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# England Coast Path Stretch:

# Mablethorpe to Easington

## Habitat Regulation Assessment

NATURAL ENGLAND

# Habitat assessment of England Coast Path proposals

## For:

- **Mablethorpe to Humber Bridge**
- **Humber Bridge to Easington**

## On:

- **Saltfleetby – Theddlethorpe Dunes & Gibraltar Point Special Area of Conservation (SAC)**
- **Greater Wash Special Protection Area (SPA)**
- **Humber Estuary SAC**
- **Humber Estuary SPA**
- **Humber Estuary Ramsar site**

## Published on the 12th May 2021

# Contents:



**Cover Picture, Paull Holme Strays, Emily Ledder**

# Summary

## Introduction

This is a record of the Habitats Regulations Assessment ('HRA') undertaken by Natural England (in its role of competent authority) in accordance with the assessment and review provisions of the Conservation of Habitats and Species Regulations 2017 (as amended) ('the Habitats Regulations').

Natural England has a statutory duty under the Marine and Coastal Access Act 2009 to improve access to the English coast. This assessment considers the potential impacts of our detailed proposals for coastal access from Mablethorpe to Humber Bridge and Humber Bridge to Easington the following sites of international importance for wildlife:

- Saltfleetby – Theddlethorpe Dunes & Gibraltar Point Special Area of Conservation (SAC)
- Greater Wash Special Protection Area (SPA)
- Humber Estuary SPA
- Humber Estuary Ramsar site
- Humber Estuary SAC

**This assessment should be read alongside Natural England's related Coastal Access Reports which between them fully describe and explain its access proposals for the stretch as a whole. The Overview explains common principles and background and the reports explain how we propose to implement coastal access along each of the constituent lengths within the stretch.**

Mablethorpe to Humber Bridge

Humber Bridge to Easington

## Background

The main wildlife interests for this stretch of coast and within the European designated sites in the proposals are:

- non-breeding waterbirds and the assemblage
- non-breeding hen harrier
- breeding little tern, avocet and marsh harrier
- grey seals
- dunes
- intertidal habitat

For a full list of qualifying features see Table 4.

## Our approach

Natural England's approach to ensuring the protection of sensitive nature conservation features under the Coastal Access Programme is set out in section 4.9 Coastal Access: Natural England's Approved Scheme 2013.

Our final published proposal for a stretch of England Coast Path is preceded by detailed local consideration of options for route alignment, the extent of the coastal margin and any requirement

for restrictions, exclusions or seasonal alternative routes. The proposal is thoroughly considered before being finalised and initial ideas may be modified or rejected during the iterative design process, drawing on the range of relevant expertise available within Natural England.

Evidence is also gathered from a range of other sources, which can include information and data held locally by external partners or from the experience of local landowners and occupiers, and environmental consultants.

The approach also includes looking at any current visitor management practices, either informal or formal. It also involves discussing our emerging conclusions as appropriate with key local interests such as landowners or occupiers, conservation organisations or the local access authority. In these ways, any nature conservation concerns are discussed early and constructive solutions identified as necessary.

In particular the project commissioned the following studies:

- An analysis of wetland bird survey (WeBS) data for The Humber Estuary SSSI, SAC, SPA and Ramsar site: sector-level trends to winter 2016/17 (D. Woodward, N.A. Calbrade, & G.E. Austin, 2018)
- Tetney Marshes and Saltfleetby-Theddlethorpe National Nature Reserve: Management of visitors with dogs (S. Jenkinson, 2019), Access & Countryside Management Ltd

The conclusions of our assessment are certified by both the member of staff responsible for developing the access proposal and the person responsible for considering any environmental impacts. This ensures appropriate separation of duties within Natural England.

## Aim and objectives for the design of our proposals

The new national arrangements for coastal access will establish a continuous well-maintained walking route around the coast and clarify where people can access the foreshore and other parts of the coastal margin. These changes will influence how people use the coast for recreation and our aim in designing our detailed proposals has been to secure and enhance opportunities for people to enjoy their visit whilst ensuring appropriate protection for affected European sites.

A key consideration in developing coastal access proposals around the Humber estuary, between Mablethorpe and Easington, has been the possible impact of disturbance to breeding and non-breeding birds and pupping grey seals, and damage to sensitive habitats, as a result of access by foot.

Objectives for design of our detailed local proposals have been to:

- avoid exacerbating issues at sensitive locations by making use of established coastal paths
- where there is no suitable established and regularly used coastal route, develop proposals that take account of risks to sensitive nature conservation features and incorporate mitigation as necessary in our proposals
- clarify when, where and how people may access the foreshore and other parts of the coastal margin on foot for recreational purposes
- work with local partners to design detailed proposals that take account of and complement efforts to manage access in sensitive locations
- where practical, incorporate opportunities to raise awareness of the importance of this stretch of coast for wildlife and how people can help efforts to protect it.

## Summary conclusion

We have considered whether our detailed proposals for coastal access between Mablethorpe to Humber Bridge and Humber Bridge to Easington might have an impact on:

- Saltfleetby – Theddlethorpe Dunes & Gibraltar Point Special Area of Conservation (SAC)
- Greater Wash Special Protection Area (SPA)
- Humber Estuary SPA
- Humber Estuary Ramsar site
- Humber Estuary SAC

In Part C of this assessment we identified some possible risks to the relevant qualifying features and concluded that proposals for coastal access, without incorporated mitigation, may have a significant effect on these designated sites.

In Part D we considered these risks in more detail, taking account of avoidance and mitigation measures incorporated into our access proposal, and have concluded that there will be no risk of an adverse effect on the integrity of any site. These measures are summarised in Tables 1 and 2 below.

**Table 1: Summary of risks and consequent mitigation built into our proposals for Mablethorpe to Humber Bridge**

| Report | Location | Nature conservation risk | Mitigation |
|---|---|---|---|
| MHB 2 | Donna Nook | Disturbance of grey seal during pupping from the public exercising their CROW rights. | Closure of the main route to the public and provision of a seasonal alternative route from 1st October to 31st January each year under section 26(3a) of the CROW Act. |
| MHB 2 | Donna Nook | Disturbance of grey seals during pupping from the construction of seasonal alternative route. | Construction to be completed outside grey seal breeding season. |
| MHB 2 | Horseshoe Point | Disturbance of passage & over-wintering SPA waterbirds and SPA assemblage from the public exercising their CROW rights. within the coastal access margin. | No coastal access rights to the public year round under section 26(3a) of the CROW Act. |
| MHB 2 | Dune at Tetney Marsh / Humber Mouth | Disturbance of breeding habitat for nationally important breeding ground nesting birds, hunting marsh harrier and passage & over-wintering SPA waterbirds and SPA assemblage from the public exercising their CROW rights within the coastal access margin. | Appropriate signs and interpretation, agreed with NELC. |
| MHB 2/3 | Humber Mouth and | Disturbance of passage & over-wintering SPA waterbirds and SPA assemblage at roosting | Appropriate signs and interpretation, agreed with NELC. |

| Table 1: Summary of risks and consequent mitigation built into our proposals for Mablethorpe to Humber Bridge | | | |
|---|---|---|---|
| **Report** | **Location** | **Nature conservation risk** | **Mitigation** |
| | Humberston Fitties | from the public exercising their CROW rights within the coastal access margin. | |
| MHB 3 | Cleethorpes leisure centre roost | Disturbance of passage & over-wintering SPA waterbirds and SPA assemblage at roosting from the public exercising their CROW rights within the coastal access margin. | Appropriate signs and interpretation, agreed with NELC. |
| MHB 4 | Skitter Ness grazed saltmarsh | Disturbance of breeding habitat for nationally important breeding ground nesting birds, hunting marsh harrier and passage & over-wintering SPA waterbirds and SPA assemblage from the public exercising their CROW rights within the coastal access margin. | No CROW access rights year-round under section 26(3a) of the CROW Act. |
| MHB 4 | Barton foreshore | Disturbance of breeding habitat for nationally important breeding ground nesting birds and passage & over-wintering SPA waterbirds and SPA assemblage from the public exercising their CROW rights within the coastal access margin. | No CROW access rights year-round under section 26(3a) of the CROW Act. |

| Table 2: Summary of risks and consequent mitigation built into our proposals for Humber Bridge to Easington | | | |
|---|---|---|---|
| **Report** | **Location** | **Nature conservation reason** | **Mitigation** |
| HBE 3 | Paull Holme Sands | Disturbance of passage & over-wintering SPA waterbirds and SPA assemblage at roosting from the public exercising their CROW rights within the coastal access margin. | No CROW access rights to the public year-round under section 26(3a) of the CROW Act. |
| HBE 3 | The Outstray, Cherry Cobb Sands | Disturbance of breeding habitat for nationally important breeding ground nesting birds, hunting marsh harrier and passage & over-wintering SPA waterbirds and SPA assemblage from the public | No CROW access rights to the public year-round under section 26(3a) of the CROW Act. |

| Table 2: Summary of risks and consequent mitigation built into our proposals for Humber Bridge to Easington | | | |
|---|---|---|---|
| **Report** | **Location** | **Nature conservation reason** | **Mitigation** |
| | | exercising their CROW rights within the coastal access margin. | |
| HBE 3 | Stone Creek and West Bank | Disturbance of breeding habitat for nationally important breeding ground nesting birds, hunting marsh harrier and passage & over-wintering SPA waterbirds and SPA assemblage from the public exercising their CROW rights within the coastal access margin. | No CROW access rights to the public year-round under section 26(3a) of the CROW Act. |
| HBE 3 | The Outstray, Sunk Island | Disturbance of breeding habitat for nationally important breeding ground nesting birds, hunting marsh harrier and passage & over-wintering SPA waterbirds and SPA assemblage from the public exercising their CROW rights within the coastal access margin. | No CROW access rights to the public year-round under section 26(3a) of the CROW Act. |
| HBE 3 | Welwick re-alignment floodbank | Disturbance of passage & over-wintering SPA waterbirds and SPA assemblage from the public using the England Coast Path. | Alignment of the trail at the landward base of the floodbank. |
| HBE 3 | Welwick saltmarsh floodbank | Disturbance of breeding habitat for nationally important breeding ground nesting birds, hunting marsh harrier and passage & over-wintering SPA waterbirds and SPA assemblage from the public exercising their CROW rights within the coastal access margin. | No CROW access rights year-round under section 26(3a) of the CROW Act. |
| HBE 4 | Triangle fields | Disturbance of passage & over-wintering SPA waterbirds and SPA assemblage from the public exercising their CROW rights within the coastal access margin. | No CROW access rights year-round under section 26(3a) of the CROW Act. |
| HBE 4 | Spurn | Disturbance of breeding nesting birds and passage & over-wintering SPA waterbirds and SPA assemblage from the public exercising their CROW rights within the coastal access margin. | No dogs within the coastal access margin of the National Nature Reserve under section 26(3a) of the CROW Act. |
| HBE 4 | Spurn | Disturbance of prospecting and potentially nesting little tern from the public exercising their CROW | No CROW access rights from 1st April to 31st August each year in the fenced areas within the National |

| Table 2: Summary of risks and consequent mitigation built into our proposals for Humber Bridge to Easington | | | |
|---|---|---|---|
| **Report** | **Location** | **Nature conservation reason** | **Mitigation** |
| | | rights within the coastal access margin. | Nature Reserve under section 26(3a) of the CROW Act. |
| HBE 4 | How Hill and around avocet field | Disturbance of passage & over-wintering SPA waterbirds and SPA assemblage from the public exercising their CROW rights within the coastal access margin. | Dogs on leads and to marked routes under section 26(3a) of the CROW Act. |
| HBE 4 | Avocet field, floodbank and dune around Beacon lagoon | Disturbance of SPA breeding birds and passage & over-wintering SPA waterbirds and SPA assemblage from the public exercising their CROW rights within the coastal access margin. | No CROW access rights year-round under section 26(3a) of the CROW Act. |
| HBE 4 | Beacon lagoon floodbank | Disturbance of SPA breeding birds and passage & over-wintering SPA waterbirds and SPA assemblage from the public using the England Coast Path. | Alignment of the trail at the landward base of the floodbank. |
| HBE 4 | Beacon lagoon floodbank | Disturbance of SPA breeding birds from the construction of new access as part of the mitigation. | Construction of new access to be completed between 1st September and 31st March. |

## Implementation

Once a route for the trail has been confirmed by the Secretary of State, we will commission Lincolnshire County Council, North East Lincolnshire Council, North Lincolnshire Council, Hull City Council and East Riding of Yorkshire Council to ensure that any works on the ground are carried out with due regard to the conclusions of this appraisal and relevant statutory requirements.

## Thanks

The development of our proposals has been informed by input from people with relevant expertise within Natural England and other key organisations. The proposals have been thoroughly considered before being finalised and our initial ideas were modified during an iterative design process. We are particularly grateful to the Humber Nature Partnership and partners, the RSPB, Lincolnshire Wildlife Trust, Yorkshire Wildlife Trust, East Riding of Yorkshire Council, North Lincolnshire Council, North East Lincolnshire Council , Lincolnshire County Council, and to other organisations and local experts whose contributions and advice have helped to inform development of our proposals.

# PART A: Introduction and information about the England Coast Path

## A1. Introduction

Natural England has a statutory duty under the Marine and Coastal Access Act 2009 to improve access to the English coast. The duty is in two parts: one relating to securing a long-distance walking route around the whole coast: we call this the England Coast Path; the other relating to a margin of coastal land associated with the route where in appropriate places people will be able to spread out and explore, rest or picnic.

To secure these objectives, we must submit reports to the Secretary of State for Environment, Food and Rural Affairs recommending where the route should be and identifying the associated coastal margin. The reports must follow the approach set out in our methodology (the Coastal Access Scheme), which – as the legislation requires – has been approved by the Secretary of State for this purpose.

Where implementation of a Coastal Access Report would be likely to have a significant effect on a site designated for its international importance for wildlife, called a 'European site[1]', the report must be subject to special procedures designed to assess its likely significant effects.

The conclusions of this screening are certified by both the member of staff responsible for developing the access proposal and the person responsible for considering any environmental impacts. This ensures appropriate separation of duties within Natural England.

Natural England's approach to ensuring the protection of sensitive nature conservation features under the Coastal Access Programme is set out in the Coastal Access Scheme. Note that, following a ruling by the Court of Justice of the European Union (Case C-323/17 – usually cited as People over Wind), we have issued a technical memorandum concerning the application of this methodology where assessment under the Habitats Regulations is required.

## A2. Details of the plan or project

This assessment considers Natural England's proposals for coastal access along the two stretches of coast from Mablethorpe to Humber Bridge and Humber Bridge to Easington. Our proposals to the Secretary of State for this stretch of coast are presented in a series of reports that explain how we propose to implement coastal access along each of the constituent lengths within the stretch. Within this assessment we consider each of the relevant reports, both separately and as an overall access proposal for the stretches in question

Our proposals for coastal access have two main components:

- Alignment of the England Coast Path; and,
- Designation of coastal margin.

<u>England Coast Path</u>

A continuous walking route around the coast – the England Coast Path National Trail - will be established by joining up existing coastal paths and creating new sections of path where necessary. The route will be established and maintained to National Trail quality standards. The England Coast

[1] Ramsar sites are treated in the same way by UK government policy

Path will be able to 'roll back' as the occasional cliffs on this stretch erode or slip, solving long-standing difficulties with maintaining a continuous route on this stretch of coast.

The route proposed usually follows existing walked lines. These are typically a mixture of sections with an existing public right of way interspersed with sections without. Approval by the Secretary of State of the route proposals in our reports leads to the creation of new public rights along the parts of the trail that are not currently public rights of way. By default, the land within 2 metres of the route on either side becomes subject to such rights, but our reports often propose adjusting the landward edge of the trail to coincide with a particular physical feature on the ground such as a fence or pavement edge. There are powers under the National Parks and Access to the Countryside Act 1949 to provide alternative routes or temporary routes for the trail, at times when access to the ordinary route is unavailable.

Coastal Access Margin

An area of land associated with the proposed trail will become coastal access margin, including all land seawards of the trail down to mean low water.

Coastal access margin is typically subject to new coastal access rights, though there are some obvious exceptions to this. The nature and limitations of the new rights, and the key types of land excepted from them, are explained in more detail in Chapter 2 of our Coastal Access Scheme. Where there are already public or local rights to do other things, these are normally unaffected and will continue to exist in parallel to the new coastal access rights. The exception to this principle is any pre-existing open access rights under Part 1 of the Countryside and Rights of Way Act 2000 (CROW) over land falling within the coastal margin: the new coastal access rights will apply in place of these.

Where public access on foot already takes place on land within the margin without any legal right for people to use the land in this way, the new coastal access rights will secure this existing use legally. Access secured in this way is subject to various national restrictions. It remains open to the owner of the land, should they wish, to continue tolerating other types of established public use not provided for by coastal access rights.

Maintenance of the England Coast Path

The access proposals provide for the permanent establishment of a trail and associated access management infrastructure, including additional mitigation measures referred to in this assessment and described in the access proposals. The England Coast Path will be part of the National Trails family of routes, for which there are national quality standards. Delivery is through local partnerships and there is regular reporting and scrutiny of key performance indicators, including the condition of the trail.

Responding to future change

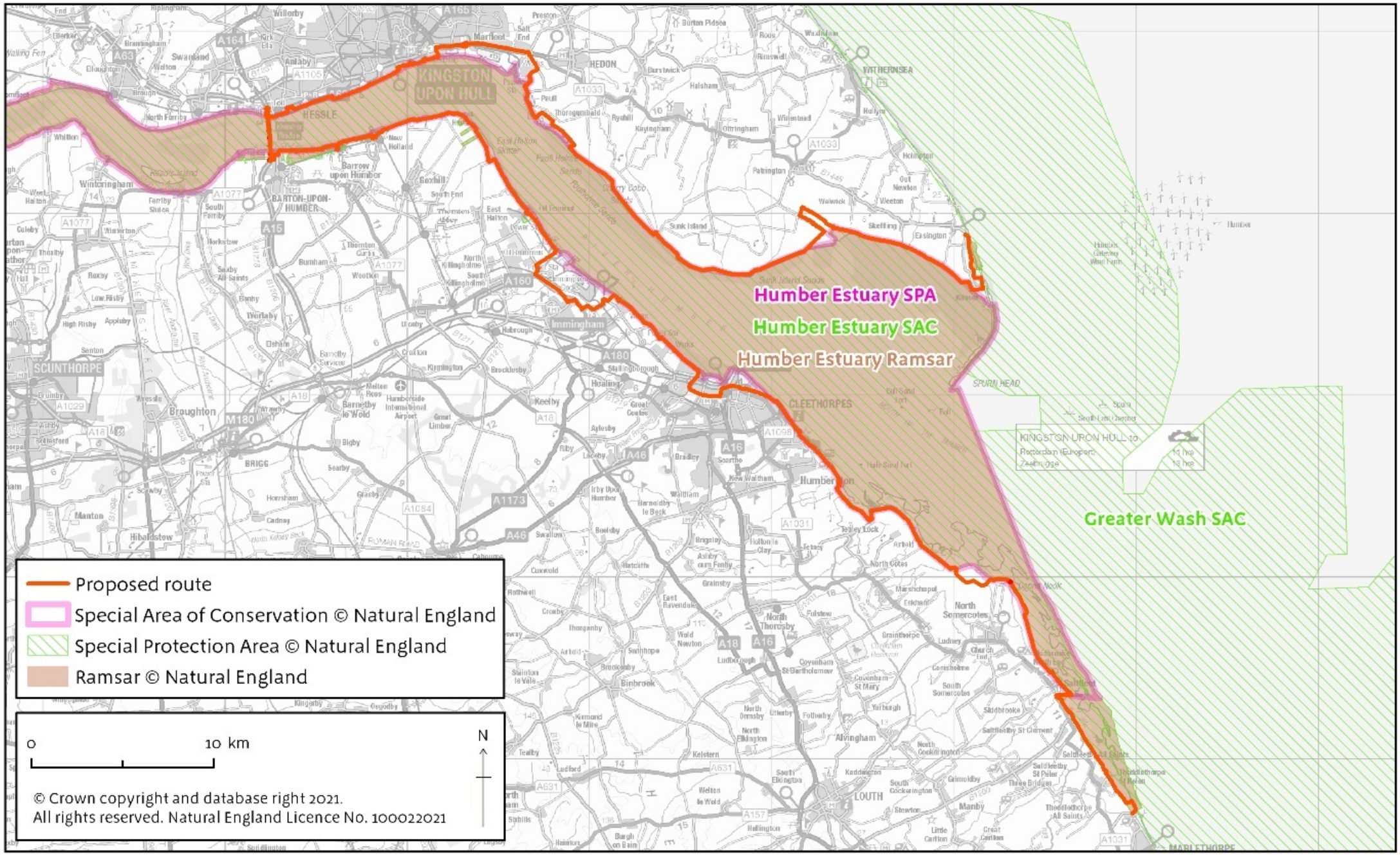
The legal framework that underpins coastal access allows for adaptation in light of future change. In such circumstances Natural England has powers to change the route of the trail and limit access rights over the coastal margin in ways that were not originally envisaged. These new powers can be used, as necessary, alongside informal management techniques and other measures to ensure that the integrity of the site is maintained in light of unforeseen future change.

Establishment of the trail

Establishment works to improve access and guide users will be carried out before the new public rights come into force on this stretch. The infrastructure, including signs, conform to the National Trails standards. Particular attention is paid to the location, design and installation of access management infrastructure on sites of conservation value. The approach is to always ensure that

any establishment works are undertaken in the way that has least impact on other uses and features of the land in question.

Details of the works to be carried out and the estimated cost are provided in the access proposals. The cost of establishment works will be met by Natural England and completed by Lincolnshire County Council, North East Lincolnshire Council, North Lincolnshire Council, Hull City Council and East Riding of Yorkshire Council, subject to any further necessary consents being obtained, including to undertake operations on a SSSI. Natural England will provide further advice to the local authority carrying out the work as necessary.


Humber Estuary SPA
Humber Estuary SAC
Humber Estuary Ramsar
Greater Wash SAC
KINGSTON UPON HULL
HESSLE
BARTON-UPON-HUMBER
Immingham
CLEETHORPES
SCUNTHORPE
BRIGG
LOUTH
MABLETHORPE
WITHERNSEA
Proposed route
Special Area of Conservation © Natural England
Special Protection Area © Natural England
Ramsar © Natural England
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# PART B: Information about the European sites which could be affected

## B1. Brief description of the European sites and their qualifying features

**Table 3: Geographical extent of European designated sites from Mablethorpe to the Humber Bridge and Humber Bridge to Easington**

| Section of coast: / Site name: | **MHB 1** Mablethorpe North End to Saltfleet Haven | **MHB 2** Saltfleet Haven to Humberston | **MHB 3** Humberston to Immingham Docks | **MHB 4** Immingham Docks to Humber Bridge | **HBE 1** Humber Bridge to River Hull | **HBE 2** River Hull to Hedon Haven | **HBE 3** Hedon Haven to East Clough | **HBE 4** East Clough to Easington |
|---|---|---|---|---|---|---|---|---|
| Saltfleetby – Theddlethorpe Dunes & Gibraltar Point SAC[a] | ✓ | | | | | | | |
| Greater Wash SPA[a,b] | ✓ | ✓ | | | | | | ✓ |
| Humber Estuary SPA[a,b] | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Humber Estuary Ramsar site[a,b] | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Humber Estuary SAC[a,b] | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

[a] Mablethorpe to Humber Bridge

[b] Humber Bridge to Easington

**Saltfleetby – Theddlethorpe Dunes & Gibraltar Point SAC** comprises two dune systems separated by about 25km. Saltfleetby–Theddlethorpe Dunes are the larger of the two systems and run between Mablethope and Saltfleet. Gibraltar Point is located further south adjacent to Skegness, so not covered by this assessment. Saltfleetby – Theddlethorpe Dunes cover 972ha and is notified for its dune system (white, grey and shifting); dune with *Hippophae rhamnoides* and humid dune slacks. It supports the only population of breeding Natterjack Toads *Bufo calamita* in Lincolnshire - the most north-easterly in England. The whole of Saltfleetby–Theddlethorpe Dunes is managed as a National Nature Reserve.

**Greater Wash SPA** lies along the east coast of England, predominantly in the coastal waters of the mid-southern North Sea between the counties of Yorkshire to the north and Suffolk to the south. It covers an area of c. 3,536km$^2$, classified for the protection of red-throated diver *(Gavia stellata),*

common scoter *(Melanitta nigra)* and little gull (*Hydrocoloeus minutus*) during the non-breeding season, and for breeding Sandwich tern (*Sterna sandvicensis*), common tern (*Sterna hirundo*) and little tern (*Sternula albifrons*). This SPA supports the largest breeding populations of little terns within the UK SPA network by protecting important foraging areas and supports the second largest aggregations of non-breeding red-throated diver and little gull.

**Humber Estuary SPA, Ramsar site and SAC**

The Humber Estuary is a large macro-tidal coastal plain estuary with high suspended sediment loads, which feed a dynamic and rapidly changing system of accreting and eroding intertidal and subtidal mudflats, sandflats, saltmarsh and reedbeds. Other notable habitats include a range of sand dune types in the outer estuary, together with sub-tidal sandbanks and coastal lagoons. As salinity declines upstream, tidal reedbeds and brackish saltmarsh communities fringe the estuary. Significant fish species include river lamprey and sea lamprey which migrate through the estuary to breed in the rivers of the Humber catchment. Grey seals come ashore in autumn to form large breeding colonies on the sandy shores of the south bank around Donna Nook.

The estuary is used by many species of wintering and passage waterbirds attracted by the different habitats of the SPA. For example, the sandy sediments of the outer estuary typically attract knot and grey plover, while waterfowl prefer the wetland zones of the inner estuary. At high tide, large mixed flocks congregate in key roost sites which are at a premium due to the combined effects of extensive land claim, coastal squeeze and lack of grazing marsh and grassland on both banks of the estuary. In summer, the site supports important breeding populations of bittern, marsh harrier, avocet and little tern.

**Table 4: Qualifying Features of European Designated Sites from Mablethorpe to the Humber Bridge and Humber Bridge to Easington**

| Features of the European designated sites | Saltfleetby-Theddlethorpe Dunes & Gibraltar Point SAC | Greater Wash SPA | Humber Estuary SPA | Humber Estuary Ramsar site | Humber Estuary SAC |
|---|---|---|---|---|---|
| A001-A Red-throated diver, *Gavia stellata* (non-breeding) | | ✓ | | | |
| A021 Bittern, *Botaurus stellaris* (breeding) | | | ✓ | | |
| A021 Bittern, *Botaurus stellaris* (non-breeding) | | | ✓ | | |
| A048 Shelduck, *Tadorna tadorna* (non-breeding) | | | ✓ | ✓ | |
| A065 Common scoter, *Melanitta nigra* (non-breeding) | | ✓ | | | |
| A081 Marsh harrier, *Circus aeruginosus* (breeding) | | | ✓ | | |
| A082 Hen harrier, *Circus cyaneus* (non-breeding) | | | ✓ | | |
| A132-A Avocet, *Recurvirostra avosetta* (breeding) | | | ✓ | | |

| **Table 4: Qualifying Features of European Designated Sites from Mablethorpe to the Humber Bridge and Humber Bridge to Easington** | | | | | |
|---|---|---|---|---|---|
| **Features of the European designated sites** | **Saltfleetby-Theddlethorpe Dunes & Gibraltar Point SAC** | **Greater Wash SPA** | **Humber Estuary SPA** | **Humber Estuary Ramsar site** | **Humber Estuary SAC** |
| A132-A Avocet, *Recurvirostra avosetta* (non-breeding) | | | ✓ | | |
| A140 Golden plover, *Pluvialis apricaria* (non-breeding) | | | ✓ | ✓ | |
| A143 Knot, *Calidris canutus* (non-breeding) | | | ✓ | ✓ | |
| A151 Ruff, *Philomachus pugnax* (non-breeding) | | | ✓ | | |
| A157 Bar-tailed godwit, *Limosa lapponica* (non-breeding) | | | ✓ | ✓ | |
| A162 Redshank, *Tringa totanus* (non-breeding) | | | ✓ | ✓ | |
| A177 Little gull, *Hydrocoloeus (Larus) minutus* (non-breeding) | | ✓ | | | |
| A191 Sandwich tern, *Sterna sandvicensis* (breeding) | | ✓ | | | |
| A193 Common tern, *Sterna hirundo* (breeding) | | ✓ | | | |
| A195 Little tern, *Sternula albifrons* (breeding) | | ✓ | ✓ | | |
| A616 Black-tailed godwit, *Limosa limosa islandica* (non-breeding) | | | ✓ | ✓ | |
| A672 Dunlin, *Calidris alpina alpina* (non-breeding) | | | ✓ | ✓ | |
| Waterbird assemblage* | | | ✓ | ✓ | |
| H1110 Sandbanks which are slightly covered by sea water all the time | | | | | ✓ |
| H1130 Estuaries | | | | ✓ | ✓ |
| H1140 Mudflats and sandflats not covered by seawater at low tide | | | | | ✓ |
| H1150 Coastal lagoons | | | | | ✓ |
| H1310 *Salicornia* and other annuals colonising mud and sand | | | | | ✓ |
| H1330 Atlantic salt meadows *(Glauco-Puccinellietalia maritimae)* | | | | | ✓ |
| H2110 Embryonic shifting dunes | ✓ | | | | ✓ |

| **Table 4: Qualifying Features of European Designated Sites from Mablethorpe to the Humber Bridge and Humber Bridge to Easington** | | | | | |
|---|---|---|---|---|---|
| **Features of the European designated sites** | **Saltfleetby-Theddlethorpe Dunes & Gibraltar Point SAC** | **Greater Wash SPA** | **Humber Estuary SPA** | **Humber Estuary Ramsar site** | **Humber Estuary SAC** |
| H2120 Shifting dunes along the shoreline with *Ammophila arenaria* ('White dunes') | ✓ | | | | ✓ |
| H2130 Fixed dunes with herbaceous vegetation ('Grey dunes') | ✓ | | | | ✓ |
| H2160 Dunes with *Hippophae rhamnoides* | ✓ | | | | ✓ |
| H2190 Humid dune slacks | ✓ | | | | |
| S1095 Sea lamprey, *Petromyzon marinus* | | | | ✓ | ✓ |
| S1099 River lamprey, *Lampetra fluviatilis* | | | | ✓ | ✓ |
| S1202 Natterjack toad, *Bufo calamita* | | | | ✓ | |
| S1364 Grey seal, *Halichoerus grypus* | | | | ✓ | ✓ |

***Waterbird assemblage of international importance:** 153,934 waterfowl, non-breeding season (5 year peak mean 1996/97-2000/2001)

All waterbirds are part of the Humber Estuary SPA and Ramsar site non-breeding bird assemblage feature. Natural England regards a number of species as being important components of the assemblage and as having particular relevance in a Habitats Regulations Assessment. Some are also qualifying features in their own right. These are:

- Humber Estuary SPA features: avocet, bar-tailed godwit, black-tailed godwit, bittern, dunlin, golden plover, knot, redshank, ruff, shelduck.
- Humber Estuary SSSI features (specifically covered in the Humber NCA): curlew *(Numenius arquata)*, dark-bellied brent goose *(Branta bernicla)*, goldeneye *(Bucephala clangula)*, greenshank *(Tringa nebularia)*, grey plover *(Pluvialis squatarola),* lapwing *(Vanellus vanellus),* oystercatcher *(Haematopus ostralegus),* pochard *(Aythya farina),* ringed plover *(Charadrius hiaticula)*, sanderling *(Calidris alba),* scaup *(Aythya marila),* teal *(Anas crecca),* turnstone *(Arenaria interpres),* whimbrel *(Numenius phaeopus),* wigeon *(Anas penelope),* mallard *(Anas platyrhynchos).*

In addition, the site currently supports:

- internationally important populations of pink-footed goose (*Anser brachyrhynchus)*,
- nationally important populations of little egret (*Egretta garzetta)*, European greater white-fronted goose (*Anser albifrons albifrons)*, Tundra bean goose (*Anser serrirostris)*, greylag goose (*Anser anser)*, green sandpiper (*Tringa ochropus)* and smew (*Mergellus albellus)*,
- significant population (>2000 individuals) of black-headed gull (*Larus ridibundus)* (based on WeBS Core Count mean peak data 2011/12-2015/16).

## B2. European Site Conservation Objectives (including supplementary advice)

Natural England provides advice about the Conservation Objectives for European Sites in England in its role as the statutory nature conservation body. These Objectives (including any Supplementary Advice which may be available) are the necessary context for all HRAs.

The overarching Conservation Objectives for every European Site in England are to ensure that the integrity of each site is maintained or restored as appropriate, and that each site contributes to achieving the aims of the Habitats Regulations, by either maintaining or restoring (as appropriate):

- The extent and distribution of their qualifying natural habitats,
- The structure and function (including typical species) of their qualifying natural habitats,
- The supporting processes on which their qualifying natural habitats rely,
- The supporting processes on which the habitats of their qualifying features rely,
- The population of each of their qualifying features, and
- The distribution of their qualifying features within the site.

Where Conservation Objectives Supplementary Advice is available, which provides further detail about the features' structure, function and supporting processes mentioned above, the implications of the plan or project on the specific attributes and targets listed in the advice will be taken into account in this assessment.

In light of the European Sites which could be affected by the plan or project, this assessment will be informed by the following site-specific Conservation Objectives, including any available supplementary advice;

The definitive list of qualifying features for each site (including any priority features) will be included within the relevant European Site Conservation Objectives, which can be found here:

- Saltfleetby – Theddlethorpe Dunes and Gibraltar Point SAC
- Greater Wash SPA
- Humber Estuary SPA
- Humber Estuary SAC

For Ramsar sites, a decision has been made by Defra and Natural England not to produce Conservation Advice packages, instead focussing on the production of High-Level Conservation Objectives. As the provisions on the Habitats Regulations relating to Habitat Regulations Assessments extend to Ramsar sites, Natural England considers the Conservation Advice packages for the overlapping European Marine Site designations to be, in most cases, sufficient to support the management of the Ramsar interests.

# PART C: Screening of the plan or project for appropriate assessment

## C1. Is the plan or project either directly connected with or necessary to the (conservation) management (of the European Site's qualifying features)?

The Coastal Access Plan is not directly connected with or necessary to the management of the European or Ramsar sites for nature conservation listed in B1 above.

**Conclusion:**
As the plan or project is not either directly connected or necessary to the management of all of the European site(s)'s qualifying features, and/or contains non-conservation elements, further Habitats Regulations assessment is required.

## C2. Is there a likelihood [or risk] of significant [adverse] effects ('LSE')?

This section details whether those constituent elements of the plan or project which are (a) not directly connected with or necessary to the management of the European Site(s) features and (b) could conceivably adversely affect a European site, would have a **likely significant effect,** either alone or in combination with other plans and projects, upon the European sites and which could undermine the achievement of the site's conservation objectives referred to in section B2.

In accordance with case law, this HRA has considered an effect to be 'likely' if it '*cannot be excluded on the basis of objective information'* and is 'significant' if it *'undermines the conservation objectives'*. In accordance with Defra guidance on the approach to be taken to this decision, in plain English, the test asks whether the plan or project '*may'* have a significant effect (i.e. there is a risk or a possibility of such an effect).

This assessment of risk therefore takes into account the precautionary principle (where there is scientific doubt) and **excludes**, at this stage, any measures proposed in the submitted details of the plan/project that are specifically intended to avoid or reduce harmful effects on the European site(s).

Each of the project elements has been tested in view of the European Site Conservation Objectives and against each of the relevant European site qualifying features. An assessment of potential effects using best available evidence and information has been made.

## C2.1 Risk of Significant Effects Alone

The first step is to consider whether any elements of the project are likely to have a significant effect upon a European site 'alone' (that is when considered in the context of the prevailing environmental conditions at the site but in isolation of the combined effects of any other 'plans and projects'). Such effects do not include those deemed to be so insignificant as to be trivial or inconsequential.

In this section, we assess risks to qualifying features, taking account of their sensitivity to coastal walking and other recreational activities associated with coastal access proposals, and in view of each site's Conservation Objectives.

## The scope of this assessment

This screening does not consider:

a. Areas beyond mean low water, as these are beyond the proposals of the project.
b. Land which is regulated by military byelaws, as these are beyond the proposals of the project.
c. Areas of mud, sand and saltmarsh that are considered unsuitable for access under section 25A of the CROW Act 2000, as this is an integral part of the project.

Land deemed unsuitable of access under section 25A of the CROW Act does not mean that it is no less important for nature and if this become suitable for access under the CROW Act, these will then be subject to further assessment.

To view the exclusions, see map E of the Mablethorpe to Humber Bridge and Humber Bridge to Easington Overviews.

This screening considers:

**a. Designated sites and qualifying features within the project area**

**Table 5: Designated sites and feature groups**

| Designated site(s) | Feature group | Qualifying feature(s) |
|---|---|---|
| Greater Wash SPA | Non-breeding seabirds | Red-throated diver, common scoter, little gull |
| Humber Estuary SPA and Ramsar site | Non-breeding waterbirds | Avocet[1], bar-tailed godwit, black-tailed godwit, bittern[1], dunlin, golden plover, knot, redshank, ruff[1], shelduck |
| Humber Estuary SPA and Ramsar site | Non-breeding waterbird assemblage | Non-breeding waterbird assemblage |
| Humber Estuary SPA | Non-breeding hen harrier | Non-breeding hen harrier |
| Humber Estuary SPA and Greater Wash SPA | Breeding tern | Breeding: common tern, little tern, Sandwich tern |
| Humber Estuary SPA | Breeding bittern | Breeding bittern |
| Humber Estuary SPA | Breeding avocet | Breeding avocet |
| Humber Estuary SPA | Breeding marsh harrier | Breeding marsh harrier |
| Humber Estuary SAC and Ramsar site | Grey seal | Grey seal |
| Humber Estuary SAC and Ramsar site | Estuaries and species | Estuaries, river lamprey, sea lamprey |
| Humber Estuary SAC | Features covered by water | Sandbanks which are slightly covered by sea water all the time |
| Humber Estuary SAC | Intertidal habitat | Coastal lagoons, mudflats and sandflats not covered by seawater at low tide, *Salicornia* and |

| Table 5: Designated sites and feature groups | | |
|---|---|---|
| **Designated site(s)** | **Feature group** | **Qualifying feature(s)** |
| | | other annuals colonising mud and sand, Atlantic salt meadows |
| Humber Estuary SAC and Saltfleetby-Theddlethorpe Dunes & Gibraltar Point SAC | Sand dunes | Embryonic shifting dunes, shifting dunes along the shoreline with *Ammophila arenaria* ('White dunes'), fixed dunes with herbaceous vegetation ('Grey dunes'), dunes with *Hippophae rhamnoides,* humid dune slack[2] |
| Humber Estuary Ramsar site | Natterjack toad | Natterjack toad |

[1] – Not Ramsar site features

[2] - Saltfleetby-Theddlethorpe Dunes & Gibraltar Point SAC

### b. Compensatory land and habitat creation

A number of managed realignment and habitat creation schemes have already been carried out in the Humber, by the Environment Agency as part of the flood defence strategy and in response to coastal squeeze and by Associated British Ports (ABP) in compensation for direct habitat losses due to port development. Further schemes are planned (Hemingway *et al* 2008).

| Table 6: Summary compensatory land and habitat creation schemes within project area | | |
|---|---|---|
| **Location** | **Reason** | **Completion** |
| Donna Nook | Flood defence and coastal squeeze | Completed 2010 |
| Cherry Cobb Sands | Direct habitat loss | Not started |
| Paull Holme Strays | Flood defence and coastal squeeze | Completed 2003 |
| Welwick | Direct habitat loss | Completed 2006 |
| Skeffling | Flood defence and coastal squeeze | Present |
| Kilnsea Wetlands | Coastal squeeze | Completed 2011 |

Where completed these are considered as designated land for SPA features and are part of this assessment. The realignment at Skeffling has taken the England Coast Path into account as part of the planning. Once complete the trail will move to a new position, which has already been through the habitat regulation assessment. This assessment will consider the path alignment proposed before work starts.

### c. Functionally Linked land

Although outside the Humber Estuary SPA boundary and landward of the trail, so outside the project, the assessment will consider the effect of the trail on adjacent farmland used by SPA species for foraging habitat and as roosting sites.

It is important to emphasise that this current habitat function provision within the fields depends on crop type and height, as well as, periods of water logging, therefore use is opportunistic and may not be used consistently year on year.

