

**Habitats Regulations Assessment of England Coast Path
proposals between Salcott and Jaywick.**

**On Blackwater Estuary Special Protection Area (SPA) and
Ramsar site, Colne Estuary SPA and Ramsar site, and
Essex Estuaries Special Area of Conservation (SAC)**

October 2020



Contents

Contents.....	2
Summary.....	4
I) Introduction.....	4
II) Background.....	4
III) Our approach.....	5
IV) Aim and objectives for the design of our proposals.....	6
V) Conclusion.....	6
VI) Implementation.....	11
VII) Thanks.....	11
PART A: Introduction and information about the England Coast Path.....	12
A1. Introduction.....	12
A2. Details of the plan or project.....	12
PART B: Information about the European Site(s) which could be affected.....	15
B1. Brief description of the European Site(s) and their Qualifying Features.....	15
B2. European Site Conservation Objectives (including supplementary advice)....	20
PART C: Screening of the plan or project for appropriate assessment.....	22
C1. Is the plan or project either directly connected with or necessary to the (conservation) management (of the European Site’s qualifying features)?.....	22
C2. Is there a likelihood [or risk] of significant [adverse] effects (‘LSE’)?.....	22
C2.1 Risk of Significant Effects Alone.....	23
C2.2 Risk of Significant Effects in-combination with the effects from other plans and projects.....	29
C3. Overall Screening Decision for the Plan / Project.....	30
PART D: Appropriate Assessment and Conclusions on Site Integrity.....	31
D1. Scope of Appropriate Assessment.....	31
D2. Contextual statement on the current status, influences, management and condition of the European Site and those qualifying features affected by the plan or project.....	32
D3. Assessment of potential adverse effects considering the plan or project ‘alone’	43
D3.1 Design of the access proposal to address possible risks – at a stretch level	44
D3.2 Design of the access proposal to address possible risks – at a local level ..	47
D3.3 Assessment of potentially adverse effects (taking account of any additional mitigation measures incorporated into the design of the access proposal) alone .	76
D4 Assessment of potentially adverse effects considering the project ‘in- combination’ with other plans and projects.....	84



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

D5. Conclusions on Site Integrity.....	95
PART E: Permission decision with respect to European Sites	97
Certification.....	97
References to evidence.....	98
Maps	101

Summary

I) Introduction

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

Natural England has a statutory duty under the Marine and Coastal Access Act 2009 to improve access to the English coast. This assessment considers the potential impacts of our detailed proposals for coastal access from Salcott to Jaywick on the following sites of international importance for wildlife: Blackwater Estuary Special Protection Area (SPA) and Ramsar site, Colne Estuary SPA and Ramsar site, and Essex Estuaries Special Area of Conservation (SAC).

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

www.gov.uk/government/collections/england-coast-path-salcott-to-jaywick

II) Background

The main wildlife interests for this stretch of coast are summarised in Table 1 (see Tables 3 and 4 for a full list of qualifying features).

Table 1. Main wildlife interests

Interest	Description
Non-breeding waterbirds	Over the winter and during spring and autumn migration periods the Blackwater Estuary and Colne Estuary SPAs and Ramsar sites support internationally important assemblages of waterbirds, including several species present in internationally or nationally important numbers. Extensive intertidal mudflats are the key feeding areas for many species. Saltmarshes, grazing marshes and water bodies – both within the sites and nearby – are also important feeding habitats, as are adjacent arable fields and grassland. Many species need suitable undisturbed places to roost at high tide, usually on saltmarsh.
Breeding waterbirds	Ringed plover, little tern and pochard breed on the Blackwater Estuary and Colne Estuary SPAs in important numbers during spring/summer. The first two species nest on sparsely vegetated shingle, shell or sand, often close to the strandline. The relatively small areas of this habitat in Essex are often near beaches and particularly susceptible to recreational disturbance. Pochard nest in dense vegetation around freshwater or brackish waterbodies.

Interest	Description
Saltmarsh and other intertidal habitats	The Essex Estuaries SAC covers a diversity of intertidal and subtidal habitats. These are of considerable importance in their own right and also as essential supporting habitat for SPA and Ramsar site species and other wildlife. They include a wide variety of saltmarsh types and extensive mudflats and sandflats. The area around Colne Point, near the mouth of the Colne Estuary, supports a particularly rich variety of intertidal habitats. These include the largest and most diverse stands of Mediterranean saltmarsh scrub on the stretch and areas of shingle, sand and shell of importance to SPA birds and Ramsar site plants and invertebrates.
Assemblages of wetland plants and invertebrates	The Blackwater Estuary and Colne Estuary Ramsar sites support assemblages of plants and invertebrates that are nationally scarce, rare and/or declining. Most of these species are associated with saltmarshes, grazing marshes and their ditches, or other brackish coastal habitats such as the borrow dykes and foldings behind sea defences and areas of sand, shingle and shell along and above the strandline.

III) Our approach

Natural England’s approach to ensuring the protection of sensitive nature conservation features under the Coastal Access Programme is set out in the Coastal Access Scheme [Ref 15]. Note that, following a ruling by the Court of Justice of the European Union (Case C-323/17 – usually cited as *People over Wind*), we have issued a technical memorandum concerning the application of this methodology where assessment under the Habitats Regulations is required.

Our final published proposal for a stretch of England Coast Path is preceded by detailed local consideration of options for route alignment, the extent of the coastal margin and any requirement for restrictions, exclusions or seasonal alternative routes. The proposal is thoroughly considered before being finalised and initial ideas may be modified or rejected during the iterative design process, drawing on the range of relevant expertise available within Natural England.

Evidence is also gathered as appropriate from a range of other sources which can include information and data held locally by external partners or from the experience of local land owners, environmental consultants and occupiers. The approach includes looking at any current visitor management practices, either informal or formal. It also involves discussing our emerging conclusions as appropriate with key local interests such as land owners or occupiers, conservation organisations or the local access authority. In these ways, any nature conservation concerns are discussed early and constructive solutions identified as necessary.

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

IV) Aim and objectives for the design of our proposals

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

A key consideration in developing coastal access proposals for this stretch has been the possible impact of disturbance on non-breeding waterbirds as a result of recreational activities, particularly visitors with dogs.

Objectives for design of our detailed local proposals have been:

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

V) Conclusion

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

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

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

Risk to conservation objectives	Relevant design features of the access proposals
<p>Repeated disturbance to foraging or resting birds during winter and on passage, following changes in recreational activities as a result of the access proposal, may lead to reduced fitness and reduction in population and/or contraction in the distribution of qualifying features within the site.</p>	<p>Nearly all the saltmarsh and intertidal flats adjacent to the route on this stretch are unsuitable for walking and access will be excluded by direction. (Though not a mitigation measure per se, this substantially reduces the risk of bird disturbance).</p> <p>At Abbots Hall Farm EWT reserve the route uses a farm track on which access by reserve visitors is already permitted and which is set well back from the reserve’s managed realignment site; dogs will be restricted to the line of the route and must be kept on leads; and access onto the breached seabanks along the outer edge of the realignment site will be excluded except at a few signed viewpoints where the risk of bird disturbance is low.</p> <p>Between Copt Hall Farm and the Strood the route provides new access along the seabank, seaward of open arable farmland that is an important feeding area for brent geese. Aligning through this farmland in order to avoid the seabank would be likely to cause greater disturbance to the geese.</p> <p>At Ray Island nature reserve, which is surrounded by saltmarsh and flats but within the coastal margin and accessible by boat, the current ‘no dogs’ restriction will be maintained.</p> <p>At the Fingringhoe Ranges MoD training area the route skirts around the inland edge of the MoD land; access onto nearly all the MoD land in the coastal margin is prohibited under military byelaws; and access onto Langenhoe Point (beyond the land covered by MoD byelaws) will be excluded year round.</p> <p>At the Wick Farm West grazing marsh the route skirts around the inland edge of the marsh close to the fence line; access onto the coastal margin will be excluded year round; and within the grazing marsh field, dogs will only be permitted on the trail and must be kept on a short lead.</p> <p>At Fingringhoe Wick EWT reserve the route runs around the inland edge of the reserve and outside its boundary, except in the northern part of the reserve, where it runs just within the boundary following an</p>

**Assessment of Coastal Access proposals under regulation 63 of the Habitats Regulations 2017 (as amended)
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Risk to conservation objectives	Relevant design features of the access proposals
	<p>existing permissive path set well back from the reserve’s managed realignment site; dogs will be restricted to the trail year round and must be kept on a lead when within the reserve boundary.</p> <p>At Howlands Marsh EWT reserve on the east side of Flag Creek access on the new seabank route and adjacent margin will be excluded between 1 Sept and 30 April; lockable pedestrian gates will be installed at either end of this section and when it is closed, signs will direct walkers along a seasonal route inland of the reserve.</p> <p>On the west side of Flag Creek the part of the route bridging the gap between existing PROWs will be aligned along the folding for 450 m at its southern end, where there is a slightly greater risk of significant bird disturbance, before coming up onto the seabank.</p> <p>At Colne Point EWT reserve the route is aligned along the seabank inland of the reserve; on the reserve and NNR land new coastal access rights in the margin will be excluded, seaward to and including the vegetated strandline; on the reserve’s beach below the strandline no dogs will be allowed; and a lockable gate will be installed on the footbridge over Ray Creek.</p> <p>The proposal includes signage in several places - particularly where the route provides new access - to inform walkers of local restrictions on coastal access rights and, where appropriate, of ways to reduce disturbance to passage/overwintering birds.</p> <p>In two places where the route follows a seabank without an existing PROW, we consider the risk of significant bird disturbance is too low to justify formal restrictions or an alternative route, because important numbers of birds are not likely to use intertidal areas close enough to the route to be disturbed except under specific tidal conditions of limited duration. At these locations (Langenhoehall Marsh and the west side of Flag Creek) the inland margin will include the folding behind the seabank, and signs will be installed asking users to walk in the folding to reduce disturbance if they see flocks of birds ahead of them close to the seabank.</p>

**Assessment of Coastal Access proposals under regulation 63 of the Habitats Regulations 2017 (as amended)
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Risk to conservation objectives	Relevant design features of the access proposals
<p>Repeated disturbance to birds during the breeding season, following changes in recreational activities as a result of the access proposal, may lead them to abandon nesting areas or reduce their breeding success.</p>	<p>At Abbots Hall Farm EWT reserve, dogs will be restricted to the line of the route and must be kept on leads, reducing the risk of disturbance to pochard nesting on the lake inland of the coastal margin.</p> <p>East of the Strood causeway advisory signage will be installed where an area of wet rough grass with ponds lies within spreading room landward of the route along an existing public footpath on the seabank. Signs will ask users to stay on the trail and keep dogs under effective control.</p> <p>At the Fingringhoe Ranges MoD training area the route skirts around the inland edge of the MoD land; access onto nearly all the MoD land in the coastal margin is prohibited under military byelaws; and access onto Langenhoe Point (which is not covered by MoD byelaws) will be excluded year round.</p> <p>At the Wick Farm West grazing marsh the route skirts around the inland edge of the marsh close to the fence line; access onto the coastal margin will be excluded year round; and within the grazing marsh field, dogs will only be permitted on the trail and must be kept on a short lead.</p> <p>At Fingringhoe Wick EWT reserve the route runs around the inland edge of the reserve and outside its boundary fence, except in the northern part of the reserve, where it runs just within the boundary following an existing permissive route set well back from the reserve’s managed realignment site; and dogs will be restricted to the trail year round and must be kept on leads when within the reserve boundary.</p> <p>At Howlands Marsh EWT reserve on the east side of Flag Creek on the new seabank route open during the summer, dogs must be kept on a short lead and on the trail; and access will be excluded year round from an area of grazing marsh that falls within the coastal margin at the northern end of this section.</p> <p>At Colne Point EWT reserve, the key location for breeding ringed plover and little tern, the route is aligned along the seabank inland of the reserve. On the reserve and NNR land new coastal access rights in the margin will be excluded, seaward to and including the vegetated strandline; on the reserve’s</p>

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Risk to conservation objectives	Relevant design features of the access proposals
	<p>beach below the strandline no dogs will be allowed; and a lockable gate will be installed on the footbridge over Ray Creek.</p> <p>The proposal includes signage in several places - particularly where the route provides new access - to inform walkers of local restrictions on coastal access rights and, where appropriate, of ways to reduce disturbance to breeding birds.</p>
<p>Repeated trampling, following changes in recreational activities as a result of the access proposal, may damage sensitive habitats, plant communities or species, leading to long-term declines in their quality, distribution or numbers within the site.</p>	<p>The route is not aligned on saltmarsh anywhere on this stretch.</p> <p>Nearly all the saltmarsh seaward of the route is unsuitable for walking, so access will be excluded by direction. The only exceptions are two areas totalling about 14 ha which are registered common land; most of this is eroding and is now dissected by deep channels and difficult to access. We consider that the proposal is unlikely to increase levels of use on these areas.</p> <p>The route is only aligned on grazing marsh (a supporting habitat for some wetland assemblage plants and invertebrates) at one location: Wick Marsh West. Here the trail runs around the inland edge of the marsh for about 1 km but access to the coastal margin will be excluded. Unlike the rest of the marsh, much of the field edge is relatively dry, semi-improved grassland and therefore unlikely to be important for wetland assemblage species. We know of no records of assemblage species from the affected area.</p> <p>At Colne Point EWT reserve the route is aligned along the seabank inland of the reserve. New coastal access rights to the reserve and NNR land in the margin will be excluded, seaward to and including the vegetated strandline. The excluded area will cover all the Mediterranean saltmarsh scrub on the reserve, along with the other vegetation types sensitive to trampling that support wetland plant and invertebrate assemblage species.</p>

The above table lists the risks to conservation objectives from our proposals and the mitigation measures built in to protect them.

VI) Implementation

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

VII) Thanks

The development of our proposals has been informed by input from people with relevant expertise within Natural England and other key organisations. The proposals have been thoroughly considered before being finalised and our initial ideas were modified during an iterative design process. We are particularly grateful to Essex Wildlife Trust, the National Trust, the Ministry of Defence, and the RSPB and to other organisations and local experts whose contributions and advice have helped inform the development of our proposals.

Special thanks are due to local volunteers contributing to the BTO’s national Wetland Bird Survey (WeBS), for their generous contributions of time and invaluable knowledge of bird numbers and distributions along the stretch.

PART A: Introduction and information about the England Coast Path

A1. Introduction

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

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

Where implementation of a Coastal Access Report could impact on a site designated for its international importance for wildlife, called a ‘European site¹’, a Habitats Regulations Assessment must be carried out.

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

Natural England’s approach to ensuring the protection of sensitive nature conservation features under the Coastal Access Programme is set out in the Coastal Access Scheme [Ref 15]. Note that, following a ruling by the Court of Justice of the European Union (Case C-323/17 – usually cited as *People over Wind*), we have issued a technical memorandum concerning the application of this methodology where assessment under the Habitats Regulations is required.

A2. Details of the plan or project

This assessment considers Natural England’s proposals for coastal access along the stretch of coast between Salcott and Jaywick in Essex. Our proposals to the Secretary of State for this stretch of coast are presented in a series of reports that explain how we propose to implement coastal access along each of the constituent lengths within the stretch. Within this assessment we consider each of the relevant reports, both separately and as an overall access proposal for the stretch in question.

Our proposals for coastal access have two main components:

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

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

England Coast Path

A continuous walking route around the coast – the England Coast Path National Trail - will be established by joining up existing coastal paths and creating new sections of path where necessary. The route will be established and maintained to National Trail quality standards. Where specified in our proposals, the coastal path will be able to ‘roll back’ as the coast erodes or where there is significant encroachment by the sea such as occurs in the case of a deliberate breach of sea defences as part of a coastal ‘managed realignment’ scheme.

Coastal Margin

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

Coastal margin is typically subject to new coastal access rights, though there are some obvious exceptions to this. The nature and limitations of the new rights, and the key types of land excepted from them, are explained in more detail in Chapter 2 of our Coastal Access Scheme [Ref 15]. Where there are already public or local rights to do other things, these are normally unaffected and will continue to exist in parallel to the new coastal access rights. The exception to this principle is any pre-existing open access rights under Part 1 of the Countryside and Rights of Way Act 2000 (CROW) over land falling within the coastal margin: the new coastal access rights will apply in place of these. Those parts of the coastal margin on which new coastal access rights will apply are referred to as ‘spreading room’.

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

The following points are of particular relevance to this assessment:

- i) A large area of land seaward of the proposed trail between the Strood and Fingringhoe lies within the Fingringhoe Ranges MoD area and is subject to military byelaws that restrict public access. This land is excepted from new coastal access rights. It includes intertidal areas and also land behind the sea defences.
- ii) Access to nearly all other areas of saltmarsh and flats seaward of the proposed route in this stretch will be excluded year round by direction under s25A of the Countryside and Rights of Way Act (2000), because they are unsuitable for public access on grounds of public safety, regardless of any other considerations.
- iii) On two Essex Wildlife Trust (EWT) nature reserves on this stretch (Abbotts Hall Farm and Fingringhoe Wick) there will be some access restrictions for land management reasons.

It should be noted that while none of the above restrictions are made on nature conservation grounds, they are important in reducing the potential for adverse effects on waterbirds and other sensitive SPA, SAC and Ramsar site features. Therefore if in future there is a proposal

to remove these restrictions from any areas along the stretch, further Habitats Regulations Assessment would be essential.

Promotion of the England Coast Path

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

Information about the Coast Path will be available on-line, including via the established National Trails website that has a range of useful information, including things for users to be aware of, such as temporary closures and diversions. The route is depicted on Ordnance Survey maps using the acorn symbol. The extent of the coastal margin is also depicted, together with an explanation about coastal access rights, where they do and don't apply and how to find out about local restrictions or exclusions.

Maintenance of the England Coast Path

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

Responding to future change

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

Establishment of the trail

Establishment works to make the trail fit for use and prepare for opening, including any special measures that have been identified as necessary to protect the environment will be carried out before the new public rights come into force on this stretch. Details of the works to be carried out and the estimated cost are provided in the access proposals. The cost of establishment works will be met by Natural England. Works on the ground to implement the proposals will be carried out by Essex County Council, subject to any further necessary consents being obtained, including to undertake operations on a SSSI. Natural England will provide further advice to the local authority carrying out the work as necessary.

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

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

Map 1 shows the boundaries of the European sites described below in the vicinity of the Salcott to Jaywick stretch.

Blackwater Estuary SPA and Ramsar site

The Blackwater Estuary is the largest in Essex north of the Thames, and one of the largest estuarine complexes in East Anglia. The SPA covers 4,395 ha of intertidal and other coastal habitats from Maldon at the head of the estuary east to Mersea Island and the northern end of the Dengie Peninsula at its mouth. At the Strood causeway onto Mersea Island, the site's northeast boundary lies immediately adjacent to the Colne Estuary SPA.

The estuary is wide, with several offshore islands. Its intertidal habitats comprise extensive mudflats and saltmarshes as well as localised areas of shingle, shell and sand. Adjacent terrestrial habitats within the SPA include seabanks with their associated foldings and borrow dykes, ancient grazing marshes with fleet and ditch systems, and semi-improved coastal grassland. All these habitats are of high conservation interest and together support internationally and nationally important concentrations of waterbirds over the winter and during spring and autumn passage, including internationally important numbers of dark-bellied brent geese and three species of wader. During spring and summer, the SPA also supports important breeding populations of pochard, little tern and ringed plover.

The overwintering and breeding waterbirds mentioned above also use surrounding areas beyond the SPA's boundaries for feeding or roosting; this is referred to as 'functionally linked land'. The open farmland between Salcott and the Strood serves as functionally linked land for brent geese and several other species such as lapwing and golden plover. An 85 ha 'managed realignment' site immediately adjacent to the SPA boundary on EWT's Abbots Hall Farm nature reserve is of special importance as functionally linked land for many more species. Here seabanks were breached in 2002 to create about 50 ha of new mudflat and saltmarsh, with areas of transitional brackish grassland on the gently rising ground behind.

The Blackwater Estuary Ramsar site covers the same area as the SPA but this designation includes non-avian as well as avian qualifying features. The site's varied habitat mosaic supports a diverse range of plants and invertebrates, including an outstanding assemblage of 16 nationally scarce plant species and a nationally important assemblage of invertebrates, with 16 Red Data Book and 94 notable and local species.

Colne Estuary SPA and Ramsar site

The Colne Estuary SPA covers 2,720 ha and is the northernmost of the five contiguous Mid-Essex Coast SPAs, which together stretch from Jaywick to Southend-on-Sea. The Colne is a comparatively short and branching estuary, with five tidal arms which flow into the main river channel. The estuary mouth lies roughly between East Mersea and Point Clear. The SPA includes some open coast intertidal habitat beyond that: the Mersea Flats to the west and Colne Point to the east. And it extends up the estuary to about a kilometre downstream of Fingringhoe and Wivenhoe. The site largely comprises intertidal mudflat and saltmarsh, together with ancient grazing marshes at Langenhoe on the west side and Brightlingsea and Howlands Marshes on the east. It also includes old mineral workings with flooded pits at Essex Wildlife Trust’s Fingringhoe Wick reserve and, at the Trust’s Colne Point reserve, a sand/shingle ridge several kms long backed by saltmarsh. The SPA’s rich mosaic of habitats supports internationally and nationally important concentrations of waterbirds over the winter and during spring and autumn passage, including internationally important numbers of brent geese and redshanks. During the summer, the SPA also supports important breeding populations of pochard, little tern and ringed plover; the latter two species nesting on sand/shingle habitat mainly near the mouth of the estuary, particularly around Colne Point.

