ENGLAND COAST PATH, FELIXSTOWE FERRY TO BAWDSEY

NATURE CONSERVATION ASSESSMENT

An assessment of the potential effects of the access proposals on sites and features of nature conservation and geological importance

December 2020

About this document

This document should be read in conjunction with the published Reports for the *Felixstowe Ferry to Bawdsey* stretch of the England Coast Path, and the associated *Habitats Regulations Assessment* (HRA).

Together, the Coastal Access Reports contain a full description of the access proposals, including any additional mitigation measures that have been included. They may be viewed here: https://www.gov.uk/government/publications/england-coast-path-in-the-east-of-england

An HRA is required for European sites (Special Protection Areas, Special Areas of Conservation and Ramsar sites), and is published alongside the Coastal Access Reports.

This Nature Conservation Assessment (NCA), covers all sites and features not already covered by the HRA. It includes sites of special scientific interest (SSSIs) and undesignated but locally important sites and features. It covers geological, as well as nature conservation, sites and features.

A list of designated sites and features for this stretch of coast is given in Annex 1. It includes features that have been considered by the Felixstowe Ferry to Bawdsey HRA.

The NCA is arranged so that it mirrors the structure of an Access Assessment previously produced for the Felixstowe Ferry to Bawdsey stretch. Both documents are, therefore, broken down into eight **Route Sections,** the lengths of which vary considerably because they reflect local circumstances, primarily the current public access provision within each route section (existing public right of way, no existing access rights, etc).

Consideration of the various route sections is preceded by an overview of the Deben Estuary SSSI (which covers the whole estuary), and a description of the categories of sites and features considered for each route section.

Contents

A. Introduction

Background

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:

- To secure a long-distance walking route around the whole coast; the 'England Coast Path' (ECP) or 'the trail'.

- To secure an associated area of land within which, in appropriate places, people will be able to spread out and explore, rest or picnic. This area is called 'coastal margin', and the accessible parts of it 'spreading room'.

To secure these objectives, we must submit *Coastal Access 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 are accompanied by a single *Overview* document, and each of them covers a separate length within the stretch. They follow the approach set out in our methodology - the *Coastal Access Scheme* - which has been approved by the Secretary of State for this purpose, as the legislation requires.

In making our coastal access proposals, we must take into account any adverse effects they may have on sites of international/ European importance, by producing a *Habitats Regulations Assessment* (HRA). These sites include Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar sites. We must also take into account any potential effects on sites or features not covered by international legislation, including non-statutory sites and features. We do this by producing a *Nature Conservation Assessment* (NCA), which covers geological, as well as nature conservation sites and features.

This NCA should therefore be read in conjunction with the published Coastal Access Reports and Overview for the Felixstowe Ferry to Bawdsey Stretch, and the associated HRA.

The stretch is a complex one, both in terms of nature conservation and of existing and anticipated recreational activity. This NCA is therefore broken down into route sections which match those set out by the *Access Assessment* for the stretch, with access assessment scores (anticipated increases in levels of recreational activity) given for each one.

Map C1 shows designated sites on the Deben Estuary. There are no Marine Conservation Zones (which would otherwise be covered by the NCA) on or near the Felixstowe Ferry to Bawdsey stretch.

The coastal access reports contain full descriptions of the access proposals, including any additional mitigation measures that have been included. They may be viewed here https://www.gov.uk/government/publications/england-coast-path-in-the-east-of-england

We have powers available to us under the Countryside and Rights of Way Act 2000 ('CROW') which would have the effect of restricting or excluding access. **Maps E1 to E7** show the extent of proposed access exclusions and restrictions for the stretch.

It is important to note that we propose to use these powers to exclude access to the great majority of areas of saltmarsh and mudflat on the Deben estuary, under section 25A of CROW, on the grounds that they are unsafe for public access. ***This proposal would have no effect on existing access rights, permissions, or established practice, and does not extend to a small area of saltmarsh immediately to the north of Bawdsey (see D7, below).*** *It is difficult to imagine a future scenario where it would be deemed appropriate to remove the s25A exclusion, but should this happen, the opportunity would be taken to review the case for an access exclusion on nature conservation grounds, under s26(3)(a) of CROW.*

We also propose that certain other areas are subject to access exclusions under s26(3)(a) of CROW, to protect nature conservation features.

Acknowledgements

This assessment draws heavily on three earlier documents, all produced by Suffolk Wildlife Trust, which proved invaluable when researching this document:

- *The Deben Estuary and its hinterland: Evaluation of key areas for birds, recreational disturbance issues and opportunities for mitigation and enhancement*
  Authors: Nick Mason, Andrew Excell and James Meyer.
  Date: 2014.

- *The River Deben Estuary – Ornithological Importance and Status for Waterbirds. Summary Report to the Deben Estuary Partnership – Environment, Landscape and Archaeology Group*
  Authors: Andrew Excell and Kieran O'Mahony.
  Date: 2013.

- *Survey of breeding redshank and other waders between Ramsholt and Bawdsey – Deben Estuary, Suffolk*.
  Author: Nick Mason.
  Date: 2018.

Further information on the numbers and behaviour of local birds has kindly been provided by Nick Mason, Andrew Excell and Phil Whittaker.

This NCA also contains Wetland Bird Survey (WeBS) data from *Waterbirds in the UK 2018/19* © copyright and database right 2020. WeBS is a partnership jointly funded by the BTO, RSPB and JNCC, in association with WWT, with fieldwork conducted by volunteers

Overview of the Deben Estuary

The Deben estuary extends for approximately 12 km between Felixstowe Ferry and Ufford Mill. It is relatively narrow, sinuous and sheltered compared with other local estuaries, being generally no wider than 800m, and less than 300m at its mouth, which is protected by shifting sands and flats.

The Deben estuary's landscape is distinctive, with gentle, often wooded slopes rising on either bank. The southern part of the estuary is generally flatter and has a more expansive feel. There are few substantial settlements, with the town of Woodbridge, towards its northern end, being by far the largest. The village of Waldringfield and the hamlet of Felixstowe Ferry are the main settlements on the western shore, with the small hamlets of Bawdsey and Ramsholt the only settlements on the eastern bank, the villages of Shottisham and Alderton being 2 and 3.5 km inland, respectively.

The Felixstowe Ferry to Bawdsey Stretch of the ECP extends from the Martello Tower at Felixstowe Ferry, along the western bank of the Deben estuary, through Woodbridge to Melton. It crosses the Deben at Wilford Bridge, and returns southwards on/ close to the eastern bank of the estuary to Bawdsey Quay, at its mouth. The proposed trail route is almost 40km in length and is mostly rural in nature, the only urban area being Woodbridge.

At present, approximately 80% of the estuary is served by public rights of way (PRoW) which are either on, or close to the shore. There are two local long-distance walking routes at the northern end: the Fynn Valley Walk and the Sandlings Walk. They approach Woodbridge from the west and south-west respectively, before converging to follow the same alignment along the Woodbridge and Melton shoreline. At the southern end of the estuary, the Suffolk Coast Path follows the open coast and crosses the Deben via the foot ferry between Bawdsey Quay and Felixstowe Ferry. The Stour and Orwell Walk also leads south from Felixstowe Ferry. On the Deben itself, however:

- Some PRoWs have been adversely affected by coastal erosion, leading to them being undermined and currently located, in a legal sense, on the foreshore, as is the case at Waldringfield, Kyson Point and Ramsholt.

- There are two historic breaches to the seawall, one at Hemley and one between Waldringfield and Martlesham Creek. Both seawalls have PRoWs on their crests which have, effectively, been severed by the breaches.

- There are also places where existing lengths of PRoW are located some distance inland, with more limited views of the estuary, such as at Hemley and near Sutton.

The town of Woodbridge, at the northern end of the estuary, is a popular tourist destination, as is the nearby National Trust-owned Sutton Hoo visitor centre and museum. The estuary is very popular for recreational activities such as sailing, kayaking, walking and birdwatching. There is one beach on the estuary, at Bawdsey. It is relatively narrow, but 300m long, sandy, and quite popular, despite the route to it from most nearby towns being a circuitous one.

The majority of the 40km England Coast Path on the Deben will follow existing PRoW under our proposals. Approximately 8km will be new access.

As noted above, the stretch has been carefully scrutinised to identify any potential impacts on natural features, the results being presented in this document and in the associated HRA.

B. Deben Estuary Site of Scientific Interest

Overview

The area covered by the Deben Estuary Site of Special Scientific Interest (SSSI) is coincident with the Deben Estuary SPA and Ramsar sites. Its boundary also partially overlaps with the boundaries of two, relatively small geological SSSIs: Ferry Cliff, at Sutton, and Ramsholt Cliff.

An overview of the Deben Estuary SSSI is given here because it covers the whole of the estuary, and is, therefore, relevant to all eight route sections within the NCA. The potential impacts of our proposals on notified features of the SSSI are discussed under the relevant route sections, in Part D.

Note: Because the two geological SSSIs are much smaller, and only relevant to route section 6, they are described under D6, along with analysis of potential impacts on them.

The Deben Estuary SSSI citation notes that the estuary supports internationally important numbers of over-wintering redshank *Tringa totan*us and that the breeding population of this species is of county significance. It goes on to say that the site is of national importance for its winter populations of dark-bellied brent goose *Branta bernicla [this species is also one of two SPA notified features for the estuary, the other being avocet – see below]*, shelduck *Tadorna tadorna* and black-tailed godwit *Limosa limosa* with the numbers of wigeon *Anas penelope*, pintail *Anas acuta* and grey plover *Pluvialis squatarola* approaching this level in some years.

The Deben estuary was originally designated as an SPA because of its wintering avocet *Recurvirostra avosetta* populations, which Mason, Excell & Meyer (2014) noted as having increased in number to 299 (mean nos. on estuary between 2006/7 and 2010/11); far in excess of the qualifying UK threshold of 75 (representing 1% of the UK population).

The SSSI citation also notes that the estuary supports many other species, including high numbers of dunlin *Calidris alpina*, curlew *Numenius arquata* and mute swan *Cygnus olor*. There is also a population of the mollusc narrow mouthed whorl snail, *Vertigo angustior* [a qualifying feature of the Deben Estuary Ramsar Site]. Martlesham Creek and a part of the estuary near Sutton Hoo are two of only about fourteen sites in Britain where this species survives. Another nationally rare mollusc, *Vertigo pusilla* has also been recorded.

The Estuary supports approximately 40% of Suffolk's area of saltmarsh (including the most complete range of saltmarsh vegetation types in the county), as well as three nationally scarce plant species, namely marsh mallow *Althaea officinalis* , shrubby seablite *Suaeda fruticosa* and small cord-grass *Spartina maritima*.

This SSSI consists of 22 units, 77% of which are assessed as being in unfavourable and declining condition, while 23% have been found to be in favourable condition (survey dates: 2009 – 2011). Loss of saltmarsh, due to coastal processes and 'coastal squeeze', are the main causes of unfavourable and declining condition.

The notified features of the SSSI that are also qualifying features of the European site are covered by the HRA and therefore omitted from this assessment (please refer to Annex 1).

The remaining SSSI features *are* covered by this assessment, and are as follows (see also Annex 1):

- Aggregations of non-breeding birds - Black-tailed Godwit, *Limosa limosa islandica*
- Aggregations of non-breeding birds - Redshank, *Tringa totanus*
- Aggregations of non-breeding birds - Shelduck, *Tadorna tadorna*
- SM8 - Annual *Salicornia* saltmarsh
- SM9 - *Suaeda maritima* saltmarsh
- SM10 - Transitional low marsh vegetation with *Puccinellia maritima*, annual *Salicornia* species and *Suaeda maritima*
- SM11 - *Aster tripolium var. discoides* saltmarsh
- SM13a - *Puccinellia maritima* saltmarsh, *Puccinellia maritima* dominant sub-community
- SM14 - *Atriplex portulacoides* saltmarsh
- SM15 - *Juncus maritimus* - *Triglochin maritima* saltmarsh
- SM16a - *Festuca rubra* saltmarsh *Puccinellia maritima* sub-community
- S4 - *Phragmites australis* swamp and reed-beds
- S21 - *Scirpus maritimus* swamp

Deben Estuary SSSI: Detailed consideration of species and habitats not covered by the HRA

The species covered by the HRA are non-breeding dark-bellied brent geese, non-breeding avocet and narrow-mouthed whorl snail.

The numbers of individual waterbird species on any estuary vary from year to year, and there can be longer term upward or downward trends as the birds respond to such factors as climate change, changes in land use, etc. It is, therefore, essential to monitor changes in population levels after sites are designated, which happened in 1991 in the case of the Deben Estuary SSSI.

In 2014, Mason, Excell & Meyer summarised the status of birds using the Deben estuary at that time as:

- Of international importance: Black-tailed godwit.

- Of national importance: Dark-bellied brent goose, shelduck, little egret *Egretta garzetta*, avocet, grey plover, redshank.

- Other species noted in significant numbers: Bar-tailed godwit *Limosa lapponica*, curlew, dunlin, golden plover *Pluvialis apricaria*, knot *Calidris canutus*, lapwing *Vanellus vanellus*, little grebe *Tachybaptus ruficollis*, pintail.

In 2019, Woodward and others produced the Wetland Bird Survey Alerts for 2016-17, which included analysis of the numbers of birds wintering on the Deben between the winters of 1991-2 and 2016-17. They identified four Deben species as being of particular concern:

- shelduck – high alert for medium term (-50%) and longer term (-66%)
- dark-bellied brent goose – medium alert for long term (-47%)
- black-tailed godwit – medium alert for medium term (-25%)
- redshank – medium alert for medium term (-27%)

(Medium term = 10 years; long term = 25 years)

The most up to date survey data available is the *Wetland Bird Survey* produced by Frost and others in 2020, covering information gathered in the winter of 2018-19. It records the following species as having occurred in **nationally important** numbers on the Deben in that winter: Dark-bellied brent goose, avocet, grey plover, black-tailed godwit, dunlin, green sandpiper, redshank, greenshank.

Looking in detail at the bird species that occur, or have recently occurred, in numbers of international or national importance (excluding those covered by the HRA):

Black-tailed godwit

The BTO's WeBS Alert report for 2016-17 (Woodward and others, 2019) shows a 22% increase in the numbers of black-tailed godwit on the Deben estuary over the last 25 years, but declines of -25% in the last 10 years and -17% in the last 5 years. So, recent on-site trends do not appear to be tracking regional or national trends (both of which have seen steady increases), suggesting site-specific reasons for the declines. The current 5 year mean for this species (2014/15-2018/19) is 671 (Frost and others, 2020).

Black-tailed godwits are larger than many waders, and have proportionately longer legs and beaks, enabling them to feed in deeper water. They feed on invertebrates in the mud but they will also feed readily on grazing marshes, where they will take insects from the surface. They are sociable birds that form large flocks when feeding. On the Deben they are mostly seen in the winter, but they are also rare breeders on wet grasslands in East Anglia (mainly the Ouse and Nene Washes). Mason, Excell & Meyer (2014) recorded that, although they will roost on the Deben's saltmarshes, they normally prefer arable fields, which they share with other species, such as curlew.

Black-tailed godwits use many parts of the estuary but the main roost sites identified by Mason, Excell & Meyer (2014) were north of Sutton Hoo, near Haddon Hall (opposite Kyson Point), Stonner Point, east of Hemley, north of Felixstowe Ferry, and (the largest area), the saltmarsh, grazing marshes and arable fields to the south of Martlesham Creek. In the latter area we propose inland trail alignment and screening

(between the saltmarsh and Decoy Pond) as mitigation measures, partially in recognition of the sensitivities (see the Felixstowe Ferry to Bawdsey HRA, and below, for more information).

Cutts, Hemingway and Spencer (2013) noted that 'Black-tailed Godwit are an under-studied species with regard disturbance impacts, both from noise and visual sources. Gill *et al* (2001) [ref also provided] suggest that the species is tolerant of disturbance but little detail on how this affects birds below the population level is described….Given the paucity of information, Black-tailed Godwit are considered tolerant of moderate visual disturbance'.

Gill and others (2001) studied disturbance and black-tailed godwits on estuaries in East Anglia, including the Deben, and did not find any effect of human presence on the number of black-tailed godwits supported by mudflats. This suggests that foraging birds on intertidal habitats are relatively tolerant of disturbance, but does not necessarily mean that roosting birds or those foraging on terrestrial habitats are not susceptible.

UK conservation status: Red.

Redshank

The latest WeBS 5 year mean for redshank (Frost and others, 2020) is 1,349, against the current GB threshold of 940, so the Deben is an important site for wintering redshank. The long term trend for wintering redshank is downward, though, with numbers on the Deben falling by 22% over the 25 year period between 1991-92 and 2016-17 (Woodward and others, 2019).

Some redshank stay on the Deben to breed, and Mason's 2018 breeding birds survey of the (currently undisturbed) shoreline between Ramsholt and Bawdsey, commissioned by Natural England, found eleven territories (calling males) concentrated on an area of saltmarsh north of Bawdsey (the survey also highlighted the importance of this area of shoreline for waterbirds in general).

Redshank are birds of moorland fringes and wet grasslands as well as rivers and estuaries. Earthworms can make up a large part of their diet, but they also eat crustaceans, molluscs and marine worms. They can exploit a range of zones within estuarine habitats and are able to feed on saltmarsh, in shallow water, and on both wetter and drier areas of intertidal mud (unlike some waders, which depend more heavily on recently exposed mud). They are widespread and common, but their numbers (both breeding and wintering) are declining.

Cutts, Hemingway & Spencer (2013) noted that redshank are 'surprisingly tolerant of people, allowing approach as close as 70-115m before flushing when confronted with a lone walker on the mudflat…Redshank are very tolerant of moderate and even high level visual disturbance stimuli'. However, they are vocal birds and readily emit loud alarm calls when disturbed.

UK conservation status: Amber.

Shelduck

Nationally important numbers of over-wintering shelduck have occurred on the Deben, but their current status is worrying. The latest 5 year mean is 465 birds (Frost and others, 2020), which means they no longer occur in nationally important numbers, and the latest WeBS Alert (Woodward and others, 2019) indicates they have suffered a 66% decline in the last 25 years and 50% over the last 10 years.

Shelduck are one of our largest ducks, and they feed along the whole length of the estuary, either by dabbling in shallow water or by rooting about in the surface layers of intertidal mud or saltmarsh, where they search for invertebrates. They may roost on the water, on saltmarsh, on grazing marshes or on arable fields.

Shelduck nest in rabbit burrows, and other similarly-sized holes, often considerable distances from water, with adults leading their young to water early in their development. Another unusual characteristic is that most of the adults leave their young in a crèche, supervised by one or two adult birds (possibly un-paired/ unsuccessful breeders), while they leave the country to congregate in huge flocks to moult, returning in late autumn.

Shelduck roost sites are widely spread across the estuary, with few areas outside the urban area of Woodbridge being unattractive to them (Mason, Excell & Meyer, 2014).

Cutts, Hemingway and Spencer (2013), whose research was primarily focused on construction works, noted that 'Shelduck are generally a wary species and are highly sensitive to visual disturbance. Typically, they approach construction works no closer than 300m and are affected by visual disturbance up to 500m away from source…Shelduck are extremely sensitive to moderate and high level visual disturbance'.