## Assessment of likely significant effects alone

**Table 7: Assessment of likely significant effects alone**

| Feature Group | Relevant pressure | Sensitivity to coastal access proposals | Assessment of risk to site conservation objectives | LSE alone? |
|---|---|---|---|---|
| **Non-breeding seabirds** | Disturbance of feeding or resting birds | Birds feeding or resting in the vicinity of the coastal access proposal may be disturbed by recreational activities including walking and walking with a dog and the installation of access management infrastructure during the establishment phase of the trail. | The boundary of the Greater Wash SPA and the coastal access proposals overlap between mean low water and mean high water. The seabirds rest and mainly forage offshore, where there is possible interaction with the birds feeding in the shallows the birds have enough spatial separation between them and the proposed trail users that it is unlikely to have a significant effect on these features. | No |
| **Non-breeding seabirds** | Loss of supporting habitat through installation of new access management infrastructure | The supporting habitats of the qualifying features may be permanently lost due to the installation of new access management infrastructure. | The supporting habitat for non-breeding seabirds is the water column. No infrastructure is placed within this habitat or the Greater Wash SPA area. | No |
| **Non-breeding waterbirds** | Disturbance of feeding or resting birds | Overwintering waterbirds, feeding and resting on the foreshore and intertidal habitat in the vicinity of a coastal path and within the coastal access margin may be disturbed by recreational activities including walking and walking with a dog and the installation of access management infrastructure during the establishment phase of the trail. | The level of risk is higher where the access proposals are likely to bring people close to places on which large numbers of birds depend, including high tide roost sites and important feeding areas, outside the areas already excluded from the proposals. | Yes |

| Table 7: Assessment of likely significant effects alone | | | | |
|---|---|---|---|---|
| **Feature Group** | **Relevant pressure** | **Sensitivity to coastal access proposals** | **Assessment of risk to site conservation objectives** | **LSE alone?** |
| **Non-breeding waterbirds** | Loss of supporting habitat through installation of new access management infrastructure | The supporting habitats of the qualifying features may be permanently lost due to the installation of new access management infrastructure. | Analysis of new infrastructure type and locations, and the supporting habitat indicate possible loss of 0.01m$^2$ of saltmarsh in 36,657ha of Humber Estuary SAC and 37,630 ha of Humber Estuary SPA. (0.01m$^2$ at Saltfleet). Potential loss of habitat is through 1 wooden post in the ground for a directional sign. | Yes |
| **Non-breeding waterbird assemblage** | Disturbance of feeding or resting birds | Overwintering waterbirds, feeding and resting on the foreshore and intertidal habitat in the vicinity of a coastal path and within the coastal access margin may be disturbed by recreational activities including walking and walking with a dog and the installation of access management infrastructure during the establishment phase of the trail. | The level of risk is higher where the access proposals are likely to bring people close to places on which large numbers of birds depend, including high tide roost sites and important feeding areas, outside the areas already excluded from the proposals. | Yes |
| **Non-breeding waterbird assemblage** | Loss of supporting habitat through installation of access management infrastructure | The supporting habitats of the qualifying features may be permanently lost due to the installation of new access management infrastructure. | Analysis of new infrastructure type and locations, and the supporting habitat indicate possible loss of 0.01m$^2$ of saltmarsh in 36,657ha of Humber Estuary SAC and 37,630 ha of Humber Estuary SPA. (0.01m$^2$ at Saltfleet). Potential loss of habitat is through 1 wooden post in the ground for a directional sign. | Yes |
| **Non-breeding hen harrier** | Disturbance of feeding or resting birds | Overwintering hen harrier, feeding and resting in the vicinity of a coastal path and within the coastal access margin may be disturbed by | Within this proposal Welwick and Saltfleetby support wintering hen harrier. During autumn passage, hen harrier are regularly seen at Donna Nook and Spurn Head. | Yes |

| Table 7: Assessment of likely significant effects alone | | | | |
|---|---|---|---|---|
| **Feature Group** | **Relevant pressure** | **Sensitivity to coastal access proposals** | **Assessment of risk to site conservation objectives** | **LSE alone?** |
| | | recreational activities including walking and walking with a dog and the installation of access management infrastructure during the establishment phase of the trail. | The proposed trail at the roost sites follows public rights of way at Saltfleetby and existing walked routes and public rights of way at Welwick. There is sufficient distance between the roost sites and the trail not to risk the conservation objectives.<br>The roost sites are within the coastal access margin and the proposals remain a risk to the conservation objectives for the hen harrier.<br><br>No new access management infrastructure will be installed in the vicinity of the roost sites. | |
| **Non-breeding hen harrier** | Loss of supporting habitat through installation of new access management infrastructure | The supporting habitats of the qualifying features may be permanently lost due to the installation of new access management infrastructure. | Analysis of new infrastructure type and locations, and the supporting habitat indicate possible loss of 0.01$m^2$ of saltmarsh at Saltfleet. This area is not in the vicinity of the hen harrier roosts, so no risk to the conservation of objectives. | No |
| **Breeding terns** | Disturbance of breeding and foraging birds | Highly sensitive to disturbance by recreational activities including walking and walking with a dog and the installation of access management infrastructure during the establishment phase of the trail. | Little terns nest within the Humber SPA at Beacon lagoons and would be in the vicinity of the trail proposal and open to access within the coastal access margin. An increase in access would reduce the time adults spend on the nest, increase the potential for predation and reduce the success rate of the nests.<br>Some establishment works will be needed in the vicinity of the little tern nesting area.<br>Colonies of breeding little tern have also been established at Spurn (last nested in 2011), Donna Nook (last nested in 2006), | Yes to disturbance by recreational activities on breeding little tern in Humber SPA |

| Table 7: Assessment of likely significant effects alone | | | | |
|---|---|---|---|---|
| **Feature Group** | **Relevant pressure** | **Sensitivity to coastal access proposals** | **Assessment of risk to site conservation objectives** | **LSE alone?** |
| | | | Tetney (last nested in 2005) and the Saltfleetby-Theddlethorpe dunes (last nested in 1996). These areas are not currently utilised by breeding little tern, but part of the Humber strategy is to increase the breeding population in the longer term.<br><br>Terns mainly forage offshore giving enough spatial separation between path users and the birds. The presence of people on the shore may discourage birds from feeding close to the shore at times, but is unlikely to compromise foraging activity.<br>Within the Greater Wash SPA little tern, common and Sandwich tern do not nest within the project proposal area. | |
| **Breeding terns** | Loss of supporting habitat through installation of new access management infrastructure | The supporting habitats of the qualifying features may be permanently lost due to the installation of new access management infrastructure. | There is no new access management infrastructure to be installed on supporting habitat for breeding little terns within the Humber Estuary SPA.<br>No new infrastructure is to be installed within the Greater Wash SPA, where common and Sandwich tern are qualifying features. | No |
| **Breeding bittern** | Disturbance of breeding birds | Birds breeding in the vicinity of a coastal path or within the coastal access margin may be disturbed by recreational activities including walking and walking with a dog and the installation of access management infrastructure during the establishment phase of the trail. | Numbers of breeding bittern are concentrated around the inner estuary, west of the Humber Bridge. Within this proposal reedbeds at Barton and Barrow clay pits and North Killingholme Haven Pits, which are landward of the trail, have supported the bittern during the breeding season.<br>At these locations the trail follows the public right of way on the floodbanks and coastal access margin is already excluded. There is no access to the pits from the trail. Therefore no risk | No |

| Table 7: Assessment of likely significant effects alone | | | | |
|---|---|---|---|---|
| **Feature Group** | **Relevant pressure** | **Sensitivity to coastal access proposals** | **Assessment of risk to site conservation objectives** | **LSE alone?** |
| | | | to the conservation objective to maintain the breeding population for this qualifying feature.<br>No new infrastructure is to be installed in the vicinity of the pits. | |
| **Breeding avocet** | Disturbance of breeding birds | Birds breeding in the vicinity of a coastal path or within the coastal access margin may be disturbed by recreational activities including walking and walking with a dog and the installation of access management infrastructure during the establishment phase of the trail. | Numbers of breeding avocet are concentrated around the inner estuary, west of Humber Bridge. Avocet are confined to saline lagoons for breeding and within this proposal avocet breed on the South Bank at Donna Nook realignment site, Northcoates Point and North Killingholme Haven clay pits and on the North Bank breeding is at Kilnsea wetlands.<br>The trail at these locations are on public rights of way on the South Bank and a mix of existing and new access on the North Bank. All the lagoons, bar North Killingholme Haven Clay Pits, are within the coastal access margin. Therefore could put the conservation objectives to maintain the breeding population at risk.<br>The installation of new access management infrastructure during the establishment phase in the vicinity of Kilnsea Wetlands could disturb breeding avocet. No new infrastructure will be installed close to the other locations. | Yes |
| **Breeding avocet** | Loss of supporting habitat through installation of new access management infrastructure | The supporting habitats of the qualifying features may be permanently lost due to the installation of new access management infrastructure. | Analysis of new infrastructure type and locations, and the supporting habitat indicate possible loss of 0.01$m^2$ of supporting saltmarsh at Saltfleet, which is not located in the vicinity of breeding avocet. Therefore no risk to the qualifying feature. | No |

| Table 7: Assessment of likely significant effects alone | | | | |
|---|---|---|---|---|
| **Feature Group** | **Relevant pressure** | **Sensitivity to coastal access proposals** | **Assessment of risk to site conservation objectives** | **LSE alone?** |
| **Breeding marsh harrier** | Disturbance of breeding birds | Birds breeding in the vicinity of a coastal path or within the coastal access margin may be disturbed by recreational activities including walking and walking with a dog and the installation of access management infrastructure during the establishment phase of the trail. | Numbers of breeding marsh harrier are concentrated around the inner estuary, west of the Humber Bridge (beyond the ECP extent). Within this proposal area, marsh harriers are known to breed on the South Bank at Barton and Barrow Clay Pits and North Killingholme Haven Clay Pits, which are landward of the trail and East Halton Skitter, which is within the coastal access margin. On the North Bank breeding occurs at Haverfield Pits, near Welwick.<br><u>North Killingholme Haven Clay Pits and Barton and Barrow Clay Pits</u><br>At these locations the trail follows public rights of way on floodbanks. It is screened from view by hedging and there is no access from the trail. Therefore no risk to the qualifying feature.<br><u>East Halton Skitter</u><br>There is potential to access a parcel of grazed saltmarsh and to disturb breeding marsh harrier, risking the conservation objectives to maintain breeding populations.<br><u>Haverfield Pits</u><br>The trail follows a mix of existing and new access to take account of estuary re-alignment. It passes close by the Pits, including it within the coastal access margin. Therefore risking the conservation objective to maintain the breeding population for this qualifying feature.<br><br>The installation of access management infrastructure (directional sign and pedestrian gate) during the | Yes for East Halton Skitter and Haverfield Pits |

| Table 7: Assessment of likely significant effects alone | | | | |
|---|---|---|---|---|
| **Feature Group** | **Relevant pressure** | **Sensitivity to coastal access proposals** | **Assessment of risk to site conservation objectives** | **LSE alone?** |
| | | | establishment phase in the vicinity of Haverfield Pits could disturb breeding marsh harrier. Other infrastructure to be installed at the noted locations do not create visual or noise disturbance being shielded by tall hedges or floodbanks and in areas that already contribute background noise. | |
| **Breeding marsh harrier** | Loss of supporting habitat through installation of access management infrastructure | The supporting habitats of the qualifying features may be permanently lost due to the installation of new access management infrastructure. | No new infrastructure is proposed on the supporting habitats where breeding marsh harriers are present. | No |
| **Grey seal** | Disturbance of pupping grey seals and their young | Pupping seals and their young on the foreshore and intertidal habitat near a coastal path and/or coastal access margin may be disturbed by recreational activities, including walking and walking with a dog and the installation of access management infrastructure during the establishment phase of the trail. | Breeding grey seals are highly sensitive to noise and visual disturbance. The level of risk is high where the access proposals bring people close to pupping grey seals and their young from mid-October to late January in areas previously undisturbed or have managed access and that are not already excluded from the proposals.<br>The installation of access management infrastructure during the establishment phase in the vicinity of the breeding grey seals and their young may also cause disturbance affecting the conservation objectives to maintain the breeding population. | Yes |
| **Grey seal** | Loss of supporting habitat through installation of new access | The supporting habitats of the qualifying features may be permanently lost due to the installation of new access management infrastructure. | Dunes at Donna Nook are a supporting habitat for grey seal, the potential loss of habitat through the installation of new infrastructure is 5.471m$^2$ on the total area (172.07 ha) of dune within the SAC.<br>The installation is a mix of scrub clearance, directional and advisory safety signs, gates and fences and a set of steps to | Yes |

| Table 7: Assessment of likely significant effects alone | | | | |
|---|---|---|---|---|
| **Feature Group** | **Relevant pressure** | **Sensitivity to coastal access proposals** | **Assessment of risk to site conservation objectives** | **LSE alone?** |
| | management infrastructure | | create new access at Donna Nook and as part of the mitigation to protect the grey seals. | |
| **Estuaries and species** | Physical damage or loss of habitat and disturbance of lamprey | Estuarial habitat, including vegetation, may be damaged or removed by recreational activities, including walking.<br><br>The supporting habitat of the river and sea lamprey is water column. | River and sea lamprey are not affected by the proposals as they use the water column, so beyond the coastal access proposals.<br><br>The subtidal features are not affected by the proposals being permanently covered in water, so beyond the coastal access proposals.<br>No new infrastructure is to be installed within this feature.<br><br>The sub features of the estuary feature include:<br>• qualifying features of Humber estuary SAC, (Atlantic salt meadows, *Salicornia* and other annuals colonising mud and sand, and mudflats and sandflats not covered by seawater at low tide.)<br>and<br>• sub features of mudflats and sandflats not covered by seawater at low tide (intertidal mixed sediments, intertidal mud, intertidal sand and muddy sand, and intertidal seagrass beds.) | Yes for estuary habitat |
| **Features covered by water** | Physical damage or loss of habitat | Seasonally submerged and submerged habitat, including vegetation, may be damaged or lost by recreational activities, including walking. | Submerged habitat is not affected by the proposals, as they are permanently covered in water, so beyond the coastal access proposals.<br>Where the habitat seasonally dries out, such as the coastal lagoons, the exposed area is subject to new coastal access rights seaward of the trail. | No |

| Table 7: Assessment of likely significant effects alone | | | | |
|---|---|---|---|---|
| **Feature Group** | **Relevant pressure** | **Sensitivity to coastal access proposals** | **Assessment of risk to site conservation objectives** | **LSE alone?** |
| | | | There is a risk that access could allow disturbance to foraging and resting birds and this will be considered as part of the wider disturbance of breeding and non-breeding waterbirds.<br>From Natural England's Designated Site View Advice on Operations the sensitivity is described as, not relevant- ''the evidence base suggests that there is no interaction of concern between the pressure and the feature or the activity and the feature could not interact.''<br>No new infrastructure is to be installed within this feature. | |
| **Intertidal habitat** | Physical damage or loss of habitat | Intertidal habitat, including vegetation, may be damaged through recreational activities, including walking and/or permanently lost by the installation of new access management infrastructure. | The intertidal habitat of the Humber estuary offers significant supporting habitat to waterbirds, as well as being qualifying features of the Humber estuary SAC. All the intertidal mud and the majority of the saltmarsh and sandflat are excluded from CROW access rights under section 25A of the Act or by military byelaw.<br>Analysis of new infrastructure type and locations indicate possible loss of 0.01$m^2$ of saltmarsh at Saltfleet in 36,657ha of Humber Estuary SAC, through 1 wooden post in the ground for a directional sign.<br>The evidence suggests the intertidal features have a low sensitivity to access causing damage to surface features. The risk of this pressure will increase depending on the spatial/ temporal scale and intensity of the activity on the feature. | Yes – sandflat and saltmarsh not excluded from CROW access rights. |
| **Sand dunes** | Physical damage or loss of habitat | Dune habitat may be damaged or lost by recreational activities, including walking and/or permanently lost by the installation of new access | <u>Saltfleetby-Theddlethorpe and Gibraltar Point SAC</u><br>The coastal access proposal traverses the landward boundary of Saltfleetby – Theddlethorpe dunes on fixed dune grassland habitat using public rights of way with small sections of | Yes |

| Table 7: Assessment of likely significant effects alone | | | | |
|---|---|---|---|---|
| **Feature Group** | **Relevant pressure** | **Sensitivity to coastal access proposals** | **Assessment of risk to site conservation objectives** | **LSE alone?** |
| | | management infrastructure and the creation of new access. | existing walked routes. The dunes are currently accessed as National Nature Reserve dedicated open access and the current routes are well used.<br>The potential loss of habitat through the installation of new infrastructure is 0.237m$^2$ in a total area of 967ha for directional signs and a kissing gate on existing walked routes or public rights of way.<br>A slight increase in walkers through the proposal and the potential loss of habitat may affect the conservation objectives to maintain the extent of the fixed dune habitat.<br><u>Humber Estuary SAC</u><br>The proposed trail crosses dunes on existing walked routes, with new access at Donna Nook. The majority of the habitat is within the coastal access margin.<br>Increased footfall from the proposals could lead to an increase in destabilisation and loss of habitat.<br><u>Humber Estuary SAC – New access and infrastructure</u><br>Creating 0.68ha of new access through scrub clearance and the installation of infrastructure is a potential loss of habitat effecting the conservation objectives to maintain the extent of dune with *Hippophae rhamnoides* habitat. | |
| **Natterjack toad** | Disturbance of the natterjack toad | Natterjack toads live throughout their lifecycle in dunes and may be disturbed by access on foot, including walking with a dog near a coastal path and/or coastal access margin and the installation of access management | Natterjack toads are recorded in one location within the Saltfleetby – Theddlethorpe Dunes. The proposed route does not pass near any natterjack toad pools and the path itself has no features that would attract the natterjack toad. The pools within the coastal access margin are fenced to prevent access to them and although the toads are not limited to staying | No |

| Table 7: Assessment of likely significant effects alone | | | | |
|---|---|---|---|---|
| **Feature Group** | **Relevant pressure** | **Sensitivity to coastal access proposals** | **Assessment of risk to site conservation objectives** | **LSE alone?** |
| | | infrastructure during the establishment phase of the trail. | around the pools, they tend to be shy and not likely to be active when the public will be on site. Therefore no risk to this Ramsar site feature. | |
| **Natterjack toad** | Loss of supporting habitat through installation of access management infrastructure | The supporting habitat of the qualifying features may be permanently lost due to the installation of new access management infrastructure. | No new access management infrastructure is to be installed within the vicinity of the natterjack toad. Therefore no risk to the conservation objectives for this feature. | No |

**Assessment of likely significant effects alone conclusion:**

The plan or project alone is likely to have a significant effect on the following qualifying features with the following pressures: see Table 8 below.

| **Table 8: Summary of likely significant effect on the following features and European designated sites with the following pressures** | | | | | |
|---|---|---|---|---|---|
| **European designation** | | **Qualifying feature(s)** | **Disturbance pressure** | | **Loss of supporting habitats** |
| | | | **Increased footfall from coastal access** | **Installation of infrastructure at establishment** | **New access management infrastructure** |
| Humber Estuary SPA | Humber Estuary Ramsar site | Avocet, bar-tailed godwit, black-tailed godwit, bittern, dunlin, golden plover, knot, redshank, ruff, shelduck | ✓ | ✓ | ✓ Saltmarsh |
| Humber Estuary SPA | Humber Estuary Ramsar site | Non-breeding waterbird assemblage | ✓ | ✓ | ✓ Saltmarsh |
| Humber Estuary SPA | | Non-breeding hen harrier | ✓ | ✗ | ✗ |
| Humber Estuary SPA | | Breeding little tern | ✓ | ✓ | ✗ |
| Humber Estuary SPA | | Breeding avocet | ✓ | ✓ Kilnsea wetlands | ✗ |
| Humber Estuary SPA | | Breeding marsh harrier | ✓ East Halton Skitter and Haverfield Pits | ✓ Haverfield Pits | ✗ |
| Humber Estuary SAC | Humber Estuary Ramsar site | Grey seal | ✓ | ✓ | ✓ |
| Humber Estuary SAC | Humber Estuary Ramsar site | Estuaries | ✓ | ✗ | ✓ Saltmarsh |

| | | | | | |
|---|---|---|---|---|---|
| Humber Estuary SAC | | Mudflats and sandflats not covered by seawater at low tide, Salicornia and other annuals colonising mud and sand, Atlantic salt meadows | ✓ Sandflat and saltmarsh | ✘ | ✓ Saltmarsh |
| Humber Estuary SAC | Saltfleetby – Theddlethorpe Dunes & Gibraltar Point SAC | Embryonic shifting dunes, shifting dunes along the shoreline with *Ammophila arenaria* ('White dunes'), fixed dunes with herbaceous vegetation ('Grey dunes'), dunes with *Hippophae rhamnoides,* humid dune slack[2] | ✓ | ✘ | ✓ Donna Nook and Saltfleetby |

[2] humid dune slack is at Saltfleetby-Theddlethorpe Dunes & Gibraltar Point SAC

The plan or project alone is unlikely to have a significant effect on the following qualifying features groups:

| **Table 9: Summary of unlikely significant effect on the following features and European designated sites** | | | | | |
|---|---|---|---|---|---|
| **European designation** | | **Qualifying feature(s)** | **Disturbance pressure** | | **Loss of supporting habitats** |
| | | | **Increased footfall** | **Installation of infrastructure at establishment** | **New access management infrastructure** |
| Greater Wash SPA | | Non-breeding: red-throated diver, common scoter, little gull. Breeding: common tern, little tern, Sandwich tern | ✘ | ✘ | ✘ |
| Humber Estuary SPA | | Breeding bittern | ✘ | ✘ | ✘ |
| Humber Estuary SAC | | Coastal lagoons, Sandbanks which are slightly covered by sea water all the time | ✘ | ✘ | ✘ |
| Humber Estuary SAC | Humber Estuary Ramsar site | River lamprey, sea lamprey | ✘ | ✘ | ✘ |
| Humber Estuary Ramsar site | | Natterjack toad | ✘ | ✘ | ✘ |

## C2.2 Risk of Significant Effects in-combination with the effects from other plans and projects

The need for further assessment of the risk of in-combination effects is considered here.

Natural England considers that it is the appreciable risks of effects (from a proposed plan or project) that are not themselves considered to be significant alone which must be further assessed to determine whether they could have a combined effect significant enough to require an appropriate assessment.

**Step 1 – Are there any appreciable risks from the access proposals that have been identified in C2.1 as not significant alone?**

Further to the risks identified as being significant alone (in C2.1), it is considered that there are no other residual and appreciable risks likely to arise from this project which have the potential to act in-combination with similar risks from other proposed plans or projects to also become significant. It has therefore been excluded, on the basis of objective information, that the project is likely to have a significant effect in-combination with other proposed plans or projects.

## C3. Overall Screening Decision for the Plan/Project

On the basis of the details submitted, Natural England has considered the plan or project under Regulation 63(1) (a) of the Habitats Regulations and made an assessment of whether it will have a likely significant effect on a European site, either alone or in combination with other plans and projects.

**In light of sections C1 and C2 of this assessment above, Natural England has concluded:**
As the plan or project is likely to have significant effects (or *may* have significant effects) on some or all of the Qualifying Features of the European Site(s) 'alone', further appropriate assessment of the project 'alone' is required.

# PART D: Appropriate Assessment and Conclusions on Site Integrity

## D1. Scope of Appropriate Assessment

In light of the screening decision above in section C3, this section contains the Appropriate Assessment of the implications of the plan or project in view of the Conservation Objectives for the European Site(s) at risk.

The Sites and the Qualifying Feature for which significant effects (whether ‘alone’ or ‘in combination’) are likely or cannot be ruled out and which are initially relevant to this appropriate assessment are as shown in the table below:

| Table 10: Scope of Appropriate Assessment | | | | | | |
|---|---|---|---|---|---|---|
| **European designation** | | **Qualifying feature(s)** | **Environmental threat from the England Coast Path** | | | **Risk to conservation objectives** |
| | | | **Disturbance or damage from increased access on foot** | **Disturbance from the construction phase** | **Permanent loss of supporting habitat from new infrastructure** | |
| Humber Estuary SPA | Humber Estuary Ramsar site | Non-breeding avocet, bar-tailed godwit, black-tailed godwit, bittern, dunlin, golden plover, knot, redshank, ruff, shelduck | ✓ | ✓ | ✓ Saltmarsh | Visual disturbance and above water noise from people walking and walking with dogs, as well as the construction phase for installing the access management infrastructure, as part of the project, are risks to the conservation with repeated disturbance leading to reduced fitness and reduction in population and/or contraction in the distribution of qualifying features within the site. The magnitude of the pressure depends on the temporal scale, intensity and proximity of the activity to the feature. The installation of access management infrastructure may lead to a permanent loss of supporting habitats (saltmarsh) reducing the extent and distribution of the qualifying features. |

| Table 10: Scope of Appropriate Assessment | | | | | | |
|---|---|---|---|---|---|---|
| **European designation** | | **Qualifying feature(s)** | **Environmental threat from the England Coast Path** | | | **Risk to conservation objectives** |
| | | | **Disturbance or damage from increased access on foot** | **Disturbance from the construction phase** | **Permanent loss of supporting habitat from new infrastructure** | |
| Humber Estuary SPA | Humber Estuary Ramsar site | Non-breeding waterbird assemblage | ✓ | ✓ | ✓ Saltmarsh | Visual disturbance and above water noise from people walking and walking with dogs, as well as the construction phase for installing the access management infrastructure, as part of the project, are risks to the conservation objectives with repeated disturbance leading to reduced fitness and reduction in population and/or contraction in the distribution of qualifying features within the site. The magnitude of the pressure depends on the temporal scale, intensity and proximity of the activity to the feature. The installation of access management infrastructure may lead to a permanent loss of supporting habitats (saltmarsh) reducing the extent and distribution of the qualifying features. |
| Humber Estuary SPA | | Non-breeding hen harrier | ✓ | ✘ | ✘ | Visual disturbance and above water noise from people walking and walking with dogs, as part of the project, are a risk to the conservation objectives with repeated disturbance leading to reduced fitness and reduction in population and/or contraction in the distribution of qualifying features within the site. The magnitude of the pressure depends on the temporal scale, intensity and proximity of the activity to the feature. |

| **Table 10: Scope of Appropriate Assessment** | | | | | |
|---|---|---|---|---|---|
| **European designation** | **Qualifying feature(s)** | **Environmental threat from the England Coast Path** | | | **Risk to conservation objectives** |
| | | **Disturbance or damage from increased access on foot** | **Disturbance from the construction phase** | **Permanent loss of supporting habitat from new infrastructure** | |
| Humber Estuary SPA | Breeding little tern | ✓ | ✓ | ✘ | Visual disturbance and above water noise from people walking and walking with dogs, as part of the project, are a risk to the conservation objectives with repeated disturbance leading to reduced fitness and reduction in population and/or contraction in the distribution of qualifying features within the site. The magnitude of the pressure depends on the temporal scale, intensity and proximity of the activity to the feature. |
| Humber Estuary SPA | Breeding avocet | ✓ | ✓ - Kilnsea wetlands | ✘ | Visual disturbance and above water noise from people walking and walking with dogs, as well as the construction phase for installing the access management infrastructure as part of the project, are risks to the conservation objective with repeated disturbance leading to reduced fitness and reduction in population and/or contraction in the distribution of qualifying features within the site. The magnitude of the pressure depends on the temporal scale, intensity and proximity of the activity to the feature. |

| **Table 10: Scope of Appropriate Assessment** | | | | | |
|---|---|---|---|---|---|
| **European designation** | **Qualifying feature(s)** | **Environmental threat from the England Coast Path** | | | **Risk to conservation objectives** |
| | | **Disturbance or damage from increased access on foot** | **Disturbance from the construction phase** | **Permanent loss of supporting habitat from new infrastructure** | |
| Humber Estuary SPA | Breeding marsh harrier | ✓ East Halton Skitter and Haverfield Pits | ✓ Haverfield Pits | ✘ | Visual disturbance and above water noise from people walking and walking with dogs, as well as the construction phase for installing the access management infrastructure, as part of the project, are risks to the conservation objectives with repeated disturbance leading to reduced fitness and reduction in population and/or contraction in the distribution of qualifying features within the site. The magnitude of the pressure depends on the temporal scale, intensity and proximity of the activity to the feature. |

| Table 10: Scope of Appropriate Assessment | | | | | | |
|---|---|---|---|---|---|---|
| **European designation** | | **Qualifying feature(s)** | **Environmental threat from the England Coast Path** | | | **Risk to conservation objectives** |
| | | | **Disturbance or damage from increased access on foot** | **Disturbance from the construction phase** | **Permanent loss of supporting habitat from new infrastructure** | |
| Humber Estuary SAC | Humber Estuary Ramsar site | Grey seal | ✓ | ✓ | ✓ Dunes | Visual disturbance and above water noise from people walking and walking with dogs, as well as the construction phase for installing the access management infrastructure, as part of the project, are risks to the conservation objectives with disturbance leading to reduced fitness and reduction in population and/or contraction in the distribution of qualifying features within the site. The magnitude of the pressure depends on the temporal scale, intensity and proximity of the activity to the feature. The installation of access management infrastructure may lead to a permanent loss of supporting habitats (dune) reducing the extent and distribution of the qualifying features. |

| Table 10: Scope of Appropriate Assessment | | | | | | |
|---|---|---|---|---|---|---|
| **European designation** | | **Qualifying feature(s)** | **Environmental threat from the England Coast Path** | | | **Risk to conservation objectives** |
| | | | **Disturbance or damage from increased access on foot** | **Disturbance from the construction phase** | **Permanent loss of supporting habitat from new infrastructure** | |
| Humber Estuary SAC | Humber Estuary Ramsar site (estuaries) | Estuaries, mudflats and sandflats not covered by seawater at low tide, Salicornia and other annuals colonising mud and sand, Atlantic salt meadows | ✓ | ✘ | ✓ Saltmarsh | More frequent trampling in areas of mudflat, sandflat and saltmarsh (outside of those areas identified as s25 and s28 of the CROW Act), as a result of the access proposal, leads to a change in distribution, extent, structure, and function of the qualifying features within the site. The installation of access management infrastructure may lead to a permanent loss of habitat reducing the extent and distribution of the qualifying features. |

| Table 10: Scope of Appropriate Assessment | | | | | | |
|---|---|---|---|---|---|---|
| **European designation** | | **Qualifying feature(s)** | **Environmental threat from the England Coast Path** | | | **Risk to conservation objectives** |
| | | | **Disturbance or damage from increased access on foot** | **Disturbance from the construction phase** | **Permanent loss of supporting habitat from new infrastructure** | |
| Humber Estuary SAC | Saltfleetby-Theddlethorpe Dunes & Gibraltar Point SAC | Embryonic shifting dunes, shifting dunes along the shoreline with *Ammophila arenaria* ('White dunes'), fixed dunes with herbaceous vegetation ('Grey dunes'), dunes with *Hippophae rhamnoides,* humid dune slack | ✓ | ✘ | ✓ Donna Nook and Saltfleetby | More frequent trampling in areas of dune and scrub clearance, as a result of the access proposal, leads to a change in distribution, extent, structure, and function of the qualifying features within the site. The installation of access management infrastructure may lead to a permanent loss of habitat reducing the extent and distribution of the qualifying features. |

# D2. Contextual statement on the current status, influences, management and condition of the European Site and those qualifying features affected by the plan or project

***Notes on waterbird features**

**1. Current Conservation Status**

The conversation status of each bird species feature is defined at both the UK and SPA level, making reference to the following terms and definitions:

**a) Conservation Status (UK)**

The conservation status of each bird at a UK level has been placed on one of three lists; Red, Amber or Green (Eaton *et al*., 2015):

- **Red List** species are those which are 'Globally Threatened', whose population or range has declined rapidly in recent years, or that have declined historically and not shown a substantial recent recovery.

- **Amber List** species are those which have an unfavourable conservation status in Europe, whose population or range has declined moderately in recent years or those whose population has declined historically but made a substantial recent recovery. It also includes rare breeders and those for which the UK holds internationally important or localised populations.

- **Green List** species are those which are of least conservation concern.

**b) BTO WeBS Alert Status**

Where birds have been allocated a BTO WeBS Alert status, these have also been included at both the GB and SPA (Humber Estuary) level.

Trends are assessed over the short (5 years), medium (10 years) and long (up to 25 years) term. Where declines exceed 50%, **High Alerts** are issued and where declines lie between 25% and 50% **Medium Alerts** are issued (Cook, *et al.*, 2013).

**2. Sensitivities to changes in access**

The following applies to all of the waterbirds:

Waterbirds may be sensitive to changes in access that interrupt them whilst feeding on the exposed tidal mudflats or saltmarshes, or when at roost along the foreshore or on saltmarshes. Visual disturbance directly impacts waterbirds due to temporal or permanent loss of roosting and feeding habitat and therefore directly affects energy budgets and body condition (Durell *et al*., 2005). Flocks may be disturbed by a variety of human activities and people walking past is one of the activities identified as an important source of disturbance (Smit & Visser, 1993, Van Der Vliet *et al*., 2010), with walking and biking people triggering stronger disturbance than vehicles (Pease *et al*., 2005; Bregnballe *et al*., 2009). However, people displaying highly predictable behaviour can cause less disturbance (Smit & Visser, 1993).

Disturbance in waterbirds may affect ability to feed and rest; maintaining low levels of disturbance is likely to be an important determinant both of population health and species distribution around the Humber Estuary. Disturbance may be most damaging at times of hard frost when food resources are limited and energy requirements are highest.

Waterbirds are at particular risk of disturbance around high tide, when the birds are forced into close proximity with the public and dogs using the foreshore, marshes and flats. Disturbance at main roost sites is likely because the birds' energy expenditure may be increased both directly (particularly if they are repeatedly flushed) and indirectly (if disturbance forces birds to roost further from their preferred feeding areas). The distribution of these roosts is determined by factors which include lack of disturbance, low vegetation and good visibility. Because the roosts act as a focal point for birds from a large foraging area they are particularly sensitive.

Rather than rely on set distances, it is instead necessary to consider the species' ecology, use of an area, habitat quality and other factors that may influence the scale of the disturbance. This information can then be used to identify what kinds of disturbance, at which locations, are likely to have an impact. It is important to understand the human use of the area in detail. The spatial patterns of recreational access (both on the water and on the shore) and other disturbance (commercial shipping, industry, military training etc.) are also critical to understand. Disturbance can then be understood in context.

It is often necessary to understand the access patterns and recreational use in detail, through for example detailed visitor surveys, in order to determine how frequently particular activities occur, in which locations and under what conditions. An overview of the ecology and use of the estuary can be viewed in a number of reports:

- Recreational Disturbance to Birds on the Humber Estuary Humber (Cruickshanks, Liley, Fearnley, Stillman, Harvell, Hoskin & Underhill-Day, 2010)
- Humber Estuary Bird Decline Investigation 2014 (I D. Woodward, N. A. Calbrade & C.A. Holt, 2015 BTO Research Report No. 668)
- Analysis of Wetland Bird Survey (WeBS) Data for The Humber Estuary SSSI, SAC, SPA and Ramsar site: Third appraisal – sector-level trends to winter 2016/17 (I.D. Woodward, N.A. Calbrade, & G.E. Austin 2018 BTO Research Report No. 709)

Waterbirds may be sensitive to:

- Establishment of a new access on foot in areas that are used by the birds for feeding, roosting or breeding.
- An increase in the presence of people and dogs on existing paths in areas that are used by the birds for feeding, roosting or breeding.
- Establishment of a new right of access on foot in parts of the coastal margin that are used by feeding, roosting or breeding birds.
- An increase in the presence of people on foot in parts of the coastal margin that are used by feeding, roosting or breeding birds.

# D2.1 Humber Estuary SPA and Ramsar site: Non-breeding waterbirds, including assemblage

## a. Current conservation status

**Table 11: Current conservation status of non-breeding waterbirds and assemblage within the Humber SPA and Ramsar site**

| Non-breeding SPA waterbird species | BTO WeBS count for Humber Estuary per year | | | | | 2013-14 to 2017-18 (5 year peak average) | Importance within the Humber Estuary SPA and Ramsar site | Conservation status (UK) | BTO WeBS Alert (GB) | BTO WeBS Alert (SPA) |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | | | | | |
| Avocet | 766 | 1,608 | 1,429 | 2,555 | 2,199 | 1,711 | Exceeds international importance threshold (British Isles)[K] | Amber | No alert issued | No alert issued |
| Bar-tailed godwit | 1,626 | 1,072 | 1,763 | 1,119 | (1,123) | 1,395 | Exceeds international importance threshold (British Isles)[K] | Amber | No alert issued | High alert (short-term) medium alert (med-term) |
| Bittern | 1 | 4 | 1 | 2 | 2 | 2 | | Amber | No alert issued | No alert issued |
| Black-tailed godwit | (3,556) | 2,699 | 2,560 | 2,610 | 4,579 | 3,201 | Exceeds international importance threshold (British Isles)[K] | Red | No alert issued | No alert issued |
| Dunlin | (11,714) | (10,698) | (16,109) | 15,640 | 15,073 | 15,607 | Exceeds international importance threshold (British Isles)[K] | Amber | Medium alert (long-term) | Medium alert (long-term) |

| Table 11: Current conservation status of non-breeding waterbirds and assemblage within the Humber SPA and Ramsar site | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Non-breeding SPA waterbird species** | **BTO WeBS count for Humber Estuary per year** | | | | | **2013-14 to 2017-18 (5 year peak average)** | **Importance within the Humber Estuary SPA and Ramsar site** | **Conservation status (UK)** | **BTO WeBS Alert (GB)** | **BTO WeBS Alert (SPA)** |
| | **2013-14** | **2014-15** | **2015-16** | **2016-17** | **2017-18** | | | | | |
| Golden plover | (16,159) | 26,000 | (34,324) | 59,427 | 20,116 | 35,181 | Exceeds international importance threshold (British Isles)K | Green | Medium alert (med-term) | Medium alert (med-term) |
| Knot | 35,322 | (14,987) | (15,025) | 14,646 | 27,112 | 25,693 | Exceeds international importance threshold (British Isles)K | Amber | No alert issued | Medium alert (med-term) |
| Redshank | 3,284 | 3,124 | 3,792 | 2,570 | 3,351 | 3,224 | Exceeds international importance threshold (British Isles)K | Amber | No alert issued | Medium alert (med- and long-term) |
| Ruff | (84) | (44) | 65 | 74 | 117 | 85 | Exceeds British national importance threshold | Red | No alert issued | Insufficient data |
| Shelduck | 3,222 | 3,948 | 4,939 | (5,158) | 4,098 | 4,273 | Exceeds international importance threshold (British Isles)K | Amber | Medium alert (long-term) | No alert issued |

( ) indicate incomplete counts

| Table 11: Current conservation status of non-breeding waterbirds and assemblage within the Humber SPA and Ramsar site | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Waterbird assemblage species (not including SPA features)** | **Status** | **2013-14** | **2014-15** | **2015-16** | **2016-17** | **2017-18** | **2013-14 to 2017-18 (5 year peak average)** | **Importance within the Humber Estuary SPA and Ramsar site** | **Conservation status (UK)** | **BTO WeBS Alert (GB)** |
| Black-headed gull | Significant population | 9,389 | 4,990 | 8,985 | 8,047 | 9,956 | 8,273 | | Amber | No data |
| Dark-bellied brent goose | Named component species - SSSI | 2,890 | 3,951 | 4,088 | 3,748 | 3,056 | 3,547 | Exceeds international importance threshold (British Isles) | Amber | No alert issued |
| Curlew | Named component species - SSSI | 2,242 | 2,325 | 2,862 | 3,198 | 3,018 | 2,729 | Exceeds British national importance threshold | Red | Medium alert (long-term) |
| Goldeneye | Named component species - SSSI | 365 | 55 | 681 | 156 | 183 | 288 | Exceeds British national importance threshold | Amber | Medium alert (long-term) |
| Green sandpiper | Nationally important | 18 | 13 | 19 | 9 | 11 | 14 | Exceeds British national importance threshold | Amber | No alert issued |
| Greenshank | Named component species - SSSI | (34) | 35 | 34 | (42) | 46 | 39 | Exceeds British national importance threshold | Amber | No alert issued |

| Table 11: Current conservation status of non-breeding waterbirds and assemblage within the Humber SPA and Ramsar site | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Waterbird assemblage species (not including SPA features)** | **Status** | **2013-14** | **2014-15** | **2015-16** | **2016-17** | **2017-18** | **2013-14 to 2017-18 (5 year peak average)** | **Importance within the Humber Estuary SPA and Ramsar site** | **Conservation status (UK)** | **BTO WeBS Alert (GB)** |
| Grey plover | Named component species - SSSI | 3,832 | 2,128 | (1,938) | 4,388 | (4,434) | 3,696 | Exceeds international importance threshold (British Isles) | Amber | Medium alert (long-term) |
| Greylag goose | Nationally important | (1,149) | 1,392 | 2,233 | 1,382 | 1,614 | 1,655 | Exceeds British national importance threshold | Amber | Not evaluated |
| Lapwing | Named component species - SSSI | 10,692 | 8,612 | 12,810 | 23,198 | 13,135 | 13,689 | Exceeds British national importance threshold | Red | Medium alert (med-term) |
| Little egret | Named component species - SSSI | 121 | 165 | 169 | 304 | 246 | 201 | Exceeds British national importance threshold | Green | No alert issued |
| Mallard | Named component species of SPA assemblage | (1,064) | 1,617 | 1,241 | 775 | 936 | 1,142 | | Amber | Medium alert (long-term) |
| Oystercatcher | Named component species - SSSI | 5,878 | 5,848 | 4,543 | 5,256 | 5,392 | 5,383 | Exceeds British national importance threshold | Amber | No alert issued |

| Table 11: Current conservation status of non-breeding waterbirds and assemblage within the Humber SPA and Ramsar site | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Waterbird assemblage species (not including SPA features)** | **Status** | **2013-14** | **2014-15** | **2015-16** | **2016-17** | **2017-18** | **2013-14 to 2017-18 (5 year peak average)** | **Importance within the Humber Estuary SPA and Ramsar site** | **Conservation status (UK)** | **BTO WeBS Alert (GB)** |
| Pink-footed goose | Named component species - SSSI | 10,580 | 14,900 | 12,922 | 8,700 | 28,186 | 15,058 | Exceeds international importance threshold (British Isles) | Amber | No alert issued |
| Pochard | Named component species - SSSI | 135 | 186 | 153 | 96 | 59 | 126 | | Red | Medium alert (med-term) high alert (long-term) |
| Ringed plover | Named component species - SSSI | 1,387 | 788 | 901 | 1,119 | 606 | 960 | Exceeds international importance threshold (British Isles) | Red | Medium alert (med-term) high alert (long-term) |
| Sanderling | Named component species - SSSI | 691 | 464 | 399 | 697 | 653 | 581 | Exceeds British national importance threshold | Amber | No alert issued |
| Scaup | Named component species - SSSI | 3 | 1 | (1) | 43 | 2 | 12 | | Red | Medium alert (med- and long-term) |
| Smew | Nationally important | 0 | 0 | 0 | 1 | 0 | 0 | | Amber | No data |
| Teal | Named component species - SSSI | (4,796) | 2,264 | 2,764 | (3,467) | 3,633 | 3,385 | Exceeds British national | Amber | No alert issued |

| Table 11: Current conservation status of non-breeding waterbirds and assemblage within the Humber SPA and Ramsar site | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Waterbird assemblage species (not including SPA features)** | **Status** | **2013-14** | **2014-15** | **2015-16** | **2016-17** | **2017-18** | **2013-14 to 2017-18 (5 year peak average)** | **Importance within the Humber Estuary SPA and Ramsar site** | **Conservation status (UK)** | **BTO WeBS Alert (GB)** |
| | | | | | | | | importance threshold | | |
| Tundra bean goose | Nationally important | 0 | 30 | 1 | 0 | 0 | 6 | Exceeds British national importance threshold | No data | No data |
| Turnstone | Named component species - SSSI | 307 | (424) | 156 | 177 | 354 | 284 | | Amber | Medium alert (long-term) |
| Whimbrel | Named component species - SSSI | 82 | 120 | 250 | 101 | 55 | 122 | | Red | No data |
| White-fronted goose | Nationally important | 1 | 2 | (4) | 151 | 71 | 56 | Exceeds British national importance threshold | Red | No data |
| White-fronted goose (European - albifrons) | Nationally important | 1 | 2 | (4) | 48 | 71 | 31 | Exceeds British national importance threshold | Red | Medium alert (short-term) high alert (long-term) |
| Wigeon | Named component species - SSSI | 3,619 | 2,432 | 2,547 | 2,590 | 3,130 | 2,864 | | Amber | No alert issued |

( ) indicate incomplete counts

No individual species BTO WeBS alerts have been set for waterbird assemblage species that are not SPA features in the Humber Estuary SPA. However the BTO figures show an overall decline from the baseline (winter 1998/99) of 24%. Short-term shows an increase of 26% with declines medium to long-term of 18% and 5% respectively, using the reference date of the winter of 2016/17.