A 22 ha managed realignment site created in 2015 on the north side of Essex Wildlife Trust’s Fingringhoe Wick nature reserve is a particularly important area of functionally linked land for feeding and roosting waterbirds immediately adjacent to the SPA. Intertidal mud, saltmarsh and grazing marsh further upstream along the Colne and Roman Rivers are also important for some species, as are flooded pits on old mineral sites on both sides of the estuary. But compared to the Blackwater Estuary, there is less open farmland between the coastal villages and towns around the Colne to act as functionally linked land for the site’s overwintering birds.

During severe winter weather the Colne Estuary, like the Blackwater and other Mid-Essex Coast SPAs, can assume even greater national and international importance as wildfowl and waders from many other areas arrive, attracted by the relatively mild climate and the abundant food resources available.

The Colne Estuary Ramsar site covers the same area as the SPA. This designation includes the same non-breeding avian features but also assemblages of nationally scarce plants and notable invertebrates. Many of these are also found on the Blackwater Estuary Ramsar site, though the Colne’s assemblages tend to have more species of coastal shingle/sand.

Essex Estuaries SAC

The SAC contains the best example of a coastal plain estuary system on the UK North Sea coast. Covering an area of more than 46,000 ha, this relatively undeveloped estuary complex includes the major estuaries of the Colne, Blackwater, Crouch and Roach, as well as extensive open coast tidal flats at Foulness, Maplin and the Dengie.

The site protects a variety of intertidal and subtidal habitats that support many marine and estuarine species, including many of the waterbirds, plants and invertebrates that are features of overlapping SPAs and Ramsar sites. It covers extensive intertidal mudflats and

sandflats that support a wide range of typical estuarine and marine communities and are key feeding habitats for many waterbirds. The SAC also contains a significant proportion of the country’s saltmarsh resource. This saltmarsh ranges from pioneer to upper/transitional types and includes plant communities with restricted UK distributions, such as Mediterranean saltmarsh scrub and stands of small cord-grass *Spartina maritima*. Saltmarshes are highly productive biologically, providing nutrients which support many other features. They also have an important physical role, acting as a sediment and carbon store to the estuary system as a whole and providing roosting sites for waterbirds at high tide.

A high proportion of the area within the Blackwater Estuary and Colne Estuary SPAs also lies within the SAC. The SPAs and the SAC share the same landward boundaries in many places, where these run along a seabank or the borrow dyke behind it. But the SAC does not include areas of grazing marsh inland of the borrow dyke, while the SPAs generally do.

Note: The Outer Thames Estuary SPA is not included in this HRA because, at its nearest point, it lies 3 km from this Coast Path stretch and no credible risks to the SPA’s conservation objectives as a result of these access proposals have been identified.

The following tables, (Tables 3 and 4) provides a complete list of the qualifying features of the European Sites which could be affected by the access proposals. For ease of reference, the sites’ avian and non-avian features are listed separately.

Table 3. Qualifying avian features

Qualifying feature ¹	Blackwater Estuary SPA	Blackwater Estuary Ramsar site	Colne Estuary SPA	Colne Estuary Ramsar site	Essex Estuaries SAC
A137 <i>Charadrius hiaticula</i> ; Ringed plover (Breeding)	✓		✓		
A195 <i>Sterna albifrons</i> ; Little tern (Breeding)	✓		✓		
A059 <i>Aythya ferina</i> ; Common pochard (Breeding)	✓		✓		
A046a <i>Branta bernicla bernicla</i> ; Dark-bellied brent goose (Non-breeding)	✓	✓	✓	✓	
A141 <i>Pluvialis squatarola</i> ; Grey plover (Non-breeding)	✓	✓			
A156 <i>Limosa limosa islandica</i> ; Black-tailed godwit (Non-breeding)	✓	✓			
A149 <i>Calidris alpina alpina</i> ; Dunlin (Non-breeding)	✓	✓			
A162 <i>Tringa totanus</i> ; Common redshank (Non-breeding)			✓	✓	
A082 <i>Circus cyaneus</i> ; Hen harrier (Non-breeding)	✓		✓		
Waterbird assemblages (Non-breeding) ²	✓	✓	✓	✓	

See notes below Table 4.

Table 4. Qualifying non-avian features

Qualifying feature ¹	Blackwater Estuary SPA	Blackwater Estuary Ramsar site	Colne Estuary SPA	Colne Estuary Ramsar site	Essex Estuaries SAC
H1110 Sandbanks which are slightly covered by sea water all the time (Subtidal sandbanks)					✓
H1130 Estuaries ³					✓
H1140 Mudflats and sandflats not covered by seawater at low tide (Intertidal mudflats and sandflats)					✓
H1310 <i>Salicornia</i> and other annuals colonising mud and sand (Glasswort and other annuals colonising mud and sand)		✓		✓	✓
H1320 <i>Spartina</i> swards (<i>Spartinion maritimae</i>) (Cord-grass swards)		✓		✓	✓
H1330 Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)		✓		✓	✓
H1420 Mediterranean and thermo-Atlantic halophilous scrubs (<i>Sarcocornetea fruticosi</i>) (Mediterranean saltmarsh scrub)		✓		✓	✓
Wetland plant assemblages ⁴		✓		✓	
Wetland invertebrate assemblages ⁵		✓		✓	

Notes for Tables 3 and 4:

¹ Latin names and international English names for bird species, as used in SPA Conservation Objectives, are given. Elsewhere in this HRA, shorter and more familiar English vernacular names are used for some species (for example: brent goose, redshank, pochard).

² A waterbird assemblage is a qualifying feature of both the SPA and Ramsar sites. When classifying a waterbird assemblage as an SPA qualifying feature, the Ramsar Conventions Strategic Framework definition of ‘waterbird’ is used and as such we consider the two qualifying features synonymous. Current abundance and composition of the assemblage feature is taken into account in our assessment. ‘Main component species’ of an assemblage are those which regularly occur on the site in internationally or nationally important numbers or regularly exceed 2,000 individuals. The main component species of the Blackwater Estuary and Colne Estuary assemblages are:

Blackwater Estuary: brent goose, shelduck, wigeon, gadwall, teal, pintail, shoveler, goldeneye, red-breasted merganser, (smew), cormorant, little egret, avocet, ringed plover, golden plover, grey plover, lapwing, knot, dunlin, ruff, black-tailed godwit, bar-tailed godwit,

curlew, (green sandpiper), (spotted redshank), (greenshank), redshank, turnstone, black-headed gull.

Colne Estuary: mute swan, brent goose, shelduck, goldeneye, cormorant, little egret, avocet, ringed plover, golden plover, grey plover, lapwing, sanderling, dunlin, black-tailed godwit, curlew, (green sandpiper), (greenshank), redshank.

Species in brackets are those with very low thresholds for national importance (<10 birds).

³ The following sub-features are cited as contributing to the SAC ‘estuaries’ feature, each of those known to occur near this Coast Path stretch are considered in the assessment that follows: Atlantic salt meadows, intertidal coarse sediment, intertidal mixed sediments, intertidal mud, intertidal rock, intertidal sand and muddy sand, intertidal seagrass beds, subtidal coarse sediment, subtidal mixed sediments, subtidal mud, subtidal sand, subtidal seagrass beds.

⁴ Nationally scarce vascular plant species, mainly of saltmarsh and brackish coastal habitats. The assemblages of the two Ramsar sites are not the same but have several species in common.

⁵ Notable invertebrate species of saltmarsh and other coastal habitats, including scarce species with high habitat fidelity. The assemblages of the two Ramsar sites are not the same but have several species in common.

Table 5. Summary of geographical extents of European sites within this Coast Path stretch and its six constituent lengths and proposal reports

Lengths / Proposal reports	SCJ 1: Salcott to Moor Farm, Langenhoe	SCJ 2: The Strood to Fingringhoe	SCJ 3: Fingringhoe to Wivenhoe Sailing Club	SCJ 4: Wivenhoe Sailing Club to Brightlingsea Hard	SCJ 5: Brightlingsea Hard to Stone Point, Point Clear	SCJ 6: Stone Point, Point Clear to Lion Point, Jaywick
Designated site						
Blackwater Estuary SPA	✓✓					
Blackwater Estuary Ramsar site	✓✓					
Colne Estuary SPA		✓	(✓)	✓✓	✓✓	✓✓
Colne Estuary Ramsar site		✓	(✓)	✓✓	✓✓	✓✓
Essex Estuaries SAC	✓✓	✓		✓✓	✓✓	✓✓

✓: <50% of length within or adjacent to the designated site.

✓✓: >50% of length within or adjacent to the designated site.

(✓): part of length adjacent to functionally linked land important for features of the designated site.

B2. European Site Conservation Objectives (including supplementary advice)

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

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

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

- The distribution of their qualifying features within the site.

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

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

Supplementary advice on the conservation objectives for Blackwater Estuary SPA can be viewed at:

<https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK9009245&SiteName=Blackwater%20Estuary&countyCode=&responsiblePerson=&SeaArea=&FCAArea=>

Supplementary advice on the conservation objectives for Colne Estuary SPA can be viewed at:

[https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK9009243&SiteName=colne%20estuary&SiteNameDisplay=Colne%20Estuary%20\(Mid-Essex%20Coast%20Phase%202\)%20SPA&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=&NumMarineSeasonality=6&HasCA=1](https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK9009243&SiteName=colne%20estuary&SiteNameDisplay=Colne%20Estuary%20(Mid-Essex%20Coast%20Phase%202)%20SPA&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=&NumMarineSeasonality=6&HasCA=1)

Supplementary advice on the conservation objectives for Essex Estuaries SAC can be viewed at:

<https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK0013690&SiteName=essex%20estuaries&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=>

For Ramsar sites, a decision has been made by Defra and Natural England not to produce Conservation Advice packages, instead focussing on the production of Conservation Objectives. As the provisions on the Habitats Regulations relating to Habitat Regulations Assessments extend to Ramsar sites, Natural England considers the Conservation Advice packages for the overlapping European Marine Site designations to be, in most cases, sufficient to support the management of the Ramsar interests. However, for the purposes of this assessment it is important to note that the qualifying features of the Blackwater Estuary Ramsar site and the Colne Estuary Ramsar site include assemblages of rare, vulnerable or endangered wetland plants and invertebrates that qualify under Ramsar criterion 2. These assemblages are not qualifying features of the equivalent SPA designations, or of the Essex Estuaries SAC. Ramsar Information Sheets for each site, available on the JNCC website, list species in the assemblages and give other details of the designation.

The Ramsar Information Sheet for the Blackwater Estuary Ramsar site can be viewed at:

<http://jncc.defra.gov.uk/pdf/RIS/UK11007.pdf>

The Ramsar Information Sheet for the Colne Estuary Ramsar site can be viewed at:

<http://jncc.defra.gov.uk/pdf/RIS/UK11015.pdf>

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

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

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

Conclusion:

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

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

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

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

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

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

C2.1 Risk of Significant Effects Alone

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

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

Some of the qualifying features considered in this assessment occupy similar ecological niches and share ways in which they might be sensitive to the access proposals. To avoid repetition and improve the clarity of this assessment we have grouped the qualifying features as shown in Table 6 below.

Table 6. Feature groups

Feature group	Qualifying feature(s)
Birds breeding on shingle/ sand	Ringed plover and little tern (both breeding)
Breeding pochard	Pochard (breeding)
Non-breeding brent goose	Dark-bellied brent goose (non-breeding)
Non-breeding waterbirds	Grey plover; black-tailed godwit; dunlin; redshank; waterbird assemblages (all non-breeding)
Non-breeding hen harrier	Hen harrier (non-breeding)
Subtidal sandbanks	Sandbanks which are slightly covered by seawater all the time
Intertidal mudflats and sandflats	Mudflats and sandflats not covered by seawater at low tide
Saltmarsh	<i>Salicornia</i> and other annuals colonising mud and sand; <i>Spartina</i> swards; Atlantic salt meadows; Mediterranean and thermo-Atlantic halophilous scrubs
Estuaries	Estuaries
Wetland plant assemblages	Wetland plant assemblages
Wetland invertebrate assemblages	Wetland invertebrate assemblages

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

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

Table 7. Assessment of likely significant effects alone

Feature group	Relevant pressure	Sensitivity to coastal access proposals	Assessment of risk to site conservation objectives	LSE alone?
Birds breeding on shingle/ sand	Disturbance of nesting, feeding or resting birds	Birds and their nests in the vicinity of the Coast Path or in the coastal margin may be disturbed by recreational activities including walking and walking with a dog. Sparsely vegetated shingle/ sand is often close to beaches popular for recreation during the summer, which puts these species at increased risk.	Localised risk. In the Colne Estuary SPA, the limited areas of suitable breeding habitat for these species mainly lie in the coastal margin of this Coast Path stretch, particularly around the mouth of the estuary. Most of these areas are readily accessible and close to beaches that tend to attract recreational visitors during the nesting season.	Yes
Breeding pochard	Disturbance of nesting, feeding or resting birds	Birds and their nests in the vicinity of the Coast Path or in the coastal margin may be disturbed by recreational activities including walking and walking with a dog. Breeding pochard are shy and nest in dense vegetation around freshwater or brackish waterbodies.	Localised risk. There is some suitable breeding habitat near the proposed route, including some near where new access is proposed. The majority of this is inland of the trail and not within spreading room.	Yes
Non-breeding brent goose	Disturbance of feeding or resting birds	Birds feeding or resting in the vicinity of the Coast Path or in the coastal margin may be disturbed by recreational activities including walking and walking with a dog.	Low to high risk. The level of risk is higher where the access proposals are likely to bring people close to places on which large numbers of birds depend, such as key roost sites and important feeding areas.	Yes
Non-breeding brent goose	Loss of supporting habitat through installation of access management infrastructure	Supporting habitat may be permanently lost due to installation of new access management infrastructure, leading to reductions in species population size or distribution.	Low risk, as little infrastructure is proposed for this stretch. Loss of extent of supporting habitat is estimated in part D.	Yes

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

Feature group	Relevant pressure	Sensitivity to coastal access proposals	Assessment of risk to site conservation objectives	LSE alone?
Non-breeding waterbirds	Disturbance of feeding or resting birds	Birds feeding or resting in the vicinity of the Coast Path or in the coastal margin may be disturbed by recreational activities including walking and walking with a dog.	Low to high risk. The level of risk is higher where the access proposals are likely to bring people close to places on which large numbers of birds depend, such as key high tide roost sites and important feeding areas.	Yes
Non-breeding waterbirds	Loss of supporting habitat through installation of access management infrastructure	Supporting habitat may be permanently lost due to installation of new access management infrastructure, leading to reductions in species population size or distribution.	Low risk, as little infrastructure is proposed for this stretch. Loss of extent of supporting habitat is estimated in part D.	Yes
Non-breeding waterbirds	Disturbance during the breeding season	Non-breeding waterbird species that are at least partially resident and breed within or near the SPAs in the vicinity of a coastal path may be disturbed during the breeding season, resulting in reduced recruitment to the passage/ overwintering population. On this stretch the two main component species of non-breeding waterbird assemblages that fall into this category are ringed plover and redshank. Breeding ringed plover is a stand-alone SPA feature, so is considered separately (see above). But breeding redshank is not, so is considered further here.	Localised low risk. The available evidence suggests that, despite marked declines in recent decades, the local breeding population of redshank may still be large enough to contribute significantly to the non-breeding populations of both SPAs. Therefore the risk that the access proposals could result in increased disturbance to breeding redshank requires further assessment.	Yes
Non-breeding hen harrier	Disturbance of feeding or resting birds	Birds hunting or roosting in the vicinity of the Coast Path or in the coastal margin may be disturbed by recreational activities including walking and walking with a dog.	Localised low risk. The small number of hen harriers overwintering around the Colne and Blackwater estuaries range widely over coastal wetland and adjacent open farmland. This stretch includes some proposed new access in areas of potentially suitable habitat.	Yes

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

Feature group	Relevant pressure	Sensitivity to coastal access proposals	Assessment of risk to site conservation objectives	LSE alone?
Subtidal sandbanks	Trampling or other physical damage from recreational activities	If close to the Coast Path, areas of this feature in the uppermost parts of the subtidal zone (so only submerged under a few cm of water during spring low tides) might be damaged by walkers or their dogs wading seaward of the trail.	No appreciable risk. All areas of this feature lie below Mean Low Water and are therefore beyond the seaward limit of any increased access rights in the coastal margin. On this stretch the feature is well separated from the proposed route by extensive intertidal flats and saltmarshes that are unsuitable for access on foot - so access will be excluded by direction - or are restricted under MoD byelaws.	No
Intertidal mudflats and sandflats	Trampling or other physical damage from recreational activities	If the Coast Path crosses intertidal flats, or the feature is included in spreading room between the trail and Mean Low Water, trampling by walkers could damage the feature’s structure, or its fauna and flora. However, all sub-features of intertidal flats present along this stretch have low sensitivity to trampling.	No appreciable risk. The proposed route is not aligned across intertidal flats at any point. No intertidal flats are within spreading room in the coastal margin, either because they are unsuitable for public access on foot and will be excluded by direction, or because they are subject to MoD byelaws.	No
Saltmarsh	Trampling or other physical damage from recreational activities	If the Coast Path crosses saltmarsh, or the feature is included in spreading room, then trampling by walkers could damage the feature, changing its structure and species composition. Some saltmarsh plant communities are more sensitive to trampling than many terrestrial vegetation types.	Localised low risk, no appreciable risk elsewhere. The proposed route is aligned inland of the saltmarsh zone throughout, generally along the top of a seabank, and does not cross saltmarsh at any point. In addition, nearly all the saltmarsh in the coastal margin is not within spreading room, either because it is subject to MoD byelaws, or because it is unsuitable for public access on foot and so will be excluded by direction. But (i) there are two saltmarsh areas totalling about 1.4 ha that are registered common land; and (ii) at Colne Point saltmarsh scrub and other upper saltmarsh communities in the	Yes

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

Feature group	Relevant pressure	Sensitivity to coastal access proposals	Assessment of risk to site conservation objectives	LSE alone?
			transition zone with sand/shingle are quite easily accessible on foot.	
Saltmarsh	Loss of feature extent through installation of access management infrastructure	Areas of saltmarsh may be permanently lost due to the installation of new access management infrastructure (eg signage, bridges, gates, and surfacing).	No risk, because on this stretch no new access management infrastructure is proposed on saltmarsh.	No
Estuaries	Trampling or other physical damage from recreational activities	The SAC ‘estuaries’ feature has 12 sub-features, 7 intertidal and 5 subtidal, though not all are present on this stretch. The subtidal sub-features are very unlikely to be sensitive to changes in access on foot. The intertidal ones comprise the saltmarsh and intertidal flats considered above.	As summarised above for subtidal sandbanks, intertidal flats and saltmarsh. Significant effects on saltmarsh as a result of trampling or other physical damage from recreational activities cannot be ruled out at this stage of the assessment and so are taken forward for further consideration in Part D.	Yes
Wetland plant assemblages	Trampling, and cutting to maintain the trail.	If the Coast Path crosses habitats that support assemblage species, or such habitats are included within spreading room either side of the trail, then trampling by walkers could damage some species. Regular cutting to keep the trail open could also damage species occurring on or immediately adjacent to it.	Low risk. The nationally scarce species in the plant assemblages of the Blackwater Estuary and Colne Estuary Ramsar sites grow in a variety of coastal habitats including saltmarsh and transitions to vegetated sand/shingle, grazing marsh, seabanks, and the foldings immediately inland of them. These plant species vary considerably in their sensitivity to trampling or cutting.	Yes
Wetland plant assemblages	Loss of supporting habitat through installation of access	The supporting habitats of the features may be permanently lost due to installation of new access management infrastructure.	Low risk. The level of risk is higher where there is a permanent and irreversible loss of the extent of supporting habitat which assemblage species depend on.	Yes

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

Feature group	Relevant pressure	Sensitivity to coastal access proposals	Assessment of risk to site conservation objectives	LSE alone?
	management infrastructure			
Wetland invertebrate assemblages	Damage to habitats supporting assemblage species caused by trampling, and by cutting to maintain the trail	If the Coast Path runs through habitats of particular importance for assemblage species, or such habitats are included within spreading room, then trampling by walkers or regular cutting to keep the trail open may change the habitat structure or species composition and so cause local population declines of sensitive species.	Low risk. The invertebrates listed on Ramsar Information Sheets for the Blackwater Estuary and Colne Estuary Ramsar sites are a mix of species of grazing marsh, upper saltmarsh or sand/ shingle, and more ‘generalist’ species found in a variety of coastal habitats.	Yes
Wetland invertebrate assemblages	Loss of supporting habitat through installation of access management infrastructure	Areas of supporting habitats may be permanently lost due to installation of new access management infrastructure.	Low risk. The level of risk is higher where there is a permanent and irreversible loss of the extent of supporting habitat which assemblage species depend on.	Yes

This table lists the identified features, the pressure exerted by the proposals and the explanation of the sensitivity to this pressure, together with an assessment of the risk caused by this pressure and whether it is enough to cause a ‘likely significant effect’ on that feature.

