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Assessment of England Coast Path proposals between Hunstanton and Sutton Bridge

On The Wash Special Protection Area and Ramsar site, Greater Wash Special Protection Area and The Wash and North Norfolk Coast Special Area of Conservation

November 2020

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Summary

I) 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 Hunstanton to Sutton Bridge on the following sites of international importance for wildlife: The Wash Special Protection Area (SPA) and Ramsar site, Greater Wash Special Protection Area and The Wash and North Norfolk Coast Special Area of Conservation (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.

Hyperlink to the report

II) Background

The main wildlife interests for this stretch of coast are summarised in Table 1 (see Table 3 for a full list of qualifying features)

Table 1. Main wildlife interests

Interest	Description
Breeding terns	3 species of tern breed within The Wash SPA and Greater Wash SPA area (common tern, little tern, and Sandwich tern) in the spring/summer. They nest in areas of bare ground, sparse vegetation or shingle / sand. Foraging in open water, creeks, and lagoons.
Non-breeding waterbirds	The Wash supports internationally important numbers of non-breeding waterbirds over winter and during the spring and autumn migration periods. Feeding is pre-dominantly on the extensive inter-tidal areas, but adjacent farmland is used by some species such as pink-footed goose. Roosting is often at the water's edge on saltmarsh and on lagoons / lakes near The Wash, and on adjacent farmland.

Saltmarsh, inter-tidal and sub-tidal habitats	The Wash is the largest embayment in the UK containing the single largest area of saltmarsh in the UK. There are also extensive areas of inter-tidal mud and sand, sub-tidal sandbanks, shallow water, deep channels and biogenic reefs formed by polychaete worms. Along the coast can be found the priority habitats of coastal sand dunes, coastal vegetated shingle and coastal lagoons. These habitats are highly productive and support large numbers of waterbirds (see above).
Wetland invertebrates	The nutrient rich shallow waters of The Wash support high concentrations of marine worms, marine invertebrates and shellfish. These in turn are food for the internationally important numbers of waterbirds. The invertebrate fauna of the saltmarsh is very rich especially on the older saltmarsh. The specialised salt-tolerant plants provide a suitable habitat for a variety of invertebrates, some of these being rare or local.
Harbour seal	The Wash's extensive inter-tidal flats provide ideal conditions for the Harbour (common) seal for breeding and during their annual moult. The SAC has the largest colony of Harbour seal in the UK.
Otter	Otter populations in Norfolk have been growing. The Wash provides ideal hunting grounds with easy access from inland freshwater habitats which support otter breeding territories.

III) Our approach

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 [Natural England, 2013]. 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.

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 as appropriate from a range of other sources which can include information and data held locally by external partners or from the experience of local land owners, environmental consultants and occupiers. The approach 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 land owners 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.

The conclusions of this assessment are approved by a member of Natural England staff who is not a member of coastal access programme team and who has responsibility for protected sites. This ensures appropriate separation of duties within Natural England.

IV) 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 for this stretch has been the possible impact of disturbance on breeding tern and non-breeding waterbirds (and their supporting habitats) as a result of recreational activities, particularly visitors with dogs.

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 new paths are required design them to avoid sensitive locations
- 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 habitats, and how people can help efforts to protect it.

V) Conclusion

We have considered whether our detailed proposals for coastal access between Hunstanton and Sutton Bridge might have an impact on The Wash SPA and Ramsar site, Greater Wash SPA and The Wash and North Norfolk SAC. In Part C of this assessment we identify some possible risks to the relevant qualifying features and conclude that proposals for coastal access, without incorporated mitigation, may have a significant effect on some of these sites. In Part D we consider these risks in more detail, taking account of avoidance and mitigation measures incorporated into our access proposal, and conclude that there will not be an adverse effect on the integrity of any of these sites. These measures are summarised in Table 2 below.

Table 2. Summary of risks and consequent mitigation built in to our proposals

Risk to conservation objectives	Relevant design features of the access proposals
■ Repeated disturbance to foraging or resting birds during winter and / or on passage which may lead to reduced fitness and reduction in population and / or contraction in the distribution of qualifying features within the site.	■ Most of the route is on existing public rights of way (PRoWs) and well walked routes. ■ The new stretch of path between Wolferton and South Outmarsh (north of King's Lynn) will be mostly landward of the seawall to separate walkers from waterbird roosting and feeding areas on the adjacent saltmarsh. Regular signage will be used to encourage people to stay on the path and off the seawall. ■ Saltmarsh and flats between Snettisham RSPB Reserve and Sutton Bridge will be excluded under S25A of the Countryside and Rights of Way Act 2000 (CROW) access as they are unsuitable for public access. ■ Access to grazing marsh within the margin adjacent to the route along the old seawall from South Beach Road, Heacham to the coastal park will be excluded all year under S26(3)(a) of CROW. ■ The route will be signposted and waymarked regularly to encourage walkers to remain on the path. ■ Information boards will be installed at appropriate points along the walk to inform visitors of the biodiversity interest of The Wash and the sensitivity of habitats and species to disturbance.
Repeated disturbance to breeding redshank that make a significant contribution to the non-breeding population of this species, which may lead them to abandon nesting areas or reduce their breeding success (for example by causing eggs to become chilled, reducing food supply to chicks, or	■ The new stretch of path between Wolferton and South Outmarsh will be mostly landward of the seawall to separate walkers from redshank nesting areas on the adjacent saltmarsh. Regular signage will be used to encourage people to stay on the path and off the seawall.

increasing the vulnerability of eggs, chicks or adults to predation).	■ Saltmarsh and flats between Snettisham RSPB Reserve and Sutton Bridge will be excluded under S25A of CROW as they are unsuitable for public access. ■ The route will be signposted and waymarked regularly to encourage walkers to remain on the path. ■ Information boards will be installed at appropriate points along the walk to inform visitors of the biodiversity interest of The Wash and the sensitivity of habitats and species to disturbance.
Undertaking works to install access management infrastructure disturbs non-breeding waterbirds causing temporary effects on their population and/or distribution within the site.	■ Operator to design access routes, storage areas and site facilities to minimise disturbance impacts. ■ Operator to conduct operations out of sight of roosting and feeding areas where possible. ■ Local authority to plan schedule with Natural England to limit disturbance risk. ■ Natural England to specify a period of low sensitivity at each construction site, based on likely departure and arrival dates of waterbird species that use it. ■ At all other times, operator working within 200 metres of, and visible to, a roost site will stop during the 2 hours before and after high tide. ■ Operator to limit construction activities to daylight hours at all times of year. ■ Operator to use hand tools where practicable. ■ Operator to avoid use of percussive machinery outside period of low sensitivity, or avoid use of machinery during the 2 hours before and after high tide. ■ Works will require a SSSI (Site of Special Scientific Interest) assent subject to a separate HRA.

Trampling of designated features following changes in recreational activities, as a result of the access proposal, causes damage to, or reduction in the extent and distribution of, qualifying natural habitats and the habitats of qualifying species.	■ Most of the route is on existing PRoWs and well walked routes outside of the designated site boundaries. ■ The route will be signposted and waymarked regularly to encourage walkers to remain on the path with clear walking options and distances indicated at route junctions within the RSPB reserve. ■ Saltmarsh and flats between Snettisham RSPB Reserve and Sutton Bridge will be excluded under S25A of CROW access as they are unsuitable for public access. ■ Short sections of fence or posts will be erected at the junction of the England Coast Path with the three informal paths running south towards the shingle ridges at the southern end of the RSPB reserve to discourage users of the England Coast Path from diverging on to existing desire lines. ■ Monitoring of the 240m of path from the junction of the England Coast Path with the path to the southernmost bird hide at the RSPB reserve to the bund by Wolferton pumping station. Should the path width increase beyond its size in 2020, with a trigger width approaching 1.8m (and associated increase in compressed or dead vegetation and broken surface), a boardwalk will be installed to define the route. ■ New interpretation boards will be installed within the RSPB reserve at the 3 entrances showing the exclusions to the seaward margin and the sensitivity of the habitats. ■ Installation of a people counter at the southern end of Snettisham RSPB reserve once the England Coast Path becomes operational to monitor the usage of this sensitive area and provide evidence should further infrastructure be necessary (e.g. a boardwalk).

	■ An advisory sign will be installed at the point that the path to the Inner Trial Bank joins the Peter Scott Walk reminding users that access to the saltmarsh is excluded under S25A of CROW.
Installation of access management infrastructure within designated sites may lead to a permanent loss of extent of habitats that are qualifying features themselves or support bird, plant or invertebrate species that are qualifying features.	■ The only infrastructure to be installed on habitat that is a SAC or Ramsar site feature, supporting habitat for SPA / Ramsar site birds, or supporting habitat for wetland invertebrates are two posts on the beach at Heacham, and 67 posts and one information board at Snettisham within vegetated shingle. ■ Sites will be carefully chosen to minimise damage e.g. utilising bare shingle. ■ The remaining infrastructure within designated site boundaries or just outside the boundaries will be either on site fabric or species poor grass. ■ Installation methods will be checked at establishment stage and a further assessment under the Habitats Regulations will be made before works are carried out.

VI) Implementation

Once a route for the trail has been confirmed by the Secretary of State, we will work with Norfolk County Council and Lincolnshire County Council to ensure any works on the ground are carried out with due regard to the conclusions of this appraisal and relevant statutory requirements.

VII) 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 RSPB and to other organisations and local experts whose contributions and advice have helped inform the development of our proposals.

Special thanks are due to Jim Scott of the RSPB for his invaluable knowledge of the dynamics of local bird populations; and also to Dr David Thompson of the Sea Mammal Research Unit for providing data on the distribution of harbour seals within The Wash.

Assessment of Coastal Access proposals under regulation 63 of the Habitats Regulations 2017 (as amended) ('Habitats Regulations Assessment')

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 could impact on a site designated for its international importance for wildlife, called a 'European site[1]', a Habitats Regulations Assessment must be carried out.

The conclusions of this assessment are approved by a member of Natural England staff who is not a member of coastal access programme team and who has responsibility for protected sites. 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 [Natural England 2013]. 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 stretch of coast between Hunstanton and Sutton Bridge. 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 part of the stretch in question.

Our proposals for coastal access have two main components:

[1] Ramsar sites and proposed Ramsar sites; potential Special Protection Areas (pSPA); candidate Special Areas of Conservation (cSAC); and sites identified, or required, as compensatory measures for adverse effects on European sites are treated in the same way by UK government policy

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

England Coast Path

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 coastal path will be able to 'roll back' as the coast erodes or where there is significant encroachment by the sea such as occurs in the case of a deliberate breach of sea defences.

Coastal Margin

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

Coastal 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 [Natural England, 2013]. 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.

Of particular relevance to this assessment is that most areas of saltmarsh and mudflat within The Wash is considered unsuitable for public access and will be excluded from the new coastal access rights at all times regardless of any other considerations. As above, this will not affect other forms of established use, such as bait digging and wildfowling.

Promotion of the England Coast Path

The England Coast Path will be promoted as part of the family of National Trails. On the ground, the path will be easy to follow, with distinctive signposting at key intersections and places people can join the route. Directional way markers incorporating the National Trail acorn symbol will be used to guide people along the route. The coastal margin will not normally be marked on the ground, except where signage is necessary to highlight dangers that might not be obvious to visitors, or clarify to the scope and/or extent of coastal access rights.

Information about the England Coast Path will be available on-line, including via the established National Trails website that has a range of useful information, including things for users to be aware of, such as temporary closures and diversions. The route is depicted on Ordnance Survey maps using the acorn symbol. The extent of the coastal margin is also

depicted, together with an explanation about coastal access, where they do and don't apply and how to find out about local restrictions or exclusions.

Maintenance of the England Coast Path

The access proposals provide for the permanent establishment of a path and associated infrastructure, including additional mitigation measures referred to in this assessment and described in the access. The England Coast Path will be part of the National Trails family of routes, for which there are national quality standards. Delivery is by 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 make the trail fit for use and prepare for opening, including any special measures that have been identified as necessary to protect the environment will be carried out before the new public rights come into force on this stretch. 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. Works on the ground to implement the proposals will be carried out by Norfolk County Council and Lincolnshire County 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.

PART B: Information about the European Site(s) which could be affected

B1. Brief description of the European Sites(s) and their Qualifying Features

The Wash SPA and Ramsar site

The Wash SPA and Ramsar site covers over 62,000 ha and is the largest estuarine system in the UK, fed by the rivers Witham, Welland, Nene and Great Ouse. There are extensive saltmarshes (the largest single area in the UK), inter-tidal banks of sand and mud, deep channels surrounded by shallow waters, areas of shingle and dune, and coastal lagoons. The sublittoral area supports a number of different marine communities including colonies of the reef-building polychaete worm *Sabellaria spinulosa*.

The highly productive system provides rich forage making The Wash the most important migratory and over-wintering site for waterbirds in the UK (combined average peak count of 376,504 for the period 2013/14 to 2017/18). In addition, the sites support two species of breeding tern (common and little). Farmland adjoining the protected sites is also important to a number of species e.g. Bewick's swan and pink-footed goose for foraging and roosting.

Additionally, the Ramsar site is noted for the rich invertebrate fauna associated with the saltmarsh and saline lagoons. The specialised salt-tolerant plants provide a suitable habitat for a variety of invertebrates, some of these being rare e.g. the yellow pogonus beetle *Pogonus luridipennis* and sea aster mining bee *Colletes halophilus*.

Greater Wash SPA

The Greater Wash SPA covers 353,578 ha of coastal waters including a small area in the north east of The Wash. Located in the mid-southern North Sea between Bridlington Bay in the north and the Outer Thames Estuary SPA in the south. It provides important at-sea foraging areas for breeding colonies of three tern species (common, little and Sandwich) and non-breeding common scoter, little gull and red-throated diver.

The Wash and North Norfolk Coast SAC

The Wash, the largest embayment in the UK, is connected to the north Norfolk coast via sediment transfer systems. Together they form one of the most important marine areas in the UK and European North Sea coast. The Wash and North Norfolk SAC covers some 107,761 ha of saltmarsh, inter-tidal mud and sand, sub-tidal sandbanks, biogenic and geogenic reefs, and coastal lagoons (The Wash being almost 60% of the SAC). Of particular note are:

- The polychaete worm *Sabellaria spinulosa* reef, which is of European significance being one of only five SACs in the UK for which this habitat is a primary reason for designation;

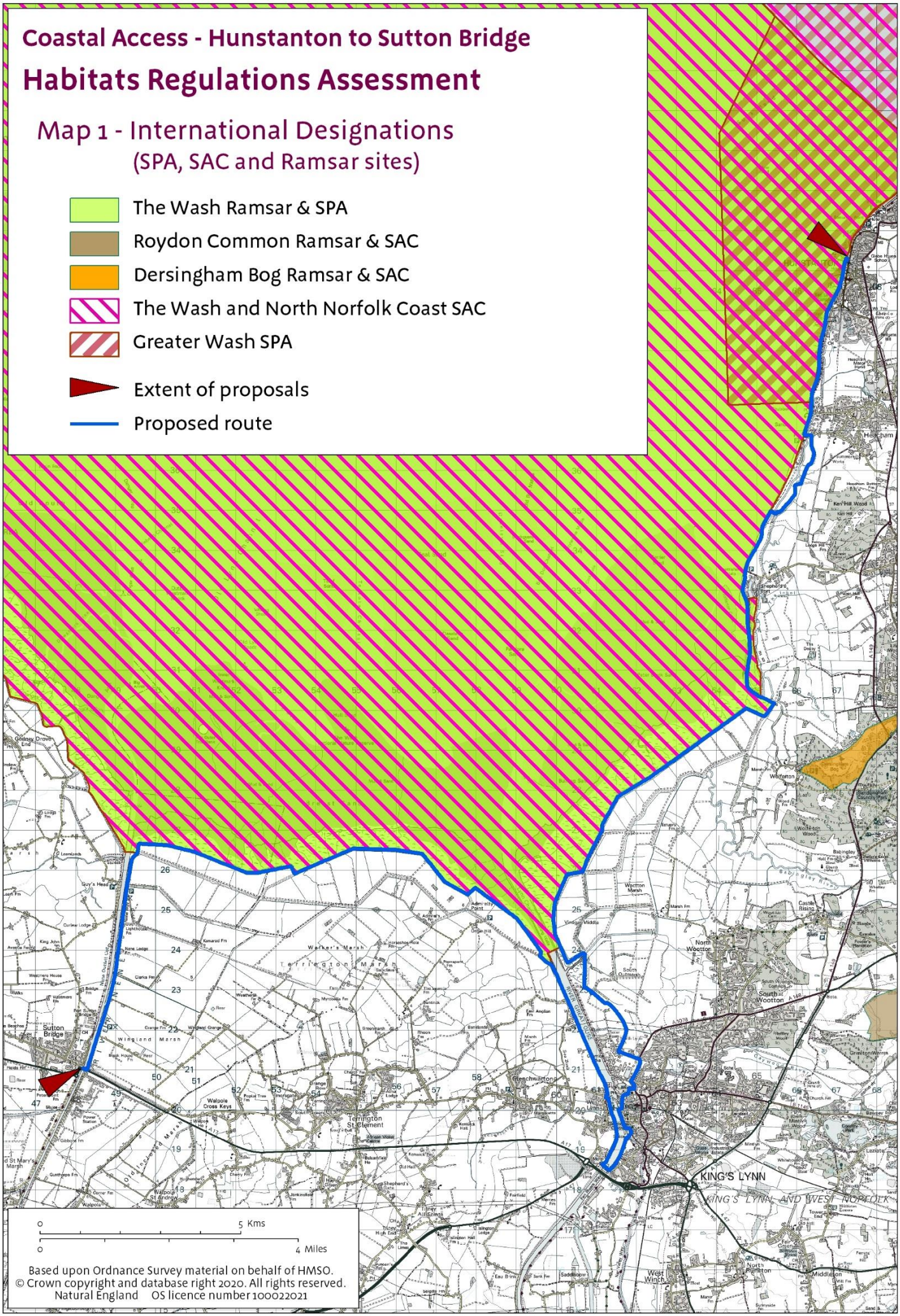
- The Atlantic salt meadows which form one of the most diverse and extensive examples of this habitat in the UK. Here is the only location in the UK where all the more typically Mediterranean species that characterise Mediterranean and thermo-Atlantic halophilous scrubs occur together.
- The site contains the largest area of Salicornia and other annuals colonizing mud and sand and is one of the few areas in the UK where saltmarshes are generally accreting.

The site is also important for Harbour (common) seals providing key habitat for breeding and hauling-out, making it the largest colony of Harbour seals in the UK. They can be found hauling out on inter-tidal sand and mudflats throughout The Wash. Also, otters make use of the foraging opportunities The Wash offers, moving between inland freshwater habitats and the sea.

Coastal Access - Hunstanton to Sutton Bridge

Habitats Regulations Assessment

Map 1 - International Designations
(SPA, SAC and Ramsar sites)



The following table provides a complete list of the qualifying features of the European Sites that could be affected by the access proposals.

Table 3. Qualifying features

Designated Site / **Qualifying feature**	**The Wash SPA**	**The Wash Ramsar**	**Greater Wash SPA**	**The Wash and North Norfolk Coast SAC**
A157 Bar-tailed godwit *Limosa lapponica* (non-breeding)	✓	✓		
A037 Bewick's swan, *Cygnus columbianus bewickii* (non-breeding)	✓			
A616 Black-tailed godwit, *Limosa limosa islandica* (non-breeding)	✓			
A065 Common scoter, *Melanitta nigra* (non-breeding)	✓		✓	
A193 Common tern *Sterna hirundo* (breeding)	✓		✓	
A160 Curlew *Numenius arquata* (non-breeding)	✓	✓		
A675 Dark-bellied brent goose *Branta bernicla bernicla* (non-breeding)	✓	✓		
A672 Dunlin *Calidris alpina alpina* (non-breeding)	✓	✓		
A051 Gadwall *Anas strepera* (non-breeding)	✓			
A067 Goldeneye *Bucephala clangula* (non-breeding)	✓			
A141 Grey plover *Pluvialis squatarola* (non-breeding)	✓	✓		
A143 Knot *Calidris canutus* (non-breeding)	✓	✓		
A177 Little gull *Hydrocoloeus (Larus) minutus* (non-breeding)			✓	
A195 Little tern *Sternula albifrons* (breeding)	✓		✓	
A130 Oystercatcher *Haematopus ostralegus* (non-breeding)	✓	✓		

A040 Pink-footed goose *Anser brachyrhynchus* (non-breeding)	✓	✓		
A054 Pintail *Anas acuta* (non-breeding)	✓	✓		
A162 Redshank *Tringa totanus* (non-breeding)	✓	✓		
A001-A Red-throated diver *Gavia stellata* (non-breeding)			✓	
A144 Sanderling *Calidris alba* (non-breeding)	✓	✓		
A191 Sandwich tern *Sterna sandvicensis* (breeding)			✓	
A048 Shelduck *Tadorna tadorna* (non-breeding)	✓	✓		
A169 Turnstone *Arenaria interpres* (non-breeding)	✓	✓		
A050 Wigeon *Anas penelope* (non-breeding)	✓			
Waterbird assemblage (non-breeding)[1]	✓	✓		
H1160 Large shallow inlets and bays[2]				✓
H1130 Estuaries[3]		✓		
Wetland Invertebrate Assemblage[4]		✓		
H1110 Sandbanks which are slightly covered by sea water all the time		✓		✓
H1140 Mudflats and sandflats not covered by sea water at low tide		✓		✓
Coastal vegetated shingle		✓		
Coastal sand dunes		✓		
H1150 Coastal lagoons		✓		✓
H1170 Reefs		✓		✓
H1310 Salicornia and other annuals colonising mud and sand		✓		✓
H1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae)*		✓		✓
H1420 Mediterranean and thermo-Atlantic halophilous scrubs (*Sarcocornetea fruticosi*)		✓		✓

S1355 Otter *Lutra lutra*				✓
S1365 Harbour (common) seal (*Phoca vitulina*)		✓		✓

Notes:

[1] A waterbird assemblage is a qualifying feature of both the SPA and Ramsar sites. When classifying a waterbird assemblage as an SPA qualifying feature, the Ramsar Conventions Strategic Framework definition of 'waterbird' is used and as such we consider the two qualifying features synonymous. Current abundance and composition of the assemblage feature is taken into account in our assessment. The main component species for this assemblage include: Bewick's swan; bar-tailed godwit; black-tailed godwit; common scoter; curlew; dark-bellied brent goose; dunlin; gadwall; goldeneye; grey plover; knot; oystercatcher; pink-footed goose; pintail; redshank; sanderling; shelduck; turnstone; wigeon; cormorant *Phalacrocorax carbo*; eider *Somateria mollissima*; golden plover *Pluvialis apricaria*; green sandpiper *Tringa ochropus*; greenshank *Tringa nebularia*; lapwing *Vanellus vanellus*; little egret *Egretta garzetta*; ruff *Calidris pugnax;* teal *Anus crecca*; whimbrel *Numenius phaeopus*; black-headed gull *Larus ridibundus*; herring gull *Larus argentatus*. (The main component species of the assemblage are deemed to be:

- Those present in nationally important numbers;
- Migratory species present in internationally important numbers;
- Those that occur in the assemblage in numbers greater than 2,000 individuals; and
- Named component species otherwise listed on the SPA citation.)