## b. Use of site by SPA waterbirds and assemblage

| Table 12: Months when the SPA waterbirds use the Humber estuary (Natural England 2017) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SPA non-breeding waterbird** | **Months where non-breeding waterbirds are present within the Humber Estuary SPA** | | | | | | | | | | | |
| | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** | **Jul** | **Aug** | **Sep** | **Oct** | **Nov** | **Dec** |
| Avocet | ✓ | ✓ | | | | | | | ✓ | ✓ | ✓ | ✓ |
| Bar-tailed godwit | ✓ | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Bittern | ✓ | ✓ | | | | | | | | ✓ | ✓ | ✓ |
| Black-tailed godwit | ✓ | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Dunlin | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Golden plover | ✓ | ✓ | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Knot | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Redshank | ✓ | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Ruff | | | | | | | ✓ | ✓ | ✓ | ✓ | | |
| Shelduck | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Waterbird assemblage | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

Please note: this Table is taken from the 'Advice on Seasonality' in the Humber Estuary SPA on Designated Sites View. It is not intended to be precise, but to act as a rough guide to when significant numbers of birds are present.

| Table 13: SPA supporting habitat for the SPA waterbirds (Natural England 2019) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **SPA non-breeding waterbird** | **SPA Supporting habitat** | | | | | | | | | |
| | **Atlantic salt meadows** | **Coastal lagoons** | **Coastal reedbeds** | **Freshwater and coastal grazing marsh** | **Intertidal mixed sediments** | **Intertidal mud** | **Intertidal sand and muddy sand** | **Intertidal seagrass beds** | **Salicornia and other annuals colonising mud and sand** | **Water column** |
| Avocet | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Bar-tailed godwit | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Bittern | | ✓ | ✓ | ✓ | | | | | | ✓ |
| Black-tailed godwit | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Dunlin | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Golden plover | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Knot | ✓ | ✓ | | ✓ | ✓ | | ✓ | | ✓ | |
| Redshank | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Ruff | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | |
| Shelduck | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ |
| Waterbird assemblage | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ |

Please note: this Table is based on the generic information on the supporting habitats, as referenced on Designated Sites View; it does not aim to cover all sub-habitats but is a broad-brush summary.

## c. Functionally linked land

Outside the SPA boundary, the most significant habitat for over wintering waterbirds is farmland, with both grasslands and arable fields being used by a number of species as foraging habitat, and fields immediately adjacent to the SPA also being used as roosting sites on the highest spring tides. (Woodward, Calbrade & Holt, 2014.)

Inland fields provide foraging opportunities for a number of species, such as wigeon and brent geese and pink-footed geese. Brent geese normally prefer grazing in the intertidal area on eelgrass and saltmarsh plants, but over the last twenty years have increasingly used coastal grassland and winter cereal crops once they have depleted their preferred food resources (Kear 2005). Although brent geese and wigeon both tend to remain close to the estuary, pink-footed geese mainly use the estuary as a roost site, and feed much further inland, normally located within 10 km of the roost site, and at an optimum distance of 2-5 km (Vickery & Gill 1999 in Birdlife 2014).

Farmland also supports species such as lapwing and golden plover, which feed on invertebrates found within inland grassland and arable fields. Fields adjacent to estuaries also provide important supplementary feeding habitat for Curlew (Townshend 1981; Stillman *et al.* 2005). Several other species of wader will also feed in fields occasionally, including oystercatcher, black-tailed godwit and redshank (Stillman *et al.* 2005).

It is important to emphasise that current habitat function provision within the fields inland of the trail depends on crop type and height, as well as, periods of waterlogging following heavy rainfall, therefore use is opportunistic and may not be used consistently year on year.

## d. High tide roost sites

Humber Estuary High Tide Roost Review 2013-2014 (Cutts, N., Hemingway, K. & S. Thomson, 2016) provides information on roost sites for the Humber Estuary SPA non-breeding waterbird features and assemblage. This is based on information from experienced ornithologists and bird surveyors with local knowledge, but it is acknowledged that roost sites can change over time. This information has also been referenced against:

- Key SPA waterbird locations in the Humber Management Scheme visitor survey (Fearnley, H., Liley, D. & Cruickshanks, K. (2012).
- England Coast Path – Paull to Kilnsea, Humber north bank. Advisory note produced by Humber Nature Partnership. (2019).
- Skeffling Waterbird Utilisation Review 2014-2016: Sector Importance Assessment. Cutts, N. (2019) Institute of Estuarine and Coastal Studies (IECS), University of Hull.
- Discussion with local bird watchers.

## f. Conservation objectives

The formal conservation advice package for Humber Estuary SPA has set following conservation targets for the qualifying features:

| **Table 14: Conservation objective for SPA waterbirds - connectivity with supporting habitats and disturbance caused by human activity** | | |
|---|---|---|
| **Humber Estuary SPA – non-breeding waterbird** | **Conservation objective** | **Target** |
| All non-breeding waterbirds | Connectivity with supporting habitats | Maintain safe passage of birds moving between roosting and feeding areas. |
| All non-breeding waterbirds | Supporting habitat for the non-breeding season | Restore the extent, distribution and availability of suitable habitat. |
| All non-breeding waterbirds | Disturbance caused by human activity | Reduce (restrict for knot & hen harrier) the frequency, duration and / or intensity of disturbance affecting roosting, foraging, feeding, moulting and/or loafing birds so that they are not significantly disturbed. |

| **Table 15: Conservation objective for SPA waterbirds - non-breeding population: abundance** | |
|---|---|
| **Humber Estuary SPA – non-breeding waterbird** | **Target** |
| Avocet | Maintain above 1213 individuals, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent. |
| Black-tailed godwit | Maintain above 2951, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent. |
| Golden plover | Maintain above 30,709 wintering individuals, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent. |
| Knot | Maintain above 18,500 individuals on passage and 28,165 wintering individuals, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent. |
| Shelduck | Maintain above 4464, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent. |

| Table 16: Conservation objective for SPA waterbirds - non-breeding population: abundance | |
|---|---|
| **Humber Estuary SPA - non-breeding waterbird** | **Target** |
| Bar-tailed godwit | Restore above 2,752 whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent. |
| Dunlin | Restore above 22,222 wintering individuals and 20,269 individuals during passage, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent. |
| Redshank | Restore above 4,632 wintering individuals and 7,462 individuals during passage, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent. |
| Ruff | Restore above 128 individuals during passage, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent. |

| Table 17: Conservation objectives for SPA waterbird assemblage | | |
|---|---|---|
| **Humber Estuary SPA – waterbird assemblage** | **Conservation objective** | **Target** |
| Waterbird assemblage, Non-breeding | Assemblage of species: abundance | Restore the overall abundance of the assemblage to a level above 153,934, whilst avoiding deterioration from its current level as indicated by the latest peak mean count or equivalent. |
| Waterbird assemblage, Non-breeding | Assemblage of species: diversity | Maintain the species diversity of the bird assemblage. |

## D2.2 Humber Estuary SPA: non-breeding hen harrier

### a. Current conservation status

**Conservation status (UK): Red**

### b. Use of site by features

| Table 18: Months when the SPA waterbirds use the Humber estuary (Natural England (2019) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Humber Estuary SPA non-breeding bird** | **Months where hen harrier are present within the Humber Estuary SPA** | | | | | | | | | | | |
| | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** | **Jul** | **Aug** | **Sep** | **Oct** | **Nov** | **Dec** |
| Hen harrier | ✓ | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | ✓ |

The wintering hen harrier population generally peaks in January/February, with numbers declining until the end of April (Catley, 2010), (Catley, 2008). During the winter, hen harriers gather at communal roost sites in reedbeds or saltmarshes (Allen *et al*., 2003), (Black & Veatch Ltd., 2005). The most important winter roost site on the Humber is Blacktoft Sands (outside this proposal), with Welwick and Saltfleetby also supporting wintering hen harrier (Allen *et al.*, 2003). During autumn passage, hen harriers are regularly seen at Donna Nook (Calbrade, 2013), Spurn Head and Blacktoft Sands (Allen *et al.*, 2003).

| Table 19: Supporting habitat for the SPA waterbirds (Natural England (2019) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Humber Estuary SPA non-breeding bird** | **SPA Supporting habitat** | | | | | | | | | |
| | **Atlantic salt meadows** | **Coastal lagoons** | **Coastal reedbeds** | **Freshwater and coastal grazing marsh** | **Intertidal mixed sediments** | **Intertidal mud** | **Intertidal sand and muddy sand** | **Intertidal seagrass beds** | **Salicornia and other annuals colonising mud and sand** | **Water column** |
| Hen harrier | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | |

A variety of other open habitats such as arable fields, rough grassland, uncultivated areas alongside drainage ditches, marshes and coastal grassland also provide hunting habitat (Allen *et a*l., 2003).

### c. Conservation objectives

The formal conservation advice package for Humber Estuary SPA has set following conservation targets for the qualifying features:

| Table 20: Conservation objectives and targets for hen harrier | | |
|---|---|---|
| **Humber Estuary SPA non-breeding bird** | **Conservation objective** | **Target** |
| Hen harrier | Connectivity with supporting habitats | Maintain safe passage of birds moving between roosting and feeding areas |
| Hen harrier | Supporting habitat for the non-breeding season | Maintain the extent, distribution and availability of suitable habitat. |
| Hen harrier | Disturbance caused by human activity | Reduce (restrict for knot & hen harrier) the frequency, duration and / or intensity of disturbance affecting roosting, foraging, feeding, moulting and/or loafing birds so that they are not significantly disturbed. |
| Hen harrier | Non-breeding population: abundance | Maintain above 8 wintering individuals, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent. |

## D2.3 Humber Estuary SPA: Breeding SPA birds

### a. Current conservation status and seasonality

| Table 21: Conservation status and months when the SPA breeding birds use the Humber estuary (Natural England (2019) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Humber estuary SPA breeding bird** | **Conservation status (UK):** | **Months where breeding SPA features are present within the Humber Estuary SPA** | | | | | | | | | | | |
| | | **Jan** | **Feb** | **Mar** | **Apr** | **May** | **Jun** | **Jul** | **Aug** | **Sep** | **Oct** | **Nov** | **Dec** |
| Avocet | Amber | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | |
| Little tern | Amber | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| Marsh harrier | Amber | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |

## b. Use of site by breeding SPA birds

### • Avocet

The Humber Estuary is one of the UK's most important sites for breeding avocet. Breeding numbers vary greatly from year to year and predation, adverse weather conditions and flooding can result in the loss of young and therefore impact on the success of the breeding colonies. (Catley, 2008; Catley, 2009; Catley, 2010; Short, 2004 – 2010).

Only breeding locations at Donna Nook managed realignment site, Northcoates Point, North Killingholme Haven Pits and Kilnsea wetlands fall within the area affected by the proposal and are considered as part of this proposal. Avocet can be found foraging and loafing on the mudflats at Saltend and Paull Holme Strays when spending time away from the nest (Black & Veatch Ltd., 2005).

### • Little tern

The established breeding colony at Beacon Lagoons has held between 1 and 2% of the UK breeding population since the early 1990s and is now the only site in Yorkshire where little tern colonies are habitually established (Henderson and Moore, 2011).

In previous years, colonies of breeding little tern have also been established at Spurn (last nested in 2011), Donna Nook (last nested in 2006), Tetney (last nested in 2005) and the Saltfleetby-Theddlethorpe dunes (last nested in 1996). Although these areas are not currently utilised by breeding little tern, it is important to maintain any remaining suitable breeding habitat. Spurn National Nature Reserve actively manage areas on the reserve to encourage breeding little tern and there is a wider Humber strategy to increase the breeding population when suitable habitat comes available.

Little tern arrive on the Humber to breed from mid-April (Bruce and Newton, 2012), and numbers gradually increase over a period of a few weeks (Allen *et al.*, 2003). The breeding season lasts until the end of July each year with last fledges occurring in mid-August, and the little tern leaving the Humber in early September (Allen *et al.*, 2003). Causes of decline in breeding productivity include adverse weather conditions, tidal surges, predation from foxes and avian predators and anthropogenic disturbance – to combat some of these issues electric fences have been erected at Beacon Lagoons to protect the breeding colony (Allen *et al.*, 2003).

**Table 22: Summary of little tern breeding success at Beacon lagoon**

| Breeding Year | Nests | Fledged | Loss of nests | Reference |
|---|---|---|---|---|
| 2017 | 49 | 14 | Flooding and predation | Woollard & Turton, 2017 |
| 2018 | 31 | 4 | Predation | South Holderness Countryside Society, 2018 |
| 2019 | 25 | 39 | | Spurn Bird Observatory, 2019 |

Little tern feed in the water column of lagoons (Allen *et al*., 2003; Garner *et al.*, 2012). Due to the preference for near-shore, shallow water areas for foraging, the outer estuary area and the open coastline around Easington are likely to be the most important foraging areas within the SPA for little tern.

- **Marsh harrier**

Within the area of this proposal, there is an established breeding marsh harrier site at Haverfield Pits, Welwick (M. Coverdale, *pers. comm*., 2018). Marsh harrier will breed in any suitable habitat on the Humber estuary and therefore there may be other breeding pairs. The main Humber roosts are located west of the Humber Bridge outside this proposal with smaller numbers observed around the outer estuary.

## c. Supporting habitat

**Table 23: Supporting habitat for the SPA breeding birds (Natural England (2019)**

| Humber estuary SPA breeding bird | SPA Supporting habitat | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Atlantic salt meadows | Coastal lagoons | Coastal reedbeds | Freshwater and coastal grazing marsh | Intertidal mixed sediments | Intertidal mud | Intertidal sand and muddy sand | Intertidal seagrass beds | Salicornia and other annuals colonising mud and sand | Water column |
| Avocet | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Little tern | | ✓ | | | ✓ | | ✓ | | | ✓ |
| Marsh harrier | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | |

## d. Conservation objectives

The formal conservation advice package for Humber Estuary SPA has set following conservation targets for the qualifying features:

| Table 24: Conservation objective – disturbance caused by human activity, supporting habitat and connectivity | | |
|---|---|---|
| **Humber Estuary SPA breeding bird** | **Conservation objective** | **Target** |
| Little tern, marsh harrier | Disturbance caused by human activity | During breeding reduce the frequency, duration and / or intensity of disturbance affecting roosting, foraging, feeding, moulting and/or loafing birds so that they are not significantly disturbed. |
| Avocet | Disturbance caused by human activity | During breeding restrict the frequency, duration and / or intensity of disturbance affecting roosting, foraging, feeding, moulting and/or loafing birds so that they are not significantly disturbed. |
| Avocet, little tern, marsh harrier | Connectivity with supporting habitats | Maintain safe passage of birds moving between roosting and feeding areas. |
| Avocet, little tern | Supporting habitat | Restore the extent, distribution and availability of suitable habitat. |
| Marsh harrier | Supporting habitat | Maintain the extent, distribution and availability of suitable habitat. |
| Avocet, little tern, marsh harrier | Supporting habitat | Maintain the structure, function and supporting processes associated with the feature and its supporting habitat. |

| Table 25: Conservation objective – breeding population: abundance | |
|---|---|
| **Humber Estuary SPA breeding bird** | **Target** |
| Avocet | Maintain the size of the breeding population at a level which is above 233 breeding pairs, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent. |
| Little tern | Restore the size of the breeding population to a level which is above 51 breeding pairs, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent. |
| Marsh harrier | Maintain the size of the non-breeding population at a level which is above 21 breeding females, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent. |

## D2.4 Humber Estuary SAC and Ramsar site: Grey seal

### a. Current conservation status and use of site by features

The Humber Estuary SAC is home to a significant breeding population of the grey seal. Donna Nook, which covers more than 10 km of coastline between Grainthorpe Haven in the north and Saltfleet in the south (Lincolnshire Wildlife Trust, 2013), supports a large and rapidly increasing grey seal breeding colony (Special Committee on Seals, 2012; SMart Wind Ltd., 2013a). Grey seals are present at Donna Nook throughout the year and in 2016 the Lincolnshire Wildlife Trust estimated a grey seal population of *ca*.6,850. Individuals from this breeding colony have been tracked in the Humber Estuary west of Kingston upon Hull and as far north as the area between Sunk Island Sands and Kilnsea (SMart Wind Ltd., 2013a).

As a breeding ground, Donna Nook is used from August to December with pupping occurring between October and January. Pups are born in three areas; running north to south these are known as the 'Range', 'Dunes' and, since 2002, 'Skidbrooke Ridge' (Allen *et al*., 2003). Sand eels and common sole are the staple diet of the local grey seal population at Donna Nook (SMart Wind Ltd., 2013a). Grey seals disperse away from breeding sites once the season is over, presumably to feeding areas (Allen *et al*., 2003). Foraging grey seals from the Humber Estuary have been tracked as far as Dogger Bank, the Wash and the Farne Islands (SMart Wind Ltd., 2013a), and regularly travel 230km out to sea from their haul-out site, with trips lasting up to 5 days (Allen *et al*., 2003; Special Committee on Seals, 2012). Donna Nook is also an important summer haul-out site with the number of individuals increasing each year since 1988 (Special Committee on Seals, 2012), being the largest haul-out site along the Lincolnshire and Norfolk coast (SMart Wind Ltd., 2013a).

Grey seal numbers at Donna Nook have increased significantly between 1999 and 2008 and pup production also increased over the same period (SMart Wind Ltd., 2013a). The North Sea colonies as a whole are showing a gradual overall decline in the rate of increase in pup production, however in contrast there has been a rapid increase at the colony at Donna Nook (Special Committee on Seals, 2002).

The grey seal feature of the Humber Estuary was assessed as favourable in 2012, as pup production had increased steadily year-on-year and there were no barriers to seals accessing the breeding areas.

### b. Conservation objectives

The formal conservation advice package for Humber Estuary SAC has set the following conservation targets for the qualifying features:

**Table 26: Conservation objectives for grey seal in the Humber estuary SAC and Ramsar site**

| Qualifying feature | Conservation objective | Target |
|---|---|---|
| Grey seal | Population | Maintain the population size and the reproductive and recruitment capability of the species within the site. |
| Grey seal | Presence and spatial distribution | Maintain the presence and spatial distribution of the species and their ability to undertake key life cycle stages and behaviours. |

| Table 26: Conservation objectives for grey seal in the Humber estuary SAC and Ramsar site | | |
|---|---|---|
| **Qualifying feature** | **Conservation objective** | **Target** |
| Grey seal | Structure and function | Maintain connectivity of the habitat within sites and the wider environment to ensure recruitment, and / or to allow movement of migratory species. |
| Grey seal | Supporting habitat | Maintain the extent, distribution and availability of suitable habitat. |

## D2.5 Humber Estuary SAC and Ramsar site: Estuary

### a. Current conservation status and use of site by features

The 'estuary' feature is made up of a number of sub-features, all of which are covered by other Humber estuary SAC qualifying features also described and considered in this assessment.

### b. Conservation objectives

The formal conservation advice package for Humber Estuary SPA has set conservation targets for the following qualifying features:

| Table 27: Conservation objectives for estuaries in the Humber estuary SAC and Ramsar site | | |
|---|---|---|
| **Qualifying feature** | **Conservation objective** | **Target** |
| Estuaries | Distribution: presence and spatial distribution of biological communities | Maintain the presence and spatial distribution of estuary communities. |
| Estuaries | Extent and distribution | Restore the total extent and spatial distribution of the estuary to ensure no loss of integrity, while allowing for natural change and succession. |

## D2.6 Humber Estuary SAC: Mudflats and sandflats not covered by seawater at low tide, Atlantic salt meadows and *Salicornia* and other annuals colonising mud and sand

### a. Overview of intertidal habitat within the site

**Mudflats and sandflats not covered by seawater at low tide**

Intertidal mud and sand flats fringe much of the Humber with 50% of the estuary exposed at low tide (English Nature, 2003). They expand at the outer estuary and are largest at the mudflats of Spurn Point on the north bank and at the sand flats of Cleethorpes to Donna Nook on the south bank (Allen *et al*., 2003). Despite progressive loss to land reclaim since the 17th century (Edwards & Winn, 2006), the total intertidal area at the time of designation was about 9382.46ha at low tide, with the Humber's intertidal flats representing 4.5% of the British resource (English Nature, 2003). The sediment cycle in the Humber is dynamic with muds and sands being eroded in places to be re-deposited elsewhere (Institute of Estuarine and Coastal Studies (IECS), 1994).

Intertidal community composition has high annual variation and can be extremely changeable (Heritage, 2011). The tidal rivers and inner estuary hold fine silts and muds with accompanying low species abundance and richness. This progresses seaward to the coarser sands and higher species diversity of the outer estuary. The intertidal flats also provide a wide range of good quality habitats for mobile species; important North Sea fish species, notably bass and flatfish, are in residence (Pérez-Dominguez, 2008) and internationally and nationally important bird species feed on abundant invertebrate prey (Calbrade, 2013).

The intertidal feature of the Humber Estuary SAC was assigned unfavourable recovering condition in 2012 because of habitat loss to coastal flood defence and other commercial developments.

- **Intertidal mixed sediments** have been recorded on the south bank of the outer estuary, south of Cleethorpes (Franco *et al.,* 2015). Mixed sediments are found predominantly on the lower shore of the intertidal in these areas, and include a very thin layer of mud occurring on hard clay and abundant stones and pebbles (Franco *et al*., 2015).

  Intertidal community composition in the Humber has high annual variation and can be extremely changeable. In general, the intertidal mixed sediments of the Humber Estuary SAC are relatively species poor and, in some cases, contain no fauna (Franco *et al.,* 2015). Where fauna are present, robust polychaetes such as ragworm *Hediste diversicolor* and oligochaetes such as *Tubificoides* spp. Dominate, along with mud shrimp *Corophium volutator*(Frost *et al*., 2010),(Hemingway *et al*., 2008). The cockle *Ceratoderma edule* may also be present (Hemingway *et al*., 2008).

- **Intertidal sand and muddy sand** cover large areas of the outer estuary, particularly on more sheltered shores and at the mouth of the estuary. The sediments of the north bank of the outer estuary are mainly sands and muddy sands, while the sediments of the south bank of the outer estuary are predominantly sandy. In the middle estuary this habitat is also patchily distributed and forms a mosaic with littoral muds, while the inner estuary is largely dominated by mud (Hemingway *et al*., 2008), (Frost *et al*., 2010).

**Atlantic salt meadows**

Atlantic salt meadows represent 2.14% of the Humber Estuary SAC (Joint Nature Conservation Committee, 2011) and 3.61% of the UK resource (Maddock, 2008). In 2001 the distribution of Atlantic Salt Meadows within the designated site boundary was mapped at the following general locations: Barton and Barrow Clay Pits, The Grues, Spurn Head to Saltend Flats, Pyewipe and Cleethorpes Coast, the North Lincolnshire Coast and the north and south banks of the Upper Humber (Bullen Consultants, 2001). The national vegetation communities for this feature have also been mapped, ranging from pioneer species to the transitional reedbeds which make up over half of the marsh, such as common reed *Phragmites australis* and sea club-rush *Scirpus maritimus* (English Nature, 2003). Stable marshes that are less dominated by transitional communities and display clearer zonation are well represented at key locations including North Somercotes, Spurn Bight, Cleethorpes and Cherry Cobb Sands (Allen *et al*., 2003).

The marsh provides a high tide refuge for internationally and nationally important wading birds and wildfowl such as oystercatcher, bar tailed godwit, knot and dunlin (Collop, 2011), which feed on the adjacent mudflats, and provides suitable habitat for nationally important breeding birds such as redshank, oystercatcher and lapwing (Swig, 2009; Collop, 2011). Saltmarsh offers sheltered nursery

sites for several species of fish and supports many rare invertebrates, particularly in areas with high structural plant diversity and where freshwater seepage provides a transition to brackish conditions.

***Salicornia* and other annuals colonising mud and sand**

Within the Humber Estuary, glasswort *Salicornia* spp. and annual sea blite *Suaeda maritima* communities are the primary colonising saltmarsh species present. Together, at the time of designation they contributed to less than 0.13% of the designated site area and over 1% of the national resource (JNCC, 2007e). More recent localised surveys have highlighted the dynamic nature of this habitat by identifying its expansion through annual monitoring (Allen *et al*., 2008) and by mapping areas larger than previously recorded on the entire estuary (SMart Wind Ltd., 2013b). Therefore, as would be expected for a colonising species, the total extent and distribution of this feature is changeable within the Humber SAC. These colonising saltmarsh species are more dominant at the outer estuary on both the north and south banks, with the highest concentrations found along the north Lincolnshire and the Pyewipe-to-Cleethorpes coasts (Dargie, 2001; Bullen Consultants, 2001). On the north Lincolnshire coast these communities largely form a mosaic with common saltmarsh grass *Puccinellia maritima*. This combination is also found on the north bank from Spurn Head to Saltend Flats but over a smaller area and particularly where common cord-grass *Spartina anglica* is a more dominant colonising species (Allen *et al*., 2008; ABPmer, 2011). *S. anglica* is a non-native species first planted on the Humber in 1936 and as such is not a designated feature of the SAC; however, as a pioneer species it colonises areas of mudflat enabling the introduction and establishment of Atlantic salt meadows.

All mudflats and the majority of sandflats and saltmarsh are excluded from the proposals as they are considered unsuitable for public access under section 25A of the CROW Act or through, military byelaws. There are some exceptions to this, which are best described as their SSSI unit names, listed below, where the mudflats, sandflats and saltmarsh are within the coastal margin.

## b. Current conservation status of intertidal habitat

**Table 28: Current conservation status of intertidal habitat and SSSI location**

| SSSI unit | SSSI unit name | Habitat and current SSSI conservation status | Reason for habitat conservation status |
|---|---|---|---|
| 76 | The Outstray 2 | Saltmarsh - unfavourable - no change. | Land management - under grazing. |
| 81 | Stone Creek saltmarsh | Saltmarsh - unfavourable – recovering. | Land management – grazing agreed. |
| 82 | Track to Spragger Clough | Saltmarsh - unfavourable – recovering. | Coastal squeeze - Humber Flood Risk Management Strategy approved for delivery. |

| Table 28: Current conservation status of intertidal habitat and SSSI location | | | |
|---|---|---|---|
| **SSSI unit** | **SSSI unit name** | **Habitat and current SSSI conservation status** | **Reason for habitat conservation status** |
| 83 | Spragger Clough to Hawkins Point | Saltmarsh - unfavourable - no change. | Coastal squeeze - Humber Flood Risk Management Strategy approved for delivery. |
| 100 | East Marsh saltmarsh | Saltmarsh - unfavourable – recovering. | Coastal squeeze - Humber Flood Risk Management Strategy approved for delivery. |
| 125 | Barton Eastern foreshore | Saltmarsh - unfavourable – recovering. | Coastal squeeze - Humber Flood Risk Management Strategy approved for delivery. |
| 128 | Barton Eastern foreshore | Saltmarsh - unfavourable – recovering. | Coastal squeeze - Humber Flood Risk Management Strategy approved for delivery. |
| 139 | Barton central foreshore | Saltmarsh - unfavourable – recovering. | Coastal squeeze - Humber Flood Risk Management Strategy approved for delivery. |
| 159 | Long Bank bridge to Westmere | Saltmarsh - unfavourable – recovering. | Proxy assessment based on habitat undertaken leading to unfavourable recovering assessment for bird features. |
| 160 | Westmere to Cliff Farm | Saltmarsh - unfavourable – recovering. | Proxy assessment based on habitat undertaken leading to unfavourable recovering assessment for bird features. |
| 161 | Cliff Farm | Saltmarsh - unfavourable – recovering. | Proxy assessment based on habitat undertaken leading to unfavourable recovering assessment for bird features. |
| 162 | West of car park | Saltmarsh – favourable. | Proxy assessment based on habitat undertaken leading to unfavourable recovering assessment for bird features. |
| 164 | Spurn | Saltmarsh - unfavourable – recovering. | Failure of assessment targets. |
| 166 | Skidbrooke | Mudflats and sandflats not covered by seawater at low tide, Atlantic salt meadows, | Accretion of saltmarsh and development of upper saltmarsh. The saltmarshes show an excellent range of habitats and species. |

| Table 28: Current conservation status of intertidal habitat and SSSI location | | | |
|---|---|---|---|
| **SSSI unit** | **SSSI unit name** | **Habitat and current SSSI conservation status** | **Reason for habitat conservation status** |
| | | *Salicornia* and other annuals colonising mud and sand – favourable. | |
| 168 | Grainthorpe Haven | Mudflats and sandflats not covered by seawater at low tide, Atlantic salt meadows, *Salicornia* and other annuals colonising mud and sand - favourable. | No comments. |
| 169 | Tetney Haven | Mudflats and sandflats not covered by seawater at low tide, Atlantic salt meadows, *Salicornia* and other annuals colonising mud and sand - favourable. | No comments. |
| 173 | Pier Beach | littoral sediment - favourable | No comments. |
| 174 | Cleethorpes Beach | littoral sediment - favourable | Sand or slightly muddy sands and saltmarsh. Predominantly polychaetes and ampihipod communities. |
| 186 | Discovery Centre Intertidal | Mudflats and sandflats not covered by seawater at low tide - favourable | |
| 187 | Discovery Centre Dunes | Saltmarsh - Unfavourable recovering. | Land management - rotational management of sea buckthorn |
| 188 | Humberston Intertidal | Mudflats and sandflats not covered by seawater at low tide - Favourable | No comments. |

### C. Conservation Objectives for intertidal habitat

The formal conservation advice package for Humber Estuary SAC has set conservation targets for the following qualifying features:

| **Table 29: Conservation objectives for intertidal habitat within the Humber Estuary SAC** | | |
|---|---|---|
| **Humber Estuary SAC qualifying features** | **Conservation objective** | **Target** |
| Mudflats and sandflats not covered by seawater at low tide | Distribution: presence and spatial distribution of biological communities. | Maintain the presence and spatial distribution of mudflat and sandflat communities. |
| Mudflats and sandflats not covered by seawater at low tide | Extent and distribution. | Restore the total extent and spatial distribution of the estuary to ensure no loss of integrity, while allowing for natural change and succession. |
| Mudflats and sandflats not covered by seawater at low tide | Structure and function. | N/A - no targets given. |
| Atlantic salt meadows | Distribution of the feature, including associated transitional habitats, within the site. | Maintain the range and continuity of the habitat and its natural transitions within saltmarsh types and to other habitats seaward and landward. |
| Atlantic salt meadows | Extent of the feature within the site. | Restore the total extent of the feature. |
| Atlantic salt meadows | Structure and function. | Maintain the abundance of the species; maintain naturally-occurring patterns of creeks and salt pans; maintain the degree of patterning of patches of bare mud of varying sizes in a mosaic with saltmarsh vegetation; maintain the frequency / cover of the *Spartina anglica* to acceptable levels and are not encouraged by changes in surface condition, soils, nutrient levels or changes to hydrology. |
| *Salicorni*a and other annuals colonising mud and sand | Distribution of the feature, including associated transitional habitats, within the site. | Maintain the range of the habitat and natural transitions within saltmarsh types and to other habitats seaward and landward. |
| S*alicornia* and other annuals colonising mud and sand | Extent of the feature within the site. | Restore the total extent of the feature. |
| *Salicornia* and other annuals colonising mud and sand | Structure and function. | Maintain the abundance of the species; maintain naturally-occurring patterns of creeks and salt pans; maintain the degree of patterning of patches of bare mud of varying sizes in a mosaic with saltmarsh vegetation; maintain the frequency / cover of the *Spartina anglica* to acceptable levels and are not encouraged by changes in surface condition, soils, nutrient levels or changes to hydrology. |

# D2.7 Humber Estuary SAC - Embryonic shifting dunes, shifting dunes along the shoreline with *Ammophila arenaria* ('White dunes'), fixed dunes with herbaceous vegetation ('Grey dunes') and dunes with *Hippophae rhamnoides*

## a. Overview of dune habitat overview within the site

### Embryonic shifting dunes

Embryonic shifting dunes occur on the outer Humber where coarse sediments dry out and are blown onshore by the prevailing winds to form dune complexes. Embryonic dunes typically have low vegetation cover and this is generally true on the Humber. At the time of designation embryonic shifting dunes were found predominantly along the north Lincolnshire coast (JNCC, 2007a; Bullen Consultants, 2001), in addition to Spurn Peninsula on the north bank and on the south bank near Cleethorpes (Dargie, 2001; Bullen Consultants, 2001). At the time of classification, the extent of embryonic shifting dunes within the Humber Estuary SAC was 18.28 ha. This figure is likely to have changed given the dynamic nature of this feature.

### Shifting dunes along the shoreline with *Ammophila arenaria* ('White dunes')

At the time of designation the area of 'white dunes' within the Humber SAC was 14.09 ha. Shifting 'white' dunes are generally a linear feature located toward the seaward side of more complex dune systems. Within the SAC they are more reduced in extent compared to dunes with sea buckthorn, though still represent 1.81% of the national resource (JNCC, 2007d). The feature is restricted by land claim and management measures that reduce or deny the natural mobility of the feature (Dargie, 2002). Given the likely impacts of the 2013 tidal surge and the salt-intolerance of marram grass it is likely that the extent and distribution of the feature has changed since this event.

### Fixed dunes with herbaceous vegetation ('Grey dunes')

At the time of designation there were 13.05 ha of fixed dunes with herbaceous vegetation within the Humber SAC, representing just 0.33% of the British resource (JNCC, 2007c). There is generally more vegetation here than on the embryonic shifting and white dunes. Grey dunes are found along the outer estuary north and south banks and along the north Lincolnshire coast dune complexes (Bullen Consultants, 2001; Dargie, 2001). The scarcity of this dune type is likely due to scrub encroachment as a result of a lack of grazing. Management can be helpful to prevent scrub encroachment and avoid further loss of this feature. Scrub management is carried out at Spurn and non-native species, such as *Rosa rugosa*, are controlled at Tetney Marsh.

### Dunes with *Hippophae rhamnoides*

Dunes with *Hippophae rhamnoides* are the most extensive dune type on the Humber SAC, covering 66.07ha at the time of classification. Whilst this type of dune has been created by the introduction of sea buckthorn for dune maintenance in many parts of the country (JNCC, 2007b), it is native to the Humber Estuary in its naturalised state. The *H. rhamnoides* scrub of the Humber SAC alone contributes roughly 28% to our national resource (JNCC, 2007b). At the time of designation dunes with sea-buckthorn were found in on the outer estuary at Spurn on the north bank and Cleethorpes on the south bank. Within the SAC, the greatest extent of dunes with sea buckthorn on the south bank was recorded at Donna Nook (Dargie, 2002). Other locations along the south bank that include significant stands are south of Cleethorpes, down to Tetney Marsh and Northcoates Lagoon area. An unusual aspect of the *Hippophae rhamnoides* stands here, in contrast with the majority of coastal sites in Europe, is the vigour with which the shrubs are expanding and colonising other habitats. For

this reason, a balance needs to be maintained between shrub-covered and open dune habitats at this SAC through active conservation management.

## b. Conservation status of dune habitat within the Humber SAC

| Table 30: Current conservation status of dune habitat and SSSI location | | | | |
|---|---|---|---|---|
| **SSSI unit** | **SSSI unit name** | **Current SSSI conservation status** | | **Reason for habitat conservation status** |
| | | **Dunes** | **Fixed dune grassland** | |
| 164 | Spurn | Favourable | Unfavourable - recovering | Failure to meet the assessment targets |
| 166 | Skidbrooke | Favourable | | No comments |
| 168 | Grainthorpe Haven | Favourable | | No comments |
| 169 | Tetney Haven | Favourable | | No comments |
| 187 | Discovery Centre Dunes | | Unfavourable - recovering | Land management - rotational management of sea buckthorn |
| 189 | Humberston Dunes | | Unfavourable - recovering | Land management - rotational management of sea buckthorn |

### c. Conservation Objectives for dune habitat within the Humber SAC

As set out in the formal conservation advice package for Humber Estuary SAC, the following qualifying features have conservation targets:

| Table 31: Conservation objectives for dune habitat within the Humber Estuary SAC | | |
|---|---|---|
| **Qualifying dune features** | **Conservation objective** | **Target** |
| Embryonic shifting dunes, Shifting dunes along the shoreline with *Ammophila arenaria* ('White dunes'), Fixed dunes with herbaceous vegetation ('Grey dunes'). | Extent and distribution | Restore the total extent, distribution and continuity of the feature, including where applicable its component vegetation types and associated transitional vegetation types, subject to natural change. |
| Dunes with *Hippophae rhamnoides.* | Extent | Maintain the total extent of the feature, subject to natural changes. |
| Dunes with *Hippophae rhamnoides.* | Structure and function | Maintain the habitat in a mosaic with other dune Annex I habitats and manage transitional areas to retain open scrub. Maintain a diverse age structure amongst the scrub habitat found |

| Table 31: Conservation objectives for dune habitat within the Humber Estuary SAC | | |
|---|---|---|
| **Qualifying dune features** | **Conservation objective** | **Target** |
| | | on the site. Areas of bare sand which are maintained by frequent human disturbance should not increase. |
| Humid dune slack. | Extent | Restore the total extent of the feature, subject to natural change. |
| Humid dune slack. | Distribution | Maintain the distribution and configuration of the feature, including where applicable its component vegetation types, across the site |

## D2.8 Saltfleetby-Theddlethorpe dunes & Gibraltar Point SAC

### a. Overview of dune habitat within the site

**Embryonic shifting dunes**

Embryonic shifting dune exists in a highly dynamic state and is dependent on the continued physical processes at the dune/beach interface. These processes have supported the progradation of the Saltfleetby-Theddlethorpe dunes by 35m in 15 years. It is estimated that there is 5.8ha of embryonic shifting dune at Saltfleetby – Theddlethorpe Dunes.

**Shifting dunes along the shoreline with *Ammophila arenaria* ('White dunes')**

The dune system on the composite site Saltfleetby – Theddlethorpe Dunes and Gibraltar Point contains good examples of shifting dunes within a complex site that exhibits a range of dune types. At this site the *Ammophila*-dominated dunes are associated with lyme-grass *Leymus arenarius* and sand couch *Elytrigia juncea*. These shifting dunes are part of a successional transition with fixed dunes with herbaceous vegetation and dunes with *Hippophae rhamnoides*. This is a dynamic vegetation type maintained only by change. It can occur on both accreting and eroding dunes, but will rapidly change and disappear if stability is imposed. It is estimated that there is 8.1ha of 'white dunes' at Saltfleetby – Theddlethorpe Dunes.

**Fixed dunes with herbaceous vegetation ('Grey dunes')**

Within this dune complex there are extensive areas of fixed dune vegetation with early successional stages on the seaward side and more stable areas inland. The lime-rich dunes support a rich and diverse flora. The fixed dunes are part of a successional transition and the rapidly accreting dunes on the seaward sand bars and shingle banks make this an important site for research into the processes of coastal development. It is estimated that there is 64.7ha of 'grey dunes' at Saltfleetby – Theddlethorpe Dunes.

**Dunes with *Hippophae rhamnoides***

*Hippophae rhamnoides* is considered native on this site and the site supports a good example of this feature in the main part of its natural range in the UK. This habitat develops on stable sand dunes and is present in a range of successional stages from early colonisation to mature scrub. The stands of scrub are important for both migratory and breeding birds.

An unusual aspect of the *Hippophae rhamnoides* stands here, in contrast with the majority of coastal sites in Europe, is the vigour with which the shrubs are expanding and colonising other habitats. For this reason, a balance needs to be maintained between shrub-covered and open dune habitats at

this SAC through active conservation management. It is estimated that there is 93.1ha of dunes with *Hippophae rhamnoides* at Saltfleetby – Theddlethorpe Dunes.

### Humid dune slacks

Dune slacks are low-lying areas within dune systems that are seasonally flooded and have a low nutrient status. They occur primarily on the larger dune systems in the UK. The humid dune slacks at this site are part of a successional transition between a range of dune features and have their origins in saltmarsh, becoming freshwater dominated after the formation of dune ridges. There is a range of communities present, depending on the topography and water table, length of time since isolation from the influence of saltwater and the management history. It is estimated that there is 7.4ha of humid dune slack at Saltfleetby – Theddlethorpe Dunes.

## b. Conservation status

All SAC dunes features at Saltfleetby - Theddlethorpe dunes are considered to be favourable – recovering with active condition threats for the change in land management: rotational management of the sea buckthorn; the prevention of spread/establishment of *Clematis vitalba*; conservation grazing on fixed dune grassland to reduce other scrub and the rotational scrape management to improve natterjack toad habitat, as well as for public disturbance relating to the National Nature Reserve open access dedication requiring dogs to be on leads during bird breeding season and the provision of a bridleway affecting the conservation status of fixed dune grassland.

## c. Conservation objectives

The formal conservation advice package for Saltfleetby – Theddlethorpe dunes and Gibraltar Point SAC, has set a conservation targets for the following qualifying features:

**Table 32: Conservation objectives for dune habitat within Saltfleetby - Theddlethorpe Dunes & Gibraltar Point SAC**

| Qualifying dune features | Conservation objective | Target |
|---|---|---|
| Embryonic shifting dunes, Shifting dunes along the shoreline with *Ammophila arenaria* ('White dunes'), fixed dunes with herbaceous vegetation ('Grey dunes'), dunes with *Hippophae rhamnoides.* | Extent and distribution. | Maintain the total extent, distribution and continuity of the feature, including where applicable its component vegetation types and associated transitional vegetation types, subject to natural change. |
| Humid dune slack. | Extent and distribution. | Restore the total extent and maintain the distribution and configuration of the feature, including where applicable its component vegetation types, subject to natural change. |
| Embryonic shifting dunes, Shifting dunes along the shoreline with *Ammophila arenaria* ('White dunes'). | Structure and function: Presence of un-vegetated surfaces. | Maintain an extent of bare sand of varying sizes in a mosaic with the vegetation (up to 50% of the feature extent). |

| Table 32: Conservation objectives for dune habitat within Saltfleetby - Theddlethorpe Dunes & Gibraltar Point SAC | | |
|---|---|---|
| **Qualifying dune features** | **Conservation objective** | **Target** |
| Fixed dunes with herbaceous vegetation ('Grey dunes'), dunes with *Hippophae rhamnoides*, humid dune slack. | Structure and function: Presence of un-vegetated surfaces. | Restore an appropriate cover of bare ground or sand, which is typically between 5-20% and in patches in a mosaic with vegetated surfaces. |
| Fixed dunes with herbaceous vegetation ('Grey dunes'), dunes with *Hippophae rhamnoides*, humid dune slack. | Structure and function. | Restore the habitat in a mosaic with other dune Annex I habitats and manage transitional areas to retain open scrub. Maintain a diverse age structure amongst the scrub habitat found on the site. |

## D2.9 Current recreational access

### a. Overview of recreational access

The estuary already supports a range of recreational activity, such as sailing, with boats moored in the estuary, canoeing, and angling, walking and cycling. Walking is a popular pursuit along much of the Humber estuary including dog walking. In general this is linked to the larger population centres, wildlife attractions, beaches, car parking and access points. The more isolated sections of coast are genuinely remote and visited much less. (Fearnley, H., Liley, D. & Cruickshanks, K. 2010).
The Humber is also renowned for its bird and wildlife watching opportunities. On the South bank; Cleethorpes beach, Tetney marshes and North Killingholme haven pits are all popular locations for wildlife watching with Spurn Point, Kilnsea Wetlands, Paull, Welwick, and Easington on the North bank. (Fearnley, H., Liley, D. & Cruickshanks, K. 2010).