Conclusion:

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

- Birds breeding on shingle/ sand (little tern; ringed plover)
- Breeding pochard
- Non-breeding brent goose
- Non-breeding waterbirds (grey plover; black-tailed godwit; dunlin; redshank; waterbird assemblages)
- Non-breeding hen harrier
- Saltmarsh (*Salicornia* and other annuals colonising mud and sand; *Spartina* swards; Atlantic salt meadows; Mediterranean and thermo-Atlantic halophilous scrubs), for the pressure ‘trampling or other physical damage from recreational activities’
- Estuaries, for the pressure ‘trampling or other physical damage from recreational activities’ on the saltmarsh sub-feature only
- Wetland plant assemblages
- Wetland invertebrate assemblages

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

- Subtidal sandbanks
- Intertidal mudflats and sandflats
- Saltmarsh (*Salicornia* and other annuals colonising mud and sand; *Spartina* swards; Atlantic salt meadows; Mediterranean and thermo-Atlantic halophilous scrubs), for the pressure ‘loss of feature extent through installation of access management infrastructure’

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

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

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

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

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

Conclusion:

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

- Subtidal sandbanks
- Intertidal mudflats and sandflats
- Saltmarsh (*Salicornia* and other annuals colonising mud and sand; *Spartina* swards; Atlantic salt meadows; Mediterranean and thermo-Atlantic halophilous scrubs), for the pressure ‘loss of feature extent through installation of access management infrastructure’.

C3. Overall Screening Decision for the Plan / Project

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

In light of sections C1 and C2 of this assessment above, Natural England has concluded:

As the plan or project is likely to have significant effects (or *may* have significant effects) on some or all of the Qualifying Features of the European Site(s) ‘alone’, further appropriate assessment of the project ‘alone’ is required.

PART D: Appropriate Assessment and Conclusions on Site Integrity

D1. Scope of Appropriate Assessment

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

The Sites and the Qualifying Features for which significant effects (whether ‘alone’ or ‘in combination’) are likely or cannot be ruled out and which are initially relevant to this appropriate assessment are listed in Table 8.

Table 8. Scope of Appropriate Assessment

Environmental pressure	Qualifying Feature(s) affected *	Risk to Conservation Objectives
Disturbance of feeding or resting birds during the winter or passage periods	Non-breeding brent goose ^{1,2,3,4} Non-breeding waterbirds ^{1,2,3,4} (grey plover ^{1,2} ; black-tailed godwit ^{1,2} ; dunlin ^{1,2} ; redshank ^{3,4} ; waterbird assemblages ^{1,2,3,4}) Non-breeding hen harrier ^{1,3}	Repeated disturbance to foraging or resting birds during winter and on passage, following changes in recreational activities as a result of the access proposal, may lead to reduced fitness and reduction in population and/or contraction in the distribution of qualifying features within the site.
Disturbance of nesting, feeding or resting birds during the breeding season	<u>Birds breeding on shingle/ sand</u> ^{1,3} (ringed plover ^{1,3} ; little tern ^{1,3}) Breeding pochard ^{1,3} <u>Non-breeding waterbirds</u> ^{1,2,3,4} (for features redshank ^{3,4} ; waterbird assemblages ^{1,2,3,4})	Repeated disturbance to birds during the breeding season, following changes in recreational activities as a result of the access proposal, may lead them to abandon nesting areas or reduce their breeding success (for example by causing eggs to become chilled, reducing food supply to chicks, or increasing the vulnerability of eggs, chicks or adults to predation). Disturbance to breeding redshank may reduce recruitment to the non-breeding (passage/overwintering) population.
Trampling or other physical damage from recreational activities or cutting to maintain the trail	<u>Saltmarsh</u> ^{2,4,5} (<i>Salicornia</i> and other annuals colonising mud and sand ^{2,4,5} ; <i>Spartina</i> swards ^{2,4,5} ; Atlantic salt meadows ^{2,4,5} ; Mediterranean and thermo-Atlantic halophilous scrubs ^{2,4,5}) Estuaries ⁵ (saltmarsh sub-feature only) Wetland plant assemblages ^{2,4} Wetland invertebrate assemblages ^{2,4}	Repeated trampling, following changes in recreational activities as a result of the access proposal, may damage sensitive habitats, plant communities or species, leading to long-term declines in their quality, distribution or numbers within the site. Types of possible effect include physical changes to habitats (for example through compaction of the substrate), shifts in the species composition of plant

Environmental pressure	Qualifying Feature(s) affected *	Risk to Conservation Objectives
		communities, and reductions in species’ population size or distribution. Regular cutting could have similar effects on species that occur on or immediately adjacent to the trail.
Loss of species’ supporting habitat through installation of access management infrastructure	Non-breeding brent goose ^{1,2,3,4} <u>Non-breeding waterbirds</u> ^{1,2,3,4} Wetland plant assemblages ^{2,4} Wetland invertebrate assemblages ^{2,4}	The installation of access management infrastructure may lead to a permanent loss of extent within the site of habitats that support bird, plant or invertebrate species that are qualifying features.

Notes:

* Feature groups are underlined. At first mention, their constituent features are listed in brackets.

- ¹ Blackwater Estuary SPA feature or feature group
- ² Blackwater Estuary Ramsar site feature or feature group
- ³ Colne Estuary SPA feature or feature group
- ⁴ Colne Estuary Ramsar site feature or feature group
- ⁵ Essex Estuaries SAC feature or feature group

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

Non-breeding birds

One of the factors we take into account when developing proposals for the alignment of the England Coast Path is the potential for disturbance to waterbirds, particularly when the birds are qualifying features of coastal SPAs and Ramsar sites. This is clearly an important consideration on this stretch of the Coast Path, which runs close to the boundaries of the Blackwater Estuary and Colne Estuary SPAs and Ramsar sites, both of which have non-breeding waterbird assemblages and dark-bellied brent goose as qualifying features. In addition, four wader species are non-breeding qualifying features: redshank on the Colne and grey plover, dunlin and black-tailed godwit on the Blackwater. Natural England has published Supplementary Advice on Conservation Objectives for all these features [Ref 20, Ref 21].

With one exception, conservation advice on the non-breeding waterbird features of both SPAs sets ‘maintain’ (rather than ‘restore’) targets for population size, as numbers have not declined significantly since site classification and there is no evidence of declines that do not mirror broader trends at a regional or national level, indicative of a site-specific problem. The exception is brent goose on the Colne Estuary where there has been a 27 % decline since classification [Ref 21]. But from recent BTO analyses of trends in WeBS core count data

(‘WeBS Alerts’) the numbers of brent geese overwintering on the Colne appear to be more or less tracking the regional and British trends, suggesting environmental conditions on the SPA remain relatively favourable for the species [Ref 29].

Nevertheless there are clear indications from the recent WeBS Alerts analyses that non-breeding waterbirds are faring less well on the Colne Estuary than on the Blackwater. For example, of the 30 species for which analyses have been carried out for both SPAs, 14 species (47%) show a decline of 50% or more between the winters of 1991/92 and 2016/17 on the Colne, compared to three (10%) on the Blackwater. Similarly the SPA waterbird assemblage on the Blackwater increased by 18% over that 25 year period, compared with a decline of 26% on the Colne [Ref 29]. These differences might partly be due to less consistent WeBS coverage on the Colne but that is unlikely to be the main reason because the BTO’s analyses take into account the effect of missing and incomplete counts.

Non-breeding hen harrier is also a qualifying feature of both SPAs. And in both cases the sites’ conservation advice sets ‘restore’ targets for the species’ population size due to reductions in numbers since classification. Those declines reflect larger-scale reductions in the species’ overwintering numbers at regional and national level, which may be at least partly due to illegal persecution of hen harriers nesting in the uplands of northern England. From summary information in recent Essex Bird Reports, typically just one or two hen harriers have been recorded overwintering around the Blackwater and Colne estuaries in recent years. Definite totals of more than three on any of the Essex Coast SPAs are now unusual.

Different parts of this Coast Path stretch vary in their susceptibility to increased disturbance caused by recreational activity. On the west side of the Colne Estuary north of Mersea Island, a large area of saltmarsh, grazing marsh and mudflats lies within the MoD Fingringhoe Ranges training area, where no public access is allowed. But elsewhere on the Colne, birds are probably somewhat more susceptible to recreational disturbance than on the Blackwater. This is because the Colne is a smaller estuary with a greater density of towns and villages around it, and with a higher proportion of its intertidal mudflats – the key feeding habitat for many species - relatively close to seabanks with current or potential public access [Ref 22].

Restricting disturbance at major high tide roosts is important, particularly if there are no suitable alternative roost sites nearby, because these roosts are used by large numbers of birds ‘commuting’ to and from much larger foraging areas. Most waders and some wildfowl are considered more vulnerable to disturbance at high tide, when available habitat is greatly reduced and many birds roost on or just above the waterline. From summary maps produced by Panter and Liley [Ref 22] many of the major roost sites along this Coast Path stretch are on offshore islets or near the outer edges of large blocks of saltmarsh, well over 100 m from the nearest seabank footpaths and so less susceptible to land-based recreational disturbance. But these roosts are still vulnerable to disturbance by watercraft (particularly types like jet-skis, canoes and kite-surfboards that can operate in shallow water) and by low-flying paramotors (powered hang-gliders) and helicopters. Bird disturbance from these watercraft and aircraft has increased noticeably in parts of this stretch over the last decade or so.

Functionally linked land (supporting habitat lying outside SPA boundaries) is important for several wader species, such as lapwing, golden plover and curlew, and especially important for brent geese. Historically, most brent geese fed in the intertidal zone on eelgrass (*Zostera* spp.) and green marine algae on intertidal mud, and on saltmarsh plants. However, there has been a widespread decline in eelgrass, which is now very rare in the Blackwater and absent from the Colne, so no longer a significant food source in these SPAs. Brent geese wintering on the east coast now appear to be largely dependent on winter wheat and barley, oil seed rape, grass fields and amenity grasslands. Both SPAs on this stretch include some grazing marsh and improved grassland for brent geese but winter cereal fields beyond their boundaries are important feeding areas, particularly in late winter when food resources in the intertidal zone are depleted [Ref 28]. The amount of open farmland suitable for brent geese is more restricted around the Colne Estuary than the Blackwater.

The two managed realignment sites on this stretch (at EWT's Abbots Hall Farm reserve on the Blackwater and the Trust's Fingringhoe Wick reserve on the Colne) are particularly important areas of functionally linked land, providing undisturbed feeding and roosting habitat just outside the SPA boundaries for a wide variety of waders and wildfowl.

Conservation advice on each SPA [Ref 20, Ref 21] defines the months when significant numbers of each qualifying bird species are likely to be present in a typical year, based on analyses of WeBS data for the site. The various non-breeding bird features differ somewhat in their seasonal occurrence. For example, significant numbers of brent geese are present on the Blackwater from October to April, and on the Colne from October to March, whereas significant numbers of black-tailed godwit and redshank are present from August to April (on the Blackwater and Colne respectively), with some redshank staying on to breed. Peak numbers of these waders can occur in the autumn migration period, rather than during the winter. Advice is not provided on the seasonality of the two SPA's waterbird assemblages, but as both include long-staying species like redshank and black-tailed godwit among their main component species, these assemblage features should probably be considered as potentially sensitive for a similar period. Hen harriers are typically present from September to April.

Redshank and ringed plover are main component species of the non-breeding waterbird assemblages of both SPAs which are partially resident, with some birds staying on through the summer to nest. So for these species, increased disturbance to the breeding population as a result of changes in recreational access could have a knock-on effect on the size of the non-breeding population, through reduced recruitment of young birds or increased adult mortality during the nesting season. Breeding ringed plover is a feature of both SPAs and is considered as such (see 'Breeding birds' below). But breeding redshank is not, so context related to the possible risk to the non-breeding population from disturbance during the breeding season is provided here. The scale of that risk largely depends on the relative sizes of the breeding and non-breeding populations.

In 1993 the RSPB surveyed redshank breeding on saltmarshes at several sites along the Essex Coast [Ref 4] and estimated the numbers of breeding pairs as 131 on the Blackwater Estuary and 179 - 225 on the Colne. Additional pairs are likely to have nested on grazing marshes in and around both SPAs. From BTO WeBS core count data, annual peak numbers

of non-breeding redshank for these two SPAs normally occur either in the autumn passage period or later in the winter. The average peak counts for the five years preceding the 1993 breeding surveys (1988/89 - 1992/93) are 1,534 for the Blackwater and 1,282 for the Colne [Ref 7]. Those figures suggest that in 1993 the breeding population represented at least 17% of the average peak non-breeding number for the Blackwater, and at least 28% for the Colne. These are clearly significant proportions, though ringing recoveries show that some locally bred birds move south for the winter [Ref 28].

There is much less information on the numbers of redshank nesting on saltmarsh around the Blackwater and Colne estuaries since 1993. What there is indicates a marked decline, which is reflected at county and national levels [Refs 5, 14, 28]. Repeat surveys of two saltmarsh areas on this stretch - Ray Island and Colne Point - suggest a 35% decline between 1996 and 2011 [Ref 13] equivalent to roughly 3% per year. Repeat surveys of three Essex saltmarshes between 1985 and 2011 also show a decline of about one pair per km² per year, roughly equivalent to 2% annually and similar to the national trend [Ref 14]. In Essex, the decline is probably mainly the result of sea-level rise reducing the area of suitable mid/upper zone saltmarsh and increasing inundation of nests during high spring tides [Ref 28], so it is probably continuing. Assuming a 2 - 3% annual decline continued to 2020, the number of pairs breeding on saltmarsh on the Blackwater and Colne would now be down to 50 - 60% of their 1993 populations. But those indirect estimates of current breeding numbers do not include birds nesting on grazing marshes and still represent about 13 - 16% of the most recent five-year average of peak WeBS counts of the non-breeding population for the Colne Estuary, and about 4% for the Blackwater.

On the Salcott to Jaywick stretch, the main concentrations of breeding redshank are likely to be on the extensive saltmarsh and grazing marsh within the MoD’s Fingringhoe Ranges training area, which still holds 20 to 30 pairs [Ref 9]. There are very few recent records of breeding from other areas of grazing marsh on the stretch [Ref 5] so most of the remaining pairs outside the MoD land are probably on the larger saltmarshes which still have some areas high enough to escape regular inundation during spring tides. These are the Abbots Hall Saltings and realignment site, Copthall Saltings, Ray Island and Bonner’s Saltings, Upper Pyefleet Channel, Aldboro Point, Brightlingsea and Flag Creeks including Cindery Island, and Colne Point.

Breeding birds

Of the three breeding species that are SPA qualifying features, two – ringed plover and little tern – share the same sparsely-vegetated coastal sand/ shingle /shell nesting habitat, so are treated as one feature group in this HRA. Conservation advice for both SPAs defines their sensitive periods as May to August for little tern and April to September for ringed plover. These breeding species are more vulnerable to disturbance than the other SPA features because the nesting season largely coincides with the summer holiday period and their sand/shingle nesting habitat is often on or close to beaches popular for seaside recreation. This is particularly true along the Essex coast, where stretches of sand/shingle beach are limited, so they are often heavily used by the public.

Breeding populations of both species have suffered marked declines at national and county levels since the 1980s. The declines are thought to have been driven largely by increased disturbance due to recreational use of the coast, along with sea level rise (causing more frequent flooding of nesting areas during high spring tides) and increased predation [Ref 28]. As well as reducing breeding success directly, disturbance by humans or dogs can act synergistically with predation. This is because nests can be easier for predators to locate if adults are flushed off them repeatedly, and the unattended eggs or chicks may be more vulnerable.

On both SPAs, breeding ringed plover have declined markedly since classification: from estimated base-line populations in the late 1980s/ early 1990s of around 50 pairs on each SPA [Ref 20, Ref 21] to 26 on the Colne and five on the Blackwater in 2007 (when a national survey was carried out), to just five pairs recorded from the Colne and none from the Blackwater in 2017 (though coverage was incomplete) [Ref 5]. Little tern has suffered a similarly dramatic decline on the Colne from a baseline population of about 40 pairs to between zero and eight pairs since 2013, few of which have reared young [Ref 5]. On the Blackwater the baseline population of little terns was only five pairs at SPA classification, not much above recent years. But in the interim the population rose to a maximum of 130 pairs in 2001 before crashing over the following few years [Ref 5]. Little terns nest colonially and rapid changes in the size and location of colonies are characteristic in Essex [Ref 28].

Due to their recent declines and high susceptibility to disturbance, conservation advice for both these breeding species on the Colne and Blackwater Estuary SPAs defines the target for the attribute “disturbance due to human activity” as: “Reduce the frequency, duration and / or intensity of disturbance affecting roosting, nesting, foraging, feeding, moulting and/or loafing birds so that they are not significantly disturbed.” This is more stringent than the equivalent target for most other SPA features, which is to “restrict” rather than “reduce” disturbance.

On both SPAs, ringed plover and little tern nesting habitat is limited to a few areas mainly near the mouths of the estuaries, where strong tidal currents and wave action lead to coarser material accumulating on the shoreline, rather than fine silt. The part of the Blackwater Estuary adjacent to this Coast Path stretch (the north sides of the Salcott and Ray Channels) has very little sand or shingle. Essex Bird Reports do not mention any breeding records for either species within 500 m of it since 2000. The nearest is of ringed plovers nesting on an island 600 m to the south off West Mersea.

On the Colne Estuary, the long sand and shingle ridge near the east side of the estuary mouth provides by far the largest area of suitable nesting habitat for both species. Most of this lies within the Colne Point EWT reserve, which forms part of the Colne Estuary NNR. In the 1980s the reserve supported a colony of little terns which peaked at 77 pairs in 1985 [Ref 28]. The size of the colony fluctuated subsequently but hit another peak of at least 54 pairs in 2004 before declining to 10 - 20 pairs between 2006 and 2012 and less than 10 since then [Ref 5]. There have been no breeding attempts in several recent years. Human disturbance, predation, sea-level rise and habitat changes may all have contributed to the decline. From records summarised in Essex Bird Reports, each year between 2000 and 2010 the Colne Point reserve held at least 75% of the Colne’s little tern pairs. But since then

it has held no more than 50% of the SPA’s much reduced population. In the last few years EWT has renewed efforts to attract little terns to nest on the reserve using measures including decoys, small-scale habitat modification (reducing vegetation on some high areas of sand/shingle), low rope fences and wardening. Elsewhere on the Colne, a few pairs of little terns have attempted to nest on smaller areas of sand/shingle mainly on the east side of the estuary south of Brightlingsea over the last decade [Ref 5]. But those locations are not reserves and are busier and more vulnerable to disturbance than Colne Point.

Breeding ringed plover shows a similar distribution to little tern on the Colne Estuary but numbers have fluctuated less dramatically and declined less steeply, both on the Colne Point EWT reserve and across the whole SPA. A national survey in 2007 recorded at least 20 pairs at Colne Point and six at other locations on the SPA [Ref 5]. Records for other years between 2000 and 2017, when coverage was less comprehensive, show the number of breeding pairs at Colne Point varying from 20-25 to 3, with signs of a gradual decline. But they indicate that the reserve still supported 60 to 90% of the SPA’s breeding pairs in nearly every year during this period.

Breeding pochard are less susceptible to disturbance than little terns or ringed plovers because they nest in dense vegetation around freshwater or slightly brackish waterbodies. The majority of the breeding population on both SPA’s nest around fleets, ponds and ditches in the main areas of grazing marsh. From records in Essex Bird Reports [Ref 5], on the Blackwater the species’ stronghold is the Old Hall Marshes RSPB reserve, which is south of the Salcott Channel and well separated from this Coast Path stretch. On the Colne, a combination of published and unpublished records indicate that the large majority nest on the MoD Fingringhoe Ranges training area [Ref 9]. But on both SPAs a few pairs use suitable habitat elsewhere, including wide borrow dykes with fringing vegetation just behind seabanks where they may be at greater risk of disturbance, particularly from dogs off the lead.

Estimated baseline populations for breeding pochard at SPA classification are 39 and 2 pairs for the Blackwater and Colne respectively [Ref 20, Ref 21]. But the latter is probably a considerable underestimate because unpublished records from the Fingringhoe Ranges MoD land were not included. From Essex Bird Reports, numbers on the Blackwater have fluctuated since classification but have not shown a significant decline. On the Colne, in the period 2003 to 2011 (for which we have annual estimates from the Fingringhoe Ranges) the number of pairs recorded varied from 12 to 25, with between 79% and 100% of those on the MoD land. Advice on conservation objectives for both SPAs sets ‘maintain’ targets for breeding pochard abundance. There is some evidence that when numbers have been low in some recent summers, including on the Fingringhoe Ranges [Ref 9], dry weather causing low water levels at nesting locations has been an important contributory factor.

Saltmarsh and wetland plant assemblages

In this HRA, the four Essex Estuaries SAC saltmarsh features are considered together as one feature group (see Table 5). Of these, H1320 ‘*Spartina* swards’ is rare along this Coast Path stretch and only occurs as individual plants or small clumps of *Spartina maritima* scattered among other species in mid to upper zone saltmarsh. (Stands of the invasive hybrid *Spartina anglica*, are not considered to be part of this SAC feature but in several places are becoming the main pioneer saltmarsh community.)

The other three SAC saltmarsh types are at least locally abundant along the stretch. The great majority of the saltmarsh is H1330 ‘Atlantic salt meadows’ which covers large areas, particularly at the Abbots Hall, Bonner’s and Geedon saltings, the upper Pyefleet Channel, and Colne Point. H1310 ‘*Salicornia* and other annuals colonising mud and sand’ is pioneer saltmarsh growing lower down the intertidal zone beyond the seaward edge of H1330 and along channel and creek edges.