[2] The following are cited as contributing to the SAC large shallow inlets and bays feature, each of which are considered in the assessment that follows: Atlantic salt meadows; circalittoral rock; inter-tidal biogenic reef: mussel beds; inter-tidal biogenic reef: *Sabellaria spp.*; Inter-tidal coarse sediment; Inter-tidal mud; inter-tidal rock; inter-tidal mud and sand; Mediterranean and thermo-Atlantic halophilous scrubs (*Sarcocornetea fruiticosi*); sub-tidal bigenic reefs; *Sabellaria spp*.; Sub-tidal coarse sediment; sub-tidal mixed sediments; sub-tidal mud; sub-tidal sand; sub-tidal stony reef. Of these sub-features, only sub-tidal coarse sediment is not a sub-feature of the other SAC qualifying features.

[3]The Wash Ramsar site qualifies under criterion 1 ("a representative, rare or unique example of a natural or near-natural wetland type"), being the largest estuarine system in Britain, comprising: very extensive saltmarshes; major inter-tidal banks of sand and mud; shallow water; and deep channels. Therefore wetland types that are qualifying features of The Wash and North Norfolk Coast SAC that overlap with The Wash Ramsar site boundary are also taken to be qualifying features of The Wash Ramsar site. The following habitats are deemed to be part of The Wash Ramsar site but not qualifying features of The Wash and North Norfolk Coast SAC: coastal vegetated shingle and coastal sand dunes.

[4] The Wash Ramsar site qualifies under criterion 3 ("supports populations of plant and/or animal species important for maintaining the biological diversity"). The sand and mud flats support high concentrations of marine worms and other invertebrates including shellfish; the sublittoral area supports a number of different marine communities including colonies of the

reef-building polychaete worm *Sabellaria spinulosa*. These marine communities are important in maintaining the large numbers of water birds, harbour seal and otter. Additionally, the saltmarsh is noted for its rich invertebrate fauna.

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.

Supplementary advice on the conservation objectives for the above designated sites can be viewed at:

The Wash SPA
https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK9008021&SiteName=the wash&SiteNameDisplay=The Wash SPA&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=&NumMarineSeasonality=21&HasCA=1

Greater Wash SPA
European Site Conservation Objectives for Greater Wash SPA - UK9020329

The Wash and North Norfolk Coast SAC
https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK9008021&SiteName=the wash&SiteNameDisplay=The Wash SPA&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=&NumMarineSeasonality=21&HasCA=1

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 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. However, for the purposes of this assessment it is important to note that the qualifying features of The Wash Ramsar site include coastal vegetated shingle, coastal sand dunes, and an important assemblage of wetland invertebrates. These are not qualifying features of The Wash SPA or The Wash and North Norfolk Coast SAC. A Ramsar information sheet is available on the Joint Nature Conservation Committee (JNCC) website giving further details.

https://rsis.ramsar.org/RISapp/files/RISrep/GB395RIS.pdf

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 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.

Some of the qualifying features considered in this assessment occupy similar ecological niches and share ways in which they might be sensitive to the access proposals. To avoid repetition and improve the clarity of this assessment we have grouped the qualifying features as shown in Table 4.

Table 4. Feature groups

Feature group	Qualifying feature(s)
Breeding common tern	Common tern
Breeding terns	Little tern and Sandwich tern
Non-breeding waterbirds	Bewick's swan, bar-tailed godwit, black-tailed godwit, curlew, dark-bellied brent goose, dunlin, gadwall, goldeneye, grey plover, knot, oystercatcher, pink-footed goose, pintail, redshank, sanderling, shelduck, turnstone, wigeon and, waterbird assemblage (all non-breeding).
Offshore foraging birds	Common scoter, little gull, red-throated diver
Estuaries	Estuaries; large shallow inlets and bays
Sub-tidal sandbanks and reefs	Sandbanks which are slightly covered by sea water at low tide; sub-tidal coarse sediment (sub-feature of large shallow inlets and bays); reefs (sub-tidal).
Inter-tidal mud, sand and reefs	Mudflats and sandflats not covered by sea water at low tide; reefs (inter-tidal).
Saltmarsh	Salicornia and other annuals colonising mud and sand; Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*); Mediterranean and thermo-Atlantic halophilous scrubs (*Sarcocornetea fruticosi*).
Vegetated shingle	Coastal vegetated shingle
Sand dunes	Coastal sand dunes

Coastal lagoons	Coastal lagoons
Wetland invertebrate assemblage	Wetland invertebrate assemblage.
Otter	Otter
Harbour Seal	Harbour (common) seal

The risk of significant effects alone is considered in the following table:

Table 5. Assessment of likely significant effects alone

Feature group **(Per Table 4)**	**Relevant pressure**	**Sensitivity to coastal access proposals**	**Assessment of risk to site conservation objectives**	**LSE alone ?**
Breeding common tern	Disturbance of nesting, feeding or resting birds from recreational activities.	Breeding common terns in the vicinity of a coastal path and within the coastal access margin are highly sensitive to disturbance from recreational activities including walking and walking with dogs. The response to disturbance can range from being alert to a major flight. During the breeding season this can lead to the trampling of eggs and chicks, or the flight of adults leading to increased mortality from predation or exposure.	Low risk. There is only one breeding colony of common tern in The Wash located on islands within the lagoons at Snettisham RSPB reserve. While the path is close to the west and south edges of the lagoon there a very low risk of impacts because: 1) the RSPB operates a dogs on lead policy; 2) the lagoon is fenced so there is no direct access from the England Coast Path; 3) there is a bund around the lagoon on three sides, so apart from the four bird hides there are no direct views into the lagoon except from the causeway on the northern edge of the lagoon.	No
Breeding common tern	Disturbance of nesting, feeding or resting birds from construction of access	Breeding common terns may be disturbed by construction activities necessary for the physical establishment of the path. The response to disturbance can range from	Low risk. There is only one breeding colony of common tern in The Wash located on islands within the lagoons at Snettisham RSPB reserve.	No

	management infrastructure	being alert to a major flight. During the breeding season this can lead to the trampling of eggs and chicks, or the flight of adults leading to increased mortality from predation or exposure.	No construction works are to be undertaken on the islands and therefore direct trampling is not a risk. There are five locations for infrastructure proposed in the vicinity of the lagoons ranging from 35m to 146m from the edge of the lagoon. However, due to an earth bund, there are no direct lines of sight to the lagoons and therefore operations are unlikely to cause disturbance.	
Breeding common tern	Loss of supporting habitat through the installation of access management infrastructure	Installation of new access management infrastructure could lead to a permanent reduction in the extent of habitat used by breeding common tern.	No appreciable risk. The only breeding colony of common terns is located on islands within lagoons at Snettisham RSPB reserve. No infrastructure will be located within this habitat. Terns forage on open water rather than terrestrial habitats so no associated habitats will be lost.	No
Breeding terns	Disturbance of nesting, feeding or resting birds from recreational activities and from construction of access management infrastructure .	Breeding little and Sandwich terns in the vicinity of a coastal path and within the coastal access margin are highly sensitive to disturbance from recreational activities, including walking and walking with dogs, and from activities connected to the installation of coastal path infrastructure. The response to disturbance can range from being alert to a major flight. During the breeding season this can lead to the trampling of eggs and chicks, or the flight of adults leading to increased mortality from predation or exposure.	No appreciable risk. Little tern is not breeding on the eastern side of The Wash. The only colony within The Wash is on the west coast at Gibraltar Point. Therefore there is no risk to breeding little tern nest sites. Sandwich tern is only a qualifying feature of the Greater Wash SPA and is not found breeding in The Wash. The nearest sites being on the north Norfolk coast at Holme. Therefore there is no risk to breeding Sandwich tern. Both tern species feed on open water and are only	No

			occasional visitors to the lagoons at Snettisham RSPB reserve normally outside of the breeding period [personal communication, Jim Scott, RSPB, 5 March 2020] Probably due to the distance from their breeding sites (little tern 23km and Sandwich tern 15km). This view is supported by WeBS count data that shows small numbers of these birds only in July and August in this area.	
Breeding terns	Loss of supporting habitat through the installation of access management infrastructure	Installation of new access management infrastructure could lead to a permanent reduction in the extent of habitat used by breeding little and Sandwich terns.	No appreciable risk. There are no breeding little tern or Sandwich tern on the eastern side of The Wash. Foraging terns will use open water rather than terrestrial habitats and therefore no supporting habitat will be lost.	
Non-breeding waterbirds	Disturbance of feeding or resting birds from recreational activities.	Birds feeding on the foreshore or roosting in the vicinity of a coastal path, and the coastal path margin, may be disturbed by recreational activities including walking and walking with dogs. The response by waterbirds can range from being alert to a major flight. This can interrupt feeding and / or increase energy usage, leading to a reduction in the condition of birds.	The level of risk is high. Waterbirds are present in large numbers in multiple locations, both within The Wash SPA and Ramsar site and adjacent farmland (functionally linked land).	Yes
Non-breeding waterbirds	Disturbance from recreational activities in the breeding season	The breeding population of a species may contribute to the non-breeding population of a site by being wholly or largely resident. Birds nesting in the vicinity of a coastal path, and	The level of risk is higher at places where a breeding population of a species significantly contributes to the non-breeding population. Most adult waterbirds leave The Wash to breed. Those that stay are not considered	Yes

		coastal path margin, are potentially at risk from disturbance by recreational activities including walking and walking with a dog.	to contribute significantly to the non-breeding population. However; ringing recoveries show that British redshank are less migratory than other waterbirds and many winter on the coastal areas on which they breed [Lack, 1986]. This represents between 6% and 10% of the over-wintering population, which is significant. Consideration was also given to breeding ringed-plover, which is subject to a number of initiatives to protect it in the breeding season. (Ringed plover are not a listed bird but form part of the non-breeding waterbird assemblage). But, evidence from ringing recoveries suggest that most breeders on The Wash winter elsewhere; wintering ringed plover mainly coming from Scandinavian breeding sites [Lucking, 2020].	
Non-breeding waterbirds	Disturbance of feeding or resting birds from construction of access management infrastructure	Birds feeding on the foreshore or roosting in the vicinity of a coastal path, and the coastal path margin, may be disturbed by construction activities necessary for the physical establishment of the path. The response by waterbirds can range from being alert to a major flight. This can interrupt feeding and / or increase energy usage, leading to a reduction in the condition of birds.	The level of risk is higher where construction activities are undertaken close to places on which large numbers of birds depend especially currently undisturbed high tide roost sites and important feeding areas.	Yes
Non-breeding waterbirds	Loss of supporting habitat through the installation of	Installation of new access management infrastructure could lead to a permanent	The England Coast Path passes through parts of the designated sites at Heacham and Snettisham. Within these areas will be a number	Yes

	access management infrastructure	reduction in the extent of habitat used by waterbirds.	of fingerposts, way-marker posts, fences and signs. The rest of the path follows the boundary of the designated sites, but in places, especially where the England Coast Path is on top of the seawall, it is just within the designated site boundary. Further signs are located in these areas.	
Offshore foraging birds	Disturbance of feeding or resting birds	Birds feeding close to the foreshore or roosting in the vicinity of a coastal path, and the coastal path margin, may be disturbed by recreational activities including walking and walking with dogs; and by construction activities necessary for the physical establishment of the path. This can interrupt feeding and /or increase energy usage, leading to a reduction in the condition of birds.	No appreciable risk. These are wide ranging birds that feed and rest on open waters. While they will make use of inland lakes and waterways, in general, the spatial separation between foraging and recreational and construction activities will be sufficient to conclude that there will be no interaction.	No
Estuaries	Physical damage from recreational activities	Habitats within the estuary that are close to a coastal path or the coastal path margin might be damaged by walkers or their dogs wading seaward of the trail.	The habitats that make up the estuary are broken down and assessed individually below. Of these, it is considered that there is an LSE on: inter-tidal mud, sand and reefs, coastal vegetated shingle and coastal sand dunes.	Yes
Estuaries	Direct loss of habitat through the installation of access management infrastructure	Installation of new access management infrastructure could lead to a permanent reduction in the extent of habitats that make up the estuary.	The habitats that make up the estuary are broken down and assessed individually below. Of these, it is considered that there is an LSE on: coastal vegetated shingle.	Yes
Sub-tidal sandbanks and reefs	Physical damage from	If close to a coastal path or the coastal path margin areas of this feature in the uppermost parts of the sub-	No credible risk Sub-tidal sandbanks are dynamic habitats generally	No

	recreational activities	tidal zone (only submerged by a few cm during spring low tide) might be damaged by walkers or their dogs wading seaward of the trail.	resilient to access on foot and reefs are located in deeper water out of reach of walkers. They are remote from existing paths and potential locations for new paths nor would they form part of the coastal margin. We conclude that there is no credible risk of significant damage as a result of the proposals.	
Sub-tidal sandbanks and reefs	Direct loss of habitat through the installation of access management infrastructure	Installation of new access management infrastructure could lead to a permanent reduction in the extent of this habitat.	No infrastructure will be located within this habitat.	No
Inter-tidal mud, sand and reefs	Physical damage from recreational activities	If the coastal path crosses the inter-tidal mud and sand, or the feature is included in the coastal path margin, trampling by walkers could damage the structure or its flora and fauna. As well as being a qualifying feature in its own right, inter-tidal mud and sand is also supporting habitat for non-breeding waterbirds and the wetland invertebrate assemblage.	Localised risk. The proposed route does not cross the inter-tidal mud and sand, and the majority of areas are unsuitable for public access on foot and will be excluded by direction. The only area within the coastal path margin, not excluded due to unsuitability, are the sandflats running from Hunstanton to Snettisham Scalp. These sandflats have existing access rights and are well used by existing residents and visitors.	Yes
Inter-tidal mud, sand and reefs	Direct loss of habitat through the installation of access management infrastructure	Installation of new access management infrastructure could lead to a permanent reduction in the extent of this habitat.	No infrastructure is proposed within this habitat	No
Saltmarsh	Physical damage from	Saltmarsh vegetation can be damaged or destroyed by people repeatedly	Low risk. The coastal path is aligned inland of the saltmarsh zone,	Yes

	recreational activities	walking on the same part of it. This creates bare areas which make the surrounding saltmarsh vegetation more vulnerable to erosion and loss. As well as being a qualifying feature in its own right, saltmarsh is also supporting habitat for non-breeding waterbirds.	generally on the seawall or landward of the seawall. The saltmarsh is deemed to be unsuitable for public access on foot and will be excluded by direction. Some areas of saltmarsh are used by wildfowlers and there are footbridges across creeks and gullies to facilitate access. In areas where there are existing rights of way on the adjoining seawall there is no evidence that walkers are detouring to walk on the saltmarsh to use these wildfowling routes. However, there is one location where an unofficial path has been made to access the manmade mound known as the Inner Trial Bank. There is therefore a small risk that the England Coast Path will result in additional use of this path with subsequent trampling of saltmarsh vegetation.	
Saltmarsh	Direct loss of habitat through the installation of access management infrastructure	Installation of new access management infrastructure could lead to a permanent reduction in the extent of this habitat. As well as being a qualifying feature in its own right, saltmarsh is also supporting habitat for non-breeding waterbirds.	No infrastructure is proposed within saltmarsh habitat types.	No
Coastal lagoons	Physical damage from recreational activities	The margins of coastal lagoons could be damaged by walkers and walkers with dogs. Additionally, dogs could enter the coastal lagoons and damage the lagoon bed. As well as being a qualifying feature in its own right, coastal lagoons are	No credible risk. The coastal path passes within 20m of two lagoons where the path returns to the coast at South Beach (within Snettisham Coastal Park, but outside of the designated sites); and within 23m of the	No

		also supporting habitat for breeding terns and non-breeding waterbirds.	southernmost lagoon at Snettisham RSPB reserve. The Snettisham lagoons are fenced off and the RSPB operate a dogs on lead policy so dogs are unlikely to enter these. Dogs off of the lead could potentially enter the lagoons at the coastal park. However, these are not within the boundaries of the designated sites.	
Coastal lagoons	Direct loss of habitat through the installation of access management infrastructure	Installation of new access management infrastructure could lead to a permanent reduction in the extent of this habitat.	No infrastructure is proposed within the coastal lagoon habitat type.	No
Coastal vegetated shingle	Physical damage from recreational activities	Vegetated shingle can be damaged or destroyed by people repeatedly walking on the same part of it. This can create bare areas and change the composition of the vegetation.	Localised risk. Areas of vegetated shingle are found at the Snettisham RSPB reserve. The coastal path is initially on a concrete track but this changes to a bare shingle track with the final 240m (approx.) across coastal vegetated shingle until the path exits the designated sites at Wolferton pumping station. (See map 3). Additionally, there is access to areas of vegetated shingle within the seaward margin of the coastal path from Snettisham Coastal Park to Snettisham RSPB reserve.	Yes
Coastal vegetated shingle	Direct loss of habitat through the installation of access	Installation of new access management infrastructure could lead to a permanent reduction in the extent of this habitat.	There is a potential small loss of vegetated shingle (approx. 7 m^2) due to the installation of signposts and fencing on shingle at Snettisham RSPB reserve.	Yes

	management infrastructure			
Coastal sand dunes	Physical damage from recreational activities	The integrity of coastal sand dunes can be damaged by repeatedly walking on the same part of it. This can create bare areas that are prune to erosion and wind-blow.	Low localised risk. There are small areas of coastal sand dunes at Heacham and north and south of Snettisham Scalp. The Environment Agency (EA) have advised against the coastal path running along the ridge of the dunes as this could compromise the integrity of the dunes as a sea defence. However, there is current access to these by residents and visitors and at Snettisham they will be within the coastal path's seaward margin.	Yes
Coastal sand dunes	Direct loss of habitat through the installation of access management infrastructure	Installation of new access management infrastructure could lead to a permanent reduction in the extent of this habitat.	No infrastructure is proposed within the coastal sand dune habitat type.	No
Wetland invertebrate assemblage	Physical damage from recreational activities	A variety of wetland invertebrates may be trampled or have their supporting habitat damaged or destroyed by recreational activity or from the maintenance activities to keep the path open.	Low localised risk. The Wash Ramsar site is cited for two distinct assemblages: firstly, the inter-tidal and sub-tidal invertebrates that provide a food source for the designated fauna of The Wash SPA, Ramsar site and The Wash and North Norfolk Coast SAC; secondly, the rich assemblage within the saltmarsh containing many rare and threatened species. Most of the inter-tidal and sub-tidal habitats within the coastal path margin are unsuitable for public access on foot and will be excluded by direction.	Yes