UK conservation status: Amber.

Grey plover

In the UK grey plovers are mainly winter migrants, although small numbers of birds may be seen at other times of year. They favour estuaries and coastlines, where they may be seen walking in fits and starts, in ones or twos, across sand and mudflats, stopping briefly to peck at invertebrates and crustaceans at, or close to the surface with their relatively short, stout bills. They typically visit the Deben estuary in numbers 10-20% above the qualifying UK threshold, according to figures quoted by Mason, Excell & Meyer (2014). The latest 5 year mean figure is 404 individuals (Frost and others, 2020) against the current GB qualifying threshold of 330.

Cutts, Hemingway and Spencer (2013), noted that 'Limited data suggest that Grey Plover are a relatively disturbance tolerant species…They are surprisingly tolerant of people, allowing approach as close as 50-

100m before flushing when confronted with a lone walker on the mudflat, even when roosting….Grey Plover are tolerant of moderate and high level visual disturbance…'.

They also say 'However, despite this 'tolerance', Grey Plover may abandon highly disturbed areas in favour of quieter areas to forage and roost', but it's likely this comment relates primarily to disturbance by construction activities; the main focus of their research.

UK conservation status: Amber.

Dunlin

Dunlins are small waders that occur in coastal habitats around the UK, in especially large numbers in the winter, with flocks often numbering thousands. They are found along the entire length of the Deben estuary, in numbers occasionally surpassing the national threshold. The most up to date five year mean number of Dunlin on the Deben is 3,437 (winters 2014-15 to 2018-19) (Frost and others, 2020).

As with many waders, Dunlin move onto saltmarshes as tide levels increase, and onto neighbouring fields when space is limited on estuarine habitats. They favour upland areas for breeding. Their legs are not especially long relative to their body, so they tend to forage on open mud or in shallow water, using their moderately long bills to pick up worms, snails, etc, on or a little way under the surface.

Cutts, Hemingway and Spencer (2013), characterise dunlin as being '…surprisingly tolerant of people, allowing approach as close as 50-90m before flushing when confronted with a lone walker on the mudflat. When foraging, they are often initially disturbed by activity start-up, with a flight response, but will then forage back towards the works, approaching to within 25m on occasions…'. They continue 'Dunlin are very tolerant of moderate and high level visual disturbance'.

UK conservation status: Amber.

Green sandpiper

The green sandpiper is also a relatively small wader, albeit a little larger and more elegant than a dunlin, and with quite different habits, apparently valuing the cover afforded by the margins of water bodies and watercourses over large expanses of mud. It is also a much less gregarious bird, occurring individually or in small groups, rather than large flocks. It often picks invertebrates from in or on water, or the surface of the mud, rather than probing, appearing nervous as it bobs up and down.

On the Deben the green sandpiper may be seen as a passage migrant and winter visitor. The most up to date five year mean number on the Deben is just four individuals (winters 2014-15 to 2018-19) (Frost and others, 2020).

UK conservation status: Amber.

Greenshank

Most often seen on migration at the coast, or on inland water bodies and marshes, alone or in small groups, this is a moderately-sized, long-legged water. Like many waders it forages for insects and worms, but it is also agile enough to successfully chase after small fish and invertebrates in the water. It nests on or near the wet bogs and peatlands of northern Scotland.

Mason, Excell & Meyer (2014) noted that Greenshank is a common spring passage wader on the Deben, although the most up to date five year mean number of greenshank on the Deben for the winters 2014-15 to 2018-19 is just 18 (Frost and others, 2020).

UK conservation status: Amber

Little egret

Once a rare visitor to the UK, this small, white heron has become established as a breeding species remarkably quickly over the last quarter of a century. It colonises new areas rapidly, with individuals often being seen in locations remote from established colonies. Most UK breeding birds remain for the winter, to be joined by continental birds. Little egret tend to stand or wade in shallow water, feeding on a wide range of animals, including small fish, invertebrates, large insects, etc.

Mason, Excell & Meyer (2014) recorded the mean number of little egret on the Deben estuary between 2006/07 and 2010/11 as 49, comparing favourably with the qualifying UK threshold of 45. Since then, their numbers have increased to a 5 year mean of 94 (Frost and others, 2020), albeit not quite keeping pace with the GB threshold, which has increased to 110.

Little egret are considered susceptible to harsh winters, but, overall, they are probably benefiting from the warming climate. Research on the species' sensitivity to disturbance is not readily available, though.

UK conservation status: Green.

Saltmarsh and swamp plant communities

The areas of saltmarsh on the Deben Estuary occur in a complex mosaic, the numbers of individual plant species in particular locations, and the proportions between those species, being dependent on several factors. These include substrate type, frequency of tidal inundation, exposure, position within the estuary, and past management practices.

Low-marsh vegetation communities, which are mainly situated towards the head of the estuary, are characterised by a vegetation dominated by sea aster *Aster tripolium*, annual seablite, glasswort *Salicornia*

europea, sea poa *Puccinellia maritima* and sea purslane *Halimione portulacoides*. In places, particularly where steep cliffs abut the mudflats, virtually pure stands of common cord-grass occur.

Where the old seawalls have been breached, saltmarsh communities that are more typical of formerly disturbed sites have established. These are characterised by a mosaic of sea poa, sea-milkwort *Glaux maritima*, common sea-lavender *Limonium vulgare*, sea arrow-grass *Triglochin maritima* and sea plantain *Plantago maritima*. Varying proportions of these species are also to be found in the more typical mid-marsh communities which are more prevalent towards the lower end of the estuary.

There are several areas where upper-marsh occurs, characterised by the presence of sea rush *Juncus maritimus*, red fescue *Festuca rubra*, saltmarsh rush *J. gerardii* and creeping bent *Agrostis stolonifera*. Sea couch *Elymus pycnanthus* is mainly confined to sea walls but, at the northern-most end of the site, it forms extensive stands which show a natural transition to blackthorn *Prunus spinosa* scrub on the higher ground.

In addition, swamp communities occur in several places along the estuary, usually as relatively narrow fringes but occasionally forming large stands. Such areas may be dominated by sea club-rush *Scirpus maritimus*, greater pond sedge *Carex riparia* or, most frequently, common reed *Phragmites australis*.

The estuary supports three nationally scarce plant species: marsh mallow, shrubby seablite and small cord-grass.

Deben Estuary SSSI: Works needing assent

If our proposals are approved, assent will be needed for the installation of the following:

A screen to be constructed close to Decoy Pond, to the north of Cross Farm, to prevent walkers disturbing birds on the adjacent saltmarsh.

4.6 kilometres of fencing between the folding and the seawall between Ramsholt and Bawdsey, to prevent access to the seawall and part of the folding.

Signage and interpretation to explain to walkers in the above location why access to the sea wall is prohibited.

Fingerposts and waymarkers in multiple locations (mostly outside the SSSI, but a small number may be within or on the site boundary).

C. Categories of habitats, species and geology considered for each section of trail route

Listed below are the categories of habitats, species and geological features considered for each of the trail route sections covered in Part D. Together, these route sections make up the Felixstowe Ferry to Bawdsey (Deben estuary) stretch of the England Coast Path.

Wintering and migratory waterbirds

This large grouping of waterbirds includes SSSI notified species (black-tailed godwit, redshank and shelduck) and species identified as noteworthy by the SPA and Ramsar citations, despite them not meeting the criteria for SPA/ Ramsar notification (because they do not, or did not, occur in large enough numbers). The full list of species includes:

> black-tailed godwit, redshank, shelduck, grey plover, avocet, golden plover, teal *Anas crecca*, pintail, wigeon, goldeneye *Bucephala clangula*, oystercatcher *Haematopus ostralegus*, ringed plover *Charadrius hiaticula*, dunlin, curlew, turnstone *Areneria interpres*, coot *Fulica atra*, cormorant *Phalacrocorax carbo*, snipe *Gallinago gallinago*.

Mason, Excell & Meyer also recorded, in 2014, that the mean numbers of little egrets exceeded the threshold for national importance between 2006/7 and 2010/11, although their numbers, despite increasing steadily since, have not quite kept pace with the increasing national threshold. They also noted five other species as having occurred in 'significant numbers' between Jan 2010 and Dec 2012: bar-tailed godwit, knot, lapwing, little grebe and pintail.

Wintering and migratory birds, other than waterbirds

This group of non-waterbirds primarily identified as noteworthy by the SPA and Ramsar citations includes three species: hen harrier *Circus cyaneus,* short-eared owl *Asio flammeus,* twite *Carduelis flavirostris.*

Breeding waterbirds

This grouping of waterbirds includes species identified as noteworthy by the SPA and Ramsar citations, despite them not meeting the criteria for SPA/ Ramsar notification. It is comprised of:

> Shelduck, gadwall *Anas strepera*, ringed plover, snipe, redshank, oystercatcher, teal, shoveler *A. clypeata.*

Breeding birds, other than waterbirds

Where we have information on other breeding birds that may be affected by our proposals we have included it in this category under each route section.

Other noteworthy species

Where we have information on other noteworthy species that may be affected by our proposals we have included it in this category under each route section.

Saltmarsh and swamp plant communities

Brief text is included in D1.2.6, and cross-referenced in all subsequent route sections, explaining why we believe that these plant communities, and the wildlife that depends on them, will not be adversely affected by our proposals.

County Wildlife Sites

County Wildlife Sites (CWSs) are non-statutory sites identified as being of importance for wildlife using recognised criteria. They may be important as stand-alone sites or as supporting habitats for other sites, such as SSSIs. They may also link other areas of habitat and function as wildlife corridors.

The relevant CWS code, and national grid reference, are given for each site, each being considered under the relevant route section. Further information on CWSs is available from the Suffolk Biodiversity Information Service: https://www.suffolkbis.org.uk/suffolk-sites/cws

Geological Sites of Special Scientific Interest

This category includes two SSSIs - Ferry Cliff and Ramsholt Cliff - both being relevant only to route section 6.

D. Sections of Trail Route Considered

Before finalising our proposals for the Felixstowe Ferry to Bawdsey stretch we produced an *Access Assessment*, which quantified the changes in levels and patterns of recreational access likely to occur as a result of establishment of the England Coast Path around the Deben estuary. It was broken down into eight separate 'route sections', together covering the whole stretch.

In Part D we look at the eight route sections again and quantify the potential impacts of these changes in access. For each, we look at the categories of habitat, species and geology set out in Part C. The route sections are:

1. Felixstowe Ferry to Sandy Lane, Waldringfield
2. Sandy Lane, Waldringfield, to Martlesham Creek
3. Martlesham Creek to Kyson Point
4. Kyson Point to Wilford Bridge
5. Wilford Bridge to Little Haugh
6. Little Haugh to Ramsholt
7. Ramsholt to Ferry Road, Bawdsey
8. Ferry Road, Bawdsey, to Bawdsey Quay

The text in parts D1 to D8, below, draws heavily from three sources, acknowledged in Part A, above.

D1. Felixstowe Ferry to Sandy Lane, Waldringfield

Access Assessment score for trail route: 3 – small increase (this is for the route section as a whole; the increase is expected to be negligible in the areas to the immediate north of Felixstowe Ferry and around Waldringfield, where levels of activity are already high).

Access Assessment score for spreading room: -1 – negligible change.

D1.1 Overview

This is the longest route section within the stretch. Within it, the two most sensitive areas are:

- The 3 km of saltmarsh and associated mudflat between Kirton Creek and Waldringfield. Here, the seawall breached some decades ago, facilitating expansion of the saltmarsh. It has since become the estuary's most important roost site for waders, supporting large numbers of a range of species, including grey plover, dunlin, bar-tailed godwit, curlew and redshank (Excell and O'Mahony, 2013, and Mason, Excell & Meyer, 2014).

- 0.5 km of saltmarsh and mudflat at Falkenham Creek. Mason, Excell & Meyer (2014) recorded that this supports shelduck, wigeon, lapwing, dunlin, black-tailed godwit, redshank, and (in certain conditions) avocet.

There is also 1 km of saltmarsh between Felixstowe Ferry and King's Fleet, but its proximity to the busy Felixstowe Ferry area means the seawall adjacent to the marsh is well walked. Despite this, it is a roost site for a range of waterbirds (notably black-tailed godwit, redshank, grey plover and shelduck) which also make use of nearby fields.

The 1 km of shoreline route to the north of Waldringfield is also well walked, which may have affected the way waterbirds use it.

The two remaining areas of shoreline are similar in character to each other, both having seawalls adjacent to (typically) 50m-wide ribbons of saltmarsh and (depending on the state of the tide) up to 75m of exposed mud. The value of the saltmarsh is limited by its narrowness and proximity to the seawall/ PRoW, although it is used by a wider range of species where it widens out, close to Falkenham Creek.

There are expansive areas of low-lying arable fields and grazing marshes, particularly towards the south. These are used by many waterbirds, typically including lapwing, golden plover and dark-bellied brent geese, although species and numbers vary with the time of year and the state of the tide.

A major, largely freshwater feature is Kings Fleet, which, as well as supporting a range of waterbirds, also provides winter habitat for notable birds such as bearded tit and Cetti's warbler (Mason, Excell & Meyer, 2014).

Under our proposals, no new access rights to saltmarsh and mudflat would be established within this route section, this being consistent with most other route sections. This access exclusion is proposed under s25A of CROW, which may only be used to exclude access to areas of saltmarsh and mudflat deemed unsuitable for access on grounds of public safety. However, it is clear that nature conservation would also benefit, both directly, by the avoidance of damage by trampling, and indirectly, in that wildlife would be protected from disturbance.

D1.2 Assessment of potential impacts

D1.2.1 Wintering and migratory waterbirds

Impacts on birds on the two most sensitive areas of saltmarsh will be avoided by the trail following an inland route between Kirton Creek and Waldringfield, and on the folding behind the seawall at Falkenham Creek.

The trail is expected to have a negligible effect on the two existing, busy lengths of PRoW, north of Felixstowe Ferry and around Waldringfield.

Regarding the two remaining areas, Felixstowe Ferry to Falkenham Creek and Falkenham Creek to Kirton Creek: Both are adjacent to only narrow ribbons of saltmarsh, likely to support relatively low numbers of birds. Both are existing lengths of PRoW, remote from centres of population, with no relevant attractors and no significant areas of spreading room. The relatively small numbers of ECP walkers they are anticipated to attract are likely to be intent on covering longer distances and are therefore expected to cause only transient disturbance. Also, levels of disturbance are likely to be higher in the warmer months, when the impacts on this category of birds will be less of a factor.

Throughout much of this route section, the areas of 'functionally linked habitat' (arable fields, grasslands, watercourses, etc) are extensive, which should enable roosting, loafing and feeding birds to locate themselves far enough to landward of the proposed route to avoid being disturbed, even as cropping regimes change between years/ seasons. It is felt that locating the trail on existing PRoW throughout this route section, as proposed, is likely to result in less disturbance than creating a parallel route further inland. The only other option - a more distant inland route - would not adequately fulfil coastal access criteria, and walkers would inevitably prefer to use the existing shoreline PRoW.

The Deben estuary is relatively narrow throughout its length, which means that the area of mud exposed at low tide is limited in some places. This restricts the area available for waterbirds to feed on between high tides; a problem exacerbated where walkers and dogs are on / close to the shoreline. However, our proposals for the two sides of the estuary mean that, for almost every location within this long route section where the ribbon of mudflat is narrow and the proposed trail alignment is on the shoreline, the opposite side of the estuary either has a more expansive area of mud, or we propose that the trail be aligned inland on that side. This means that undisturbed feeding areas remain available on the opposite side of the estuary and relatively close. The only exception is a length of seawall trail to the SE of Kirton Creek, where, on both sides, the area of low-tide mud is relatively narrow and we also proposed that the trail be located on the shoreline, but this only applies to 1 km of estuary.

D1.2.2 Wintering and migratory birds, other than waterbirds

Mason, Excell & Meyer (2014) noted that a single short-eared owl was known to roost on the seawall in the south of this route section, and the relevant *Suffolk Bird Reports* record 3 of this species wintering near Felixstowe Ferry in 2018, and 4 at Kings Fleet in 2015 (plus up to 5 sightings in Jan 2017, on the opposite side of the estuary). They, and marsh harriers, are known to hunt along the seawalls and over adjoining habitats. The *Bird Reports* for recent years show that there are often between 6 and 8 marsh harriers wintering on the Deben, focused mainly on the mid-lower reaches. They will make extensive use of this route section for hunting and, potentially, roosting.

Hen harriers visit Suffolk each winter, and may find their way to the Deben, but the already low numbers have declined significantly in recent years: In 2012 up to 21 were recorded for Suffolk, with numbers dropping to maxima of 8 in 2016, 11 in 2017, and 6 in 2018 (figures from relevant *Suffolk Bird Reports*).

It's possible that harriers and short-eared owls roosting close to the trail might be adversely affected by trail users, but harriers are more likely to favour denser cover such as areas of reeds, and the longer grass favoured by short-eared owls is not present where seawalls are mown. Reedbeds and reed fringes together comprise an extensive network of habitat within this route section (supplemented by similar on the opposite side of the estuary), and they are partially separated from the trail by a substantial borrowdyke. Although there remains the risk that such habitats closer to the proposed trail route might be chosen as roost sites, this is likely to be in relatively remote areas where, especially in the winter months and at the times of day when roosting is likely to occur, they are likely to be subject only to occasional, transient disturbance.

Similarly, any birds likely to be deterred from hunting by human activity will tend to focus on the more remote areas where they will only be subject to transient disturbance by a relatively small number of trail users, especially in the winter.

There are also records of 12 twite wintering at Waldringfield in the 2013 *Suffolk Bird Report*, but only two the following year, and no recent records. However, we would not expect our proposals to adversely affect such species, should they reappear, because they are most likely to be found on saltmarshes, perhaps in the company of other visitors such as snow buntings, and they're mobile enough to not be unduly affected by transient disturbance. As with other route sections on the Deben, there is the potential for other wintering or migratory passerines to be present, but, for the most part, they will concentrate on saltmarshes, areas of reeds, etc, rather than on the trail route, and are regarded as being mobile enough to not be unduly affected by transient disturbance.

D1.2.3 Breeding waterbirds

Shelduck nest in rabbit burrows and other, similarly sized holes, in many locations around the estuary. They can nest a considerable distance from water, with adults soon leading their young to the estuary or other areas of water. Lapwing breed in fields and grazing marshes in several locations along the Deben, despite their numbers having declined steeply in recent decades. Mason, Excell & Meyer estimated, in 2014, that 50 pairs of oystercatcher nested along the length of the estuary, on the saltmarshes and adjoining fields, and sometimes (less successfully) on seawalls.

Teal have occasionally stayed to breed on the estuary, but have been absent, as a breeding species, from recent *Suffolk Bird Reports*. In 2014, Mason, Excell & Meyer recorded that small numbers of avocet had bred on the Deben for more than 12 years, on three sites in the lower river, including King's Fleet (see the HRA for further information on avocet).