H1420 ‘Mediterranean and thermo-Atlantic halophilous scrubs’ (Mediterranean saltmarsh scrub) is much more localised. Along most of the stretch it only occurs as occasional small stands of shrubby seablite *Suaeda vera* on upper or transitional saltmarsh close to or on the seaward slopes of seabanks. But the Colne Point EWT reserve supports one of the largest, most species-rich and least damaged areas of saltmarsh scrub in the SAC. Here it mainly forms bands of varying width on the firmer substrates between the crest of the sand/shingle ridge and the lower-lying Atlantic salt meadow to landward. These extend for almost 4 km from near Sandy Point to the southeast boundary of the reserve, and continue east beyond that to St Osyth Beach as smaller, scattered patches.

All four types of saltmarsh are more sensitive to trampling than many terrestrial vegetation communities. The effects include changes in vegetation structure and species composition, often resulting in a shorter, less diverse sward with more bare ground and greater susceptibility to erosion or colonisation by invasive *S. anglica*.

The relative susceptibilities to trampling damage of the different saltmarsh communities depend as much on where they grow as on the intrinsic sensitivity of their constituent species. Mediterranean saltmarsh scrub is probably the most at risk, simply because it is relatively rare and the largest stands are on quite firm substrates close to sand/shingle beaches popular with the public. On the Colne and Blackwater estuaries and the Dengie peninsular, stands at East and West Mersea and north of Sales Point all show obvious trampling damage, including multiple desire-line paths. Trampling damage currently affects a much smaller proportion of the extent of other SAC saltmarsh types. It mainly occurs in localised areas, often where coastal footpaths become very muddy after frequent use, so walkers skirt round them onto adjacent upper saltmarsh. But the resulting localised trampling damage is much easier to address than the major systemic threats to saltmarsh: sea-level rise and coastal squeeze.

Ramsar Information Sheets for the Blackwater Estuary and Colne Estuary Ramsar sites list 15 and 12 nationally scarce species respectively in their wetland plant assemblages. Updated lists (taking into account new records, local extinctions and changes in national

status) give totals of 16 and 18 nationally scarce species. Of these, 14 are common to both sites and at least 16 have been recorded along this Coast Path stretch [Ref 1, Ref 26 and unpublished records]. Half of those are saltmarsh species and, like the communities they occur in, are quite sensitive to trampling. They include *Spartina maritima* and *Suaeda vera* (key component species of H1320 *Spartina* swards and H1420 Mediterranean saltmarsh scrub respectively) and six other nationally scarce species mainly found in the upper to mid zone of Atlantic salt meadows, sometimes within a few metres of seabanks. As a result of sea level rise and coastal squeeze some now grow on the seaward slopes of the sea defences. Several are mainly found where there is a relatively high content of sand or shingle. In Essex the two most localised species - rock sea-lavender *Limonium binervosum* and sea-heath *Frankenia laevis* - are now more or less confined to Colne Point, in and around areas of saltmarsh scrub.

Most of the remaining assemblage members cannot tolerate regular flooding with sea water and so are mainly restricted to areas inland of seabanks. The majority require brackish, relatively open ground and are often found on the foldings behind seabanks or on their landward slopes, particularly where there is some seepage through the sea defences. These species benefit from some ground disturbance (for example by livestock or farm vehicles) to create bare patches and they can tolerate some trampling. A few other assemblage species are mainly found further inland on brackish grazing marshes or in their ditch systems.

Wetland invertebrate assemblages

Information Sheets for the Blackwater Estuary and Colne Estuary Ramsar sites list 16 and 38 Red Data Book (RDB) species respectively in the sites’ wetland invertebrate assemblages. The assemblages are similar (13 species are on both lists) and more recording effort for some invertebrate groups on the Colne is a possible reason for that site’s longer list. But the greater area and variety of habitats on coarser sediments around the Colne is also likely to be a contributory factor, as its assemblage includes more species characteristic of sand/shingle. Recent surveys have found additional RDB and nationally scarce species in a variety of habitats on both sites.

Species of saltmarsh and transitional brackish marsh are the main component of both Ramsar site assemblages. They include species found on saltmarsh or moderately brackish grazing marsh. Other smaller components are species of freshwater habitats (reflecting the least brackish areas of grazing marsh) and early successional sand or chalk (reflecting the sand/shingle habitats).

Habitats that are particularly important for scarce coastal invertebrates [Ref 12] include:

- Mid-upper zone and drift line saltmarsh, especially where it is sheltered and the vegetation is relatively species-rich and structurally complex and includes plants particularly important for invertebrates (such as sea wormwood, sea lavender, golden samphire, shrubby sea-blite and sea rush), and there are transitions to semi-natural freshwater or terrestrial habitats just inland.

- Grazing marsh, especially where there are a good variety of shallow ditches and fleets with abundant emergent vegetation, at a range of successional stages and with a range of salinities from freshwater to brackish.
- Vegetated sand or shingle, especially where there is a mixture of organic debris such as drift wood, leaf litter and seaweed along the strandline and, on higher ground, some patches of bare sand.
- Any habitat with abundant nectar sources, whether on saltmarsh, or on/inland of seabanks.

Between Salcott and Jaywick, the main locations known to be especially important for scarce invertebrates include:

- The unimproved grazing marshes, particularly Langenhoe Marsh on the MoD training area;
- The disused gravel pits and associated habitat mosaic on EWT’s Fingringhoe Wick reserve;
- The areas of shingle and sand, and transitions to sheltered saltmarsh just inland, at EWT’s Colne Point reserve.

The value of coastal habitats for scarce invertebrates depends on the plant species they support and on their physical structure. Increased trampling of areas of upper saltmarsh or vegetated sand/shingle could damage the habitats’ invertebrate communities but is unlikely to be severe or large-scale enough to produce significant effects except in unusual circumstances. For example, significant damage might be caused if important areas of these habitats with limited or no previous access became heavily used as a result of new public access rights.

Other less direct effects of increased access might affect invertebrate communities significantly if they led to changes in the characteristics of important habitats on a large enough scale. For example, if increased recreational access led to demands to ‘tidy up’ sand/shingle areas by removing plants and organic strandline debris, or to allow vehicle access, that would damage invertebrate as well as plant communities. Or if new access rights required changes to the way vegetation on and behind seabanks is managed - such as changes in grazing or cutting - that might also be damaging in some circumstances.

Current levels of use

Current levels and patterns of public use can have an important influence on the potential effects of Coast Path alignment options on qualifying features, particularly in relation to bird disturbance. There are marked differences in public use within and between the six lengths of this stretch, partly due to several large gaps (between 2 km and over 5 km long) in the present network of coastal footpaths. From observations during site visits and from Strava heatmaps², current levels of de facto use are very low on parts of the stretch without public

² Strava is a website and mobile app used to track running, cycling and water-based sports activities via GPS. Users upload workouts and the logged activities include route data. The accumulated information is collated to produce a global ‘heatmap’ which provides a qualitative, graphical summary of how often routes in an area are used. Continued

or permissive paths. Where there are paths, levels of use vary considerably and appear to depend on a variety of factors, in particular the proximity of towns, villages and holiday/caravan parks, as well as car parks, public beaches and other attractors and access points, and the scope for short circular walks.

On the westernmost length from Salcott to Moor Farm, along the northeast part of the Blackwater Estuary (SCJ-1) access to the coast is limited to permissive paths to a few bird hides and viewpoints on EWT’s Abbotts Hall Farm nature reserve, and along about 1.3 km of seabank at Copt Hall Marshes, a National Trust (NT) property. The latter allows dogs and has permissive paths connecting the seabank to a NT car park, so is quite heavily used by dog walkers.

Access to the coast is also limited on the adjacent length running up the west side of the Colne Estuary from the Strood to Fingringhoe (SCJ-2), mainly because the MoD Fingringhoe Ranges training area takes up much of it. The only public access is at either end: about 1.9 km of seabank footpath at the western end of the Pyefleet Channel, and permissive access to EWT’s Fingringhoe Wick reserve. The former gets little use. During opening hours the EWT reserve is popular but wardening and access management, including a no dogs rule over most of the reserve, keeps bird disturbance low.

The northernmost length (SCJ-3, Fingringhoe to Wivenhoe sailing club) is much less rural than the others and has almost continuous public rights of way along both sides of the river. Their levels of use (mainly by residents of Colchester, Wivenhoe and Rowhedge) are generally high and are likely to increase due to new housing developments nearby.

The length covering the east side of the estuary from Wivenhoe to Brightlingsea (SCJ-4) is predominantly rural and has coastal footpaths along much of it, apart from a gap of about 2 km on the south side of Alresford Creek. The existing paths are moderately to heavily used by residents of, and visitors to, both towns. Use is highest close to the residential areas.

The adjacent length between Brightlingsea and Point Clear (SCJ-5) runs around Flag Creek. There are sections about 4 to 4.5 km long on both sides of the creek without seabank footpaths. Where there are public rights of way, levels of use are generally low to moderate due to relative remoteness and limited connectivity, except around Point Clear where the existing coast path is popular with residents and holidaymakers.

The final length, from Point Clear to Jaywick (SCJ-6) has shoreline/ seabank footpaths at both ends, but a gap of about 2.1 km between. For several years there was a permissive seabank path along part of the gap in access south of Point Clear, and some de facto use by local residents continues here. The seabank path at the southeast end of the length has quite high levels of use near Seawick and Jaywick, moderate levels west to Lee-over-Sands, and light use further north.

The large majority of Strava users on foot are likely to be runners rather than walkers, so heatmaps cannot be taken as an accurate guide to patterns of use by typical coastal path users. Nevertheless, from comparisons with our observations during site visits, they can be useful as a rough indication of relative levels of use.

Bird disturbance due to watercraft and aircraft is probably a more serious issue on this stretch than most others on the Essex coast, and has increased over the last decade or two. Aircraft disturbance is mainly from paramotors (powered hang-gliders) and to a lesser extent helicopters, both of which can flush waterbirds over 500 m away, even when flying at several hundred feet. Disturbance by these aircraft is most regularly reported between Abbots Hall Farm EWT reserve and the main channel of the Colne near East Mersea.

A wide variety of recreational watercraft are used on the Colne including sailing boats, power boats, jet-skis, canoes, paddle-boards and wind- and kite-surfboards. Based on the distribution of moorings and access infrastructure (such as pontoons and slipways), observations during site visits, and Strava heatmaps of water-based activity, bird disturbance by watercraft appears to be particularly concentrated around West Mersea and the nearby Strood and Ray channels in the west part of the stretch, and around Brightlingsea, Point Clear and Sandy Point in the east.

Housing growth and the Essex Coast RAMS

This Coast Path stretch includes lengths within Colchester Borough (west of the main channel of the Colne Estuary), and within Tendring District (east of the Colne). These and several other Essex planning authorities covering areas on or close to the coast have new Local Plans at early stages of development. The plans include targets for new housing that would substantially increase the population living within easy reach of the coast over the next 20 years. Recognising that this population increase has the potential to adversely affect the county’s internationally designated coastal sites (SPA, SAC and Ramsar sites) 12 Essex planning authorities have entered into partnership to develop and implement an Essex Coast Recreational disturbance Avoidance & Mitigation Strategy (Essex Coast RAMS). This aims to deliver the mitigation necessary to avoid significant adverse effects from ‘in-combination’ impacts of the residential development that is anticipated across Essex; thus protecting SPAs, SACs and Ramsar sites on the Essex coast from adverse effects on site integrity. The RAMS identifies a programme of strategic mitigation measures which are to be funded by developer contributions from residential development schemes. All new residential developments within evidenced Zones of Influence (Zols) of the coastal sites and where there is a net increase in dwelling numbers are included. Agreed Zols based on visitor survey data for the SPAs considered in this HRA are 22 km for the Blackwater Estuary and 9.7 km for the Colne. Taken together, the 12 authorities are aiming to deliver approximately 80,000 new homes in the next 20 years according to growth set out in their current and emerging Local Plans. This will potentially result in around 190,000 new residents in their combined area (based on a 2.4 person per household average household occupancy) between 2018 and 2038 – the end of the current period of the Essex Coast RAMS [Ref 21]. These estimates of housing growth and numbers of additional residents may well be amended as the Local Plans evolve but give a good indication of the scale of change.

Participating planning authorities are expected to adopt Supplementary Planning Documents before the end of 2020 to implement the Essex Coast RAMS. Public consultation on the draft Essex Coast RAMS SPD [Ref 24] took place in January and February 2020. In November 2017 Natural England provided written advice to the participating authorities that until the implementation phase of the RAMS, an interim protocol should be followed to ensure

consistency and fairness in securing strategic level mitigation for new housing developments within Zols. Recommended elements of this protocol include: (i) collection of appropriate funding for strategic mitigation measures, proportionate to the level of housing development; (ii) a delivery mechanism for these measures and their implementation prior to first occupation of the dwellings; and (iii) a policy in emerging Local Plans setting out how likely recreational disturbance impacts from new residential development will be mitigated, which should include a policy commitment to the production and implementation of the Essex Coast RAMS. In August 2018 Natural England provided further interim advice, including information on revised Zols agreed by the RAMS Steering Group and, for larger scale residential developments falling within Zols, recommendations on appropriate and proportionate measures within the development site - such as high quality green infrastructure with provision for dog walking - to reduce recreational disturbance on European sites nearby. In 2019 the RAMS website ‘Bird Aware Essex Coast’ was launched, adopting the ‘Bird Aware’ branding already in use to publicise messages on the avoidance and mitigation of bird disturbance affecting three SPAs around the Solent, as part of the Solent Recreation Mitigation Partnership.

As part of their new Local Plans, three North Essex planning authorities (Colchester, Tendring and Braintree) have developed the ‘North Essex Authorities Shared Strategic Section 1 Local Plan’ [Ref 3]. This sets out the numbers of additional homes and jobs across the authorities’ combined area needed up to 2033, and highlights key strategic growth locations and the necessary infrastructure to support the planned growth. As of January 2020, the joint strategic plan is under examination by the Planning Inspector. The plan gives minimum numbers of additional homes in the Plan period, which for Colchester and Tendring equate to population increases of roughly 20%. It also identifies locations for three new ‘Garden Communities’, which together would provide at least 5,810 dwellings. The largest of these, on the Colchester/Tendring border east of Colchester town, would lie roughly midway along this Coast Path stretch and within 4 km of the Colne Estuary SPA at its nearest point.

D3. Assessment of potential adverse effects considering the plan or project ‘alone’

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

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

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

In this section of the assessment we describe our overall approach to address the potential impacts and risks from the access proposals.

Disturbance of non-breeding and breeding birds

A key nature conservation issue for this stretch of the Coast Path is the protection of non-breeding birds that are SPA or Ramsar site qualifying features. These occur all along the stretch over the winter and during spring and autumn migration periods. When considering the potential for increased disturbance to birds we focussed attention on: (i) parts of the stretch where we predict appreciable changes in levels of public use as a result of our proposals; and (ii) sensitive locations likely to hold concentrations of birds, such as high tide roost sites and important feeding areas, either within or outside SPA boundaries.

Redshank is a main component species of the non-breeding waterbird assemblages and a non-breeding feature of the Colne Estuary SPA. It also nests in appreciable numbers on saltmarsh and grazing marsh in both SPAs but is not a qualifying feature as a breeding species. So for this species we also considered the risk of indirect impacts on the non-breeding population that could result from increased disturbance during the breeding season.

To assess sensitive locations for bird disturbance, we used BTO WeBS data [Ref 7], observations during site visits, and information compiled by Panter and Liley [Ref 22] or provided to us by site managers, land owners and local birdwatchers, including BTO WeBS counters. Where necessary we carried out some additional bird survey work. To identify parts of the stretch where at least a moderate increase in levels of use appears to be likely we used our own observations, on-line mapping and aerial photography, Strava heatmaps, and information provided by the local access authority, site managers and land owners, or by Panter and Liley [Ref 22]. From this information, we predict only small increases in use above current baseline levels where there is already public or permissive access along this stretch, but at least a moderate increase where new sections of trail are proposed to bridge current gaps in coastal access. Locations where proposed new access might bring walkers closer to concentrations of non-breeding birds are considered in more detail below (see D3.2A to D3.2E).

Any increase in levels of public use near areas where birds are feeding or resting may produce some increase in bird disturbance. But that can vary from occasional, short-term, ‘low cost’ events affecting a few birds (for example increased alertness and a small reduction in feeding rates lasting a few minutes) to major disruption on a regular basis (such as large flocks abandoning a key roost site or feeding area and flying several kilometres to the nearest alternative site).

When assessing whether increases in bird disturbance at a particular location require changes to route alignment or other mitigation measures to ensure there is no adverse effect on site integrity, we have followed the principle that ‘significant’ disturbance - as defined by

the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA) and used in Natural England’s supplementary advice on the conservation objectives for marine SPAs - must be avoided. The definition is: “Disturbance should be judged as significant if an action (alone or in combination with other effects) impacts on (water)birds in such a way as to be likely to cause impacts on populations of a species through either: (i) changed local distribution on a continuing basis; and/or (ii) changed local abundance on a sustained basis; and/or (iii) the reduction of ability of any significant group of birds to survive, breed, or rear their young.”

The potential for disturbance to non-breeding birds is reduced on this stretch because nearly all the intertidal flats and saltmarshes in the coastal margin are unsuitable for public access on foot, so they will be excluded from new coastal access rights on grounds unrelated to nature conservation, or they are within the Fingringhoe Ranges military training area, where public access is restricted under MoD byelaws. As well as intertidal flats and saltmarsh, the restricted MoD land also includes large areas of grazing marsh and reedbed of particular importance for SPA birds.

The potential for changes in coastal access to increase disturbance to the three breeding bird SPA qualifying features on this stretch (ringed plover, little tern and pochard) is more localised than for the non-breeding bird features. But, as explained above, for ringed plover and little tern the potential is high in the vicinity of their sand/shingle nesting habitat. Moreover, recreational disturbance is considered to have been one of the main contributory factors in these species’ declines, both on the Essex coast and more widely. We have therefore paid particular attention to them. The main area of suitable nesting habitat around Colne Point is considered in detail below (see D3.2E).

Risks of bird disturbance during the installation of access management infrastructure on this stretch are low because of the limited amount proposed (see below), the great majority of which will be several 100 m from important roost sites or feeding or nesting areas. Nevertheless, the mitigation measures summarised in Table 9 are proposed as standard to reduce bird disturbance during path establishment works.

Table 9. Establishment works - mitigation measures to reduce bird disturbance

Item	Mitigation measures
Site design	<p>Operator to design access routes, storage areas and site facilities to minimise disturbance impacts.</p> <p>Operator to conduct operations out of sight of roosting, feeding or nesting areas as far as possible.</p>
Timing of works	<p>Access authority to plan schedule with Natural England to limit disturbance risk.</p> <p>Natural England to specify a period of low sensitivity at each construction site, based on likely departure and arrival dates of waterbird species that use it.</p> <p>At all other times, operators working within 200 m of, and visible to, a roost site will stop during the 2 hours before and after high tide.</p> <p>Operator to limit construction activities to daylight hours at all times of year.</p>
Method	<p>Operator to use hand tools where practicable.</p> <p>Operator to avoid use of percussive machinery outside period of low sensitivity, or avoid use of machinery during the 2 hours before and after high tide.</p>

Loss or damage to non-avian qualifying features or supporting habitats as a result of use or maintenance of the coast path, and to any qualifying features as a result of installation of access management infrastructure.

In developing our Coast Path proposals, our general approach has been as far as possible to avoid routing the trail across habitats that are qualifying features of the Essex Estuaries SAC, or are important as supporting habitats for SPA/ Ramsar site birds or Ramsar site plant or invertebrate assemblages. Where these habitats occur in the coastal margin and would not be excluded from new coastal access rights on grounds other than nature conservation, we have carefully considered their sensitivity and how changes to access rights on or near them might affect levels of use, and included mitigation measures as necessary to avoid any significant damage.

The non-avian qualifying features on this stretch (intertidal habitats and wetland plant and invertebrate assemblages) are generally much less susceptible to adverse effects from Coast Path proposals than the birds. This is because (i) unlike birds, these features are not susceptible to ‘disturbance from a distance’; and (ii) new coastal access rights will not apply to a very large proportion of the area supporting them, either because they are saltmarsh or flats unsuitable for public access, are within the MoD training area, or are inland of the coastal margin. Important areas of sand/ shingle in the coastal margin around Colne Point are the main exception and are considered in more detail below (see D3.2E).

We have also considered the extent to which the installation of access management infrastructure on this stretch may result in loss of habitats that are SAC qualifying features and/or support species that are SPA or Ramsar site features. The infrastructure proposed

within European site boundaries on this 80 km stretch includes four footbridges, 18 kissing gates, three interpretation panels, and larger numbers of small items such as fingerposts, waymarkers and advisory signs. We estimate this infrastructure, nearly all of which will be within a few metres of site boundaries, will take up about 96 m² in total.