			However, there are three areas where invertebrates are at risk: 1) the sand flats between Hunstanton and Snettisham which is outside of the exclusion area as this has current access rights and is heavily used by existing residents and visitors; 2) an area of shingle to the south of the RSPB Reserve at Snettisham where the shingle transitions into saltmarsh; 3) an unofficial path across saltmarsh to the manmade structure known as the Inner Trial Bank (located between the rivers Great Ouse and Nene) may attract users from the path.	
Wetland invertebrate assemblage	Direct loss of supporting habitat through the installation of access management infrastructure	Installation of new access management infrastructure could lead to a permanent reduction in the extent of wetland habitat used by invertebrates.	No credible risk. No infrastructure is proposed within sub-tidal, inter-tidal or other wetland habitats.	No
Otter	Disturbance of feeding or resting otters from recreational activities	Otters feeding and resting in the vicinity of the coastal path and the coastal path margin are sensitive to disturbance by walkers, especially walkers with dogs. Areas around holts are particularly sensitive. Otters are very alert and can react to the presence of people up to 250m away. Interruption to feeding and resting could result in otters losing condition. Repeated disturbance could result in parts of their habitat being abandoned.	Low risk. The habitats within The Wash and North Norfolk Coast SAC represent good otter habitat and are considered to support a significant otter presence. They are solitary, mainly nocturnal, territorial animals almost always found beside water. River territories are large: up to 12 miles for dog otters and 7 miles for bitches. Consequently, sightings tend to be sporadic. There have been reports of otter at Snettisham RSPB reserve on inter-tidal areas and freshwater bodies [personal	No

			communication, Jim Scott, RSPB, 5 March 2020]. Along this stretch of the England Coast Path they are most likely to be found foraging along the shore, shallow coastal waters or rivers that discharge to The Wash (Great Ouse, Babingley, and Heacham) as well as the coastal lagoons. Otters are largely nocturnal and therefore are unlikely to be encountered by walkers using the England Coast Path Additionally, evidence suggests that otters are not significantly affected by anthropogenic disturbance [Chanin, 2003] this is borne out by the many urban otter populations that have established in recent years.	
Otter	Disturbance of feeding or resting otters from construction of access management infrastructure	Otters feeding and resting in the vicinity of the coastal path and the coastal path margin may be disturbed by construction activities necessary for the physical establishment of the path. Otters are very alert and can react to the presence of people up to 250m away. Interruption to feeding and resting could result in otters losing condition.	Low risk. The habitats within The Wash and North Norfolk Coast SAC represent good otter habitat and are considered to support a significant otter presence. They are solitary, mainly nocturnal, territorial animals almost always found beside water. River territories are large: up to 12 miles for dog otters and 7 miles for bitches. Consequently, sightings tend to be sporadic. There have been reports of otter at Snettisham RSPB reserve on inter-tidal areas and freshwater bodies [personal communication Jim Scott, RSPB, 5 March 2020]. Most signage and infrastructure is away from water courses where otters may be encountered. Where	No

			infrastructure is proposed in the zone of influence (a sign at Coalyard creek and steps / ramp at The Ingol, Wolferton) the bankside vegetation has been cleared to facilitate the building of the new pumping station and therefore otters will be unlikely to be utilising the area.	
Otter	Loss of supporting habitat through the installation of access management infrastructure	Installation of new access management infrastructure could lead to a permanent reduction in the extent of wetland habitat used by otters.	No credible risk. No infrastructure is proposed within sub-tidal, inter-tidal or other wetland habitats used by otters.	No
Harbour seal	Disturbance of breeding and basking seals from recreational activities	Harbour seals hauled-out in the vicinity of the coastal path and the coastal path margin are sensitive to disturbance by walkers, especially walkers with dogs. During the breeding season (late June – early July) adults could temporarily abandon their young leading to increased pup mortality; during the moulting period (late July – early September) adults may lose condition.	No appreciable risk Harbour seals use inter-tidal mud and sand flats to give birth and to moult. Research has shown that adults can become alert to pedestrians at distances up to 425m [Andersen and others, 2012]. Most haul-out sites in The Wash are located on the inter-tidal mud and sand flats beyond the saltmarsh. The nearest in relation to the England Coast Path is located at the mouth of The Lynn Channel (Great Ouse river) at a distance of at least 500m. As the saltmarsh and mud flats are excluded by direction walkers on the path will be outside the zone of influence.	No
Harbour seal	Disturbance of feeding or resting seals from construction of access	Harbour seals hauled-out in the vicinity of the coastal path and the coastal path margin may be disturbed by construction activities necessary for the physical establishment of the path.	Low Risk Harbour seals use inter-tidal mud and sand flats to give birth and to moult. Research has shown that adults can become alert to pedestrians at distances up to 425m	No

	management infrastructure	During the breeding season (late June – early July) adults could temporarily abandon their young leading to increased pup mortality; during the moulting period (late July – early September) adults may lose condition.	[Andersen and others, 2012]. Most haul-out sites in The Wash are located on the inter-tidal mud and sand flats beyond the saltmarsh. The nearest in relation to the England Coast Path is located at the mouth of The Lynn Channel (Great Ouse river) at a distance of at least 800m from the nearest proposed infrastructure, and thus outside of the zone of influence.	
Harbour seal	Loss of supporting habitat through the installation of access management infrastructure	Installation of new access management infrastructure could lead to a permanent reduction in the extent of estuary and other habitats used by harbour seals.	No credible risk. No infrastructure is proposed within the sub-tidal and inter-tidal habitats used by harbour seals.	No

Conclusion:

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

- Non-breeding waterbirds (bar-tailed godwit; Bewick's swan; black-tailed godwit; curlew; dark-bellied brent goose; dunlin; gadwall; goldeneye; grey plover; knot; oystercatcher; pink-footed goose; pintail; redshank; sanderling; shelduck; turnstone; wigeon; waterbird assemblage)
- Non-breeding waterbirds (breeding) (redshank)
- Wetland invertebrate assemblage
- Estuaries (mudflats and sandflats not covered by seawater at low tide; large shallow inlets and bays; coastal vegetated shingle; coastal sand dunes)
- Inter-tidal mud, sand and reefs (mudflats and sandflats not covered by seawater at low tide; reefs (inter-tidal))
- Saltmarsh (Salicornia and other annuals colonising mud and sand; Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*); Mediterranean and thermo-Atlantic halophilous scrubs (*Sarcocornetea fruticosi*))
- Coastal vegetated shingle

- Coastal sand dunes

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

- Breeding common tern
- Breeding terns (Sandwich tern; little tern)
- Offshore foraging birds (red-throated diver; common scoter; little gull)
- Sub-tidal sandbanks and reefs (sandbanks which are slightly covered by seawater all the time; reefs(sub-tidal))
- Coastal lagoons
- Otter
- Harbour (common) seal

(Any appreciable risks identified that are not significant alone are further considered in section C2.2)

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.

In C2.1 the qualifying features on which the access proposals might have an effect alone are identified – these are considered further in Part D of this assessment. For all other features, no other appreciable risks arising from the access proposals were identified that have the potential to act in combination with similar risks from other proposed plans or projects to also become significant. It has therefore been determined that the project is unlikely to have a significant effect in-combination with other proposed plans or projects.

In light of this review, we have not identified any significant and combinable effects that are likely to arise from other plans and projects.

Conclusion:

The plan or project, in combination with other plans and projects, is unlikely to have a significant effect on the following qualifying features of the European Site(s):

- Breeding common tern
- Breeding tern (Sandwich tern; little tern)
- Offshore foraging birds (red-throated diver; common scoter; little gull)

- Sub-tidal sandbanks and reefs (sandbanks which are slightly covered by seawater all the time; reefs(sub-tidal))
- Coastal lagoons
- Otter
- Harbour (common) seal

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:

Table 6. Scope of Appropriate Assessment

Environmental pressure	**Qualifying Feature(s) affected** **~~(~~b = breeding; nb = non-breeding~~)~~**	**Risk to Conservation Objectives**
Disturbance of feeding or resting non-breeding waterbirds from recreational activities	■ Bewick's swan (nb) ■ Bar-tailed godwit (nb) ■ Black-tailed godwit (nb) ■ Curlew (nb) ■ Dark-bellied brent goose (nb) ■ Dunlin (nb) ■ Gadwall (nb) ■ Goldeneye (nb) ■ Grey plover (nb) ■ Knot (nb) ■ Oystercatcher (nb) ■ Pink-footed goose (nb) ■ Pintail (nb) ■ Redshank (nb) ■ Sanderling (nb) ■ Shelduck (nb) ■ Turnstone (nb) ■ Wigeon (nb) ■ Waterbird assemblage (nb)	The access proposals modify how the site and surrounding areas are used for recreation, causing repeated disturbance to foraging or resting birds during winter and / or on passage which may lead to reduced fitness and reduction in population and / or contraction in the distribution of qualifying features within the site.

Disturbance of breeding redshank from recreational activities	■ Redshank (nb)	The access proposals modify how the site is used for recreation, causing repeated disturbance to breeding redshank, that make a significant contribution to the non-breeding population of this species, which may lead them to abandon nesting areas or reduce their breeding success (for example by causing eggs to become chilled, reducing food supply to chicks, or increasing the vulnerability of eggs, chicks or adults to predation).
Disturbance of non-breeding waterbirds from construction works	■ Bewick's swan (nb) ■ Bar-tailed godwit (nb) ■ Black-tailed godwit (nb) ■ Curlew (nb) ■ Dark-bellied brent goose (nb) ■ Dunlin (nb) ■ Gadwall (nb) ■ Goldeneye (nb) ■ Grey plover (nb) ■ Knot (nb) ■ Oystercatcher (nb) ■ Pink-footed goose (nb) ■ Pintail (nb) ■ Redshank (nb) ■ Sanderling (nb) ■ Shelduck (nb) ■ Turnstone (nb) ■ Wigeon (nb) ■ Waterbird assemblage (nb)	Undertaking works to install access management infrastructure disturbs non-breeding waterbirds causing temporary effects on their population and/or distribution within the site.
Trampling of qualifying and supporting habitat following changes in access	■ Bewick's swan (nb) ■ Bar-tailed godwit (nb) ■ Black-tailed godwit (nb) ■ Curlew (nb) ■ Dark-bellied brent goose (nb) ■ Dunlin (nb) ■ Gadwall (nb) ■ Goldeneye (nb) ■ Grey plover (nb) ■ Knot (nb) ■ Oystercatcher (nb) ■ Pink-footed goose (nb)	The trampling of designated features following changes in recreational activities, as a result of the access proposal, causes damage to, or reduction in the extent and distribution of, qualifying natural habitats and the habitats of qualifying species.

	■ Pintail (nb) ■ Redshank (nb) ■ Sanderling (nb) ■ Shelduck (nb) ■ Turnstone (nb) ■ Wigeon (nb) ■ Waterbird assemblage (nb) ■ Estuaries ■ Mudflats and sandflats not covered by sea water at low tide ■ Reefs (inter-tidal) ■ Coastal vegetated shingle ■ Coastal sand dunes ■ Saltmarsh (Salicornia and other annuals colonising mud and sand; Atlantic salt meadows; Mediterranean and thermo-Atlantic halophilous scrubs) ■ Wetland invertebrate assemblage	
Loss of feature extent or of species' supporting habitat through the installation of access management infrastructure	■ Bewick's swan (nb) ■ Bar-tailed godwit (nb) ■ Black-tailed godwit (nb) ■ Curlew (nb) ■ Dark-bellied brent goose (nb) ■ Dunlin (nb) ■ Gadwall (nb) ■ Goldeneye (nb) ■ Grey plover (nb) ■ Knot (nb) ■ Oystercatcher (nb) ■ Pink-footed goose (nb) ■ Pintail (nb) ■ Redshank (nb) ■ Sanderling (nb) ■ Shelduck (nb) ■ Turnstone (nb) ■ Wigeon (nb) ■ Waterbird assemblage (nb) ■ Estuaries ■ Coastal vegetated shingle	The installation of access management infrastructure causes damage to, or a reduction in the extent and distribution of, qualifying natural habitats and habitats of the qualifying species.

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

The Hunstanton to Sutton Bridge section of the England Coast Path largely follows the boundary of The Wash SPA and Ramsar site, The Wash and North Norfolk SAC and the Greater Wash SPA.

The Wash SPA and Ramsar site incorporate the entire waters of The Wash together with the coastal margin. The Greater Wash SPA primarily covers the waters of the North Sea from Bridlington Bay in the north to the Outer Thames Estuary SPA in the south and does not include most of The Wash embayment. The boundaries of the two SPAs are largely coincident with a small area overlapping in the north east corner of The Wash from Old Hunstanton to Heacham. Of the six designated features of the Greater Wash SPA, five have been screened out for further assessment leaving only common tern (breeding). However, the only breeding colony of common tern, in The Wash, is located outside of the boundary of the Greater Wash SPA and therefore this assessment will concentrate on the bird interest of The Wash SPA and Ramsar site.

Disturbance of non-breeding waterbirds

One of the factors we take into account when proposing the alignment of the England Coast Path is the potential for the disturbance of birds.

The waterbird assemblage of The Wash is the largest aggregation in the United Kingdom, with a 5 year average of over 370,000 (2013/14 to 17/18), according to the British Trust for Ornithology (BTO) Wetland Bird Survey (WeBS) [WeBS online, 2019], including 19 species qualifying as features in their own right, and a further 13 species meeting the assemblage criteria (see B1 above).

The Wash is the largest embayment in the UK, composed of tidal rivers, estuaries, lagoons, mud and sand flats and in the centre, deep channels surrounded by shallower waters. Shallow coastal waters support small fish which are preyed upon by tern species. Inter-tidal mud and sand flats support a variety of polychaete worms and bivalve molluscs including cockle and mussel beds which alongside algae provide rich foraging grounds for a number of bird species. The Wash contains the largest single area of saltmarsh in the UK and is one of the few areas in the UK where saltmarsh is generally accreting, both horizontally and vertically [Environment Agency, 2010]. The saltmarsh provides important roosting habitat for several bird species, including redshank, curlew and dunlin; as well as foraging for birds such as dark-bellied brent goose, pintail and wigeon. Adjacent farmland provides foraging for pink footed goose and overspill foraging for curlew, oystercatcher, dunlin and black-tailed godwit during high tides. Where there is evidence that this takes place the land is deemed to be ‘functionally linked’ and is treated as supporting habitat in this assessment.

As part of the Supplementary Advice on Conservation Objectives for The Wash European Marine Site published in 2019 [Natural England, 2020], Natural England set targets to maintain the SPA waterbird features and their supporting habitats in favourable condition; and to restore or maintain the waterbird assemblage population and that of the named component waterbirds.

Of these attributes, only population has established baselines against which the conservation status of each waterbird feature can be measured. These targets are expressed in terms of the five year peak mean count by WeBS, the latest being for the period 2013/14 to 2017/18 [WeBS online, 2019]. The WeBS Alerts system provides a standardised method of identifying changes in numbers of waterbirds at a variety of spatial and temporal scales. Species that have undergone major declines in numbers are flagged.

The current situation with regard to the qualifying waterbird features of The Wash SPA and Ramsar site illustrated in Table 7 below.

Table 7. Waterbird conservation targets and WeBS alerts

SPA /Ramsar site designated feature (bird)	SPA/Ramsar site Baseline Population	Conservation Objective Target Maintain(M*) / Restore(R)	WeBs 2013/14 to 2017/18	WeBs Alerts
Waterbird assemblage	214,000	214,000 M	376,054	N
Bar-tailed godwit	8,200	8,200 M	19,101	N
Bewick's swan	130	130 R	3	Y
Black-tailed godwit	260	260 M	8,376	Y
Common scoter	830	830 M	1,357	Y
Curlew	3,700	3,700 M	6,970	Y
Dark-bellied brent goose	17,000	17,000 M	14,687	Y
Dunlin	29,000	29,000 R	26,321	Y
Gadwall	130	130 M	134	Y
Goldeneye	220	220 R	79	Y
Grey plover	5,500	5,500 M	9,462	Y
Knot	75,000	75,000 M	170,471	N
Oystercatcher	24,000	24,000 R	19,679	N
Pink-footed goose	7,300	7,300 M	34,223	N
Pintail	1,700	1,700 R	505	Y
Redshank	4,331	4,331 M	5,712	N
Sanderling	500	500 M	6,972	N
Shelduck	16,000	16,000 R	3,175	Y
Turnstone	980	980 R	911	Y
Wigeon	3,900	3,900 M	10,854	N

*Maintain above target figure whilst avoiding deterioration from its current level as indicated by the latest WeBS mean peak count or equivalent.

There are currently WeBS alerts for 12 species. However, only five are not in line with regional and national trends and indicate that site specific issues are at work. These are for black-tailed godwit, dark-bellied brent goose, goldeneye, pintail and shelduck.

A further 13 species meet the criteria for assessment as part of the waterbird assemblage. Of these, two species have population trends where there may be site specific issues: golden plover and lapwing.

The attribute of disturbance caused by human activity is most relevant to this assessment, for which the target is 'reduce the frequency, duration and/or intensity of disturbance affecting roosting and/or foraging birds so that they are not significantly disturbed'.

On The Wash, disturbance can be problematic because it reduces the time available to birds for feeding and resting and may increase energy expenditure, for example if it results in flight. Repeated disturbance at a favoured feeding or roosting site may be significantly reduce its function as supporting habitat.

Most waders and some waterfowl are considered more vulnerable to disturbance at high tide, when available habitat is greatly reduced and many birds roost on or just above the waterline. Generally this is not a significant issue on The Wash which has a wide belt of saltmarsh between the inter-tidal flats and the seawall (over 1 km in places) and saltmarsh is accreting. Thus usually allowing sufficient separation between people and roosting birds. However, on the highest spring tides most of the saltmarsh can be covered reducing this separation and increasing the risk of disturbance.

At low tide waterbirds are generally less vulnerable to disturbance because there is extensive feeding and resting habitat on the inter-tidal flats, further from places where recreational activity normally takes place. There are notable exceptions to this rule on The Wash, for example on the sandflats from Hunstanton to Snettisham Scalp which are extensively used by locals and visitors for walking and other activities.

Recreational disturbance from walkers, especially walkers with dogs, has become increasingly recognised as an issue for protected sites designated for their bird interest across the UK. Local authorities with allocated new housing in the vicinity of designated sites need to consider the impact of recreational disturbance from new residents from developments. In the case of The Wash two studies have been carried out by Footprint Ecology on behalf of: Norfolk County Council; and the South East Lincolnshire Joint Strategic Planning Committee.

- Norfolk County Council commissioned Footprint Ecology to undertake visitor surveys at European protected sites across Norfolk during 2015 and 2016, including The Wash [Panter Liley & Lowen, 2016]. The report modelled the increase in visitor numbers from allocated housing development within Norfolk with the aim of providing information for countywide mitigation planning. The report concludes there will be a 6% increase in visitors to The Wash from planned housing growth and that a likely significant effect from recreational disturbance could not be ruled out. Pending a countywide strategy being adopted, the Borough of King's Lynn and North Norfolk is collecting £50 per new dwelling / holiday accommodation to fund mitigation projects.

- South East Lincolnshire Joint Strategic Planning Committee was established in 2011 for the purpose of submitting joint planning policy documents for South Holland District Council and Boston Borough Council. The committee commissioned Footprint Ecology to undertake visitor surveys on the Lincolnshire side of The Wash during 2015 and 2016 [Panter & Liley, 2016]. The report modelled the increase in visitor numbers expected from the planned 18,250 dwellings across the two council areas, and concluded that visits to The Wash would increase by 10% and that a likely

significant effect from recreational disturbance could not be ruled out. To mitigate these impacts Suitable Alternative Natural Greenspace (SANGs) will be provided for all major housing sites in Boston, Spalding and Holbeach West.

Current levels and patterns of public use can have an important influence on the potential effects of coastal path alignment options on qualifying features, particularly in relation to bird disturbance. There are marked differences in public use within and between the four lengths of this stretch.

1. Hunstanton to Snettisham Beach Car Park – Hunstanton and Heacham are popular holiday destinations. The beach / foreshore and inter-tidal sandflats along this stretch are fully accessible and are well used by local residents and visitors. The route follows a concrete promenade from Hunstanton to Jubilee Road, Heacham; then continuing on existing public rights of way (PRoWs) or existing walked routes to Snettisham Beach car park, partly inland and partly on the upper shoreline.

2. Snettisham Beach Car Park to Babingley River, South Outmarsh – at first the England Coast Path follows existing walked paths along the upper beach and onto marked trails within Snettisham RSPB reserve. While the reserve does not have facilities, there is a car park and it is a popular destination with an estimated 41,000 visitors each year [RSPB 2004]. From the reserve to South Outmarsh there are no existing PRoWs, a distance of 11 km. It is very remote with wide expanses of saltmarsh to seaward. Evidence from the RSPB and WeBS indicates that this stretch contains the highest concentration of waterbirds.

3. Babingley River, South Outmarsh to Ferry Square, West Lynn – the path leaves The Wash and follows field boundaries inland, through King's Lynn crossing the Great Ouse via the Free Bridge and up the other side to West Lynn. As an alternative a ferry can be taken from Kings Lynn to West Lynn. This is the least sensitive section.

4. Ferry Square, West Lynn to Cross Keys Bridge, Sutton Bridge – the England Coast Path continues along the existing waymarked route, the Peter Scott Walk, following along the top of the seawall for 16 km. While it is a waymarked route it is not well used, probably due to its remoteness and there being only three points of access and little parking provision. Surveys by Footprint Ecology [Panter & Liley, 2016] indicate that the majority of visitors walk less than 5 km based around Ongar Hill and Peter Scott lighthouse on the River Nene. This section is also categorised by the wide expanse of saltmarsh to seaward supporting large numbers of roosting and feeding waterbirds.

Levels of disturbance are influenced by the behaviour of visitors which in turn is influenced by their understanding of the sensitivity of bird populations to their actions. As part of the Footprint Ecology surveys in Norfolk [Panter, Liley & Lowen, 2016] visitors to The Wash at Snettisham and Holme were asked whether they were aware of any conservation designations on the site they were visiting. Significantly only 30% responded "yes" with the remainder responding "no" or "unsure". For the Lincolnshire report [Panter & Liley, 2016] which included the lighthouse at Sutton Bridge and Ongar Hill the responses were 36% and 48% respectively.

Disturbance of breeding redshank

Breeding redshank are a SSSI notified feature and are found on suitable saltmarsh habitats across The Wash. While breeding redshank are not a named interest feature of either The Wash SPA or Ramsar site bird ringing recoveries indicate that the British and Irish breeding populations are less migratory than any other and many winter on the coastal areas on which they breed [Lack, 1986]. The 5 year monthly averages from WeBS indicates that the breeding population of redshank could be contributing between 6% and 10% of the non-breeding population of The Wash.

Studies have shown that up to 75% of British breeding redshank are found on coastal saltmarshes and that the breeding population declined by 53% between 1985 and 2011. This has largely been attributed to the grazing regime but other factors are at work including the decline in saltmarsh due to sea level rise. [Malpas, 2013 and Mason, 2019].

Disturbance can impact breeding success by:

- Reducing daytime nest attentiveness;
- Reducing time spent incubating eggs;
- Predation of nest whilst absent;
- Loss of nest from trampling by cattle whilst absent.

Trampling of qualifying and supporting habitat following changes in access

The Supplementary Advice for The Wash SPA [Natural England, 2019] provides baseline information (based on the best available evidence) on the extent and distribution of supporting habitat used by the qualifying features. These include the following inter-tidal and terrestrial habitats: Inter-tidal rock 6.5 ha; inter-tidal sand and muddy sand 23,069 ha; inter-tidal mud 5,921 ha; inter-tidal mixed sediments (extent unknown); inter-tidal coarse sediments (extent unknown) inter-tidal biogenic reefs, mussel beds 500 ha; saltmarsh 5,704 ha; freshwater and coastal grazing marsh 0.25 ha; coastal lagoons 19 ha; and coastal reedbeds (extent unknown). Additionally, the Ramsar information sheet indicates that 0.03% (between 120 and 180 ha) is sand / shingle shores including coastal sand dunes and coastal vegetated shingle. Sub-tidal / open water largely making up the remainder of the 62,000 ha of the designated sites.