Little grebe breed in the marginal fringes of watercourses and borrowdykes along the estuary, as do tufted ducks *Aythya fuligula*, the latter notably in the King's Fleet area. Water rails *Rallus aquaticus* may well inhabit reedbeds and reedy margins in these areas, but their small size and skulking, nocturnal habits make them difficult to locate and monitor.

Despite wintering on the Deben in good (albeit reduced) numbers, the numbers of redshank breeding on the river appear to be declining, although they are difficult to monitor when nesting. According to Mason, Excell & Meyer (2014), they are known to breed close to King's Fleet and at Falkenham Creek, and to have exhibited breeding behaviour in several other locations in the middle and lower estuary.

Most breeding waterbirds are likely to be located on the larger areas of saltmarsh. As outline above, our proposals completely avoid any impacts on either of the two most sensitive saltmarshes and are likely to have a negligible impact on the large, but already disturbed areas of saltmarsh, such as at Felixstowe Ferry.

As outlined above, some waterbirds will also choose to nest and raise their young in functionally linked habitats landward of the shore, e.g. shelduck in rabbit burrows, and oystercatcher, lapwing and redshank within fields, or on their margins. To an extent, as with wintering/ passage birds, breeding waterbirds may be able to locate themselves a safe distance from the trail in the areas where there are higher levels of disturbance, e.g. near Felixstowe Ferry. In the more remote areas, where the number of walkers is likely to be far lower, the relatively small number of pairs that nest closer to the trail will only suffer occasional, transient disturbance, especially as the increase in levels of use as a result of national trail designation is expected to be small in these areas.

D1.2.4 Breeding birds, other than waterbirds

Stonechats *Saxicola rubicola*, have bred on the Deben, although their numbers fluctuate noticeably with climatic conditions, and skylarks *Alauda arvensis* breed fairly widely in arable fields, including many close to the estuary, although their numbers, generally, have declined markedly over the last fifty years, with changes in farming practices. Mason, Excell & Meyer (2014) recorded the presence of corn buntings *Emberiza calandra* in spring and summer, in the King's Fleet and Falkenham Creek areas. They are a rare and declining Red List species, and typically in-field nesters that sometimes nest in field margins. Yellow wagtail *Motacilla flava* is a Red List species that favours breeding sites in expansive arable fields and wet grasslands, away from hedges and trees. Mason, Excell & Meyer (2014) recorded them as having exhibited breeding behaviour in the low-lying fields between Felixstowe Ferry and Kirton Creek. Meadow pipits *Anthus pratensis* have a preference for thick grasses on the un-grazed seawalls and are widespread along the Deben.

Sedge warblers *Acrocephalus schoenobaenus* and reed warblers *Acrocephalus scirpaceus* are present in good numbers as breeding birds throughout the river, favouring the reed fringes of borrowdykes and other watercourses to landward of the seawalls. Cetti's warblers *Cettia cetti* have experienced a huge expansion in their range over recent decades, and, in 2014, Mason, Excell & Meyer estimated that there could be 20 pairs nesting in reeds on the Deben, with known nest sites including Kirton Creek and King's Fleet.

Reed buntings *Emberiza schoenichus* are common along the Deben, breeding in reeds and low, scrubby habitat to landward of the seawalls and some distance inland wherever their favoured watery habitats are present. Small numbers of nightingales *Luscinia megarhynchos* breed in scrub

and exploit suitable habitat in the lightly managed areas to landward of the seawalls on the estuary.

It is unlikely that passerines, as a whole, would be affected adversely by establishment of the ECP on the alignment proposed, due to a range of factors. In areas where there is already plenty of human activity, e.g. at Felixstowe Ferry, establishment of the ECP will make no appreciable difference to levels of disturbance. Those species with a preference for open fields will benefit from the lack of any new cross-field routes being proposed for this route section. Other species nest in reeds along the edges of borrowdykes, or scrub close to seawalls, which may bring them into closer contact with users of the proposed trail route. However, the areas in which the ECP is likely to lead to a measurable increase in levels of human activity are more remote, and path users will generally cause only transient disturbance, which appears to be tolerated by most passerines. The same applies to ground-nesting passerines, even though some of these may choose to nest on seawalls, a good example being meadow pipits, which don't appear to be adversely affected by localised disturbance (Mason, Excell & Meyer, 2014).

To the extent that passerines might be affected, it's quite likely that this would occur on other potential routes that are suitable for hosting the ECP in rural locations, if roads are excluded. This is because alignment options in rural areas generally come down to field edges, existing PRoW, alongside watercourses, etc, where potential nesting habitats also exist.

Marsh harriers *Circus aeruginosus* (considered in more detail in D7.2.4) have nested on the Deben for a quarter of a century, using a number of favoured reedbed sites and hunting over the low-lying fields and watercourses, particularly in the lower river. Some evidence appears to indicate that the species isn't particularly sensitive to the existence of recreational routes when selecting nesting sites. For instance, they are known to occasionally nest within a few tens of metres of a relatively busy seawall PRoW on the Suffolk/ Essex border, and different pairs to repeatedly nest between 40 and 100m of another fairly well-used PRoW close to the Suffolk coast, further north. However, we acknowledge that these examples may not necessarily be typical, and that caution is needed in the light of the birds' status as a Schedule 1 species. In this route section, though, the anticipated small increase in numbers of path users is thought unlikely to have a significant adverse effect on marsh harriers, especially as we don't propose to create any new access routes within the route section, which extends throughout the middle and lower west bank of the estuary .

D1.2.5 Other species of note

Common lizards *Zootoca vivipara* have been recorded from several locations along the sea wall, brown hares *Lepus europaeus* from the nearby fields, and water voles *Arvicola amphibius* and otters *Lutra lutra* mainly from the borrowdykes and other watercourses. All are protected under

the Wildlife and Countryside Act 81 (as amended). Otters and water voles are also Priority Species under the UK Post-2010 Biodiversity Framework. Additionally, otters are European Protected Species under Annex IV of the European Habitats Directive, and listed as Near Threatened on the global IUCN Red List of Threatened Species.

McGuire and Whitfield (2017) found that the national distribution of water voles had declined by 30% over the period 2006 – 2015, compounding a previously estimated 90% decline since the 1970s. A range of factors are understood to have contributed: habitat loss, pollution, agricultural intensification, urbanisation, and the establishment in the wild of the highly predatory, and non-native, American mink.

Otters were once found in most parts of the UK, but their population suffered dramatic declines in the last century, due to persecution, habitat loss and the effects of toxic organochlorine insecticides. Population levels and distribution have increased steadily over the past quarter of a century, but otters remain scarce in many parts of England.

Hares, otters and water voles should all benefit from our proposal that the ECP sticks to existing PRoW throughout this long route section. In particular, keeping the ECP to the seawall, and therefore to the east of the extensive network of watercourses and fields, all the way between Felixstowe Ferry and Kirton Creek, should ensure that any impacts are minimised.

Common lizards colonise seawalls particularly effectively, especially where they are not close-mown, because they thrive in the rough sward on well-drained soils, the steep slopes often providing sun-bathed microclimates ideal for basking and foraging. However, lizards are sensitive to vibration and very quickly move out of the way of approaching walkers, especially in the warmer months and times of day when walkers are likely to be more numerous. They are also too small, quick, and adept at hiding to interest most dogs.

There are also records of a small number of less common moths and plants, and of scarce or characteristic saltmarsh species, on or near the seawalls. However, we don't propose any changes to management regimes likely to substantially affect any of these species, and our proposal that the saltmarsh in this area be covered by a s25A access exclusion should protect them.

D1.2.6 Saltmarsh and swamp plant communities

These SSSI habitats will, by default, fall within the coastal margin, as they are landward of the trail. However, no new access rights to the great majority of saltmarsh (and mudflat) will be established under our proposals, which include an access exclusion under s25A of CROW (the only exception to

this being a small area of saltmarsh at Bawdsey, at the end of Route Section 7, which is more readily accessible and where access is well established).

Although, in botanical/ scientific terms, there is a difference between saltmarsh habitats (for which s25A is intended to be used), and swamp communities, the latter are smaller in scale and, in most places, inextricably linked with the former, usually forming a transition zone. In practical terms, it is unlikely that members of the public would seek to differentiate between the two, and, in any case, swamps are inherently difficult to access.

D1.2.7 Geological Sites of Special Scientific Interest

There are no geological SSSIs on this route section.

D1.2.8 County Wildlife Sites

Felixstowe Ferry - CWS 205 - TM326372

Current situation

This is a complicated site, a key feature being a large area of vegetated shingle in the eastern part of the site, colonised by specialist and scarce plants such as yellow horned poppy *Glaucium flavum*, sea kale *Crambe maritima* and sea pea *Lathyrus japonica*. In the western part of the site is an inland seawall, 'Tomline Wall'. Between the two are areas of rough, dry, and sand-dune grasslands, together supporting a wide range of notable plants and animals. The nationally scarce shrubby sea blight *Suaeda vera* has been recorded, and there are also plants such as grass vetchling *Lathyrus nissolia* and sea holly *Eryngium maritimum*. The site supports a wide range of birds, including meadow pipit and skylark. Common lizard, slow-worm *Anguis fragilis* and grass-snake *Natrix natrix* have been recorded, and watercourses and associated reedbeds provide habitat for water voles and reed buntings.

The complexity of the site's habitats is mirrored by a wide range of land uses within and round it. There is a large golf course and, as well as a ferry (taking foot passengers across the mouth of the Deben to Bawdsey), there are houses, a large sailing club, a popular pub, busy café, boatyard, fishmongers' huts, etc. The whole area, including the shoreline seawall and network of footpaths, is a popular area with visitors throughout much of the year.

The Tomline Wall currently hosts a permissive footpath and is within an area of land that is accessible to the public under section 15 of CROW.

Risk analysis

The areas of beach/ vegetated shingle (a habitat very sensitive to foot traffic) would lie within the coastal margin under our proposals, but this would remain the case even if the trail were located further inland.

The great majority of the site would be landward of the trail under our proposals, and not part of the coastal margin. As noted above, it already hosts a network of PRoWs, a permissive path, and open access land. The trail itself is proposed to be on the same alignment as the existing, very well used shoreline PRoW, and it expected to bring about a negligible increase in human activity.

Overall, therefore, our proposals are expected to have a negligible effect on local species and habitats, even taking into account the high sensitivity of some of them.

King's Fleet - CWS 67 - TM310380

Current situation

King's Fleet drains a large area of land including Falkenham, Felixstowe, Walton and Rosier Marshes; low-lying grazing marshes now protected from flooding by a seawall, but which would once have been saltmarshes of the lower Deben estuary. It is a broad, linear expanse of open water that is largely spring fed, and therefore freshwater, but is more brackish towards the eastern end, where there is some seepage from the estuary, despite the water control structure being designed to prevent the ingress of seawater.

King's Fleet has good water quality and therefore supports a diverse and rich aquatic ecology, including numerous plant and dragonfly species, and mammals such as otters and water voles.

An assessment by SWT Ecological Consultants, in 2009, recorded that this site is especially good for birds, with a wide range of species nesting in the margins, bearded tits/ reedlings *Panurus biarmicus* and yellow wagtails roosting in the reeds in late summer (the latter in exceptional numbers), and large numbers of swallows roosting in the autumn.

Risk analysis

This site lies landward of the proposed trail and therefore does not form a part of the coastal margin, but it is considered here because its easternmost limit is only 45m from the trail.

The trail will be aligned along the existing PRoW on the seawall. Another PRoW follows the northern side of King's Fleet for its entire length, 20-30m from its shore.

This habitat type is sensitive to recreational pressures, but levels of recreational activity here are already relatively high, the existing PRoWs being popular with walkers, often with dogs. The increase in recreational activity likely to result from establishment of the ECP is anticipated to be negligible.

Corporation Marshes - CWS 66 - TM300404

Current situation

This site is mainly reedbed, but with areas of scrub. It is immediately inland of Falkenham Creek, into which it drains. It is an important breeding site for sedge and reed warblers, and for whitethroat *Sylvia communis*, and provides winter hunting habitat for noteworthy species such as hen and marsh harriers, and short-eared owls.

Falkenham Creek and Corporation Marshes are separated by a seawall and borrowdyke, a shoreline PRoW being located on the seawall. Another PRoW is located on the northern and eastern edges of the site, and links with the seawall PRoW.

Risk analysis

This site lies landward of the proposed trail and, therefore, does not form a part of the coastal margin. However, it is considered here because its easternmost limit is only 25m or so from the seawall folding, on which the trail is proposed to be located. The trail's proposed location is here, rather than on the crest of the seawall, to avoid disturbance of the birds using the saltmarsh to seaward.

This habitat type is sensitive to recreational pressures, but access is physically difficult and the proposed trail is to seaward of the site and separated from it by a borrowdyke. The increase in use of the shoreline route as a result of ECP designation is expected to be small, and the effect on the site itself, especially given the close proximity of an existing PRoW on its northern boundary, is therefore anticipated to be minimal.

The Mill River - CWS 29 - TM219433

Current situation

This is an especially long, linear site, with Mill River rising on the outskirts of Ipswich and flowing eastward to meet the Deben estuary via Kirton Creek. It is unusual for a lowland river in being largely unimpeded by man-made structures, and this, combined with good water quality, enhances its value ecologically. It also flows past/ through habitats important in their own right, including flower-rich meadows, alder carr and old pollard willows.

Kingfishers may be seen along its length, reedy margins in the lower reaches provide habitat for birds such as reed and sedge warblers, and waders such as oystercatcher and lapwing frequent the areas closer to the estuary, with green sandpiper and whimbrel also noted. The site also provides habitat for otters and water voles.

Risk analysis

This extensive CWS lies entirely landward of the trail and does not form a part of the coastal margin. It is considered here because its easternmost boundary abuts the sluice at Kirton Creek, which is crossed by the shoreline PRoW/ proposed trail alignment.

The increase in recreational activity on the seawall PROW likely to result from establishment of the ECP is anticipated to be small. This, combined with the shape and location of the site mean that we expect adverse impacts on the site to be negligible.

D2. Sandy Lane, Waldringfield, to Martlesham Creek

Access Assessment score for trail route: 6 – Large increase.

Access Assessment score for spreading room: -1 – Negligible change.

D2.1 Overview

The first 55% of this proposed route alignment is on new access routes which zig-zag from Waldringfield northwards, largely sticking to field edges a field or two inland of a fairly large area of saltmarsh, but ultimately meeting the inland/ western limit of the saltmarsh and being located on its border for about 300m. There is an existing shoreline PRoW, but it's on an old seawall which was breached several decades ago, severing the PRoW and allowing saltmarsh to re-establish behind it.

Most of the remaining 45% of the route section is also new, but it continues northwards from the saltmarsh on a more direct alignment, on arable field edges about 350m inland of the shore. It ultimately joins an existing PRoW 250m before re-joining the shoreline at Martlesham Creek (at TM 270 472), where the next route section begins. The existing seawall PRoW continues throughout this area, running north from the site of the breach. Part of the seawall (at TM 275 470) has been adapted to form a spillway at a level substantially below the seawall crest; the landowner has built a second 'counterwall' further inland, and accepts that the intervening land will flood occasionally. The remainder of the original seawall is subject to minimal maintenance (none is carried out by the Environment Agency) and likely to be increasingly prone to breaching as it deteriorates.

The combination of favourable conditions and low levels of disturbance have allowed the saltmarsh behind the breached seawall to become important habitat for (according to Excell and O'Mahony, 2013) a range of waterbirds including shelduck, wigeon, lapwing, pintail, dunlin and redshank, with Mason, Excell & Meyer (2014) describing the latter as 'perhaps the most important wader species on the Deben estuary'. They also note that dark-bellied brent geese (an SPA notified species) may be found loafing on the saltmarsh, and that shelduck often roost along the shoreline throughout this route section.

Excell & O'Mahony (2013), also noted this as a particular area favoured as a roost site by hen harriers, although their numbers have dwindled to extremely low levels in the intervening years (see D1.2.2).

The wider landscape is gently sloping arable, with the fields in the northern part of the route section being separated from the seawall by two areas of low-lying grazing marshes, there being a gap of just 200m between them, where an arable field extends right up to the seawall. Mason, Excell & Meyer (2014) noted that the grazing marshes are popular with lapwing, curlew and redshank, and that up to 200 black-tailed godwits may also roost here. The latter is around one-third of the mean estuary population, the latter being of national significance, based on latest Wetland Bird Survey results and current national population

estimates. The adjacent mudflats are used by a wide range of waterbirds for feeding (pers. comm. Nick Mason, 2020), with several of these species moving to the grazing marshes and arable fields when the tide is high.

In terms of existing access, small numbers of people occasionally walk from the well-used paths around Martlesham Creek (in the next route section), southward along the seawall PRoW, potentially as far as the breach, but from this point they have no choice but to return, as there is currently no through-route.

Under our proposals, no new access rights to saltmarsh and mudflat would be established within this route section, this being consistent with most other route sections. This access exclusion is proposed under s25A of CROW, which may only be used to exclude access to areas of saltmarsh and mudflat deemed unsuitable for access on grounds of public safety. However, it is clear that nature conservation would also benefit, both directly, by the avoidance of damage by trampling, and indirectly, in that wildlife would be protected from disturbance.

D2.2 Assessment of potential impacts

D2.2.1 Wintering and migratory waterbirds

As noted above, this area includes a progression of waterbird habitats, from the open water, mudflats and saltmarsh of the estuary itself, through low-lying grazing marshes, to arable fields (to the east). All of these habitats are used by various species of waterbirds at different times, depending on the tidal cycle, time of day, and time of year. They have benefited from the low levels of recreational activity prevalent here for many decades.

Also as noted above, the seawall PRoW that extends throughout this route section hasn't provided a through-route since it was breached in the 1930s. ECP guidance says we should consider using existing shoreline PRoW where they exist, and to avoid creating parallel routes where possible. We therefore considered proposing alignment of the trail on the seawall throughout the northern part of this route section, i.e. north of the breach. This would have provided significant advantages for walkers, particularly those not constrained by disabilities, pushchairs, etc (for whom it would not be suitable). However, we decided against this course of action for reasons primarily to do with the safety, longevity and accessibility aspects of the seawall (which is currently subject to minimal maintenance), and the importance of the adjacent areas for waterbirds.

We acknowledge that adoption of an inland route has the potential to disturb birds using the fields when they are in suitable cultivation, but it has the significant advantage of allowing space for them to feed and/ or roost undisturbed on the grazing marshes and intertidal areas.

We also acknowledge the potential for the creation of a new, inland through-route to combine with the existing seawall PRoW (which would remain available to walkers while the seawall remains passable, at least) to lead to substantially increased levels of activity in the area, which could have adverse effects on local waterbird populations. This is only likely to develop into a serious issue, though, if proximity of the coast path to the seawall PRoW encourages users to walk from one to the other, despite the absence of access rights, in order to circumvent the seawall breach and continue their journey north/ south, or to create circular routes. This would have the effect of increasing the numbers of walkers on the seawall, despite the trail being located inland. To address this we propose measures to clearly define the England Coast Path route and to discourage the public from departing from it. As noted above, the existing PRoW is currently only lightly used and we expect it to become impassable in the medium term, as the seawall deteriorates though lack of maintenance to the point where it breaches or is closed because it has become unsafe to walk on.