Much of the estuary can be accessed by public rights of way, often coinciding with the flood defences. The only gaps being around Immingham Docks, Donna Nook and Saltend industrial area.

In areas where public rights of way do not exist such as from Horseshoe Point to Tetney Haven**,** around Sunk Island, between Skeffling and Kilnsea and from Kilnsea to Easington informal access still takes place on the floodbanks.

The Yorkshire Wolds Way has its terminus at Hessle Foreshore and the Trans Pennine Trail goes from the passenger ferry terminal at King George Dock along the Estuary to west of the Humber Bridge. The England Coast Path would create a link with both of these trails.

Maps (map B) of existing public access are published as part of the Overview reports for Mablethorpe to Humber Bridge and Humber Bridge to Easington.

| Table 33: Types and quantities of access used by the England Coast Path | | |
|---|---|---|
| **Mablethorpe to Humber Bridge trail section** | **Length (km)** | **Length (km) within European designations** |
| Total length of trail section | 82.333 | 42.168 |
| **Type of trail** | | |
| On road | 34.752 | 4.19 |

| | | |
|---|---|---|
| Off road | 47.581 | 37.977 |
| Public right of way | 57.966 | 24.121 |
| Promoted regional routes | 2.337 | 1.185 |
| Existing walked routes | 18.858 | 15.634 |
| Proposed new access | 4.315 | 2.412 |

| **Table 34: Types and quantities of access used by the England Coast Path** | | |
|---|---|---|
| **Humber Bridge to Easington trail section** | **Length (km)** | **Length (km) within European designations** |
| Total length of trail section | 64.779 | 31.567 |
| **Type of trail** | | |
| On road | 21.757 | 1.583 |
| Off road | 43.021 | 29.984 |
| Public right of way | 28.94 | 4.992 |
| Promoted regional routes | 15.394 | 2.971 |
| Existing walked routes | 20.102 | 1.269 |
| Proposed new access | 3.284 | 0.692 |

### b. Results of the recreational visitor survey across the Humber Estuary

In 2012 the Humber Management Scheme undertook an extensive recreational survey with the aim of providing detailed visitor information to consider the impacts of recreation to the bird interest of the estuary and underpin considerations relating to the management of access. The fieldwork consisted of onsite visitor surveys, car park counts, vantage point counts of people and targeted interviews with user groups in summer and winter across 20 locations. The full 'Results of the recreational visitor survey across the Humber Estuary' report and map annex (Fearnley, Liley & Cruickshanks, 2012) can be viewed on the Humber Nature Partnership website.

In total 614 visitor groups were interviewed (112 in the summer and 502 in the winter) providing data from 1154 individuals and their 395 dogs. Visitors were not equally distributed across the survey locations. Some locations received a significantly higher number of visitors than others.

**General results**

- 88% of interviewed visitors were local residents travelling from home.
- 51% of interviewed visitors were aged between 41 - 65 years, 20% were between 18 - 40, 17% were older than 65 and 12% of the people in groups were under 18. There were more young people visiting in the summer compared to the winter.
- 74% of visitors interviewed in the winter stated they visited the area equally all year, with 11% stating that they visit more in the winter. Of the summer visitors, 61% visited all year equally whilst 21% visited more in the summer.
- 50% of visitors interviewed in the summer spent 1 - 2 hours on a site while 49% of those interviewed in the winter spent less than 1 hour on a site.
- 25% of interviewed visitors made daily visits to the interview location with an additional 24% visiting most days.
- 55% of those interviewed in the winter preferred to visit before midday.
- 29% of visitors stated the main reason they chose to visit the interview location was because it was close to home. (The most popular other reason was 'good for dog/dog enjoys it'.)
- The total number of people recorded entering each location over the eight survey sessions ranged between 9 at Easington Bank and 344 at Sea Lane (Saltfleet). Using winter data only, there was a significant difference between locations in the number of visitors that were recorded entering each suggesting that total visitor pressure may vary between locations.

- Within the proposal area Donna Nook, Sea Lane (Saltfleet), Hessle and Cleethorpes (Discovery Centre) had the highest number of visitors during the winter survey period.
- Within the proposal area Easington Bank, Killingholme and Patrington had the least concentration of visitors over the winter survey period.

**Dogs**

- The visitor survey revealed that the Humber is used widely by dog walkers. 395 dogs were recorded (60 in the summer and 335 in the winter).
- Visitors with dogs were present at every survey location except at Spurn in the winter survey.
- The percentage of groups accompanied by dogs varied between locations and seasons. During the winter survey, 45% of the groups interviewed had at least one dog with them. This decreased slightly to 41% of groups in the summer.
- From interviews the spatial distribution of dog ownership by postcode of people accompanied by at least one dog tend to live closer to the Humber.

**Activities**

- The Humber estuary is used for a variety of land, intertidal and water-based recreation. Some activities are concentrated around specific parts of the estuary while others are more widespread.
- The most popular main activity cited by 40% of interviewed visitors from both the summer and winter survey sessions was dog walking. Other popular activities cited by visitors were walking, wildlife watching, an outing with children/family, seal watching, kite surfing, bait digging and photography.
- Walking is the most widespread activity and was noted across the whole estuary.

**Transport**

- 70% of interviewed groups travelled to their destination by car, while 26% reached their destination by foot. The rest either travelled by bicycle, public transport or other means.
- The proportion of visitors arriving by car/van and by foot varied between the survey locations.
- The parking areas which on average were the fullest were the parking bays at Tetney Lock, the Buck Beck car park (Cleethorpes), Layby near Pyewipe, coastal layby by the power station near Stallingborough and 'The Deep' attraction car park.

**Distance to visit location**

- The distance visitors travelled for their trip varied between locations and also varied with activity.
- On average 50% of visitors who arrived at their destination by foot lived within 0.95km of the site. On average 50% of visitors who arrived at their destination by car lived within 8.4km of the site.
- 29% of all visitors arriving by car/van to the Humber visited daily or most days compared to 68% of foot visitors. Therefore whilst a lower number of visitors make recreational trips to the Humber by foot, individually these visitors will make more visits to the area than the greater number of visitors who arrive by car and visit less frequently.
- Interviewee visit frequency was considered on a per postcode basis and the spatial data illustrates that visitors with postcodes nearer to survey location have a higher visit frequency.
- The majority of interviewed visitor groups (88% / 542) were local residents and had travelled to the site from their home (92% / 462 in the winter and 71% / 80 in the summer).

**Visitor routes**

- There was a significant difference in route length between visitors undertaking different activities. Winter visitors who were jogging or cycling undertook the longest routes, on average 4.78km and 4.43km respectively. For walking the average was 2.29km in winter and 2.8km in summer and for walking with a dog 1.86km in winter and 2.16km in summer. In general the median route length of a summer visit was slightly greater than the median route length recorded during the winter.
- Across all visitor routes the maximum distance was 5137m. The mean (+SE) was 757+32m and median was 545m. This would suggest that half of all interviewees took a route that kept them within 550m of the location where interviewed.
- Route length also varied with location, within the proposal area winter visitors to Killingholme covered the greatest distance and visitors to Grain beach (Paull) the shortest distance. The longest summer routes were recorded at Cleethorpes Discovery Centre whilst the shortest summer routes were recorded at Rimac.
- Of those visitors who provided route information 77% of visitors stated they stayed on the paths and 4.5% were not sure of their route or did not answer the question, 19% stated their route involved them walking off the path and onto the mudflat or open beach. Of these 19% of visitors, 51% were accompanied by at least one dog and 75% of these were seen by the surveyor with their dog(s) off the lead.
- The proportion of visitors who went onto the open beach or mudflats was not constant between locations.
- A higher proportion of visitors ventured away from the paths and onto the shore at Rimac (17 out of 40 interviewees or 40%), Saltfleet (12 out of 26 interviewees or 46%) and Horseshoe Point (9 out of 20 interviewees or 45%). The highest numbers leaving the path, but not as a proportion of visitors, was at Cleethorpes and Spurn with 21 out of 74 interviewees and 21 out of 45, respectively. Within the proposal area visitors did not deviate from the path at Oldfleet Drain, (north of Grimsby), Killingholme and Patrington.

Since this survey was carried out Spurn Discovery Centre opened in 2018, as a new visitor attraction. As a consequence of this, the results above for this location may be superseded with numbers increasing to the area. However access to the site is managed by having zoned areas for dog walking to minimise the pressure to wildlife sensitive habitats.

**Access management – visitor responses**

- The most popular features that could be used to encourage visitors to spend longer at their visit locations were better path surfacing and the creation of marked trails. Generally visitors would be discouraged from an area if their dog had to be on a lead, car parking charges were introduced or the site became busier.
- Overall, the majority of visitors indicated that 'nothing' could be done to attract them to an alternative site to the one where they were interviewed. There was some evidence to suggest that dog walkers could be encouraged to use other sites if they were made more dog-friendly.

### c. Access disturbance to overwintering birds

A further study of winter bird disturbance in the Humber Estuary (Ross, K. & Liley, D. 2014) was carried out building on the results of the recreational survey in 2012. 10 sites were selected, 8 being within the proposal area. Each location was visited a total of 8 times, with survey effort evenly split between October 2013 and January 2014 and evenly split between weekends and weekdays. Each survey visit lasted 1 hour and 45 minutes. During this time a 'diary' was maintained of all human activities and other events taking place within a 200m radius of a pre-determined focal area. If birds were present within the focal area and within 200m (or the birds were disturbed) then the diary

record was considered a potential disturbance event. Observations involved recording how the birds responded to potential disturbance, the distances at which they responded, how far they flew if flushed and a range of other information. At the end of each visit a count was made of the birds present in the focal area – this count was then considered in relation to the levels of access recorded during the survey period.

In total, 1,304 diary entries were recorded, involving 2,280 individual people and 839 dogs (655 off lead, 184 on lead). Dog walking was the most commonly (44.9%) recorded activity and one third of all activity recorded involved dog walkers with dogs off leads. Walkers without dogs accounted for 28% of diary entries. A wide range of other activities and events were recorded, but all other categories/types of event were less than 10% of records. The majority of activities occurred on the shore (76.5%). Cleethorpes Leisure Centre was by far the busiest location with 674 recorded activities. Humberston Fitties was the next busiest (less than a quarter of the disturbance events recorded at Cleethorpes Leisure Centre (157)). The site with the least activity was Welwick with only 14 records (9 of which were birds of prey). Across all sites, there was a significant negative relationship between the number of birds counted at the end of each survey visit and the number of people recorded during the survey.

There was marked variation between sites in the proportion of events that resulted in birds taking flight. At Cleethorpes less than 5% of the events recorded resulted in birds taking flight, by contrast at Saltfleet 76% of observations involved birds being flushed. Wildfowling, birds of prey, air-borne activities and 'other' were the potential disturbance events with the highest proportion of major flights. These were all relatively uncommon (compared to other activities), for example there were just six species-specific observations of wildfowling where birds were present (and in all cases major flight was recorded). Accounting for the frequency of occurrence, dog walking stands out as the activity resulting in the most behavioural responses from the birds. Dog walkers with dogs off leads accounted for just under a third (31%) of all species-specific observations, yet caused 40% of all the flight responses recorded. Compared to all other human activities, dog walkers accounted for over half of all the flight events (i.e. birds being flushed) that were recorded – as much as all the other activities combined. Numbers of birds flushed varied between points. The numbers of birds flushed was highest at Welwick (where predominantly attributed to birds of prey). The numbers of birds flushed were relatively low at Cleethorpes, Humberston Fitties, Pyewipe and to some extent at Saltfleet.

Whether birds were flushed or not varied according to a range of factors:

- There was a higher probability of an event resulting in birds being flushed in January compared to October.
- There was a higher probability of birds being flushed when temperatures were low (unless below freezing, when there was a low probability of birds taking flight).
- The probability of birds being flushed at low tide was lower than at high tide.
- The probability of birds being flushed declined with distance (i.e. how far away the activity was from the bird), such that the probability of birds being flushed when activities are beyond 100m away is very low.
- Foot/bike activities had the lowest probability of causing birds to take flight.
- Considering the grouping of people on foot or bike, there was a significantly higher probability of birds being flushed if dogs were present. For foot/bike activities the probability of birds being flushed increased with the number of dogs off a lead, but the number of dogs on a lead was not significant.
- There was a significantly higher proportion of flight responses on weekend survey days, compared with weekdays.
- The proportion of flight responses was greater in larger flock sizes.

A desk-based study on recreational disturbance to birds on the Humber estuary states: The Humber is a very large estuary at 37,494ha and a perimeter of 284km. Most of the SPA's area is located well away from public footpaths and the shore. At low tide particularly there is a very large area of habitat that the birds can exploit, and therefore it is likely to be possible that birds can redistribute themselves according to where disturbance is occurring and that undisturbed sites will occur.

The issue is complex because there are a range of species, all with different ecological requirements and life histories. There is a range of access types and activities, all of which occur at varying levels of intensity at different locations. Added to this is the complex range of substrates, habitat types and prey availability, all of which will influence the range of sites and food available to birds at any one time. Furthermore there are a range of other factors that may affect the ability of the estuary to support the bird interest, for example industrial disturbance, water quality, habitat quality (and weather. (Cruickshanks, K., Liley, D., Fearnley, H., Stillman, R., Harvell, P., Hoskin, R. & Underhill-Day, J. (2010)).

# D3. Assessment of potential adverse effects considering the plan or project 'alone'

This section considers the risks identified at the screening stage in section C and assesses whether adverse effects arising from these risks can be ruled out, having regard to the detailed design of proposals for coastal access.

In reviewing the ability of any incorporated measures to avoid harmful effects, Natural England has considered their likely effectiveness, reliability, timeliness, certainty and duration over the full lifetime of the plan or project. A precautionary view has been taken where there is doubt or uncertainty regarding these measures.

# D3.1 Design of the access proposal to address possible risks – at a stretch level

**Access assessment**

In drawing up the proposals, within the criteria of the Coastal Access Scheme, it was agreed with Natural England statutory access colleagues that some areas of the proposed coastal access margin were unsuitable for access and therefore no new CROW coastal access rights would be extended to them under section 25(A) of the CROW Act.

To inform our risk assessment, we have reviewed how the coast is currently used for recreation and how the established patterns and levels of access might be affected by the proposed improvement to access. The predictions made from this work are informed by available information, including:

- Recreational visitor survey results across the Humber Estuary (2012).
- Strava on-line data, which shows aggregated route data via GPS for public recreational activities (walking and running) over the past 2 years. The accumulated information is collated to produce a global 'heatmap' which provides a qualitative, graphical summary of how often routes in an area are used. It can be viewed on the Strava Global Heatmap website.
- Aerial photography.
- Travel and visitor information.
- Site visits and observations from Natural England access specialists.

- Anecdotal observations and feedback from local residents and land managers.
- Input from local stakeholders, local access authorities, Environment Agency, Humber Nature Partnership, Wildlife Trusts, BTO, RSPB, Humber Recreational Group, Cleethorpes and Tetney Local Recreational Disturbance Management Plan Group.

As part of the access proposal specialist advice on managing access for people with dogs in the countryside was provided to Natural England from a leading consultant, who provides evidence-based advice. The advice is borne out of international research and experience on the most appropriate approach to people and dog management and behavioural change. Commissioned studies have been provided for Tetney Marshes, Saltfleetby-Theddlethorpe National Nature Reserve, Paull Holme Strays and Beacon Lagoons at Kilnsea.

**Access management Infrastructure, including signage and interpretation panels**
England Coast Path's approach focuses on appropriate specific well-placed information and access management infrastructure to encourage the behaviour that is required in the location.

Where necessary the project will replace, upgrade or install new access management infrastructure, including signs to guide walkers along the trail. These items can be seen in the England Coast Path reports for each stretch. Mablethorpe to Humber Bridge and Humber Bridge to Easington.

All the directional signs and waymarkers contain the National Trail logo and are usually placed at junctions along the route to avoid uncertainty among walkers using the trail.

As part of the local access engagement the project held a workshop to consider the current situation for the signage, including interpretation messages and locations, and what improvement; new messaging; location etc., could the England Coast Path assist with, if any changes were needed. The project also supports the work of the Cleethorpes and Tetney Local Recreational Disturbance Management Plan Group to create consistent interpretation along this highly visited and wildlife sensitive section.

The access infrastructure mainly forms part of the project and is not used as mitigation alone. The advisory signs and interpretation panels are there to inform and educate visitors and to positively influence new and existing users, so that they understand of the importance of the wildlife, the risk of disturbance and how to avoid it. These also form part of the wider visitor engagement in the estuary.

During the establishment phase the project along with the local access authorities and local stakeholders will design effective messaging and finalise the preferred locations. There will be on-going management by the access authority, once the access rights on the England Coast Path commence.

## Nature Conservation

We also met with key colleagues / stakeholders from Natural England, Environment Agency, Wildlife Trusts, RSPB, South Holderness Countryside Society, Spurn Bird Observatory, and Humber Nature Partnership to highlight sensitive locations, scope out an acceptable trail alignment with access management infrastructure and to see whether any mitigation infrastructure was required in the design.

To assess sensitive locations, we used BTO WeBS data, observations during site visits, information provided to us by landowners and site managers and the Humber Nature Partnership, as well as reports compiled by:

- Cruickshanks, K., Liley, D., Fearnley, H., Stillman, R., Harvell, P., Hoskin, R. &
- Underhill-Day, J., (2010). Desk Based Study on Recreational Disturbance to birds on the Humber Estuary. Footprint Ecology / Humber Management Scheme.
- Fearnley, H., Liley, D. & Cruickshanks, K., (2012). Results of the recreational visitor surveys across the Humber Estuary. Footprint Ecology/Humber Management Scheme.
- Ross, K., Liley, D., (2014) Humber Winter Bird Disturbance Study. Report for the Humber Management Scheme by Footprint Ecology.
- Woodward, Neil A. Calbrade and Chas A. Holt, (2014). Humber Estuary Bird Decline Investigation. BTO Research Report No. 668.
- Cutts, Hemingway & Thomson, (2016). Humber Estuary High Tide Roost Review 2013-2014. Institute of Estuarine & Coastal Studies, University of Hull.

Where necessary we carried out additional survey and analysis work, updating the research carried out in 2014 by BTO investigating bird decline in the Humber estuary. This concluded in the report: Analysis of Wetland Bird Survey (WeBS) Data for The Humber Estuary SSSI, SAC, SPA and Ramsar site: Third appraisal – sector-level trends to winter 2016/17.BTO Research Report No. 709. Woodward, Calbrade & Austin, 2018.

# D3.2 Local project design and evaluation to address the possible risks to the qualifying features of the European designation sites

### D3.2A Non-breeding SPA waterbirds and SPA waterbird assemblage assessment

| European designation | Qualifying feature(s) | Disturbance by increased access on foot from England Coast Path | Disturbance from installation of infrastructure at establishment | Permanent loss of supporting habitats through the installation of infrastructure |
|---|---|---|---|---|
| Humber Estuary SPA<br>Humber Estuary Ramsar site | Non-breeding avocet, bar-tailed godwit, black-tailed godwit, bittern, dunlin, golden plover, knot, redshank, ruff, shelduck | ✓ | ✓ | ✓ |
| Humber Estuary SPA<br>Humber Estuary Ramsar site | Non-breeding waterbird assemblage | ✓ | ✓ | ✓ |

**Disturbance by increased access on foot from England Coast Path**
**Baseline situation**
For the current conservation assessment and use of the site by passage and over-wintering SPA waterbirds and the SPA assemblage see section D2.1.

For the current recreational access activity within the Humber estuary see section D2.9.

As part of the integral planning of the project a large part of the Humber estuary coastal access margin is already excluded from CROW access rights due to the unsuitability of the access (section 25A of the CROW Act) or through military byelaws. The assessment understands that the Humber estuary as a whole is important for passage and over-wintering waterbirds and not mentioning an area does not reduce its importance. If in future these areas are considered suitable for access, then a further assessment will be carried out of the impacts on the nature conservation value.

This section considers the potential disturbance from the trail on roosting and important foraging areas in functionally linked land and all the coastal margin to mean low water regardless of whether it has been excluded from the CROW access rights. It also considers potential disturbance from new CROW access rights in the coastal margin where section 25A or military byelaws haven't been applied.

**Disturbance assessment across all trail sections for non-breeding SPA waterbirds and SPA waterbird assemblage**
General disturbance responses from different types of actions, tide times and functionally linked land have been considered for the estuary, before assessing disturbance from the trail and coastal access margin at a local level.

- **Disturbance assessment from different types of actions**

Birds vary their response to recreational activities depending on the type of activity, the speed and randomness of approach, the distance to which the disturbance factor approaches and the frequency of disturbance (Burton *et al.,* 2002., Rees *et al*., 2005). It generally appears that birds are most disturbed by irregular human movements. Large groups of noisy people; the chaotic and high speed approach of dogs off leads and aerial objects such as kites are all considered activities particularly likely to heighten the response of individuals (Smit and Visser, 1993; Cutts, N., Phelps, A. & Burdon, D. 2009).

Wide, well defined and well surfaced paths with clear directional signs give confidence to walkers and provides easy onward progress, so reducing random movement. The lack of amenities, such as toilets, cafes and shops, as well as exposed, remote or featureless landscapes also promote a more predictable pattern of movement, as opposed to a beach setting or a circular walk with a visitor attraction, car park or venue as a point of interest.

Directional signs installed by the England Coast Path will also guide and provide confidence to new users encouraging onward movement across the trail to minimise the risk of disturbance on the SPA features in the vicinity of the trail. Improved signage also encourages walkers to keep to the path.

The Humber winter bird disturbance study (Ross, K., Liley, D., 2014) suggests a low probability of SPA waterbirds being flushed in the Humber estuary above 100m from the source of disturbance, while the waterbird disturbance mitigation toolkit (Cutts, N., Hemingway, K., and Spencer J., 2013) suggests a distance of above 300m. The difference between these two studies makes clear this is not a precise science, and other studies have noted major differences between disturbance distances for different species (e.g. Collop et al 2016). In NE's internal note on bird disturbance, a 'rule of thumb' suggesting a distance of 200m is used, but with an important caveat that this can vary greatly depending on the conditions. For example, the presence of dogs off leads would be likely to result in disturbance at a greater distance.

When measuring for disturbance from a possible increase in footfall by England Coast Path users, distance, landscape, vegetation, trail characteristics, current use and accessibility to the area are all considered.

The small predicted increase at certain locations will be restricted to a relatively small area, with the median average walking distance around the Humber at 1.86km for dog walkers and 2.29km for walkers without a dog, therefore typically straying not much more than 1km from an access point.

- **Disturbance assessment from different tide times**

Once past high tide many birds disperse either moving down the shore with the tide or to newly exposed mudflats elsewhere in the estuary, in some cases moving between the north and south bank. Across all locations in the Humber estuary the probability of birds being flushed was lower at low tide, but this will vary to some extent depending on the species (e.g. turnstone are likely to remain closer to the high tide mark). At low tide there is plenty of open mudflat available for the birds to feed on and the birds are likely to be much further from the sources of disturbance (which are usually on the shore). At low tide disturbance is therefore less of a concern for most species than at high tide. At sites where low tide means large expanses of soft sediment and the water's edge is far from the shore, there is little need for any management measures relating to access and birds feeding. If birds gather to roost or feed on the falling/rising tide close to the shore, then measures may be appropriate (Ross, K. & Liley, D., 2014).

The extent of supporting habitat available at mid-water suggests that the project will in general have a reduced impact on the SPA waterbirds at mid (and low) tide, with the focus on potential impacts being around high water, when much less suitable habitat is available.

Evidence of roost sites and important foraging areas have been gathered from discussions with stakeholders and the Humber Estuary High Tide Roost Review 2013-2014 (Cutts, N., Hemingway, K. & S. Thomson. 2016).

- **Disturbance assessment in functionally linked land**

Farmland landward of the trail and outside the SPA boundary is used at various locations within the Humber estuary by over-wintering SPA waterbirds and SPA assemblage. This habitat is not managed for nature conservation and is outside the control of the project. Use by the waterbirds is opportunistic, as it depends on the crop rotation with waterbirds moving around the fields with the location of the preferred crop, crop height and density and waterlogging within the field. This suggests that sites may not be used consistently year on year and that use peaks in winter through to early spring before the crop grows away and the soil dries.

It is expected that the area of available farmland habitat adjacent to the coast and estuary will remain. This agricultural habitat is remote and extensive with the over-wintering waterbirds generally avoiding the edges of the fields preferring the middle of large, open, flat fields to allow for vigilance during feeding.

Importantly, none of the functionally linked land identified for roosting or feeding is within the coastal access margin with the public rights of way or existing walked routes used by the trail passing close by.

Any disturbance from the trail could create a disturbance, as walkers pass by. This is minimised by:

- the predictability of the onward movement in the remote areas with defined paths and improved directional signs
- the timing and climatic conditions of use by the waterbirds being outside the optimum times for recreation
- distance of functionally linked land from access points and the known average walked length for surveyed walkers
- extensive availability of habitat to move into, allowing the birds to redistribute to nearby habitat outside the radius of disturbance
- assessment of current levels of access and the negligible increase in remote areas from the England Coast Path project.

**Local assessment of disturbance by increased access on foot from England Coast Path for non-breeding SPA waterbirds and SPA waterbird assemblage**

**Mablethorpe to Humber Bridge**
**MHB 1: Mablethorpe North End to Saltfleet Haven**
**Baseline**
Recreation
Access is available throughout this section, with dedicated open access, as part of the Saltfleetby-Theddlethorpe Dunes National Nature Reserve, as well as public rights of way and existing walked routes linking access in and around the dunes and the shore. There are promoted trails throughout the nature reserve and dogs are required to be on a lead or under close control at all times. The area is bounded in the north and south by the holiday destinations of Saltfleet and Mablethorpe. At

these points access leads onto sandy beach, with desire lines traversing saltmarsh and dunes to reach the sands. Access is facilitated throughout with 9 car parks close by.

Studies (Fearnley, H., Liley, D. & Cruickshanks, K., 2012 and Ross, K., Liley, D., 2014) and observations (Strava Global Heatmap and Saltfleetby-Theddlethorpe National Nature Reserve) show the area has high levels of access throughout the year with local and tourist use, with the most popular activities being walking or walking with a dog. The area is also used by horse riders and holiday recreational activities, such as picnicking and playing on the beach.

The saltmarsh and wider sands at Saltfleetby are excluded from access by military byelaws.

SPA waterbird locations and usage

High tide roosts between Mablethorpe and Theddlethorpe-St-Helen are at risk from disturbance from the trail and coastal margin. This includes a roost with the SPA assemblage feature of black-headed gull on the mid to outer sands and the foreshore being used during passage by dunlin and sanderling.

At Saltfleet the roosts are at risk from disturbance from the trail. This includes roosts containing SPA features: bar-tailed godwit, dunlin, knot, redshank and shelduck, and
SPA assemblage features: bar-tailed godwit, curlew, dunlin, grey plover, knot, lapwing, oystercatcher, redshank, ringed plover, shelduck, teal and wigeon. (Cutts, N., Hemingway, K. & S. Thomson, 2016) (Saltfleetby-Theddlethorpe Dunes NRR observations, 2019).

**Detailed design features of the access proposal**

From Mablethorpe North End to Saltfleet Haven the trail uses a mix of public rights of way and existing walked routes with a mix of surfaces: gravel, boardwalk, tarmac and grass on floodbank and fixed dune habitat. After trail section MHB-1-S004 (approximately 0.6km) the route moves directly inland on to the landward boundary of the Humber Estuary SPA and behind the dune ridge until it reaches the northern bank of Saltfleet Haven, where it follows the floodbank.

The majority of the route is public right of way from MHB-1-S004, with small linking sections of existing walked route. The proposed trail and coastal access margin do not alter the current access arrangements with walkers continuing to access the margin at numerous points nor does it intend to upgrade any surface. To guide walkers throughout this section 17 directional signs and 11 way-markers are to be installed or upgraded, with the addition of two advisory signs at Mablethorpe North End and at the point where the trail moves inland to inform walkers of the sensitive wildlife using the shore.

The creation of a promoted route and associated coastal access margin is not predicted to significantly increase numbers of walkers or change the current pattern of use as:

- The route uses current available access.
- The area is currently well accessed, as an advertised dog walking location and as a holiday destination with nearby facilities and car parks.
- Current and surrounding access remains available.
- No new circular routes or significant improvements to surfaces are being created on this section.
- The trail will be improved with directional and advisory signs, so encouraging walkers new to the area to stay off the path and avoid sensitive wildlife areas, however long-term users, who are confident in the locality, are likely to continue to use existing walked routes and the wider margin.

**Consideration of possible risks to qualifying features at this location in light of the access proposal**
The area supports a number of high tide roosts for SPA and non-SPA features on the (access excluded) saltmarsh and the sands. It also currently has high levels of access for a number of recreational activities. To avoid the proposed trail impacting on these roosts it travels the majority of route from Mablethorpe to Saltfleet on public rights of way on the landward edge of the dune. This provides a natural screen and barrier between walkers and the roosts. Only on the upper shore at Mablethorpe and the floodbank at Saltfleet is the trail visible to the high tide roosts.

Mablethorpe
The trail cuts directly inland at the earliest opportunity from the upper shore to continue north on the landward edge of the dune, acknowledging the risk to the roosts from the trail due the potential disturbance from England Coast Path footfall.

To guide England Coast Path users off the shore at this point there will be a directional and an advisory sign clearly marking the way and informing all coastal users of the sensitive wildlife ahead in the coastal access margin. Waymarkers will also guide and provide confidence to new users encouraging onward movement across the trail to limit the risk of disturbance on the SPA features in the vicinity of the trail.

The trail comes nearest to a small roost for passage dunlin & sanderling and the gull roost by approximately 300m. Due to the large expanse of available open sand and the distance from the trail to the roosts there is enough spatial separation to avoid any disturbance of SPA features.

It is noted in the Humber Estuary High Tide Roost Review 2013-2014 (Cutts, N., Hemingway, K. & S. Thomson, 2016) that the gull roost is currently disturbed by dog walkers, with horse riders and motorbikes also occasionally causing disturbance. The area is adjacent to Mablethorpe and a very large caravan and chalet park, with visitors using the beach for recreation and dog walkers encouraged to use this area to avoid a PSPO dog exclusion for Mablethorpe beach during from 1st May to 30th September.

From site observations and Strava Global Heatmap evaluation the beach is very well used for recreation with people constantly seen on the sands at all times of the year. Black-headed gulls make up the SPA assemblage, as a significant population over 2000 individuals, its current conservation status in the UK is amber. From WeBS data black headed gull numbers in the Humber estuary over the past 5 years are stable with a 5 year average of 8,273 birds (2013/14 - 2017/18). The area is already promoted for recreation and access with the peak number of users coinciding with the peak period for the roost. It is predicted that the promotion of the trail will not increase walkers across the wider access margin of the project at Mablethorpe North End.

Saltfleet
The trail crosses the Haven at Gowts Farm. As it moves towards the coast the trail uses an existing gravel surfaced walked route along the floodbank for approximately 500m before turning north again to continue its journey. At this point there is a small car park and access to the beach. The trail is some 200m from the edge of the nearest roost on the saltmarsh and separated by the Haven, preventing access from the trail. Therefore limiting the risk of disturbance from walkers and their dogs being separated by distance and barriers. This is also minimised with walkers focussing on the wider beach access as an attraction, so providing clear predictable onward movement, rather than lingering on the path to minimise disturbance from footfall.

Therefore disturbance from the potential small increase in footfall from the England Coast Path will not adversely affect the achievement of the site conservation objectives for SPA waterbirds and the SPA assemblage and as such will not result in an adverse effect on site integrity alone, but will be assessed in combination with other projects.

**MHB 2: Saltfleet Haven to Humberston**

**Baseline**

Recreation

This trail section varies in recreational usage with visitor hotspots for wildlife watching at Donna Nook and holiday destinations at Saltfleet and Humberston. In between are more isolated areas with low levels or no access onto the coastal margin due to military byelaws or a vast expanse of saltmarsh. Donna Nook is a National Nature Reserve famous for pupping grey seals and managed by the Lincolnshire Wildlife Trust, where they expect up to 60,000 - 70,000 visitors during the pupping season. The RSPB also have a reserve at Tetney covering the marsh and part of the outer sands. The RSPB estimate 20,000 – 30,000 visitors throughout the year accessing the area from Humber Mouth car park, near Humberston. To the south-east of the reserve at Horseshoe Point visitor numbers drop dramatically to an estimated 10,000 to 15,000 per year. It is mainly used by locals for dog walking, being accessed from a car park at Horseshoe Point, which is 3.5km from the main road.

The current main car parks and access points are at the Donna Nook realignment site, Horseshoe Point and Humber Mouth yacht club, adjacent to Tetney Marsh. This section is bounded by substantial accessible grass floodbanks, which are a mix of public right of way and existing walked routes.

SPA waterbird locations and usage

The area contains a number of coastal habitats, including Donna Nook realignment site, to provide SPA supporting habitat, as well as functionally linked arable farmland at North Coates. This is landward of the trail and supports large numbers of golden plover, lapwing and brent geese, although use depends on the cropping regime.

There are a number of high tide roosts throughout this section of coast, some of which are within parts of the coastal margin that are excluded from the CROW access rights under section 25A and military byelaws.

Areas to be considered for CROW access rights within the margin are at Saltfleet, Donna Nook realignment site and the sands around Tetney Marsh.

**Detailed design features of the access proposal**

77% (16.38km) of the trail within this section is on the crest of the floodbank with 50% of this being on public right of way and 50% on existing walked routes. The remainder of the trail is across low lying coast on a mix of surfaces and mainly on existing walked routes. 2.4km of new seasonal alternative access is created at Donna Nook National Nature Reserve to protect grey seals from disturbance during pupping of which 1.37km is to be created, as the trail moves inland, through sea buckthorn scrub.

Access management infrastructure will be installed and improved to guide and inform walkers along the route, this includes scrub clearance, steps, gates, fencing, and directional and advisory signs. The proposed trail and coastal access margin does not intend to upgrade any existing surfaces.

The creation of a promoted route and associated coastal access margin could increase numbers of walkers and may change the current pattern of use. This increase is variable across the section with no predicted increase at Humber Mouth, due to the current estimated numbers using the location; a

slight increase at Horseshoe Point, where visitor numbers are currently low and the path remains remote, to a moderate increase to the south of Donna Nook reserve, where new areas of access are offered.

**Consideration of possible risks to qualifying features at this location in light of the access proposal**

Trail

Saltfleet to Donna Nook realignment site

The trail uses existing walked routes on the crest of the sea defence from Saltfleet to North Somercotes, before moving to an existing track along the upper shore until it cuts slightly inland to the wildlife-viewing path on the reserve. The high tide roosts of the SPA waterbirds are on the outer sands at Sand Haile Flats, some 1km from the trail, so sufficiently spatially separated from the access to not cause disturbance.

Donna Nook realignment site to Humberston

From Donna Nook realignment the trail follows on the crest of the sea defence until Humberston (12.46km), just over half of the length is public right of way, with the rest from Horseshoe Point to Humberston on an existing walked route. Roosts present throughout this section are at Grainthorpe, Donna Nook realignment site, Horseshoe Point and Tetney High Sands.

The roosts at Grainthorpe and Donna Nook realignment site are beyond the 100m distance for minimal probability of flushing and the median displacement figures given for the over-wintering species (mallard and teal: 50m, lapwing: 100m and wigeon: 250m (Ross, K., Liley, D., 2014). They are therefore at minimal risk of disturbance from the trail.

At Tetney High Sands and Horseshoe Point the main SPA wader species roosting are bar-tailed godwit, dunlin, grey plover, knot, oystercatcher, ringed plover and sanderling. The majority of the roosts are at least 300m from the trail, separated by the saltmarsh, and in places fenced to prevent public access to the intertidal zone. Where the roosts are adjacent to the saltmarsh and low dune system on the edge of Tetney Marsh this landscape also creates a visual barrier to minimise the risk of disturbance. At these distances and given the nature of the landscape, there is a minimal risk of disturbance from the trail itself, using the data from the Humber Winter Bird Disturbance Study (2014, Ross, K., Liley, D.).

From the Strava Global Heatmap and site visits to this section it is can be seen that the floodbanks are currently well used with little or no evidence of access from these to the intertidal zone. The banks are wide and exposed with a resilient cut grass surface to allow for easy onward travel. There are no places to stop or attractors to the area, such as benches or facilities, as well as limited opportunity for walking a circuit. Therefore users are more likely to move in a predicted, constant manner to the next available access point rather than be more erratic in movement. The signs and waymarkers installed by the England Coast Path will guide and provide confidence to new users to stay on the path and encourage this onward movement across the trail to reduce the risk of disturbance.

Functionally linked land opposite Tetney Marsh

Landward of the trail is approximately 500 ha of flat, open arable farmland that supports over-wintering brent geese, golden plover and lapwing. The current habitat is not managed for nature conservation outside the control of the project. Use by the waterbirds is opportunistic, as it depends on the crop rotation with waterbirds moving around the fields with the location of the preferred crop, crop height and density and waterlogging within the field. Therefore suggesting that sites may not be used consistently year on year and that use peaks in winter through to early spring before the crop grows away and the soil dries.

The trail rises above the land on a floodbank and is separated from the land by a large drain, which runs the length of the land. Noting the median distance walked by surveyed visitors, this leaves 3.5km of trail relatively undisturbed (approx. 50% of the trail from Horseshoe Point to Humber Mouth) and walkers using the route are likely to be moving in a predicted way, as described above, so limiting the disturbance. This is likely to continue with the establishment of the England Coast Path and although numbers may slightly increase, it is not predicted to increase disturbance, as:

- Walkers and dogs cannot access the fields.
- Any predicted slight increase will still leave many undisturbed periods.
- Over-wintering waterbirds prefer the middle of large, open, flat fields to allow for vigilance during feeding.
- Over-wintering waterbirds have the opportunity to move away when within sight of the trail.
- Plenty of available and adjacent habitat to move into.

Therefore disturbance from the potential small increase in footfall from the England Coast Path will not adversely affect the achievement of the site conservation objectives for SPA waterbirds and the SPA assemblage and as such will not result in an adverse effect on site integrity alone, but will be assessed in combination with other projects.

Coastal Margin

Donna Nook managed realignment site

The realignment site is newly created habitat to attract SPA features and relatively undisturbed, there is a risk that a new CROW access right could encourage footfall within the site and prevent the species using the area. This area has also attracted SSSI and SPA breeding waterbirds therefore the site is sensitive to disturbance year-round. Therefore to mitigate against this the CROW access rights to the public have been removed year-round under section 26(3a) of the Act.

Tetney High Sands to Horseshoe Point

At Tetney High Sands the main SPA wader species roosting are bar-tailed godwit, dunlin, grey plover, knot, oystercatcher, ringed plover and sanderling. The most sensitive area is between Horseshoe Point and Northcoates Point. If left unrestricted, the coastal access margin of the project would allow access to the roosts at their most vulnerable time: high tide when suitable, available habitat is reduced elsewhere in the estuary. Strava Global Heatmap and observations show the area is currently accessed and the Humber Winter Bird Disturbance Study indicates 30% of all activities at Horseshoe Point are taking place on the intertidal zone with the main activity being dog walking. The proportion of access events over the study period at the location was the second lowest at 37, as opposed to the highest at Cleethorpes (668) and Humberston Fitties (155). It is predicted that the England Coast Path may slightly increase footfall at Horseshoe Point, even though it is remote and distant from a main road, with improved directional signs. This would increase the risk of disturbance from England Coast Path users using the intertidal sands when the SPA birds and humans would be in closer proximity at a high tide. At other times the exposed sands offer a vast feeding area and the birds are more likely to be on the shoreline some 2.5km distant from the trail.

Evaluating the seasonality of the passage and over-wintering waterbirds in the estuary shows only one month that the waterbirds are not present and although evidence (Ross, K., Liley, D., 2014) suggest that dogs off the lead cause the most disturbance, it is acknowledged that walkers without dogs could also cause disturbance in this relatively undisturbed area. For this reason a s26(3a) year-round nature conservation restriction will be put in place on the area between Horseshoe Point and Northcoates Point, with S25A restrictions either side of this. These restrictions will remove the Coastal access rights out from the ECP route on the seaward side, extending out to Mean Low Water Mark (MLWM), effectively preventing access further out to the seaward side of the restricted

saltmarsh area. Maps showing the restrictions are included in the ECP overview and reports. There will be appropriate interpretation and advisory signs, as part of the establishment of the national trail and the Cleethorpes to Tetney local recreational disturbance management plan.

Tetney Marsh

Tetney Marsh is excluded from CROW access rights under section 25A of the Act, however there is a spur of low-lying dune near Humber mouth car park, which is not excluded. It is used by walkers, including walkers with dogs, for a short circular route and the RSPB request users to keep dogs on a lead when in this area. The marsh is used by breeding redshank and over-wintering SPA waterbirds. Therefore to prevent any potential disturbance from England Coast Path users CROW access rights to the dune spur will be limited to keep dogs on leads throughout the year with supporting advisory signs.

Therefore with mitigation from signage, disturbance from the potential small increase in footfall from the England Coast Path will not adversely affect the achievement of the site conservation objectives for SPA waterbirds and the SPA assemblage and as such will not result in an adverse effect on site integrity alone, but will be assessed in combination with other projects.

**MHB 3: Humberston to Immingham Docks**

**Baseline**

Recreation

This section is predominately urban and industrial including the ports of Grimsby and Immingham. To the south are the busy holiday destinations of Humberston and Cleethorpes with numerous attractions and caravan and chalet parks. Cleethorpes attracts 3.4 million visitors per year with the area being used by tourists and locals for recreation, including water sports, as well as wildlife watching, walking, cycling, jogging and angling. A public space protection order exists excluding dogs from Cleethorpes beach from Good Friday until 30th September each year allowing them access from Cleethorpes leisure centre to Humberston all year round. Humberston Fitties and Humber Mouth is also the main launch area for yachting, paddle boarding and kayaking. There are numerous car parks and access points to the sands and saltmarsh.

SPA waterbird locations and usage (main examples only, not intended as a comprehensive list of all species)

In front of Humberston Fitties and towards Tetney Marsh, knot, golden plover, oystercatcher, dunlin, lapwing, redshank and brent geese use the Tetney Haven on the falling and rising tide. The low water mark extends approximately 1.5 km from the Fitties with the high tide coming up to the edge of the sea defences.

There is a significant high tide roost 0.5km offshore between Cleethorpes leisure centre and Buck Beck, which is used by knot, dunlin and oystercatcher and during passage: ringed plover. The sand bar is approximately 1.5km long with saltmarsh and low-lying dunes between the sand and marine walk situated on the floodbank. The bar is cut off at high tide as the tide covers the lower lying saltmarsh and muddy sand.

The roost sites at Pyewipe support up to 3000 black-tailed godwits around the dock frontage and between the dock frontage and Novartis up to 350 redshank, 2000 lapwing and 3000 golden plover on the mud.

The majority of the foreshore is excluded from CROW access rights under section 25A of the Act. This leaves the sands and saltmarsh from Humber Mouth to Cleethorpes North Promenade available for consideration as part of the assessment.