The beaches, foreshore and inter-tidal sandflats between Hunstanton and Snettisham RSPB reserve are currently fully accessible to the public for a range of recreational activities including walking and will be within the coastal margin. The habitats currently being impacted from recreational activity are: inter-tidal sand and muddy sand, and sand / shingle shores (including the priority habitats coastal sand dunes and coastal vegetated shingle).

Inter-tidal sand is not in itself vulnerable, but repeated trampling can lead to compaction which can reduce the number and diversity of invertebrates that are prey for the SPA / Ramsar site bird interest [Rossi and others, 2007].

Small areas of dune are located on the upper shore between Heacham and Snettisham Scalp. They form a low, sparsely vegetated, ridge on the upper beach and form part of the flood defence. The beach in front of the dunes is subject to annual re-nourishment from sand and shingle recovered from an area to the south of Snettisham Scalp.

From Snettisham Scalp running south through Snettisham RSPB reserve is an area of vegetated shingle, the majority of which is registered common land. There is a right for inhabitants of the parish of Snettisham to collect shingle from the common in a way that does not have an adverse impact on the vegetated shingle community or sea defences (see in-combination assessment in section D4 below). As Snettisham scalp is adjacent to the Snettisham Yacht Club and the holiday cabins of Shepherd's Port it is well used with resulting in some localised erosion and bare patches. Further south into the reserve the shingle is accessed less, so is in better condition and supports more interesting flora such as the critically endangered red hemp nettle *Galeopsis angustifolia* at its only known site in Norfolk. There are also areas of shingle with lichen and vascular plants typical of the habitat.

The area of shingle to the south of the RSPB reserve is formed of two main ridges aligned in a north-west / south-east direction. To landward there is a distinct change to the habitat adjacent to the sea wall, but seawards there are natural transitions into the saltmarsh, largely into shrubby sea-blite *Sueada vera* which forms the main species of the SAC interest feature Mediterranean and thermo-Atlantic halophilus scrubs. Natural transitions like this are only found in a limited number of places in the UK.

Outside of the area around the RSPB reserve / Snettisham Scalp there is limited public access to the foreshore. The saltmarsh that fringes much of the rest of the route is accessed by graziers and wildfowlers, but there is little evidence on the ground of regular public access. There is one exception which is an unofficial path from the Peter Scott walk shown on the Ordnance Survey map across the saltmarsh to the man-made structure known as the Inner Trial Bank. The path is probably mainly used by wildfowlers but because it is well defined, marked on the Ordnance Survey map and is mentioned in a number of on-line sources it is highly probable that walkers are attracted to investigate, even though it is inaccessible on higher spring tides.

The risk associated with the coastal access proposal is the possible increase in repeated trampling where the England Coast Path changes current access levels and patterns at sensitive sites; resulting in damage to, or reduction in the extent and distribution of, qualifying natural habitats and the habitats of qualifying species.

Loss of feature extent or of species' supporting habitat through the installation of access management infrastructure

Much of the path infrastructure will be outside of the designated site. However, where the path is within the boundary of the designated sites there is a risk of permanent loss of habitat

due to the installation of establishment works. Inappropriate management and direct or indirect impacts may affect the extent and distribution of habitats, which may adversely affect the population and distribution of designated bird features.

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

In this section of the assessment we describe our overall approach to address the potential impacts and risks from the access proposals. The key nature conservation issues for the Hunstanton to Sutton Bridge stretch of the England Coast Path are the protection of non-breeding waterbirds, trampling of sensitive vegetation and loss of supporting habitat.

Disturbance of non-breeding waterbirds (including breeding redshank)

The overall approach to waterbird conservation can be summarised as to ensure that there is a functioning network of high-tide roosts and feeding areas on each part of the site that are protected from significant disturbance, as set out in the site conservation objectives, to ensure populations are sustained.

Since waterbirds are mobile and present in significant numbers in every part of the site, it makes sense to adopt a strategic approach to design of the new access arrangements, in particular to communications with the general public about sensitivities and the behaviour we want people to adopt.

- A series of branded on-site signs are proposed between Hunstanton and Sutton Bridge in an attractive and distinctive design that will be easily recognisable to regular users and long-distance walkers all around The Wash. The signs will stimulate enjoyment of the waterbird assemblage and understanding of their sensitivity to disturbance.
- The signs will also promote key messages about the behaviour that walkers will be encouraged to adopt in sensitive locations. The messages will emphasise general themes: look out for waterbirds, especially around high-tide; keep your distance if you see them and put your dog on a lead until out of sight. Dog control will be a key theme: there is a body of evidence that suggests that disturbance to waterbirds is more significant when dogs are allowed to roam freely [Jenkinson, 2016]. On The Wash a high proportion of dogs have been recorded off lead [Panter & Liley, 2016].

- The most sensitive locations will be promoted as ‘waterbird refuges’. Signs at these locations will ask walkers to keep to the path and keep dogs with them on the path, using a lead if necessary. In places that will be newly accessible under the proposals, these refuges will be excluded all year, requiring users to keep to the path by excluding access to the wider coastal margin.
- These messages will be backed up at specific locations with additional physical measures such as guide fencing, which act as a visual clue to encourage people to stick to the way-marked route, or fences/screens which make it much more difficult for people or dogs to leave it.
- We expect most new users to adopt the required patterns of behaviour from the outset, either because they remain on the England Coast Path or because they read the signs and consciously adopt the desired behaviour. In the long-term we expect a reduction in disturbance to waterbirds as existing users moderate their behaviour in response to the information we give them.

Our assessment of where these measures are necessary is set out in section D3.2 on local design (below). There we draw on WeBs count data to identify sectors where waterbirds are found in significant numbers. In the tables we provide the sector numbers for the relevant WeBs counts for readers who wish to cross-reference them. (A map of the sectors can be seen in Appendix 1).

Where necessary we carried out additional survey work. To identify parts of the stretch where at least a moderate increase in levels of use appears to be likely we used our own observations, on-line mapping and aerial photography, Strava heatmaps[2], and information provided by the local access authority, site managers and land owners. Based on this we predict only small increases in use above current baseline levels except on the stretch from Wolferton pumping station to King’s Lynn where there is currently no access. This is looked into in further detail in section D3.2D below.

As a rule of thumb, we consider any recreation activity on foot by people or dogs within 200 metres or less of roosting or feeding birds to be a potential cause of visual disturbance. This corresponds to the distance at which the more sensitive species are likely to respond to the activity by flight. We go on to consider location specific factors. Where there is existing use by the public, local knowledge of recreational activity and field observations of interactions with birds are sometimes used to inform the detailed design of the access proposals and our assessment of impacts.

Table 8 below summarises mitigation measures to reduce disturbance to waterbirds during path construction works.

Table 8. Establishment works - mitigation measures

Site design	■ Operator to design access routes, storage areas and site facilities to minimise disturbance impacts.

[2] A heatmap is a graphical representation of data that uses a system of colour coding to represent different values. Strava heatmaps show ‘heat’ made by aggregated public activities over the past 2 years overlaid on a world map. www.strava.com

	■ Operator to conduct operations out of sight of roosting and feeding areas where possible.
Timing of works	■ Local authority to plan schedule with Natural England to limit disturbance risk. ■ Natural England to specify a period of low sensitivity at each construction site, based on likely departure and arrival dates of waterbird species that use it. ■ At all other times, if the operator has to work within 200 metres of, and visible to, a roost site work will stop during the 2 hours before and after high tide. ■ Operator to limit construction activities to daylight hours at all times of year.
Method	■ Operator to use hand tools where practicable. ■ Operator to avoid use of percussive machinery outside period of low sensitivity, or avoid use of machinery during the 2 hours before and after high tide.

Trampling of qualifying and supporting habitat following changes in access

At each location of sensitive habitats between Hunstanton and Sutton Bridge we have assessed any existing patterns of recreational use and predicted changes that are likely to take place as a result of the proposals. In this we drew extensively on the knowledge and experience of local authority staff, in particular those managing public footpaths at the coast; RSPB staff based at Snettisham; and Natural England staff responsible for The Wash NNR.

As part of this process we also noted any clearly visible damage that is already occurring to a particular feature as a result of recreational activity on foot. These observations and inferences form the basis for any additional mitigation proposals incorporated into the design of the access proposal.

Our default is to propose a route that avoids sensitive habitats altogether. In many cases we select an existing route which is part of the site fabric rather than part of the habitat we seek to protect. This limits the scope for damage to sensitive habitat by channelling the heaviest use away from it.

Where the path needs to cross sensitive habitats e.g. the coastal vegetated shingle to the south of the RSPB reserve, clear signage and directional aids are used to minimise impacts.

Whilst increased use of the wider coastal margin could in theory result in increased damage to sensitive habitats, our detailed assessment below concludes that in reality it will not, because most access users will follow the waymarked route because it is more enjoyable and convenient. Additionally, saltmarsh and flats are not deemed suitable and have been excluded from the coastal margin and the shingle habitats at Snettisham already have open access and access is well managed by the RSPB.

Loss of feature extent or of species' supporting habitat through the installation of access management infrastructure

Our choice of route means that the necessary access infrastructure can generally be installed without any risk of habitat damage during works. Method statements by the local authority managing the works will ensure that this is the case, for example by stipulating safe routes for vehicle access and requiring the use of hand tools where more control is

necessary. The installation works will be subject to a SSSI consent which will require a separate HRA.

There are a few places where, having considered all the circumstances, we have concluded that it is necessary to install a new post in the ground in an area of shingle and / or sand. In these cases method statements will require the use of hand tools and the avoidance of vegetation. Additionally, vehicles bringing in materials will need to use existing tracks only. Doing so will limit habitat loss to 0.1 square metres in each location, a total of seven square metres out of the 45 hectares (450 thousand square metres) of shingle / sand habitat within the Ramsar site. We conclude that the loss is trivial in terms of the conservation objectives for the sites, including as supporting habitat.

D3.2 Design of the access proposal to address possible risks – at a local level

In this part of the assessment we consider the coast between Hunstanton and Sutton Bridge as a series of shorter lengths of coast, corresponding to a coastal access report or reports where establishing the England Coast Path and associated coastal access rights might impact on Qualifying Features of a European site. Each length of coast is then considered in a separate subsection (3.2A to 3.2E). In each subsection we explain how the detailed design of our proposals in the relevant report or reports takes account of possible risks.

The qualifying features occurring at each of these shorter lengths of coast are shown in Table 9 below. For readers who wish to cross–refer between this assessment and the corresponding Coastal Access Report in which access proposals are described, the relationship between the geographic units used in this assessment and the way the stretch is sub divided into reports is also shown.

Table 9. Summary of key locations

Location	Coastal Access Report	Relevant risks			
		Disturbance of non-breeding waterbirds	Disturbance of breeding redshank	Trampling of qualifying and supporting habitat	Loss of feature extent or species' supporting habitat
Hunstanton to South Beach Rd., Heacham	HSB-1-S004 to HSB-1-S033	✓		✓	✓
South Beach rd., Heacham to	HSB-1-S034 to HSB-1-S042	✓		✓	

Shepherd's Port					
Shepherd's Port car park to Wolferton Pumping Station	HSB-2-S001 to HSB-2-S054	✓		✓	✓
Wolferton pumping station to South Outmarsh	HSB-2-S055 to HSB-3-S001	✓	✓		
Peter Scott Way	HSB-4-S009 to HSB-4-S014	✓	✓	✓	

To inform our assessment of risk, we have reviewed how relevant sections of coast are currently used for recreation, how this might change as a result of known factors (such as planned housing), and how the established patterns and levels of access might be affected by our proposed improvement to access. The predictions we have made from this work are informed by available information, including reports commissioned to support development of the local plan, on-line mapping and aerial photography, travel and visitor information, site visits and input from local access managers. The findings of this work are incorporated into the assessments below.

D3.2A Hunstanton to South Beach Road, Heacham

I) Baseline situation

Hunstanton and Heacham are popular holiday resorts offering a range of facilities for day trippers and longer stay tourists. Holiday parks are located close to the beach to the south of Hunstanton and the west of Heacham. The two communities are separated by a golf course and farmland, although ribbon development of houses / holiday cabins back on to the beach for most of the distance between the two settlements. A concrete promenade and sea defence runs from Hunstanton to Jubilee Road, Heacham. From here to South Beach Road (710 m) is a low sand ridge vegetated with marram grass *Ammophila arenaria* and scrub with many well used paths crossing from holiday caravans immediately to landward.

With both residential and holiday accommodation close by and ample parking the promenade, seawall and beach are popular with walkers and walkers with dogs throughout the year.

The boundary of the SPA, Ramsar site and SAC follows the top of the beach to seaward of the promenade and seawall. Between Jubilee Road and South Beach Road the boundary is on the top of the sand ridge.

The relevant WeBS sectors and the total peak numbers of waterbirds (all species) making up the SPA and Ramsar site assemblage for the five year period to 2017/18 are shown in table 10 below.

Table 10. Summary WeBS data covering sectors from Hunstanton to South Beach Road, Heacham

WeBS Sector	Location	5 yr average peak counts (2013/14 to 2017/18)	5 yr peak counts (2013/14 to 2017/18)
Hunstanton 11	beach from Old Hunstanton to Lees Caravan Park, Hunstanton	420	786
Hunstanton 10	beach from Lees Caravan Park to South Beach Rd, Heacham	1,954	3,109
Hunstanton 50	Inter-tidal flats from Old Hunstanton to South Beach Rd, Heacham	1,686	2,086

The WeBS 5 year average peak counts to 2017/18 indicate that the beach can be used by significant numbers of oystercatcher (439; 2.3% of SPA population, peak 557), sanderling (884; 12.7%, peak 1,400), turnstone (278; 30.5%, peak 330), ringed plover (56; 4.4%), black-headed gull (280; 1.6%) and herring gull (250; 5.2%). 80% of which are found in the southern section (Hunstanton 10) from Lees Caravan Park, Hunstanton to South Beach Road, Heacham. The beach and associated inter-tidal area provide good habitat for turnstone and sanderling.

II) Detailed design features of the access proposal

The proposed route for the England Coast Path is the existing concrete promenade and coastal defence from Hunstanton to Jubilee Road. This is outside of the designated sites whose boundary is the top of the beach. Between Jubilee Road and South Beach Road the England Coast Path is within the designated sites following the top of the beach, seaward of a dune ridge. The landward margin on the beach is the landward base of the dune ridge; the land seaward of the England Coast Path will become coastal margin by default.

A way-marker post and fingerpost are proposed within the designated sites either end of the stretch of beach between Jubilee Road and South Beach Road.

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

a) Disturbance of non-breeding waterbirds

The proposed coastal path will follow a well walked route along the seawall with a short section along the top of the beach (710m). Based on current usage we expect only a small increase in access to the trail between Hunstanton and Heacham, and to the coastal margin. However, due to the narrowness of the beach an increase in disturbance cannot be ruled

out. This is most likely to happen on early morning high tides when birds may have congregated on the beach before the first walkers arrive and before the tide has receded sufficiently for the birds to feel safe.

As mentioned in D2 above, a large proportion (70%) of existing users are unaware of the conservation importance of The Wash and the sensitivity of the bird interest to disturbance. It is therefore proposed that information signs are installed at key locations to inform and educate visitors. While this may not moderate the behaviour of all new users to the trail this should be offset by the moderation in the behaviour of existing walkers. On this basis it can be concluded that there will not be a significant increase in disturbance.

The key locations for signs are:

i) At Hunstanton where the England Coast Path joins the promenade;

ii) On the promenade by The Boat House Café, Hunstanton;

iii) At the end of Jubilee Road, Heacham where the seawall ends.

The path infrastructure (three information boards, one way-marker post and one fingerpost) will be installed outside of the sensitive period for the non-breeding bird assemblage.

b) Trampling of qualifying and supporting habitat

The coastal path follows the top of the beach (between the high water mark and a small dune ridge) between Jubilee Road and South Beach road for a distance of 710 m this is within the designated sites. While the beach above high water is not a named feature it forms part of the interplay between inter-tidal and dune features and provides supporting habitat for the waterbird interest of the SPA and Ramsar site. Trampling of sandy beaches can lead to compaction in the layer below the top 15 cm [Liddle & Grieg-Smith, 1975 cited in Natural England, 2015a]. However, this compaction of the subsurface should not impact the usage of the area by roosting waterbirds; or foraging birds such as turnstone and sanderling that use the strandline.

The landward margin contains a ridge which is mainly covered in marram grass. A path follows the top of the ridge and a number of paths cross it from a path that runs parallel on the landward side. Research by Boorman and Fuller found that marram grass is particularly sensitive to trampling [1977 cited in Natural England, 2015a]. However, the clear signposting of the path should ensure that that the majority of coastal path users avoid the route along the dune. It may also encourage some existing users to also avoid the dune ridge and thus reduce existing trampling pressure.

The seaward margin of the whole stretch from Hunstanton to South Beach Road includes the inter-tidal sandflats. These widen from 200m at Hunstanton to 1.3 km at South Beach Road. Walking on inter-tidal flats can result in compaction which in turn can impact on the abundance and diversity of invertebrates [Rossi and others, 2007], which in turn are a food source of many SPA and Ramsar site waterbirds. However, given the size of the area, the existing number of people that use the inter-tidal sands, and the anticipated small increase in path users (of which only a small percentage are likely to walk on the sands), any impact can be considered trivial.

c) Loss of feature extent or species' supporting habitat through installation of path infrastructure

Between Jubilee Road and South Beach Road one way-marker post and one fingerpost will be installed at the top of the beach resulting in the loss of 0.2 m^2 of sand/shingle beach within the designated sites. However, the location of the posts next to the existing walked route and main access points from car parks means that the area immediately around the posts is unlikely to be utilised by the waterbird interest.

Conclusion

Natural England has considered the possible risks to qualifying features at this location. Given the mitigation measures detailed above, we consider that no new significant disturbance from recreational activities will be caused. The proposals will therefore not adversely affect the achievement of the conservation objectives in this location.

D3.2B South Beach Road, Heacham to Coastal Park car park, Shepherd's Port

From Heacham the path diverts inland to avoid non-SPA / Ramsar site nesting ringed plover on South Beach and other constraints. The path follows an existing footpath along a raised bank before returning to the coast 2 km to the south. Then following a path between the beach and Snettisham Coastal Park just outside of the designated site boundary.

The area is popular with walkers, with a car park and toilets at each end; and the inland path and coastal park offering circular walks. The Footprint Ecology study on behalf of Norfolk CC [Panter, Liley & Lowen, 2016] maps the routes taken by visitors from the Coastal Park car park. This illustrates the popularity of the coast both north and south and the inland paths of the Coastal Park and proposed inland route of the England Coast Path.

The relevant WeBS sectors and the total peak numbers of waterbirds (all species combined) making up the SPA and Ramsar site assemblage for the five year period to 2017/18 are shown in table 11 below.

Table 11. Summary WeBS sector data covering from South Beach Road, Heacham to Beach Road, Shepherd's Port

WeBS Sector	Location	5 yr average peak counts (2013/14 to 2017/18)	5 yr peak counts (2013/14 to 2017/18)
Heacham 12	Beach from South Beach Rd to end of beach huts on South Beach	130	365
Heacham 11	Beach from beach huts to end of groynes on South Beach	2,649	5,804
Heacham 10	Beach from groynes to Beach Rd, Shepherd's Port	402	566
Heacham 40	Landward of the beach to old seawall including the coastal park from South Beach Rd to Beach Rd	1,302	2,161

Heacham 41	Landward of the old seawall (south section)	1,996	2,512
Heacham 42	Landward of the old seawall (north section)	481	774
Heacham 51	Inter-tidal flats adjoining Heacham 11 and 12	122	197
Heacham 50	Inter-tidal flats adjoining Heacham 10	243	599

WeBS data for the five year average peaks to 2017/18 indicates that Heacham 11 has the highest concentration of waterbirds, with significant numbers of: curlew (260; 3.3% of SPA population; peak 500); oystercatcher (665; 3.4%; peak 2000); sanderling (433; 6.2%; peak 740); turnstone (13; 1.4%; peak 22); and ringed plover (35; 3%; peak 135). There are also large numbers of knot, although not in significant numbers against the population as a whole (1070; 0.6%; peak 1980).

Heacham 12 covering the beach to the north, and Heacham 10 the beach to the south, record far fewer birds although oystercatcher and sanderling have been recorded with peak counts of 250 and 300 respectively. The larger number of birds recorded in Heacham 11 may be partly due to the distance from the access points at South Beach Road and Beach Road, and partly to the fact that there is unrestricted access to the Coastal Park to landward. This inland strip is used by both golden plover and lapwing with maximum counts of 1020 and 115 respectively. There are warnings for both of these species where site specific issues are indicated. There are also significant numbers of black-headed and herring gull.

Inland, the fields between the beach and the old railway line are used by SPA and Ramsar site birds for roosting and feeding and are deemed to be functionally linked to the designated sites. The southern section (Heacham 41) has the greater number of birds no doubt due to being lower lying with many waterbodies. Waterbirds in significant numbers include curlew (600; 8.6% of SPA population), golden plover (500; 3.5%), black-headed gull (256; 1.4%; peak 500) and herring gull (76; 1.6%, peak 150). The area is also used by pink-footed geese (peak 300) and lapwing (peak 88).

These fields form part of the Ken Hill Estate which has plans to “re-wild” and improve the site especially for waterbirds. Numbers are therefore likely to increase in the future.

II) Detailed design features of the access proposal

The proposed route of the England Coast Path will follow existing PRoWs and walked routes. At South Beach Road the route will turn inland to pick up a footpath following the old seawall that runs parallel to the coast; returning to the coast just over 2 km to the south at the southern end of WeBS sector Heacham 11. From here it continues along a well-used path between the boundary of the designated sites and the Coastal Park.