No infrastructure will be on saltmarsh within the SAC. Four finger posts, two advisory signs, a kissing gate and two footbridges (about 27 m² in total) will be on SPA grazing marsh east of Langenhoe Hall (see D3.2B for details). Two more footbridges (16 m²) will be across ditches not within grazing marsh. Nearly all the remaining items (mainly kissing gates and signage) will be on seabanks (40 m²) or the foldings behind them (10 m²). Seabanks and foldings are not SAC habitats and are not listed in SPA conservation advice as supporting habitat for waterbirds. Birds may occasionally use seabanks to roost but normally prefer the outer edges of saltmarsh, where the risks of disturbance and predation are lower. The infrastructure we propose for seabanks will not be in or near known roost sites. Some species in the wetland plant and invertebrate assemblages are found on seabanks or foldings, though the seabank crest is less important for them than the folding. On both, assemblage plant species have very sparse, scattered distributions. A pre-works check of proposed infrastructure locations, and adjustment where necessary, will minimise the risk of any damage.

In addition to the infrastructure mentioned above, proposals for this stretch include the surfacing with aggregate of one 195 m section of public footpath just within the Colne Estuary Ramsar site. This section (SCJ-4-S020) is on an old seabank and has become degraded and difficult to walk due to heavy use.

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

In this part of the assessment we consider key locations along the coast between Salcott and Jaywick where establishing the England Coast Path and associated coastal access rights might impact on qualifying features of a European site. We assess the possible risks at each location and explain how the detailed design of our proposals takes account of them.

The relationship between the key locations referred to in this assessment and the corresponding Coastal Access Reports (in which the access proposal is described in detail) is shown in Table 10 and the environmental pressures at each location are listed. These pressures have the potential to affect different qualifying features at each location, which are listed in sections D3.2A to D3.2E below.

In places the proposed route between Salcott and Jaywick runs just within the boundary of the Essex Estuaries SAC but at no point does it cross saltmarsh or any other vegetation types that are SAC qualifying features. Therefore risks to SAC features from the pressure ‘trampling of vegetation’ are only related to access rights in the coastal margin. Those risks are limited to a few specific areas where we do not propose to exclude access onto saltmarsh and flats on grounds unrelated to nature conservation.

Table 10. Summary of key locations and environmental pressures

Location	Cross reference to Coastal Access Reports	Disturbance of non-breeding birds	Disturbance of breeding waterbirds	Trampling of vegetation
Salcott to the Strood	Report SCJ 1/ route sections SCJ-1-S005 to SCJ-1-S023 (Maps SCJ 1a to 1e)	✓	(✓) ¹	
Upper Pyefleet Channel and Langenhoe grazing marshes	Report SCJ 2/ route sections SCJ-2-S001 to SCJ-2-S014 (Maps SCJ 2a to 2c)	✓	✓	
Fingringhoe Wick EWT reserve, including managed realignment site	Report SCJ 2/ route sections SCJ-2-S028 to SCJ-2-S030 (Maps SCJ 2f)	✓	(✓)	
Flag Creek	Report SCJ 5/ route sections SCJ-5-S022 to SCJ-5-S058 (Maps SCJ 5b to 5e)	✓	(✓)	(✓) ²
Colne Point and St Osyth Beach and Marsh	Report SCJ 6/ route sections SCJ-6-S078 to SCJ-6-S089 (Maps SCJ 6b to 6e)	✓	✓	✓

Notes:

Ticks in brackets (✓) indicate that an environmental pressure only presents a minor risk to qualifying features at the location, though this is assessed in the relevant section below.

¹ Minor risk to breeding pochard only

² Minor risk to saltmarsh only

Our assessment of the impact of the access proposals at each of these location is set out in sections D3.2A to D3.2E below.

D3.2A Salcott to the Strood (Map 2)

Baseline situation

Access baseline

This first part of the Salcott to Jaywick stretch (SCJ-1) covers about 10 km of the north eastern part of the Blackwater Estuary SPA and Ramsar site. The coastline here runs roughly west to east along the north side of the Salcott Channel to its mouth near Feldy Marshes, then northeast up the west side of the Ray Channel (Map 2). Public access to the coast on this length is currently limited to permissive paths to and between bird hides and viewpoints on EWT’s Abbotts Hall Farm nature reserve, and along about 1.3 km of seabank at Copt Hall Marshes, a National Trust (NT) property just east of the EWT reserve. West of Abbotts Hall Farm and east of Copt Hall is privately owned farmland with no coastal public access.

The EWT reserve is only open during office hours and dogs are not permitted except in a dog walking area near the visitors’ car park and main buildings (the Trust’s headquarters), which are about 1 km north of the Salcott Channel. There is no access to the car park out-of-hours and no public rights of way leading onto the reserve. Because of this and the fact that the reserve is not open at weekends, visitor numbers are relatively low compared to other EWT reserves of similar size.

The Copt Hall Marshes NT property, which is a tenanted farm, has a visitors’ car park that is always accessible with space for about 15 vehicles, near to the hall itself. Dogs are allowed on permissive paths between the car park and the seabank to the south and there are circular walks, so the property is popular with dog walkers. NT has recently introduced a dogs-on-leads policy on some of the more heavily used permissive paths near the car park and farm buildings but not on the path along the seabank. A second car park marked on OS maps at Lower Barn is now closed.

West of Abbotts Hall Farm and east of Copt Hall Marshes is privately owned farmland with very few public footpaths and none along seabanks. Apart from the EWT and NT carparks, parking space within a km of the coast is very limited on this length. From our site visits to this length, the level of de facto use is low on the seabanks that lack an existing public or permissive footpath.

Environmental baseline

Along most of this length, the habitat inland of the sea defences is open, predominantly arable farmland. The main exception is at Abbotts Hall Farm, where the 3.5 km-long seabank fronting onto the Salcott Channel was breached in five places in 2002, to create about 45 ha of new intertidal habitat. This managed realignment site varies from about 15 m to 500 m wide and is now predominantly saltmarsh except in the widest section behind the main breach, which has areas of open mudflat. On the gently rising ground along the inland edge of the site, new upper saltmarsh grades into transitional rough grassland with some scattered scrub, and fenced sheep pasture or arable fields beyond that. The realignment site

is effectively functionally linked land supporting European site avian features, because the Blackwater Estuary protected site has not yet been re-designated to include it.

'Whole count sector' totals from BTO WeBS core (high tide) counts are of little use when assessing the numbers of waterbirds that might be vulnerable to disturbance as a result of increased coastal access along the Salcott and Ray Channels, simply because the relevant count sectors (Old Hall Marshes and Mersea Island respectively) are very large and include areas several kms distant.

However, for the period 2014/15 to 2017/18 we have WeBS data for two subsectors that together cover the Salcott Channel only. Comparing average annual peak numbers for these subsectors with those for the whole Blackwater Estuary SPA indicates that for several species which are SPA qualifying features or main component species of the SPA waterbird assemblage, the Salcott Channel supports an appreciable percentage of the SPA's population, for example: golden plover 25.1%, curlew 8.9%, grey plover 7.0%, lapwing 6.5%, avocet 5.6%, dunlin 4.8%, redshank 3.9%, black-tailed godwit 2.9%, wigeon 7.5%, brent goose 5.7%, shelduck 5.5% and teal 5.0%. Therefore the Salcott Channel clearly holds important numbers of many species around high tide. The main high tide roosts along the channel are on saltmarsh on the extensive Abbots Hall Saltings at the eastern end of the EWT reserve and Sunken Island at the channel mouth [Ref 22]. But smaller flocks roost elsewhere, including within the Abbots Hall realignment site [Ref 27].

WeBS low tide surveys of the Blackwater Estuary have been carried out in four winters since 2000, using smaller count sectors than the core counts. Species 'dot density' maps summarising the survey data [Ref 7] show considerable variation between winters. But they indicate that, compared to other parts of the SPA, the Salcott Channel usually supports moderate to high densities of several SPA and main component species at low tide, including dunlin, grey plover, golden plover, lapwing, curlew, redshank, black-tailed godwit, ruff, spotted redshank, wigeon, teal and shelduck.

For the Abbots Hall managed realignment site, more detailed information on bird use at high and low tide is available from bespoke surveys undertaken between 2003 and 2006, in the second to fourth years after the sea defences were breached [Ref 27]. The results show the site being used at all states of the tide by appreciable numbers of feeding and roosting waterbirds, both over the winter and during passage periods. Lapwing, dunlin, redshank, golden plover, teal and wigeon were among the most abundant species during the winter. The same four waders plus black-tailed godwit and black-headed gull were the most abundant during passage periods. Small numbers of four wader and two duck species bred. The relative abundances of the different species using the realignment site is likely to have shifted since 2006 as the new intertidal habitats have evolved. But from recent site visits, it and adjacent parts of the Salcott Channel remain important for many species including lapwing, golden and grey plovers, dunlin, redshank, curlew, teal and wigeon. The 3.5 km long, gently sloping transitional zone along the inland edge of the site is a rare habitat in Essex and important for both wetland and farmland birds, including raptors, as well as coastal invertebrates and other wildlife.

Since the creation of the Abbots Hall realignment site, the upper part of the Salcott Channel has had a band of saltmarsh along its north side at least 200 m wide, separating the High Water Springs tide line from the open mudflats along the low water channel. This wide band of saltmarsh substantially reduces the risk of disturbance from the landward side to waterbirds feeding or loafing on the open flats. It also provides plenty of roost locations well away from the nearest walkable routes, except for brief periods during the highest spring tides. But east of the eastern end of the Copt Hall Saltings there is a section about 600 m long which is more susceptible to disturbance because there is little or no saltmarsh between the seabank and the adjacent mudflats.

To assess the disturbance risk, we surveyed the birds using this area on 22 February and 8 March 2019. Counts were made at 30 minute intervals over 3 and 6 hours respectively, including parts of the tidal cycle when the mudflat was partially or completely flooded. The Salcott Channel is wide here and has two low water channels: Little Ditch (near the north bank) and the main channel beyond. The two are separated by about 200 m of intertidal mud and, further east, by the Sunken Island saltmarsh. We recorded very few birds using the area between Little Ditch and the northern seabank (maxima of 27 brent geese, 11 redshank, and single figure numbers of eight other species) but more waders using the wider flats beyond, (for example 150 dunlin, 47 grey plover and 40 redshank). The results suggest the risk of significant disturbance from the northern seabank here is quite low because birds using the area beyond Little Ditch are over 100 m away. The disturbance risk is also reduced because the flats beyond Little Ditch west of Sunken Island are higher than those adjacent to the seabank, so they start to appear earlier on a falling tide and flood later on a rising tide. Our surveys also confirmed that around high tide the large majority of waders and wildfowl in the vicinity congregate in and around the Abbots Hall and Copt Hall Saltings, well away from the nearest seabank.

For Ray Channel, WeBS core counts provide little information on bird numbers because the area is counted from Mersea Island, so most of the channel is hidden from view behind Ray Island (see Map 2). And the only WeBS low tide survey data for Ray Channel is from 1994/95. To supplement this limited information we carried out counts on 22 and 23 February 2018 from a vantage point near the top of Ray Channel, covering the period from 2 hours before to 2-3 hours after low tide, counting at roughly 30 minute intervals. Of the 13 waterbird species recorded, maximum counts for eight were at least 1% of the total count for the Blackwater Estuary SPA in February 2018 but for all but two species the maximum was well under 100 birds and no more than 2.2% of the whole SPA count. The exceptions were redshank (peak count 200) and brent goose (peak count 2,500), representing 10.9% and 35.9% of their whole SPA totals. These results suggest Ray Channel is of high importance for brent geese, moderately important for redshank, but holds rather low numbers of other species around low tide. Those conclusions are generally supported by 'dot density' maps from the 1994/95 WeBS low tide survey, though more dunlin and lapwing were recorded then.

The large numbers of brent geese seen on both February survey days used the Ray Channel on-and-off through the count periods, predominantly using the lower half of the channel and flying between it and the open arable farmland to the west, where they fed on

winter cereal crops. In recent winters a similar pattern of movement has been seen around high tide during WeBS core counts covering the Strood area, with from several hundred to over a thousand brent geese flying into the Strood Channel from the private farmland to the west, loafing on the water or feeding on flooded saltmarsh at Bonner’s Saltings and elsewhere around Ray Island. From our observations around Copt Hall and Abbots Hall, some brent geese also feed in arable fields on the NT property but rarely in the fields further west inland of the Abbots Hall Farm realignment site.

Panter and Liley [Ref 22] map Ray Island as the only key high tide roost site between West Mersea town and the Strood causeway but recent WeBS counts show a more complex situation, with larger numbers of birds usually roosting nearer the Strood causeway, on Bonner’s Saltings and on saltmarsh on the Mersea Island side of the Strood Channel. Nevertheless, Ray Island is an important roost site for several species such as curlew, redshank and little egret - particularly during high spring tides when most of the adjacent saltmarsh is flooded. The island and its surrounding saltmarsh also provides feeding and roosting habitat for overwintering ducks and raptors, as well as brent geese. And in summer redshank, oystercatcher and shelduck breed on the higher areas [Ref 8].

Several pairs of pochard, an SPA breeding species, have been recorded nesting around the lake on the Abbots Hall Farm reserve, which was created at the same time as the realignment site [Ref 27]. But there appears to be little suitable nesting habitat for pochard elsewhere between Salcott and the Strood. The species sometimes nests beside borrow dykes but the large majority on this length are either too narrow, shallow, choked or silted up, or have too little fringing vegetation to be suitable. Possible exceptions are some sections at Copt Hall Marshes but we do not know of any breeding records from there. On this length there is no suitable sand/shingle nesting habitat for little tern or ringed plover - the two other SPA breeding species.

Detailed design of the access proposal and assessment of risks to qualifying features

Disturbance of non-breeding birds (non-breeding brent goose, waterbirds and hen harrier)

Because the existing coastal access is very limited, our proposed Coast Path route between Salcott and the Strood is predominantly new access (Map 2). And because this section lies close to areas in or adjacent to the Blackwater Estuary SPA and Ramsar site which support important numbers of non-breeding waterbirds, alternative route options required careful assessment, as did the need for local restrictions or other mitigation measures to avoid the risk of significant bird disturbance.

In making these risk assessments, we have assumed that levels of use will increase significantly on any section of the route that is new access, as current de facto use of these sections appears to be very low. But after the route is open we only expect low or moderate levels of use, because of the very limited car parking available nearby (apart from the existing EWT and NT car parks), the low housing density in the surrounding area, and the fact that our proposals do not create new short circular routes.

The western end of the route, from Salcott village east to the boundary of EWT’s Abbots Hall Farm reserve (route sections SCJ-1-S001 to S005) incorporates 450 m of new access

along the seabank at the top of Salcott Creek but the creek is so narrow here that the risk of disturbing significant numbers of waterbirds is very low.

For the route through the EWT reserve, the option of creating a new path along the inland edge of the managed realignment site was considered initially. But it was rejected because of the risk of significant disturbance to the passage and overwintering waterbirds using the site, as well as to other wintering and breeding birds using the intertidal habitats and the strip of rough transitional grassland just inland of them. Instead, our proposed route uses the existing west-to-east permissive access through the reserve which follows a farm track and for most of its length runs 100 to 200 m inland of the realignment site, separated from it by arable fields or fenced pasture. Visitors using this route cause minimal disturbance to the reserve’s wildlife. We have added short sections of new access at either end to take the trail to the reserve’s western and eastern boundaries.

On the EWT reserve, which currently does not allow dogs, we propose that dogs must be kept to the line of the Coast Path trail and on a lead at all times. This restriction is made on land management grounds but it will substantially reduce the risk of bird disturbance by dogs on the reserve. This is important because the gradual transition from farmland to upper saltmarsh along the inland edge of the managed realignment site presents much less of a barrier to dogs than the deep muddy channels usually found just beyond a seabank. If this land management restriction was not included then a similar restriction on nature conservation grounds would be needed. Advisory signs at both ends of this section (SCJ-1-S006 to S017) will explain the restriction and why it is necessary.

The great majority of the saltmarsh and flats in the coastal margin along this stretch will be excluded by direction from new coastal access rights as unsuitable for public access. But the same restriction does not cover the breached seabanks along the outer edge of the realignment site. Anyone walking along these would be conspicuous and could get close to important feeding and roosting areas, so access to them will be restricted on nature conservation grounds, except at a few signed viewpoints at low risk locations.

East of the EWT reserve, our proposed route joins the existing permissive path along the Copt Hall Marshes seabank and follows it for about 1.3 km. This path is already quite frequently used by dog walkers, most of whom start from the NT car park. We do not expect incorporation into the Coast Path to greatly increase levels of use here and the seabank is fronted by saltmarsh at least 300 m wide (the Abbots Hall and Copthall Saltings). Therefore the risk of a significant increase in bird disturbance is low. Nevertheless we propose advisory signs where permissive paths from the car park join the seabank, to remind users of the requirement to keep dogs under effective control and that the saltmarsh is excluded from new access rights (as there are signs of localised trampling damage in a couple of places).

Our proposed route from the southeastern end of NT’s permissive path to the top of Ray Creek near the Strood causeway is about 5 km long and is all new access along the seabank. We do not expect use of this seabank will cause bird disturbance on a scale that might adversely affect the integrity of the Blackwater Estuary SPA because:

- We predict use of this section will be low because of the very low housing density in the vicinity, the complete lack of public car parking within a km or more, and the absence of any public footpaths joining the seabank from inland.
- The main high tide roosts on this section (Sunken Island and Ray Island) are at least 200 m from the seabank.
- Results of our bird counts at Little Ditch and Ray Channel (see above for details) suggest that - apart from brent geese and to a lesser extent redshank in Ray Channel - relatively small numbers of waterbirds use intertidal areas within 100 m of the seabank.
- There are two grazing marsh fields just inland of this section (at Copt Hall Marshes and at the top of Ray Creek) but both are rather dry, semi-improved grassland which to the best of our knowledge do not attract flocks of brent geese or other waterbirds. Counts of waders and wildfowl on them during our site visits have been in single figures.

In addition, we have taken into account that if an alternative, inland route was chosen in order to keep walkers away from the seabank, that would have to run through the open arable farmland west of Ray Channel which is an important feeding area for brent geese, and so would be likely to disturb them. As this area of arable farmland varies from 500 m to over 2 km wide, we do not expect feeding geese to be flushed off it by walkers skirting around its edge along the seabank, particularly as the wide borrow dyke just inland of the seabank provides an obvious barrier to walkers and their dogs. No equivalent barrier would exist along an inland route through the farmland unless the whole length was fenced. Also, our observations suggest that brent geese are more tolerant of walkers and dogs in the vicinity if they are separated from the source of disturbance by a borrow dyke.

We propose advisory signs at either end of this section of new seabank access to explain its sensitivity particularly in relation to waterbirds, the restriction on access onto adjacent saltmarsh and flats, and the requirement to keep dogs under effective control.

Access to Ray Island nature reserve is currently restricted to visitors arriving by boat and no dogs are allowed on the island. A permissive path to the island across Bonner’s Saltings is now closed. The reserve is separated from our proposed route by saltmarsh and flats which, as elsewhere along this stretch, will be excluded from spreading room because they are unsuitable for public access. But the highest part of the island is rough grass and scrub and so is not covered by that restriction. Therefore, because of the importance of Ray Island for feeding, roosting and breeding waterbirds (see above) we propose a ‘no dogs’ restriction on nature conservation grounds to maintain the current rules on access.

Disturbance of breeding waterbirds (breeding pochard)

There is no suitable breeding habitat for little tern or ringed plover between Salcott and the Strood, so the only SPA breeding bird that needs to be considered here is pochard. The species is known to nest around the small lake on EWT's Abbots Hall Farm reserve but that is inland of the coastal margin and screened by vegetation from our proposed route along the farm track to the south. As our proposal includes the restriction that dogs must be kept to the line of the trail and on short leads while on the EWT reserve, the risk of increased disturbance to breeding pochard is very low. The only other potential nesting areas for pochard near the route are borrow dykes. But most of these appear to lack suitable habitat (see above), we know of no breeding records for pochard from them, and they are all inland of the coastal margin. The section of borrow dyke which appears most likely to support pochard or other nesting waterbirds is the roughly 700 m just south of NT's permissive path at Copt Hall Marshes. Our proposal includes an advisory sign at the northern end of this section to explain its sensitivities, the limits to coastal access rights either side of the route, and the requirement to keep dogs under effective control at all times.

Though breeding redshank is not a European site qualifying feature on this stretch, the risk of increased disturbance to the breeding population has been considered because it could have knock-on effects on the passage/overwintering population, which is a main component of the non-breeding waterbird assemblage. The Abbots Hall Saltings and realignment site, Copt Hall Saltings and Ray Island are known breeding locations for redshank [Refs 4, 13, 27]. However, redshank nesting on saltmarsh will be protected from increased disturbance by the restriction on access to the saltmarsh on safety grounds, while those nesting on transitional grassland just above the marsh will be protected by the additional restrictions at Abbots Hall Farm EWT reserve and Ray Island outlined above (all of which will apply year-round).

Conclusion:

Natural England has considered the possible risks to qualifying features at this location and, taking into account the avoidance and mitigation measures detailed above, considers that the proposals will not cause significant levels of bird disturbance. The proposals will therefore not adversely affect the achievement of the conservation objectives in this location. Establishing a well maintained and easy to follow Coast Path along the alignment proposed, with signage to inform walkers of access restrictions on parts of the route and the coastal margin and advice on how to reduce bird disturbance, will also help with the long-term management of visitors to the area.