**Detailed design features of the access proposal**
The trail travels adjacent to the landward boundary of the European designated site and is 23.23km along this section, of which 18.72km is on public walkways and 2.96km on other existing walked routes; all on manmade surfaces, such as stone, concrete or tarmac. 1.55km of new access is to be created beside an urban road at Immingham.

The trail uses public rights of way on the crest of the floodbank (11.62km) from Humberston to Cleethorpes North Promenade and Pyewipe to Immingham docks, only moving off the floodbank to come inland at Grimsby and Immingham docks.

The project will not alter or restrict any current access arrangements and will guide users with the addition of signs attached to existing infrastructure and 19 new directional signs. Interpretation and advisory signs to support the Cleethorpes to Tetney local recreational disturbance management plan (which NE has closely supported) will also be installed.

The creation of a promoted route and associated coastal access margin is not predicted to significantly increase the number of walkers or change the current pattern of use as:

- The route uses currently available access.
- The area is currently well accessed by locals and to the south has high levels of access, as a holiday destination with nearby facilities and car parks.
- Current and surrounding access remains available and is not altered.
- No new circular routes or significant improvements to existing surfaces are being created on this section.
- The trail will be improved with directional and advisory signs, so encouraging walkers new to the area to stay on the path and avoid sensitive wildlife areas. Long-term users, however, who are confident in the locality, are likely to continue to use existing walked routes and the wider margin.

**Consideration of possible risks to qualifying features at this location in light of the access proposal**
Throughout the year Humberston to Cleethorpes attracts high numbers of tourists and locals, with locals often visiting on a daily basis. The area has high levels of intertidal access from multiple user groups.

<u>Humber Mouth and Humberston Fitties</u>
The coastal margin of Humberston Fitties and the Humber Mouth is extensively used, with vehicles also accessing the area for beach patrols and boat launches on the haven. The haven is also used on the rising and falling tide by brent geese and waders with the area being inundated at high tide.

It is estimated 20 - 30,000 people visit the Tetney Marsh reserve per year, mainly from the car park at Humber Mouth. This is one of two well–used car parks to access the Fitties, both car parks provide easy, adjacent access to the beach and are some distance from the main road, with visitors having to travel through the caravan and holiday chalet complexes to reach them. Therefore it is thought that most users have a prior knowledge of the area and are mainly local or long-term users. From the Humber Winter Bird Disturbance Study (2014, Ross, K., Liley, D.) The Fitties had the highest proportion of activities occurring in the intertidal area at 51% and was the second busiest location at 157 recorded activities (1st Cleethorpes with 668 events and 20% of activity occurring in the intertidal area).

Improved directional signage at the southern end of marine walk could encourage new walkers further south and onto the Fitties either using the trail or the beach. From Humber Mouth car park

there is no anticipated increase in England Coast Path walkers, with directional signs initially guiding walkers away from the beach behind the yacht club or on to the public right of way landward of the marsh. There are no other changes to encourage users to the car park from England Coast Path project.

Whilst this is seen as a very slight increase, it offers no significant further impact on an already busy area. It is highlighted that the birds are currently disturbed by numerous recreational activities, so therefore to avoid the deterioration of European sites under Article 6(2) of the Habitats Directive and to mitigate against this risk, interpretation and advisory signs to support the Cleethorpes to Tetney local recreational disturbance management plan (which NE has closely supported) will be installed.

Cleethorpes

Cleethorpes is a well-known and popular seaside resort. Cleethorpes beach and foreshore are within easy travelling distance of several seaside towns and other urban centres. In addition to local users, there are approximately 3.5 million visitors to Cleethorpes each year. Tourist visits are highest in August but are spread throughout the year, including over the winter months.

The extensive sandy flats at Cleethorpes are used for a wide range of recreational activities including walking, walking with a dog and other beach leisure activities. Use of the foreshore is longstanding and inextricably linked to development of the town as a coastal resort.

The proposed trail is on a public multi-user route just north of Humberston Fitties to Cleethorpes. The trail is 300m from a high tide roost at Buck Beck and 500m from a roost at Cleethorpes leisure centre. The nature of the coastal landscape with successive phases of dune building and accreting saltmarsh creates a visual barrier to minimise the risk of disturbance. At these distances and given the nature of the landscape there is a minimal risk of disturbance from the trail itself, using the evidence from the Humber winter bird disturbance study (Ross, K., Liley, D., 2014) and the waterbird disturbance mitigation toolkit (Cutts, N., Hemingway, K., and Spencer J., 2013), if the England Coast Path project were to increase footfall.

Access to the 5 mile section of foreshore at Cleethorpes is managed by North East Lincolnshire Council (NELC). This area stretches from Grimsby Fish dock in the west to the authority boundary at Humberstone Fitties in the east. The distribution and intensity of public use is dictated both by practical considerations (proximity to car parking and facilities, ease of access onto the foreshore, ground conditions etc), and proactive regulatory and management measures employed by the Council. There is a full-time beach safety team that make regular patrols, and there are byelaws and dog controls as well as permitting of new activities, like jet skiing.

Recreational activities and bird use of the foreshore are somewhat spatially and temporally segregated but interactions occur. Disturbance to birds foraging and roosting at Cleethorpes is a long term and ongoing issue. Of greatest significance from a nature conservation perspective is thought to be disturbance to birds roosting at high tide on a prominent sandbank that becomes cut-off from the shore at high tide and is known locally as ‘the Whaleback’. Suitable sites where waterbirds can roost undisturbed at high tide, are a limited resource for the Humber SPA and interventions that would help to reduce the risk of disturbance to overwintering birds using this location to roosting would be particularly beneficial.

In practice, there is a link with public safety, since beach users can become stranded on the sandbank by the incoming tide and the NELC beach safety team actively patrol the area at these times. NE is pleased to note that NELC are updating their Habitat Management Plan for the

Cleethorpes area and considering what further actions might be taken to reduce disturbance from recreational activities in sensitive areas. We also note that the Humber Nature Partnership have recently carried out an audit of signage in the area and that the findings of this work may be used to inform improvements to on-site information and messaging. At Cleethorpes, NE believes that the Council, working with beach users and others, could agree positive actions that would reduce disturbance to wildlife at sensitive times. NE's preferred approach is to see informal management measures used to raise awareness and increase support for behaviour changes that benefit SPA birds. Our access proposals at Cleethorpes support this approach by including practical measures to deliver some of the actions identified from these initiatives - specifically:

- Installing new access infrastructure (seating, finger posts and signage) at Tetney that will help steer visitors away from a sensitive area.
- Updating existing signage along the promenade and at carparks; Pleasure Island, Humberston Fitties and (opposite) the Holiday Park concerning the Whaleback and high tides. This signage can also incorporate messages about how people can help protect birds.
- At the time the ECP is opened, Natural England will incorporate conservation messages in relevant promotional material and online stories.

NE will work with NELC during the establishment stage to implement these measures. We note also that Coastal Access rights can, if necessary in the future, be limited or removed – though NE would only take such a step in conjunction with steps by the Council to remove existing access rights.

After high tide the birds disperse to the newly exposed mud and sands offering a vast feeding area or move with the tide up to 1.5km offshore. The extent of supporting habitat available at mid-water and the predicted no change in recreational patterns or use from the introduction of England Coast Path within the coastal access margin between Humberston and Cleethorpes suggests that the project will not have a likely significant impact on the SPA waterbirds at mid (and low) tide at this location.

A recommendation for the Cleethorpes to Humber Mouth area from the Humber Winter Bird Disturbance Study (2014, Ross, K., Liley, D.) was to consider limiting the extent to which people spread over the sandflats and intertidal area. One option available was to include interpretation, provision of paths and way-marked routes away from the intertidal habitats. The England Coast Path project will provide a clear way-marked route and is working with partners in the area to develop interpretation for the area to support this.

<u>Grimsby to Immingham</u>

The Strava Global Heatmap indicates that the floodbanks, as public rights of way, are currently well used with no evidence of access from these to the intertidal zone. Where the roosts are located, the trail moves inland into built up areas, so avoiding any visual disturbance from the proposed trail, except at Pyewipe where the proposed trail sits closer to the northern half of a roost site between the dock frontage and Novartis with up to 350 redshank, 2000 lapwing and 3000 golden plover on the mud. The trail for the southern half of this roost and a black-tailed godwit roost is inland and distant from the dock frontage and there is no current or proposed access to it.

The wide, well-defined and well surfaced path allows for easy onward travel. There are no places to stop and linger along this exposed estuary edge or attractors to the area, such as benches or recreational amenities between the major settlements close by, as well as limited opportunity for walking a circuit. Therefore users are more likely to move in a predicted, constant manner to the next available access point rather than be more erratic in movement, e.g. playing on a beach. The lack of attractions, facilities and industrial landscape also limits the appeal to new visitors. The signs

and waymarkers installed by the England Coast Path will help guide and provide confidence to new users encouraging this onward movement across the trail to reduce the risk of disturbance.

Therefore disturbance from the potential small increase in footfall from the England Coast Path will not adversely affect the achievement of the site conservation objectives for SPA waterbirds and the SPA assemblage and as such will not result in an adverse effect on site integrity alone, but will be assessed in combination with other projects.

**MHB 4: Immingham Docks to Humber Bridge**
**Baseline**
Recreation
This section is predominately open, flat countryside and remote from settlements and facilities, with the floodbank and the public right of way on top of it hugging the estuary. Interspersed with this is industry: docks at Immingham and New Holland, oil refineries and jetties at North Killingholme Haven, and car storage for import/export cars. There are urban settlements at the start and end of the section at Immingham and Barton upon Humber.

There are few formal car parking areas on this section, with cars parking informally on the floodbank between Immingham and East Halton Skitter for sea angling. There are more formal car parks heading west between Goxhill and the Humber Bridge with the attractions of the Waters' Edge Country Park and Visitor Centre and nature reserves between Barrow and Barton upon Humber.

From the Strava Global Heatmap data, usage of the public footpath around the Humber decreases, as you move away from the centres of Barton-upon-Humber in the west and Immingham in the south east. When compared against each other, it can be broken into sections of current use:

- Immingham to East Halton Skitter – highest
- East Halton Skitter to New Holland - least
- New Holland to Barrow Haven – lower
- Barrow Haven to Humber Bridge – highest

Angling and wildlife watching, as well as walking, also occur as recreational activities in equal measure between Immingham and East Halton, with a higher proportion of walkers and walkers with dogs closer to the Bridge.

SPA waterbird locations and usage
In the mid-estuary there is relatively little expanse of mud and saltmarsh with a proportion of the waterbirds moving to the outer estuary to roost. At Immingham docks the frontage supports the autumn and winter feeding of black-tailed godwit, ringed plover, redshank and dunlin, with feeding and roosting taking place in the cropped fields either side of East Halton Beck by curlew, golden plover and lapwing and on the saltmarsh at Skitter Ness dunlin, redshank and black-tailed godwit roost. Marsh harrier also hunt over the saltmarsh at Skitter Ness.

At Barton the saltmarsh and intertidal mud are used by SPA features, with roosting often occurring on the saltmarsh at high tide. This includes small numbers of redshank, dunlin, curlew, bar-tailed godwit, black-tailed godwit, lapwing, wigeon and shelduck on the intertidal mud. The saltmarsh and associated reed beds are also used by breeding bird species, such as reed bunting (amber-listed), as well as providing suitable habitat for breeding marsh harrier (personal conversation, Lincolnshire Wildlife Trust 2020).

Inland from this is a series of water-filled pits with associated reedbed and grassland. Some of these are now managed for nature conservation and are used by SPA waterbirds, such as pochard, tufted duck, mallard, dunlin, redshank and bar-tailed godwit (Lincolnshire Wildlife Trust 2020).

The majority of the foreshore is excluded from CROW access rights under section 25A of the Act. This leaves the saltmarsh at Skitter Ness and Barton foreshore available for consideration as part of the assessment.

**Detailed design features of the access proposal**
This section is 28.82km long, with the majority (26.32km) being on public rights of way (19.44km on floodbank). 1.76km is on existing walked routes, providing small links to the public right of way or staying on the floodbank rather than using the public right of way to avoid moving into Barrow Haven nature reserve. 0.74km is new access beside an urban road at Immingham.

The England Coast Path is not altering any current or surrounding access and no new paths will be created nor will it upgrade any existing surfaces. The only access management infrastructure will be to install 16 new directional signs and replace 18 to clearly define the route. Through settlements way-markers will be added to existing signs.

The creation of the promoted route is predicted to have a small increase in the use of the trail, but not significantly increase from its present usage, due to its remoteness and lack of close by amenities or other attractions providing a greater pull, such as the country park and visitor centre.

**Consideration of possible risks to qualifying features at this location in light of the access proposal**
Trail
The trail at Immingham Docks is inland and not in sight of the roosting and feeding area at Immingham docks, therefore the trail is no risk to disturbance on the SPA features.

From Immingham to East Halton Skitter it sits on a concrete surfaced road with a wall to the seaward side, so preventing access to the coastal margin all. At East Halton Skitter to Humber Bridge the trail continues on the floodbank with a maintained surface. East Halton Skitter to New Holland has very low levels of use being the most remote from settlements and amenities, with increasing levels of access from New Holland to Humber Bridge.

No increase in users from the promotion of the England Coast Path is predicted where attractions already exist close to the Humber Bridge and the public right of way's current popularity, proximity to and promotion by those local attractions. Therefore there is no adverse effect from the trail on the coastal margin or functionally linked water-filled pits.

The project is not altering or improving the surface of the trail to increase visitors. In the remote sections the wide, well-defined and well surfaced path allows for easy onward travel. There are no places to stop and linger along this exposed estuary edge or attractors to the area, such as benches or recreational amenities between the major settlements close by, as well as limited opportunity for walking a circuit. Therefore users are more likely to move in a predicted, constant manner to the next available access point rather than be more erratic in movement, e.g. playing on a beach. The lack of attractions, facilities and the exposed landscape also limits the appeal to new visitors in the remote areas.

The signs and waymarkers installed will guide and provide confidence to new users to stay on the path and encourage this onward movement across the trail to reduce the risk of disturbance.

Coastal access margin

Skitter Ness

To the seaward side of the trail is a parcel of grazed saltmarsh, which is used by over-wintering dunlin, redshank and to a lesser extent black-tailed godwit, as well as providing suitable habitat for hunting marsh harrier and nationally important breeding birds such as redshank, oystercatcher and lapwing.

The parcel is fenced with scrub at the base of the bank providing a barrier to access. There is one access to the field across the floodbank with an access desire line running the seaward length of the saltmarsh, formed closer to the estuary. The access levels across the coastal access margin are not expected to increase or change due to the nature of the landscape offering no attraction to cross the habitat on the mudflat and having separation from the trail with a well-defined route on the top of the floodbanks.

However the saltmarsh parcel is being managed under Countryside Stewardship to increase the suitability for roosting and breeding species and there is a risk that England Coast Path walkers could enter the field as part of the coastal access margin and disturb these objectives, therefore to mitigate against this risk England Coast Path has removed the CROW access rights to the parcel, so not to disturb roosting and potentially breeding waders, under section 26(3a) of the Act.

Barton Foreshore

The saltmarsh is accessed from a slipway with some access evidenced close to the upper shore at Barton Haven. There is potential to increase the access to the accessible saltmarsh used as a high tide roost and for breeding birds, therefore to mitigate this risk the project will remove all CROW access rights under section 26(3a) of the Act  year round from the saltmarsh.

Functionally linked land

Immingham Docks

The trail passes 50m from the north-west corner of Rosper Road Pools on main road before crossing the road onto a cycle path. The pools could be functionally linked with the SPA features on the estuary and would be in the coastal margin.  The trail does not disturb any features using the pools, as the trail moves away from the site before reaching it and it is screened from view by tall bushy hedges. The nature of the trail at this location encourages onward travel and walkers are unlikely to know the pools are present to attract access. The pools are not managed for access and from observations are gated, so there appears to be little risk of the coastal margin being accessed here.

Halton Marshes

To the landward edge of the floodbank and trail is 83ha of rough grassland owned by the ports and used by roosting golden plover and lapwing. The trail has no access to this area with scrub growing in places along the route to screen the visual impact of walkers.

Overall within the estuary there is no WeBS alert for the over-wintering lapwing population and medium alert for the medium term trend for golden plover, which is in line with the broad scale trends, indicating the stable proportion of regional numbers supported by this site suggest the environmental conditions remain relatively favourable for lapwing at least. (WeBS BTO 2019)

Skitter Ness

The large, flat open arable and grass fields to the landward side of the trail are used for feeding by over-wintering pink footed geese, curlew, lapwing and golden plover at Skitter Ness; dunlin, ringed plover and golden plover at Goxhill Haven and golden plover and lapwing at New Holland. This is dependent on crop type and therefore use is opportunistic and independent from this project. The

land is separated from the trail by a series of drains and in the southern half a large hedging running along the landward base of the floodbank. The CROW access rights do not extend into the fields. The over-wintering waterbirds generally avoid the edges of the fields preferring the middle of large, open, flat fields to allow for vigilance during feeding. The area is also used for feeding rather than roosting, which is generally shown to be less sensitive to disturbance than roosting in the Humber estuary (Ross, K., Liley, D., (2014)). It is recognised that the division between feeding and roosting birds isn't always precise, but high tide roosts are intrinsically vulnerable to disturbance, with so many birds concentrated in one place.

The proposed route is sufficiently separated both physically and by distance from the most important areas of the fields to not cause disturbance. Adding to that the well-defined path allowing for easy onward travel, the lack of close by amenities, as well as limited opportunity for walking a circuit, means users are more likely to move in a predicted, constant manner to the next available access point rather than be more erratic in movement. The signs and waymarkers installed by the England Coast Path will help guide and provide confidence to new users encouraging this onward movement across the trail to minimise the risk of disturbance.

Barrow and Barton Pits

The landward roosts are noted using Barrow and Barton pits: pochard, goldeneye and tufted duck with curlew using the adjacent grass at the Tileries. Other landward roosts lie beyond the railway track and are distant from the route.

Where the grass field is used by curlew the proposed route is sufficiently separated by distance from the most important areas of the fields to not cause disturbance. The trail is screened for much of the distance by high dense hedges and scrub with the pits sitting behind these therefore removing the risk of disturbance from the trail currently and into the future, when the project is promoted.

**Table 35: Summary of risks and consequent mitigation for SPA waterbirds and the SPA waterbird assemblage for Mablethorpe to Humber Bridge**

| Report | Location | Nature conservation risk | Mitigation |
|---|---|---|---|
| MHB 2 | Horseshoe Point | Disturbance of passage & over-wintering SPA waterbirds and SPA assemblage at roosting from the public exercising their CROW rights within the coastal access margin. | No coastal access rights to the public year-round under section 26(3a) of the CROW Act.<br>Influence visitor behaviour through interpretation and signage, in discussion with NLC. |
| MHB 2 | Dune at Tetney Marsh / Humber Mouth | Disturbance of breeding habitat for nationally important breeding ground nesting birds, hunting marsh harrier and passage & over-wintering SPA waterbirds and SPA assemblage from the public exercising their CROW rights within the coastal access margin. | Influence visitor behaviour through interpretation and signage, in discussion with NLC. |

| Table 35: Summary of risks and consequent mitigation for SPA waterbirds and the SPA waterbird assemblage for Mablethorpe to Humber Bridge | | | |
|---|---|---|---|
| **Report** | **Location** | **Nature conservation risk** | **Mitigation** |
| MHB 2 | Humber Mouth and Humberston Fitties | Disturbance of passage & over-wintering SPA waterbirds and SPA assemblage at roosting from the public exercising their CROW rights within the coastal access margin. | Influence visitor behaviour through interpretation and signage, in discussion with NELC. |
| MHB 3 | Cleethorpes leisure centre roost | Disturbance of passage & over-wintering SPA waterbirds and SPA assemblage at roosting from the public exercising their CROW rights within the coastal access margin. | Influence visitor behaviour through interpretation and signage, in discussion with NELC. |
| MHB 4 | Skitter Ness grazed saltmarsh | Disturbance of breeding habitat for nationally important breeding ground nesting birds, hunting marsh harrier and passage & over-wintering SPA waterbirds and SPA assemblage from the public exercising their CROW rights within the coastal access margin. | No CROW access rights year-round under section 26(3a) of the CROW Act. |
| MHB 4 | Barton foreshore | Disturbance of breeding habitat for nationally important breeding ground nesting birds and passage & over-wintering SPA waterbirds and SPA assemblage from the public exercising their CROW rights within the coastal access margin. | No CROW access rights year-round under section 26(3a) of the CROW Act. |

**Humber Bridge to Easington**
**HBE 1: Humber Bridge to River Hull**
**Baseline**

Recreation

This section is urban with the only area of 'open coast' at Hessle. Here the main dual carriageway and a multi-user route into Hull follows the narrow extent of mud and saltmarsh, which is excluded from CROW access under section 25A of the Act. East of Hessle the river is contained by hard frontages.

A number of recreational activities use the river frontage from Hull, such as sea angling, sailing, cycling, walking and sightseeing. The public rights of way along the shore are used for commuting, as well as recreation. Pedestrian access levels rise closer to Victoria Dock and The Deep visitor attraction in central Hull and at the Humber Bridge country park.

SPA waterbird locations and usage

Analysing WeBS data for the Humber estuary the main wader species using this section with greater than 20% of the estuary population (5 year peak av. 20012/13 to 2016/17), as well as using the frontage in HBE 2: River Hull to Hedon Haven, is turnstone. Small numbers of lapwing and redshank can also be found over-wintering between Hessle and Hull. (I.D. Woodward, N.A. Calbrade, & G.E. Austin 2018)

The trend for these species within these WeBS sectors are increasing for lapwing, stable for redshank and a long-term decrease for turnstone.

Numbers of turnstone recorded on the Humber Estuary in the 15 years to 2015/16 have in general been declining, and mean numbers on the estuary have halved from around 300 to around 150, although the trend is not consistent and there is much between-year fluctuation. The trend for turnstone is broadly in line with the regional trend, and the proportion wintering on the Humber Estuary has varied along with the fluctuations in abundance, at between 5% and 10% of the regional population. There is indication from the analysis which suggests numbers are redistributing around the estuary with increasing numbers at Goxhill directly across from Hull on the south bank.

**Detailed design features of the access proposal**

The proposed trail in this section is 13.14km, with 12.64km on public rights of way, of which 11.13km is currently used as promoted routes (Yorkshire Wolds Way and Trans Pennine multi-user trail). Only 418m is on existing walked routes and 81m of new access on a gravel surface is created at St Andrew's Quay to link with the public right of way.

The route will not alter any existing access, but will improve the surface of the public right of way between Hessle Haven and Priory Market using stone aggregate. 15 new directional signs and 8 replacement signs or additions to signs will complete the establishment works to guide walkers in this urban section.

**Consideration of possible risks to qualifying features at this location in light of the access proposal**

The proposed trail hugs the estuary with the built landscape rising behind the established route. This includes warehousing, office blocks, train tracks and dual carriageways. In more open spaces the trail is separated from the shore by scrub or has the floodbank behind it to provide screening.

When using this proposed route England Coast Path walkers cannot access the river from the hard frontages and there is no attraction to use the saltmarsh and mudflat at Hessle. There is no evidence that walkers are currently accessing this area.

It is not expected that the England Coast Path will increase access to this already well accessed and promoted section. The landscape and background noise from the road behind the trail provide a backdrop, which prevents sky-lining and disturbance to the SPA waterbirds and the SPA waterbird assemblage from walkers, therefore having no adverse effect at this location.

**HBE 2: River Hull to Hedon Haven**
**Baseline**
Recreation
This section is urban with all areas of mud excluded from the project under section 25A of the CROW Act. Only 2.03km of the proposed trail is on the hard frontage with the remainder taking an inland route past Alexandra Dock, King George Dock, Queen Elizabeth Dock and Saltend chemical works.

A number of recreational activities use the river frontage from Hull, such as sea angling, sailing, cycling, walking and sightseeing. The walked routes along the shore are used for commuting, as well as recreation. Pedestrian access levels are high at Victoria Dock and The Deep visitor attraction in central Hull.

SPA waterbird locations and usage
A number of SPA features can be found in Hull to Paull WeBS sector: black-tailed godwit, ringed plover, shelduck, teal, golden plover, lapwing, dunlin, mallard, curlew and redshank, although none holding significant numbers of the estuary population over a 5 year period apart from turnstone. (I.D. Woodward, N.A. Calbrade, & G.E. Austin 2018).

**Detailed design features of the access proposal**
The proposed trail in this section is 9.46km, with 7.48km on public rights of way. 3.19km is currently used as the promoted Trans Pennine multi-user trail, this includes a mix of existing walked routes, public footways and cycle path. Only 1.08km is on existing walked routes, which uses the hard surfaces and sea defence in front of The Deep, and 0.90km of new access is created at Saltend beside the main road.

The route will not alter any existing access points, but will improve the access at Saltend with new tarmac and grass surfacing and 3 new footbridges. Overall 2 new signs and 24 additions to signs will complete the establishment works to guide walkers in this urban section.

**Consideration of possible risks to qualifying features at this location in light of the access proposal**
Much of this section is inland from the estuary, as it routes through the industrial landscape away from the docks, so having no disturbance effect from England Coast Path walkers on the SPA waterbirds and the SPA waterbird assemblage.

At The Deep the trail moves eastwards along the flood defence, which is an existing walked route and promoted as the Trans Pennine Trail. Here walkers are sheltered and unable to gain access to the river frontage by a large concrete wall. Behind this defence sits a housing estate with natural landscaping. It is not expected that the England Coast Path will increase access to this already well accessed and promoted section. The landscape and background noise, where the trail runs close to the estuary provide a backdrop, which prevents sky-lining and disturbance to the SPA waterbirds and the SPA waterbird assemblage from walkers, therefore having no adverse effect at this location.

**HBE 3: Hedon Haven to East Clough**

**Baseline**

Recreation

After the village of Paull on the eastern bank of Hedon Haven the next village on the estuary bank is Kilnsea, at the head of Spurn Peninsular, 37.31km of proposed trail away. The trail from Hedon Haven to Stone Creek is all on public rights of way, mainly on floodbank and a mix of maintained surfaces to allow for easy onward travel. This area is well used by locals for walking, including walking with a dog.

From Stone Creek the trail is in open countryside on an existing walked route with the next available car park and access point to the estuary at Welwick, approximately 10km away. The path is unmanaged on the western side, but cut on the eastern bank, so encouraging walkers towards Paull, with a more easily recognised and well-defined route. This access has low levels of use being mainly used by specific activities, such as wildfowlers, bird watchers and anglers

Levels of access are focussed around the car parks and entry points to the estuary. Car parking is limited to a maintained car park at Paull village, Paull Holme Strays and Welwick and small pull-ins at Stone Creek, which is the next available access point to the estuary, some 9km distant from Paull Holme Strays. Use of the car park at Paull Holme Strays increases at the weekend.

Visitor numbers at Paull Holmes Strays was the 4th highest from the Winter Bird Disturbance Study (Ross, K., Liley, D., 2014), with the top 3 being on the south bank. Welwick had the lowest visitor numbers of all with 4 walkers over the survey period. And from the 2012 Humber management scheme visitor survey during November and February 115 people in 73 groups visited Paull, whilst only 9 people visited the Stone Creek access point in 4 groups.

Strava Global Heatmap indicates moderate levels of access on foot around Paull Holme Strays with levels dropping towards Cherry Cobb Sands. There is a small peak in levels at Stone Creek with walkers walking east towards Hull for 2.5km before turning inland to complete a circular route. West of Stone Creek to Welwick show low levels of use with a trod route through the unmown bank top.

The area is remote, low lying and backed by large, open, mainly arable fields. The estuary is bounded by substantial earth and stone flood defences throughout and has completed managed realignment sites at Paull Holme Strays and Welwick with more planned at Cherry Cobb Sands and on the east and west side of Welwick. The England Coast Path will adopt new alignments considered at the planning stage when breaches occur.

Paull Holme Strays, now a nature reserve and an attraction to the area for recreation, was breached in 2003 and provides approximately 80 ha of inter-tidal habitat and is fronted by the extensive Paull Holme Sands. Work has recently been completed revising access routes around the site to reduce the disturbance of roosting and feeding SPA birds whilst allowing recreation on the site.

Welwick saltmarsh is a nature reserve with the adjacent managed realignment site managed for conservation and habitat creation. The reserve attracts birdwatchers and currently has low levels of access. There are no other facilities, so not attracting casual users.

The extensive areas of mud excluded from the project under section 25A of the CROW act. Areas to be considered as part of the project are: remnant flood bank at Paull Holme Strays and Welwick, and grazed saltmarsh at Cherry Cobb Sands and Sunk Island.

SPA waterbird locations and usage

2015/16 WeBS sector data (Paull to Stone Creek and Stone Creek to Patrington) show good numbers of golden plover, dunlin, lapwing, grey plover, shelduck, knot, curlew, teal, wigeon, redshank and bar-tailed godwit using the foreshore, with mallard and dark-bellied brent geese also using Stone Creek to Patrington.

Between Saltend and Paull the fields on the landward side of the existing flood defences can hold significant numbers of roosting and loafing golden plover and lapwing with curlew and redshank present. Behind Paull Holmes Strays at Boreas Hill significant numbers of curlew feed. At Paull Holmes Strays the seaward side of the old floodbanks are used as a roost site.

The Cherry Cobb intertidal saltmarsh is a regular high tide roost for dunlin, curlew, redshank, grey plover, bar-tailed godwit and occasionally knot with the upper saltmarsh now less favoured. During high spring tides the SPA birds disperse inland of the flood defences. The upper saltmarsh at Cherry Cobb Sands, West Bank and The Outstrays at Sunk Island are currently used as grazing marsh, with agri-environmental stewardship management to improve the habitat and increase the suitability for roosting and breeding species.

Between West Bank and Hawkin's Point, in the Humber estuary high tide roost review 2013-14 (N. Cutts, K. Hemingway & S. Thomson, 2016) a consultee comments that there are no high tide roosts and that curlew use the inland fields dispersing across the whole of Sunk Island, but not as regularly as the Patrington roost. Comments from an advisory note produced by Humber Nature Partnership and from the Humber management scheme visitor survey (Fearnley, H., Liley, D. & Cruickshanks, K., 2012) also supports this.

The Welwick managed realignment site including Patrington Channel and adjacent mudflat also holds a series of significant roosts used by curlew, redshank, grey plover, shelduck, bar-tailed godwit, oystercatcher, knot, dunlin, dark-bellied brent goose and lapwing. Behind the floodbank lapwing and golden plover feed on autumn crops. This usage is dependent on crop type and height.

**Detailed design features of the access proposal**

The proposed trail in this section is 25.59km, with just over half the length (13.89km) on public rights of way and nearly all (24.27km) on floodbank. 11.65km is on existing walked routes, and 0.46km of new access is created as the trail passes onto a stone track to incorporate the proposed habitat creation at Welwick.

At the Welwick managed realignment site the trail uses the landward base of the bank on an existing track to prevent any visual disturbance at this location.

The route will not alter any existing access and access points nor alter or upgrade trail surfaces, which remain a mix of grass, stone, gravel and tarmac. It will improve access by replacing 3 step stiles with gates at Saltend and Cherry Cobb Sands. Overall 18 new signs will complete the establishment works to guide walkers in this remote section and direct them away from sensitive areas.

It is expected that promoting this route as England Coast Path may slightly increase access levels on foot to the trail, outward from areas of higher access levels with the possibility of walkers extending their walks from the entry points with improved signage and also onto the upper saltmarsh, but not raise them significantly due to the remoteness of the trail, lack opportunities for a circular route and lack of provision over this section. This may increase again with the planned managed realignment

and habitat creation, however this has been considered as part of their habitat regulation assessment and England Coast Path will adopt these measures, so causing no adverse effect.

**Consideration of possible risks to qualifying features at this location in light of the access proposal**

Trail

The trail is not expected to increase visitors around the public rights of way at Paull and Paull Holme Strays, as the area already promoted for recreation and wildlife, close to large settlements and has visitor attractions. Recent works at Paull Home Strays have sought to improve access and reduce the impact on wildlife.

As the trail moves into open countryside at Cherry Cobb Sands the public right of way is distant from any other access with no opportunity for a return route. Any new walkers here are likely to be long-distance walkers, with an aim of walking to the next available access point or settlement. As part of the Cherry Cobb managed re-alignment the trail will be re-routed and screened at sensitive locations so not to disturb any SPA waterbirds.

From Stone Creek westwards there is potential to encourage walkers with a more maintained route, however a series of gates along the path may still dissuade the casual walker, as well as the lack of a short circular walk. Again, any new walkers here are likely to be long-distance walkers, with an aim of walking to the next available access point or settlement, which would be Welwick approximately 10km away.

At the Welwick managed realignment site the trail uses the landward base of the bank on an existing track to prevent any visual disturbance at this location.

In the open countryside there are no places to stop and linger along this exposed estuary edge or attractors to the area, such as benches or recreational amenities, as well as limited opportunity for walking a circuit. Therefore users are more likely to move in a predicted, constant manner to the next available access point rather than be more erratic in movement e.g. playing on a beach. The lack of attractions, facilities and exposed landscape also limits the appeal to new general visitors in the lower accessed areas.

The small predicted increase at certain locations will still leave many undisturbed periods and undisturbed areas with the median average walking distance around the Humber at 1.86km for dog walkers and 2.29km for walkers without a dog, therefore typically straying no more than 1km from an access point. Waymarkers installed by the England Coast Path will also guide and provide confidence to new users encouraging onward movement across the trail to minimise the risk of disturbance on the SPA features using the area in the vicinity of the trail.

Functionally linked land

Landward of the trail are large, flat, open arable fields that are used for feeding and loafing by golden plover, lapwing, curlew and occasionally redshank at Paull, with an occasional high tide roost for curlew at Cherry Cobb Sands. Use of the current habitat within the fields depends on the cropping rotation with SPA birds moving around the fields with the location of the preferred crop, therefore use is opportunistic and independent from this project. The land is separated from the trail by a series of drains and scattered scrubby hedging running along the landward edge of the floodbank, so there is no access to these fields and areas of screening. The over-wintering waterbirds generally avoid the edges of the fields preferring the middle of large, open, flat fields to allow for vigilance during feeding. The over-wintering birds also have the opportunity to move away when within sight of the trail with suitable available habitat to move into. This coupled with no

public access to the fields, some screening and predictable onward movement minimises the risk of disturbance on the SPA features using the area in the vicinity of the trail.

Coastal access margin

Once past high tide the birds disperse either moving down the shore with the tide or to newly exposed mudflats elsewhere in the estuary. In some cases moving between the north and south bank. Across all locations in the Humber estuary the probability of birds being flushed was lower at low tide (2014, Ross, K., Liley, D.). Around low water the intertidal zone is extensive with approximately 1 km between the proposed trail and the foraging birds. This distance reduces at Hawkin's Point, however evidence from Skeffling waterbird utilisation review 2014-2016: sector importance assessment (N. Cutts, 2019) show the focus on high tide around the previous realignment area and Patrington Channel including the adjacent mudflat with reducing significance of bird numbers and species west toward Hawkin's Point and at mid to low tide. This is also evidenced from information gathered from the Humber management scheme visitor survey (Fearnley, H., Liley, D. & Cruickshanks, K., 2012) and the advisory note from Humber Nature Partnership.

The areas of risk are the roosting sites on the old eastern floodbank at Paull Home Strays and the old floodbank at Welwick realignment site, and the upper saltmarsh at Cherry Cobb Sands, West Bank and The Outstray, Sunk Island.

Old eastern floodbank at Paull Home Strays

The area is available for CROW access rights with a maintained stone aggregate path up to the final lighthouse from there it becomes an unmaintained grass path. The floodbank reaches out into the created intertidal area with the roost using the more isolated final third. To mitigate the risk of impact to the SPA features that the England Coast Path may have at this location all CROW access rights under section 26(3a) of the Act have been removed year-round from the tip of the floodbank to the final lighthouse. CROW access rights are still available from the Paull to the second (final) lighthouse.

Upper saltmarsh - Cherry Cobb Sands

The parcel sits between an area of intertidal saltmarsh used by roosting over-wintering dunlin, curlew, redshank, grey plover, bar-tailed godwit and occasionally knot and roost on the adjacent landward field when tides are very high and push the birds off their regular roost, as well as providing suitable habitat for hunting marsh harrier and nationally important breeding birds such as redshank.

The parcel is accessible from the base of the bank and has a low level of de facto access with a faint desire line running between the intertidal and upper saltmarsh the length of the main parcel at Cherry Cobb Sands. The levels across the coastal access margin are not expected to increase or change due to the nature of the landscape offering no attraction to cross the habitat to the mudflat and having separation from the trail with a well-defined route on the top of the floodbanks.

However there is a risk that walkers using their CROW access rights could enter the field as part of the coastal access margin and disturb the intertidal roost by moving closer to the roost, therefore to mitigate against this risk England Coast Path has removed the CROW access rights year round to the parcel, so not to disturb roosting and potentially breeding waders, under section 26(3a) of the Act.

Upper saltmarsh - West Bank

The upper saltmarsh is in an agri-environment scheme to improve the habitat and increase the suitability for roosting and breeding species by grazing, as well as providing suitable habitat for hunting marsh harrier. The marsh is used by breeding redshank, avocet and oystercatcher with a range of SPA waterbirds using the area for feeding and roosting. Marsh harrier also breed along in this section. (Personal conversation, Yorkshire Wildlife Trust 2020).

The parcel is accessible from the base of the bank and no de facto access has been observed. The levels across the coastal access margin are not expected to increase or change due to the nature of the landscape offering no attraction to cross the habitat to the mudflat and having separation from the trail with a well-defined route on the top of the floodbanks.

There is a risk that England Coast Path walkers could enter the coastal access margin and disturb these objectives, therefore to mitigate against this risk England Coast Path has removed the CROW access rights to the upper saltmarsh, so not to disturb roosting and breeding waders, under section 26(3a) of the Act.

Upper saltmarsh - The Outstray, Sunk Island

The upper saltmarsh is managed to improve the saltmarsh habitat and increase the suitability for roosting and breeding species by grazing, as well as providing suitable habitat for hunting marsh harrier. The marsh is used by breeding redshank, avocet and oystercatcher with a range of SPA waterbirds using the area for feeding and roosting. Marsh harrier also breed along in this section. (Personal conversation, Yorkshire Wildlife Trust 2020).

The parcel is accessible from the base of the bank with a low level of de facto access on to the saltmarsh around both sides Spragger Clough sluice. The levels across the coastal access margin are not expected to increase or change due to the nature of the landscape offering no attraction to cross the habitat to the mudflat and having separation from the trail with a well-defined route on the top of the floodbanks.

There is a risk that England Coast Path walkers could enter the coastal access margin and disturb these objectives, therefore to mitigate against this risk England Coast Path has removed the CROW access rights to the upper saltmarsh, so not to disturb roosting and breeding waders, under section 26(3a) of the Act.

Floodbanks at Welwick realignment site

The realignment site contains a number of significant SPA waterbird high tide roosts, as well as a hen harrier roost on the marsh. These areas are excluded from CROW access rights, under section 25A of the Act, however two floodbanks are within the coastal margin and available for CROW access rights. The raised floodbank spur beside Winestead drain reaches out into the created intertidal and roosting area, with a current floodbank perpendicular to this; linking with the old floodbank and sitting behind a hen harrier roost. These areas are highly visible to the roosts with people appearing irregularly on the banks, as they walk up the bank for coastal views. As part of the habitat assessment for the planned realignment these floodbanks will not be available for access, however to mitigate the risk of disturbance to SPA roosting features from England Coast Path walkers before construction starts all CROW access rights will be excluded year round from the top of the floodbanks, under section26(3a) of the Act.

**HBE 4: East Clough to Easington**

**Baseline**

Recreation

The trail takes a new alignment at East Clough in readiness for the planned managed realignment crossing over Winestead drain, around the back of the planned works, and onto Welwick Bank, before hugging the coastline around Spurn Bight on the public rights of way. At Easington Clough the route continues on existing walked routes until Kilnsea where it turns inland on the road and heads to the east coast where it turns north toward Easington. The trail sits landward of Spurn peninsular and Beacon lagoons. There are two small car parks at Skeffling Clough and Easington Clough approximately 2.57km apart, with a large maintained car park at Spurn Discovery Centre and National Nature Reserve and another small car park at Kilnsea wetlands nature reserve.

The trail from Welwick Bank to Kilnsea is in open countryside and uses the floodbank with a grass surface. This area is used by locals for walking, including walking with a dog and also wildfowling, birdwatching and sea angling. From the Humber management scheme visitor survey (Fearnley, H., Liley, D. & Cruickshanks, K., 2012) visitor numbers at Patrington were 13 people in 9 groups with most (80%) of visitors having a dog. Nationally the figure is 38% of walkers having dogs with them on the coast (Natural England, 2016).

From Strava Global Heatmap, levels of access increase westward and can be broken into sections. The levels can be described as:

- Welwick to Skeffling Clough (3.26km) - least
- Skeffling Clough to Easington Clough (2.57km) - medium
- Easington Clough to Kilnsea (1.74km) - higher
- Kilnsea to Spurn (1.11km) - highest

Once at Kilnsea the coastal margin is very well used by walkers and bird watchers visiting the nature reserves. Access also spreads out onto the more inviting coastal habitats of sand and dune at Spurn and Easington beach. The area is rural, low lying and backed by large, open, mainly arable fields. The estuary is bounded by substantial earth and stone flood defences throughout.

The extensive areas of mud are excluded from the project under section 25A of the CROW Act. The areas of coastal margin to be considered as part of the project are: Spurn peninsular from Kilnsea Road and Easington lagoons, including Beacon lagoon.

SPA waterbird locations and usage

The Skeffling waterbird utilisation review 2014-2016 (N Cutts, 2019) of the Welwick embayment up to Skeffling indicates the general pattern of use on the mudflats on the upper shore during tidal compression with dispersion across the extensive intertidal mudflats around mid to low water. At around high-water large concentrations of wildfowl, predominantly shelduck, wigeon, teal and mallard, can loaf on the tidal pools within the saltmarsh and along the main channels close to the current flood defence alignment. Similarly large numbers of waders, in particular curlew, redshank and dunlin and on occasion large flocks of lapwing and some grey plover roost among areas of short vegetation including the Welwick managed realignment site. On extremely high tides birds will move off the site, and in general, utilisation of inland fields as a high tide roost is relatively infrequent.

The birds move out from the upper shore area quite swiftly on an ebbing tide. The timing depends on tide phase and other factors. However, well before mid-water (c. +2 hours), most species will have moved well down shore beyond 500m from bank with an extensive area of mid shore available for use by this time. It should be noted that this movement is not simply down shore, but also dispersal out onto adjacent mudflat.

Between Welwick and Easington Clough the fields on the landward side of the existing flood defences hold small and occasional roosts and foraging areas for golden plover, curlew and redshank. These are separated from the trail by Soak Dike.