The landward margin is the base of the old seawall where the route is inland and the edge of the path along the coast.

Seaward of the England Coast Path will become coastal margin by default. However, the area of fields between the old seawall and the lagoons separating them from the Coastal Park will be excluded year round by under S26(3)(a) for the purpose of nature conservation.

There are four way-marker posts and two fingerposts (one existing) proposed. All of these will be outside of the designated sites.

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

a) Disturbance of non-breeding waterbirds

Based on current usage we expect only a small increase in access to the trail between South Beach Road, Heacham and Beach Road, Shepherd's Port, and to the coastal margin. However, WeBS data indicates that the beach comprising WeBS sector Heacham 11 can support significant numbers of SPA and Ramsar site waterbirds, including golden plover and lapwing where there are site specific warnings. Additionally, during the summer ringed plover, which are a SSSI feature, are known to nest on this stretch of beach. The England Coast Path is therefore to be aligned on a PRoW that runs parallel to the coast and thus avoids the bird interest.

However, the fields through which the path passes are functionally linked to the designated sites as they are used by a variety of SPA / Ramsar site birds for roosting and feeding. The fields to the east are fenced from the seawall and therefore not accessible; but the fields to the west are not fenced. These fields currently support fewer birds than those to the south, and the landowner has placed signs at both ends of the path requesting that dogs are kept on leads and to keep to the footpath.

Seaward of the England Coast Path will become coastal margin by default. However, the area of fields between the old seawall and the lagoons separating them from the Coastal Park will be excluded year round under S26(3)(a) of CROW for the purpose of nature conservation, advisory signs will inform users at both ends of the path. (Map 2).

As mentioned in D2 above, a large proportion (70%) of existing users are unaware of the conservation importance of The Wash and the sensitivity of the bird interest to disturbance. It is therefore important that new users are made aware of these sensitives and can be encouraged to behave appropriately. D3.2A refers to an information board being installed at Jubilee Road. A further board is proposed for the Coastal Park car park in Beach Road. Design of the board to be in collaboration with the RSPB and the Ken Hill Estate (Coastal Park landowner), who will be starting a new project in 2021 to protect the nests of oystercatcher and ringed plover on the beach between Shepherd's Port and Heacham.

The path infrastructure (two advisory signs, one information board, four way-marker posts and one fingerpost) will be installed outside of the sensitive period for the non-breeding bird assemblage.

b) Trampling of qualifying and supporting habitat

The proposed route of the England Coast Path avoids the designated sites. However, at the coast the path is on the top of the beach for short sections. While outside of the designated sites it could be considered to be supporting habitat of the SPA and Ramsar site bird

interest. Trampling of sandy beaches can lead to compaction in the layer below the top 15 cm [Liddle & Greig-Smith, 1975 cited in Natural England,2015a]. However, this compaction of the subsurface will not impact the usage of the area by waterbirds for roosting.

The seaward margin of the whole stretch from South Beach Road, Heacham and Beach Road, Shepherd's Port includes: the beach including a section of sand dunes; part of the Coastal Park; and the inter-tidal sands which vary in depth from 1.3 km to 1.8 km.

The dunes are vegetated with marram grass, which is sensitive to trampling [Boorman & Fuller, 1977 cited in Natural England, 2015a]. However, the clear signposting of the path should ensure that that the majority of coastal path users avoid the route along the dune. It may also encourage some existing users to also avoid the dune ridge and thus reduce existing trampling pressure.

Walking on inter-tidal flats can result in compaction which in turn can impact on the abundance and diversity of invertebrates [Rossi and others, 2007], which in turn are a food source of many SPA and Ramsar site waterbirds. However, given the size of the area, the existing number of people that use the inter-tidal sands, and the anticipated small increase in path users (of which only a small percentage are likely to walk on the sands), any impact can be considered trivial.

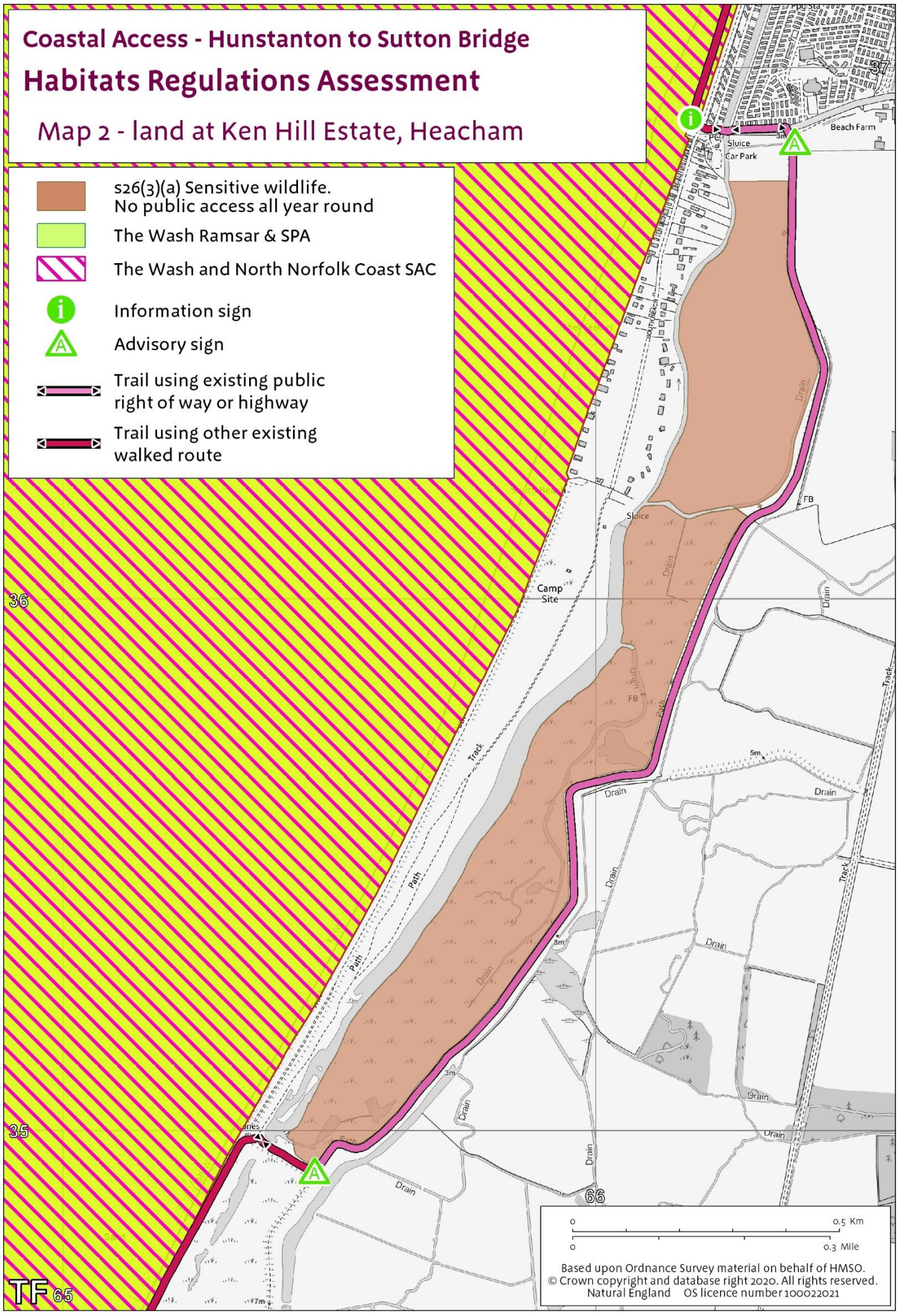
Conclusion

Natural England has considered the possible risks to qualifying features at this location. Given the mitigation measures detailed above, we consider that no new significant disturbance from recreational activities will be caused. The proposals will therefore not adversely affect the achievement of the conservation objectives in this location.

Coastal Access - Hunstanton to Sutton Bridge

Habitats Regulations Assessment

Map 2 - land at Ken Hill Estate, Heacham



D3.2C Coastal Park car park, Shepherd's Port to Wolferton Pumping Station

I) Baseline situation

From Beach Road the England Coast Path follows existing well-walked paths along the top of the beach, landward of the dunes at Snettisham Scalp, and into Snettisham RSPB Reserve. The northern section through the reserve is on a concrete path that then continues as a bare shingle path to the south. These are well used and defined, reflecting the 41,000 visitors [RSPB, 2004] that use the reserve each year. Beyond the southernmost hide there is a dead-end path towards Wolferton pumping station, outside of the reserve boundary. It is less well used and defined, with current use limited to RSPB staff and the occasional curious visitor.

Much of the area that the path passes through within the reserve is classified as the BAP priority habitat coastal vegetated shingle and is an interest feature of The Wash Ramsar site and The Wash SSSI.

The path follows the boundary of the designated sites until just beyond the row of holiday chalets to the south of Snettisham Scalp. At this point the path enters The Wash SPA and Ramsar site, and The Wash and North Norfolk SAC (the entrance to the RSPB Reserve) staying within the designated sites until leaving the reserve to the south.

This section of path has the highest concentration of SPA / Ramsar site birds of the entire stretch. A number of factors contribute to this: extensive inter-tidal feeding areas, with the mean low water mark some 4 km from the shore; a wide area of saltmarsh to the south, stretching up to 1.2 km to the mean high water mark providing feeding, nesting and roosting opportunities; and sheltered saline lagoons to the east of the beach providing safe roosting on higher spring tides.

The relevant WeBS sectors and the total peak numbers of waterbirds (all species combined) making up the SPA and Ramsar site assemblage for the five year period to 2017/18 are shown in table 12 below.

Table 12. Summary WeBS data for sectors covering Shepherd's Port to Wolferton pumping station

WeBS Sector	Location	5 yr average peak counts (2013/14 to 2017/18)	5 yr peak counts (2013/14 to 2017/18)
Snettisham 01	Northernmost lagoon	18	19
Snettisham 02	Next lagoon south	18	24
Snettisham 03	Next lagoon south	99	144
Snettisham 04	Southernmost lagoon	79,733	104,551
Snettisham 10	Beach from Beach Rd to southern end of the 4 lagoons	2,305	5,322
Snettisham 11	Snettisham Scalp	7,705	17,271
Snettisham 20	Saltmarsh and vegetated shingle to south of lagoons	232	508

Snettisham 30	Outer saltmarsh and inter-tidal flats from Beach Rd south to Snettisham 20	94,719	156,105
Snettisham 41	Inland fields to east of lagoons	747	1,262

The WeBS data indicates that the beach and Snettisham Scalp support some significant numbers of waterbirds: black-tailed godwit (106; 1.3% SPA population; peak 195); dunlin (589; 2.2%; peak 1,775); knot (4,868; 2.9%; peak 12,500); oystercatcher (2,796; 14.2%; peak 4,917); sanderling (1,297; 18.6%; peak 2,340); turnstone; 91; 10%; peak 254); and ringed plover (122 (9.6%; peak 162). This is surprising given the numbers of people that use the path and Scalp for walking and walking with dogs. However, these large numbers tend to be recorded when high tide coincides with the early morning or dusk when there are fewer people about (personal communication Jim Scott, RSPB 21 May 2020). At other times birds will tend to avoid the area and move to the saltmarsh further south or the southern lagoon to the east.

The outer saltmarsh and flats (WeBS sector Snettisham 30) is famed for the number of waterbirds that congregate here and on the nearby lagoon (Snettisham 04). From late summer to spring tens of thousands of wading birds gather on the flats to roost. On high spring tides the birds are pushed closer to the beach and the result is vast flocks of knot, dunlin and oystercatcher taking to the air in a swirling 'spectacular'. These events are publicised by the RSPB and watched by large numbers of visitors from the beach. Peak numbers of birds recorded in the thousands within Snettisham 30 include: bar-tailed godwit (4,700); curlew (1,600); dunlin (12,000); grey plover (2,710); knot (90,000); oystercatcher (6,000); pink-footed goose (34,000); sanderling (2,000); and golden plover (1,000). (Knot numbers hit a record 140,000 at Snettisham in October 2020 [BBC News, 2020]).

The southernmost lagoon at the reserve (WeBS Snettisham 04) is intrinsically linked to Snettisham 30 providing safe roosting opportunities on high spring tides. Peak numbers of birds recorded in the thousands include: bar-tailed godwit (1,150); black-tailed godwit (4,350); dunlin (10,000); knot (75,000); oystercatcher (7,200); redshank (1,870); wigeon (2,000); and lapwing (1,340). Additionally, the islands in the southern lagoon are home to the only colony of breeding tern (common) on this side of The Wash.

II) Detailed design features of the access proposal

The proposed route of the England Coast Path will follow existing PRoWs and walked routes. From Beach Road the path follows the top of the beach, landward of Snettisham Scalp, and then the top of the concrete sea defence to the RSPB reserve. Within the reserve (and designated sites) the path follows a mixture of bare shingle paths with some stretches of concrete. The last section from the southernmost bird hide is across coastal vegetated shingle to an earth bank and Wolferton pumping station, to which there is currently no legal access.

The RSPB request that dogs are kept on leads and this is followed by most visitors. Currently, there is only an information board within the RSPB car park to the north east of

the site. It is proposed to erect a further two information boards along the route of the England Coast Path at the north entrance and the southern entrance from Wolferton pumping station. These information boards should:

- Include a map of the site;
- Highlight the significance of the site nationally / internationally;
- Explain the sensitivities on site (birds, other species, saltmarsh and vegetated shingle);
- Highlight that the saltmarsh and flats are unsuitable for access;
- Highlight where the England Coast Path and other paths are;
- Request visitors to keep to paths and keep dogs on leads.

Although landward of the path is open access land the official landward margin of the England Coast Path is the edge of the path. Seaward of the England Coast Path will become coastal margin by default. However, the saltmarsh to the south and mudflats to the east of Wolferton Creek are considered to be unsuitable for public access and therefore access will be excluded under S25A of CROW.

Proposed infrastructure on this section, within the designated site, includes: three way-marker posts and one fingerpost; three sections of fencing or guide posts (up to 20m long each - maximum 63 posts); repeated path signs on existing fence posts; and two information boards. A further two fingerposts and another information board will be just outside the boundary.

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

a) Disturbance of non-breeding waterbirds

Based on current usage, only a small increase in access to the England Coast Path is envisaged. For most of this section it passes through Snettisham RSPB reserve which attracts a large number of visitors each year. Despite the number of visitors active management by the RSPB has ensured that recreational disturbance is kept to a minimum as evidenced by the sustained bird numbers on the reserve [Ross-Smith and others. 2011; and personal communication with Jim Scott, RSPB 7 October 2020]. While much of the reserve is open habitat, most visitors stay on the paths in accordance with the RSPB guidance, although there are a number of desire lines across the shingle. Clear marking of the England Coast Path should ensure that new users follow the path.

The proposed new information signs at the northern and southern entrances will re-inforce the RSPB messages regarding the sensitivity of the site to existing and new users. The RSPB policy is to request that dogs be kept on leads, which we expect to continue as before with the introduction of coastal access rights.

Of the seven species of waterbird with site specific WeBS alerts and warnings only golden plover and lapwing are recorded in significant numbers. These are on the saltmarsh and the

southernmost lagoon. The saltmarsh will be excluded under S25A of CROW; and access to the lagoon is excluded by the RSPB.

The path infrastructure (three guide fences, two information boards, three way-marker posts and one fingerpost) will be installed outside of the sensitive period for the non-breeding bird assemblage.

b) Trampling of qualifying and supporting habitat

The seaward margin of the whole stretch from Beach Road, Shepherd's Port includes: the beach; a range of shingle habitats and dune habitats on Snettisham Scalp; and the inter-tidal sands up to Wolferton Creek.

The dune communities include mobile dunes with marram grass, semi-fixed dunes with red fescue *Festuca rebra* and sand couch *Elytrigia juncea*, and fixed dune grassland. These are sensitive to trampling [Boorman & Fuller, 1977 cited in Natural England, 2015a]. However, the clear signposting of the path should ensure that that the majority of England Coast Path users avoid the route along the dune. It may also encourage some existing users to also avoid them and thus reduce existing trampling pressure.

Walking on inter-tidal flats can result in compaction, which can impact on the number of invertebrates, which in turn are a food source of many SPA and Ramsar site waterbirds. However, given the size of the area, the existing number of people that use the inter-tidal sands, and the anticipated small increase in path users (of which only a small percentage are likely to walk on the sands), it is not likely that there will be an adverse impact.

The area to the south of the RSPB reserve is a transition zone from saltmarsh to coastal vegetated shingle and some of the saltmarsh invertebrate assemblage are likely to be found in both habitats e.g. the sea aster mining bee. However, the proposed fencing and signs to discourage deviation from the path and information signs about the importance and fragility of the habitat (see below) should mean that England Coast Path users are unlikely to disturb or trample habitats and the associated species that make up the assemblage.

The path at the southern end of this section, between the turn-off to the southernmost hide and the RSPB boundary, is lightly used and the vegetation cover has not been eroded to any great extent. (See map 3). The first part has a short sward with lichens; with the second section being ranker vegetation with grass. There are three clearly visible paths forking from this path towards the two shingle ridges to the south that extend into the saltmarsh towards Wolferton Creek. These are not part of the England Coast Path and only lead to dead-ends in the inter-tidal area.

Vegetated shingle is particularly vulnerable to damage from trampling [Natural England, 2015b], especially where lichens are present [Doody & Randall, 2003 cited in Natural England, 2015b]. One of the main causes of damage is the breaking up of the surface layers of vegetation and the fine humic layer that may take many years to be deposited. As a result it is very difficult to re-instate once damaged.

The extent of damage will depend on the usage of the path. Research by Liddle [1997 cited in Natural England, 2015a] has shown that sensitive habitats require relatively few passages by walkers to reduce the vegetation cover by 50%. While the research did not look at

shingle habitats it did include sand dunes which have similar characteristics. This showed that on sand dune marram grass the number of passages resulting in a 50% reduction was 288 and on sand dune pasture it was 1445. It is also noted that a number of studies covering a variety of habitat types show that path width increases with usage [Liddle 1997; Bayfield and Lloyd, 1971; Dale & Weaver, 1974; Lance and others, 1989 cited in Natural England, 2015a].

Currently there is low usage of this section as the path does not link to a public through route and is 3.3km from the nearest car park. This will change with the opening of the England Coast Path. It is difficult to quantify the increase but it is known that:

- At least 41,000 people visit the RSPB reserve each year [RSPB 2004];
- The Footprint Ecology report for Norfolk [Panter, Liley & Lowen, 2016] indicates that over 70% of visitors to the Coastal Park car park are walkers / walkers with dogs;
- 25% of visitors to the Coastal Park car park stay for more than 2 hours, discounting for the 10% that are there for beach activities, it indicates that up to 15% of walkers have time to walk the 3.3km from the car park and beyond;
- The Borough Council plan to promote King's Lynn as a gateway for walkers to the North Norfolk Coast once the England Coast Path is in place [West Norfolk Destination Management Plan 2016-2020]. (Due for review).

From this it would seem likely that the volume of traffic using the path could be sufficient to result in damage to the coastal vegetated shingle from trampling. Potentially an area of 480 m^2 (240m length by 2m width) of habitat is at risk of erosion from trampling.

In the context of the Conservation Objectives of shingle habitats:

- Extent of the feature: the shingle habitat will not be lost so the extent of the feature will be maintained. However, should usage increase to such a level that the path lost all vegetation and the humic layer, this would represent a loss of extent of approximately 480m^2.
- Structure and function: the structure of this small area will be changed. There is likely to be a change in the vegetation structure.

To mitigate these potential impacts (bearing in mind that that the current level of trampling has not lead to major damage), it is proposed that:

- Short sections of fence or low wooden posts are installed at the junction of the England Coast Path with the three informal paths across the shingle to the south to encourage walkers to stay on the path along the existing fence line.
- Clear signage at the junction of the England Coast Path with the path to the southern hide indicating walking options with distances.
- Interpretive signage with map showing exclusions to the seaward margin highlighting the sensitivity of the habitat (part of the information boards to be erected at the three entrances to the RSPB reserve).

- Monitoring[3] of the state of the 240m of path defined as the England Coast Path and surrounding areas to determine any direction change and increase in path networks away from the England Coast Path. Should the path width increase beyond its size as at 2020, with a trigger width approaching 1.8m and associated increase in compressed or dead vegetation and broken surface, a boardwalk will be installed to define the route of the England Coast Path, along with any other remedial measures to secure the habitat condition.
- Installation of a people counter once the England Coast Path becomes operational to monitor the usage of this sensitive area and provide evidence should further infrastructure be necessary (e.g. a boardwalk).

c) Loss of feature extent or species' supporting habitat through installation of path infrastructure

Within the designated sites there will be three sections of fencing / guide posts (a maximum of 63 15cm x 15cm posts), three way-marker posts, one fingerpost and two information board installed. This will result in the potential loss of 6.8m^2 of coastal vegetated shingle habitat, an interest feature of The Wash Ramsar site. Additionally, there could be a further 288m^2 lost through the installation of a boardwalk (240m x 1.2m standard boardwalk width), should it become necessary in the future to prevent the braiding and widening of the section of path at the southern end of the RSPB reserve.

The impact of the sign and post/fence infrastructure (6.8m^2) is minimal and will be mitigated by utilising areas of bare shingle where possible.

The route of the England Coast Path puts approximately 480m^2 of habitat at risk of impact (see section b above). However, the proposed monitoring (at least annual) of the condition of the habitat, with trigger thresholds for the installation of a boardwalk (or other effective long-lasting measures to ensure the section of path is robust to increased use), means that any permanent loss would be limited to 288m^2 (240m x 1.2m). This will not be an adverse impact on the overall coastal vegetated shingle feature as the site will still be able to meet the conservation objectives for shingle due to the presence of an existing path at this location which covers approximately the same area. Any board walk or other features would be subject to a separate HRA.