D3.2B Upper Pyefleet Channel and Langenhoe grazing marshes (Map 3)

Baseline situation:

Access baseline

This part of the proposed route (sections SCJ-2-S001 to SCJ-2-S014) lies close to and partly within the western end of the Colne Estuary SPA and Ramsar site. It runs east from the Strood causeway along the seabank on the north side of the upper Pyefleet Channel before turning inland to skirt around the MoD Fingringhoe Ranges training area (Map 3). For its first 2 km (sections SCJ-2-S001 to S007), the route uses an existing public footpath on the seabank (though for sections SCJ-2-S003 and S004 it runs a few metres from the definitive line of the PRow). Few walkers use this existing access, probably because using it as part of a circular route would involve walking for over a km along the B1025 (a busy road that provides the only vehicle access onto Mersea Island) and because the nearest public parking is a layby 600 m away south of the Strood causeway. At most, we expect only a small increase in levels of use along this footpath when it becomes part of the Coast Path. Beyond the existing public access, along sections SCJ-2-S008 to SCJ-2-S014, the proposed route is further from houses, public roads and car parking, so we expect levels of use to be similar or lower. Nevertheless, that will represent a marked increase above current levels, because de facto use of these sections is negligible.

Environmental baseline

Immediately east of the Strood, where route sections SCJ-2-S003 and S004 follow the existing public footpath, an area of wet rough grassland with some fresh/brackish water ponds and ditches lies just inland of the route. But this area is potentially within spreading room because it lies seaward of route sections SCJ-1-S028 to S030 to the north. Though just outside the Colne Estuary SPA boundary and not counted by WeBS, it appears from site visits to have some value as functionally linked land for a few SPA waterbird assemblage species such as mallard, teal and shelduck and contains some habitat that could be suitable for breeding pochard.

Further along the route, beyond the existing public footpath, use of the proposed new access may lead to increased disturbance to waterbirds using the north side of the upper Pyefleet Channel. ‘Whole count sector’ totals from BTO WeBS core counts are of little use when assessing how many birds might be vulnerable to disturbance here, because the relevant count sector (Mersea Island) is very large and include areas several kms away. But from our site visits and information from WeBS counters, the upper channel regularly holds important numbers of several main component species of the Colne Estuary SPA non-breeding waterbird assemblage, including redshank, grey plover, dunlin, curlew, shelduck, wigeon and teal. The only WeBS low tide survey that has covered the upper Pyefleet Channel was carried out in the 2007/8 winter [Ref 2]. ‘Dot density’ maps summarising the results show moderate to high densities - compared to other parts of the SPA - for all the above species and also for oystercatcher, knot and black-tailed godwit.

The Pyefleet Channel widens and forks at its upper end (Map 3). Only birds using the northern of the two low water channels are potentially susceptible to disturbance from the northern seabank. The large wedge of saltmarsh between these two channels holds the main high tide roost in the vicinity, with most waders concentrated towards its narrower eastern end, 200 m from the northern seabank (Map 3). Information from our site visits and WeBS counters indicates that birds using this roost site are not disturbed from adjacent seabanks and that significant numbers of birds are only likely to be within 100 m of the northern seabank under specific tidal conditions. Shortly before or after a high tide, with most of the mudflat submerged, wader flocks in the low hundreds have sometimes been seen feeding on the band of exposed mud next to the northern seabank. On a rising tide, some of these birds may move up onto the fragments of saltmarsh at the toe of the seabank before flying to the main high tide roost. Also around high tide, a flock of 100 or more shelduck regularly swim in the northern channel, along with smaller numbers of wigeon and teal.

All the available evidence indicates that overwintering brent geese rarely use the upper Pyefleet Channel or the farmland north of it. The nearest areas where flocks are regularly seen are west of the Strood causeway (see D3.2A) and around Reeveshall Marsh on Mersea Island.

Two areas of grazing marsh within the Colne Estuary SPA and west of the MoD training area lie adjacent to parts of the route where new access is proposed. The first, Langenhoehall Marsh, is inland of the seabank along the Pyefleet Channel (sections SCJ-2-S008 and S009). The second is a smaller area about 1 km further along the route, north of the farm buildings at Wick and referred to here as Wick Marsh West. This lies in the coastal margin with the proposed trail skirting around its southern and western edge (section SCJ-2-S014). Both areas are outside WeBS count sectors and no WeBS data are available, so we only have observations on bird use from site visits. They are both mainly unimproved grazing marsh with uneven ground, including low ways and many ant hills, so they do not attract flocks of brent geese, lapwing or golden plover. But they are used by smaller numbers of less gregarious waders like snipe, green sandpiper and curlew. Langenhoehall Marsh is rather dry with scattered scrub but Wick Marsh West is wetter and more open and is used for wildfowling. It has a dammed, permanently wet fleet and the low ways often flood in winter, so it attracts reasonable numbers of wildfowl. We have seen over 100 wigeon and double figure numbers of teal, gadwall, mallard and mute swan, as well as several snipe and green sandpiper. Waterbirds fly between this grazing marsh and the adjacent MoD wetland. The fleet also appears to be suitable nesting habitat for pochard. Though we do not have confirmatory breeding records from this fleet, up to 20 pairs nest on the adjacent MoD grazing marsh [Ref 9].

The MoD Fingringhoe Ranges training area that the route skirts around has extensive grazing marshes, reedbeds, saltmarsh and mudflats that are very important for SPA species [Ref 9] as well as for plants and invertebrates that are Ramsar site qualifying features. The great majority of this MoD land is subject to military byelaws, so is excluded from new coastal access rights despite lying seaward of the route. The exception is Langenhoe Point which, though MoD-owned and inaccessible on foot except through the Ranges, is not subject to MoD byelaws and is therefore potentially within spreading room. This area

includes a large reedbed, a shallow brackish lagoon and, outside the sea defences, a small shingle ridge fronting the saltmarsh. During the winter and spring/autumn passage periods it holds concentrations of feeding and roosting waders, ducks and other waterbirds, as well as a harrier roost. In summer it provides habitat for some rare or threatened breeding birds including SPA qualifying species.

Detailed design of the access proposal and assessment of risks to qualifying features

Disturbance of non-breeding birds (non-breeding waterbirds and hen harrier)

Where the route follows the existing seabank footpath (sections SCJ-2-S001 to S007), we only expect levels of use to increase slightly. But one effect of the Coast Path here is that the area of wet rough grass with ponds inland of sections SCJ-2-S003 and S004 will fall within spreading room and be subject to coastal access rights unless restricted. This area is outside the SPA boundary and we consider evidence of its value as functionally linked land for a few SPA species is not strong enough to justify a formal restriction on nature conservation grounds. But to mitigate the risk of increased disturbance to this area we propose advisory signage at the Strood end of the seabank, asking users to follow the trail and keep dogs under effective control.

A significant increase in disturbance to waterbirds using intertidal habitats in the Pyefleet Channel close to the route is very unlikely in the first 2 km from the Strood, because there is an existing public footpath and the adjacent habitat is saltmarsh rather than open mudflat. Beyond that, where we propose new access and where the mudflats are not separated from the seabank by a wide buffer of saltmarsh, use of the trail is likely to increase bird disturbance somewhat but we do not consider the scale or frequency of disturbance will amount to an adverse effect on the integrity of the SPA, for the following reasons:

- Because of its distance from houses and car parking, we expect levels of use along this section will be even lower than current levels on the existing public footpath to the west.
- The main high tide roost in the vicinity is separated from the northern seabank by a wide channel and 200 m away at its nearest point, so walkers are very unlikely to disturb it.
- The intertidal zone in the upper Pyefleet Channel varies from 700 m to nearly 2 km across. It has large blocks of saltmarsh that provide roost sites and, around low tide, hide much of the mudflat from the seabanks on either side. So if birds close to the northern seabank are disturbed occasionally they are unlikely to be displaced by more than a couple of hundred metres.
- The lack of public access onto the MoD Ranges creates a large refuge area of intertidal and other coastal wetland habitats just to the east, well away from any public footpaths.

However, because under certain tidal conditions important numbers of waders or ducks may use parts of the channel within disturbance distance of the route, we propose to extend the landward limit of the coastal margin here to include the folding behind the seabank and install advisory signs at both ends of this section. These will explain that flocks of waterbirds may occasionally be feeding or resting near enough to the path to be disturbed and that, in those circumstances, users are requested to walk in the folding to avoid disturbing them. We do not consider compliance with this advice necessary to avoid an adverse effect on site

integrity but it will raise awareness of the bird disturbance issue and any level of compliance should be beneficial.

Langenhoe Hall Marsh, inland of the route, is uneven and rather dry unimproved grazing marsh that does not attract flocks of brent geese, ducks or waders. The only birds we have flushed off it when walking the seabank or folding have been occasional snipe and curlew.

At the east end of Langenhoe Hall Marsh the route leaves the seabank to avoid the MoD training area and runs around the east end of a grass field and then north between the MoD boundary and a solar farm. This field provides a buffer between the solar farm and the SPA grazing marsh. It was intended as supporting habitat for SPA waterbirds but we have only seen single figure numbers of lapwing and curlew on it. Nevertheless, to reduce walkers’ visibility we have kept the route to low ground around the edge of this field close to the MoD boundary hedge.

On the Wick Farm West grazing marsh, a route crossing the marsh via the fleet dam was considered initially. This was rejected for practical reasons (the ground is very uneven and liable to flooding) and because walkers would disturb birds using the fleet and other parts of the marsh. Therefore we propose a route around the edge of the field, which keeps walkers out of view of birds on the fleet except at its narrow western end. But because this puts the rest of the marsh within the coastal margin and as there is no fence between it and the trail, we also propose restrictions on nature conservation grounds here to exclude access to the margin and to require walkers with dogs to keep them on a lead at all times.

Overwintering hen harriers use the MoD land [Ref 9] so probably occasionally hunt over the adjacent grazing marsh, saltmarsh and farmland along this part of the route. But the route choices and restrictions proposed for non-breeding waterbirds should ensure there is little risk of any significant disturbance to them.

Disturbance of breeding waterbirds (breeding pochard, ringed plover and little tern)

At Langenhoe Point, on the MoD land but beyond the area restricted by military byelaws, there is suitable breeding habitat for all three SPA breeding birds (little tern, ringed plover and pochard), at least two of which have nested [Ref 9]. Therefore we propose a year-round exclusion of access to the coastal margin here (to protect breeding as well as non-breeding SPA birds). Elsewhere along this part of the route there is no suitable breeding habitat for little tern or ringed plover. The Fingringhoe Ranges, already restricted under MoD byelaws, hold the majority of breeding pochard in the Colne Estuary SPA [Ref 9].

There appears to be some suitable nesting habitat for pochard within the coastal margin at Wick Marsh West - where again we propose exclusion of access to the margin year round to protect breeding as well as non-breeding birds from disturbance - and also just east of the Strood. As this last area is outside the SPA boundary and inland of an existing public footpath, and in the absence of breeding records, we consider advisory signage to be sufficient mitigation here. The borrow dykes close to the route at Langenhoe Hall Marsh are too silted up and choked to provide pochard nesting habitat and are usually dry by mid-summer.

Though breeding redshank is not a European site qualifying feature on this stretch, the risk of increased disturbance to the breeding population has been considered because it could have knock-on effects on the passage/overwintering population, which is a feature of the Colne Estuary SPA and a main component of the site’s non-breeding waterbird assemblage. The MoD Fingringhoe Ranges training area has extensive areas of saltmarsh and grazing marsh important for breeding redshank and the species also nests on saltmarsh in the upper Pyefleet Channel. We do not know of any recent breeding records from the Langenhoe Hall and Wick Marsh West grazing marshes but they could provide suitable habitat, at least in wet years. Redshank nesting on any of these areas will be protected from increased disturbance because our proposed Coast Path route skirts around the MOD land and access to the coastal margin is restricted under MoD byelaws, on safety grounds on the saltmarsh not subject to those byelaws, and on nature conservation grounds at Wick Marsh West and Langenhoe Point.

Conclusion:

Natural England has considered the possible risks to qualifying features at this location and, taking into account the avoidance and mitigation measures detailed above, consider that the proposals will not cause significant levels of bird disturbance. The proposals will therefore not adversely affect the achievement of the conservation objectives in this location. Establishing a well maintained and easy to follow Coast Path along the alignment proposed, with signage to inform walkers of the access restrictions in the coastal margin and advice on how to reduce bird disturbance, will also help with the long-term management of visitors to the area.

D3.2C Fingringhoe Wick EWT reserve (Map 4)

Baseline situation

Access baseline

Essex Wildlife Trust’s Fingringhoe Wick nature reserve covers an area of disused gravel workings bought by the Trust in 1961, bounded to the east by the main channel of the Colne Estuary. A visitor centre near the reserve’s southern boundary overlooks the extensive saltmarshes (the Geedon Saltings and Fingringhoe Marsh) that form the northeast part of the MoD Fingringhoe Ranges training area. Within the last decade, more farmland and saltmarsh was purchased north of the original reserve. The seabank along the east side of this extension was breached in 2015 to create 22 ha of new intertidal habitat (Map 4).

The reserve and visitor centre are open to the public all year from 9 a.m. to 4 or 5 p.m., except for Christmas and Boxing Day. The large majority of visitors arrive by car and park in the visitor centre car park. There is very little other parking space nearby. The reserve is fenced and the entrance gate locked out of hours. When the reserve is open, a network of permissive paths gives access to several hides and viewpoints looking out onto the intertidal habitats and the lake and ponds within the reserve. These include a hide built 50 m out into the new managed realignment site, accessed via a screened walkway.

No dogs are allowed except on a designated dog walking route between the visitor centre and the reserve entrance, where dogs must be kept on a lead.

Environmental baseline

The original reserve is a mosaic of scrub, woodland and mainly acid grassland with a lake, several shallow ponds and a brackish scrape. The estuary shoreline grades into extensive mudflats and is mainly saltmarsh with some areas of sand/shingle. On the recent reserve extension, the new managed realignment site is now predominantly intertidal mud with three small islands and the breached seabank and original saltmarsh beyond. The southwest corner of this site is bunded to create a freshwater lagoon and reedbed. But otherwise, as along much of the reserve’s shoreline, the landward limit of the intertidal zone is set by rising ground rather than a seabank.

The Geedon Saltings are the most important high tide roost site on the Colne. Large flocks of waders fly between this roost and feeding areas further up or down the estuary. Most birds settle along the eastern edge of the saltings, including at the northern end close to the EWT reserve, and feeding birds congregate on the adjacent mudflats before and after high tide.

Flocks of several hundred brent geese visit the Geedon Saltings and the adjacent mudflats and channel to feed and rest, and often cross the estuary to feed on open arable farmland between Alresford Creek and Brightlingsea. Less frequently, they also visit fields just north of the EWT reserve. The Geedon Saltings are also a favoured hunting area for overwintering raptors, including hen harrier.

The Fingringhoe Wick WeBS core count sector includes the reserve and extends several 100 m east to the midpoint of the main Colne channel, and nearly 2 km south to include the Geedon Saltings and Fingringhoe Marsh saltmarshes. Coverage of this sector has been patchy, partly because access restrictions and the distances involved make counting birds on the MoD land difficult. In the latest 5-year period for which data is available (2013/14 to 2017/18) the sector was only counted in three winters. The data therefore need to be interpreted with caution but averages of winter peak counts indicate the sector holds over 20% of the whole SPA populations for several waterbird assemblage main component species, including avocet, grey plover, curlew, black-tailed godwit, dunlin and shelduck; and over 10% for brent goose, redshank, lapwing and little egret [Ref 7]. ‘Dot density’ distribution maps summarising the results of the 2007/8 WeBS low tide survey of the Colne [Ref 2] show moderate or high densities on the flats east and south of the reserve for most of those species, and also for knot and wigeon.

The managed realignment site created in 2015 is already an important feeding and roosting area for waterbirds just outside the SPA boundary, though that is not fully reflected in the available WeBS data. A wide variety of waders – including hundreds of avocet, black-tailed godwit, dunlin, knot and redshank - regularly feed on the site and roost at high tide on its islands, the breached seawall and the adjacent saltmarsh.

Smaller numbers of waterbirds use the reserve’s lake and ponds and the scrape just north of the Geedon Saltings. But during passage periods the scrape can hold a significant proportion of the greenshanks and spotted redshanks on the SPA. And during the winter the lake is used by several species of diving and dabbling ducks. Some of these, including pochard, stay on to breed in small numbers [Ref 6]. There is a limited amount of suitable sand/shingle nesting habitat for little tern and ringed plover on the reserve: on the southeastern shoreline and on islands in the new managed realignment site. Ringed plover have bred occasionally. Little tern have visited the realignment site but have not yet nested.

Detailed design of the access proposal and assessment of risks to qualifying features

Disturbance of non-breeding birds (non-breeding brent goose, waterbirds and hen harrier)

The Coast Path route, diverted inland around the MoD training area, approaches the EWT reserve from the west along South Green Road. We briefly considered taking it south of the road, between the reserve’s southern boundary and the northern edge of the Geedon Saltings, but rejected that option because of the significant risk of disturbing large numbers of birds roosting on the Saltings, and because an onward route north through the east side of the reserve raised additional nature conservation and land management concerns.

Therefore our proposed route leaves the road just before the reserve entrance, following an existing public bridleway along the edge of arable farmland just north of the reserve’s boundary fence (route section SCJ-2-S028). It continues east to the southwestern corner of the reserve extension (section SCJ-2-S029), then enters the reserve and turns north following a permissive path just within the reserve boundary (section SCJ-2-S030). This runs along high ground inland of the new managed realignment site and set back at least 80 m from it. Reserve visitors following this path cause no disturbance to birds using the realignment site. The route leaves the northwest corner of the reserve and continues inland around an active gravel extraction site and on towards Fingringhoe village.

The whole EWT reserve lies seaward of the proposed route and therefore within the coastal margin. To replicate existing visitor management restrictions on access to the reserve, we propose the following restrictions on section SCJ-2-S030 and seaward of sections SCJ-2-S028 to SCJ-2-S030:

- Accompanied dogs must be kept on the trail year round and on leads when within the reserve boundary.
- Dogs are not allowed in the margin at any time of year, except on the reserve’s existing marked dog walking route, where accompanied dogs must be kept on short leads.

These restrictions are proposed on land management grounds but are also important to ensure there is no significant increase in disturbance to non-breeding SPA birds, or to other sensitive wildlife on the reserve (see the Nature Conservation Assessment for this stretch for more details). If they were not included in our proposals then similar restrictions on nature conservation grounds would be needed. Advisory signs at both ends of this part of the route will explain the restrictions and why they are necessary.

Disturbance of breeding waterbirds (breeding pochard, ringed plover and little tern)

Pochard breed on the reserve, ringed plover have bred in the past, and there is some sand/shingle habitat suitable for ringed plover or little tern. The restrictions on land management grounds outlined above are proposed year-round, so they will limit disturbance to these SPA breeding species as well as to passage and overwintering birds.

Though breeding redshank is not a European site qualifying feature on this stretch, the risk of increased disturbance to the breeding population has been considered because it could have knock-on effects on the passage/overwintering population, which is a feature of the Colne Estuary SPA and a main component of the site’s non-breeding waterbird assemblage. Available evidence indicates that redshank very occasionally nest near the shoreline within the reserve and much more regularly on the MoD land to the south [Refs 5, 6, 9]. Our proposed route and restrictions on land management grounds outlined above will limit any increase in disturbance.

Conclusion:

Natural England has considered the possible risks to qualifying features at this location and, taking into account the avoidance and mitigation measures detailed above, consider that the proposals will not cause significant levels of bird disturbance. The proposals will therefore not adversely affect the achievement of the conservation objectives in this location. Establishing a well maintained and easy to follow Coast Path along the alignment proposed, with signage to inform walkers of the access restrictions on parts of the trail and in the coastal margin, and advice on how to reduce bird disturbance, will also help with the long-term management of visitors to the area.

D3.2D Flag Creek (Map 5)

Baseline situation

Access baseline

Brightlingsea Creek joins the main channel of the Colne Estuary south of Brightlingsea town. About 2 km further east it splits into Flag Creek and the smaller St Osyth Creek. Flag Creek curves round to the north and west, separated from Brightlingsea by a kilometre or two of open farmland and, nearer the edge of town, some flooded gravel pits (Map 5). On its east side, the creek lies a little over a km northwest of the village of St Osyth at its nearest point. From north to south along the east side are: a static caravan/holiday park, Martin’s Farm Country Park (on a restored landfill site), an inert waste transfer site at Wellwick Wharf, and Essex Wildlife Trust’s Howlands Marsh nature reserve.

The Country Park has a visitors’ car park and full public access and is popular with dog walkers. But elsewhere, parking space near the creek is very limited. A public footpath runs south from the Country Park along the inland edge of EWT’s Howlands Marsh reserve and then across open farmland to the upper part of St Osyth Creek. Current levels of use along this path are quite low. The only access onto the Howlands Marsh reserve is a permissive path at the northern end, leading from the PRoW to a hide that gave views over the seabank into Flag Creek but is now closed for safety reasons. The only Flag Creek seabank that has

a public footpath is a section about 2.5 km long at the northern end, between Marsh Farm House and Cottage Farm. Levels of use along this footpath are relatively low. De facto use of other seabanks around the creek that lack public access appears to be very low.

About 5 ha of mid-zone saltmarsh on the west side of Flag Creek adjacent to the southern end of route section SCJ-5-S022 is registered common land but current use of this appears to be very low.