From Easington Clough to Spurn Point the mudflats are used for foraging and loafing oystercatcher, knot, dunlin, sanderling, redshank, bar-tailed godwit, curlew, ringed plover and grey plover, with roosting taking place around the Warren and the sands around Spurn. The greatest concentration of waders on the peninsular are on the estuary side at Warren Head and Chalk Bank.

Triangle fields at Spurn have an important role for passage migrants in spring and autumn, particularly for whimbrel with flocks of teal and wigeon. Recent works have been carried out to improve habitat and access is currently not allowed. On the foreshore, adjacent to Triangle fields, the greatest concentrations of waders are at Cliff Farm and Warren Head with the highest numbers of individuals recorded below the mean high-water mark. Numbers on the foreshore in front of the Discovery Centre are generally low compared to other areas on the peninsular. Records at How Hill, east of Spurn Road, show peak numbers of teal using the borrow pit with greenshank and whimbrel in Clubley's Field exceeding the 1% level for the Humber as a whole.

The inland fields between the estuary and the open coast are used for foraging and loafing brent geese, curlew, redshank and golden plover, with the newly created habitat of Kilnsea wetlands supporting roosting, foraging and loafing for golden plover, grey plover, dunlin, knot, redshank, curlew and bar-tailed godwit. Adjacent to the wetlands is Beacon lagoons, which also support a range of waders with ringed plover roosting on the beach at peak times.

**Detailed design features of the access proposal**

The proposed trail in this section is 16.60km, with just under half the length (7.38km) on public rights of way and nearly two thirds (10.08km) on floodbank. 6.96km is on existing walked routes and 2.55km of new access is created where the trail incorporates part of the planned Outstrays managed realignment scheme and at Beacon lagoon to mitigate against disturbance from England Coast Path for SPA features.

As part of the Outstrays and Welwick to Skeffling managed re-alignment schemes the proposed trail will be re-routed and screened in sensitive locations by using the landward toe of the bank.

The route will not alter any surrounding access and access points nor alter or upgrade current trail surfaces, which remain a mix of grass, gravel and tarmac. It will improve the surface for 567m where new access is created at Beacon lagoon and improve access by replacing or installing 6 pedestrian gates instead of step stiles and a ramp. Overall 13 new signs will complete the establishment works to guide walkers in this remote section. 15 access management items will be retained as part of the project.

It is expected that promoting this route as the England Coast Path may slightly increase access levels on foot to the trail, outward from areas of higher access levels with the possibility of walkers extending their walks from the entry points with improved signage, but not raise them significantly due to the remoteness of the trail and lack of provision over this section. This may increase again with the planned managed realignment and habitat creation, however this has been considered as part of their habitat regulation assessment and the England Coast Path will adopt these measures, so causing no adverse effect.

**Consideration of possible risks to qualifying features at this location in light of the access proposal**

East Clough to Easington Clough

The trail at East Clough to Weeton Bank follows the intended route for the planned managed realignment. This route is already screened with scrub to the west on an existing walked route and on the east and north will be screened as part of the construction when wet grassland habitat is created.

From Weeton Bank until Easington Clough the trail moves away from Welwick saltmarsh on the public right of way. The mudflats along this section stretch out between 2km and 3km at mean low water. The evidence from the Skeffling waterbird utilisation review 2014-2016 (N Cutts, 2019) show over-wintering water birds dispersing and increasing on the mud between mid to low tide over 500m from the trail. During high tide birds on the mud are closer to the trail. Between the mud and public right of way there is approximately 50 to 100m of tall, rank vegetation acting as a barrier to discourage access.

As part of the Welwick to Skeffling managed re-alignment the proposed trail will be re-routed and screened in sensitive locations so not disturb and SPA waterbirds. The distance from the trail and to the mud at mid to low tide, being over 500m, provides spatial separation to avoid disturbance. Any small insignificant effect from the risk of disturbance at high tide will be fully removed once the trail is re-routed as part of the managed re-alignment schemes.

Landward of this section are some small and occasional roosting and foraging areas, which are dependent on crop rotation, growth height and extremely high tides. The land is separated from the trail by Soak Drain, so there is no access to these fields and CROW access rights do not extend into the fields. The over-wintering waterbirds generally avoid the edges of the fields preferring the middle of large, open, flat fields to allow for vigilance during feeding. The over-wintering birds have the opportunity to move away when within sight of the trail with available habitat to move into. Over this section there are no places to stop and linger along this exposed estuary edge or attractors to the area, such as benches or recreational amenities, as well as limited opportunity for walking a circuit. Therefore users are more likely to move in a predicted, constant manner to the next available access point rather than be more erratic in movement. The lack of attractions, facilities and exposed landscape also limits the appeal to new general visitors in the lower accessed areas.

The mix of factors: occasional bird use of the landward fields, the negligible increase in walkers and the predictability of movement with a defined and waymarked path provides no adverse effect on integrity alone for disturbance of the SPA waterbirds using the area in the vicinity of the trail, but will have insignificant effect at high tide. This will be removed over the most sensitive section as part of the Welwick to Skeffling managed re-alignment.

Easington Clough to Easington

Current levels of access increase from Easington Clough, with high levels of interest around Spurn and Kilnsea. The trail continues on the floodbank, as an existing walked route, before moving inland at Kilnsea to direct walkers away from the sensitivities around Spurn. There is a large expanse of mud here used for foraging and loafing SPA waterbirds, extending 6km from the trail. Due to this large expanse there is enough spatial separation between this and the trail to avoid any disturbance of SPA features.

Landward of this section is approximately 135ha of large, open arable fields and wet grassland that extend east toward Kilnsea wetlands and the open coast. These areas are used for foraging and loafing and are dependent on crop rotation, growth height and waterlogging. The land is separated from the trail by a series of large drains, so there is no access to these fields and CROW access rights do not extend into the fields. The over-wintering waterbirds generally avoid the edges of the fields preferring the middle of the open fields to allow for vigilance during feeding. The extent of this habitat also allows the waterbirds to move away when within sight of the trail.

Over this section there are no places to stop and linger along this exposed estuary edge with Kilnsea close by either attracting you onwards to the local amenities or if setting off from Kilnsea a walk to the next access point at Easington Clough. Therefore users are more likely to move in a predicted, constant manner rather than be erratic in movement.

The mix of factors: crop dependent use by SPA features in the landward fields, the negligible increase in walkers and the predictability of movement with a defined and waymarked path provides no adverse effect on integrity alone for disturbance of the SPA waterbirds using the area in the vicinity of the trail.

Spurn and Kilnsea Wetlands

The trail follows Kilnsea Road and then heads north on North Marsh Road directing England Coast Path walkers with signs away from the Nature Reserve, so not to impact the peninsula from the trail. Once at the end of North Marsh Road the trail moves inland around avocet field to avoid taking a beach route and disturbing roosting and breeding SPA waterbirds. As mitigation the inland route drops below the bank at the most sensitive point, before continuing on a declining floodbank toward Easington.

This leaves the reserves in the coastal access margin, which could be adversely affected by CROW access rights.

Therefore to mitigate this impact for passage and overwintering waterbirds, as well as breeding avocet and breeding little tern, the CROW access rights, under section 26(3a), will be limited in places and removed in others.

These are:

- No dogs within the coastal access margin on Spurn national nature reserve.
- No public access to the Triangle fields, How Hill, avocet field and Beacon lagoons year round.
- Dogs on leads and kept to marked routes at How Hill and avocet field.
- No public access within fenced areas during little tern nesting from 1st April until 31st August at Spurn and Beacon lagoons.

The CROW access rights limits have been set taking current management and wardening into consideration. The mitigation mirrors current access management across Spurn and Kilnsea wetlands to minimise and manage the risks of disturbance from visitors to the area.

At these locations the visitor centre acts as an information hub providing advice and interpretation to increase visitor knowledge and respect for the wildlife sensitivities. In addition wardens around Spurn and seasonal wardens at Kilnsea wetlands, along with strategically placed advisory signs will encourage compliance.

There is an unmarked de facto access within the coastal margin that links Kilnsea to the reserve, which has a moderate to high level of current use by locals and birdwatchers. The de facto access is closer to the foreshore at Kilnsea than at the visitor centre.

The foreshore in front of Triangle fields and the visitor centre is mainly used below high tide (50 - 300m below the mean high tide line) with ringed plover and turnstone (among other species) present within the mid-foreshore (50m from the mean high tide line) between Cliff Farm, Kilnsea and the groynes approximately 300m south. (Underhill-Day, J. C. 2016).

The mud and saltmarsh foreshore is excluded from the project under section 25A of the CROW Act and current de facto access could be disturbing these species, as named components of the SPA waterbird assemblage. Analysis shows turnstone decreasing in the WeBS sector and across the estuary, with some relocation and increasing numbers on the south bank. Ringed plover is increasing within the estuary and in the sector (D. Woodward, N.A. Calbrade, & G.E. Austin, 2018).

The distance between the visitor centre and the excluded foreshore provides enough spatial separation to not cause an adverse effect, with the de facto access at Cliff Farm pinched against the mean high tide mark. At this point the trail directs new walkers away from this area with clear signs and continuing the route on a well-defined tarmac path at Kilnsea. The existing walked route is not maintained, but is visible from a car pull-in at the sharp bend in the road. It curves round the shoreline with no hint of the visitor centre, as an attraction, at the end, so not encouraging walkers new to the area to take a short. From Spurn, this path is not marked, and visitors are guided away from this path to use the formal paths set out in the reserve's access plan, as well as through wardening, signs and interpretation. With this in place it is not anticipated that England Coast Path walkers will significantly increase use of the de facto route, either continuing along the trail or following the formal paths and so not cause an adverse effect to the SPA waterbird assemblage's conservation objectives.

**Table 36 : Summary of risks and consequent mitigation for SPA waterbirds and the SPA waterbird assemblage for Humber Bridge to Easington**

| Report | Location | Nature conservation reason | Mitigation |
|---|---|---|---|
| HBE 3 | Paull Holme Sands | Disturbance of passage & over-wintering SPA waterbirds and SPA assemblage at roosting from the public exercising their CROW rights within the coastal access margin. | No CROW access rights to the public year-round under section 26(3a) of the CROW Act. |
| HBE 3 | The Outstray, Cherry Cobb Sands | Disturbance of breeding habitat for nationally important breeding ground nesting birds, hunting marsh harrier and passage & over-wintering SPA waterbirds and SPA assemblage from the public exercising their CROW rights within the coastal access margin. | No CROW access rights to the public year-round under section 26(3a) of the CROW Act. |
| HBE 3 | Stone Creek and West Bank | Disturbance of breeding habitat for nationally important breeding ground nesting birds, hunting marsh harrier and passage & over-wintering SPA waterbirds and SPA assemblage from the public | No CROW access rights to the public year-round under section 26(3a) of the CROW Act. |

| Table 36 : Summary of risks and consequent mitigation for SPA waterbirds and the SPA waterbird assemblage for Humber Bridge to Easington | | | |
|---|---|---|---|
| **Report** | **Location** | **Nature conservation reason** | **Mitigation** |
| | | exercising their CROW rights within the coastal access margin. | |
| HBE 3 | The Outstray, Sunk Island | Disturbance of breeding habitat for nationally important breeding ground nesting birds, hunting marsh harrier and passage & over-wintering SPA waterbirds and SPA assemblage from the public exercising their CROW rights within the coastal access margin. | No CROW access rights to the public year-round under section 26(3a) of the CROW Act. |
| HBE 3 | Welwick re-alignment floodbank | Disturbance of passage & over-wintering SPA waterbirds and SPA assemblage from the public using the England Coast Path. | Alignment of the trail at the landward base of the floodbank. |
| HBE 3 | Welwick saltmarsh floodbank | Disturbance of breeding habitat for nationally important breeding ground nesting birds, hunting marsh harrier and passage & over-wintering SPA waterbirds and SPA assemblage from the public exercising their CROW rights within the coastal access margin. | No CROW access rights year-round under section 26(3a) of the CROW Act. |
| HBE 4 | Triangle fields | Disturbance of passage & over-wintering SPA waterbirds and SPA assemblage from the public exercising their CROW rights within the coastal access margin. | No CROW access rights year-round under section 26(3a) of the CROW Act. |
| HBE 4 | Spurn | Disturbance of breeding nesting birds and passage & over-wintering SPA waterbirds and SPA assemblage from the public exercising their CROW rights within the coastal access margin. | No dogs within the coastal access margin of the National Nature Reserve under section 26(3a) of the CROW Act. |
| HBE 4 | Spurn | Disturbance of prospecting and potentially nesting little tern from the public exercising their CROW rights within the coastal access margin. | No CROW access rights from 1st April to 31st August each year in the fenced areas within the National Nature Reserve under section 26(3a) of the CROW Act. |
| HBE 4 | How Hill and around avocet field | Disturbance of passage & over-wintering SPA waterbirds and SPA assemblage from the public exercising their CROW rights within the coastal access margin. | Dogs on leads and to marked routes under section 26(3a) of the CROW Act. |

| Table 36 : Summary of risks and consequent mitigation for SPA waterbirds and the SPA waterbird assemblage for Humber Bridge to Easington | | | |
|---|---|---|---|
| **Report** | **Location** | **Nature conservation reason** | **Mitigation** |
| HBE 4 | Avocet field, floodbank and dune around Beacon lagoon | Disturbance of SPA breeding birds and passage & over-wintering SPA waterbirds and SPA assemblage from the public exercising their CROW rights within the coastal access margin. | No CROW access rights year-round under section 26(3a) of the CROW Act. |
| HBE 4 | Beacon lagoon floodbank | Disturbance of SPA breeding birds and passage & over-wintering SPA waterbirds and SPA assemblage from the public using the England Coast Path. | Alignment of the trail at the landward base of the floodbank. |

**SPA waterbirds and SPA waterbird assemblage**
**Disturbance from installation of infrastructure at establishment**
**Baseline**
With the establishment of the England Coast Path new access management infrastructure will be installed to guide walkers along the trail and improve accessibility around the coast. This includes the addition of new signs and roundels, replacing items and in places creating new structures and access, which will be within or outside the designation boundary. The work is in close proximity to existing walked routes or public rights of way, apart from Donna Nook and Kilnsea wetlands, where new trail access is created to mitigate long-term disturbance from England Coast Path walkers.

**Detailed design features of the access proposal**
This installation phase will be temporary, sporadic and localised with activity taking from 1 hour to a few days, using hand-held power tools with a noise level from 85 -100dB at source. At Donna Nook and Beacon Lagoon the construction for a new trail, as mitigation to avoid the long-term disturbance by England Coast Path walkers, will be more prolonged and complex to include scrub clearance, grass cutting and path surfacing. The new trail and construction will be at the landward base of the floodbank and pass between the lagoon on the seaward side and Kilnsea Wetlands and functionally linked arable land to the west. Access to the base of the bank will be from the top where the proposed path deviates from the existing walked route to the landward side of the bank.

Disturbance from this work is also assessed as part of the grey seal (Donna Nook), breeding little tern and breeding avocet (Kilnsea Wetlands) assessments.

**Consideration of possible risks to qualifying features at this location in light of the access proposal**
<u>Construction around the estuary</u>
Using the Humber winter bird disturbance study (Ross, K., Liley, D., 2014) and the waterbird disturbance mitigation toolkit (Cutts, N., Hemingway, K., and Spencer J., 2013) the probability of birds being flushed when activities are beyond 200m away is very low, with the probability of birds being flushed at low tide and at warmer temperatures lower than at high tide and in colder conditions. The waterbird disturbance mitigation toolkit suggests a precautionary distance of 300m and a noise level of 70dB at receptor to avoid disturbance.

Some installation of infrastructure will take place within urban settings, being distant from the coastline and roost sites; sheltered from view and not raising the noise levels above that already present and therefore will not cause an adverse effect on the SPA features.

The work on the rural coast occurs in close proximity to existing walked routes and rights of way, which may also be on the crest of the floodbank. It will be localised and brief, as the work moves around the estuary, leaving many sections of the trail and vast areas of supporting habitat undisturbed by the work. For equipment running at 100dB the noise reduces to 70dB at 20m and is reduced further to 64dB at 42m, so limiting the distance of the disturbance effect to outside the roost sites along the Humber estuary.

Construction activities on the top of the banks, if visible from the foreshore and functionally linked land, are considered to create a temporary visual disturbance. The responses are likely to range from increased vigilance, avoidance walking and short flights with birds rapidly resettling and resuming feeding or roosting near their original location. However occasional larger disturbance events could occur if there is any excessive and random noise or visual disturbance, causing birds to flush and leave the immediate vicinity. Rather than evacuating the area completely, birds would be expected to redistribute to nearby habitat outside the radius of disturbance. There is appropriate habitat for any displaced species to use within close vicinity to the proposed works.

Any effects from the work of establishing the trail is expected to be short-term, localised and reversible with mild behavioural responses in the vicinity of the works. There is also opportunity for the birds to redistribute to adjacent habitat and return following completion of the works, if occasional larger disturbances occur.

Beacon Lagoon – new trail creation

Kilnsea Wetlands is one location with multiple sensitivities for construction of the England Coast Path with breeding little tern and avocet and over-wintering waterbirds overlapping. Around avocet field 6 new signs will either be fitted to existing infrastructure or installed along the existing walked route. At Beacon Lagoon the construction for the re-aligned access will be more prolonged (1 week to 1-2 months) and complex, with the new trail at the landward base of the floodbank and passing between the lagoon on the seaward side and Kilnsea Wetlands and functionally linked arable land to the west.

The Lagoons remain an important roost area, mostly during the summer and autumn with high numbers of knot, dunlin, grey plover and bar-tailed godwit recorded with the adjacent seashore supporting approximately 200 roosting sanderling and over 70 ringed plover. Kilnsea Wetlands, adjacent and landward of the proposed new trail, support both roosting and foraging golden plover, grey plover, dunlin, knot, redshank, curlew, greenshank and bar-tailed godwit, and also in winter: oystercatcher. Arable fields, north of the wetlands are used by brent geese, curlew, redshank and golden plover for foraging, loafing and roosting.

Roost movements are quite complex in the outer north bank of the estuary, with both along-estuary flights and longer distance movements across the estuary identified. Flights occur from the lagoon and adjacent habitat to the functionally linked habitat and mud around Easington Clough in Spurn Bight, approximately 2km west. (Cutts, N., Hemingway, K. & S. Thomson. 2016)

Any effects from the work to the over-wintering SPA features is expected to be short-term, localised and reversible with mild behavioural responses in the vicinity of the works, with the opportunity to move away from the disturbance with avoidance walking and short flights or can redistribute into

adjacent supporting habitat and roosts, if temporarily disturbed by random or excessive noise or visual disturbance as discussed above.

This cannot be said for the SPA breeding species, which are most sensitive and least resilient to disturbance, potentially reducing breeding success. Therefore the construction should take place between 1st September and 31st March, to avoid the little tern and avocet breeding season.

Donna Nook – scrub clearance and associated works

The new trail will be cut through dense, closed canopy sea buckthorn scrub to protect breeding grey seal from long-term disturbance from England Coast Path walkers. The timing of establishing the new route and associated infrastructure (as outlined below) needs to consider the effect on breeding and pupping grey seals; breeding and nesting birds using the scrub; and disturbance of over-wintering SPA bird species and the assemblage at roost. Using the Humber estuary high tide roost review 2013-2014 (N. Cutts, K. Hemingway & S. Thomson 2016) the nearest roost is 200m away from the nearest works and is used by twite, linnet, snow bunting and skylark with SPA features being approximately 850m from the shore, so avoiding the risk of temporary noise and visual disturbance due the distances.

**SPA waterbirds and SPA waterbird assemblage**

**Permanent loss of supporting habitats through the installation of infrastructure**

**Detailed design features of the access proposal**

New infrastructure is to be installed to guide walkers in wildlife sensitive areas within dune habitats at Donna Nook and a single signpost with a footprint of 0.01m$^2$ beside a well-trod existing walked route on saltmarsh at Saltfleet.

**Consideration of possible risks to qualifying features at this location in light of the access proposal**

The permanent loss of habitat through the installation of new access management infrastructure has been considered and assessed as part of the Humber Estuary SAC qualifying features: dune habitats, estuary and Atlantic salt meadows. Dune is not considered a supporting habitat for passage and over-wintering SPA waterbirds and the SPA assemblage (Part D2.4). The loss of 0.01m$^2$ in approximately 783.87ha of Atlantic salt meadow next to a well-trodden track is inconsequential to the continuity and functioning of the habitat as a whole, due to the location and quantity of potential loss, so therefore of no adverse effect to the waterbirds.

**D3.2B Non-breeding hen harrier assessment**

| European designation | Qualifying feature(s) | Disturbance by increased access on foot from England Coast Path | Disturbance from installation of infrastructure at establishment | Permanent loss of supporting habitats through the installation of infrastructure |
|---|---|---|---|---|
| Humber Estuary SPA | Non-breeding hen harrier | ✓ | ✘ | ✘ |

**Baseline situation**

Key areas for hen harrier are at Welwick and Spurn on the north bank and Saltfleetby on the south bank. During autumn passage, hen harrier are regularly seen at Donna Nook (Calbrade, 2003) and Spurn Head (Allen et al, 2003).

For the current conservation assessment and use of the site by hen harrier see section D2.2.

Welwick saltmarsh is a nature reserve with the adjacent managed realignment site managed for conservation and habitat creation. The reserve attracts birdwatchers and currently has low levels of access. There are no other facilities, so not attracting casual users.

Wildlife watching at Kilnsea Wetlands Nature Reserve and Spurn National Nature Reserve provide an attraction to the area, with visitor numbers averaging 45,000 per year at Spurn. It is noted from the Yorkshire Wildlife Trust Spurn Management Plan 2019-2024 that the majority of visitors stay within 100m of the visitor centre and peak times are during the summer. The reserves are in close proximity to each other and both manage the access with marked routes and dog walking routes, with dogs on a lead.

**Detailed design features of the access proposal**

The proposed route has taken account of the non-breeding hen harrier that use the wider estuary for passage, including hunting, roosting and visiting birds. The trail does not alter or upgrade any existing access, access points or surfaces, with the new access using the existing surfaces at Welwick. It provides directional signs to guide and give confidence to users on the trail.

Saltmarsh

Throughout the Humber estuary, most saltmarsh is excluded from all CROW access rights, either under section 25A or section 26(3a) of the Act or by military byelaws, which minimises the risk of disturbance to hen harrier and maintains supporting habitat.

Welwick

The proposed trail at Welwick follows a mix of existing walked routes, public rights of way and new access in readiness for the planned managed realignment. At its nearest point, the trail is at least 200m away from the roost in the centre of the excluded marsh. At this point the landward landscape and scrub rise above the trail and the height of a person to conceal users.

Saltfleetby

The trail mainly uses public rights of way on resilient fixed dune grassland on the landward side of Saltfleetby-Theddlethorpe Dunes. The known roost sits at least 200m away from the public right of way and is screened from view by scrub and the dune ridge. This area is dedicated open access in the national nature reserve.

Spurn

The proposed trail at Spurn directs walkers away from Spurn as the trail moves inland at Kilnsea towards the east coast before heading north. This leaves the nature reserve within the coastal access margin. The project does not alter any current access arrangements or surfaces within the reserve.

**Consideration of possible risks to qualifying features at this location in light of the access proposal**

Trail

The trail at the known locations for hen harrier passes by on clearly defined public rights of way and existing walked routes and does not alter any existing access, access points or surfaces. The trail is distant from the roosts and screened from view at all locations, so posing no risk to visual disturbance. The nature of the trail also encourages predictable onward movement to further avoid any risk from disturbance therefore not adversely affecting the conservation objectives for hen harrier. Any installation of access management items is considered far enough away not to conflict with hen harrier, either roosting or feeding.

Coastal access margin

Areas of saltmarsh and reedbed around the Humber estuary, where hen harrier are likely to roost and hunt, are excluded from CROW access rights.

At Saltfleetby the dune is dedicated open access, and has a number of well used de facto routes. Strava Global Heatmap indicates that walkers stay on the path and do not deviate through the dense dune slack vegetation and wetland, where the hen harrier roosts, preferring open, dry, low vegetated areas for ease of walking. Current management on the national nature reserve states that dogs are to be on a lead or under close control at all times. The project does not alter any current access and management or improve any surfaces close by to encourage further use and use away from the trail. Also directional signs on the trail provide confidence to England Coast Path walkers to keep to the route.

At Spurn to minimise the disturbance to hen harrier and other SPA features, CROW access rights have been removed with no year-round public access to the Triangle fields and limited to no dogs within the coastal access margin of the reserve. The known locations on the peninsula, where no dogs are allowed, are past the breach, which significantly reduces visitor numbers, and with visitors managed by the rangers on site.

Therefore with CROW access excluded or access managed within the coastal access margin, where the hen harriers roost, disturbance from any possible increase in footfall from the England Coast Path will not adversely affect the conservation objectives.

**D3.2B Breeding little tern assessment**

| European designation | Qualifying feature(s) | Disturbance by increased access on foot from England Coast Path | Disturbance from installation of infrastructure at establishment | Permanent loss of supporting habitats through the installation of infrastructure |
|---|---|---|---|---|
| Humber Estuary SPA | Breeding little tern | ✓ | ✓ | ✘ |

**Baseline situation**

Little tern currently breed at Beacon Lagoon. The site is actively managed during the breeding season with the area fenced and wardened to increase the fledging success rate. The Humber Management Scheme aims to establish at least four successful breeding colonies additional to the lagoons, with opportunities noted at Spurn, Saltfleetby, Donna Nook realignment site and Tetney Marsh. At present Spurn National Nature Reserve is the only location providing active management to encourage prospecting and breeding little tern by roping off and managing access to these areas. If new locations and suitable habitat becomes available, the England Coast Path will consider these for further CROW access restrictions at that time.

For the current conservation assessment and use of the site by breeding little tern see section D2.3.

Wildlife watching at Kilnsea Wetlands Nature Reserve and Spurn National Nature Reserve provide an attraction to the area, with visitor numbers averaging 45,000 per year at Spurn. It is noted from the Yorkshire Wildlife Trust Spurn Management Plan 2019-2024 that the majority of visitors stay within 100m of the visitor centre and peak times are during the summer. The reserves are in close proximity to each other and both manage the access with marked routes and dog walking routes,

with dogs on a lead. For the current recreational access activity within the Humber estuary see section D2.9.

**Detailed design features of the access proposal**

Beacon Lagoon

The trail follows part of a promoted existing walked route moving inland at the northern end of North Marsh Road to run alongside a newly created wet grassland (avocet field). Once past this field the proposed trail deviates from the existing walked route to create new access on the landward base of the floodbank. This new access runs the length of Beacon Lagoon before it joins the (non-promoted) existing walked route at New Bank and continues onto Easington.

The new access will guide walkers below the bank by closing an existing gate at the top of the bank. The floodbank itself will be excluded from CROW access rights under section 26(3a) of the Act throughout the year, along with the dune and coastal habitat that sits seaward of the lagoon. It is extended throughout the year to take in the interest from passage and over-wintering SPA waterbirds and the SPA assemblage, which also use the wetlands, lagoons and coastal frontage.

The England Coast Path intends to adopt the current access management policy on the promoted route, and extend it to new access around Beacon Lagoon, which is to keep dogs on a lead and to marked routes.

Spurn

The proposed route directs England Coast Path walkers away from Spurn as the trail moves inland at Kilnsea towards the east coast, before heading north. This leaves the nature reserve within the coastal access margin. Little tern attempt to breed at Spurn Point & Chalk Bank each year. These areas are actively managed to encourage nesting by roping off zones and wardening to prevent recreational disturbance. Therefore as part of the project, CROW access rights to the public will be excluded from the fenced areas in the nature reserve under section 26(3a) of the Act between 1st April and 31st August each year. This is further to other wildlife restrictions on the reserve for passage and over-wintering SPA waterbirds and the SPA assemblage.

Beacon Lagoon - Installation of access management infrastructure

The 942m of new access will be created by grass cutting with a new gravel surface for 567m at trail section HBE-4-S026. The infrastructure to put this in place includes gap creation through existing fence lines, retaining existing field gates, a directional sign and 3 advisory signs.

**Consideration of possible risks to qualifying features at this location in light of the access proposal**

Beacon Lagoons

The mitigation to create a new trail landward and below the bank top removes the risk of disturbance from England Coast Path walkers. The removal of the CROW access rights from the bank top and surrounding coastal habitat, as well as limiting the trail to keep dogs on leads and to marked routes avoids the risk of disturbance from England Coast Path walkers.

Spurn

The CROW access rights from 1st April to 31st August each year will be removed within the fenced off zones to promote nesting for prospecting little tern to remove the risk of disturbance from England Coast Path walkers. This is in addition to wardening from the Wildlife Trust and CROW access rights not allowing dogs in the coastal margin of the nature reserve.

Beacon Lagoon - Installation of access management infrastructure

Kilnsea Wetlands is one location with multiple sensitivities for construction of the England Coast Path with breeding little tern and avocet and over-wintering waterbirds overlapping. The construction for the new access will be more prolonged and complex involving larger machinery, therefore increasing the risk of noise and visual disturbance over a longer period of time.

Breeding little terns are the most sensitive and least resilient to disturbance, potentially being displaced from their nests, thus resulting in nest failure, whereas over-wintering waterbirds in the vicinity have the opportunity to move away from the disturbance with avoidance walking and short flights or can redistribute into adjacent supporting habitat and roosts, if temporarily disturbed by random or excessive noise or visual disturbance.

Therefore the construction should take place between 1st September and 31st March, to avoid the little tern and avocet breeding season and any disturbance from the construction. SSSI consent will be required before any work is carried out and will need to consider the location, method and in detail.

**D3.2C Breeding avocet assessment**

| European designation | Qualifying feature(s) | Disturbance by increased access on foot from England Coast Path | Disturbance from installation of infrastructure at establishment | Permanent loss of supporting habitats through the installation of infrastructure |
|---|---|---|---|---|
| Humber Estuary SPA | Breeding avocet | ✓ | ✓ - Kilnsea wetlands | ✖ |

**Baseline situation**

Avocet currently breed in the ponds at Donna Nook realignment site, Northcoates Point and the Avocet field at Kilnsea wetlands, amongst other locations outside the project area.

Donna Nook realignment site

This habitat was created in 2010 and hosts a number of overwintering waterbirds, as well as breeding avocet and nationally important breeding birds. The area is bounded by a public right of way along the flood bank, with an adjacent maintained car park.

Northcoates Point

This area is excluded from CROW access rights under a section 25A of the Act, with the current existing walked route on the bank top. The area is remote with little opportunity for a circular route, once on the bank. The area is fenced between the bank and the lagoons.

Kilnsea wetlands

The grass field, adjacent to Beacon lagoon, is fenced off with newly created scrapes; on two sides of the field is a promoted dog walking route. The spoil from the scrapes has been landscaped at the edge of the field to create a berm and natural visual barrier from dogs.

For the current conservation assessment and use of the site by breeding Avocet see section D2.3.
For the current recreational access activity within the Humber estuary see section D2.9.

**Detailed design features of the access proposal**

Donna Nook realignment site

The trail follows the public right of way with the nesting area included in the coastal access margin. It will not alter any existing access arrangements.

Northcoates Point

This area has been excluded from CROW access rights under a section 25A of the Act. The England Coast Path uses the existing walked route on the bank, which has a well-defined grassy surface. The project will improve directional signs and interpretation from the car park at Horseshoe Point, approximately 2km away, and does not alter current access arrangements. As the site is excluded from the coastal access margin only disturbance from the trail will be assessed.

Kilnsea Wetlands

The trail follows part of a promoted existing walked route moving inland at the northern end of North Marsh Road to run alongside a newly created wet grassland (avocet field). Once past this field the proposed trail deviates from the existing walked route to create new access on the landward base of the floodbank. This new access runs the length of Beacon Lagoon before it joins the (non-promoted) existing walked route at New Bank and continues onto Easington.

Kilnsea wetlands - Installation of access management infrastructure

The new access created adjacent to Beacon lagoon, as mitigation for breeding little tern and SPA waterbirds, including directional and advisory signs around avocet field, may disturb the breeding avocet.

**Consideration of possible risks to qualifying features at this location in light of the access proposal**

Donna Nook realignment site

From the Strava Global Heatmap and site visits to this section it is can be seen that the floodbanks are currently well used with little or no evidence of access from these to the intertidal zone. The banks are wide and exposed with a resilient cut grass surface to allow for easy onward travel. There are no places to stop or attractors to the area, such as benches or facilities, as well as limited opportunity for walking a circuit. Therefore users are more likely to move in a predicted, constant manner to the next available access point rather than be more erratic in movement. The signs and waymarkers installed by the England Coast Path will guide and provide confidence to new users to stay on the path and encourage this onward movement across the trail to reduce the risk of disturbance.

The coastal access margin of the realignment site also supports SPA waterbirds and is relatively undisturbed, there is a risk that a new CROW access right could encourage footfall within the site and prevent non-breeding and breeding species using the area. Therefore to mitigate against this the CROW access rights to the public have been removed year-round under section 26(3a) of the Act.

Northcoates Point

The lagoons are remote from settlements and amenities being approximately 2km from the nearest car park and entry point at Horseshoe Point, meaning that dog walkers usually turn around before reaching this point, using the evidence from the Humber winter bird disturbance survey. The trail is fenced and sits back from the lagoons, which are sheltered by reed and scrub, so that the nature of the habitat provides screening for the current access. This physical barrier and natural screening allows users to pass by unnoticed. The project will not change current arrangements, however it may slightly increase usage with promotion of national trails. As the screening and trail remain,

there will be no risk of disturbance to the conservation objective for breeding avocet from the England Coast Path at this location.

Kilnsea Wetlands

The trail around the field will not increase the risk to disturbance from England Coast Path users, as the field is fenced with low screening at the field edges, which minimises the risk from disturbance, if walking with a dog. To reduce this risk further, as the trail is in adjacent to the field, dogs will be kept on a lead on marked routes. It is accepted that birds in the vicinity of dogs off the lead are more likely to exhibit a disturbance reaction. It is not expected that the England Coast Path will increase users in the area, as it is already popular for wildlife watching, however there are no places to linger on this fenced route, so creating a more predictable onward movement to reduce erratic movement and disturbance, if there was any increase in England Coast Path users at this location.

As the grass field is in the coastal access margin there is opportunity for walkers to exercise their CROW access rights over this newly formed wetland habitat. To avoid potential disturbance to breeding avocet and SPA waterbirds using the field will be excluded from CROW access rights under section 26(3a) of the Act.

Kilnsea wetlands - Installation of access management infrastructure

Kilnsea Wetlands is one location with multiple sensitivities for construction of the England Coast Path with breeding little tern and avocet and over-wintering waterbirds overlapping. Breeding avocet, along with breeding little tern, are the most sensitive and least resilient to disturbance, which could result in nest failure. Therefore the construction should take place between 1st September and 31st March, to avoid the little tern and avocet breeding season and any disturbance from the construction.

**D3.2D Breeding marsh harrier assessment**

| European designation | Qualifying feature(s) | Disturbance by increased access on foot from England Coast Path | Disturbance from installation of infrastructure at establishment | Permanent loss of supporting habitats through the installation of infrastructure |
|---|---|---|---|---|
| Humber Estuary SPA | Breeding marsh harrier | ✓- East Halton Skitter and Haverfield Pits | ✓ - Haverfield Pits | ✖ |

**Baseline situation**

Marsh harrier mainly breed outside the project boundary, but are known to breed at Haverfield pits, Welwick. They are also use Barrow and Barton haven, North Killingholme Haven Pits and East Halton Skitter on the south bank.

For the current conservation assessment and use of the site by breeding marsh harrier see section D2.3. East Halton Skitter is remote from settlements and amenities and has very low levels of use.

Welwick saltmarsh is a nature reserve with the adjacent managed realignment site managed for conservation and habitat creation. The reserve attracts birdwatchers and currently has low levels of access. There are no other facilities, so not attracting casual users.

**Detailed design features of the access proposal**

East Halton Skitter

England Coast Path adopts the current public right of way on the floodbank. To the seaward side of the trail is a parcel of grazed saltmarsh (SSSI unit 100) at Skitter Ness that is available for CROW access rights.

Haverfield Pits

The trail follows an existing walked route past the pits, with directional signs and a barrier to be installed close by. The pits are within the coastal access margin. The trail does not alter or upgrade any existing access, access points or surfaces at these locations.

**Consideration of possible risks to qualifying features at this location in light of the access proposal**

East Halton Skitter

The England Coast Path adopts the current public right of way on the floodbank. The right of way provides a wide well-defined route on a stable grass surface for easy onward progression. There are no amenities or places to stop and linger, leading to more predictable movement, so minimising disturbance. There is sufficient distance from the trail and suitable habitat available within the location, so to minimise disturbance from the trail. The lack of attractions to this exposed part of the coastline with few car parks or opportunities for a circular walks means it is unlikely that the promotion of England Coast Path will significantly increase numbers from the current low levels to adversely affect the conservation objectives of marsh harrier using the open saltmarsh and adjacent farmland for hunting. However at Skitter Ness grazed saltmarsh (SSSI unit 100) is available for CROW coastal access as part of the project. This area is also important for migrating and over-wintering SPA waterbirds and the SPA assemblage as well as breeding habitat for nationally important redshank, therefore as mitigation for all species all CROW access rights have been removed under section 26(3a) of the Act from the parcel year round.

Haverfield Pits

The proposed trail passes by the pits on an existing grass track. Fencing along the alignment prevents public and dog access to the area. There is also scrub along the edge of the ponds to encourage people to stay on the path, as well as providing a natural screen from the pits. The addition of the England Coast Path will not create further disturbance from users and will not adversely affect the conservation objectives of the breeding marsh harrier.

The pits will be available for CROW access within the coastal access margin, which could lead to disturbance of the breeding marsh harrier throughout its lifecycle, therefore to mitigate against this the project will remove all CROW access rights from the pits year round under section 26(3a) of the Act.

The proposals will take account of potential for minor and temporary disturbance along this section during installation of the directional signs and barrier with the work to be completed outside the breeding season.

**D3.2E Grey seal assessment**

| European designation | Qualifying feature(s) | Disturbance by increased access on foot from England Coast Path | Disturbance from installation of infrastructure at establishment | Permanent loss of supporting habitats through the installation of infrastructure |
|---|---|---|---|---|
| Humber Estuary SAC<br>Humber Estuary Ramsar site | Grey seal | ✓ | ✓ | ✓ |

**Baseline situation**

Donna Nook is used from August to December as a breeding ground for grey seal with pupping occurring between October and January. Donna Nook is a National Nature Reserve and a visitor attraction during the pupping season. It can attract 60,000 - 70,000 visitors during November and December, with numbers peaking during the weekends. This access is managed by the Lincolnshire Wildlife Trust with the site being wardened during this time. The viewing area (approximately 620m) is to the north of the reserve leaving other pupping areas free from activity. Established existing routes used by local walkers are available throughout the year, which follow the seaward edge of the dune from Ponderosa to Red Farm track, before moving to the top of the floodbank.

All coastal access margin seaward of the trail is excluded from public access by military byelaws and the landward coastal access margin has been limited to the edge of the trail. For the current recreational access activity within the Humber estuary see section D2.9. For the current conservation assessment and use of the site by grey seal see section D2.4.

**Detailed design features of the access proposal**

The proposed route around Donna Nook contains a seasonal alternative route to protect grey seals during the pupping season. The main trail follows an existing walked route along the seaward edge of the dune from Red Farm track to Ponderosa. 2.4km of new access for the seasonal alternative route is created, as the trail moves inland at Red Farm track into dunes with *Hippophae rhamnoides*. The seasonal route will be used between 1st October and 31st January each year, with the main England Coast Path closed to prevent disturbance.

At the Ponderosa the proposed trail uses the established route used for viewing the seals.
The new seasonal access requires 1.37 km of sea buckthorn clearance to a width of 5m, as well as new access management infrastructure to guide and inform the seasonal alternative route; close off areas, as part of the mitigation to protect pupping grey seals, and to remind walkers of the MoD danger area.

As part of the measures the new access will be fenced on both sides with a stock fence using sheep netting to prevent access between dogs and seals on the seaward side, and contain field gates at regular intervals in the event that a seal gets trapped against the fence. Other infrastructure contains a mix of advisory signs, directional signs and pedestrian gates. These items can be seen in report maps 2d and 2e.

**Consideration of possible risks to qualifying features at this location in light of the access proposal**

It is recognised that the England Coast Path proposal opens up areas that currently have very low levels of access and that access is managed on site during the grey seal pupping season. The

proposal considers this risk to disturbance through increased footfall and mitigates against this by providing a seasonal alternative route that is:

- sheltered from view by passing through mature sea buckthorn
- fenced to prevent any further access through the scrub
- wardened by Lincolnshire Wildlife Trust
- distant from the pupping seals
- allows regular 'seal escape' gates throughout the seasonal route in case of exceptionally high tides and storm surges.

In establishing the seasonal route and installing the access management infrastructure, disturbance to the breeding grey seal as well as other wildlife factors are considered with work taking place, during the least sensitive period for both. Breeding and pupping grey seals are present from August to January, being most vulnerable during pupping from mid-October to mid-January, therefore scrub clearance will need to be carried out once pupping has finished until end of February to avoid the bird nesting season, and with the scrub checked for any early nests before work commences.

Using the Humber Estuary High Tide Roost Review 2013-2014 (N. Cutts, K. Hemingway & S. Thomson 2016). The nearest roost is 200m distant from the nearest works and is used by twite, linnet, snow bunting and skylark with waders being further distant from the shore on the sands, so lowering the risk of temporary noise and visual disturbance due to the distances.

SSSI consent will be required before any work is carried out and will need to consider the location, method, timing and removal of the scrub in detail.

Consideration for the loss of supporting habitat: embryonic shifting dunes, shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes"), fixed dunes with herbaceous vegetation ("grey dunes"), dunes with *Hippophae rhamnoides*, intertidal mixed sediments, intertidal mud, intertidal sand and muddy sand, are considered within the Humber Estuary SAC qualifying features below (see D3.2H).

The overall potential loss of supporting habitat within the Humber Estuary SAC that supports breeding grey seal is 0.695ha, which is the area of scrub clearance and new access management infrastructure on dunes with *Hippophae rhamnoides* and a multi-finger post on saltmarsh at Saltfleet. This is considered an inconsequential loss over the designated area of 36657.15ha.

Overall these mitigation measures prevent disturbance to the breeding grey seal, so removing any adverse effect to the qualifying feature.

**D3.2F Estuaries assessment**

| **European designation** | **Qualifying feature(s)** | **Disturbance by increased access on foot from England Coast Path** | **Disturbance from installation of infrastructure at establishment** | **Permanent loss of supporting habitats through the installation of infrastructure** |
|---|---|---|---|---|
| Humber Estuary SAC<br>Humber Estuary Ramsar site | Estuaries | ✓ | ✘ | ✓ - Saltmarsh |

**Baseline situation**
The 'Estuary' feature is made up of a number of sub-features, all of which are covered by other qualifying features described and considered in this assessment.

For the current conservation assessment see section D2.5. For the current recreational access activity within the Humber estuary see section D2.9.

