, <i>Coenonympha pamphilus</i>	16	1998 - 2016	Priority
Wall, <i>Lasiommata megera</i>	16	1999 - 2014	Priority
White Admiral, <i>Limenitis camilla</i>	2	2014 - 2014	Priority
White-letter Hairstreak, <i>Satyrrium w-album</i>	34	2003 - 2020	Protected, Priority

Insect - Moth (1 taxa)

Cinnabar, <i>Tyria jacobaeae</i>	1	2015 - 2015	Priority
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Insect - True Bug (Hemiptera) (1 taxa)

Western Conifer Seed Bug, <i>Leptoglossus occidentalis</i>	1	2010 - 2010	Non-native
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Marine Mammal (1 taxa)

Common Porpoise, <i>Phocoena phocoena</i>	2	2010 - 2010	Protected, Priority
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Mollusc (2 taxa)

Bladder snails, <i>Physa</i>	2	2006 - 2006	Non-native
Jenkins' Spire Snail, <i>Potamopyrgus antipodarum</i>	9	2006 - 2017	Non-native

Terrestrial Mammal (10 taxa)

Brown Hare, <i>Lepus europaeus</i>	7	1976 - 2018	Priority
Brown Rat, <i>Rattus norvegicus</i>	2	1977 - 2002	Non-native
Eastern Grey Squirrel, <i>Sciurus carolinensis</i>	4	1977 - 2018	Non-native
Eurasian Badger, <i>Meles meles</i>	1	2016 - 2016	Protected
Eurasian Otter, <i>Lutra lutra</i>	1	2020 - 2020	Protected, Priority
European Rabbit, <i>Oryctolagus cuniculus</i>	9	1977 - 2015	Non-native
European Water Vole, <i>Arvicola amphibius</i>	8	2007 - 2018	Protected, Priority, Local Priority

Terrestrial Mammal (10 taxa)

Harvest Mouse, <i>Micromys minutus</i>	1	2009 - 2009	Priority
House Mouse, <i>Mus musculus</i>	1	1977 - 1977	Non-native
West European Hedgehog, <i>Erinaceus europaeus</i>	8	1976 - 2018	Priority

Terrestrial Mammal (bat) (5 taxa)

Bat, <i>Chiroptera</i>	11	2001 - 2014	Protected, Priority, Local Priority
Brown Long-eared Bat, <i>Plecotus auritus</i>	1	2008 - 2008	Protected, Priority, Local Priority
Common Pipistrelle, <i>Pipistrellus pipistrellus sensu stricto</i>	4	2003 - 2011	Protected, Local Priority
Noctule Bat, <i>Nyctalus noctula</i>	2	2003 - 2011	Protected, Priority, Local Priority
Pipistrelle Bat species, <i>Pipistrellus</i>	5	1992 - 2009	Protected, Priority, Local Priority

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