With regard to the use of the area as supporting habitat for other species:

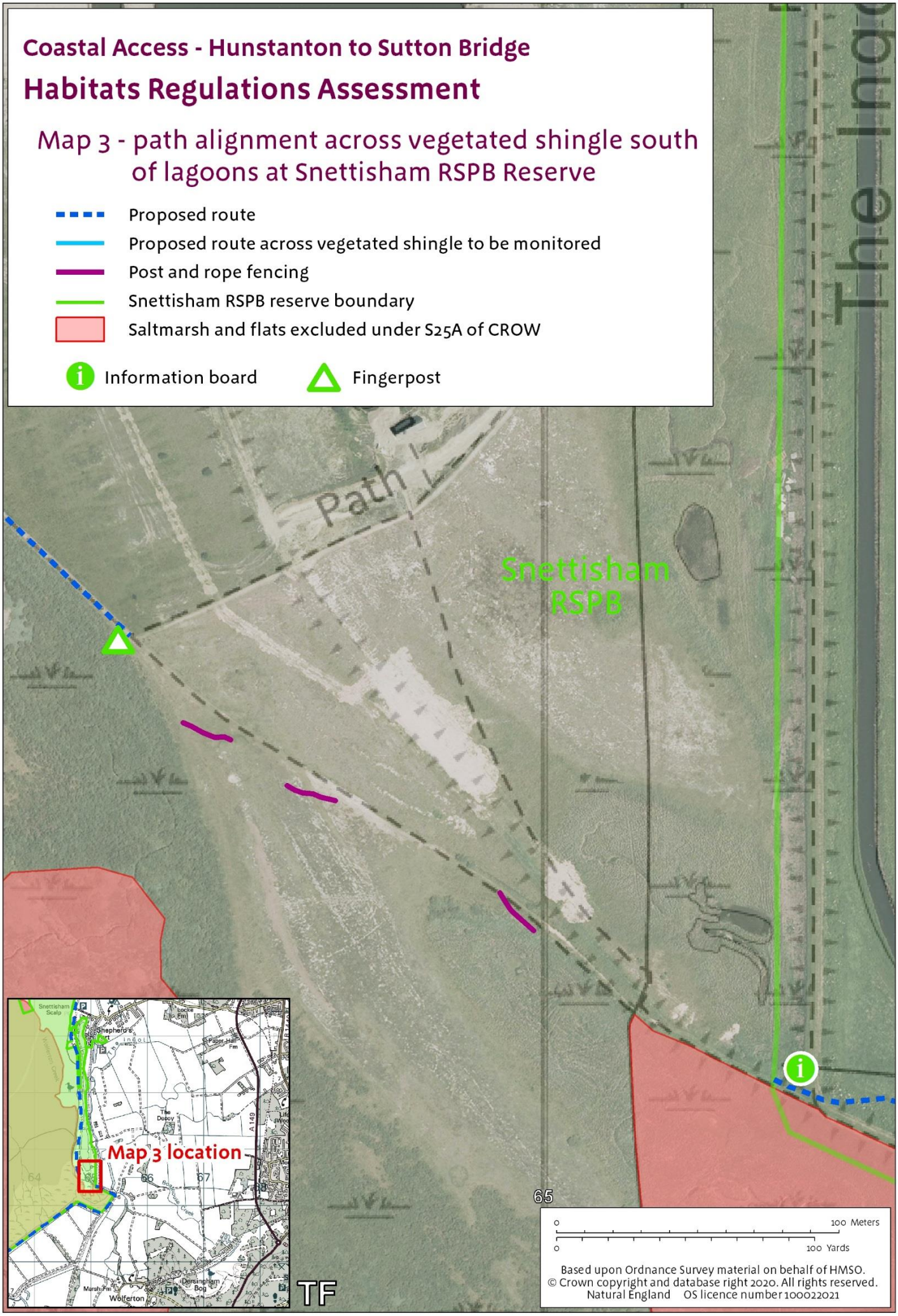
- Waterbirds are unlikely to be using the areas to any great extent as they are adjacent to well-walked paths and an existing fence line.

- The areas concerned are sufficiently distant from the saltmarsh areas and the nature of the habitat is such that it is unlikely that the wetland invertebrate interest will be impacted.

[3] A baseline survey will be carried out by Natural England's Field Unit in 2021/22 before the Coast Path becomes operational. This will consist of cross path transects, thus allowing path expansion and changes in adjacent vegetation to be monitored. Future monitoring to be in conjunction with the RSPB consisting of an annual assessment of path condition and further transects in years 2 and 5 (if required).

Conclusion

Natural England has considered the possible risks to qualifying features at this location. Given the mitigation measures detailed above, we consider that no increase in disturbance from recreational activities will be caused and there are no adverse impacts to coastal vegetated shingle. The proposals will therefore not adversely affect the achievement of the conservation objectives in this location.


Coastal Access - Hunstanton to Sutton Bridge
Habitats Regulations Assessment
Map 3 - path alignment across vegetated shingle south of lagoons at Snettisham RSPB Reserve
Proposed route
Proposed route across vegetated shingle to be monitored
Post and rope fencing
Snettisham RSPB reserve boundary
Saltmarsh and flats excluded under S25A of CROW
Information board
Fingerpost
Path
Snettisham RSPB
The Ing
Map 3 location
TF
65
0
100 Meters
0
100 Yards
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D3.2D Wolferton Pumping Station to South Outmarsh, north of King's Lynn

I) Baseline situation

The 11 km of seawall between Wolferton and South Outmarsh currently has no formal access. Anecdotally, there is some informal use by walkers and runners but this is limited given the remoteness of the area. Other than this informal activity, the saltmarsh is relatively undisturbed other than the activities associated with grazing and wildfowling.

The saltmarsh in this sector falls within the RSPB Snettisham reserve to the east and The Wash National Nature Reserve (NNR), managed by Natural England, to the west. This ranges in width from 120 m along the River Ouse to 400m along The Wash. Beyond the saltmarsh is a large expanse of inter-tidal flats that are over 3 km wide in places. Much of the upper saltmarsh is grazed which provides the shorter sward that is preferred by a number of bird species including breeding redshank. The grazing regime and availability of waterbodies are key elements for a range of waterbirds and thus impacts distribution. For this section most of the inner saltmarsh meets these requirements although there is a section towards the western end (part of WeBS sector Ouse 21) where the absence of both grazing and waterbodies results in lower usage by birds for feeding, roosting and nesting.

The relevant WeBS sectors for this stretch of coast are shown in table 13 below together with the total five year average peak counts for SPA / Ramsar site waterbird interest (all species combined) for the period to 2017/18 (unless otherwise stated – in recent years it has not been possible to maintain counts on all remote WeBS sectors):

Table 13. Summary WeBS data for sectors covering new path from Wolferton to South Outmarsh

WeBS Sector (starting at Wolferton and finishing at South Outmarsh)		5 yr average peak counts (2013/14 to 2017/18) (unless stated otherwise)	5 yr peak counts (2013/14 to 2017/18) (unless stated otherwise)
Inner Saltmarsh			
Snettisham 20		232	508
Snettisham 21		766	1,097
Snettisham 22		433	966
Snettisham 23		26,522	31,989
Ouse 22		11,016	27,184
Ouse 21		6,303	18.005
Ouse 20		1,620	3,839
Outer saltmarsh and flats			
Snettisham 30		94,719	156,105
Snettisham 31		44,171	62,978
Snettisham 32	Figures for 2013/14 only	6,400	8,400
Ouse 31	Figures for 2007/08 to 2009/10	12,171	15,142
Ouse 30	Figures for 2007/08 to 2009/10	7,264	9,016
Adjacent inland fields			

Snettisham 42		12	15
Snettisham 43		17	28
Snettisham 44		338	368
Snettisham 45	Figures for 2008/09 to 2009/10	531	531
Ouse 43		1,587	6,914
Ouse 42		1,151	3,210
Ouse 41		790	1,969
Ouse 40		497	1,032

The inner saltmarsh on the Snettisham sections are grazed and contain a number of waterbodies that are favoured by breeding waterbirds including redshank and avocet. The outer saltmarsh is preferred by many birds but they will move to the inner saltmarsh on higher spring tides. That said the WeBS data indicates that the inner saltmarsh is used by significant numbers of bar-tailed godwit (1,100; 5.7% of SPA population), curlew (318; 4.6%), brent goose (600; 4%), pink-footed goose (25,000; 90%), shelduck (91; 2.9%), little egret (46; 7.8%), and teal (275; 8.2%). (See D3.2C above for Snettisham 30).

The inner saltmarsh on the Ouse sections is mostly grazed with pools close to the seawall in Ouse 22. WeBS data indicates that the inner saltmarsh of the Ouse sections support more species of birds in significant numbers than the Snettisham section. Of the 32 birds making up the SPA / Ramsar site non-breeding assemblage 22 are found in significant numbers in Ouse 22 and 17 in Ouse 21. This includes for Ouse 22: black-tailed godwit (481; 5.7%; peak 1,112), brent goose (1,575;10.7%; peak 2,906), dunlin (1,311; 5%; peak 5,000), pink-footed goose (1,171; 4.2%; peak 3,300), shelduck (527; 16.6%; peak 1,799), golden plover (1,009; 7.1%; peak 3,500), lapwing (975; 6.7%; peak 2,154), and whimbrel (48; 15.6%; peak 165).

For Ouse 21 it includes: black-tailed godwit (183; 2.2%; peak 421), brent goose (824; 5.6%; peak 2,700), dunlin (650; 2.5%; peak 1,235), shelduck (110; 3.5%; peak 168), golden plover (665; 4.7%; peak 2,500), and lapwing (654; 4.5%; peak 1,919). While the sector is well used it should be noted that they are not evenly distributed across the sector with the northern section having far fewer due to the absence of grazing and ranker vegetation. There are no plans to introduce grazing to this area, which is part of The Wash NNR. The NNR Management Plan allows for a mosaic of saltmarsh habitats with a mixture of grazed and ungrazed areas [personal communication with Tom Bolderstone, NNR Manager, Natural England 26 May 2020].

Ouse 20 is the strip of saltmarsh along the River Ouse. It is much narrower than the saltmarsh bordering The Wash, but still supports significant numbers of black-tailed godwit (84; 1%; peak 353), lapwing (147; 1%; peak 420), black-headed gull (468; 2.6%; peak 993) and herring gull (257; 5.3%; peak 830). Brent geese also use the area with peak counts of 300.

The fields to the south of the seawall are separated from the seawall for most of its length by ditches. The fields are used by a number of birds for feeding (geese species in particular) and roosting (especially on spring tides). The WeBS average peak counts do not reflect this use in part due to the nature and timing of counts. However, peak counts show some species in significant numbers especially in the western 'Ouse' sectors: curlew (300 -

Snettisham 45), brent goose (526 - Ouse 43), pink-footed goose (357 – Ouse 41), golden plover (1,506 – Ouse 43), lapwing (1,278 – Ouse 42), black-headed gull (550 – Ouse 40) and herring gull (650 – Ouse43).

II) Detailed design features of the access proposal

From Wolferton pumping station the England Coast Path will follow the foot of the seawall on the landward side for 6 km. The England Coast Path then gains the top of the bank for 1.1 km (see Map 4). This 1.1 km on top of the seawall is on the northern section of WeBS sector Ouse 21. The final 3 km to the River Babingley (South Outmarsh) continues on the landward side of the bank. From here the path follows the top of the bank overlooking the saltmarsh inlet of Point Green before turning inland towards King's Lynn.

The landward margin of the England Coast Path is the edge of the drainage ditch where it is landward of the seawall and the top of the bank where it is on the seawall. The coastal margin would include the saltmarsh by default, however, the saltmarsh is considered to be unsuitable for public access and therefore new coastal access rights will be excluded under S25A of CROW.

Proposed infrastructure includes: steps on the bank leading to the pumping station at Wolferton and steps to access the seawall further to the west both outside of the designated site; two fingerposts outside of the designated site boundary; two way-marker posts, one within the designated site boundary, one outside; two advisory signs, both within the designated site boundary; and six gates, four within the designated sites and two outside. The infrastructure within the designated sites is on grass habitats on the seawall which is not a designated feature of the Ramsar site or SAC nor is it considered supporting habitat for any interest features of the SPA or Ramsar site.

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

It is difficult to estimate the number of people who will use this new section of path between Wolferton pumping station and South Outmarsh (see also D3.2C above). The section along the Peter Scott Walk provides an indication of a similarly remote section without connecting paths (see D3.2E below), although the nearest parking is 3.3 km from the start of the Wolferton section (a round trip of 6.6 km – more than the average walk on the Peter Scott Walk) and at Point Green there is only room for 3 cars at the end of a long track (1 km from the start of the new right of way). Thus it can be expected that it will attract fewer walkers. Conversely, the southern section will provide the closest coastal walk for the residents of King's Lynn; in the past a short circular walk at Point Green has been promoted (saltmarsh with boardwalk at the mouth of the River Babingley); and King's Lynn Borough Council have plans to publicise the town and England Coast Path as a gateway to the north Norfolk coast [West Norfolk Destination Management Plan 2016-2020].

Overall we would anticipate lower usage than the Peter Scott Walk where the average number of movements ranged from 16 per day in January to 56 per day in August.

a) Disturbance of non-breeding waterbirds

The saltmarsh on this stretch of coast is relatively undisturbed and supports large numbers of waterbirds often quite close to the seawall. This includes five species which have WeBS alerts and and other warnings where site specific issues are a factor. These are: black-tailed godwit (inner saltmarsh Ouse sector and along the river Ouse); brent goose (inner saltmarsh in Snettisham and Ouse sectors, and inland fields); shelduck (inner saltmarsh on Snettisham and Ouse sectors); golden plover (inner saltmarsh and inland fields on the Ouse sector); and lapwing (inner saltmarsh and inland fields on the Ouse sector, and along River Ouse).

While it is anticipated that the number of users of the path will be small if the path were aligned along the top of the seawall then over time a number of bird species may be inclined to avoid the area immediately adjacent. It is therefore appropriate to align the England Coast Path along the landward side of the seawall in the cattle grazed areas. This will also lessen any impact on birds using the adjacent fields as walkers will not be silhouetted against the skyline.

Surveys of visitors to The Wash at Snettisham and Sutton Bridge (Panter, Liley & Lowen, 2016 and Panter & Liley, 2016] show that many visitors are either unaware or unsure of the nature conservation importance of The Wash and the sensitivity of wildlife to disturbance (see D2 above). To help educate visitors and instil appropriate behaviour Information Boards will be installed at the northern (RSPB Reserve) and southern ends of the section. These will include a map showing the section of seawall that can be accessed. The former information board will be sited below the sea wall so it is not visible to users of the previous section. This is so that it does not act as an attraction and increase the number of path users on the sensitive shingle habitat at Snettisham (see D3.2C above).

Existing fences and gates south of Wolferton pumping station (approximately 1.4 km from the pumping station) and by the River Babingley will direct visitors to the foot of the seawall at either end of this section. Clear way-marking and the information boards at the start should encourage visitors to use the official path landward of the seawall. The message will be reinforced by repeat signage at intervals (every 1 to 1.5km) along the base of the seawall. The signs will request that visitors do not access the top of the seawall and also inform them of the distance to the section of seawall that can be accessed. This should negate the temptation to access the top of the wall.

The above mitigation is in line with that used on other stretches of the England Coast Path and there is a high degree of confidence that it will be sufficient to manage the risk. However, with a combined distance of over 9km the residual impacts may be greater than those encountered elsewhere. In planning this section the inclusion of two viewpoints had been considered to enhance the experience for visitors which would also lessen the residual risk of people accessing the top of the seawall. Unfortunately, to date it has not been possible to progress this with the EA. Given the length of path at the foot of the seawall it would be appropriate to monitor[4] the response of visitors in the early years of the path to quantify non-compliance and its effect and whether additional mitigation is required.

[4] Monitoring will be undertaken by WeBS counters while they carry out their monthly counts. This has been agreed with the WeBS co-ordinators responsible for this stretch of coast (currently Jim Scott of the RSPB within the RSPB Reserve and Tom Bolderstone of Natural England for the NNR). A standardised monitoring form will be produced to collect data on the number of walkers, the number of walkers with dogs, the number of walkers on the seawall, and any disturbance events associated

Path infrastructure (steps, two information boards, two fingerposts, two way-marker posts, advisory signs, and six gates) will be installed outside of the sensitive period for the non-breeding bird assemblage.

b) Disturbance of breeding redshank

Across the UK saltmarsh breeding redshank declined by 50% between 1985 and 2011, although they declined less in East Anglia including The Wash [Malpas and others. 2013]. Breeding redshank are found in low densities on this stretch of coast on grazed areas of saltmarsh close to suitable waterbodies. They tend to be more responsive to disturbance in the breeding season and are likely to respond to walkers on the seawall up to 200m, although the zone of influence will depend on the structure and height of the intervening saltmarsh vegetation.

However, the alignment of the England Coast Path along the landward side of the seawall will avoid disturbance. The section of path on the seawall is on an ungrazed area which is not favoured by breeding redshank.

Path infrastructure (steps, two information boards, two fingerposts, two way-marker posts, advisory signs, and six gates) will be installed outside of the sensitive period for breeding redshank.

Conclusion

Natural England has considered the possible risks to qualifying features at this location. Given the mitigation measures detailed above, we consider that no new significant disturbance from recreational activities will be caused. The proposals will therefore not adversely affect the achievement of the conservation objectives in this location.

with walkers. These regular surveys during WeBS counts will be supplemented by ad hoc visits by RSPB and Natural England staff who will record any non-compliance.

A people counter will also be installed at an appropriate place along the seawall to record any movements of people. This will need to be positioned in a location without grazing cattle.

A review of the monitoring to be carried out after 2 years of the opening of the path to decide whether additional mitigation is required and whether the monitoring should continue.

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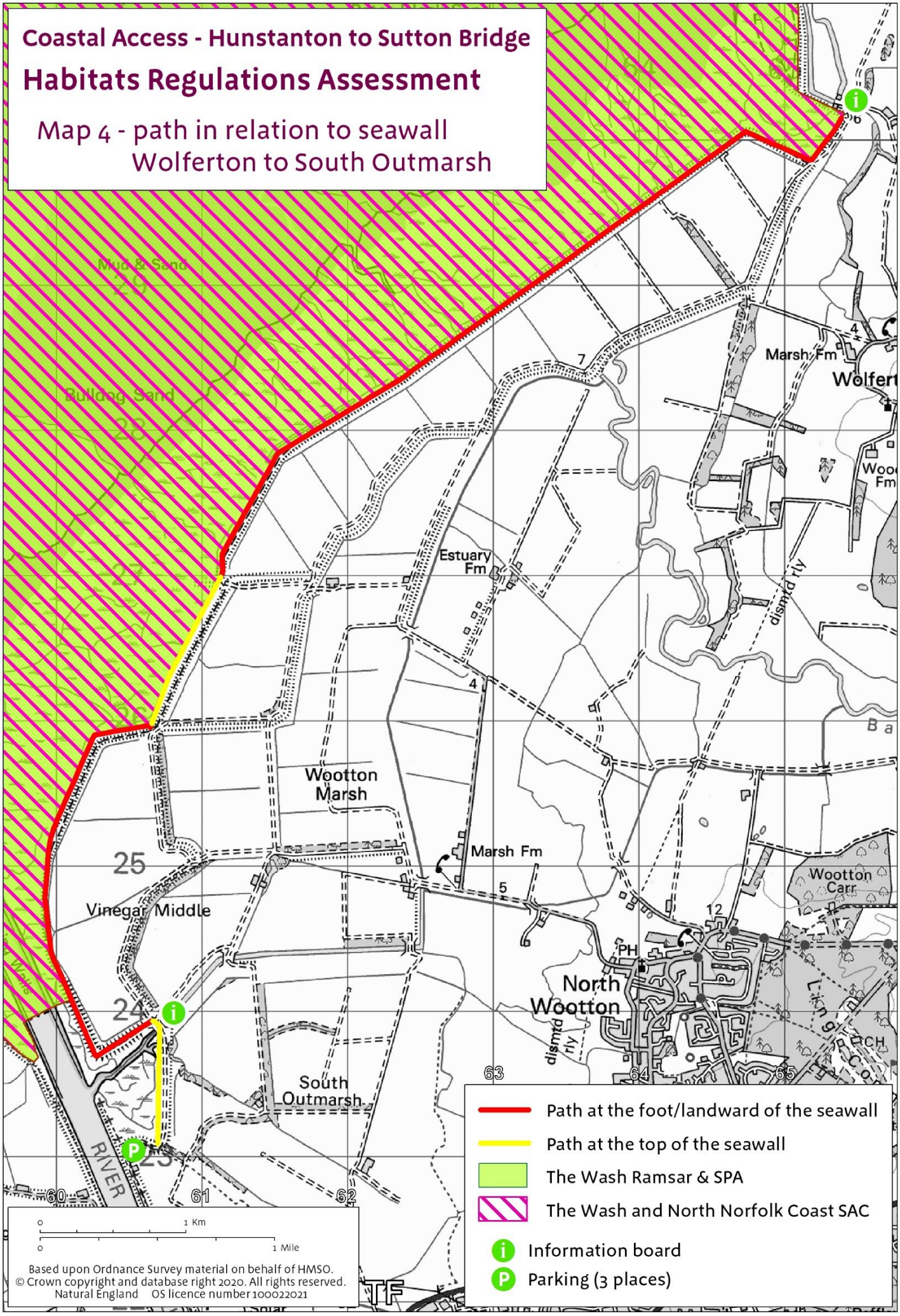
Map 4 - path in relation to seawall
Wolferton to South Outmarsh



D3.2E West Lynn to Peter Scott Lighthouse (Peter Scott Walk)

I) Baseline situation

The Peter Scott Walk is a 16 km waymarked trail following the top of the sea wall from West Lynn to the Peter Scott Lighthouse just outside of Sutton Bridge on the eastern bank of the River Nene. The route of the England Coast Path follows this path for the majority of the route. The trail is remote from habitations with only four access points (three with parking - West Lynn, Ongar Hill and the Peter Scott Lighthouse on the River Nene and one connecting footpath at the eastern end - Clenchwarton Parish Walk).