**Detailed design features of the access proposal**
The qualifying feature sits in part within the coastal access margin of the proposal, where it is above the mean low water mark and not already excluded for public access by military byelaws or as unsuitable for access under section 25A of the CROW Act. The trail does not travel across this feature. The proposal includes the installation of 1 multi-finger post (0.01m$^2$) at Saltfleet adjacent to a popular existing sand surfaced walked route.

**Consideration of possible risks to qualifying features at this location in light of the access proposal**
The impacts considered are discussed as part of the qualifying habitat features: mudflats and sandflats not covered by seawater at low tide, *Salicornia* and other annuals colonising mud and sand and Atlantic salt meadows in section D3.2H.

The assessment for mudflats and sandflats not covered by seawater at low tide, *Salicornia* and other annuals colonising mud and sand and Atlantic salt meadows in section D3.2I conclude no adverse effect, so therefore it is concluded that if all the sub-features within the estuary qualifying feature are not impacted there is no overall adverse effect on the estuary feature.

**D3.2G Mudflats and sandflats not covered by seawater at low tide, *Salicornia* and other annuals colonising mud and sand and Atlantic salt meadows assessment**

| European designation | Qualifying feature(s) | Disturbance by increased access on foot from England Coast Path | Disturbance from installation of infrastructure at establishment | Permanent loss of habitat through the installation of infrastructure |
|---|---|---|---|---|
| Humber Estuary SAC | Mudflats and sandflats not covered by seawater at low tide, *Salicornia* and other annuals colonising mud and sand, Atlantic salt meadows. | ✓ | ✘ | ✓ - Saltmarsh |

**Baseline situation**
<u>Mudflats and sandflats not covered by seawater at low tide</u>
<u>Mablethorpe to Humber Bridge</u>:

- All mudflats are excluded from the project, under section 25A A of the CROW Act or through military byelaws.
- Sandflats available for access in this project and assessed are: Theddlethorpe St Helens (SSSI unit 1), Saltfleet (part SSSI unit 166), Horseshoe Point to Cleethorpes (SSSI units 168, 169, 188, 168, 174 & part 174).

Humber Bridge to Easington:

- All mudflats are excluded from the project, as unsuitable for access under section 25A A of the CROW Act.
- Sandflats available for access in this project and assessed are: Spurn Point (SSSI units 164 & 163) and Easington (SSSI unit – The lagoons 1).

*Salicornia* and other annuals colonising mud and sand and Atlantic salt meadows
Mablethorpe to Humber Bridge: Saltfleet to North Somercotes Warren (unless access is excluded through military byelaws) (part SSSI unit 166), Cleethorpes (SSSI unit 186), Skitter Ness (SSSI unit 100) and Barton foreshore (SSSI units 125,128,139).

Humber Bridge to Easington: The Outstray to mean high water, Cherry Cobb Sands (SSSI units 76, 77 & 78), West Bank to mean high water, Sunk Island (SSSI units 81), Spragger Clough & The Outstray, Sunk Island (SSSI unit 82, 83 & 150)

Recreation

Mablethorpe to Humber Bridge: current recreational access is available at all locations with high numbers of visitors on the south bank at Mablethorpe, Saltfleet, Tetney/Humberston Fitties and Cleethorpes, as recreational destinations for locals and holidaymakers.

From Tetney/Humberston Fitties to Horseshoe Point visitor numbers fall, as the route becomes rural and distant from facilities. Horseshoe Point is approximately 10km, as the CROW flies, from Cleethorpes in the north and Saltfleet to the south. It is accessed by one car park, which is approximately 3.5km from the main road. At the other locations the areas are serviced with a range of facilities such as car parks, toilets, cafes and overnight provision.

Skitter Ness and Barton foreshore sit in the mid-Humber estuary on the south bank. Skitter Ness is remote with low levels of access on the public right of way, which the trail proposes to use. There is one access to the grazed saltmarsh across the floodbank with an access desire line formed closer to the estuary running the seaward length of the saltmarsh. The saltmarsh is being managed under Countryside Stewardship to increase the suitability for roosting and breeding species.

At Barton foreshore the adjacent public footpath on the floodbank has high levels of access from circular and short walking routes, as well as attractions such as the Waters' edge country park and a series nature reserves on the landward edge of the proposed trail. The saltmarsh is access from a slipway with some access evidenced close to the upper shore at Barton Haven.

Humber Bridge to Easington: on the north bank access on the sandflats is managed at Spurn Point and to some extent at Easington during little tern breeding season. Both locations experience good numbers of visitors for wildlife watching with the Discovery Visitor Centre close by providing good car parking and facilities. Where the saltmarsh is present on the north bank the areas are rural and isolated with few access points and small car parking areas and pull-ins. The proposed trail passes by on a public right of way at Cherry Cobb Sands and on existing walked routes around Sunk Island. Walkers currently access the route at Stone Creek between the two areas, with more walking west towards Cherry Cobb Sands, along a maintained grass path.

Visitor numbers and recreational activity across the estuary can be evidenced from the Humber Management Scheme reports: Results of the recreational visitor surveys across the Humber Estuary (Fearnley, H., Liley, D. & Cruickshanks, K. (2012)) and Humber winter bird disturbance study (Ross, K., Liley, D. (2014)).

In a recent saltmarsh survey bare substrate from anthropogenic activity was not seen as a major problem. Bare areas were noted in 5 units out of the 30 surveyed, including unit 186 caused by use of tracks/footpaths. In the middle estuary, units 76, 77, 78 and 81 have new saltmarsh vegetation in adjacent areas. (Jukes, A. and Pawley, E. (2018) Humber Estuary SSSI NEFU Saltmarsh Surveys 2018 (Draft). Natural England).

For current recreational access activity see section D2.9. For the current conservation assessment see section D2.6.

**Detailed design features of the access proposal**

Mudflats and sandflats not covered by seawater at low tide

The proposed trail only crosses areas of sandflat for 0.68km at Mablethorpe and 0.26km at Saltfleet with the rest of the habitat only included in the coastal access margin of the project. The proposed trail follows either on existing walked routes or public rights of way and does not alter or upgrade any of the trail, other than replace worn infrastructure or add/replace waymarkers and directional signs at junctions to the path. No new access management infrastructure will be placed on this feature as part of the project.

*Salicornia* and other annuals colonising mud and sand and Atlantic salt meadows

The proposed trail at all locations does not use any areas of saltmarsh habitat and is only included in the coastal access margin of the project. The proposed trail follows either on existing walked routes or public rights of way and does not alter or upgrade any of the trail, other than replace worn infrastructure or add/replace waymarkers and directional signs at junctions to the path. One multi-finger post is intended to be placed at the edge of the existing walked route at Saltfleet (map MHB 2a) where the saltmarsh transitions to dune with *Hippophae rhamnoides* to direct walkers from the shore to the floodbank.

**Consideration of possible risks to qualifying features at this location in light of the access proposal**

Mudflats and sandflats not covered by seawater at low tide

Evaluating the access data from Strava Global Heatmap and from site visit observations foot access spreads across the sands and is not concentrated along a linear route. The existing paths currently allow access to the sands and this will continue. Clear directional signs give confidence for walkers to continue along the trail, so may reduce the number of walkers straying from the path, however the attraction to the sands will not alter. Where the trail is on the beach at Mablethorpe and Saltfleet, this is for the shortest distance possible and is a tiny proportion of the overall habitat.

Trampling through walking may cause disturbance to the surface and shallow sub-surface of the foreshore (Wyles et al., 2014), however the sands, offer a wide expanse, are highly dynamic and the extent of footfall at present is localised and temporary, being reset daily through natural processes. The inter-tidal sands are currently not impacted by recreational disturbance. Due to the nature and location of the sands it is predicted that the England Coast Path proposal will not increase access to the sands around the holiday locations. On the sands with low levels of access the trail could promote access, so provide a small increase in visitors, however this would be minimal due to the lack of amenities close by. The areas of sand (SSSI units 168, 169) cover approx. 1400ha, so any increased footfall damage would be localised and temporary allowing for tides, leaving vast areas

untouched. This slight increase will not impact the extent, distribution, functioning or structure of the feature.

*Salicornia* and other annuals colonising mud and sand and Atlantic salt meadows

Evaluating the access data from Strava Global Heatmap and from site visit observations, current access to saltmarsh differs between locations. Current access levels are either none or very low, where the saltmarsh is adjacent to mudflat and away from holiday locations. At Cleethorpes leisure centre and Saltfleet walkers follow existing walked routes around the established saltmarsh or cross it at various points to reach the beach. The proposed trail is well defined either being on the floodbank or at Cleethorpes on remnant dune, using rights of way or existing walked routes, and offers separation from the saltmarsh. The SSSI saltmarsh between Cleethorpes Discovery Centre and Humberston has been assessed as 'unfavourable recovering' but most of the saltmarsh up to Saltfleet has been assessed as in favourable condition, albeit with a condition threat to the changes in bird distribution using them as a supporting SPA habitat. In a recent saltmarsh survey bare substrate from anthropogenic activity was not seen as a major problem.

Access routes to the saltmarsh will not alter, as part of the project, and clear directional signs will continue to give confidence for walkers to continue along the trail; the attraction to the sands will remain, so it is expected that walkers will continue to use the developed routes across the saltmarsh at Saltfleet and Cleethorpes. Throughout the year these areas currently attract high numbers of tourists and locals, with locals often visiting on a daily basis. Therefore it is expected that the England Coast Path proposal will not change or increase the pattern of use, so having no adverse effect on the saltmarsh at these locations.

Where there are currently very low levels of access, the levels across the coastal access margin are also not expected to significantly increase or change due to the nature of the landscape offering no attraction to cross the habitat on the mudflat and having separation from the trail with a well-defined route on the top of the floodbanks. The saltmarsh at these locations is either unfavourable-recovering or unfavourable due to under-grazing or coastal squeeze. It is not threatened by recreational disturbance and in the rural, isolated locations grazing is now taking place to improve the habitat.

Light trampling (between 1,851 and 3,630 passes per year) could be beneficial to seashore communities (but not specifically saltmarsh – Sue Rees pers comm.) by keeping vegetation in an immature and dynamic stage (Andersen (1995)) and a review on the effects of trampling on intertidal habitats by Tyler-Walters and Arnold (2008) found that saltmarsh communities are relatively resistant to trampling, but can still be affected (by foot access). To add to this, mitigation is in place year round excluding all public access to protect passage and overwintering SPA waterbirds and the SPA waterbird assemblage, marsh harrier and nationally important breeding waders from disturbance at Skitter Ness, Barton foreshore, Cherry Cobb Sands and Sunk Island. These measures will therefore help to prevent trampling and the project will have no adverse effect at these locations.

The new multi-finger post to be installed to direct walkers off the saltmarsh at Saltfleet covers 0.01m$^2$ of potential permanent habitat loss. The post will be installed adjacent to a well-trodden existing walked route. This loss from a total area of approximately 783.87ha of Atlantic salt meadow on the Humber is inconsequential to the continuity and functioning of the habitat as a whole, so will not adversely affect the SAC feature.

**D3.2H Embryonic shifting dunes, shifting dunes along the shoreline with *Ammophila arenaria* ('White dunes'), fixed dunes with herbaceous vegetation ('Grey dunes'), dunes with *Hippophae rhamnoides,* humid dune slack assessment**

| European designation | Qualifying feature(s) | Disturbance by increased access on foot from England Coast Path | Disturbance from installation of infrastructure at establishment | Permanent loss of habitat through the installation of infrastructure |
|---|---|---|---|---|
| Humber Estuary SAC | Embryonic shifting dunes, shifting dunes along the shoreline with *Ammophila arenaria* ('White dunes'), fixed dunes with herbaceous vegetation ('Grey dunes'), dunes with *Hippophae rhamnoides,* humid dune slack | ✓ | ✖ | ✓ |

**Baseline situation**

Dune systems within the Humber Estuary SAC that are available for access within the proposal and assessed are:

Mablethorpe to Humber Bridge: Donna Nook (SSSI unit 168 - trail only), Humberston Dunes (part SSSI unit 169 and 189) and Cleethorpes leisure centre (SSSI unit 186)

Humber Bridge to Easington: Spurn (SSSI unit 164) and Long Bank, Kilnsea wetlands (The Lagoons, SSSI unit 1)

For the current conservation assessment see section D2.7.

Visitor numbers and recreational activity across the estuary can be evidenced from the Humber Management Scheme reports: Results of the recreational visitor surveys across the Humber Estuary (Fearnley, H., Liley, D. & Cruickshanks, K. (2012)) and Humber winter bird disturbance study (Ross, K., Liley, D. (2014)).

For the current recreational access activity see section D2.9.

**Detailed design features of the access proposal**

Mablethorpe to Humber Bridge

Donna Nook

The proposed route around Donna Nook contains a seasonal alternative route to protect grey seals during the pupping season. The trail follows an existing walked route along an established track at the seaward edge of the dune. 2.4km of new access, on various habitats, is created between North Somercotes and Stonebridge Cottages for the seasonal alternative route. The trail crosses the dunes at sections MHB-2-S012, MHB-2-S013, MHB-2-A003, MHB-2-A004, MHB-2-A005, MHB-2-A008 and MHB-2-A009.

1.37km of sea buckthorn clearance is required for the new access to a width of 5m at MHB-2-S013 and MHB-2-A004, MHB-2-A005, MHB-2-A006 and MHB-2-A008. This equates to 0.685 hectares.

Donna Nook – new access management infrastructure

To guide and inform the seasonal alternative route; close off areas, as part of the mitigation to protect pupping grey seals, and to remind walkers of the MoD danger area new infrastructure is to be installed on dune habitat. The access management infrastructure contains a mix of advisory signs, directional signs, gates, steps and stock fencing. The fencing of the temporary route has been extensively consulted on, and is largely designed to ensure the separation of dogs from the seals. The new infrastucture equates to 5.471m$^2$ of potential permanent loss of SAC and supporting SPA habitat, which is considered acceptable in the wider context.

Humberston Dunes

The dune is approximately 1.5km and stretches into Tetney marsh by 420m. It is used as sea defence with holiday chalets and caravan parks sat landward of the dunes and currently has five crossing points to reach the beach. The proposed trail runs along a well-trod route on top of this narrow dune from the northern edge of Humber mouth yacht club to the start of Marine Walk and does not alter or upgrade the existing walked route.

Cleethorpes

At Cleethorpes the trail sits outside the boundary of the SAC and follows the popular and well defined Marine Walk public right of way with the low level dune system and associated saltmarsh seaward of the trail within the coastal access margin and SAC boundary. The proposed trail and coastal access margin does not alter the current access arrangements with walkers accessing the margin at numerous formal and informal points. No new access management infrastructure will be placed on this feature as part of the project.

Humber Bridge to Easington

Spurn

The dunes at Spurn sit within the coastal access margin with the proposed trail following the road at Kilnsea, approximately 1km distant from start of the dune habitat. No new access management infrastructure will be placed on this feature as part of the project.

Long Bank

The dunes at Long Bank are within the coastal access margin with the proposed trail following an existing walked route along the top of the floodbanks in the north and creating new access in the south around Beacon lagoon, where the trail proposes to align at the landward side of the floodbank, to protect overwintering waterbirds and breeding little tern using the dunes and lagoons. No new access management infrastructure will be placed on this feature as part of the project.

**Consideration of possible risks to qualifying features at this location in light of the access proposal**

Mablethorpe to Humber Bridge

Donna Nook - Trail

Where there is no scrub clearance the proposed trail follows existing walked routes on gravel (MHB-2-S012 and MHB-2-A009) and grass (MHB-2-A003), where it creates a new route with a grass surface on the landward edge of the dune. As the trail follows on an existing gravel surface and does not alter this, it will not have an adverse effect on the dune system.

Where the proposed trail creates new access at section MHB-2-A003 and through scrub clearance (MHB-2-S013, MHB-2-A004, MHB-2-A005, MHB-2-A006 and MHB-2-A008), this alternative route will be available for use between 1st October and 31st January each year, when the main route is closed to avoid pupping seals. It is understood that the trail will increase footfall at this location, as this will be creating new public access in an area of interest.

It is predicted that the potential for damage from trampling on the alternative route will be limited and temporary with the fixed dune grassland being the most resilient of dune habitats and the closure of this alternative route between 31st January and 1st October each year allows for sufficient recovery time over the growing season when the vegetation is better able to recolonise from any damage.

Donna Nook - scrub clearance

Dunes with *Hippophae rhamnoides* are the most extensive dune type on the Humber SAC, covering 66.07ha of the estimated 172.07 ha of dune at the time of classification. The *H. rhamnoides* scrub of the Humber SAC alone contributes roughly 28% to our national resource. The seasonal alternative route will be cut and maintained to be open for use between 1st October and 31st January each year. The seasonal route sits 40 – 50m inland from the proposed trail and is aligned through sections of dense closed canopy mature scrub. As part of the on-going conservation management of the reserve, rotational scrub cutting is encouraged and there is a conservation objective to maintain a diverse age structure amongst the scrub habitat to sustain the feature in the longer term. Sea buckthorn is extending seaward on the dune habitat within the reserve.

Each phase of growth offers different microclimatic conditions and microhabitats, therefore it is important to maintain a mosaic of sea buckthorn in different phases of growth. Typically this age structure should comprise 30% of scrub area being in colonising stage, 10% of scrub less than 5 years old and 20% more than 20 years old.

The scrub clearance on the seasonal alternative route will open up the structure providing a positive edge effect and to allow for different microclimatic conditions within the mature scrub area. The clearance does not fragment the dune feature and without maintenance scrub would readily recolonise the area. The ground surface will remain natural and has the potential to develop into the scarcer fixed dune habitat on the Humber SAC. From the clearance the overall extent of the scrub reduces by 1.37% over the estimated feature extent (66.07ha) at classification. This does not significantly reduce the extent and distribution of the feature, as it easily recolonises on the reserve and elsewhere on the Humber SAC, nor does it adversely affect the structure and functioning of the feature, which has the conservation objectives as maintain.

The timing of establishing the new route and associated infrastructure is considered for disturbance at section D3.2E (grey seals) & D3.2A (SPA waterbirds).

SSSI consent will be required before any work is carried out and will consider the method and removal of the scrub.

Donna Nook – new access management infrastructure

0.465$m^2$ of the new access management infrastructure is beside gravel or bare earth tracks, on mown grass or concrete yards, which are part of the site fabric of the designations and not part of the qualifying feature. The remaining 5.006$m^2$ of the new infrastructure is part of the new seasonal alternative route, and within the 5m width cut for the trail. As the new items are to be installed within the cleared scrub, the area does not add to the loss of habitat already considered, and therefore does not have an adverse effect on the designation.

The timing of establishing the new route and associated infrastructure is considered for disturbance at section D3.2E (grey seals) & D3.2A (SPA waterbirds). SSSI consent will be required before any work is carried out and will consider the method and removal of the scrub.

Humberston Dunes

Evaluating the access data from Strava Global Heatmap, site visit observations and the Humber Management Scheme visitor survey (Fearnley, H., Liley, D. & Cruickshanks, K. 2012) foot access across the dune links two highly accessed areas of sand and can be concentrated along this route, especially at high tide, before walkers spread across the sands. The existing walked route currently has benches at intervals along the route and allows access to the sands, which will continue. The area already has high levels of access on existing routes and on the sands, with heavily used car parks at each end of the dune system. New clear directional signs at each end of the dune give England Coast Path walkers' confidence to continue along the trail, so may encourage a small uptake in new walkers using the path to explore further afield or to use the trail at high tide rather than returning.

The dune system from the Humber mouth yacht club to the start of Marine Walk is highly modified being used for amenity landward of the trail and with sea defence groynes and chestnut paling to the front, so not allowing for natural processes. The condition assessment is unfavourable-recovering because of this. Recreational disturbance has not been highlighted as a threat to the condition and current disturbance by footfall allows for open sand areas. Some recreational disturbance is now often seen as beneficial to dune management in creating open sandy areas. The foreseeable small uptake in numbers using the trail at this location, by the encouragement of signage, once it becomes the England Coast Path is considered to have no adverse effect because the increase will be a very small proportion of new walkers compared to its current use by local walkers, along with its vicinity to settlements and amenities.

At the southern end of the dune in Tetney Marsh the spur offers local walkers and dog walkers a slightly raised, dry surface and allows for a short walk. It sits some distance from the trail and the trail directs England Coast Path walkers away from the area. The adjacent car cark is highly used to access the surrounding coastal habitats including the dune. It is not expected that levels of access will increase here with the introduction of the proposal, due to its vicinity to settlements, amenities, its current local use and the route proposed.

Cleethorpes

The dunes run from the leisure centre to the end of Marine Walk before becoming Humberston dunes; approximately 2km in length. The dunes are backed by a miniature railway, boating lake, car parks and caravan parks with numerous walked routes intersecting the dunes and the tarmacked Marine Walk sitting on top of the low ridge. Studies (Fearnley, H., Liley, D. & Cruickshanks, K. (2012) and Ross, K., Liley, D., (2014) and observations from site visits and Strava Global Heatmap show the area has a high levels of access throughout the year with local as well as tourist use with the most popular activity walking or walking with a dog. In 2017 Cleethorpes was visited by 3.4 million people. (NE Lincs Council STEAM report 2016).

The dune system is unfavourable-recovering due to lack of land management and sea buckthorn clearance. Recreational disturbance has not been highlighted as a threat to the condition and some recreational disturbance is now seen as beneficial to dune management in creating open sandy areas.

Along this section of trail England Coast Path will not make any changes to this highly accessible and accessed route, adopting the public right of way. The draw to this location, as a seaside resort with many facilities, will remain with visitors using the trail and associated coastal access margin on a very regular basis for daily or weekly exercise, as well as, a holiday destination (Fearnley, H., Liley, D. & Cruickshanks, K. (2012). It is not foreseen that the England Coast Path will increase numbers or change the pattern of use here to cause an adverse effect on the distribution, extent and function of the dune system.

Humber Bridge to Easington:

Spurn

The dunes lie within the Spurn National Nature Reserve. The strandline, mobile and embryo sand dunes are in favourable condition with good species diversity. The SSSI as a whole is unfavourable recovering and fails to meet the SSSI assessment target for fixed dune grassland amongst other SSSI features. This is due to land management and the decline in bird species over the reserve. Recreational disturbance to the dunes has not been highlighted as a threat to its condition. Wildlife watching and the new visitor centre provide an attraction to the area, with visitor numbers averaging 45,000 per year. The reserve manages the access with formal marked routes crossing the dunes, which has prevented other desire lines forming. It is noted from the Yorkshire Wildlife Trust Spurn Management Plan 2019-2024 that the majority of visitors stay within 100m of the visitor centre and peak times are during the summer. Therefore minimising any current impact of the dunes, as they start approximately 300m south of the centre. It is not foreseen that England Coast Path will increase numbers to the coastal access margin to cause an adverse effect on the distribution, extent and function of the dune system.

Long Bank

The dunes here are subject to coastal squeeze and eroding, with an open, sandy structure, which is difficult to walk on. The area attracts local walkers and keen birdwatchers. Walkers currently access the area on the floodbanks and the beach, passing at the seaward base of the low-lying dunes with some observed desire lines across the dune between the beach and lagoons at the northern end. The southern part is wardened during the little tern nesting season. When the site was last assessed it passed on all attributes apart from the extent due to coastal squeeze, which is mitigated against with the Environment Agency's habitat compensation scheme. Due to the nature of the dunes and more stable walking surfaces close by it is not foreseen that England Coast Path will increase numbers to the coastal access margin to cause an adverse effect on the distribution, extent and function of the dune system.

However as part of the mitigation for Humber Estuary SPA features (breeding little tern, qualifying overwintering and passage waterbirds and the assemblage of qualifying overwintering and passage waterbirds) the dune system around Beacon Lagoon will be excluded from CROW access rights year round for nature conservation (section 26(3a) of CROW Act).

**D3.2I Embryonic shifting dunes, shifting dunes along the shoreline with *Ammophila arenaria* ('White dunes'), fixed dunes with herbaceous vegetation ('Grey dunes'), dunes with *Hippophae rhamnoides,* humid dune slack assessment**

| European designation | Qualifying feature(s) | Disturbance by increased access on foot from England Coast Path | Disturbance from installation of infrastructure at establishment | Permanent loss of habitat through the installation of infrastructure |
|---|---|---|---|---|
| Saltfleetby-Theddlethorpe Dunes & Gibraltar Point SAC | Embryonic shifting dunes, shifting dunes along the shoreline with *Ammophila arenaria* ('White dunes'), fixed dunes with herbaceous vegetation ('Grey dunes'), dunes with *Hippophae rhamnoides,* humid dune slack. | ✓ | ✖ | ✓ |

**Baseline situation**
Saltfleetby-Theddlethorpe Dunes are part of a wider SAC with Gibraltar Point. The current conservation assessment for the Saltfleetby-Theddlethorpe Dunes & Gibraltar Point SAC is at section D2.8.

Current recreational access is available throughout the Saltfleetby-Theddlethorpe Dunes, as part of the dedicated open access of the National Nature Reserve. There are set promoted trails throughout the nature reserve and dogs are required to be on a lead or under close control at all times. The dunes are adjacent to Mablethorpe in the south and are accessed by 5 car parks along the dunes, with a further 4 close by. In the south the dunes lead onto beach, with desire lines traversing them to reach the sands, whereas in the north the dunes are landward of saltmarsh, which is excluded from through military byelaws.

Visitor numbers and recreational activity across the estuary can be evidenced from the Humber Management Scheme reports: Results of the recreational visitor surveys across the Humber Estuary (Fearnley, H., Liley, D. & Cruickshanks, K. (2012)) and Humber winter bird disturbance study (Ross, K., Liley, D. (2014)).

For current recreational access activity see section D2.9.

**Detailed design features of the access proposal**
The majority of the proposed trail at this location lies on the landward boundary of the SAC on public rights of way, sometimes in the boundary sometimes outside. Small sections of existing walked routes are used to link up the rights of way. The proposed trail and coastal access margin do not alter the current access arrangements with walkers accessing the margin at numerous points nor does it intend to upgrade any surface.

New access management infrastructure within the SAC accounts for 0.227$m^2$ of potentially permanently lost habitat. This is made up of 17 way-markers or directional signs, 2 advisory signs and 1 kissing gate, where the trail crosses a fence line.

**Consideration of possible risks to qualifying features at this location in light of the access proposal**
The dunes run from the edge of Mablethorpe to Saltfleet; approximately 7km in length. Studies (Fearnley, H., Liley, D. & Cruickshanks, K. (2012) and Ross, K., Liley, D., (2014) and observations (Strava Global Heatmap and Saltfleetby-Theddlethorpe National Nature Reserve) show the area has

high levels of access throughout the year with local as well as tourist use with the most popular activities being walking or walking with a dog.

The dune system is unfavourable-recovering due to the dominance of sea buckthorn with land management agreed to clear it. In 2016/17 recreational disturbance was identified as a threat to the condition due to a new right of way through a key moth habitat, as well as the management of dogs across the site with the establishment of the dedicated open access. The moth habitat and the England Coast Path is considered as part of the Nature Conservation Assessment and dogs are managed on site through wardening, leaflets and clear signage.

Where the trail follows existing walked routes the surface is a mix of gravel, boardwalk and grass on fixed dune habitat, which is more stable and resilient to footfall than mobile dunes. The trail also uses the fixed dune habitat along the public rights of way at the back of the dune. Along this section of trail England Coast Path will only add signs to guide walkers along the path and improve accessibility at one location and will not alter the trail route, surface or access to the available coastal access margin. New directional signs will give walkers confidence of the route and allow walkers to stay on the path and not deviate across the dunes to establish new desire lines. The draw to this location will remain with visitors using the trail and associated coastal access margin on a very regular basis for daily or weekly exercise, as well as, a holiday destination (Fearnley, H., Liley, D. & Cruickshanks, K. (2012). It is not foreseen that England Coast Path will increase numbers here to cause an adverse effect on the distribution, extent and function of the dune system.

The new access management infrastructure is to be installed next to public rights of way or hardstanding, where the ground is considered as non-contributory land. New infrastructure on established existing routes amount to 0.227$m^2$, which is considered an inconsequential reduction in extent of dune which is surveyed at 64.7ha.

**3.3 Assessment of potentially adverse effects (taking account of any additional mitigation measures incorporated into the design of the access proposal) alone**

| **Table 37: Assessment of adverse effect on site integrity alone** | | | |
|---|---|---|---|
| **Risk to conservation objectives** | **Relevant design features of the access proposal** | **Can 'no adverse effect' on site integrity be ascertained?**<br>**(Yes/No) Give reasons.** | **Residual effects?** |
| Disturbance to breeding overwintering waterbirds, including geese, as a result of the access proposal, leads to reduced breeding success and reduction in population and/or contraction in the distribution of qualifying features within the site. | • All the mudflats within the project area are restricted under section 25A of the CROW Act, as unsuitable for access or by military byelaws.<br>• All the saltmarsh, apart from a small area at Saltfleet and Cleethorpes, within the project area is restricted either:<br>  ○ under section 25A of the CROW Act, as unsuitable for access.<br>  ○ by military byelaws.<br>  ○ under section 26(3a) of the CROW Act, for nature conservation.<br>• The majority of the sandflats within the project area are restricted under section 25A of the CROW Act, as unsuitable for access or by military byelaws.<br>• Where not already excluded from CROW access rights sandflats:<br>  ○ Have current very high levels of access that the project will not add to.<br>  ○ At mid to low tide are extensive and usually allow spatial separation of the trail users and waterbirds.<br>• Other areas of coastal access margin excluded from CROW access right under section26(3a) of the Act are:<br>  ○ Donna Nook realignment site. | Yes – no adverse effect.<br><u>Coastal access margin</u><br>The majority of the coastal access margin has been excluded from CROW access rights or has limited CROW access rights to avoid disturbance by the potential increased footfall from the project. Where there are no limits:<br>• these (Mablethorpe and Cleethorpes) have very high levels of current access and are already heavily promoted as holiday destinations with many attractions/facilities, or<br>• are remote and extensive at mid to low tide, being unavailable for access at high tide during the most sensitive time for the waterbirds.<br>Away from the beaches, the nature of the wide open, isolated landscape discourages new users off a defined path with reduced confidence to venture away from a landmark into an unknown area, especially when there is nothing to draw them away from the path, such as a bench, structure or facilities. | Yes from increase in use on the trail within close proximity to high-tide and functionally linked land roosts, where there is no screening.<br><br>No from the coastal access margin. |

| Table 37: Assessment of adverse effect on site integrity alone | | | |
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| **Risk to conservation objectives** | **Relevant design features of the access proposal** | **Can 'no adverse effect' on site integrity be ascertained?**<br>**(Yes/No) Give reasons.** | **Residual effects?** |
| | ○ Part of the old western floodbank at Paull Holme Strays.<br>○ Part of the floodbank at Welwick.<br>• A suite of CROW access limits are introduced at Spurn and Kilnsea wetlands, including:<br>○ No dogs within the coastal access margin of the National Nature Reserve.<br>○ Keep dogs on leads and to walked routes around How Hill and avocet field.<br>○ All CROW access rights removed year-round from Triangle fields, How Hill, avocet field and land around Beacon lagoon.<br>• The proposed trail uses public rights of way/promoted routes (71%) and well-defined existing walked routes (26%), wherever possible.<br>• New access has been assessed and created to avoid disturbance to SPA features or causes no adverse effect being in urban settlements.<br>• A range of access management infrastructure, including a combination of new directional signs, advisory signs and interpretation panels are to be installed to manage access and increase awareness in sensitive locations. The project is working with partners to agree design and information.<br>• Installation of access management infrastructure will be in close to existing paths and not within the disturbance range of roost and foraging locations; generally be for a very short time period, using hand | The project does not add any attractions, such as benches, structures, visitor centres or facilities to encourage visitors and increase footfall.<br><u>Trail</u><br>The promotion of the trail will bring a negligible proportion of visitors to areas, as the project uses defined public rights of way and established existing walked routes. It does not change any surrounding current access, entry/exit points and only offers surface improvements to mitigate against sensitive nature or within an urban setting.<br>The coast falls into 3 general land use categories:<br>• Heavily promoted holiday destination or visitor attraction.<br>• Industrial centres/docks and urban settlements.<br>• Remote countryside with few access points and limited car parking that offers little attraction to the ad-hoc user.<br>Improved signage could encourage new users and users extending their walk with improved confidence in the route, however this would be concentrated around existing entry/exit points and extend out from these points. The distance limit of this depends on the type of walker with leisure and dog walkers covering on median average 1.86km or 2.29km during winter and long distance and day | |

| Table 37: Assessment of adverse effect on site integrity alone | | | |
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| **Risk to conservation objectives** | **Relevant design features of the access proposal** | **Can 'no adverse effect' on site integrity be ascertained?**<br>**(Yes/No) Give reasons.** | **Residual effects?** |
| | and small power tools, such as spades and electric drills. Larger works for scrub clearance will have a written specification at the time of SSSI assent request.<br>• The trail using public rights of way and existing walked routes passes by the landward edge of functionally linked agricultural habitat, which is remote and extensive.<br>• The trail will be re-aligned as part of the managed realignment schemes. | walkers aiming for the next available settlement/facilities.<br>With the average distance walked little more than 1km from an access point this leaves many undisturbed periods and undisturbed areas along the route and improved signage also guides and provides confidence to new users encouraging less erratic and more predictable movement to minimise disturbance.<br>The project relies on third party promotion of the trail.<br><u>Functionally linked land</u><br>The trail uses established paths alongside the edge of functionally linked agricultural land and does not enter any of these areas. The over-wintering waterbirds generally avoid the field edges preferring the middle of large, open, flat fields to allow for vigilance during feeding, so putting themselves at a distance from the trail.<br>The habitat is extensive and use moves around with crop rotation, height and density and soil moisture. Peak use is in winter through to early spring, so outside the peak recreation time of late spring and summer. The roosts are in isolated locations away from settlements and amenities with few access points, so offering little attraction to the area for new walkers. | |

| Table 37: Assessment of adverse effect on site integrity alone | | | |
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| **Risk to conservation objectives** | **Relevant design features of the access proposal** | **Can 'no adverse effect' on site integrity be ascertained?**<br>**(Yes/No) Give reasons.** | **Residual effects?** |
| | | The nature of the trail at these locations also encourages predictability in the onward movement with defined paths and improved directional signs and if any temporary disturbance does occur there is extensive availability of habitat allowing the birds to easily redistribute to close by. | |
| Disturbance to overwintering non-breeding hen harrier, as a result of the access proposal, leads to reduced fitness and reduction in population and/or contraction in the distribution of qualifying features within the site. | <u>Saltmarsh</u><br>• Throughout the Humber estuary saltmarsh is excluded from access through military byelaws or all CROW access rights have been removed, either under section 25A A or section 26(3a) of the Act, which minimises the risk of disturbance to hen harrier and maintains supporting habitat.<br><u>Welwick</u><br>• The proposed trail follows an existing walked route, before joining the public right of way at Welwick Bank<br>• At its nearest point, it is at least 200m away from the roost in the centre of the excluded marsh.<br>• At this point the landward landscape and scrub rise above the trail and the height of a person to conceal users.<br>• The trail does not alter or upgrade any existing access, access points or surfaces.<br><u>Spurn</u> | Yes – no adverse effect.<br>Conservation objectives are to maintain the size of the population, restrict disturbance and maintain extent, distribution and availability of suitable habitat.<br>Areas of saltmarsh and reedbed around the Humber estuary, where hen harrier are likely to roost and hunt, are excluded from CROW access rights.<br><br>The trail at the known locations for hen harrier passes by on clearly defined public rights of way and existing walked routes and does not alter any existing access, access points or surfaces.<br>The trail is distant from the roosts and screened from view at Welwick and Saltfleetby, so posing no risk to visual disturbance. The nature of the trail also encourages predictable onward movement to further minimise any risk from disturbance. | No |

| Table 37: Assessment of adverse effect on site integrity alone | | | |
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| **Risk to conservation objectives** | **Relevant design features of the access proposal** | **Can 'no adverse effect' on site integrity be ascertained?**<br>**(Yes/No) Give reasons.** | **Residual effects?** |
| | • The proposed trail directs walkers away from Spurn at Kilnsea.<br>• The National Nature Reserve is within the coastal access margin.<br>• A suite of CROW access right limits are introduced at Spurn and Kilnsea wetlands, including:<br>  ○ No dogs within the coastal access margin of the National Nature Reserve.<br>  ○ Keep dogs on leads and to walked routes around How Hill and avocet field.<br>  ○ All CROW access rights removed year-round from Triangle fields, How Hill, avocet field and land around Beacon lagoon.<br>• The project does not alter any current access arrangements or surfaces within the reserve.<br><u>Saltfleetby</u><br>• The trail mainly uses public rights of way on resilient fixed dune grassland on the landward side of Saltfleetby-Theddlethorpe Dunes.<br>• The known roost sits at least 200m away from the public right of way and is screened from view by scrub and the dune ridge.<br>• The national nature reserve is dedicated open access. Dogs are to be on a lead or under close control at all times.<br>• The trail does not alter or upgrade any existing access, access points or surfaces. | At Spurn the CROW access right limits, also minimise the disturbance to hen harrier with no year-round public access to Triangle fields and no dogs within the coastal access margin of the reserve. The known locations on the peninsula is also past the breach, which reduces visitor numbers and with visitors managed by the rangers on site.<br>At Saltfleetby the dune is currently accessible and has a number of well used de facto routes, evidence indicates that walkers stay on the path and do not deviate through the dense dune slack vegetation and wetland, where the hen harrier roost is, preferring open, dry, low vegetated areas for ease of walking. Dogs are to be on a lead or under close control at all times. The project does not alter this or improve any surfaces close by to encourage further use and use away from the trail. Also directional signs on the trail provide confidence to England Coast Path walkers to keep to the route. | |

| **Table 37: Assessment of adverse effect on site integrity alone** | | | |
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| **Risk to conservation objectives** | **Relevant design features of the access proposal** | **Can 'no adverse effect' on site integrity be ascertained?**<br>**(Yes/No) Give reasons.** | **Residual effects?** |
| Disturbance to breeding little terns, as a result of the access proposal, leads to reduced breeding success and reduction in population and/or contraction in the distribution of qualifying features within the site. | • New path creation at the landward base of the floodbank in the vicinity of the nesting site to avoid visual disturbance from the bank top.<br>• New path creation to be constructed outside of breeding season.<br>• Removal of CROW access rights to the public around Beacon lagoons nesting site.<br>• Removal of CROW access rights to the public in the fenced areas at Spurn National Nature Reserve during 1st April to 31st August each year to aid prospecting birds.<br>If suitable little tern breeding habitat becomes available within the Humber SPA, then further CROW access limits to be assessed. | Yes – no adverse effect.<br>Breeding success of the colonies within the Humber SPA relies on intervention to reduce disturbance and predation.<br>The removal of the CROW access rights in the coastal access margin offer protection to the nesting little terns from the project during breeding season.<br>The design offers separation of the nesting site from the proposed trail by creating new access behind the floodbank at Beacon lagoons.<br>Any new nesting sites will be assessed at the time to remove CROW access rights to the public during the breeding season. | No |
| Disturbance to breeding avocet, as a result of the access proposal, leads to reduced breeding success and reduction in population and/or contraction in the distribution of qualifying features within the site. | <u>Donna Nook realignment site</u><br>• The proposed trail uses the well-used public right of way on the floodbank.<br>• The trail does not alter or upgrade any existing access, access points or surfaces.<br>• The project will improve directional and advisory signs along the trail.<br>The CROW access rights under section 26(3a) of the Act are excluded from the coastal access margin to avoid disturbance to over-wintering SPA waterbirds and breeding avocet. | <u>Donna Nook realignment site, Northcoates Point and North Killingholme Haven Pits</u><br>The England Coast Path adopts the current public right of way and existing walked route on the floodbank, which provides a wide well-defined route on a stable concrete or grass surface for easy onward progression. There are no amenities or places to stop and linger, leading to more predictable onward movement, so minimising the risk of disturbance. There is no access from the path to the breeding areas with the pools set back from the trail. | No |

| Table 37: Assessment of adverse effect on site integrity alone | | | |
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| **Risk to conservation objectives** | **Relevant design features of the access proposal** | **Can 'no adverse effect' on site integrity be ascertained?**<br>**(Yes/No) Give reasons.** | **Residual effects?** |
| | <u>Northcoates Point</u><br>• This area is excluded from CROW access rights under a section 25A of the Act, so will be assessed only for disturbance from the trail.<br>• The areas is not open for public access and access is discouraged with fencing and signs.<br>• The trail uses a well-defined existing walked route on the floodbank with a grassy surface.<br>• The trail does not alter or upgrade any existing access, access points or surfaces.<br>• The project will improve directional and advisory signs along the trail at Horseshoe Point and Northcoates Point.<br><br><u>North Killingholme Haven Pits</u><br>• The proposed trail uses the well-used public right of way on the floodbank.<br>• There is no access from the path to the pits.<br>• The trail does not alter or upgrade any existing access, access points or surfaces.<br>• The pits are landward of the trail, so not in the coastal access margin and assessed only for disturbance from the trail.<br><br><u>Kilnsea Wetlands</u> | There is also screening from tall vegetation and scrub at Northcoates Point and North Killingholme Haven Pits.<br><br>Also the lack of attractions to this exposed coastline with no opportunities for a circular walks and no upgrade or alterations to the current access means it is unlikely that the promotion of England Coast Path will not significantly increase numbers to these locations to adversely affect the conservation objectives of breeding avocet.<br><br><u>Kilnsea Wetlands</u><br>The trail adopts the current promoted existing walked route, which provides a fenced corridor around the avocet breeding field. There are no places to stop and linger along the path, leading to more predictable onward movement and a low-level berm runs around the field to limit visual disturbance from dogs. Also CROW access rights limit dogs to walked routes and on a lead to further minimise any risk from visual disturbance. There is no access to the field and all CROW access rights, year-round, have been removed from the field.<br>The area is already clearly signed and promoted for wildlife watching and walking, the Spurn visitor centre close by. | |

| **Table 37: Assessment of adverse effect on site integrity alone** | | | |
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| **Risk to conservation objectives** | **Relevant design features of the access proposal** | **Can 'no adverse effect' on site integrity be ascertained?**<br>**(Yes/No) Give reasons.** | **Residual effects?** |
| | • The trail follows a promoted walked around the nesting area.<br>• The field is fenced from the trail and a low-level berm runs around the field to limit visual disturbance from dogs.<br>• The trail does not alter or upgrade any existing access, access points or surfaces around the field, but will construct new access approximately 350m from the field to mitigate against visual disturbance to little tern and SPA waterbirds and the SPA waterbird assemblage.<br>• A suite of CROW access right limits are introduced, including:<br>  ○ Keep dogs on leads and to walked routes around How Hill and avocet field.<br>  ○ All CROW access rights removed year-round from Triangle fields, How Hill, avocet field and land around Beacon lagoon. | The centre acts as an information hub providing advice and interpretation to increase visitor knowledge and respect for the wildlife sensitivities. In addition roving wardens around Spurn and seasonal wardens at Kilnsea wetlands, along with strategically placed advisory signs will encourage compliance.<br>Any construction works for the new access will take place outside the avocet breeding season. | |
| Disturbance to breeding marsh harrier, as a result of the access proposal, leads to reduced breeding success and reduction in population and/or contraction in the | <u>East Halton Skitter</u><br>• The proposed trail uses the public right of way on the floodbank.<br>• The trail does not alter or upgrade any existing access, access points or surfaces.<br>• The area has very low levels of use being the most remote from settlements and amenities. | <u>East Halton Skitter</u><br>England Coast Path adopts the current public right of way on the floodbank, which provides a wide well-defined route on a stable concrete or grass surface for easy onward progression. There are no amenities or places to stop and linger, leading to more predictable onward movement, so minimising the risk of disturbance. There is no access from the path to the saltmarsh. There is sufficient distance | No |