It is helpful that our proposal for the eastern side of the estuary is that the trail be located a good distance inland of the shore. This means that any birds flushed from the western side (while the seawall PRoW remains passable) only need fly to the mudflats opposite to find undisturbed feeding areas (a distance of 250 – 500m, depending on the state of the tide).

Having accepted that any new route linking the busy settlements/ visitor destinations of Waldringfield and Woodbridge is likely to bring about a large increase in pedestrian traffic, we believe the route we propose offers the best compromise between the various criteria set out in the *Coastal Access Scheme* and the wildlife and accessibility legislation we must comply with. There remains the potential for some disturbance of wintering and passage waterbirds using the arable fields, but we anticipate that the fields are mostly large enough that birds will be able to position themselves where the risk of disturbance is lower.

The potential for our proposals to result in disturbance of waterbirds on the intertidal areas, saltmarshes, and on the grazing marshes, is almost entirely avoided by the route we have identified and our proposal that access to the saltmarsh and mudflat in the coastal margin be excluded all year round under 25A of CROW.

However, there are two aspects of our proposals which have the potential to bring about excessive levels of disturbance to wintering and passage birds:

1. Where we propose trail alignment alongside the most important area of saltmarsh, at Howe's Farm.

   We intend to overcome this by installing a 70m long screen, and to plant up any gaps in the adjacent hedges, to provide a continuous visual barrier between the saltmarsh and the trail. Accompanied dogs must be kept on a short lead on the trail on this section, all year round. This

is proposed under Section 26(3)(a) of the Countryside and Rights of Way Act (2000) to protect birds using the adjacent saltmarsh from disturbance (see map FFB E7, below, and Report FFB2).

2. Under coastal access legislation, any areas of land to seaward of the trail that are not of an 'excepted' land type will, by default, become accessible to walkers on the trail. Our proposed inland trail alignment would, therefore, bring the two areas of grazing marshes into 'spreading room', to which the public would have a right of access.

   To overcome this we propose that access to these areas be prevented by s26(3)(a) access exclusions under CROW.

D2.2.2 Wintering and migratory birds, other than waterbirds

Short-eared owls and marsh harriers hunt over this route section at times. Short-eared owls, in particular, exhibit some tolerance of people, but both species will benefit from our proposed alignment, which is largely separated from their favoured hunting habitats by a series of arable fields. There remains a risk that the strips of reed fringes and rough grass close to the proposed trail route in the extreme northern part of the route section might be chosen as roost sites, but this only applies to 300m of trail, and these habitats are far more extensive elsewhere in the route section, so the risk is small.

As noted for the previous route section, hen harriers visit Suffolk each winter, and may find their way to the Deben, but the already low numbers have declined to extremely low levels in recent years. This route section includes one of only two favoured hen harrier roost sites on the estuary mapped by Excell and O'Mahony (2013), but the species is expected to benefit from our inland trail alignment in the same way as short-eared owls and marsh harriers should do.

As with other route sections on the Deben, there is the potential for wintering or migratory passerines to be present, but, for the most part, they will concentrate on saltmarshes, areas of reeds, rank grassland, etc, some distance to seaward of the proposed trail and not to be unduly affected by our proposals. There is a more detailed consideration of passerines in D1.2.2.

D2.2.3 Breeding waterbirds

Shelduck nest in rabbit burrows and other, similarly sized holes, in many locations around the estuary, including this route section. They can nest a considerable distance from water, with adults soon leading their young to the estuary or other bodies of water. Lapwing breed in fields and grazing marshes in several locations along the Deben, despite their numbers having declined

steeply in recent decades. Mason, Excell & Meyer estimated, in 2014, that 50 pairs of oystercatchers nested along the length of the estuary, on the saltmarshes and adjoining fields, and sometimes (less successfully) on seawalls.

Despite wintering on the Deben in good, albeit reducing, numbers, the numbers of redshank breeding on the river also appears to be declining, although they are difficult to monitor when nesting. According to Mason, Excell & Meyer (2014) they have exhibited breeding behaviour in several locations in the middle and lower estuary.

Teal have occasionally stayed to breed on the estuary, but have been absent, as a breeding species, from recent *Suffolk Bird Reports*.

Little grebe breed in the marginal fringes of watercourses and borrowdykes along the estuary, as do tufted ducks, but suitable habitats are limited in this route section. Water rails may inhabit reedbeds and reedy margins (also less extensive here than in the lower river), but their small size and skulking, nocturnal habits make them difficult to locate and monitor.

Breeding waterbirds are most likely to be located on the larger areas of saltmarsh, which are mostly avoided by our proposals, the only exception being the inland limit of the saltmarsh that has re-established behind the old seawall at Howes Farm, where we propose to install a screen, and to plant up the gaps in the existing hedgerows, to prevent birds being able to see walkers on the trail. Some birds will choose to nest and raise their young in functionally linked habitats to landward of the shoreline, as noted above, but our proposed trail alignment and the application of access exclusions under s26(3)(a) of CROW (to the two areas of grazing marshes) should avoid any impacts on areas of sensitivity.

D2.2.4 Breeding birds, other than waterbirds

Stonechats have bred on the Deben, although their numbers fluctuate noticeably with climatic conditions, and Skylarks breed fairly widely in arable fields, including many close to the estuary, although their numbers, generally, have declined markedly with changes in farming practices over the last fifty years. Yellow wagtail is a Red List species that favours breeding sites in expansive arable fields and grasslands, away from hedges and trees. Meadow pipits have a preference for thick grasses on the un-grazed seawalls and are widespread along the Deben.

Sedge warblers and reed warblers are present in good numbers as breeding birds throughout the river, favouring the reed fringes of borrowdykes and other watercourses to landward of the seawalls. Cetti's warblers have experienced a huge expansion in their range over recent decades

and, in 2014, Mason, Excell & Meyer estimated that there could be 20 pairs nesting in reeds on the Deben.

Reed buntings are common along the Deben, breeding in reeds and low, scrubby habitat to landward of the seawalls. Small numbers of nightingales breed in scrub and exploit suitable habitat in the lightly managed areas to landward of the seawalls on the estuary.

It is unlikely that passerines as a whole would be affected adversely by establishment of the ECP on the alignment proposed, due to a range of factors. Those species with a preference for open fields will benefit from us not proposing any new cross-field routes in this route section. A wider range of species, though, nest in reeds along the edges of borrowdykes, or among rank vegetation or scrub along the unmanaged seawall. The 300m length of proposed trail near the counterwall, in the northern part of this route section, is probably the most sensitive in this respect, with most of the remainder of the trail being a good distance inland of the more sensitive habitats. However, this area represents a very small proportion of the total area of similar habitats, and any negative effects are expected to be commensurate with this.

A single short-eared owl was disturbed from long vegetation on the seawall in this route section, on 11 Aug, 2020 (pers. obs.), but a return visit a few days later revealed no further activity and this unusual record was deemed to be a single, unpaired bird.

D2.2.5 Other species of note

There are some records of common lizards along the sea wall, and some of water voles and (especially) otters in the vicinity of Martlesham Creek (see D1.2.5 for details of the conservation status of both species). All of these species should benefit from our proposed trail alignment which is substantially inland of their favoured habitats, and from our proposal that the two areas of grazing marsh (including borrowdykes, ditches and ponds) have access excluded under s26(3)(a) of CROW.

D2.2.6 Saltmarsh and swamp plant communities

These SSSI habitat types are treated consistently throughout all route sections, in that we propose that the great majority of them have access excluded under s25A of CROW. Please see 1.2.6 for a more detailed explanation.

D2.2.7 Geological Sites of Special Scientific Interest

There are no geological SSSIs on this route section.

D2.2.8 County Wildlife Sites

There are no county wildlife sites within this route section.

D3. Martlesham Creek to Kyson Point

Access Assessment score for trail route: 1 – negligible increase.

Access Assessment score for spreading room: 1 – negligible change.

D3.1 Overview

This short route section follows the shores of Martlesham Creek and is aligned on popular shoreline PRoWs throughout. It includes a mix of habitats and land uses. Initially, it has 600m of grassland to landward, then 300m of arable, giving way to deciduous woodland. The latter transitions into to a 1 km-long strip of grazing marsh as the trail rounds the end of the creek and heads along its northern side to Kyson Point.

The creek itself includes large areas of intertidal mud, relatively small patches of saltmarsh and reeds, and hosts a boatyard and houseboats at its western end.

Under our proposals, no new access rights to saltmarsh and mudflat would be established within this route section, this being consistent with most other route sections. This access exclusion is proposed under s25A of CROW, which may only be used to exclude access to areas of saltmarsh and mudflat deemed unsuitable for access on grounds of public safety. However, it is clear that nature conservation would also benefit, both directly, by the avoidance of damage by trampling, and indirectly, in that wildlife would be protected from disturbance.

D3.2 Assessment of potential impacts

D3.2.1 Wintering and migratory waterbirds

Martlesham Creek provides valuable habitat, particularly for species such as teal and little grebe (Mason, Excell & Meyer, 2014), as do the grazing marshes to the north of the creek, which are used by a range of waterbirds, and the woodlands towards the western end of the creek, which are discussed in detail under 'County Wildlife Sites', below.

However, as stated above, in all these locations we propose trail alignment on existing PRoW. Given the close proximity of Woodbridge and Martlesham, these areas are very well walked at present. Our proposals are, therefore, likely to lead to a negligible increase in activity, with no appreciable adverse effects on local species or habitats.

D3.2.2 Wintering and migratory birds, other than waterbirds

We are unaware of any wintering or migratory non-waterbird species likely to be adversely affected by our proposals, given the circumstances set out above.

D3.2.3 Breeding waterbirds

Some of the waterbirds covered in the previous two route sections may also breed within this route section, but we are unaware of any species likely to be adversely affected by our proposals, given the circumstances set out above

D3.2.4 Breeding birds, other than waterbirds

Some of the other bird species covered in the previous two route sections may breed within this route section, but we are unaware of any species likely to be adversely affected by our proposals, given the circumstances set out above.

D3.2.5 Other species of note

There are records of water voles and (especially) otters in the vicinity of Martlesham Creek (see D1.2.5 for details of the conservation status of both species). Both species should benefit from our proposal that the ECP sticks to the existing PRoW throughout this route section.

There are also records of a small number of less common moths and plants, and of scarce or characteristic saltmarsh species, on or near the seawalls. However, we don't propose any changes to management regimes likely to substantially affect any of these species, and our proposal that the great majority of areas of saltmarsh be covered by a s25A access exclusion should protect the saltmarsh plants.

We are unaware of any species likely to be adversely affected by our proposals, given the circumstances set out above.

D3.2.6 Saltmarsh and swamp plant communities

These SSSI habitat types are treated consistently throughout all route sections, in that we propose that the great majority of them have access excluded under s25A of CROW. Please see 1.2.6 for a more detailed explanation.

D3.2.7 Geological Sites of Special Scientific Interest

There are no geological SSSIs on this route section.

D3.2.8 County Wildlife Sites

Sluice Wood and Martlesham Creek - CWS 182 - TM257470

Current situation

There are two, distinctly different, parts to this site, both immediately adjacent to Martlesham Creek: an area of reedbed and scrub, and a larger area of deciduous woodland. The former provides breeding habitat for species such as reed bunting and reed and sedge warblers. It is also an important roost site, with snipe and teal using it in the winter, and waders such as greenshank, wood sandpiper and spotted redshank having been recorded on passage. In the autumn, exceptional numbers of pied wagtails, swallows and sand martins roost here.

The woodland contains a good mix of native deciduous tree species, with a ground flora indicating the wood's long history as such, and that parts of it are damp/ wet, these areas providing breeding habitat for amphibians.

There are PRoWs more or less hugging the shore on both sides of the creek, and they are very well used. There are also popular PRoWs through, and on the fringes of Sluice Wood. Most of the relevant lengths of PRoW are also part of the Sandlings Walk long distance path.

Risk analysis

We propose that the trail follows the shoreline PRoW around the creek and the northern edge of Sluice Wood. This would mean that all of Sluice Wood to landward of the trail would be outside the coastal margin. If the trail were to be located further inland it would potentially bring Sluice Wood into the coastal margin and within spreading room, because woodland is an accessible land type under coastal access legislation.

The waterlogged nature of Martlesham Creek reedbed means that it is unlikely to be disturbed by people, although there is a risk of dogs causing disturbance within the outer fringes.

Because the levels of use of existing local footpaths are high, any increase in activity, and resultant negative impacts, following establishment of the ECP, are anticipated to be negligible.

D4. Kyson Point to Wilford Bridge

Access Assessment score for trail route: 1 - negligible increase.

Access Assessment score for spreading room: 1 – negligible change.

D4.1 Overview

This route section is broadly within the built-up areas of Woodbridge and Melton, although it does include low-lying grazing marshes between Kyson point and Woodbridge Station, pockets of drier green space elsewhere, and a very small area of wet/ damp grassland at Wilford Bridge picnic area (see 'County Wildlife Sites', below).

The proposed route is entirely on very popular, existing PRoW.

Under our proposals, no new access rights to saltmarsh and mudflat would be established within this route section, this being consistent with most other route sections. This access exclusion is proposed under s25A of CROW, which may only be used to exclude access to areas of saltmarsh and mudflat deemed unsuitable for access on grounds of public safety. However, it is clear that nature conservation would also benefit, both directly, by the avoidance of damage by trampling, and indirectly, in that wildlife would be protected from disturbance.

D4.2 Assessment of potential impacts

Other than saltmarsh (see below), the potentially most sensitive areas in this route section, Kyson Meadows and Melton Picnic Site, are considered under 'County Wildlife Sites', below.

No assessment of other potential impacts is attempted because:

a) The area is already so busy with human activity that any affects resulting from establishment of the England Coast Path are expected to be negligible.

b) Any potentially sensitive habitats within the coastal margin, to which new access rights would have applied, are excluded from public access under our proposals, under s25A of CROW. In respect of s25A this route section is treated consistently with all other route sections, full details being given in 1.2.6.

D4.2.1 Geological Sites of Special Scientific Interest

There are no geological SSSIs on this route section.

D.4.2.2 County Wildlife Sites

Kyson Meadows - CWS 182 - TM257470

Current situation

Kyson Meadows CWS is made up of unimproved grazing pastures bisected by ditches, with areas of reed fringe and pollard willows. The ground flora reflects the meadows' damp nature. Despite its proximity to the busy town of Woodbridge the site is frequented by a range of waterbirds which use it for roosting, loafing or feeding, the species present changing according to the time of year. Reed and sedge warblers breed in the reedy areas and other species exploit holes in the pollards for nesting, and invertebrates in the rotting wood as a food source. Amphibians breed in the watercourses.

There is an existing, highly popular PRoW along the crest of the seawall adjacent to the site, but the seawall is separated from the site by a borrowdyke.

Risk analysis

It is proposed that the trail follows the existing seawall PRoW/ Sandlings Walk/ Fynn Valley Walk. As this CWS lies entirely landward of the proposed trail it will not form a part of the coastal margin. Because the PRoW is already so popular, any increase in activity following establishment of the ECP is anticipated to be negligible and we envisage no negative impacts on this CWS.

Melton Picnic Site - CWS 126 - TM587503

Current situation

This is a very small area of damp/ wet meadow in an area very popular with local people, close to Melton and Woodbridge and immediately adjacent to a busy car park. Despite the high level of use the site remains important for a wide range of characteristic wetland, and some notable, plants such as ragged robin *Lychnis flos-cuculi* and southern marsh orchid *Dactylorhiza praetermissa*.

The site is approximately 15 metres to landward of the proposed trail alignment, which is on the seawall.

Risk analysis

The increase in use of the site as a result of ECP designation is expected to be negligible in relation to the very high levels of existing use. Also, as we propose trail alignment along the adjacent seawall, the entire site will be outside the coastal margin. For these reasons we expect there to be no appreciable ill-effects resulting from our proposals.

D5. Wilford Bridge to Little Haugh

Access Assessment score for trail route: 6 – large increase.

Access Assessment score for spreading room: 2 – possible increase.

D5.1 Overview

This is a short route section of about 1.2 km. It passes through an area of grassland and woodland that is part of the National Trust's Sutton Hoo estate. The adjacent estuary includes a broad area of saltmarsh and intertidal mud covering the first 1 km downstream of Wilford Bridge; a dynamic area that was, at one point, protected by a seawall, but where both saltmarsh establishment and erosion have taken place since the seawall was breached.

Under our proposals, no new access rights to saltmarsh and mudflat would be established within this route section, this being consistent with most other route sections. This access exclusion is proposed under s25A of CROW, which may only be used to exclude access to areas of saltmarsh and mudflat deemed unsuitable for access on grounds of public safety. However, it is clear that nature conservation would also benefit, both directly, by the avoidance of damage by trampling, and indirectly, in that wildlife would be protected from disturbance.

D5.2 Assessment of potential impacts

D5.2.1 Wintering and migratory waterbirds

Mason, Excell & Meyer (2014) asserted that the area of saltmarsh and mud is particularly important for waders, not just in terms of numbers, but also the range of species supported. Dunlin, black-tailed godwits, redshank and turnstone may be found here in good numbers, and purple sandpiper, common sandpiper, greenshank and bar-tailed godwits have also been recorded. The area is also an important roost site for shelduck.

Our proposed trail alignment in this area is 100m or more from the shoreline, through an area that already has a moderate level of recreational activity (all but 350m being part of the Sutton Hoo permissive path network). Much of the intervening land, though, would be accessible 'by default' because it is landward of the trail (i.e. within the coastal margin) and of accessible land types (grassland and woodland). However, we propose that the land seaward of the trail has access rights excluded from it under CROW section 26(3)(a), primarily to avoid impacts on narrow-mouthed whorl snail, a species protected under European legislation (see the Felixstowe Ferry to Bawdsey

HRA). This exclusion would have the added benefit of discouraging access to the shoreline, which would reduce the risk of birds on the adjacent saltmarsh and mud being disturbed.

D5.2.2 Wintering and migratory birds, other than waterbirds

We are unaware of any wintering or migratory non-waterbird species likely to be adversely affected by our proposals, given the inland alignment of the proposed trail route, the proposed s26(3)(a) access exclusion covering the coastal margin, and the moderate level of human activity that currently prevails on the majority of this section.

D5.2.3 Breeding waterbirds

We are unaware of any breeding waterbird species likely to be adversely affected by our proposals, given the circumstances described in D5.2.2, above.

D5.2.4 Breeding birds, other than waterbirds

We are unaware of any breeding non-waterbird species likely to be adversely affected by our proposals, given the circumstances described in D5.2.2, above.

D5.2.5 Other species of note

There are records of otters for this short route section (see D1.2.5 for details of their conservation status). They should benefit from our proposal that the ECP be routed a little way inland, with the intervening land covered by s26(3)(a).

There are also records of a small number of less common plants, including southern marsh orchid, and of scarce or characteristic saltmarsh species, to landward of the trail. However, we don't propose any changes to management regimes likely to affect any of these species, and our proposal that the saltmarsh be covered by a s25A access exclusion (see 5.2.6), and that most of the area between the shore and the trail should be covered by a s26(3)(a) access exclusion, should protect these plants.