Environmental baseline

The main high tide roost sites in the vicinity are two large intertidal islands in mid-channel: Cindery Island West (in Brightlingsea Creek) and Cindery Island East (near the junction of Flag Creek and St Osyth Creek) [Ref 22] (Map 5). Cindery Island West is the higher of the two and is only completely submerged on the highest spring tides. Roosting birds move between the islands depending on the water level and flocks tend to congregate on the adjacent mudflats before and after high tide. Waders and wildfowl disperse from the Cindery Islands roosts upstream into Flag Creek, as well as into Brightlingsea and St Osyth Creeks and, to a lesser extent, to adjacent parts of the main channel of the Colne.

The Flag Creek WeBS core count sector has been surveyed every year since 2008/9 (before that, the creek was counted as part of a larger sector which also included Colne Point). The sector includes the roosts on both Cindery Islands and is counted from the east side of the creek. Averages of species’ annual peaks for the latest 5-year period (2013/14 to 2017/18) indicate that at high tide the sector holds important proportions of the whole SPA populations of redshank (15.7%), brent goose (11.1%), and many of the other main component species of the Colne Estuary SPA non-breeding waterbird assemblage, including lapwing (48.8%), curlew (21.4%), shelduck (16.8%), avocet (15.1%), golden plover (13.5%), black-tailed godwit (13.3%), little egret (10.0%), dunlin (9.9%), and grey plover (6.7%).

Except at its narrow northern end, upstream of Eastmarsh Point, the west side of Flag Creek is fringed by saltmarsh at least 50m wide but there is very little saltmarsh along the east side. Its low water channel is narrow, so the creek provides a relatively large area of mudflat feeding habitat, including areas within a few metres of the eastern seabank. The most recent WeBS low tide data for the creek is from a survey in the 2007/8 winter [Ref 2]. ‘Dot density’ maps summarising the results show quite high densities of redshank using the Flag Creek mudflats, and moderate densities of shelduck, teal, avocet, curlew, grey plover, lapwing, and knot.

Brent geese use the lower part of Flag Creek and adjoining intertidal areas in St Osyth and Brightlingsea Creeks to loaf and feed, and also frequently feed in a large arable field on higher ground between EWT’s Howlands Marsh reserve and St Osyth Creek (see Map 5). The EWT reserve itself is hummocky, unimproved grazing marsh which is not often used by brent geese but attracts teal, wigeon and smaller numbers of other duck such as shelduck, shoveler and mallard - mainly to the wetter seaward half of the marsh - along with some waders like curlew, snipe and redshank. Hen harriers are occasionally seen hunting over the reserve. Three pairs of pochard bred on the grazing marsh in 2017 and in 2007 and 2008 a pair of ringed plover bred at ‘St Osyth, Flag Creek’ [Ref 5]. We do not know the exact

location of the latter records. The only suitable nesting habitat for ringed plover in the vicinity appears to be on the Wellwick Wharf waste transfer site (which was previously a sand/gravel extraction site), or possibly on very small areas of coarse sediment at the toe of the Howlands Marsh seabank.

The open arable farmland on the west side of the creek includes low-lying fields alongside the seabank with drainage ditches and two ponds, as well as drier fields on the higher ground further west. The farm is managed for shooting (of pheasants, partridges and wildfowl). It is not within the WeBS count sector and largely out-of-view from the east seabank, so our information on its use by waterbirds is mainly from a few site visits. But both the low-lying and higher fields are sometimes used by flocks of lapwing and golden plover and are probably occasionally visited by brent geese, though not as regularly as the farmland south of Howlands Marsh. The pond next to the seabank is used by small flocks of wigeon and teal, and smaller numbers of other species like shoveler, shelduck and mallard. Some of the ponds and wider ditches might provide suitable nesting habitat for pochard, though we do not know of any breeding records.

Detailed design of the access proposal and assessment of risks to qualifying features

Our proposal includes two new sections of seabank footpath either side of Flag Creek: route section SCJ-5-S022 on the west side and SCJ-5-S055 to S058 on the east side (roughly 3 km and 2.4 km long respectively).

Disturbance of non-breeding birds (non-breeding brent goose, waterbirds and hen harrier)

Flag Creek east side

On the east side of the creek, the northern part of the proposed route lies at least 200 m inland of the seabank, skirting around the holiday park and the waste management site and through the country park. It then follows the permissive path at the north end of EWT’s Howlands Marsh reserve where it joins the seabank and runs south along that. Here the crest of the seabank is within 20m or less of the adjacent mudflats as there is very little saltmarsh, and the low water channel is within 70 m. During a late November site visit between low and high tide, walking the seabank from SCJ-5-S055 to S058 flushed the large majority of wildfowl and waders from the low water channel and mudflats on both sides of the creek down to or beyond Cindery Island East. As well as the hundreds of birds using the creek, wildfowl inland of the seabank on the EWT reserve are also at risk of disturbance from walkers on this seabank. Moreover, if a route along the folding just behind the seabank was proposed to reduce disturbance, it would be unrealistic to expect EWT staff to prevent walkers from using the seabank crest instead, because this reserve does not have a visitor centre and staff are normally only present when management work is being carried out. We therefore propose that this seabank route is closed during those months when significant numbers of passage and overwintering waterbirds are likely to be present in the area and at risk of disturbance. When the seabank route is closed, the Coast Path will use an alternative seasonal route inland of the Howlands Marsh reserve, following existing PRoWs (route sections SCJ-5-A001 to A004 – see Map 5).

To determine the months when use of the Howlands Marsh seabank would risk disturbing significant numbers of waterbirds, we analysed monthly counts for the Flag Creek WeBS count sector for the six year period 2012 to 2017, for the whole SPA non-breeding waterbird assemblage, the two SPA qualifying species (brent goose and redshank), and seven of the assemblage’s other main component species which were either identified as potential SPA qualifying species during the 2001 SPA Review (avocet and golden plover) or are SSSI interest features (black-tailed godwit, dunlin, grey plover, ringed plover and sanderling). For each of these species, we compared each month’s counts for the Flag Creek sector with the mean of the species’ annual peaks for the whole SPA over the period 2012/13 to 2016/17. For each species, Flag Creek was considered to support a significant proportion of the whole SPA population in a particular month if in at least 60% of years within the 6 year period, the month count exceeded 1% of the whole SPA mean peak. Analyses using this criterion show that for two SPA features - the waterbird assemblage and redshank - Flag Creek holds significant numbers in every month from September to April inclusive. Six of the eight other species examined also occur in Flag Creek in significant numbers in at least two months within this period. Like redshank, black-tailed godwit is present in significant numbers in April and September.

Therefore our proposal is that (1) access on the seabank route and adjacent margin is excluded from 1 September to 30 April each year; (2) lockable pedestrian gates are installed at either end (at the junctions of route sections SCJ-5-S054/S055, and SCJ-5-S058/S059); and (3) advisory signs are installed by both gates, informing users of the seasonal closure and directing them along the alternative route on the landward side of Howlands Marsh when the seabank route is closed.

In the 2012 to 2017 dataset we analysed there are several missing WeBS counts for the summer months, so it is possible that redshank and black-tailed godwit, and perhaps other species, might use Flag Creek in significant numbers before the end of August in some years. Because of this, and also because there is a small amount of sand/shingle near the seabank that might still be suitable for nesting ringed plover, we propose that dog walkers using the seabank route must keep their dogs on a lead. That message will be included on the advisory signs at either end of the seabank.

Flag Creek west side

On the west side of Flag Creek, the proposed new access meets the seabank southeast of Lower Farm after running for about 380 m through a narrow strip of registered common land. It then follows the seabank round to the top of the creek, where it meets a public footpath near Marsh Farm House. The proposed new seabank path links at both ends with existing PRowS that connect with the eastern edge of Brightlingsea, so could form part of a circular walk from the edge of the town. But as that is over 5 km long and involves over a km of road walking, we consider it is unlikely to become heavily used.

We assessed the risk of significant bird disturbance from use of this proposed seabank path during two site visits in December 2017, covering the period from 3 hours before to 3 hours after high tide. Results of those visits were supplemented by observations in January and February 2020. We concluded that walking the seabank here would result in some bird

disturbance, but much less than would be caused by winter use of the Howlands Marsh seabank on the east side of the creek. The main reasons for this difference are explained below.

The wide lower creek - from Eastmarsh Point downstream to the Cindery Islands – has a strip of saltmarsh 50 m to 150 m wide separating the western seabank from the mudflats. And its low water channel, which feeding waders and wildfowl tend to congregate along around low tide, lies towards the east side of the creek and over 150 m from the west bank. Also, for much of the tidal cycle there are quite extensive areas of ‘dead ground’ (where birds are out of view from the seabank) beyond the saltmarsh edge and also along the low water channel. As a result, when the mudflats are at least partly exposed, the hundreds of birds using them are at low risk of disturbance from the west seabank. We recorded only two instances when birds on the exposed flats appeared to be flushed by a walker on the seabank about 100 m away: a flock of 30 to 40 shelduck, and part of a flock of 500 lapwing (the latter had just been flushed by a marsh harrier and may have been wary as a result). A less exceptional situation in which birds beyond the outer edge of the saltmarsh were sensitive to disturbance was when the tide was just below the level of the saltmarsh and flocks of duck (mainly teal and wigeon) swam near the marsh’s outer edge in full view of the seabank. These birds usually reacted to a walker on the seabank 60 to 150 m away, either by flying or by swimming out into mid-channel.

The narrow upper creek - upstream of Eastmarsh Point – has less saltmarsh separating the seabank from the mudflats but provides a relatively small area of feeding habitat and appears to be used by much smaller numbers of birds than the lower creek. Maxima we recorded for this area were: 40 redshank, 10 grey plover, 3 wigeon and 2 teal. A relatively high proportion of the mudflats in the upper creek are hidden from the seabank by adjacent saltmarsh, so when waders were flushed they were generally displaced by only a few tens of metres. And as there is already a public footpath along the north side of the upper creek, the Coast Path proposal is likely to produce a smaller increase in the frequency of potential disturbance events here than in the lower creek.

The saltmarsh adjacent to the west seabank is used by relatively small numbers of birds even when the mudflats are completely submerged. Maxima recorded on it were: 75 redshank, 20 curlew, 15 lapwing and 50 brent geese. The waders were all roosting and were flushed mainly to the outer edge of the marsh or downstream towards the main Cindery Islands roost. The brent geese were grazing over 50 m from the seabank and did not fly.

The Cindery Island East roost site lies over 400 m away at its nearest point. We saw no indication that any of the hundreds of waterbirds that gather on and near the eastern end of the island around high tide could be disturbed from our proposed route.

Landward of the seabank there is no grazing marsh and the borrow dyke and farmland beyond are outside the SPA boundary. The open arable fields, which extend over 400 m inland to Lower Farm, are of some value as functionally linked land because they are sometimes used by flocks of lapwing and golden plover (maxima recorded 300 and 450 respectively). Birds within 100 m or so of the borrow dyke are likely to be displaced inland by disturbance from walkers on the seabank. But they could suffer greater disturbance if a new

inland route across this farmland was used instead. The pond next to the seabank is used by some wildfowl (maxima recorded: 35 shelduck, 30 teal, 30 wigeon, 5 mallard). The large majority of duck on this pond will be flushed by walkers on the adjacent seabank or folding.

From the summary above, the risk of increased disturbance to birds using the intertidal habitats in the creek is largely restricted to periods of the tidal cycle when the mudflats are inundated - when a relatively small number of waders on the saltmarsh and wildfowl swimming near it will be vulnerable. We do not consider that this level of localised disturbance amounts to an adverse effect on the integrity of the SPA or justifies use of an alternative inland route during the winter, particularly as that might increase disturbance to lapwing and golden plover using arable fields beyond the SPA boundary.

To limit bird disturbance along this part of the route (section SCJ-5-S022) we propose that:

- The trail is aligned along the folding rather than the crest of the seabank for 450 m at the southern end, because more waders and wildfowl feed at the lower end of Flag Creek and the risk of disturbing birds from the seabank is probably greater here than further up the creek.
- The coastal margin is extended to the seaward bank of the borrow dyke for the whole of this section, so that walkers can use the folding to reduce disturbance if they see flocks of birds close to the seabank (see below).
- Advisory signs are installed at both ends of the route along the crest of the seabank to explain that waterbirds using the area are sensitive to disturbance and that: (i) dogs must be kept under effective control and must not be allowed to stray onto the saltmarsh or mudflats; (ii) the saltmarsh and flats are unsafe and access onto them is excluded by direction; (iii) flocks of waterbirds may occasionally be feeding or resting near enough to the path to be disturbed and that, in those circumstances, users are requested to walk in the folding to avoid disturbing them. We do not consider that compliance with this request is necessary to avoid an adverse effect on site integrity but it will raise awareness of the bird disturbance issue and any level of compliance should be beneficial.

Disturbance of breeding waterbirds (breeding pochard and ringed plover)

Pochard and ringed plover have occasionally been recorded nesting on the Howlands Marsh reserve and there are small areas of habitat that might be suitable for ringed plover seaward of the seabank. As the seabank route will be open during the nesting season, we propose that walkers using it are required to keep dogs on a short lead and that this message is included on the signs at either end of the seabank. An area of grazing marsh just north of the summer route falls within the coastal margin and includes habitat suitable for breeding pochard and other wetland birds. Access to this will be excluded by direction year round.

Along the west side of Flag Creek, some of the ponds and ditches near the route may provide suitable nesting habitat for pochard. But we know of no breeding or summer records of the species from this area and all the potential nesting habitat is inland of the coastal margin, so the risk of significant disturbance is too low to justify a formal restriction.

Though breeding redshank is not a European site qualifying feature on this stretch, the risk of increased disturbance to the breeding population has been considered because it could have knock-on effects on the passage/overwintering population, which is a feature of the Colne Estuary SPA and a main component of the site’s non-breeding waterbird assemblage. About 20 pairs of redshank bred on saltmarsh along the Brightlingsea and Flag Creeks in 1993 [Ref 4] but the breeding population has probably declined markedly since then [Refs 14, 28]. Apart from the 5 ha that is registered common, all this saltmarsh (over 100 ha) will be excluded from new coastal access rights, so there is little risk of increased disturbance to redshank breeding on it. The species is also occasionally present during the summer on the grazing marsh at Howlands Marsh EWT reserve, though breeding has not been confirmed in recent years. The main part of the grazing marsh lies landward of our proposed route while the area at the north end of the reserve will be excluded by direction year round, protecting any redshank nesting on it from disturbance.

Trampling of vegetation (saltmarsh)

The narrow strip of registered common land that the route runs through before joining the seabank on the west side of Flag Creek widens into a roughly rectangular 5 ha block of saltmarsh just west of the southern end of route section SCJ-5-S022. The route turns east over the seabank onto the folding behind and so avoids crossing this saltmarsh, which lies within the coastal margin. Because it is registered common land we do not propose to exclude access to this 5 ha block under a S25A direction (unsuitable for public access). But we consider it unlikely that walkers will venture out onto it and cause significant trampling damage because it is mid-zone saltmarsh dissected by deep muddy channels, so it is uninviting and access across it is difficult. Moreover there is a fence along the seabank on its east side and the onward route is in the folding behind that, so access from the trail onto the registered common land is limited to one point on its northern edge.

Conclusion:

Natural England has considered the possible risks to qualifying features at this location and, taking into account the avoidance and mitigation measures detailed above, consider that the proposals will not cause significant levels of bird disturbance or trampling damage to saltmarsh. The proposals will therefore not adversely affect the achievement of the conservation objectives in this location. Establishing a well maintained and easy to follow Coast Path along the alignment proposed, with signage to inform walkers of the access restrictions on parts of the trail and in the coastal margin, and advice on how to reduce bird disturbance, will also help with the long-term management of visitors to the area.

D3.2E Colne Point (Map 6)

Baseline situation

EWT’s Colne Point reserve forms part of the Colne Estuary National Nature Reserve and the NNR and EWT reserve boundaries coincide. The reserve comprises a ridge nearly 4 km long of shingle, sand and shell (referred to below as the shingle ridge) with extensive saltmarshes to landward and intertidal flats to seaward (Map 6). The whole reserve lies outside the seabank between Point Clear and Seawick and nearly all of it floods on high

spring tides. The shingle ridge runs south-southeast from Sandy Point to Colne Point, then east to the eastern boundary of the reserve and NNR. Backed by a narrowing wedge of saltmarsh, the ridge continues east from there for another 1.4 km to the eastern limit of the Colne Estuary SPA and Ramsar site at St Osyth Beach, Seawick. The tide flows into and drains from the saltmarsh via Ray Creek, which runs behind the shingle ridge and opens into Point Clear Bay near its northern end.

Access baseline

The EWT reserve has a part-time warden and no visitor centre. Under the current Colne Point management plan [Ref 25], authorised visitors to the reserve are: permit holders (who are EWT members or have obtained permission from the Trust); residents of the neighbouring chalets by agreement; visitors landing on the beach by boat within a permitted area; or groups by previous arrangement. No dogs are permitted on the reserve. The section of shoreline where boats are allowed to land is about 100 m long and prominently signed. The only road access is from Point Clear, south along a 3 km single-track road via Lee Wick Farm to Lee-over-Sands (about a dozen houses just inland of the Colne Point seabank). At this point the road is gated and signed “Private Road – residents and Essex Wildlife Trust members only”. It then crosses the seabank to the EWT car park (liable to flooding at high tide) and extends a few 100 m west to give access to about 20 chalets. The access route from the car park to the shingle ridge along the reserve shoreline is past the chalets and across a 30 m long footbridge over Ray Creek. Just south of this are a warden’s hut and paths to the Colne Point beach and to a nearby hide overlooking the saltmarsh.

Control of access is considered essential on the reserve because of its sensitive habitats and species, and unauthorised recreational use can be a problem [Ref 25]. This includes landings by boat outside the permitted area, and people arriving on foot or by vehicle via the private road or along the beach. In 2016 a fire started outside the reserve damaged vegetation on the shingle ridge within the eastern boundary before it could be controlled.

The 1.4 km of coastal margin between the EWT reserve and Seawick is privately owned but there is de facto public access to the beach from the Seawick end. Levels of use are highest within a few 100 m of Seawick but considerably lower further west towards the EWT reserve boundary, which is marked by an old fence line now in disrepair. Though OS maps show a channel cutting through the shingle ridge just east of Colne Point this has now been filled by accumulated sand and shingle, so the whole beach over 5 km long from Seawick to Sandy Point is walkable except around high spring tides.

A public footpath runs west along the seabank from Seawick, past Lee-over-Sands to a sewage works about a kilometre further north, where it turns inland. Levels of use along this seabank path appear to be quite high near Seawick, moderate west to Lee-over-Sands, and low further north. Though there is no public access along the seabank between the sewage works and Point Clear, most of this 1.3 km gap was a permissive footpath under a previous agri-environment scheme and a low level of de facto use by local residents continues.

Environmental baseline

Information on the numbers of non-breeding waterbirds using the area at high tide is good because the Colne Point WeBS core count sector has been surveyed every year since 2008/9 (before that, the creek was counted as part of a larger sector which also included Flag Creek). Averages of species’ annual peaks for the latest 5-year period (2013/14 to 2017/18) indicate that the sector holds important proportions of the whole SPA populations of redshank (10.5%), brent goose (9.0%), and many of the other main component species of the Colne Estuary SPA waterbird assemblage. It holds particularly high proportions of the SPA’s passage/overwintering ringed plover (72.4%), sanderling (86.1%) and cormorant (76.7%). This reflects the sector’s position at the estuary mouth: ringed plover and sanderling often feed on coarser sediments rather than soft mud, while cormorants fish offshore. Other well represented species feed on the flats seaward of the shingle ridge and in Point Clear Bay north of the reserve, or on the extensive saltmarshes within it. They include dunlin (41.5%), little egret (27.0%), curlew (22.6%), grey plover (21.0%), lapwing (14.5%), shelduck (11.8%) and golden plover (9.9%). Most of these birds roost at high tide on the large area of saltmarsh between Ray Creek and the seabank to the east [Ref 22].

The most recent WeBS low tide counts for Colne Point are from the 2007/8 winter [Ref 2]. ‘Dot density’ maps summarising the results show quite high densities of ringed plover, sanderling, oystercatcher, cormorant, little egret and curlew on the flats and/or saltmarsh between Sandy Point and Seawick, and moderate densities of brent goose, redshank, dunlin, grey and golden plover and wigeon.

Hen harriers and other passage/overwintering raptors are regularly seen hunting across the reserve and adjacent areas within and beyond the SPA.

The reserve’s shingle ridge provides by far the largest area of suitable habitat for breeding little tern and ringed plover on the Colne Estuary SPA. Unlike the much smaller patches of suitable habitat at Point Clear and on Mersea Island, the reserve is relatively undisturbed and easier to protect from increased recreational pressure. Numbers of ringed plover nesting on the reserve have probably declined from the 20 pairs recorded during a national survey in 2007. But records in more recent Essex Bird Reports [Ref 5] indicate that the reserve still supports 60 to 90% of the SPA’s breeding population. Little terns have declined dramatically on the reserve since their most recent peak of 54 pairs in 2004 [Ref 5], mirroring similar declines elsewhere on the Essex coast [Ref 28]. But as a follow-up to the recent LIFE-funded Little Tern Project, there are ongoing management efforts to attract a colony back to the reserve using measures including decoys, small-scale habitat modification (reducing vegetation on some high areas of sand/shingle), low rope fences and wardening.