| Table 37: Assessment of adverse effect on site integrity alone | | | |
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| **Risk to conservation objectives** | **Relevant design features of the access proposal** | **Can 'no adverse effect' on site integrity be ascertained?**<br>**(Yes/No) Give reasons.** | **Residual effects?** |
| distribution of qualifying features within the site. | • The coastal access margin is excluded from CROW access rights under section 25A and section 26(3a) (Skitter Ness) of the Act.<br><br><u>Welwick</u><br>• The proposed trail takes an inland route at Winestead drain to follow the boundary of the planned realignment before heading back towards the coast past Haverfield quarry pits on an existing walked route.<br>• Access management infrastructure to be installed close by includes 5 directional signs, a barrier and a replacement kissing gate.<br>• The trail does not alter or upgrade any existing access, access points or surfaces.<br>• All CROW access rights excluded year-round from Haverfield Quarry Pits to cover the whole breeding lifecycle of marsh harrier. | from the trail and suitable habitat available within the location for the non-breeding marsh harriers to move into, to minimise the risk of disturbance.<br>Also the lack of attractions to this exposed coastline with no maintained car parks or opportunities for a circular walks and no upgrade or alterations to the current access means it is unlikely that the promotion of England Coast Path will not significantly increase numbers to adversely affect the conservation objectives of breeding marsh harrier.<br><u>Welwick</u><br>Fencing along the trail prevents public and dog access to the area. There is also scrub along the edge of the ponds to encourage people to stay on the path, as well as providing a natural screen from the pits. With this in place disturbance from England Coast Path users will not adversely affect the conservation objectives of the breeding marsh harrier. However the pits are will be available for CROW access rights under the project, which could lead to direct and indirect disturbance of the species throughout their lifecycle, therefore to mitigate against this the project will remove all CROW access rights from the area year round.<br>The proposals take account of potential for minor and temporary disturbance along this section during | |

| Table 37: Assessment of adverse effect on site integrity alone | | | |
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| **Risk to conservation objectives** | **Relevant design features of the access proposal** | **Can 'no adverse effect' on site integrity be ascertained? (Yes/No) Give reasons.** | **Residual effects?** |
| | | installation of access management infrastructure with timing of the work to be completed outside the breeding season. | |
| Disturbance to breeding grey seal, as a result of the access proposal, leads to reduced fitness and reduction in population and/or contraction in the distribution of qualifying features within the site. | • The grey seals breed and pup at Donna Nook - the proposed trail uses a seasonal alternative route each year during 1st October to 31st January, with the main route closed during this time.<br>• The seasonal alternative route is newly created through dense *Hippophae rhamnoides* scrub.<br>• A range of access management infrastructure, including a combination of new directional signs, advisory signs and interpretation panels are to be installed to manage access and increase awareness in sensitive locations. The project is working with partners to agree design and implement this part of the project.<br>• Installation of access management infrastructure and scrub clearance will take place outside the grey seal breeding season and breeding bird season. (The scrub clearance is screened and not in range of over-wintering SPA waterbird roosts.) Written specification will be required at the time of SSSI assent request.<br>• The coastal access margin at this location is excluded from the project, having restricted access through military byelaws. | Yes – no adverse effect.<br><br>The trail moves inland to avoid visual and noise disturbance, during the most sensitive time for the breeding grey seals, closing the main trail from 1st October to 31st January each year.<br><br>The installation of the infrastructure and construction of the seasonal route takes place outside of the breeding season.<br><br>CROW access rights are excluded at this location. | No |

| **Table 37: Assessment of adverse effect on site integrity alone** | | | |
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| **Risk to conservation objectives** | **Relevant design features of the access proposal** | **Can 'no adverse effect' on site integrity be ascertained?**<br>**(Yes/No) Give reasons.** | **Residual effects?** |
| Damage to intertidal mud, sand and saltmarsh, as a result of the access proposal, leads to a long-term contraction in the extent, distribution, structure and function of qualifying features within the site. | • The habitats of intertidal mud, sand and saltmarsh are seaward of the trail and the proposed trail only uses the sand for 0.68km at Mablethorpe and 0.26km at Saltfleet on established existing walked routes.<br>• A range of access management infrastructure is to be installed to guide and provide confidence to walkers on the trail. The project is working with partners to implement this part of the project.<br><br><u>Intertidal mud and sand</u><br><u>Estuaries</u><br>• All the mud in the coastal access margin is excluded from CROW access rights, as unsuitable for access, under section 25A of the CROW Act.<br>• The majority of the sandflats within the project area are excluded from access through military byelaws or under section 25A A of the CROW Act, as unsuitable for access.<br>• Where not already excluded from CROW access rights sandflats:<br>  ○ Have current very high levels of access that the project will not add to.<br>  ○ Are remote and extensive at mid to low tide.<br><u>Saltmarsh</u><br><u>Estuaries</u> | <u>Intertidal mud and sand</u><br><u>Estuaries</u><br>Yes – no adverse effect.<br>Mudflats are excluded from CROW access rights.<br>The sandflats are highly mobile and dynamic. The extensive nature of the habitat does not focus walkers into specific routes to concentrate the pressure. Where the trail is on the beach at Mablethorpe and Saltfleet, this is for the shortest distance possible and is a tiny proportion of the overall habitat. This habitat has low sensitivity to disturbance by trampling, as any damage is very localised; limited to the footprint of the walkers. Any damage occurring would be temporary and has the capacity to recover quickly, so not adversely affected by the proposals.<br><u>Saltmarsh</u><br><u>Estuaries</u><br>Yes – no adverse effect.<br>At Saltfleet and between Buck Beck and Cleethorpes leisure centre walkers follow public rights of way and existing walked routes around the established saltmarsh or cross it at various points to reach the beach. The proposed trail is well defined mainly using the floodbank or at Cleethorpes on remnant dune, which offers separation from the saltmarsh. | No |

| Table 37: Assessment of adverse effect on site integrity alone | | | |
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| **Risk to conservation objectives** | **Relevant design features of the access proposal** | **Can 'no adverse effect' on site integrity be ascertained?**<br>**(Yes/No) Give reasons.** | **Residual effects?** |
| | • All the saltmarsh, apart from a small area at Saltfleet and Cleethorpes, within the project area is restricted either:<br>○ under section 25A of the CROW Act, as unsuitable for access.<br>○ through military byelaws.<br>○ under section 26(3a) of the CROW Act, to avoid disturbance of SPA waterbirds, SPA waterbird assemblage and nationally important breeding birds.<br>• 0.01m$^2$ of new access management infrastructure is to be installed in saltmarsh habitat. | At both locations the saltmarsh has been assessed as in favourable condition or unfavourable recovering. In a recent saltmarsh survey bare substrate from anthropogenic activity was not attributed as a negative impact.<br>Access routes to the saltmarsh will not alter, as part of the project, and clear directional signs will continue to give confidence for walkers to continue along the trail; the attraction to the sands will remain, so it is expected that walkers will continue to use the developed routes across the saltmarsh at Saltfleet and Cleethorpes. Throughout the year these areas currently attract high numbers of tourists and locals, with locals often visiting on a daily basis. Therefore it is expected that the England Coast Path proposal will not change or increase the pattern of use.<br>The new multi-finger post to be installed to direct walkers away from the saltmarsh at Saltfleet covers 0.01m$^2$ of potential permanent habitat loss. The post will be installed adjacent to a well-trod existing walked route. This loss in approximately 783.87ha of Atlantic salt meadow is inconsequential to the continuity and functioning of the habitat as a whole, due to the location and quantity of potential loss. | |
| Damage and permanent loss of | • The trail uses the dunes of:<br>○ Donna Nook with new seasonal access to mitigate disturbance for breeding grey seals. | Yes – no adverse effect. | Yes due to scrub |

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| **Risk to conservation objectives** | **Relevant design features of the access proposal** | **Can 'no adverse effect' on site integrity be ascertained?**<br>**(Yes/No) Give reasons.** | **Residual effects?** |
| sand dune habitat, as a result of the access proposal, leads to a long-term contraction in the extent, distribution, structure and function of qualifying features within the Humber SAC. | ○ Humberston with an existing walked route<br>• Within the coastal access margin is:<br>○ Remnant dune at Humber mouth, Tetney Marsh<br>○ Humberston<br>○ Cleethorpes<br>○ Spurn<br>○ Long Bank, Easington<br>• No CROW coastal access margin is created at Donna Nook.<br>• All CROW access rights year-round have been excluded at Long Bank, Easington to mitigate against the disturbance to SPA waterbirds, SPA waterbird assemblage and SPA breeding little terns.<br>• All dunes, apart from Donna Nook, have moderate to high levels of access with numerous access points and desire lines running through them.<br>• The trail does not alter or upgrade any existing access or surfaces, apart from where new seasonal access is created.<br>• No new infrastructure will be placed on the dune systems, apart from the new seasonal alternative access.<br><br><u>New seasonal alternative access</u><br>• Available to use between 1st October and 31st January each year, before moving back to the main seaward route. | Public access has not been identified as a threat to the dune systems. (Humber Estuary Site Improvement Plan, 2015 and Natural England Designated Site View).<br><br>The predicted change in access levels to the trail comes with the addition of new seasonal alternative access at Donna Nook and potentially a slight increase to the Humberston Dunes route, as the project improves a directional sign to the north, where the trail changes from public right of way to existing walked route. The project is not expected to increase access to the coastal access margin, where available, due to the close proximity to settlements, amenities, its current use, the route proposed and the lack of change to surrounding and existing access and surfaces.<br><br><u>New seasonal alternative access - scrub clearance</u><br>Dunes with *Hippophae rhamnoides* are the most extensive dune type on the Humber SAC, covering 66.07ha of the estimated 172.07 ha of dune at the time of classification. The clearance is 40 – 50m inland from the proposed main trail and is aligned through sections of dense closed canopy mature scrub. As part of the on-going conservation management of the reserve rotational scrub cutting | clearance at Donna Nook potentially in-combination with other known plans |

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| **Risk to conservation objectives** | **Relevant design features of the access proposal** | **Can 'no adverse effect' on site integrity be ascertained?**<br>**(Yes/No) Give reasons.** | **Residual effects?** |
| | • 1.03km of new seasonal alternative access is created on existing gravel and grass paths.<br>• 1.37km (0.685 hectares) of dune with *Hippophae rhamnoides* scrub clearance is also used to create new seasonal alternative access and fixed dune grassland.<br>• To guide and inform the seasonal alternative route; close off areas, as part of the mitigation to protect pupping grey seals, and to remind walkers of the MoD danger area, new infrastructure is to be installed on dune habitat.<br>  ○ The access management infrastructure contains a mix of advisory signs, directional signs, gates, steps and stock fencing.<br>  ○ 0.465m$^2$ of the new access management infrastructure is beside gravel or bare earth tracks, on mown grass or concrete yards.<br>  ○ 5.006m$^2$ of the new infrastructure is part of the new seasonal alternative route, and within the 5m width cut for the trail. | is encouraged and there is a conservation objective to maintain a diverse age structure amongst the scrub habitat to sustain the feature in the longer term.<br>The scrub clearance on the seasonal alternative route will open up the structure providing a positive edge effect and to allow for different microclimatic conditions within the mature scrub area. The clearance does not fragment the dune feature and without maintenance scrub would readily recolonise the area. The ground surface will remain natural and has the potential to develop into the scarcer fixed dune habitat on the Humber SAC. From the clearance the overall extent of the scrub reduces by 1.37% over the estimated feature extent (66.07ha) at classification. This does not significantly reduce the extent and distribution of the feature, as it easily recolonises on the reserve and elsewhere on the Humber SAC, or adversely affect the structure and functioning of the feature, which has the conservation objectives as maintain.<br><br><u>New seasonal alternative access</u><br>It is predicted that the potential for damage from trampling will be limited and temporary with the fixed dune grassland/ dune with *Hippophae rhamnoides* being the most resilient of dune | |

| Table 37: Assessment of adverse effect on site integrity alone | | | |
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| **Risk to conservation objectives** | **Relevant design features of the access proposal** | **Can 'no adverse effect' on site integrity be ascertained?**<br>**(Yes/No) Give reasons.** | **Residual effects?** |
| | | habitats with the seasonal alternative trail only being available for CROW access rights between 1st October and 31st January each year. This allows for sufficient recovery time over the growing season when the vegetation is better able to recolonise from any temporary damage.<br><u>New seasonal alternative access - infrastructure</u><br>0.465m$^2$ of the new access management infrastructure is beside gravel or bare earth tracks, on mown grass or concrete yards, which are considered as part of the site fabric of the designation and not part of the qualifying feature.<br><br>5.006m$^2$ of the new infrastructure is within the 5m width cut for the trail, so not creating an additional area of habitat loss to that already considered as part of the scrub clearance and deemed not to significantly reduce the extent and distribution of the feature or adversely affect the structure and functioning of the feature, which has the conservation objectives as maintain. | |
| Damage and permanent loss of sand dune habitat, as a result of the access proposal, leads to a long-term contraction in the | • The trail mainly uses public rights of way on resilient fixed dune grassland on the landward side of Saltfleetby-Theddlethorpe Dunes.<br>• Short sections of existing walked routes are used to link the public rights of way. | Yes – no adverse effect.<br>The dunes run from the edge of Mablethorpe to Saltfleet and have high levels of access throughout the year with local, as well as tourist use, with the most popular activities being walking or walking with a dog. | No |

| Table 37: Assessment of adverse effect on site integrity alone | | | |
|---|---|---|---|
| **Risk to conservation objectives** | **Relevant design features of the access proposal** | **Can 'no adverse effect' on site integrity be ascertained?**<br>**(Yes/No) Give reasons.** | **Residual effects?** |
| extent, distribution, structure and function of qualifying features within the Saltfleetby-Theddlethorpe and Gibraltar Point SAC. | • The trail crosses approximately 60m of mobile dune on an existing walked route, as it moves from the beach to the fixed dune habitat.<br>• The trail does not alter or upgrade any existing access, access points or surfaces.<br>• Saltfleetby-Theddlethorpe Dunes National Nature Reserve is within the coastal access margin.<br>• The National Nature Reserve has dedicated open access, recreational zones for different activities, promoted routes and request dogs to be on a lead or under close control when using the reserve.<br>• The dune system is well used with numerous car parks close by, access points and desire lines running through it.<br>• New access management infrastructure accounts for 0.227m$^2$ of potentially permanently lost habitat. This is made up of 17 way-markers or directional signs, 2 advisory signs and 1 kissing gate, where the trail crosses a fence line. | The dune system is unfavourable-recovering due to the dominance of sea buckthorn with land management agreed to clear it. In 2016/17 recreational disturbance was identified as a threat to the condition due to a new right of way through a key moth habitat (see Nature Conservation Assessment), as well as the management of dogs across the site for breeding birds with the establishment of the dedicated open access.<br>The proposed trail uses resilient surfaces of gravel, boardwalk and fixed dune grass with the addition of directional signs to give confidence to walkers to stay on the path and not deviate across the dunes to establish new desire lines. The 60m of existing walked route across mobile dune, does not limit the natural processes allowing the free movement of sand.<br>The proposed trail will not alter any routes, surfaces or any current entry/exit points and surrounding access to the available coastal access margin. Accessibility is improved at one location on fixed dune with a kissing gate.<br><br>The project is not expected to increase access to the trail and coastal access margin, due to the close proximity to settlements, amenities, car parks and access points, its current use, the route proposed | |

| Table 37: Assessment of adverse effect on site integrity alone | | | |
|---|---|---|---|
| **Risk to conservation objectives** | **Relevant design features of the access proposal** | **Can 'no adverse effect' on site integrity be ascertained?**<br>**(Yes/No) Give reasons.** | **Residual effects?** |
| | | and the lack of change to surrounding and existing access and surfaces.<br>The new access management infrastructure is to be installed next to public rights of way or on hardstanding, where the ground is considered as non-contributory land or on established existing routes, which amount to 0.217m$^2$. This is considered an inconsequential reduction in extent of dune which is surveyed at 64.7ha. | |

**Conclusion:**

The following risks to achieving the conservation objectives identified in D1 are effectively addressed by the proposals and no adverse effect on site integrity (taking into account any incorporated mitigation measures) can be concluded for:

- Non-breeding hen harrier
- Breeding little tern
- Breeding avocet
- Breeding marsh harrier
- Grey seal
- Estuaries
- Mudflats and sandflats not covered by seawater at low tide
- Salicornia and other annual colonising mud and sand
- Atlantic salt meadows
- Embryonic shifting dunes
- Shifting dunes along the shoreline with *Ammophila arenaria*
- Fixed dunes with herbaceous vegetation

The following risks to achieving the conservation objectives identified in D1 are effectively addressed by the proposals and no adverse effect on site integrity (taking into account any incorporated mitigation measures) can be concluded, although there is some residual risk of insignificant impacts:

- SPA waterbirds and SPA waterbird assemblage from the trail
- Dunes with *Hippophae rhamnoides* from scrub clearance at Donna Nook

**D4 Assessment of potentially adverse effects considering the project 'in-combination' with other plans and projects**

The need for further assessment of the risk of in-combination effects is considered here.

Natural England considers that it is the appreciable effects (from a proposed plan or project) that are not themselves considered to be adverse alone which must be further assessed to determine whether they could have a combined effect significant enough to result in an adverse effect on site integrity.

**Step 1 – Are there any appreciable risks from the access proposals that have been identified in D3.3 as not themselves considered to be adverse alone?**

Natural England considers that in this case the potential for adverse effects from the plan or project has not been wholly avoided by the incorporated or additional mitigation measures outlined in section D3. It is therefore considered that there are residual and appreciable effects likely to arise from this project which have the potential to act in-combination with those from other proposed plans or projects. These are:

- Humber estuary SPA non-breeding waterbirds
- Humber estuary SPA non-breeding waterbird assemblage
- Humber estuary SAC dunes with *Hippophae rhamnoides*

**Step 2 – Have any combinable risks been identified for other live plans or projects?**

| **Table 38: Summary of other live plans or projects and their potential to work in-combination to have adverse effects on site integrity** | | |
|---|---|---|
| **Competent Authority** | **Plan or project** | **Have any insignificant and combinable effects been identified?** |
| DECC (Dept of Energy and Climate Change) | Hornsea 2 offshore wind farm – export cable route and work area. | No, the HRA for the wind farm found no adverse effect on the Humber estuary SAC either alone or in-combination with other plans/projects. There is also no adverse effect alone or in-combination from the England Coast Path, as the saltmarsh is excluded from the CROW access rights and any damage to the sands will be very localised and temporary.<br><br>To prevent the disturbance of waders and wildfowl during the overwintering period and the disturbance of roosting birds during spring and autumn (an important time for breeding and passage species) Hornsea 2 construction in the intertidal area at Horseshoe Point will be outside of the overwintering period (30th September to 1st April inclusive) and not undertake works from 1st April to 31st May, and 1st August to 30th September, within 1 km of the seawall during the 2 hour period either side of high water.<br><br>The saltmarsh in the coastal margin at Tetney High Sands and Tetney Marshes, is excluded from CROW access year-round under a section 25A restriction, while the Horseshoe Point area is excluded from access year-round under a s26(3a) restriction.<br><br>The pipeline construction is due to be completed in 2020 and will not coincide with the opening of the England Coast Path. |
| Natural England | Saltfleet & Skidbrook Wildfowlers & Claypigeon Club currently have:<br><br>A restricted consent which covers the killing & removal of wild birds, digging pits and hunting practices.<br><br>A one-year consent granted on 2 /10/20 which expires on | No, the northern half of the wildfowling area, including the shooting and no shooting zones, is not within the ECP project, as restricted by military byelaws. The southern half is available as coastal access margin. The Club have an unrestricted wildfowling consent for part of the area and a limited consent for the period up to 31/8/21.<br><br>The southern area, including the trail, is already well accessed with walkers dispersing across the sands from several de facto routes across the saltmarsh. This is unlikely to change with the introduction of the England Coast Path, due to the location, current use and no alteration or improvement of the coastal margin from the project, apart from the installation of directional signs, which may encourage people to use the trail rather than the wider sands. |

| Table 38: Summary of other live plans or projects and their potential to work in-combination to have adverse effects on site integrity | | |
|---|---|---|
| **Competent Authority** | **Plan or project** | **Have any insignificant and combinable effects been identified?** |
| | 31/8/21, covering wildfowling but with 8 species excluded from the consent, inc. mallard, wigeon, teal and golden plover. | The project focuses on access on foot and does not include any other permissions, with the wildfowlers access currently limited to the area covered by their unrestricted wildfowling consent and an additional s28E consent which expires on 31/8/21. Therefore, no likely significant alone or combinable effects have been identified to cause an adverse effect to the designated site integrity. |
| Natural England | North Lincolnshire Wildfowlers Club<br><br>The consent covers killing & removal of wild birds and hunting practices at Grainthorpe. | No, the Club has a maximum of 277 visits on foot from 1st Sept to 20th February each year, with voluntary restraint and a code of practice for shooting in severe weather. Members' dogs must be kept under control at all times. There is no shooting within 500 metres of known wader roosts.<br><br>The shoot and no shoot areas at Grainthorpe Haven are excluded from CROW access rights (S25A restriction). The trail uses a public right of way.<br><br>The project focuses on access on foot and does not include any other permissions, with the wildfowlers limited to a maximum number of visits. Therefore no insignificant and combinable effects have been identified to cause an adverse effect to the designated site integrity. |
| Natural England | North Lincolnshire Wildfowlers Club and Humber Wildfowlers currently have:<br><br>A one-year consent issued from 1/9/20 to 31/8/21 covering wildfowling but with 8 species excluded from the consent, inc. mallard, wigeon, teal and golden plover. | No, the Clubs visit on foot from 1st Sept 2020 to 31st August 2021, with voluntary restraint and a code of practice for shooting in severe weather. Members' dogs must be kept under control at all times. There is no shooting within 500 metres of known wader roosts.<br><br>The shoot area at Northcoates Point is excluded from CROW access rights (with a S25A restriction on the inshore saltmarsh and a s26(3a) conservation restriction further out) and Tetney High Sands is highlighted as a no shoot zone. The trail is sufficiently distant and separated from the area by fencing. Advisory signs currently in place will continue or be installed as part of the project. Therefore, the project and wildfowling consent combined do not cause an adverse effect. |

| **Table 38: Summary of other live plans or projects and their potential to work in-combination to have adverse effects on site integrity** | | |
|---|---|---|
| **Competent Authority** | **Plan or project** | **Have any insignificant and combinable effects been identified?** |
| | | The project focuses on access on foot and does not include any other permissions. Therefore, no likely significant alone or combinable effects have been identified to cause an adverse effect to the designated site integrity. |
| Natural England | North Lincolnshire Wildfowlers Club and Humber Wildfowlers<br><br>The consent covers the killing and removal of any wild animal, and the erection of permanent or temporary structures.<br><br>Tetney Marsh | No, the Clubs use Tetney Marsh from 1st Sept to 31st January each year and shooting is limited to 4 days per week. The marsh is excluded from the CROW access rights (under a S25A restriction) and the trail uses the public right of way.<br><br>The project focuses on access on foot and does not include any other permissions. No insignificant and combinable effects been identified to cause an adverse effect to the designated site integrity. |
| Natural England | Hull and East Riding Wildfowlers Association and Holderness and Humber Wildfowlers Association<br><br>The consent covers:<br>• recreational or other activities likely to damage or disturb the features of special interest.<br><br>• game and waterfowl management and hunting practices and | No, the Clubs have a maximum of 160 visits in zone D and 200 visits in zone E from 1st Sept to 20th February each year, with voluntary restraint and a code of practice for shooting in severe weather. Competent gundogs to be present to ensure efficient and effective retrieval of quarry.<br><br>All of the inter-tidal area beyond 50m from the mean high-water mark is managed as a permanent spatial refuge in both zones. There are temporal refuges (no shooting 2 hours either side of high water on tides of 7.6m and below (ABP Grimsby tide table predictions)) at:<br><br>• The triangle of saltmarsh west of the managed realignment site<br><br>• Welwick Bay and adjacent freehold<br><br>All shooting and refuge zones to be regularly wardened by the Clubs. |

| Table 38: Summary of other live plans or projects and their potential to work in-combination to have adverse effects on site integrity | | |
|---|---|---|
| **Competent Authority** | **Plan or project** | **Have any insignificant and combinable effects been identified?** |
| | alterations to game and waterfowl management and hunting practice.<br><br>(1st September 2019 - 20th February 2024) | The project excludes all shoot and no shoot zones from CROW access rights. The trail sits outside the boundary of the wildfowling areas, but uses an existing walked route alongside zone D and public rights of way alongside zone E; both have low levels of use from locals and wildfowlers. This is unlikely to change with the introduction of the England Coast Path, due to the location, current use and no alteration to the access, apart from the installation of directional signs.<br><br>The wildfowlers are limited in visits and the potential for in-combination impacts with wildfowling are considered to be low. |
| Natural England | Able Marine Energy Park / Cherry Cobb Sands compensatory habitat | No, the trail is inland of the proposed development with the site being classed as 'expected' land within the project, so excluded from CROW access rights. The Energy Park relies on compensatory land at Cherry Cobb, as mitigation for nature. Here the England Coast Path uses the public right of way and may have an insignificant residual effect alone. The coastal access margin is excluded from CROW access rights, so has no residual effect.<br><br>Construction of the compensatory habitat has no start date, however when construction starts the trail will be re-aligned to minimise the risk of disturbance to over-wintering waterbirds (and access to the seaward habitat as 'spreading room' will be restricted). Therefore no insignificant and combinable effects have been identified to cause an adverse effect to the designated site integrity. |
| Natural England | Dynamic Dunescapes EU LIFE/ HLF project at Cleethorpes Dune (between TA3273806653 and TA3153307864) (2020 – 2023) | No, approximately 2.6ha of mixed scrub clearance is intended at Cleethorpes. The objective is to achieve favorable condition of the dune grassland, which is the priority Annex I habitat. It is also included in the Cleethorpes Habitat Management Plan. At this location the trail uses the public right of way with the dunes in the coastal access margin. Only the installation of signs are intended at this location outside the SAC boundary.<br><br>0.685ha of scrub clearance at Donna Nook is intended as part of the project, which could add pressure to the extent and distribution of the dune with *Hippophae rhamnoides* with the Humber estuary SAC. |

| Table 38: Summary of other live plans or projects and their potential to work in-combination to have adverse effects on site integrity | | |
|---|---|---|
| **Competent Authority** | **Plan or project** | **Have any insignificant and combinable effects been identified?** |
| | | However the reduction in scrub also encourages the extent of dune grassland, having a positive effect on this Annex 1 habitat within the designation. |
| Natural England | Dynamic Dunescapes EU LIFE/ HLF project at Saltfleetby-Theddlethorpe National Nature Reserve (2020 – 2023) | No, up to 8ha of mixed scrub clearance (*Hippophae rhamnoides,* bramble or hawthorn) is intended at Saltfleetby-Theddlethorpe dunes, as part of a range of habitat management works. The England Coast Path across this SAC intends to install 0.227m$^2$ of new infrastructure, which are close to existing routes and public footpaths. It is concluded that part are classed as part of the fabric of the designation and 0.217m$^2$ as an insignificant adverse effect when viewed alone. The permanent loss of dune habitat from the England Coast Path could be returned to dune habitat with the removal of the wooden posts, as will the scrub re-grow in time. |
| Natural England | Environment Agency Asset maintenance assent (2019 to 2024)<br><br>Lincolnshire coast (Gibraltar Point to Humberston Fitties) | No, the assent does not cover any works that will take place or directly affect the SAC species and habitats. Works are excluded during seal pupping at Donna Nook. The proposed works all lie on the sea defence or on its landward side.<br><br>For SPA features works take place from 1st September until 31st March; 2 hours either side of high tide and not less than 200m from shoreline on a spring hide tide; not when temperatures are freezing for 7 consecutive days; use low-noise tools, and if works takes longer than 7 days on the top or seaward of the bank, this needs further consultation with Natural England.<br><br>The England Coast Path project will install signs and small items, such as gates and steps. This work be temporary (an hour to a few days per location) over a 12-18 month period, not limited to a season and outside the range of roosts for noise and visual disturbance. For the creation of new access the method and location will be considered when it is time to apply for SSSI assent, with the timings limited to outside the breeding/pupping season for little tern, avocet and grey seals. |
| Natural England | Environment Agency Asset maintenance assent (until 31st | No, impacts to designated site features are fully mitigated for through a variety of spatial, temporal and avoidance measures. |

| Table 38: Summary of other live plans or projects and their potential to work in-combination to have adverse effects on site integrity | | |
|---|---|---|
| **Competent Authority** | **Plan or project** | **Have any insignificant and combinable effects been identified?** |
| | Dec June 2023) – North Bank Yorkshire | Assented works include a variety of minor activities required for maintenance of EA assets, these include:<br>• Flood bank maintenance and protection- grazing, grass cutting, minor repair of ruts, crests and slopes, stoning, wrack removal, pest and invasive species control.<br>• Outfall maintenance- asset inspection, sluicing, jetting, obstruction removal and incident response.<br>The majority of the works take place outside the 1st September until 31st March winter bird period, with a severe weather constraint and no works 1 hour either side of high tide. A 300m exclusion zone around areas of higher sensitivity such as Faxfleet is also in place. Works are not permitted on SAC features other than 'site fabric', personnel and machinery limitations apply. |
| Natural England | Environment Agency Asset maintenance assent (until 31st Dec June 2023) – South Bank to Humberston Fitties | No, impacts to designated site features are fully mitigated for through a variety of spatial, temporal and avoidance measures.<br>Assented works include a variety of minor activities required for maintenance of EA assets, these include:<br>• Flood bank maintenance and protection - grass cutting, minor repair of ruts, crests and slopes, stoning, pest and invasive species control.<br>• Outfall maintenance - asset inspection, sluicing, jetting, obstruction/shoal removal, minor repair and incident response.<br>The majority of the works take place outside the 1st September until 31st March winter bird period, with a severe weather constraint and no works 2 hour either side of high tide and in day light only. On spring tides no works occur until tide is 200m from shore. Works last a maximum of two days, not return |

| Table 38: Summary of other live plans or projects and their potential to work in-combination to have adverse effects on site integrity | | |
|---|---|---|
| **Competent Authority** | **Plan or project** | **Have any insignificant and combinable effects been identified?** |
| | | within two weeks and have 2km buffer between site locations. Works are not permitted on SAC features other than 'site fabric', personnel and machinery limitations apply. |
| Environment Agency | Humber Estuary Coastal Authorities Group<br><br>Shoreline Management Plan: Flamborough Head to Gibraltar Point (2010) | No adverse effects on the integrity of the sites from the implementation of the policies in the Shoreline Management Plan. |
| Environment Agency | Welwick to Skeffling managed realignment | No, the managed realignment project has taken the England Coast Path project into consideration, as part of its planning and habitats regulation assessment. Once complete the England Coast Path will move to a new trail alignment to avoid any disturbance to the SPA features (and seaward 'spreading room' will be restricted as necessary). |
| Natural England | Saltfleetby-Theddlethorpe National Nature Reserve Management Plan | No, the project does not add any additional access to what is already in place at the site. |
| Natural England | Donna Nook Nature Reserve Management Plan | No, the mitigation complements the management plan. The trail is moves inland from 1st October to 31st January to avoid any impacts on the breeding seals and allows the Trust to manage visitor access. |
| Natural England | Tetney Marsh reserve management plan (July 2016 – June 2021) | No, the England Coast Path keeps the status quo of the visitor facilities and the mitigation complements the management plan by reducing or removing CROW access rights across the main areas of site. |
| North East Lincolnshire Council | Cleethorpes habitat management plan (2016 – 2021) | No, approximately 2.6ha of mixed scrub clearance is intended at Cleethorpes. The objective is to achieve favorable condition of the dune grassland, which is the priority Annex I habitat. At this location |

| Table 38: Summary of other live plans or projects and their potential to work in-combination to have adverse effects on site integrity | | |
|---|---|---|
| **Competent Authority** | **Plan or project** | **Have any insignificant and combinable effects been identified?** |
| | | the trail uses the public right of way with the dunes in the coastal access margin. Only the installation of signs are intended at this location outside the SAC boundary. |
| Natural England | Humber Nature Partnership - Cleethorpes to Tetney Local Recreational Disturbance Management Plan (2019 -2021) | No, the mitigation complements the management plan limiting CROW access rights where recreational disturbance on foot has been identified. The project is also working with the partners to improve coastal interpretation and signage for walkers within the local area. |
| Natural England | Yorkshire Wildlife Trust - Paull Holme Strays nature reserve management plan | Info requested. 3-4-20 – not received to date. |
| Natural England | Yorkshire Wildlife Trust - Welwick nature reserve management plan | Info requested. 3-4-20 – not received to date |
| Natural England | Yorkshire Wildlife Trust - Spurn National Nature Reserve management plan (July 2019 – June 2024) | No, the mitigation complements the management plan in adding no extra CROW access rights requirements to what is already in place at the site. |
| Natural England | Yorkshire Wildlife Trust - Kilnsea wetlands nature reserve management plan (July 2019 – June 2024) | Info requested. 3-4-20 – not received to date |

| **Table 38: Summary of other live plans or projects and their potential to work in-combination to have adverse effects on site integrity** | | |
|---|---|---|
| **Competent Authority** | **Plan or project** | **Have any insignificant and combinable effects been identified?** |
| East Lindsey District Council | East Lindsey Local Plan (2018) | No, the Council requires developers to provide information to enable a proper assessment of the site. In assessing such proposals, the Council will incorporate the habitat or species within the development and seek its enhancement through the proposals. Where this is not possible, harm or disturbance to the habitat or species will be kept to a minimum and appropriate mitigation sought. Residential development increases the demand for open space, recreation and sports facilities. Therefore, if development is proposed in areas where there is a deficiency in existing provision or where the development creates an issue of deficiency, the Council will require the provision of new or improved open space, recreational or outdoor sports facilities.<br><br>Between Mablethorpe and Humberston the England Coast Path project uses the existing public rights of way and walked routes. It minimises risk to the Humber Estuary SPA and SAC by removing or limiting CROW access rights throughout the coastal access margin. |
| North East Lincolnshire District Council | North East Lincolnshire Local Plan (2018) | No, as to address the development requirements, the increased population and the need for green space, including recreation, the Council require developers to provide new open space and recreation facilities to meet the needs of new residents, based upon generic upon walkable limits. Where facilities are already available within the walkable catchment of a site the Council will seek a commuted sum towards the improvement and maintenance of off-site facilities reflecting the future intensification of use of these facilities. The Council will also track planning permissions granted on all housing sites and will identify and secure appropriate, effective and timely mitigation to manage increasing recreational pressures on the Humber Natura 2000 sites when necessary; this includes a commitment to further development of the *Cleethorpes Habitat Management Plan*. Any mitigation or management measures identified will be implemented prior to impacts occurring.<br><br>Between Humberston and Grimsby the England Coast Path project uses the existing public rights of way and minimises risk to the Humber Estuary SPA by influencing visitor behaviour through interpretation and signage, in discussion with NELC. |

| Table 38: Summary of other live plans or projects and their potential to work in-combination to have adverse effects on site integrity | | |
|---|---|---|
| **Competent Authority** | **Plan or project** | **Have any insignificant and combinable effects been identified?** |
| | | No adverse effect was found with current access and that of the England Coast Path for the Humber SAC features. |
| North Lincolnshire District Council | North Lincolnshire Local Plan (2010) | No, as to address the development requirements, the increased population and the need for green space, including recreation, developers will be expected to make an appropriate contribution towards necessary improvements or additional provision for recreation facilities and open space arising from their development proposals.<br><br>The local plan recognises the potential for impacts on the internationally important habitats of the Humber Estuary. Habitat Regulations Assessment will be made by the council to inform development control decisions. Where it cannot be demonstrated that a development proposal will not have an adverse effect on the integrity of a site of European or international importance to nature conservation, such development is not supported by the local plan and will not be permitted, thus ensuring that there are no likely significant effects on the Humber Estuary Natura 2000 sites as a result of the plan.<br>The England Coast Path project uses the existing public rights of way system and minimises risk to the Humber Estuary SPA and SAC by removing all CROW access rights seaward of the trail and as part of the local plan has worked with North Lincolnshire Council to improve their safe walking and cycleway network around Immingham. |
| East Riding of Yorkshire Council | East Riding of Yorkshire Council Local Plan (2012- 2029) | No, as a consequence of the location, landscape, current infrastructure and climate change the proportion of development directed to this area of the estuary and the open coast is low, with development focussed on re-energising Withernsea and Hornsea, outside the England Coast Path project area.<br>The England Coast Path project uses a mix of existing public rights of way and remote walked routes and minimises risk to the Humber Estuary SPA and SAC by removing all CROW access rights seaward of the trail until at Kilnsea, where there is a mix of measures to complement the ongoing wildlife watching and tourism, whilst limiting the CROW access rights to protect the Humber estuary SPA features. |
| Hull City Council | Hull Local Plan (2016 – 2032) | No, a habitat regulations assessment will be made by the council to inform development control decisions. Where it cannot be demonstrated that a development proposal will not have an adverse effect on the integrity of a site of European or international importance to nature conservation, such |

| Table 38: Summary of other live plans or projects and their potential to work in-combination to have adverse effects on site integrity | | |
|---|---|---|
| **Competent Authority** | **Plan or project** | **Have any insignificant and combinable effects been identified?** |
| | | development is not supported by the local plan and will not be permitted, thus ensuring that there are no likely significant effects on the Humber Estuary Natura 2000 sites as a result of the plan.<br><br>The Council sits on the board of directors of the Humber Nature Partnership (HNP) alongside other local authorities that front the Humber estuary with statutory regulators, business and voluntary sectors. The HNP works with members and others to deliver the sustainable management of the Humber Estuary European Marine Site. Increased recreational use of the land around the Humber has the potential to harm its special features. The Council will monitor the implementation of the local plan and its effects to help inform strategies on mitigating and minimising these potential effects.<br><br>The England Coast Path project uses a mix of urban public rights of way and walked routes at The Deep to Victoria Dock village and the trail is separated from the estuary and minimises risk to the Humber Estuary SPA and SAC by removing all CROW access rights seaward of the trail. |

**Step 3 – Would the combined effect of risks identified at Steps 1 and 2 be likely to have an adverse effect on site integrity?**

In light of the conclusions of Steps 1 & 2, no further in-combination assessment is required.

**D5. Conclusions on Site Integrity**

Because the plan/project is not wholly directly connected with or necessary to the management of the European site and is likely to have a significant effect on that site (either alone or in combination with other plans or projects), Natural England carried out an Appropriate Assessment as required under Regulation 63 of the Habitats Regulations to ascertain whether or not it is possible to conclude that there would be no adverse effect on the integrity of a European Site(s).

**Natural England has concluded that:**

It can be ascertained, in view of site conservation objectives, that the access proposal (taking into account any incorporated avoidance and mitigation measures) will not have an adverse effect on the integrity of:

Saltfleetby-Theddlethorpe dunes and Gibraltar Point SAC
Greater Wash SPA
Humber estuary SPA
Humber estuary SAC
Humber estuary Ramsar site

either alone or in combination with other plans and projects.

**PART E: Permission decision with respect to European Sites**

Natural England has a statutory duty under section 296 of the Marine and Coastal Access Act 2009 to improve access to the English coast. To fulfil this duty, Natural England is required to make proposals to the Secretary of State under section 51 of the National Parks and Access to the Countryside Act 1949. In making proposals, Natural England, as the relevant competent authority, is required to carry out an HRA under Regulation 63 of the Habitats Regulations.

We, Natural England, are satisfied that our proposals to improve access to the English coast between Mablethorpe and the Humber Bridge and the Humber Bridge to Easington are fully compatible with the relevant European site conservation objectives.

It is open to the Secretary of State to consider these proposals and make a decision about whether to approve them, with or without modifications. If the Secretary of State is minded to modify our proposals, further assessment under the Habitats Regulations may be needed before approval is given.

**Certification**

| | |
|---|---|
| **Assessment prepared by:** | Coastal Path Assessment Unit and Adam Gretton (National ECP Team) |
| **Date:** | 12/4/2021 |

| | | |
|---|---|---|
| **HRA approved by:** | Claire Argent | *Senior officer with responsibility for protected sites Yorkshire and North Lincolnshire Area* |
| **Date:** | *5/5/2021* | |

| | | |
|---|---|---|
| **HRA approved by:** | James Marshall | *Senior officer with responsibility for protected sites East Midlands Area* |
| **Date:** | *5/5/2021* | |

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# Appendix 1.

**Standard measurements for access management infrastructure**

| Item | Constituents | Size of constituents (mm) | Area ($m^2$) | Amount required for each item | Total area per constituent item ($m^2$) | Total area per item ($m^2$) |
|---|---|---|---|---|---|---|
| Waymarker post | post | 100 x 100 | 0.01 | 1 | | 0.01 |
| Multi-finger post | post | 100 x 100 | 0.01 | 1 | | 0.01 |
| Wooden kissing gate | hanging post | 150 x 150 | 0.023 | 1 | 0.023 | |
| | closing/back post | 125 x 125 | 0.016 | 4 | 0.064 | 0.087 |
| Stock fencing | straining post / 150m interval | 125 (diameter) | 0.012 | 1 | | 0.012 |
| | struts | 80 (diameter) | 0.005 | 1 | | 0.005 |
| | intermediate posts / 3m intervals | 65 (diameter) | 0.003 | 1 | | 0.003 |
| Footbridge (in-ground items only) | bearing pads | 200 x 75 | 0.015 | 2 | 0.03 | |
| | posts | 100 x 75 | 0.008 | 4 | 0.032 | 0.062 |
| Interpretation panels (in-ground items only) | posts | 100 x 100 | 0.01 | 4 | | 0.04 |
| Field/ pedestrian gate | hanging post | 150 x 150 | 0.023 | 1 | 0.023 | |
| | closing/back post | 125 x 125 | 0.016 | 1 | 0.016 | 0.039 |

- Specifications for stock fencing and footbridge taken from Higher Level Stewardship capital items.
- Specifications for waymarker post, multi-finger post, interpretation panel taken from madebylandmark.com.
- Specifications for kissing gates taken from Kent County Council.
- Specifications for metal kissing gate taken from Jackson-fencing.co.uk.
- Specification for field/pedestrian gate taken from kissing gate specification.