There are also limited records for turtle dove *Streptopelia turtur*. According to the RSPB's *Operation Turtle Dove* website (2020) this species has declined by 93% since the 1970s. The RSPB says that 'Current research shows the main factor driving the decline is a reduction of nesting attempts during their breeding season…..This has been linked to a decline of fitness as a result of loss of

suitable habitat and availability of their natural food sources….Suffolk and Essex support almost 30 per cent of the UK breeding turtle dove population (data provided by BTO Bird Atlas 2007-11)'.

According to the most recent *Breeding Bird Survey* (BTO, 2020), turtle dove numbers have declined even more rapidly, i.e. by 95% between 1995 and 2018. As part of the breeding bird survey in Suffolk, 34 one km squares were surveyed in 1996 and 44 in 2019, with the numbers of squares occupied by turtle doves falling from 22 to 2 over this period, and the numbers of individual birds falling from 58 to just 3.

Turtle doves are declining so fast that there is a high probability that they are no longer present in this area. Despite that, it would be a mistake to make changes likely to adversely affect their ability to thrive here. We don't propose any changes in management that might affect turtle doves directly, but our proposals are likely to lead to an increase in human activity along the trail route, to which this species would theoretically be sensitive. Having said that, the wider area already experiences a moderate-high level of activity, with most of the land being part of the busy National Trust's Sutton Hoo estate. Our proposal is for trail alignment very close to an existing access route (albeit not a PRoW), and, as noted above, we propose that most of the land to seaward of the trail (i.e. within the coastal margin, and also likely to appeal to turtle doves) has access rights excluded under s26(3)(a). We therefore believe our proposals are unlikely to have a negative effect on turtle doves, and that were we to proposed trail alignment further inland, all of the intervening land would fall within spreading room unless it were protected by a s26(3)(s), which could not be justified by the existing evidence.

D5.2.6 Saltmarsh and swamp plant communities

These SSSI habitat types are treated consistently throughout all route sections, in that we propose that the great majority of them have access excluded under s25A of CROW. Please see 1.2.6 for a more detailed explanation.

D5.2.7 Geological Sites of Special Scientific Interest

There are no geological SSSIs on this route section.

D5.2.8 County Wildlife Sites

There are no county wildlife sites within this route section.

D6. Little Haugh to Ramsholt

Access Assessment score for trail route: 3 – small increase.

Access Assessment score for spreading room: 1 – negligible change.

D6.1 Overview

This is a long route section, extending from Sutton Hoo all the way down the eastern side of the Deben estuary as far as Ramsholt. It passes through a very rural landscape, predominantly arable, with numerous small woodlands and some fairly extensive areas of grassland/ wet grazing meadows alongside the middle reaches of the estuary. There are no villages close to the estuary other than Shottisham, which 2 km away.

Overall levels of activity on the footpaths on or near the shoreline are relatively low, due to their remoteness, although there is much more activity at the extreme northern and southern limits, close to Sutton Hoo and Ramsholt, respectively. Sutton Hoo is a popular National Trust site, and at Ramsholt there is a busy public house, boat mooring facilities, a small beach and a car park, from which people spread northwards along the estuary, along existing PRoWs.

The areas of sensitivity identified by Mason, Excell & Meyer (2014) were:

1. The saltmarsh and adjacent fields opposite Kyson point are of value to waders (Excell & O'Mahony, 2013, listed the key species as redshank, lapwing, dunlin, curlew, oystercatcher and shelduck).

2. Lapwing and curlew roost in the fields just south of Methersgate, and lapwing, curlew, grey plover and turnstone in the fields just north of Stonner Point. Curlew also use the fields to the SE of Stonner Point (where they are sometimes joined by black-tailed godwit) and the Shottisham Creek grazing marshes (see 'County Wildlife Sites', below) and nearby fields.

3. Within the estuary, and between Methersgate and Stonner Point, at TM292458, is an area of saltmarsh used primary by ducks such as shelduck, wigeon, teal and (sometimes) pintail.

4. There are saltmarshes south of Stonner Point and north of Ramsholt which are particularly favoured by shelduck, with the former also holding a range of waders.

5. Lodge Marsh grazing marshes, at TM300423 often hold good numbers of ducks and geese, including teal, pintail and brent geese, and these are joined by waders at high tide. Bearded tits often winter here, and Cetti's warblers may also be present.

Under our proposals, no new access rights to saltmarsh and mudflat would be established within this route section, this being consistent with most other route sections. This access exclusion is proposed under s25A of CROW, which may only be used to exclude access to areas of saltmarsh and mudflat deemed unsuitable for access on grounds of public safety. However, it is clear that nature conservation would also benefit, both directly, by the avoidance of damage by trampling, and indirectly, in that wildlife would be protected from disturbance.

D6.2 Assessment of potential impacts

D6.2.1 Wintering and migratory waterbirds

The main factor is that the majority of this route section is remote from major settlements and road access. As a result, levels of recreational activity are relatively low. This is unlikely to change significantly when the England Coast Path is established, and most of the additional walkers are likely to be covering longer distances and wanting to keep on the move, perhaps stopping off at major landscape features like Ramsholt Cliff SSSI (see below), which is already popular with walkers and as a stop-off point for boaters.

Other factors:

- Our proposed route in the area opposite Kyson Point is 1 km inland over a distance of at least 2km, and coastal access rights will not extend to most of the intervening land because it is arable.

- From Methersgate to Ramsholt, a distance of nearly 7 km, our proposed route sticks entirely to the existing, and most popular, PRoW. Although this means that it is close to the areas of saltmarsh, it minimises the amount of coastal margin created and avoids the creation of new access routes.

- The low-lying grazing marshes are mostly fairly extensive, and separated from the proposed trail alignment by borrowdykes, which is likely to confer a sense of security to the birds using them.

- The arable fields used by waterbirds are mostly of a reasonable size and slope upwards from the existing PRoW/ proposed trail, giving the birds a good view of the route on which they are used to seeing humans, at least occasionally.

It is important to remember that the trail would have to be located a considerable distance inland to avoid all the habitats used by species of concern, this would make it much less appealing to

walkers, who would be more likely to use the existing shoreline PRoW, which would remain accessible to them. For this reason, and those set out above, we believe that the proposed route is the best option to minimise potential impacts on sensitive species.

D6.2.2 Wintering and migratory birds, other than waterbirds

As the proposed trail route is followed southwards, alongside the middle reaches of the Deben estuary, the areas of grazing marshes and the lengths of reed fringes and lightly-maintained seawalls increase in extent, providing enhanced habitats for species such as short-eared owls and marsh harriers. For example, the 2015 *Suffolk Bird Report* recorded that 6 of the latter wintered here.

As noted for route sections 1 and 2, hen harriers visit Suffolk each winter, and may find their way to the Deben, but the already low numbers have declined to extremely low numbers in recent years.

It's possible that harriers and short-eared owls roosting close to the trail might be adversely affected by trail users, but harriers are more likely to favour denser cover such as areas of reeds. Reedbeds and reed fringes together comprise a fairly extensive network of habitat within lower part of this route section and they are, to a large extent, separated from the trail by borrowdykes. Although there remains the risk that such habitats closer to the proposed trail route might be chosen as roost sites, the small increase in levels of disturbance is unlikely to cause a significant impact, given that human activity decreases through the winter months and at the times of day when roosting is likely to occur.

Similarly, birds of prey are unlikely to be deterred from hunting by the modest and transient human disturbance likely to arise in the winter months.

There are also records of 11 twite wintering at Ramsholt in the 2013 *Suffolk Bird Report*, but no recent records. However, we would not expect our proposals to adversely affect such species, should they reappear, because they are most likely to be found on saltmarshes, perhaps in the company of other visitors such as snow buntings, and they're mobile enough to not be unduly affected by transient disturbance.

D6.2.3 Breeding waterbirds

Shelduck nest in rabbit burrows and other, similarly sized holes, in many locations around the estuary. They can nest a considerable distance from water, with adults soon leading their young to the estuary or other bodies of water. Lapwing breed in fields and grazing marshes in several locations along the Deben, despite their numbers having declined steeply in recent decades.

Mason, Excell & Meyer estimated, in 2014, that 50 pairs of oystercatcher nested along the length of the estuary, on the saltmarshes and adjoining fields, and sometimes (less successfully) on seawalls.

Teal have occasionally stayed to breed on the estuary, but have been absent, as a breeding species, from recent *Suffolk Bird Reports*.

Little grebe breed in the marginal fringes of watercourses and borrowdykes along the estuary, as do tufted ducks. Water rails are likely to inhabit reedbeds and reedy margins in these areas (at least two having been heard in reedy areas next to the footpath, north of Ramsholt, in 2018 or 2019 – pers. com.), but their small size and skulking, nocturnal habits make them difficult to locate and monitor.

Despite wintering on the Deben in good numbers, the numbers of redshank breeding on the river appears to be declining, although they are difficult to monitor when nesting. According to Mason, Excell & Meyer (2014), they have exhibited breeding behaviour in several other locations in the middle and lower estuary.

There are long-established heronries at Lodge Plantation and Nettle Hill Wood (see 'County Wildlife Sites', below).

Breeding waterbirds are most likely to be located on larger areas of saltmarsh. On this route section there are relatively long, linear strips of saltmarsh, of modest width. The most extensive area is north of Ramsholt. It is 1.3 km long and mostly less than 100m wide, although it does extend to being 175m wide just north of Ramsholt. We propose the trail follows the shoreline throughout this area, but it is on an existing PRoW that is currently relatively well used in the summer, being close to the popular destination of Ramsholt. It is, therefore, unlikely that an appreciable increase in disturbance will result from ECP designation.

Some birds will also choose to nest and raise their young in functionally linked habitats to landward of the shoreline, as outlined above. To an extent, as with wintering/ passage birds, breeding waterbirds may be able to locate themselves a safe distance from the trail in the areas where there are higher levels of disturbance, e.g. near Ramsholt. In the more remote areas, where the number of walkers is likely to be lower, the relatively small number of pairs that nest closer to the trail will only suffer occasional, transient disturbance, especially as the increase in levels of use as a result of national trail designation is expected to be small.

D6.2.4 Breeding birds, other than waterbirds

The range of passerines inhabiting this route section is as broad as those elsewhere on the stretch. Please refer to D2.2.4 for a detailed analysis, the range of species and the conclusion reached being similar: it is unlikely that passerines would be adversely affected by establishment of the ECP on the alignment proposed.

Marsh harriers are considered in more detail as a nesting species for the next route section (see 7.2.4). As they do not appear to be particularly sensitive to the existence of recreational routes when selecting nesting sites, we believe that the anticipated small increase in numbers of path users in this route section is unlikely to have a significant adverse effect on these birds, especially as we don't propose any new access routes here.

D6.2.5 Other species of note

Within this route section there are a small number of records for water voles and badgers *Meles meles*. Both are protected under the Wildlife and Countryside Act 81 (as amended), and water voles are also Priority Species under the UK Post-2010 Biodiversity Framework (see D1.2.5 for more detail).

Water voles should benefit from our proposal that the ECP sticks to existing PRoW, or the nearby existing walked route, through the relevant area, keeping walkers to seaward of the locations in which they are likely to be found, if still present.

In the areas where badgers, and particularly badger setts, are most likely to be found, we also propose that the trail sticks to existing PRoW, or nearby walked routes, to seaward. This, combined with the small anticipated increase in human activity and the badgers' largely nocturnal habits, mean that we don't expect our proposals to have a measurable effect on them.

There are also records of a small number of less common plants, and of scarce or characteristic saltmarsh species, on or near the seawalls. However, we don't propose any changes to management regimes likely to substantially affect any of these species, and our proposal that the saltmarsh in this area be covered by s25A access exclusion should protect saltmarsh plants.

D6.2.6 Saltmarsh and swamp plant communities

These SSSI habitat types are treated consistently throughout all route sections, in that we propose that the great majority of them have access excluded under s25A of CROW. Please see 1.2.6 for a more detailed explanation.

D6.2.7 Geological Sites of Special Scientific Interest

There are two geological SSSIs within this route section: Ferry Cliff and Ramsholt Cliff.

Ferry Cliff SSSI

Overview

This site partially overlaps the Deben Estuary SSSI, as well as the Deben Estuary SPA and Ramsar sites (see the HRA for more information on these European designations).

The following text is reproduced from the SSSI citation: 'The site is of geological interest because rocks of Palaeocene age yield an important mammalian fauna including representatives of the seven orders, including the oldest British members of the Rodentia, Artiodactyla and Perissodactyla (rodents and hoofed animals). This locality and Belgian sites (of approximately the same age) have yielded the earliest artiodactyls and Hyracotherium (ancestral horse) in Europe; and probably worldwide'.

Current situation

This SSSI consists of 2 units, both described as being in a favourable condition (survey date 2008). In surveys conducted in 2002 and 2008 (the most recent) it was noted that the construction of the steps (along which the footpath has been re-aligned, despite it not being on the definitive route) had enabled vegetation to grow around the official footpath route. It was recommended that the vegetation not be allowed to grow any more significantly and, in doing so, conceal geological features. We propose that the trail will follow the existing route and utilise the steps.

Risk Analysis

This site is not one of those where damaging levels of specimen collection have been identified, and we do not expect the generally small increase in activity resulting from ECP designation to result in damage by this mechanism, or by trampling/ erosion. By proposing that construction operations are limited to replacement of some of the existing steps, we are avoiding the potential for new structures to interfere with natural erosion processes and exposure of the features of interest.

Establishment works

Assent or advice may be needed for the replacement of some of the existing steps where they have fallen into disrepair, and for the installation of waymarking post(s).

Ramsholt Cliff SSSI

Overview

The following text is reproduced from the SSSI citation: 'This SSSI is specifically designated for its Neogene features. The Coralline Crag at this locality can be seen resting uncomfortably on irregular, erosional surface of London Clay, and to be overstepped by Red Crag where it comes to rest directly on London Clay. At the base of the Coralline Crag the phosphorite deposit (a 'coprolite bed' or 'Suffolk bone-bed') can be seen. This is the only locality where the Coralline Crag phosphorite deposit can be examined, and is also probably the only existing locality where the 'boxstones', phosphatic remnants of a Miocene formation, can be seen *in situ*. The section at Ramsholt represents the most southerly and, paleaoecologically, probably the most near-shore Coralline Crag deposited in East Anglia.'

'The fauna is rich and well preserved and contains a number of uncommon species. Amongst these the most notable are the large barnacle *Balanus concavus*, the coral *Cryptangia woodii* and large colonies of the bryozoan *Turbicellepora* which forms the substrate for *C. woodii*. Many species of aragonitic mollusc are also found. This locality, described by Charlesworth, was the basis for his sub-division of the Suffolk Crag deposits and for the distinction of the 'Coralline' Crag as a new and distinct stratigraphical division. This site is therefore of extreme importance historically and for the number of sedimentological and palaeontological features and exhibits.'

Current situation

This SSSI consists of two units, both listed as being in a favourable condition. The most recent survey (2013) found no issues in terms of threats to the notified features such as unsustainable levels of fossil collection. The site remains unconstrained by structures which would inhibit the natural coastal processes important for retaining the site's integrity.

Risk Analysis

As noted above, this site is not one of those where damaging levels of specimen collection have been identified, and we do not expect the generally small increase in activity resulting from ECP designation (actually likely to be a very small increase in this particular location, given its current

popularity among boaters, as well as walkers), to result in damage by this mechanism, or by trampling/ erosion.

Establishment works

Assent or advice may be needed for installation of a waymarking post.

D6.2.8 County Wildlife Sites

Cliff Farm Meadows and Nettle Hill Wood - CWS 163 - TM293460

Current situation

This site is comprised of two small fields, one on either side of a small tributary of the Deben, and an area of woodland which is adjacent to the southern-most of the fields. The fields are about 200m apart, and much of the southern field and woodland front onto the estuary. There is also a pond in which amphibians breed.

The fields are grazed and have a diverse flora which is supplemented by characteristic wetland plants in the lower-lying areas closer to the stream. There is also an area of drier, acid grassland. The fields are used by barn owls *Tyto alba* for hunting, and by wintering waders as roosting/ resting sites. Waterbirds such as redshank and lapwing also breed here. The woodland is home to one of the largest heronries in the county.

The northern part of the site has PRoWs on two of its four sides; the southern part has a shoreline PRoW passing along its western edge, and another PRoW adjacent to its northern end.

Risk analysis

The proposed trail alignment by-passes the northern field by a minimum of 230m, and is to seaward of it, putting it outside the coastal margin. The trail passes through the western edge of the southern field and woodland, on, or very close to, the definitive line of the existing shoreline PRoW. Although this means that the trail itself has the potential to directly affect this part of the site, it also means that the field and woodland would be kept largely outside the coastal margin. They would benefit from this, as they are both accessible land types under coastal access legislation, meaning they would fall within spreading room if the trail were located further inland.

The increase in recreational activity anticipated to result from ECP designation is anticipated to be small, and therefore unlikely, generally, have an appreciable adverse effect.

We have considered potential impacts on the heronry, but herons are not a species of particular conservation concern and they have chosen to nest here despite the existence of the PRoW. It is not anticipated that the increase in activity from coast path designation would be sufficient to bring about a change in the birds' behaviour.

Shottisham Creek – CWS 146 – TM305432

Current situation

This large CWS is to the east of the estuary and separated from it by a seawall and borrowdyke. There is a PRoW along the crest of the seawall, but there are no other PRoWs on, or close to the site.

The site is comprised of pastures bisected by Shottisham Creek and a number of small tributaries to either side of it. There are reeds within and to either side of the main channel and lining the tributaries. There are also decoy ponds in the south of the site. Reed buntings, and reed and sedge warblers, breed in the reeds, and barn owls hunt over the reeds and fields. A range of waterbirds (e.g. shoveler, shelduck, gadwall, teal and green sandpiper) move between the estuary, the ponds, and the fields and watercourses, following variations in tides and the seasons. Marsh harriers nest nearby and hunt over the site.

Risk analysis

There are no major settlements nearby and the one PRoW to the west of the site is relatively lightly used. There is expected to be a small increase in activity as a result of coast path designation. Given the size of the site, its location to landward of the trail (and therefore not part of spreading room), and given that it is separated from it by a borrowdyke, we expect no appreciable impacts to result from our proposals.

Ramsholt Marshes and Lodge Plantation - CWS 147 - TM300422

Current situation

The site is divided into two units, one to the NW of Cragpit Plantation (not part of the CWS designation), and one to the SE. The unit to the NW includes Lodge Plantation.

Other than the plantation, both parts of the site are made up of agriculturally improved grazing meadows bisected by a network of drainage ditches and subject to flooding in the winter, which makes them ideal feeding and roosting areas for a wide range of wintering and passage waterbirds. Also, some notable species, e.g. lapwing,

breed on the meadows in the summer. Lodge Plantation supports a well-established heronry.

Lodge Plantation has a shoreline PRoW aligned a little way inside its shoreline boundary. Other than within this woodland, the shoreline PRoW is separated from the NW unit by a borrowdyke. The shoreline PRoW continues in a south-easterly direction and passes within the shoreline boundary of the SE unit, which is also crossed by two more PRoWs, both inland.