The Wash Visitor Survey [Panter, Liley & Lowen, 2016] indicates that the Peter Scott lighthouse (Sutton Bridge East) is the main access point with visitor numbers being three times those at Ongar Hill to the east (an average of 6 visitors/movements an hour against 2.1 an hour). The majority of visitors were local (over 85%) with the average distance covered being 4.9 km from Sutton Bridge East and 4.3 km from Ongar Hill. Despite being a promoted trail very few visitors walk the entire length due to a combination of distance, transport difficulties and lack of facilities; thus it can be taken that every two visitor movements equates to 1 individual - 3 per hour at Sutton Bridge East and 1 per hour at Ongar Hill.

Between August 2016 and July 2017 (341 days) Natural England collected further data on the number of walkers at the mouth of the River Nene north of the lighthouse by means of a body heat sensor attached to a data-logger. The average number of passes was 30 per day over the year (15 individuals). This ranged from 16 per day (8 individuals) in January to 56 per day (28 individuals) in August. There were only five days that recorded more than 100 passes (50 individuals) a day: three during the summer, including May and August Bank Holidays, and the two days following Christmas, when traditionally many families go for a walk. 62% of walkers were recorded in the spring / summer with 38% in the autumn / winter.

The boundary of The Wash SPA and Ramsar Site, and The Wash and Norfolk Coast SAC follows the line of the seawall, mostly on the top of the bank where the Peter Scott Walk path is aligned. This is also the southern boundary of The Wash NNR which includes most of the inter-tidal habitats on this stretch. To the north of the seawall is a large expanse of saltmarsh which varies in width from 160m alongside the rivers Ouse and Nene to over 900m in the Lincolnshire section.

There is currently no public access to the saltmarsh, although there are a few paths used by wildfowlers but apart from one exception these are not heavily used and there is no obvious erosion of the saltmarsh. The exception is a path from the seawall to a manmade structure known as the Inner Trial Bank. An unofficial path is marked on ordnance survey maps and some walking websites make mention of the path. Additionally, there is a farm access road that meets the seawall at this point with parking. It is likely that a proportion of walkers on the path will divert out to the Inner Trial Bank, on occasions when the tide allows.

The relevant WeBS sectors for this stretch of coast are shown in table 14 below together with the total five year average peak counts for SPA / Ramsar site waterbird interest (all

species combined) for the period to 2017/18 (unless otherwise stated– in recent years it has not been possible to maintain counts on all remote WeBS sectors):

Table 14. Summary WeBS data for sectors covering the Peter Scott Walk

WeBS Sector (from east to west) (Data incomplete as counts have not been maintained for all sectors. Reference dates of data in second column)		5 yr average peak counts	5 yr peak counts
Inner Saltmarsh			
Terrington Norfolk 23	No data held		
Terrington Norfolk 22	Data for 2012/13 to 2016/17	8,690	21,718
Terrington Norfolk 21	Data for 2008/09 to 2012/13	3,438	12,291
Terrington Norfolk 20	Data for 2010/11 to 2014/15	10,698	21,173
Terrington Lincolnshire 20	Data for 2013/14to 2017/18	6,491	13,253
Outer saltmarsh and flats			
Terrington Norfolk 32	Data for 2012/13 to 2016/17	9,885	18,335
Terrington Norfolk 31	Data for 2012/13 to 2013/14	2,168	2,867
Terrington Norfolk 30	Data for 2007/08 to 2011/12	5,038	9,836
Terrington Lincolnshire 30	Data for 2013/14to 2017/18	5,761	11,166
Adjacent inland fields			
Terrington Norfolk 43	No data held		
Terrington Norfolk 42	Data for 2012/13 to 2016/17	5,054	8,952
Terrington Norfolk 41	Data for 2008/09 to 2012/13	5,060	5,131
Terrington Norfolk 40	Data for 2009/10 to 2013/14	4,873	6,836
Terrington Lincolnshire 40	Data for 2013/14to 2017/18	3,175	6719

WeBS counts indicate that waterbirds are not evenly spread across the marsh. There are higher numbers recorded in the middle section to the east of the Inner Trial Bank (Terrington Norfolk 20 and 30) and to the west of Ongar Hill (Terrington Norfolk 22 and 32). Reflecting variations in the topography (number of pools and creeks) and the grazing regime of the saltmarsh.

It is difficult to directly compare this section with the last due to the missing data. However, the BTO undertook an analysis of the bird trends in The Wash SSSI and NNR (Ross-Smith, Calbrade & Austin 2011). It revealed that this part of the NNR had seen declines in a number of species over the 25 years of the study (1993/94 to 2007/08). Some of these are due to a re-distribution within The Wash and may be related to food availability. But it does include four of the species for which there are current WeBS alerts/warnings due to site specific issues: black-tailed godwit, brent geese, shelduck and lapwing.

Breeding redshank are found in low densities in suitable grazed areas of saltmarsh, although most will not be found close to the seawall due to the lack of pools.

II) Detailed design features of the access proposal

The proposed route for the England Coast Path is to adopt the public footpath known as Peter Scott Walk running on the top of the seawall. The landward coastal margin will be the landward base of the seawall. Land seaward of the coastal path would become part of the coastal margin by default. However, it is considered to be unsuitable for public access due to the numerous pools, creeks and areas of mud, and therefore new coastal access rights will be excluded under S25A of CROW. Information boards will be installed at the three entry points with parking to highlight the sensitivity of waterbirds to disturbance, the habitats to trampling, and inform that access to the saltmarsh is excluded.

A further advisory sign will be installed on the seawall where the unofficial path to the Inner Trial Bank meets the seawall as a reminder of the dangers of accessing the saltmarsh and that it is excluded from the coastal margin.

Other path infrastructure (two advisory signs, three way-marker posts and one fingerpost) are located on the seawall and will not impact on any designated or supporting habitat.

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

The proposed England Coast Path will align with an existing promoted trail that is already well known to local residents. Consequently, it is expected that any increase will be from visitors attracted by the National Trail designation and long distance walkers. However, because of its location, restricted access, and lack of facilities any increase is likely to be small. Based on the usage data collected by Natural England, even on the busiest days in summer a 10% increase in walkers would equate to only an additional 6 people a day. During the more sensitive autumn / winter period the numbers would be less.

a) Disturbance of non-breeding waterbirds

Large numbers of birds utilise the saltmarsh to the north of the proposed England Coast Path for feeding and roosting, with the arable fields to the south being used to a lesser extent. As mentioned above the area has seen declines in numbers for some bird species, and disturbance by walkers (with or without dogs) may be contributing to this decline. However, due to the tendency for many waterbirds to roost close to the water's edge, the absence of large pools close to the seawall over much of its length, and the width of the saltmarsh, major disturbance events are likely to be restricted to periods on the higher spring tides when roosting birds will be forced closer to the seawall.

The RSPB's birdwatchers tide table from 2019 [RSPB 2019] provides information on the best times to observe bird 'spectaculars' especially at Snettisham (see above). These take place at tide heights of 6.8m and above when the majority of the mud on the outer edge of the saltmarsh at Snettisham is covered by the incoming tide and birds move from the intertidal to the lagoons. It is likely that it is at this tide height that the saltmarsh adjacent to the Peter Scott Walk will start to be inundated.

An analysis was undertaken to look at the coincidence of higher tides and the normal daylight walking period during 2019. The following assumptions were made:

- Tide height of 6.6m and above to allow for other factors such as weather and atmospheric conditions that influence tide height;
- Walking day being from 9 am to sunset;
- High tide critical period being an hour either side of high tide.

This revealed that over the 365 days in 2019 tides of 6.6m occurred 64 times during the nominal walking period; 37 in the morning and 27 in the afternoon. The majority of these fell in the spring and summer. Only 11 occurred during the period October to February when colder weather and shorter days mean that disturbance events potentially have a greater impact on the condition of birds.

The data collected by Natural England indicates that 30% of walking activity takes place October to February, with an average of 22 movements (11 individuals) per day at the mouth of the River Nene. An increase in users of 10% would only result in an additional two movements per day (0.6 movements at Ongar Hill), or one every four hours. This gives a 50% chance of a new path user causing an additional major disturbance event on one of the 11 days that higher tides force birds closer to the seawall.

The path infrastructure (three advisory signs, three information boards, three way-marker posts and one fingerpost) will be installed outside of the sensitive period for the non-breeding bird assemblage.

b) Disturbance of breeding redshank

Breeding redshank are found in low densities on this stretch of coast on grazed areas of saltmarsh close to suitable waterbodies. They tend to be more responsive to disturbance in the breeding season and are likely to respond to walkers on the seawall up to 200m away, although the zone of influence will depend on the structure and height of the intervening saltmarsh.

However, given the low number of walkers on the path, the size of the saltmarsh resource and the fact that there are few waterbodies close to the seawall it is not thought that the existing low level of walkers are impacting on breeding redshank. As mentioned above the expected increase is expected to be very small and therefore there is unlikely to be an impact on breeding redshank from the path.

The path infrastructure (three advisory signs, three information boards, three way-marker posts and one fingerpost) will be installed outside of the sensitive period for breeding redshank.

c) Trampling of qualifying and supporting habitat

The England Coast Path will follow the top of the seawall on which there are no sensitive habitats. There is no evidence that existing walkers stray on to the saltmarsh in any numbers apart from on to the unofficial path out to the Inner Trial Bank where there is a noticeable well used path. In order to encourage new users not to use this path and reduce current usage from existing walkers it is proposed to install an advisory sign at this point reiterating that there are no access rights to the saltmarsh.

Conclusion

Natural England has considered the possible risks to qualifying features at this location. Given the mitigation measures detailed above, we consider that no new significant disturbance from recreational activities will be caused. The proposals will therefore not adversely affect the achievement of the conservation objectives in this location.

D3.3 Assessment of potentially adverse effects (taking account of any additional mitigation measures incorporated into the design of the access proposal) alone

In this section we assess the potential for adverse effects on site integrity resulting from the five environmental pressures and consequent risks to site conservation objectives identified in Table 6. We consider the whole England Coast Path stretch and take into account mitigation measures incorporated into the design of our access proposal. Each of the following five subsections deals with one type of pressure. For ease of reference, we repeat the risk to conservation objectives and the qualifying features affected given in Table 6 (see D1) before summarising relevant design features, our conclusions on site integrity and whether non-significant residual effects remain which need to be considered in combination with non-significant effects of other plans or projects (see D4).

Disturbance to non-breeding birds from recreational activities

Risk to conservation objectives: The access proposals modify how the site and surrounding areas are used for recreation, causing repeated disturbance to foraging or resting birds during winter and / or on passage which may lead to reduced fitness and reduction in population and / or contraction in the distribution of qualifying features within the site.

Qualifying features affected: Bewick's swan; bar-tailed godwit; black-tailed godwit; curlew; dark-bellied brent goose, dunlin, gadwall, goldeneye, grey plover, knot, oystercatcher, pink footed goose, pintail, redshank, sanderling, shelduck, turnstone, wigeon, waterbird assemblage.

Relevant design features of the access proposals:

- Most of the route is on existing PRoWs and well walked routes.

- Saltmarsh and flats between Snettisham RSPB Reserve and Sutton Bridge will be excluded under S25A of CROW as they are unsuitable for public access.
- The new stretch of path between Wolferton and South Outmarsh will be mostly landward of the seawall to separate walkers from waterbird roosting and feeding areas on the adjacent saltmarsh. Regular signage will be used to encourage people to stay on the path and off the seawall.
- Access to grazing marsh within the margin adjacent to the route along the old seawall from South Beach Road, Heacham to the coastal park will be excluded year round under S26(3)(a) of CROW.
- The route will be signposted and waymarked regularly to encourage walkers to remain on the path.
- Information boards will be installed at appropriate points along the walk to inform visitors of the biodiversity interest of The Wash and the sensitivity of habitats and species to disturbance.

Can 'no adverse effect' on site integrity be ascertained? Yes, for the following reasons:

- Our proposal is designed to maintain important refuges and facilitate responsible recreation in ways that minimise disturbance to the waterbird interest of the designated sites.
- The path between Hunstanton and Wolferton follows existing PRoWs and walked routes that are already well used. Against this existing usage increases following designation as part of the England Coast Path are expected to be very small.
- The existing walked route between King's Lynn and Sutton Bridge follows the Peter Scott Walk. This is a very remote part of the coast with restricted access, parking and facilities. Designation as part of the England Coast Path is unlikely to result in a significant increase in users.
- The section of path between Wolferton and South Outmarsh is remote, only accessible from either end, has limited parking and no facilities, as such it is anticipated that numbers of users will be small.
- Sensitive roosting and feeding areas will continue to function with access to the coastal margin being excluded in these areas and alignment of the path along the landward side of the seawall on most of the new stretch of path.
- New way-marking and signage will encourage new users to keep to the path but should also influence the behaviour of a proportion of existing users.

Are there residual effects? Yes.

Disturbance to breeding birds that contribute to the non-breeding bird interest from recreational activities

Risk to conservation objectives: The access proposals modify how the site is used for recreation, potentially causing repeated disturbance to breeding redshank that make a

significant contribution to the non-breeding population of this species, which may lead them to abandon nesting areas or reduce their breeding success (for example by causing eggs to become chilled, reducing food supply to chicks, or increasing the vulnerability of eggs, chicks or adults to predation).

Qualifying features affected: redshank (breeding).

Relevant design features of the access proposals:

- The new stretch of path between Wolferton and South Outmarsh will be mostly landward of the seawall to separate walkers from redshank nesting areas on the saltmarsh. Regular signage will be used to encourage people to stay on the path and off the seawall.
- Saltmarsh and flats between Snettisham RSPB Reserve and Sutton Bridge will be excluded under S25A of CROW as they are unsuitable for public access.
- The route will be signposted and waymarked regularly to encourage walkers to remain on the path.
- Information boards will be installed at appropriate points along the walk to inform visitors of the biodiversity interest of The Wash and the sensitivity of habitats and species to disturbance.

Can 'no adverse effect' on site integrity be ascertained? Yes, for the following main reasons:

- Breeding redshank are found across the saltmarsh but in low densities which limits the impact of a disturbance event.
- The new stretch of path between Wolferton and South Outmarsh will follow the landward side of the seawall separating walkers from suitable saltmarsh breeding areas. Where the path is on top of the seawall the adjacent saltmarsh is ungrazed and not suitable for breeding redshank.
- Both the new path and the Peter Scott Walk are remote areas with limited access and parking. It is therefore anticipated that relatively small numbers of people will be attracted to these sections when the path is designated as part of the England Coast Path.

Are there residual effects? Yes

Disturbance to non-breeding birds from construction works

Risk to conservation objectives: Undertaking works to install access management infrastructure disturbs non-breeding waterbirds causing temporary effects on their population and/or distribution within the site.

Qualifying features affected: Bewick's swan; bar-tailed godwit; black-tailed godwit; curlew; dark-bellied brent goose, dunlin, gadwall, goldeneye, grey plover, knot, oystercatcher, pink footed goose, pintail, redshank (breeding and non-breeding), sanderling, shelduck, turnstone, wigeon, waterbird assemblage.

Relevant design features of the access proposals: Table 8 in D3.1 provides a summary of the mitigation measures to reduce disturbance to non-breeding and breeding waterbirds, including scheduling works to limit disturbance.

Can 'no adverse effect' on site integrity be ascertained? Yes, for the following main reasons:

- Providing the mitigation measures are implemented during construction works any impacts from the works to non-breeding waterbirds should be minimised.
- The installation methods will be checked at the establishment stage and a further assessment under the Habitat Regulations made, as necessary, prior to the works being carried out.

Are there residual effects? No.

Trampling of qualifying and supporting habitat

Risk to conservation objectives: The trampling of designated features following changes in recreational activities, as a result of the access proposal, causes damage to, or reduction in the extent and distribution of, qualifying natural habitats and the habitats of qualifying species.

Qualifying features affected: Bewick's swan; bar-tailed godwit; black-tailed godwit; curlew; dark-bellied brent goose, dunlin, gadwall, goldeneye, grey plover, knot, oystercatcher, pink footed goose, pintail, redshank (breeding and non-breeding), sanderling, shelduck, turnstone, wigeon, waterbird assemblage; estuaries; mudflats and sandflats not covered by water at low tide; reefs (inter-tidal); coastal vegetated shingle; coastal sand dunes; saltmarsh (Salicornia and other annuals colonising mud and sand; Atlantic salt meadows; Mediterranean and thermo-Atlantic halophilous scrubs); wetland invertebrate assemblage.

Relevant design features of the access proposals:

- Most of the route is on existing PRoWs and well walked routes.
- The route will be signposted and waymarked regularly to encourage walkers to remain on the path with clear walking options and distances indicated at route junctions within the RSPB reserve.
- Short sections of guide fence or posts will be erected at the junction of the England Coast Path with the three informal paths towards the shingle ridges at the southern end of the RSPB reserve.
- Monitoring of the 240m of path from the junction of the England Coast Path with the path to the southernmost bird hide at the RSPB reserve to bund by Wolferton pumping station. Should the path width increase beyond its size in 2020, with a trigger width approaching 1.8m (and associated increase in in compressed or dead vegetation and broken surface), a boardwalk will be installed to define the route.
- Installation of a people counter once the England Coast Path becomes operational to monitor the usage of this sensitive area and provide evidence should further infrastructure be necessary (e.g. a boardwalk).

- New interpretation boards will be installed within the RSPB reserve at the three entrances showing the exclusions to the seaward margin and the sensitivity of the habitats.
- An advisory sign will be installed at the point that the path to the Inner Trial Bank meets the England Coast Path to remind users that the saltmarsh is excluded from the coastal margin for reasons of safety.

Can 'no adverse effect' on site integrity be ascertained? Yes, for the following main reasons:

- The areas of concern are relatively remote and it is not expected that there will be a large increase in users on the path.
- Clear signposting of the path will mean that most new users will keep to the designated route. The signage and information should also mean that some existing users may also change their behaviour and keep to the path.
- Monitoring of the section of path 'at risk' will ensure that any loss or damage will be restricted to the line of path with any indication of braiding or widening of the path triggering the installation of a boardwalk.
- The reduction in the extent of vegetated shingle in respect of path infrastructure is 1.6m^2 in the first instance with a further 288m^2 possible if a boardwalk is installed.
- This will not be an adverse impact on the overall coastal vegetated shingle feature as the site will still be able to meet the conservation objectives for shingle due to the presence of an existing path at this location which covers approximately the same area

Are there residual effects? Yes

Loss of feature extent or species' supporting habitat from the installation of path infrastructure

Risk to conservation objectives: The installation of access management infrastructure within designated sites may lead to a permanent loss of extent of habitats that are qualifying features themselves or support bird, plant or invertebrate species that are qualifying features.

Qualifying features affected: Bewick's swan; bar-tailed godwit; black-tailed godwit; curlew; dark-bellied brent goose, dunlin, gadwall, goldeneye, grey plover, knot, oystercatcher, pink footed goose, pintail, redshank (breeding and non-breeding), sanderling, shelduck, turnstone, wigeon, waterbird assemblage; estuaries; coastal vegetated shingle.

Relevant design features of the access proposals:

- The only infrastructure to be installed on habitat that is a SAC or Ramsar site feature, supporting habitat for SPA / Ramsar site birds, or supporting habitat for wetland invertebrates are two posts on the beach at Heacham, and 67 posts and one information board at Snettisham within vegetated shingle.
- Sites will be carefully chosen to minimise damage e.g. in areas of bare shingle.

- The remaining infrastructure within designated site boundaries or just outside the boundaries will be either on site fabric or species poor grass.
- Installation methods will be checked at establishment stage and a further assessment under the Habitats Regulations will be made before works are carried out.

Can 'no adverse effect' on site integrity be ascertained? Yes for the following reasons:

- Habitat lost is not of importance to the designated terrestrial fauna (waterbirds and wetland invertebrate assemblage).
- The loss of 7 m^2 of vegetated shingle in the context of the total resource of 45ha is considered to be trivial.
- The possible 288m^2 from the installation of a boardwalk is not considered to be an adverse impact on the overall coastal vegetated shingle feature as the site will still be able to meet the conservation objectives for shingle due to the presence of an existing path at this location of the nominal loss which covers approximately the same area.

Are there residual effects? Yes (coastal vegetated shingle)

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:

- Undertaking works to install access management infrastructure disturbs non-breeding waterbirds causing temporary effects on their population and/or distribution within the site.

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 which will be considered further in combination with other plans and projects:

- Disturbance to foraging or resting birds during winter and / or on passage which may lead to reduced fitness and reduction in population and / or contraction in the distribution of qualifying features within the site.
- Disturbance to breeding redshank that make a significant contribution to the non-breeding population of this species, which may lead them to abandon nesting areas or reduce their breeding success.
- The trampling of designated features (coastal vegetated shingle and coastal sand dunes) following changes in recreational activities, as a result of the access proposal, causes damage to, or reduction in the extent and distribution of, qualifying natural habitats and the habitats of qualifying species.

- The installation of access management infrastructure causes damage to, or a reduction in the extent and distribution of, qualifying natural habitats and habitats of the qualifying species (shingle and beach).

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.

Residual risk of insignificant impacts from the access proposals

Natural England considers that in this case the potential for adverse effects from the access proposals 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:

Table 15. Residual risk of insignificant impacts from the access proposals

Residual risk	Qualifying features affected
Disturbance of feeding or resting non-breeding waterbirds from recreational activities	■ Bewick's swan (nb) ■ Bar-tailed godwit (nb) ■ Black-tailed godwit (nb) ■ Curlew (nb) ■ Dark-bellied brent goose (nb) ■ Dunlin (nb) ■ Gadwall (nb) ■ Goldeneye (nb) ■ Grey plover (nb) ■ Knot (nb) ■ Oystercatcher (nb) ■ Pink-footed goose (nb) ■ Pintail (nb) ■ Redshank (nb) ■ Sanderling (nb) ■ Shelduck (nb) ■ Turnstone (nb) ■ Wigeon (nb) ■ Waterbird assemblage (nb)

Disturbance of breeding redshank from recreational activities	■ Redshank (nb)
Trampling of qualifying and supporting habitat following changes in access	■ Coastal vegetated shingle ■ Coastal sand dunes
Loss of feature extent or of species' supporting habitat through the installation of access management infrastructure	■ Coastal vegetated shingle

Combinable risks arising from other live plans or projects

In this section we consider other live plans or projects we are aware of, that might interact with the access proposals, to identify any insignificant and combinable effects that have been highlighted in corresponding Habitats Regulations Assessments.