In places, the definitive alignment of the PRoW differs slightly from the existing walked route on the ground.

Risk analysis

We propose that the trail be aligned on the existing shoreline PRoW. This means that for the NW part of the site it will largely be outside the site boundary and separated from it by a borrowdyke, although it will be inside the shoreline boundary of Lodge Plantation; this also applies to the SE part of the site.

Our proposals mean that the great majority of this CWS will be to landward of the trail and therefore outside the coastal margin, and consequently inaccessible under coastal access legislation. The only parts of the site to be affected by new access rights will be where the trail follows the existing shoreline PRoW/ nearby existing walked route, meaning that the very small amount of land to seaward of this alignment will fall within the coastal margin by default and, therefore, be accessible to the public as part of spreading room.

We have considered potential impacts on the heronry, but herons are not a species of particular conservation concern and they have chosen to nest here despite the existence of the PRoW. It is not anticipated that the increase in activity from coast path designation would be sufficient to bring about a change in the birds' behaviour.

The PRoW/ existing walked route in this area is quite popular, particularly in summer and closer to Ramsholt. Any increase in use following establishment of the ECP is therefore anticipated to be small, at most. We therefore foresee no negative impacts arising as a consequence of our proposals.

D7. Ramsholt to Ferry Road, Bawdsey

Access Assessment score for trail route: 7 - large increase.

Access Assessment score for spreading room: -1 - negligible change.

D7.1 Overview

This route section is approximately 5km long and is unique on the Felixstowe Ferry to Bawdsey stretch in having no existing PRoWs, either on the shoreline or inland. There are public roads linking Ramsholt and Bawdsey, but, leaving aside concerns over the safety of walkers using these roads and the lack of a 'coastal feel', if the ECP were to be aligned along these roads a considerable inland detour would be involved, effectively doubling the distance to be walked compared with the direct route proposed.

The absence of any significant land-based sources of disturbance has enabled a high level of conservation value to establish on this route section. It is primarily focused on the more-or-less continuous, 4.5 km long strip of saltmarsh (of variable width), but also applies to the extensive, low-lying farmland to landward, which reaches as far inland as Alderton (over 3 km from the shore), and is bisected by numerous wet channels. Most of the land between these channels is intensively managed arable, so their individual corridors of marginal, wetland vegetation are narrow, but they jointly comprise a substantial wildlife resource. Birds utilising the saltmarsh includes such key species as avocet and redshank, while Mason, Excell & Meyer (2014) recorded that, as well as brent geese, neighbouring fields are used by 'good numbers of lapwing, curlew and, more recently, golden plover'. The specific areas used by waterbirds varies from year to year, according to the crops being grown and their stage of development.

The areas of saltmarsh and farmland are separated by a continuous seawall, folding and borrowdyke, which are only lightly managed and, therefore, support good numbers of passerines, small mammals and reptiles, making them attractive to birds of prey such as marsh harriers and short-eared owls.

We propose that the ECP follows a new access route almost entirely along the seawall folding, and adjacent to the borrowdyke. The only exception is the first few hundred metres, at Ramsholt, which is on the seaward edge of an elevated arable field.

Under our proposals, access to the great majority of saltmarsh and mudflat within this route section would be excluded, the only exception being a small area of saltmarsh at Bawdsey, at the end of the route section; an area that is more readily accessible and where access is already well established. This access exclusion is proposed under s25A of CROW, which may only be used to exclude access to areas of saltmarsh and mudflat deemed unsuitable for access on grounds of public safety. However, there would clearly also be

nature conservation benefits, both directly, by the avoidance of damage by trampling, and indirectly, in that wildlife using them will be protected from disturbance.

D7.2 Assessment of potential impacts

D7.2.1 Wintering and migratory waterbirds

The long ribbon of saltmarsh that runs throughout this route section hosts a wide range of waterbirds. As noted above, one of the most important species found here is avocet, the numbers of which have been slowly increasing over recent decades, from an extremely low base in the 1980s. They tend not to use the adjacent farmland, but the saltmarsh is their favoured roost site on the estuary. This species is considered by the Felixstowe Ferry to Bawdsey HRA, alongside brent geese, which move between the open water, saltmarsh and nearby fields. Another species of interest noted by Mason (2018) as part of his breeding bird survey (see D7.2.3), was whimbrel, with 14 sighted in April, on passage to their breeding ground in the north of Scotland, and a further 3 as late as mid-May.

Although much of the saltmarsh is narrow, its value to waterbirds is enhanced by the current absence of land-based human activity. As noted above, we propose that the trail be located on the folding, adjacent to the borrowdyke. We also propose that it be fenced on its seaward side, to prevent access to the seawall, and that the narrow strip of land (including the seawall) between the fence and the saltmarsh, should have access rights excluded under s26(3)(a) of CROW. We intend these measures to ensure that people and dogs are prevented from disturbing birds on the saltmarsh, and they will also benefit other wildlife on or near the seawall, such as ground-nesting birds. We also propose that any gaps in the borrowdyke, which would otherwise facilitate access by people or dogs onto adjacent land (albeit outside the coastal margin), be closed by fences and/ or gates.

We believe the factors listed below will combine to make our proposals unlikely to have a detrimental effect on wintering and migratory waterbirds:

- The location of the trail at a low level, on the folding, rather than on the seawall.
- The absence of spreading room/ accessible areas to landward of the trail.
- The extent of the landward habitats should enable roosting, loafing and feeding birds to locate themselves far enough landward of the proposed route to avoid being disturbed, even as cropping regimes change between years/ seasons. It is also likely that birds using these areas

will feel more secure because of the presence of a broad borrowdyke separating them from the proposed trail alignment on the folding.

- The trail being tightly constrained between the borrowdyke and fence all the way between Ramsholt and Bawdsey, and this route section lacking any features likely to encourage walkers to loiter in specific locations.
- The length of the route section (approximately 5km), combined with the absence of other routes to which it might link to create a circular walk, is likely to limit the number of walkers and mean they will pass through the route section relatively quickly.

D7.2.2 Wintering and migratory birds, other than waterbirds

As with other route sections on the Deben, there is the potential for wintering or migratory passerines to be present, but, for the most part, they will concentrate on saltmarshes, areas of reeds, etc, rather than the trail route. Some species are also likely to exploit the areas of (currently unmanaged) vegetation on the folding adjacent to the trail, potentially making them more prone to disturbance, but they are also expected to benefit from the mitigation factors identified in D7.2.1, above. They are also regarded as being mobile enough to not be unduly affected by the relatively low levels of transient disturbance like to be experienced throughout much of the route section in the winter months.

Marsh harriers and short-eared owls are known to hunt and roost in this route section (and marsh harriers to also nest here – see below). The 2017 *Suffolk Bird Report* recorded that up to 5 short-eared owls wintered in this area, and up to 6 marsh harriers (8 in the previous year).

As noted for other route sections, hen harriers visit Suffolk each winter, and may find their way to the Deben, but the already low numbers have declined significantly in recent years: In 2012 up to 21 were recorded for Suffolk, with numbers dropping to maximum numbers of 8 in 2016, 11 in 2017, and 6 in 2018 (figures from relevant *Suffolk Bird Reports*). There were a small number of records specifically for the Bawdsey area several years ago: two in late 2011, and another two on two occasions in early 2013.

It's possible that harriers and short-eared owls roosting close to the trail might be adversely affected by trail users, but harriers are more likely to favour denser cover such as areas of reeds. Reedbeds and reed fringes together comprise an extensive network of habitat within this route section (supplemented by similar on the opposite side of the estuary), and they are, to a large extent, separated from the trail by the substantial borrowdyke.

Although both Bawdsey and Ramsholt are popular visitor destinations, the mitigating factors listed in D7.2.1, above, re wintering and migratory waterbirds, also largely apply to harriers and owls. It is therefore unlikely that levels of disturbance, particularly in the winter months and when birds are likely to roost, will have a substantial impact on these species.

D7.2.3 Breeding waterbirds

In 2018, Natural England commissioned Suffolk Wildlife Trust to carry out the *Survey of Breeding Redshank and Other Waders between Ramsholt and Bawdsey*, in recognition of the potential for the England Coast Path to cause increased levels of disturbance in this area, which currently lacks any public footpaths or open access areas. The key findings of this survey (Mason, 2018) were:

- Redshank breeding territories were heavily concentrated (9 territories) in the broadest area of saltmarsh, just north of Bawdsey. There was also a single territory in the narrower area of saltmarsh just south of Ramsholt, and another in arable fields about half way between Bawdsey and Ramsey, probably in coarse grass beside a small watercourse.

- Birds may have been deterred from breeding elsewhere on the saltmarsh by its narrow width (100-150m), although another broad area of saltmarsh, at TM 314 396, also lacked redshank territories. Mason suggested this was probably due to lights and noise emanating from the Anglian One Offshore Windfarm temporary groundworks. In contrast, birds were evident on the other side of the estuary, even on narrow areas of saltmarsh.

- A single avocet territory was also identified, in the middle of the broadest area of saltmarsh, north of Bawdsey.

- Eight pairs of oystercatcher were also estimated, again mostly in the broadest area of saltmarsh, although they were more spread out than the redshank, with up to three pairs elsewhere.

- A single pair of ringed plovers were located, again, towards the centre of the broadest area of saltmarsh.

- A single pair of lapwing were also located in the broadest area of saltmarsh. None were seen on nearby fields, where they might have been expected, but it's quite possible they were overlooked because they were obscured by the growing crops.

- Other breeding species of waterbirds recorded were:

- A pair of shelduck were behaving as though they had young nearby; they had been using the area prior to breeding. Shelduck are an Amber List species.

- Water rail were breeding in the wetter watercourses, including Queen's Fleet.

The following is an extract from the *Evaluation* section of the 2018 survey report:

> *'The high concentration of breeding Redshank in the area between Bawdsey and Ramsholt (11 pairs) demonstrates the importance of this section of the estuary in supporting this key species. Oystercatchers were also noted breeding on the river wall itself, and Redshank have been recorded nesting at the base of the river wall here in previous years (A Excell – pers. comm.).*
>
> *The high concentration of breeding species is most likely due to presence of ideal habitat and following factors:*
>
> - *Very low levels of disturbance (occasional watercraft)*
> - *Lack of the skylining effect of walkers on crest of river wall*
> - *Complete absence of dogs and general recreational 'spread' typically noted off footpaths.'*

Clearly, the introduction of a new walking route through this area has the potential to disrupt the behavior of birds using the area for breeding, but the factors we describe to avoid and mitigate any negative impacts on wintering and passage waterbirds (see D7.2.1, above), are equally applicable to breeding waterbirds. We do not, therefore, anticipate any significantly adverse effects to arise from our proposals.

D7.2.4 Breeding birds, other than waterbirds

A number of non-waterbird breeding species were also recorded during the 2018 survey. They are listed below, with Birds of Conservation Concern (BoCC4) and Section 41 Natural Environment and Rural Communities Act 2006 listing being provided, where relevant. This information is copied from the 2018 report, edited slightly for clarity:

- 'Grasshopper warbler - possibly two pairs. *Red List and UK Priority species*.

- Corn bunting (a rare and declining species) - 1 territory recorded in 1st survey with 11 individual birds recorded in 2nd survey. *Red List and UK Priority species*.
- Linnet - minimum of 8 pairs. *Red List and UK Priority species*.
- Skylark - some were holding territory over the saltmarsh. *Red List and UK Priority species*.
- Reed bunting - 14+ pairs. *Amber List and UK Priority species*.
- Meadow pipit - maximum of 3 territories. *Amber list*.
- Black-headed gull - maximum of 6 territories. *Amber list*.
- Reed warbler - 29 territorial. *Green List.*
- Sedge warbler - 13+ territorial. *Green List*.'

It's unlikely that passerines in general would be affected adversely by the establishment of the ECP on the alignment proposed. Those species with a preference for open fields will benefit from us not proposing any new cross-field routes in this route section, and only a short length of field-edge route. Corn buntings are one of the species of greatest concern. They will nest in field margins, and possibly also the seawall or folding, but they tend to favour open-field situations. Other species nest in reeds along the edges of borrowdykes, or scrub close to seawalls, which may bring them into closer contact with users of the proposed trail route. However, path users are expected to cause only transient disturbance on this 5 km long, tightly constrained route section, and this type of disturbance appears to be tolerated by most passerines. The same applies to ground-nesting passerines, even though some of these may choose to nest on seawalls, a good example being meadow pipits, which don't appear to be adversely affected by localised disturbance (Mason, Excell & Meyer, 2014). On this route section ground nesting birds will have, under our proposals, the added protection of a fence preventing access to the folding seaward of the trail and the whole of the seawall. Also, the narrow strip of land between the fence and the saltmarsh, including the seawall and much of the folding, will have access rights excluded under s26(3)(a).

To the extent that passerines might be affected, this might also be expected to occur on the limited number of other potential routes within this route section, given that use of local roads would not be deemed acceptable in terms of coastal access criteria.

Mason's 2018 survey also found a pair marsh harriers nesting in Queen's Fleet, over 250m landward of the seawall. It was noted that marsh harriers regularly breed relatively close to the seawall (a local landowner claims there was a marsh harrier nest approximately 100m from the seawall in 2019 - pers. comm.), a favoured site being further north-east within the survey area, and that disturbance from the Anglia One Offshore Windfarm cabling works may well have prevented them from nesting here in 2018. Two different males were recorded during the survey, and its thought there would normally be two nest sites between Ramsholt and Bawdsey in a typical season.

Marsh Harriers are present on the Deben all year round, and have nested here for over 25 years. Breeding records were absent from the 2016 and 2017 *Suffolk Bird Reports*, but there is the potential for the Deben to have hosted one or more of the 15 nests recorded for Suffolk as a whole in the 2015 report. In 2014, Mason, Excell & Meyer noted that they had three favoured sites, the exact locations varying from year to year, with adults regularly crossing the river from the east to hunt over Felixstowe, Falkenham and Kirton Marshes when they have young. Shottisham Creek is the main known roost site, with 6-8 birds in 2017 (*Suffolk Bird Report*).

Marsh harriers are listed under Schedule 1 of the Wildlife and Countryside Act 1981, as amended, which conveys additional protection in respect of disturbance when nesting. By 1971, the UK population of marsh harriers had been reduced by persecution, habitat loss, and poisoning by residual pesticides, to a single pair. They have since made a steady recovery to 590+ pairs, but numbers remain low and localised. Possibly due to the loss of large reedbed habitats, marsh harriers sometimes breed in smaller reed-beds, where they may be more vulnerable to disturbance by humans and dogs, and also predation by foxes if water levels are low (Brown & Grice, 2005). They may also breed in cereal fields, which may increase their vulnerability to disturbance by uncontrolled dogs. Marsh harriers are now more secure as a breeding species in the UK than at any time during the last century but, despite this, they remain on the Amber List.

Marsh harriers *Circus aeruginosus* have nested on the Deben for a quarter of a century, using a number of favoured reedbed sites and hunting over the low-lying fields and watercourses, particularly in the lower river. Some evidence appears to indicate that the species isn't particularly sensitive to the existence of recreational routes when selecting nesting sites. For instance, they are known to occasionally nest within a few tens of metres of a relatively busy seawall PRoW on the Suffolk/ Essex border, and different pairs to repeatedly nest between 40 and 100m of another fairly well-used PRoW close to the Suffolk coast, further north. We acknowledge that these examples may not necessarily be typical, and that extra caution is needed in light of the birds' status as a Schedule 1 species, but nonetheless feel justified in anticipating that the factors listed under D7.2.1, above, should combine to mean our proposals will not have a measurable adverse impact on this species.

In his 2018 report, Mason noted a sighting of a single short-eared owl on the second of four survey dates, in mid-May. Although it is possible that it was one of a pair making a rare attempt at breeding on the Deben, it is considered more likely that it was an un-paired bird or a late migrant. The 2015 *Suffolk Bird Report* also noted the sighting of a single bird as late as July (a single bird was also spotted on 11 August 2010, albeit further north, in the Martlesham area (pers. obs.); a return visit a few days later revealing no further activity).

D7.2.5 Other species of note

There are many records of common lizards for this route section; most are probably associated with the seawall and folding. There are also numerous records of water voles associated with the borrowdykes and other watercourses. Both are protected under the Wildlife and Countryside Act 81 (as amended), and water voles are also Priority Species under the UK Post-2010 Biodiversity Framework.

Common lizards colonise seawalls particularly effectively, especially where they are not close-mown, because they thrive in the rough sward on well-drained soils, the steep slopes often providing sun-bathed microclimates ideal for basking and foraging. It is possible that they will also be present on the folding, although their numbers are likely to be lower on the landward edge, where we propose that the trail be located. Also, lizards are sensitive to vibration and very quickly move out of the way of approaching walkers, especially in the warmer months and times of day, when walkers are likely to be more numerous. They are also too small, quick, and adept at hiding to interest most dogs.

Further information on the status of water voles is given in D1.2.5. Water voles are sometimes found in locations with moderate levels of human activity, but dogs pose a particular threat to them. There is the potential for our proposed trail alignment to bring people and dogs into close contact with water vole habitat along the borrowdyke, which may have something of an adverse effect on the existing population, or limit the potential for re-colonisation. However, the proposed route has the advantages of being relatively direct, and not involving any bridges, culverts or similar infrastructure that would affect water vole habitat. The network of watercourses in this area is extensive and complex, and it would have been extremely difficult to identify another route that wouldn't potentially have had similar or greater impacts. Having taken into account the (potential) effects on a range of other species, we feel that the proposed route alignment strikes an appropriate balance between coastal access and wildlife legislation.

There are also records of a small number of scarce or characteristic saltmarsh plants to seaward of the seawall. However, our proposals that the trail follows the folding and that the great majority of the areas of saltmarsh be covered by a s25A access exclusion (see below), should protect them.

D7.2.6 Saltmarsh and swamp plant communities

These SSSI habitat types are treated consistently throughout all route sections, in that we propose that the great majority of them have access excluded under s25A of CROW. Please see 1.2.6 for a more detailed explanation. As noted above, a small exception within this route section (and extending slightly into the next) is an area of saltmarsh immediately north of Bawdsey which is more readily accessible and where access is already well established.

D7.2.7 Geological Sites of Special Scientific Interest

There are no geological SSSIs on this route section.

D7.2.8 County Wildlife Sites

There are no county wildlife sites within this route section.

D8. Ferry Road, Bawdsey, to Bawdsey Quay

Access Assessment score for trail route: 1 - negligible increase.

Access Assessment score for spreading room: 1 – negligible change.

D8.1 Overview

This route section is extremely short, including just Bawdsey Picnic Site and car park, and approximately 300m of shoreline road/ Bawdsey Quay. Despite being somewhat difficult to get to by road, and distant from any large centres of population other than Felixstowe (which is directly accessible only by foot ferry), this area is very popular with visitors, drawn by the (relatively small) beach, small picnic site, the foot ferry, and impressive views of the estuary and North Sea, and of Felixstowe Ferry, on the opposite bank.