Table 16. Review of other live plans and projects

Competent Authority	Plan or project	Have any insignificant and combinable effects been identified?
King's Lynn and West Norfolk Borough Council	Local Plan 2011 - 2026	**No**. The HRA for the Local Plan considers the risk of disturbance to The Wash SPA and Ramsar site's bird interest from increased recreational activity as a result of housing growth. In order to mitigate any negative impact the Council adopted a strategic mitigation plan [King's Lynn and West Norfolk B.C. 2015] that includes: ▪ project level HRAs to establish specific issues; ▪ a levy per dwelling or additional holiday unit to fund recreational mitigation on protected sites; ▪ using Community Infrastructure Levy receipts for strategic green infrastructure; ▪ participating in Norfolk wide monitoring of the effects of new development on designated sites. As a result, it was concluded that the planned housing growth would not lead to an adverse effect on integrity and no further residual impacts were identified. King's Lynn and West Norfolk Borough Council is currently developing a new Local Plan for 2016 – 2036 and are engaging with Natural England and partners to further develop the mitigation plan. A revised HRA has not yet been prepared.
King's Lynn and West Norfolk Borough Council	Brancaster Parish Neighbourhood Plan 2015 – 2026 (adopted 30 November 2015)	**No**. The initial assessment concluded that there would be no likely significant effect on designated sites as there is no new housing proposed and the plan conforms to the Borough Local Plan.

King's Lynn and West Norfolk Borough Council	Sedgeford Parish Neighbourhood Plan 2017 – 2036 (adopted 16 September 2019)	**No**. While three development sites have been identified in the village an HRA was screened out due to the size of the developments and the distance to designated sites. Any new housing would contribute to the Borough-wide mitigation plan.
King's Lynn and West Norfolk Borough Council	Snettisham Parish Neighbourhood Plan 2018 – 2033 (adopted 30 November 2018)	**No**. Housing allocations are included but the HRA concludes that there will be no impact to the designated sites provided the mitigation set out is secured at the planning stage. Any new housing would contribute to the Borough-wide mitigation plan.
King's Lynn and West Norfolk Borough Council	South Wootton Parish Neighbourhood Plan 2015 – 2026 (adopted 23 November 2015)	**No**. There are two large housing developments within South Wootton totalling 900 dwellings. However, these are existing allocations within the Borough Local Plan and therefore the Neighbourhood Plan will not have an impact on the designated sites.
King's Lynn and West Norfolk Borough Council	Walpole Cross Keys Neighbourhood Plan 2015 – 2026 (adopted October 2017)	**No**. No new housing development is being allocated and the plan conforms to the Borough's Local Plan. Therefore there are no impacts to designated sites.
King's Lynn and West Norfolk Borough Council	West Winch and North Runcton Neighbourhood Plan 2017 – 2036 (adopted October 2017)	**No**. Sites have been allocated within the parish for 1,600 new homes. However, these have been allocated within the Borough's Local Plan. The Neighbourhood Plan does not allocate any further sites but provides guidance and advice on the design of the developments. Therefore the plan does not have an impact on the designated sites.
King's Lynn and West Norfolk Borough Council	Castle Acre Neighbourhood Plan	**No**. The Neighbourhood Plan is at an early stage. A draft HRA has been prepared and sites on The Wash have been screened out due to the distance (24 km). Any housing allocation would contribute to the Borough's Strategic Mitigation Plan so it can be concluded that there will be no impact to The Wash designated sites.
King's Lynn and West Norfolk Borough Council	Holme-next-the –sea Neighbourhood Plan 2016 - 2036	**No**. The Neighbourhood Plan went for examination in December 2019 and the inspector's report was received on 27 January 2020. The Council have accepted the recommendations and will now seek to have a referendum. Impacts on designated sites were screened out at the Appropriate Assessment stage (no new sites were allocated).
King's Lynn and West Norfolk Borough Council	Hunstanton Neighbourhood Plan 2020 - 2036	**No.** The plan is in draft form and no HRA is available at the moment. However, the plan does not allocate additional housing above that in the Borough's Local Plan and therefore there is unlikely to be an impact on designated sites in The Wash.

King's Lynn and West Norfolk Borough Council	Thornham Neighbourhood Plan 2020 - 2036	**No**. The plan is in draft form and no HRA is available at the moment. However, the plan does not allocate any new housing and therefore there is unlikely to be an impact on designated sites in The Wash.
King's Lynn and West Norfolk Borough Council	Upwell Parish Neighbourhood Plan	**No**. The Neighbourhood Plan was out for consultation in January 2020. The plan allocates sites for 45 dwellings. As the parish is located 23 km to the south of The Wash and any housing would contribute to the Borough's Strategic Mitigation Plan it was concluded that there would be no impact to The Wash.
King's Lynn and West Norfolk Borough Council	Various housing developments at King's Lynn, Hunstanton, Heacham and Snettisham	**No.** There are various planning applications for housing in the settlements close to The Wash. However, the larger developments are site allocations within the Local Plan and smaller developments are contributing to the Strategic Mitigation Plan. Consequently it can be concluded that they will not be having a likely significant effect on the interest features of The Wash designated sites.
King's Lynn and West Norfolk Borough Council	17/02338/F Anaerobic digestion facility to process up to 19,250 tonnes of biomass north of Riverside Business Centre, Cross Bank Road, King's Lynn, Norfolk	**No**. While the facility is located adjacent to the River Great Ouse and just under 2 km from The Wash SPA and Ramsar site, and The Wash and North Norfolk Coast SAC a likely significant effect was screened out at the Appropriate Assessment stage of the HRA.
South East Lincolnshire Joint Strategic Planning Committee (Boston Borough Council, Holland District Council and Lincolnshire County Council)	South East Lincolnshire Local Plan 2011 – 2036 (covering Boston Borough and Holland District)	**No**. The HRA for the Local Plan considers the risk of disturbance to The Wash SPA and Ramsar site's bird interest from increased recreational activity as a result of housing growth. In order to mitigate any negative impact the Environment Policy within the Local Plan includes the following measures: ▪ All major housing proposals within 10km of The Wash will be subject to project level HRA to assess the impact of recreational pressure; ▪ Suitable Alternative Natural Greenspace (SANGs) should be provided in tandem with new housing at Boston, Spalding and Holbeach West; ▪ Other major housing sites should either provide SANGs or contribute funds to enhance natural greenspace in the locality. The joint committee will continue to gather evidence to inform future protection of designated sites including monitoring of mitigation implemented.

		On the basis of the above the HRA concluded that the Local Plan will not lead to adverse effects on European site integrity.
Greater Lincolnshire Local Economic Partnership (LEP)	Greater Lincolnshire LEP Strategic Economic Plan 2014 to 2030 (refreshed 2016).	**No.** A non-statutory partnership between local authorities and businesses which promotes economic growth within Lincolnshire including tourism. The LEP acts as a promotor and fund-raiser. The plan sets out the LEP's vision for growth but individual projects will be subject to HRA where applicable. Consequently the plan does not impact on European designated sites.
Norfolk County Council	Minerals and Waste Plan	**No.** The HRA concluded that there would be no likely significant effect as the area of search excluded sites within 5km of The Wash SPA, The Wash Ramsar site, and The Wash and North Norfolk Coast SAC.
Lincolnshire County Council	Minerals and waste Plan	**No**. The closest sites are within 5km of The Wash but the HRA only screened in impacts from air and water pollution and not disturbance. There are therefore no in-combination impacts with the England Coast Path.
Environment Agency	The Wash Shoreline Management Plan	**No**. The Shoreline Management Plan is a high level study. Due to the fact that it is about Policy setting, rather than proposing specific options at a scheme or project level, where specific details about construction or engineering proposals will be detailed, it is very difficult to determine the exact effects any proposal would have on the integrity of the designated sites, especially in the long term.
Environment Agency	Wash East Coastal Management Strategy	**Yes**. The strategy sets out the preferred options to maintain the flood defences from Hunstanton to Wolferton. No works are expected on units A (Hunstanton Cliffs) and B (Hunstanton Town) other than maintenance and repair of existing defences for the next 10 to 15 years. Unit C (Heacham to Wolferton) will be maintained for now by beach re-nourishment with shingle being recycled from Snettisham Scalp. Funding mechanisms are in place until at least 2031. The beach re-nourishment has the potential to disturb the SPA and Ramsar site bird interest but due to the timing of works and avoidance of certain habitats it was concluded that there would be no likely significant effect. Impacts on coastal vegetated shingle and coastal sand dunes were not covered in the HRA as the habitats were considered to be SSSI features only at the time. Annual monitoring was undertaken from 2005/06 until 2015/16. It will now be undertaken every 5 years. The monitoring concluded that there was no impact to the

		waterbird interest or the invertebrate prey on which they rely. Observations of the dune and Scalp ecology raise concerns about potential future change of the vegetation communities. Beach recycling has helped maintain the coast in a 'managed equilibrium' state. However, natural processes continue including the occurrence of storm surges and sea level rise. The central section of the Scalp has lost vegetated shingle habitat to erosion which may be partly attributable to the recycling works. To mitigate this material is being placed in front of this section, as part of the re-nourishment programme, to provide some protection. This will be subject to continued monitoring.
King's Lynn and West Norfolk Borough Council	Provision of additional shipping container for storage at Snettisham Sailing Club. 20/00412/F - validated 16 March 2020	**Yes.** The proposed new container would be located on an area of vegetated shingle on Snettisham Scalp. This could potentially result in the loss of 15m^2 of coastal vegetated shingle habitat. An HRA has been requested but is not yet available.
King's Lynn and West Norfolk Borough Council	Replacement bird hide at RSPB Snettisham Reserve 16/02144/F – Permission granted 13 March 2017	**Yes.** Permission granted to replace a bird hide destroyed in the 2013 floods. The replacement is not quite on the same site, but there is some overlap, and it is slightly larger than the old hide. The hide covers 96m^2 of shingle habitat offset by the removal of the old hide resulting in a smaller net loss of shingle habitat. The works compound was on species poor grass on shingle and the access route used an area of shingle already disturbed by EA machinery carrying out emergency repairs after the 2013 floods. The HRA did not cover the impacts to coastal vegetated shingle. However, a consent was issued for the works dated 22 August 2018 when the impacts were assessed against the SSSI shingle interest. It was concluded that the net loss was minimal taking into account the footprint of the old hide and the temporary nature of the compound and access route.
Natural England	Consent for parishioners of Snettisham to continue to exercise their common right to extract shingle dated 2 November 2011	**No.** The parishioners of Snettisham have a common right to take shingle from the RSPB site at Snettisham (Common CL378). The RSPB, Natural England and the Environment Agency have worked with Snettisham Parish Council over many years to ensure that this right does not have a significant effect on the vegetated shingle Ramsar feature or the coastal sea defences. This consent relates to the allocation of a specific site measuring 15m x 15m (225m^2), which will be topped up by the EA as required. At the time an HRA was not carried out, but as the purpose of the consent was to manage the impact of the pre-existing

		common right it was not considered to have an adverse impact on the Ramsar site.
Natural England	Implementation of coastal access from Weybourne to Hunstanton	**No**. This stretch, which has been published, overlaps with The Wash and North Norfolk Coast SAC and Greater Wash SPA. The Access and Sensitive Features Appraisal did not identify any significant or combinable impacts to the features of these designated sites. A separate HRA will be prepared for this stretch of the England Coast Path in due course.
Natural England	Implementation of coastal access from Sutton Bridge to Skegness	**Yes**. The Access and Sensitive Features Appraisal for The Wash SPA, The Wash Ramsar site and The Wash and North Norfolk Coast SAC, published 24 January 2018, could not rule out residual disturbance impacts to resting non-breeding birds. An HRA for this stretch is in the process of being prepared and the indication is that this will still be the case.

In the light of this review, we have identified insignificant and combinable effects are likely to arise from the following projects that have the potential to act in-combination with the access proposals.

Table 17. Insignificant and combinable effects from other projects

Risk	**Qualifying features affected** **(nb = non-breeding)**
Loss of the extent of interest feature by removing shingle from the south of Snettisham Scalp to re-nourish beaches to the north.	■ Coastal vegetated shingle
Loss of the extent of interest feature by building a new bird hide on vegetated shingle and the temporary loss from the works compound and works access.	■ Coastal vegetated shingle
Loss of the extent of interest feature from the installation of a new storage unit at Snettisham Sailing Club.	■ Coastal vegetated shingle
Disturbance caused by an increase in walkers following the implementation of coastal access from Sutton Bridge to Skegness	■ Bewick's swan (nb) ■ Bar-tailed godwit (nb) ■ Black-tailed godwit (nb) ■ Curlew (nb) ■ Dark-bellied brent goose (nb)

	■ Dunlin (nb) ■ Gadwall (nb) ■ Goldeneye (nb) ■ Grey plover (nb) ■ Knot (nb) ■ Oystercatcher (nb) ■ Pink-footed goose (nb) ■ Pintail (nb) ■ Redshank (nb) ■ Sanderling (nb) ■ Shelduck (nb) ■ Turnstone (nb) ■ Wigeon (nb) ■ Waterbird assemblage (nb)

Assessment of in-combination effects

In light of the conclusions above, we have made an assessment of the risk of in combination effects. The results of this risk assessment, taking account of each qualifying feature of each site and in view of each site's Conservation Objectives, are as follows:

Table 18. Risk of in-combination effects

Qualifying Feature affected	In-combination pressure	Assessment of risk to site conservation objectives	Adverse effect in-comb?
■ Coastal vegetated shingle	Small losses or damage to the feature resulting in a reduction in extent.	While small losses in the extent of Coastal Vegetated Shingle can be accepted as trivial in context to the overall resource accumulated losses overtime can result in a significant loss. Losses associated with the three projects above are: Wash East Coastal Management: Unknown. (It is difficult to quantify how much loss is due to the project and how much is due to natural processes. However, remedial actions have been put in place to reverse the trend).	No

		New bird hide: 96m^2 (Maximum less site of old hide. The site of the new hide largely on formerly disturbed shingle. The temporary access path has also resulted in some erosion which will take time to recover). New storage container: 15m^2 (Not yet approved. HRA still awaited so condition of habitat and possible mitigation not known). While the above accumulated losses are greater than the potential loss due to the England Coast Path, the full impacts are mitigated and thus are smaller than the headline figures.	
■ Bewick's swan (nb) ■ Bar-tailed godwit (nb) ■ Black-tailed godwit (nb) ■ Curlew (nb) ■ Dark-bellied brent goose (nb) ■ Dunlin (nb) ■ Gadwall (nb) ■ Goldeneye (nb) ■ Grey plover (nb) ■ Knot (nb) ■ Oystercatcher (nb) ■ Pink-footed goose (nb) ■ Pintail (nb) ■ Redshank (nb) ■ Sanderling (nb) ■ Shelduck (nb) ■ Turnstone (nb)	Increased use of the England Coast Path is expected as a result of improvements to the quality of the path and its promotion as part of the England Coast Path. Other plans or projects that would increase local demand for recreational routes could similarly increase use of coastal paths and lead to more disturbance events.	The proposals for coastal access between Sutton Bridge and Skegness have been designed to mitigate the impact of disturbance on the bird interest of The Wash SPA and Ramsar site. The project aligns the majority of the coastal path along existing well used access routes in order to limit changes to access levels and patterns around sensitive sites. Where the proposals use existing paths, the main risk to the conservation objectives from recreation is where people go on site and how they behave, rather than fluctuations in the number of people using the path. We consider that the project will make a positive contribution to managing recreational use of the site. Where new sections of path are proposed, they have been carefully designed to avoid/minimise disturbance. Access has been restricted year round to inter-tidal saltmarsh and flats.	No

■ Wigeon (nb) ■ Waterbird assemblage (nb)			

The possibility of adverse effects arising in combination with other plans and projects is thus ruled out.

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 The Wash SPA and Ramsar site, Greater Wash SPA and The Wash SAC either alone or in combination with other plans and projects

Assessment of Coastal Access proposals under regulation 63 of the Habitats Regulations 2017 (as amended) ('Habitats Regulations Assessment')

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.

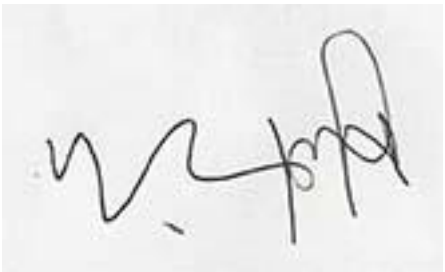
We, Natural England, are satisfied that our proposals to improve access to the English coast between Hunstanton and Sutton Bridge are fully compatible with the relevant European site conservation objectives.

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

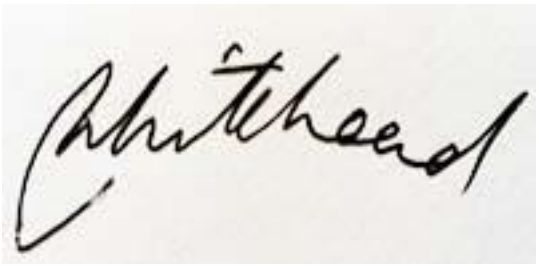
HRA prepared by:

Name: Nigel Jennings Date: 20 October 2020



HRA approved by:

Name: Catherine Whitehead Date: 12 November 2020



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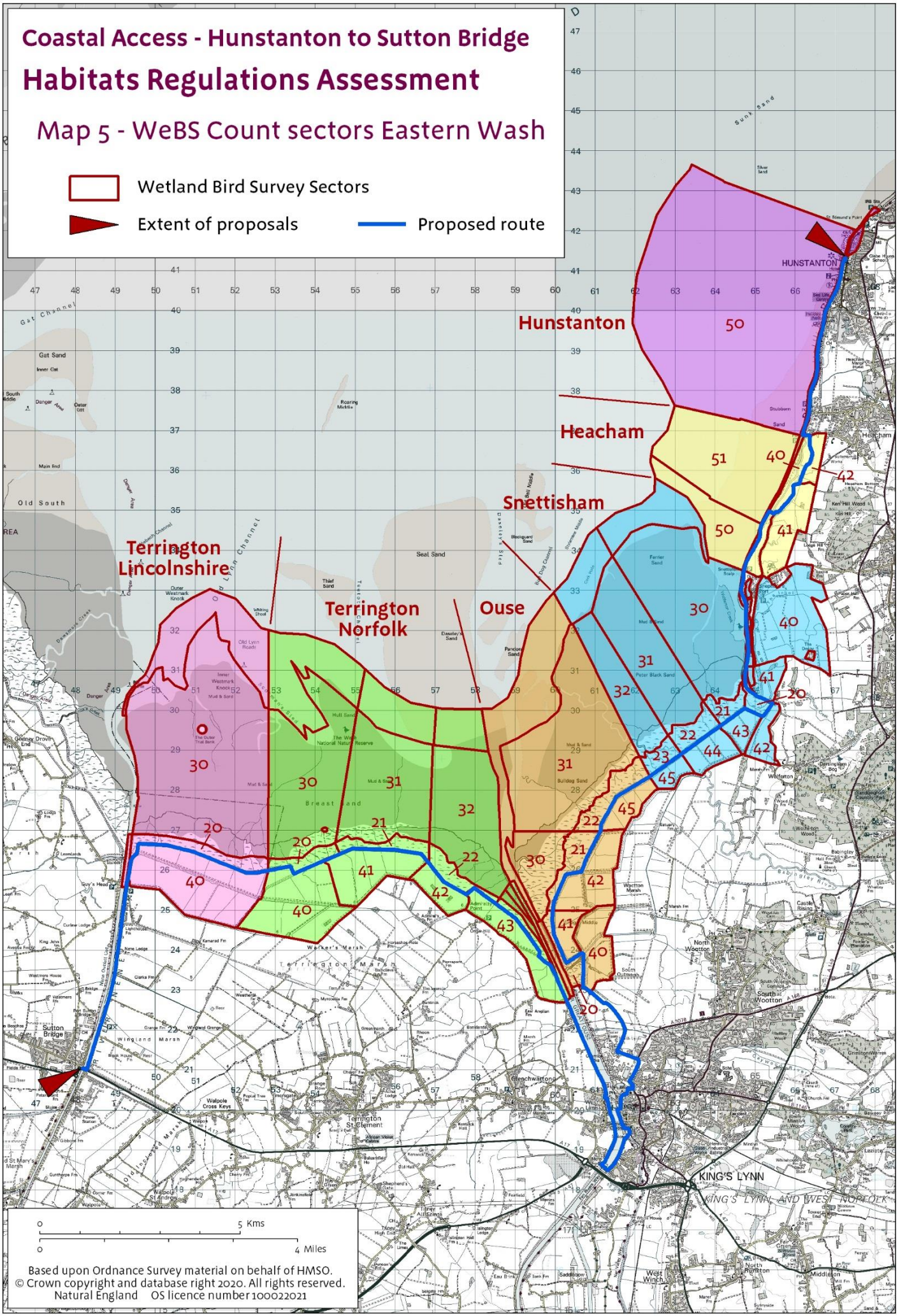
Coastal Access - Hunstanton to Sutton Bridge
Habitats Regulations Assessment
Map 5 - WeBS Count sectors Eastern Wash
Wetland Bird Survey Sectors
Extent of proposals
Proposed route
Hunstanton
Heacham
Snettisham
Terrington Lincolnshire
Terrington Norfolk
Ouse
HUNSTANTON
KING'S LYNN
0 5 Kms
0 4 Miles
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