Under our proposals, no new access rights to saltmarsh and mudflat would be established within this route section, this being consistent with most other route sections. This access exclusion is proposed under s25A of CROW, which may only be used to exclude access to areas of saltmarsh and mudflat deemed unsuitable for access on grounds of public safety. However, it is clear that nature conservation would also benefit, both directly, by the avoidance of damage by trampling, and indirectly, in that wildlife would be protected from disturbance.

D8.2 Assessment of potential impacts

No assessment of potential impacts is attempted because:

a) The area is already so busy with human activity that any affects resulting from establishment of the England Coast Path are expected to be negligible.

b) Any potentially sensitive habitats within the coastal margin, to which new access rights would have applied, are excluded from public access under our proposals, under s25A of CROW (see above).

D8.2.2 Geological Sites of Special Scientific Interest

There are no geological SSSIs within this route section.

D8.2.3 County Wildlife Sites

There are no county wildlife sites within this route section.

E. Conclusion

We, Natural England, are satisfied that our proposals to improve access to the English coast between Felixstowe Ferry and Bawdsey are fully compatible with our duty to further the conservation and enhancement of the notified features of the Deben Estuary SSSI, Ferry Cliff SSSI, and Ramsholt Cliff SSSI, and consistent with the proper exercise of our functions[1].

In respect of the County Wildlife Sites listed under each route section, and all other sites and features we are aware of, we are satisfied that an appropriate balance has been struck between Natural England's conservation and access objectives, duties and purposes, as we have developed and finalised our access proposals.

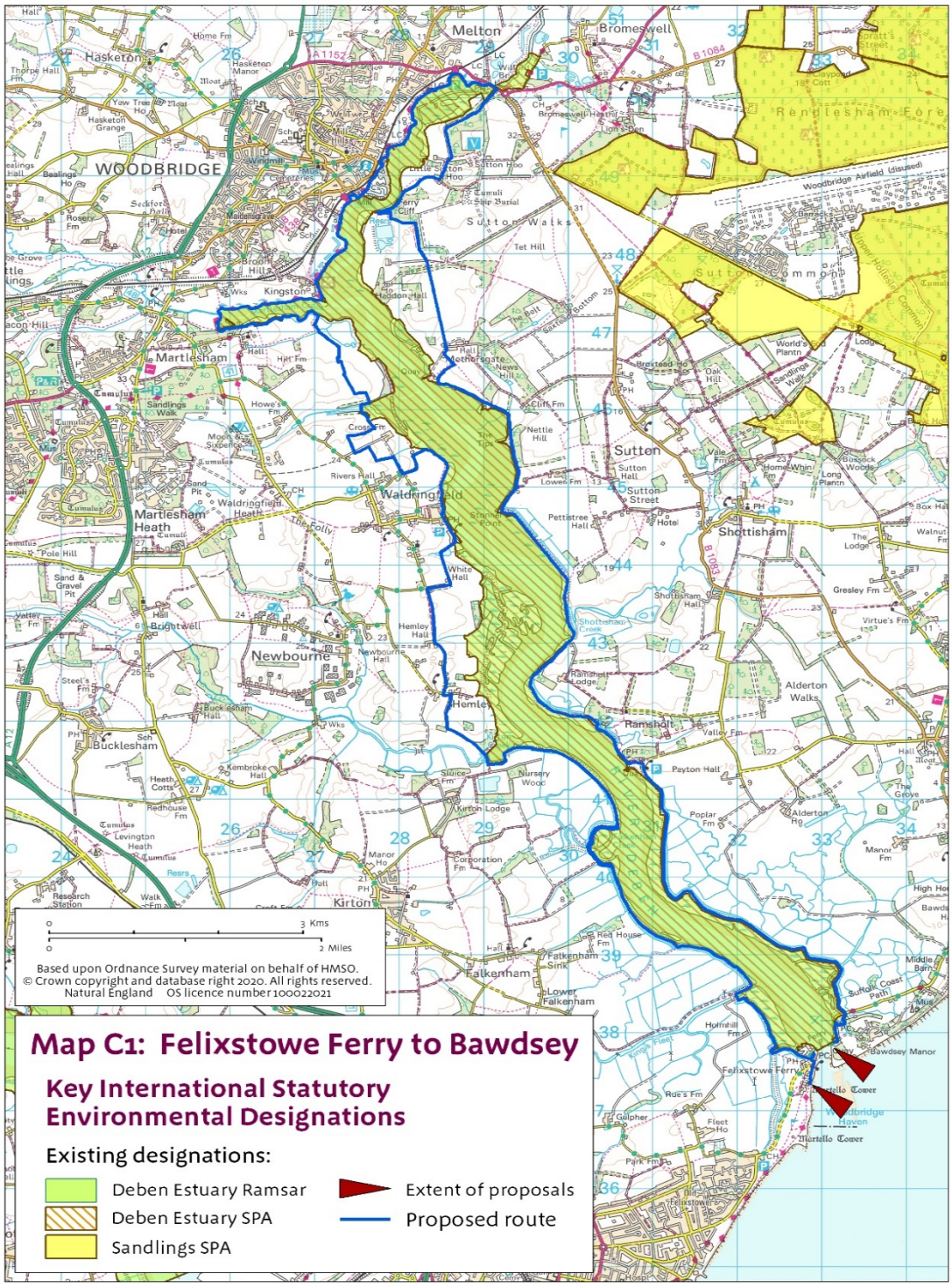
See also, where relevant, the conclusions of the separate HRA relating to common features.

The conclusions of this assessment have been checked by:

Each NCA must be signed off by two named officers, representing coastal access and protected sites. Additional rows may be added to this table where other staff have been involved and in which case their respective role in relation to the assessment must be clearly stated.

Sally Fishwick 	Date 20.11.20	On behalf of the Coastal Access Programme Team
Catherine Whitehead 	Date 20.11.20	Senior Officer with responsibility for protected sites

[1] Natural England's functions includes its balanced general purposes for access, nature conservation and landscape under the NERC Act 2006, any specific statutory duties it may have to deliver specific improvements to public access, and the access-related policies and priorities it periodically agrees with Defra.


Melton
Bromeswell
Rendlesham Fore
WOODBRIDGE
Sutton Walks
Martlesham
Martlesham Heath
Waldringfield
Sutton
Shottisham
Newbourne
Hemley
Ramsholt
Alderton Walks
Kirton
Falkenham
Felixstowe Ferry
Bawdsey Manor
3 Kms
2 Miles
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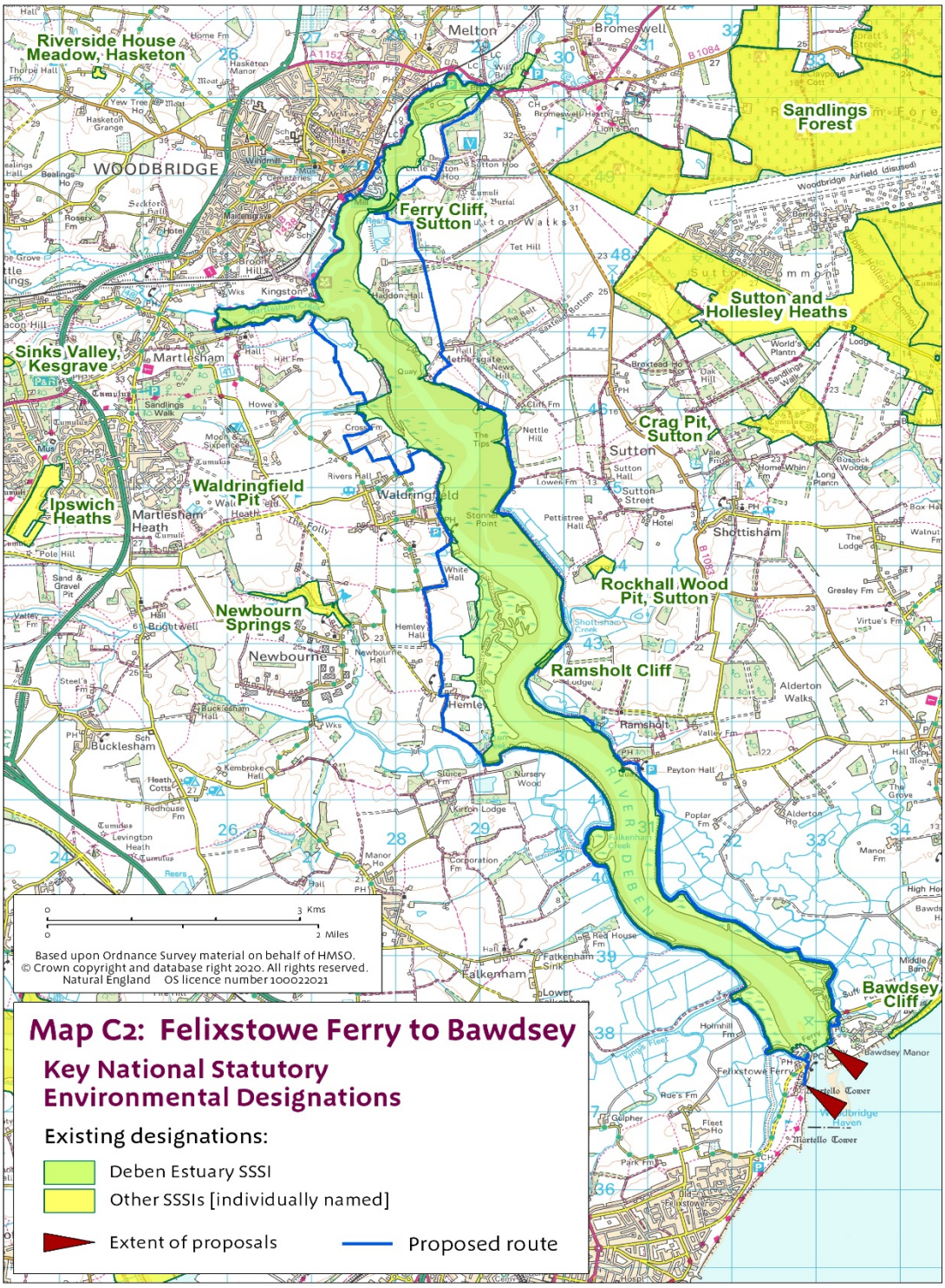
Map C1: Felixstowe Ferry to Bawdsey
Key International Statutory Environmental Designations
Existing designations:
Deben Estuary Ramsar
Deben Estuary SPA
Sandlings SPA
Extent of proposals
Proposed route


Riverside House Meadow, Hasketon
WOODBRIDGE
Ferry Cliff, Sutton
Sandlings Forest
Sutton and Hollesley Heaths
Sinks Valley, Kesgrave
Ipswich Heaths
Waldringfield Pit
Crag Pit, Sutton
Rockhall Wood Pit, Sutton
Newborn Springs
Ramsholt Cliff
Bawdsey Cliff
0 3 Kms
0 2 Miles
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Map C2: Felixstowe Ferry to Bawdsey
Key National Statutory Environmental Designations
Existing designations:
Deben Estuary SSSI
Other SSSIs [individually named]
Extent of proposals
Proposed route

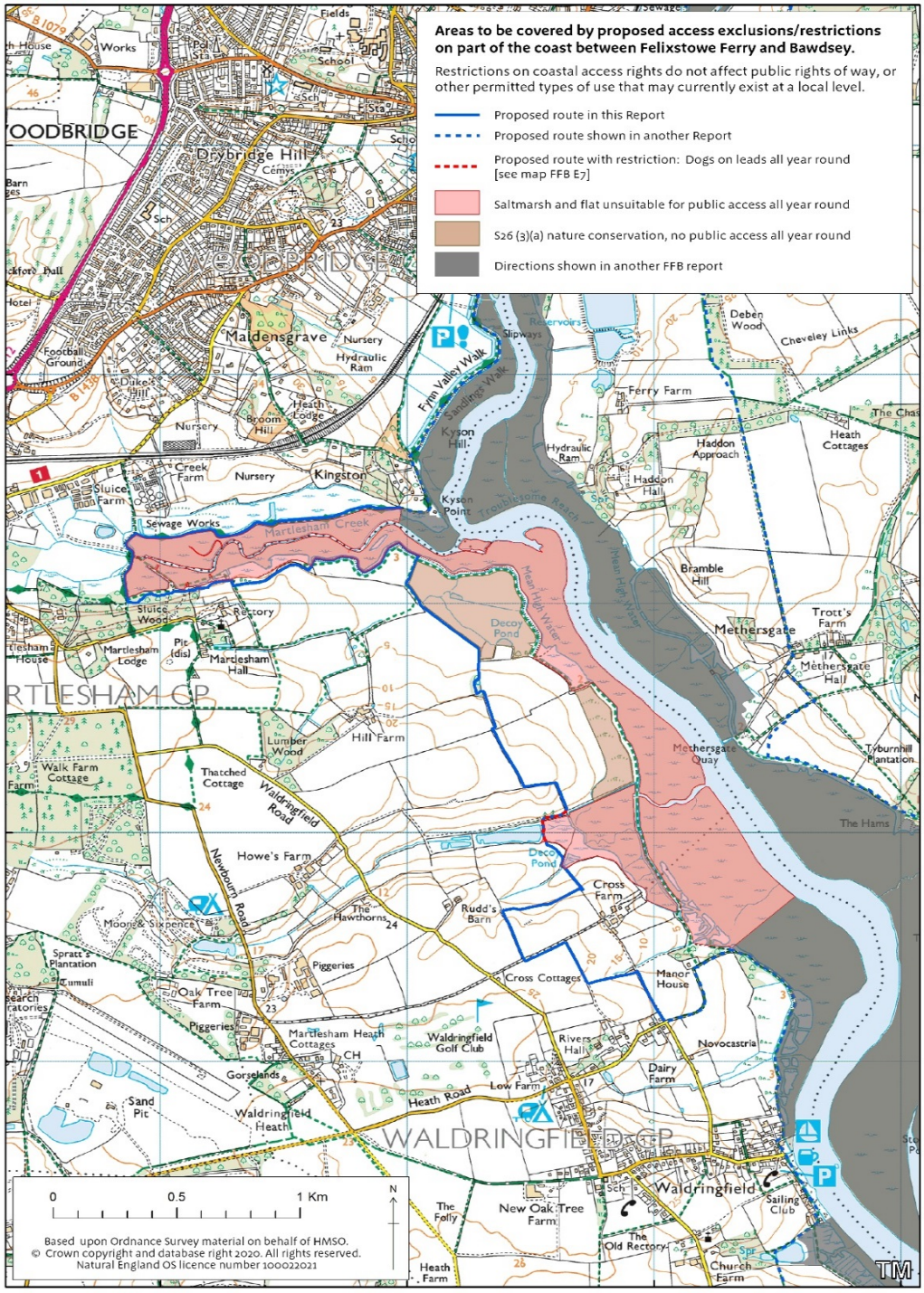
Coastal Access - Felixstowe Ferry to Bawdsey - Natural England's Proposals

Map FFB E1:
Directions to exclude/restrict access - as proposed for area covered by Report FFB1

Map FFB E1: Directions to exclude/restrict access - as proposed for area covered by Report FFB1

Coastal Access - Felixstowe Ferry to Bawdsey - Natural England's Proposals

Map FFB E2:
Directions to exclude/restrict access - as proposed for area covered by Report FFB2



Map FFB E2: Directions to exclude/restrict access - as proposed for area covered by Report FFB2

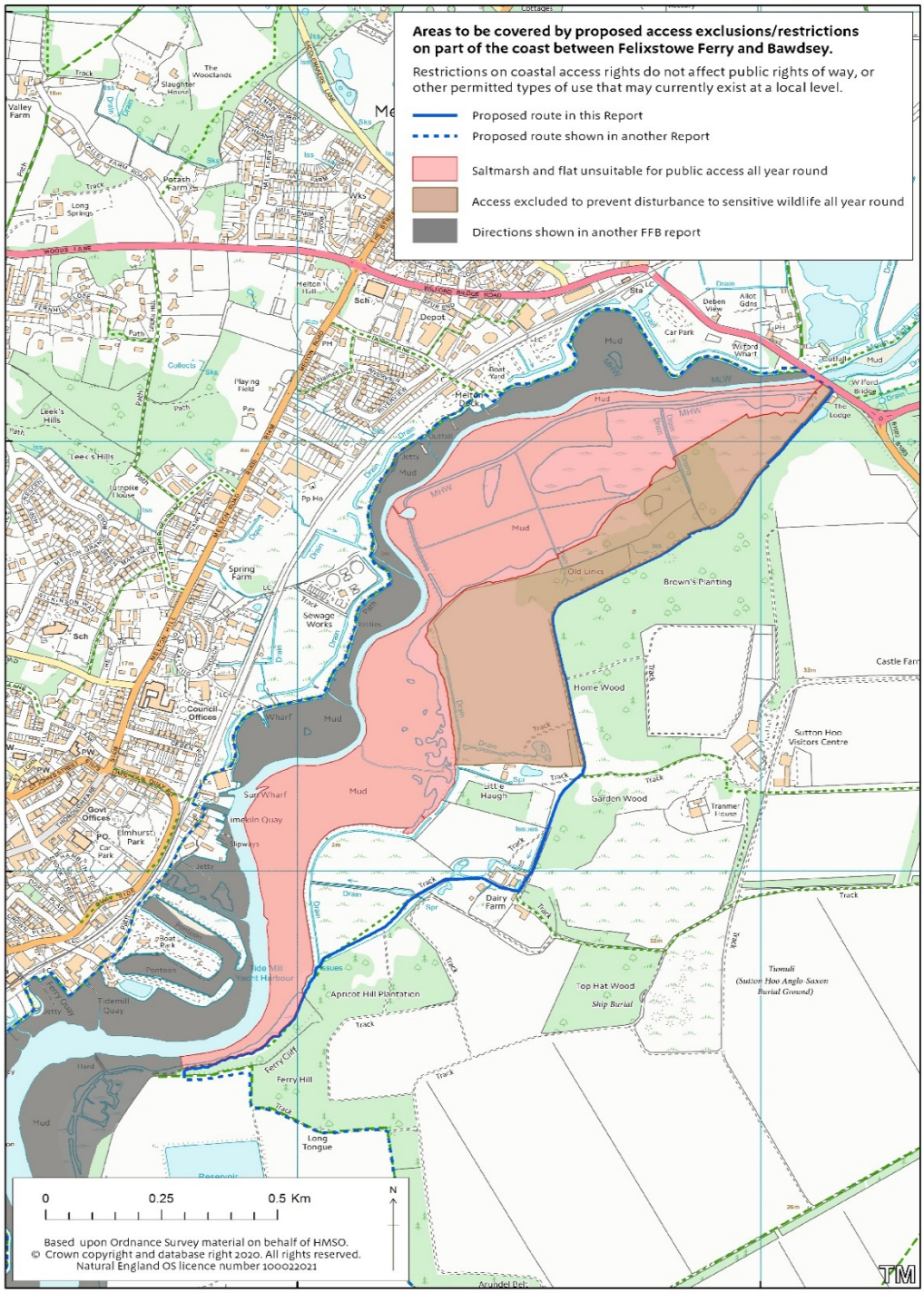
Coastal Access - Felixstowe Ferry to Bawdsey - Natural England's Proposals

Map FFB E3:
Directions to exclude/restrict access - as proposed for area covered by Report FFB3

Map FFB E3: Directions to exclude/restrict access - as proposed for area covered by Report FFB3

Coastal Access - Felixstowe Ferry to Bawdsey - Natural England's Proposals

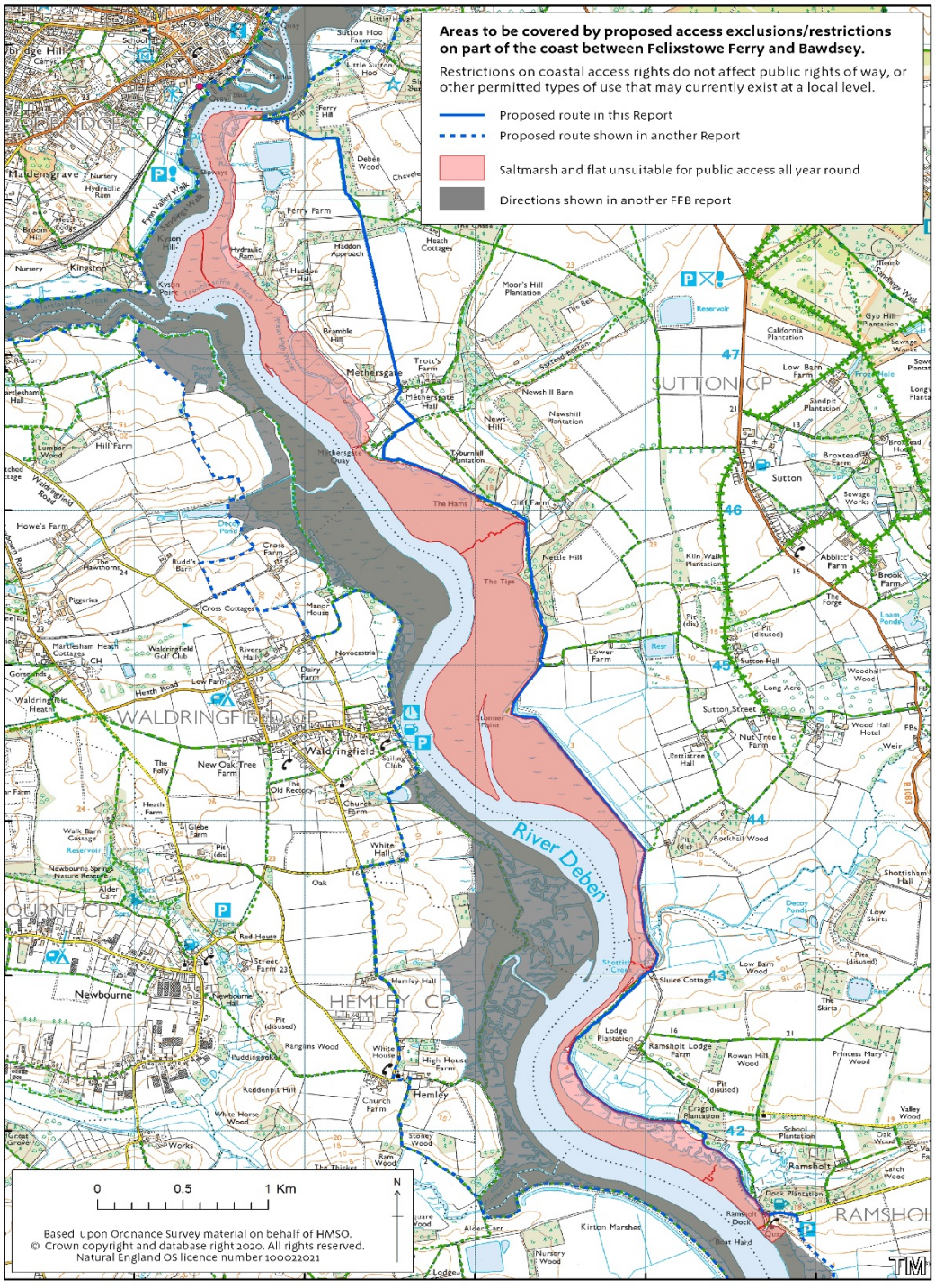
Map FFB E4:
Directions to exclude/restrict access - as proposed for area covered by Report FFB4



Map FFB E4: Directions to exclude/restrict access - as proposed for area covered by Report FFB4

Coastal Access - Felixstowe Ferry to Bawdsey - Natural England's Proposals

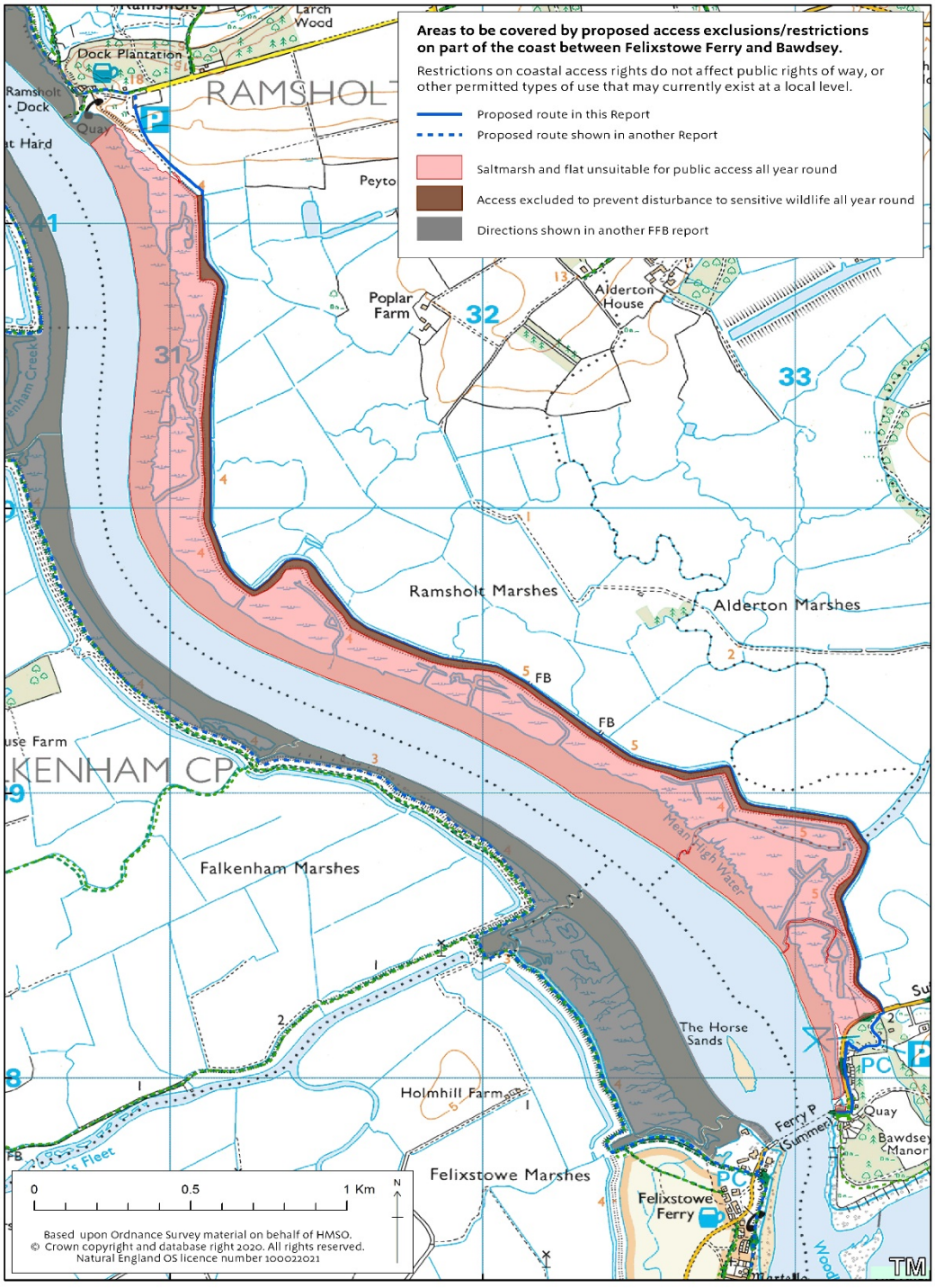
Map FFB E5:
Directions to exclude/restrict access - as proposed for area covered by Report FFB5



Map FFB E5: Directions to exclude/restrict access - as proposed for area covered by Report FFB5

Coastal Access - Felixstowe Ferry to Bawdsey - Natural England's Proposals

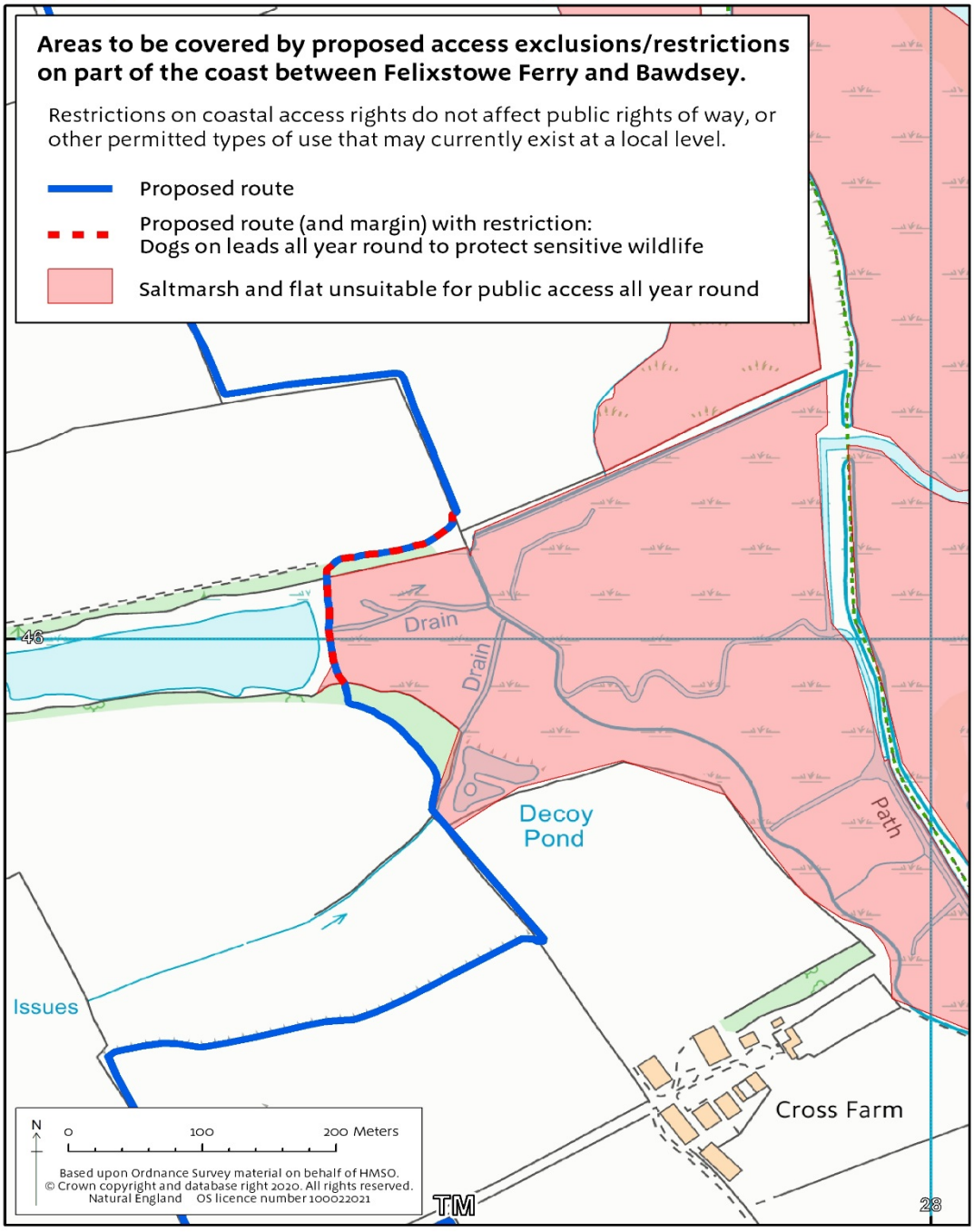
Map FFB E6:
Directions to exclude/restrict access - as proposed for area covered by Report FFB6



Map FFB E6: Directions to exclude/restrict access - as proposed for area covered by Report FFB6

Coastal Access - Felixstowe Ferry to Bawdsey - Natural England's Proposals

Map FFB E7: Directions to exclude/restrict access - as proposed for area covered by Report FFB2



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Annex 1. Index of designated sites and features

Features of the designated sites	Deben Estuary SSSI	Deben Estuary SPA	Deben Estuary Ramsar Site	Ferry Cliff SSSI	Ramsholt Cliff SSSI
A132 Pied avocet *Recurvirostra avosetta* (Breeding)		✓			
A046a Dark-bellied brent goose *Branta bernicla bernicla* (Non-breeding)	✓	✓	✓		
A156 Black-tailed godwit *Limosa limosa islandica* (Non-breeding)	✓				
A048 Shelduck, *Tadorna tadorna* (Non-breeding)	✓				
A162 Common redshank *Tringa totanus* (Non-breeding)	✓				
Invertebrate assemblage: - mollusc *Vertigo angustior*			✓		
SM8 - Annual *Salicornia* saltmarsh	✓				
SM9 - *Suaeda maritima* saltmarsh	✓				
SM10 - Transitional low marsh vegetation with *Puccinellia maritima*, annual *Salicornia* species and *Suaeda maritima*	✓				

SM11 - Aster tripolium var. discoides saltmarsh	✓				
SM13a - Puccinellia maritima saltmarsh, *Puccinellia maritima* dominant sub-community	✓				
SM14 - Atriplex portulacoides saltmarsh	✓				
SM15 - Juncus maritimus - Triglochin maritima saltmarsh	✓				
SM16a - Festuca rubra saltmarsh *Puccinellia maritima* sub-community	✓				
S4 - *Phragmites australis* swamp and reed-beds	✓				
S21 - Scirpus maritimus swamp	✓				
London Clay succession				✓	
Suffolk Pebble Bed (Palaeocene) along foreshore – at or below mean low water. Important mammal fauna				✓	
Neogene features					✓

Annex 2. Establishment works: nature conservation / environmental factors to be taken into account

Once approval for a coastal access report is received from the Secretary of State, any necessary works can be carried out on the ground to make the trail fit for use and to prepare for its opening. In this case, works will be carried out by Suffolk County Council, who will be responsible for ensuring they take appropriate steps to protect sensitive features while works are carried out, in line with any recommendations or conditions agreed in advance.

We have held preliminary discussions with Suffolk County Council about the works required. We believe it is feasible for them to be carried out without adversely affecting the designated sites considered in this appraisal, provided that working methods are agreed with the relevant Natural England Responsible Officer (RO) as appropriate.

Legally protected species are an important consideration where works involve the removal or maintenance of existing features, or the construction of new features. Where these species are known, or are likely to be present, any works carried out should include appropriate mitigation in line with legislative guidelines. Appropriate measures must be taken to protect historic/ archaeological features and sites, and the relevant consents obtained before work commences. Care should also be taken to ensure the materials and design of items of infrastructure are appropriate to the landscape setting and minimise visual clutter.

The main considerations with regard to protected sites and species, and on-site working methods, are summarised in the bullet points and table below.

- European Protected Species are those species of plant and animal listed in Annex IV to EC Directive 92/43/EEC ('the Habitats Directive'). For a complete list of European Protected Species in England & Wales refer to Schedules 2, 4 and 5 of the Conservation of Habitats & Species Regulations 2017.

- The Wildlife and Countryside Act 1981, as amended, affords protection to wild birds, their eggs, young and nests (the latter whether complete or under construction). Those listed in Schedule 1 of the '81 Act receive additional protection against intentional or reckless disturbance while they are nest building or at a nest containing eggs or young. Dependant young are also protected from intentional or reckless disturbance. The timing of any works on habitats which may support birds (particularly breeding birds), and the methodologies employed should take these factors into account.

- Plants and animals included in Schedules 5 & 8 of the Wildlife and Countryside Act 1981 (as amended) are protected from being killed or injured, and protection may also apply to their place of shelter.

- Badgers and their setts are protected under the Protection of Badgers Act 1992, under which it is an offence to damage, destroy or obstruct a badger sett, or to disturb a badger when it is occupying a sett.

- All bat species, their breeding sites and resting places are fully protected in law and are European protected species. The presence of bats is often overlooked and it should be remembered that they inhabit crevices in tree trunks and branches as well as built structures (both above and below ground). Where there is uncertainty about their presence, surveys should be carried out beforehand by suitably qualified individuals.

- Activities which may affect any of the above species may require a licence from Natural England's licensing team, from which advice should be sought, as appropriate.

Timing of works	Works should be timed to prevent or minimise disturbance of wintering wildfowl and waders. *Severe Winter Weather Restrictions* will apply to works likely to disturb wintering wildfowl and waders when they are least able to cope with disturbance. Where works are likely to affect breeding birds the works should be timed to avoid the breeding season which is, for the majority of species, March to August inclusive. Timing may also need to be adjusted to take account of other species, such as those above.
Use of heavy machinery/ storage of plant and materials	Access routes and ground protection measures/ other mitigation measures (as appropriate) should be agreed with the relevant RO to ensure damage to the site or interest features/ legally protected species does not take place. Screening of plant and machinery to prevent visual and noise disturbance of wintering wildfowl and waders should be undertaken where necessary, under advice from the RO.
Presence of Protected Species	Where legally protected species are known or suspected to be present all works should include appropriate mitigation in line with legislative guidelines. As noted above, some species are afforded extra levels of protection and a licence may be required. Advice on the presence of legally protected species, and any special measures necessary, should be sought from the RO.
Pollution prevention and control	Pollution prevention and control measures must be agreed with the RO and the Environment Agency, the relevant consents being obtained were appropriate.
Biosecurity	Where necessary, appropriate measures must be taken to prevent the translocation and spread of invasive, non-native species. Where these are

	found to exist on site, or on tracking routes, advice should be sought from the relevant RO. Mitigation measures may include: • the avoidance of certain areas; • the use of geotextiles/ membranes to 'screen off' areas of ground; • removal of contaminated material to licenced sites; • chemical (pesticide/ herbicide) treatment; • the cleaning of plant, machinery or personal protective equipment before entry to, or leaving the site (or part of it); • other measures agreed with the RO as necessary.

Suffolk County Council will instigate the SSSI assent process by writing to us to confirm the timing of works and how operations are to be undertaken in line with these conditions. Natural England will provide further advice as necessary.

Works to be carried out by third parties

Occasionally, we may recommend a trail alignment which is dependent on works being carried out by a third party such as a landowner, rather than an access authority or ourselves. In these cases it is essential that all relevant environmental factors are taken into account *and that all the relevant consents and permissions are obtained from the appropriate regulatory body* (normally Natural England, Environment Agency, Historic England or Local Authority) before works commence. This responsibility rests with the third party, who may wish to employ suitably qualified consultants/ contractors to undertake design and construction work, and to obtain consents and permissions, on their behalf.