The Colne Point reserve holds one of the largest, most species-rich and least damaged areas of H1420 Mediterranean saltmarsh scrub in the Essex Estuaries SAC and by far the largest area of this SAC qualifying feature on the Colne Estuary. This vegetation type is dominated by bushes of shrubby sea-blite *Suaeda vera* interspersed with sea purslane *Atriplex portulacoides* and herbaceous species. It mainly forms bands of varying width on the firmer substrates between the crest of the shingle ridge and the lower-lying Atlantic salt meadow behind. These extend for almost 4 km from near Sandy Point to the southeast

boundary of the reserve, and continue east beyond that to St Osyth Beach as smaller, scattered patches. The reserve is the only place in the SAC where NVC type SM21 (*Suaeda vera* – *Limonium binervosum* saltmarsh community) occurs, as well as the more common but less species-rich SM25 (*Suaeda vera* drift-line community). SM21 is a rare local variant of *Suaeda vera* scrub with a greater abundance of other plants, including unusual species like rock sea-lavender *Limonium binervosum* and sea-heath *Frankenia laevis*.

Another notable characteristic of the saltmarsh on the reserve is the extent and quality of mid, upper and transition zone H1330 Atlantic salt meadow communities. This is mainly because (i) the saltmarsh is sheltered behind the shingle ridge, so is largely protected from erosion; and (ii) there are natural transitions between H1330, H1420, strandline and other plant communities across the reserve, due to the variations in elevation and in the proportions of shingle, sand and mud in the substrate.

As a result of the variety and quality of its intertidal plant communities, the reserve supports nine of the nationally scarce species in the Colne Estuary Ramsar site’s wetland plant assemblage [Ref 1, Ref 25, Ref 26]. These include two, mentioned above, that are found nowhere else in the Ramsar site: rock sea-lavender *Limonium binervosum* and sea-heath *Frankenia laevis*. The latter is not recorded anywhere else in the county. The remaining species include shrubby sea-blite *Suaeda vera* and small cord-grass *Spartina maritima* (key component species of H1420 Mediterranean saltmarsh scrub and H1320 *Spartina* swards respectively) and five others mainly found on firmer ground near the edge of saltmarsh.

Another consequence of the reserve’s variety of plant communities and substrates is its importance for the Ramsar site’s wetland invertebrate assemblage. Its combination of sheltered mid, upper and transition zone saltmarsh, saltmarsh scrub, other sand/shingle plant communities, and strandline vegetation and litter, make the reserve a key location for invertebrates of sand, shingle and strandline niches, as well as for saltmarsh species.

Detailed design of the access proposal and assessment of risks to qualifying features

The proposed route runs along the seabank between Point Clear and Seawick, inland of the Colne Point EWT reserve and NNR (route sections SCJ-6-S078 to S083) and also inland of the saltmarsh between the reserve’s eastern boundary and Seawick (route sections SCJ-6-S084 to S089). For its first 1.3 km (route sections SCJ-6-S078 to S080), the route provides new access along the seabank south of Point Clear but there is an existing public footpath for the remaining 4 km.

There is a greater range of sensitive European site qualifying features on this part of the route than at any of the other locations discussed above. They include SAC habitats and Ramsar site wetland species assemblages as well as SPA breeding and overwintering birds. Risks to these features are not related to the alignment of the route itself but to potential changes to access rights in the coastal margin as a result of our proposals. This is because the shingle ridge between Sandy Point and Seawick (including transitional areas either side of the ridge crest) supports sensitive SPA, SAC and Ramsar site features and is not unsuitable for access on safety grounds, so will not be excluded by direction under S25A. Moreover, the sand beach fronting the shingle ridge could lead to a substantial increase in recreational use in the coastal margin if access restrictions on the Colne Point reserve are removed and it becomes subject to full coastal access rights.

Risks to the relevant SPA, SAC and Ramsar site features are discussed below and proposed mitigation measures explained.

Trampling of vegetation (saltmarsh, wetland plant assemblage, wetland invertebrate assemblage)

Unlike SPA birds, the plant communities and plant and invertebrate assemblage species in the coastal margin along this part of the route are not susceptible to ‘disturbance from a distance’ but they are all sensitive to trampling damage year round. Some of these features occur in areas of saltmarsh and flats that are unsuitable for public access on safety grounds, so access would normally be excluded by direction under S25A even if there were no nature conservation concerns. However, some of the most valuable and sensitive features, such as the Mediterranean saltmarsh scrub and wetland assemblage species more or less confined to Colne Point, are concentrated on and around the shingle ridge and other areas where the ground is firm underfoot and relatively high, so access on foot is safe.

We initially considered defining those parts of the Colne Point reserve where exclusion on safety grounds under S25A is appropriate, and only proposing an exclusion on nature conservation grounds on the remaining parts of the reserve where sensitive features are present. But that approach proved unworkable because areas of sand/shingle and transitional habitats where access is safe occur in a complex mosaic with unsafe areas of saltmarsh and mud, and boundaries between them are impossible to define precisely. Moreover, due to dynamic coastal processes at the estuary mouth, the spatial distributions of safe and unsafe areas and of European site features change rapidly and unpredictably, often from one year to the next.

We therefore propose that on the Colne Point reserve, new coastal access rights in the coastal margin are excluded for the purposes of nature conservation on all parts of the reserve inland from the vegetated strandline at the top of the beach. Permissive access to the reserve granted by EWT (as specified in the Trust’s agreed Colne Point reserve management plan, which forms part of the management plan for the Colne Estuary NNR) will be unaffected by the exclusion of new coastal access rights. We propose that access on foot is permitted along the beach below the vegetated strandline but that no dogs are allowed. This maintains the current ‘no dogs’ restriction over the whole reserve, and is required primarily to prevent a significant increase in disturbance to breeding and non-breeding SPA birds (see below).

We propose to install advisory signs explaining the access restrictions outlined above and why they are necessary at the reserve’s main access points, namely (i) where Beach Road crosses the trail along the seabank, about 100 m from the EWT car park and (ii) near the top of the beach at the eastern boundary of the reserve. Most visitors access the main part of the reserve, including the most sensitive areas along the shingle ridge, via the footbridge over Ray Creek. Therefore we propose to install a lockable gate and an additional sign at the landward end of this bridge to assist visitor management on the reserve.

Along the 1.4 km section of coastline between the eastern boundary of the reserve and Seawick we do not propose restrictions in the margin on nature conservation grounds. But

saltmarsh between the seabank and the shingle ridge, and flats offshore of the beach, will be excluded by direction from new coastal access rights as unsuitable for public access under S25A, as elsewhere along the stretch. This leaves European site features associated with the shingle ridge more exposed to increased recreational disturbance than those on the reserve and NNR but we consider that acceptable because:

- From observations during site visits and patterns of wear, most people using the coastal margin east of the reserve get to the area from Seawick and mainly use the beach within a few hundred metres of this access point and below the vegetated strandline.
- There is already de facto public access to the beach from Seawick. This is accepted by the land owner and represents the current baseline level of access. We do not expect our proposals to have an appreciable effect on that level, which is mainly linked to the beach’s proximity to housing and caravan/ holiday parks.
- The extent, quality and variety of sensitive features associated with sand and shingle appear to be significantly lower between Seawick and the reserve boundary than within the reserve itself. For example the patches of saltmarsh scrub outside the reserve are quite small and do not include the rare SM21 community.
- Though there is obvious damage to sand/shingle vegetation not far from the reserve boundary, this appears from aerial photos to be largely the result of cars driving and parking on the shingle ridge in the past. Vehicle access onto the margin is not part of new coastal access rights and is no longer possible here due to ongoing coastal erosion at Seawick.

Disturbance of breeding waterbirds (breeding ringed plover and little tern)

A large proportion of the sparsely vegetated sand/shingle habitat on the Colne Point reserve suitable for nesting little tern and ringed plover lies just above the strandline within metres of the beach fronting the shingle ridge. In the recent past, the reserve’s little tern colony nested in this zone between Colne Point and the eastern boundary. To minimise the risk of nests being flooded out by high spring tides, EWT are focussing management efforts to attract terns on the highest parts of the ridge here. Ringed plover nest in similar habitat along the ridge but also in other relatively open areas further inland on the reserve, including some areas inland of Ray Creek.

Natural England’s conservation advice on the Colne Estuary SPA [Ref 21] requires restoration of the breeding populations of little tern and ringed plover to their baseline levels at the time the SPA was classified. Given the importance of the Colne Point reserve for both species, that objective is not compatible with the unrestricted application of new coastal access rights to areas of sand/shingle nesting habitat on the reserve, particularly because the birds nest during the summer when recreational use of the coast is at its height. The proposed exclusion of coastal access rights on the reserve inland from the vegetated strandline at the top of the beach is therefore required to protect these breeding birds from increased disturbance as well as to protect the habitats, plants and invertebrates that are sensitive to trampling.

Areas of the beach below the vegetated strandline will be inundated by the tide too frequently to be suitable for nesting, so we do not consider they require the complete

exclusion of coastal access rights. But because of the beach’s close proximity to key areas of nesting habitat a few metres above the strandline, a ‘no dogs’ restriction to cover the beach as well as the rest of the reserve is required to protect breeding birds from increased disturbance.

We do not expect the proposal to allow access to the reserve’s beach below the strandline for walkers without dogs will increase levels of use or the risk of bird disturbance significantly because:

- The direct route to it (across the reserve via the EWT car park and footbridge) will remain subject to permissive access rules agreed between EWT and Natural England. These can be adjusted as necessary if adverse effects on breeding birds or other sensitive features due to increased footfall on the reserve become apparent.
- There is over a kilometre of beach of similar quality between the eastern boundary of the reserve and Seawick, which is the next nearest easy access point.

In years when terns or plovers establish nesting territories close to the reserve beach it may be necessary for EWT to supplement the proposed formal restrictions with temporary, informal access management measures such as advisory signs and low rope fencing extending below the strandline, in order to alert walkers and encourage them to keep well clear of active nests.

East of the reserve and NNR, between their boundary and Seawick, we do not propose to exclude or restrict coastal access rights on the beach or on the smaller areas of vegetated sand and shingle above the strandline. This is because:

- Though ringed plover may sometimes nest on these areas, available evidence suggests that the large majority of the local breeding population nest within the EWT reserve.
- We do not know of any breeding records for little tern east of the reserve.
- We do not expect the Coast Path proposal will result in a significant increase in disturbance between the reserve and Seawick above current baseline levels, because the land owner already allows public access along the beach, our proposed route follows an existing public footpath along the seabank and, except at Seawick, the route is separated from the beach by saltmarsh on which coastal access rights will be excluded by direction under S25A.
- Absence of a formal restriction does not prevent the use of temporary, informal access management measures, as outlined above, if birds establish nesting territories on sand/shingle outside the reserve.

Though breeding redshank is not a European site qualifying feature on this stretch, the risk of increased disturbance to the breeding population has been considered because it could have knock-on effects on the passage/overwintering population, which is a feature of the Colne Estuary SPA and a main component of the site’s non-breeding waterbird assemblage. In 1993 at least 28 pairs bred on saltmarsh within the EWT reserve [Ref 4]. The number is likely to have declined markedly since then [Refs 14, 28] but several pairs probably still breed on saltmarsh within and east of the reserve. However, the risk of increased disturbance is low because access to the saltmarsh here will be excluded by direction year

round, either on nature conservation grounds (within the reserve) or on safety grounds (further east).

Disturbance of non-breeding birds (non-breeding brent goose, waterbirds and hen harrier)

At Colne Point, non-breeding birds are less susceptible to recreational disturbance than breeding ringed plover and little tern because they are not restricted to areas of sand and shingle and are present from autumn to spring, when there is less recreational use of the coast. The main high tide roost sites are on the extensive saltmarsh between the proposed seabank route and the shingle ridge, and far enough from both to be at little risk of disturbance. Most species, including brent goose and redshank, also feed mainly in inaccessible areas of saltmarsh and mudflat at similarly low risk. However, WeBS data show that the Colne Point count sector holds over 70% of the SPA’s non-breeding ringed plover and sanderling. These are main component species that are likely to feed along the beach and have declined in the SPA by over 70% since 1991/92 [Ref 29]. To protect them and other non-breeding species using the foreshore from increased disturbance we propose that the exclusion of dogs from the reserve’s beach applies year round.

Our proposed route includes 1.3 km of new access along the seabank between Point Clear and the sewage works north of Lee-over-Sands, where the Trail joins an existing public footpath. We expect a moderate increase in use along this stretch, above the current low level of de facto use. This increase may extend to adjacent parts of the public footpath further south because the new access will link that to Point Clear. But we do not expect this will lead to a significant increase in bird disturbance because this part of the route has extensive saltmarshes between 200 m and 800 m wide on the seaward side, with very little mudflat and no main roost sites near the seabank. The open fields inland lie outside the SPA boundary; though they may have value as functionally linked land for some SPA birds we have no evidence that areas close to the seabank are of importance for brent geese or other main component species.

Conclusion:

Natural England has considered the possible risks to qualifying features at this location and, taking into account the mitigation measures detailed above, consider that the proposals will not cause significant levels of bird disturbance or trampling damage to saltmarsh plant communities or wetland assemblage species. The proposals will therefore not adversely affect the achievement of the conservation objectives in this location. Establishing a well maintained and easy to follow Coast Path along the alignment proposed, with signage to inform walkers of the access restrictions in the coastal margin, and advice on how to reduce bird disturbance, will also help with the long-term management of visitors to the area.

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

In this section we assess the potential for adverse effects on site integrity resulting from the four environmental pressures and consequent risks to site conservation objectives identified

in Table 8 we consider the whole Coast Path stretch and take into account mitigation measures incorporated into the design of our access proposal. Each of the following subsections deals with one type of pressure. For ease of reference, we repeat the risk to conservation objectives and the qualifying features affected given in Table 8 (see D1) before summarising relevant design features, our conclusions on site integrity and whether non-significant residual effects remain which need to be considered in combination with non-significant effects of other plans or projects (see D4).

As in Table 8, feature groups are underlined and, at first mention, their constituent features are listed in brackets. Superscript numbers identify which designated sites each feature or feature group applies to, as follows: 1: Blackwater Estuary SPA; 2: Blackwater Estuary Ramsar site; 3: Colne Estuary SPA; 4: Colne Estuary Ramsar site; 5: Essex Estuaries SAC.

Disturbance of non-breeding birds

Risk to conservation objectives: Repeated disturbance to foraging or resting birds during winter and on passage, following changes in recreational activities as a result of the access proposal, may lead to reduced fitness and reduction in population and/or contraction in the distribution of qualifying features within the site.

Qualifying features affected: Non-breeding brent goose^{1,2,3,4}; Non-breeding waterbirds^{1,2,3,4} (grey plover^{1,2}; black-tailed godwit^{1,2}; dunlin^{1,2}; redshank^{3,4}; waterbird assemblages^{1,2,3,4}); Non-breeding hen harrier^{1,3}

Relevant design features of the access proposals:

- Nearly all the saltmarsh and intertidal flats adjacent to the route on this stretch are unsuitable for walking and access will be excluded by direction under S25A. The only exceptions are two areas of saltmarsh totalling about 14 ha which are registered common land; most of this is eroding and is now dissected by deep channels and difficult to access. We consider that the proposal is unlikely to increase levels of use on these areas.
- At Abbotts Hall Farm EWT reserve (see D3.2A) the route uses a farm track on which access by reserve visitors is already permitted and which is set well back from the reserve’s managed realignment site; dogs will be restricted to the line of the route and must be kept on leads; and access onto the breached seabanks along the outer edge of the realignment site will be excluded except at a few signed viewpoints where the risk of bird disturbance is low.
- Between Copt Hall Farm and the Strood (see D3.2A) the route provides new access along the seabank, seaward of open arable farmland that is an important feeding area for brent geese. Aligning through this farmland in order to avoid the seabank would be likely to cause greater disturbance to the geese.
- At Ray Island nature reserve (see D3.2A), which is surrounded by saltmarsh and flats but within the coastal margin and accessible by boat, the current ‘no dogs’ restriction will be maintained.

- At the Fingringhoe Ranges MoD training area (see D3.2B) the route skirts around the inland edge of the MoD land; access onto nearly all the MoD land in the coastal margin is prohibited under military byelaws; and access onto Langenhoe Point (beyond the land covered by MoD byelaws) will be excluded year round.
- At the Wick Farm West grazing marsh (see D3.2B) the route skirts around the inland edge of the marsh close to the fence line; access onto the coastal margin will be excluded year round; and within the grazing marsh field, dogs will only be permitted on the trail and must be kept on a short lead.
- At Fingringhoe Wick EWT reserve (see D3.2C) the route runs around the inland edge of the reserve and outside its boundary, except in the northern part of the reserve, where it runs just within the boundary following an existing permissive path set well back from the reserve’s managed realignment site; and dogs will be restricted to the trail year round and must be kept on a lead when within the reserve boundary.
- At Howlands Marsh EWT reserve on the east side of Flag Creek (see D3.2D) access on the new seabank route and adjacent margin will be excluded between 1 Sept and 30 April; lockable pedestrian gates will be installed at either end of this section and when it is closed, signs will direct walkers along a seasonal route inland of the reserve.
- On the west side of Flag Creek (see D3.2D) the part of the route bridging the gap between existing PRowS will be aligned along the folding for 450 m at its southern end, where there is a slightly greater risk of significant bird disturbance, before coming up onto the seabank.
- At Colne Point EWT reserve (see D3.2E) the route is aligned along the seabank inland of the reserve; on the reserve and NNR land new coastal access rights in the margin will be excluded, seaward to and including the vegetated strandline; on the reserve’s beach below the strandline no dogs will be allowed; and a lockable gate will be installed on the footbridge over Ray Creek.
- The proposal includes signage in several places - particularly where the route provides new access - to inform walkers of local restrictions on coastal access rights (made on nature conservation, land management or safety grounds) and, where appropriate, of ways to reduce disturbance to passage/overwintering birds.
- In two places where the route follows a seabank without an existing PRow, we consider the risk of significant bird disturbance is too low to justify formal restrictions or an alternative route, because important numbers of birds are not likely to use intertidal areas close enough to the route to be disturbed except under specific tidal conditions of limited duration. At these locations (Langenhoe Hall Marsh and the west side of Flag Creek) the inland margin will include the folding behind the seabank, and signs will be installed asking users to walk in the folding to reduce disturbance if they see flocks of birds ahead of them close to the seabank. We do not consider that compliance with this request is necessary to avoid an adverse effect on site integrity but it will raise awareness of the bird disturbance issue and any level of compliance should be beneficial.

Can ‘no adverse effect’ on site integrity be ascertained? Yes, taking into account the design features explained in D3.2 and summarised above, as well as the following points:

- Along most of this stretch, where the route follows existing PRowS, only small increases in levels of use above current baseline levels are expected.
- On sections where the route provides new access, use is only expected to increase to moderate levels at most, because there is little public parking space available near these sections and housing densities nearby are low.
- Important roosts sites and feeding areas for non-breeding birds on and seaward of the large Fingringhoe Ranges MoD training area will be unaffected by the proposals, because the route diverts inland around the training area and access onto it is prohibited under MoD byelaws or, in the case of Langenhoe Point, will be excluded by direction.
- In several other places the route skirts inland to avoid other excepted land types, again reducing the risk of disturbance to roosting and feeding areas on or seaward of the excepted land.
- The south side of Alresford Creek is the only part of the route not discussed in D3.2 where there is new access along a seabank. From site visits and information provided by local birdwatchers, we do not consider that new access here is likely to cause a significant increase in bird disturbance above current baseline levels. That is because the creek is narrow and only used by small numbers of birds, there is already a public footpath along its north side, and the nearest important roost site is at the creek mouth several 100 m from the new access.

Are there residual effects? Yes

Disturbance of breeding birds

Risk to conservation objectives: Repeated disturbance to birds during the breeding season, following changes in recreational activities as a result of the access proposal, may lead them to abandon nesting areas or reduce their breeding success (for example by causing eggs to become chilled, reducing food supply to chicks, or increasing the vulnerability of eggs, chicks or adults to predation).

Qualifying features affected: Birds breeding on shingle/ sand^{1,3} (ringed plover^{1,3}; little tern^{1,3}); Breeding pochard^{1,3}

Relevant design features of the access proposals:

- At Abbotts Hall Farm EWT reserve (see D3.2A), dogs will be restricted to the line of the route and must be kept on leads, reducing the risk of disturbance to pochard nesting on the lake inland of the coastal margin.
- East of the Strood causeway (see D3.2B) advisory signage will be installed where an area of wet rough grass with ponds lies within spreading room landward of the route along an existing public footpath on the seabank. Signs will ask users to stay on the trail and keep dogs under effective control.
- At the Fingringhoe Ranges MoD training area (see D3.2B) the route skirts around the inland edge of the MoD land; access onto nearly all the MoD land in the coastal margin is prohibited under military byelaws; and access onto Langenhoe Point (which is not covered by MoD byelaws) will be excluded year round.
- At the Wick Farm West grazing marsh (see D3.2B) the route skirts around the inland edge of the marsh close to the fence line; access onto the coastal margin will be excluded year round; and within the grazing marsh field, dogs will only be permitted on the trail and must be kept on a short lead.
- At Fingringhoe Wick EWT reserve (see D3.2C) the route runs around the inland edge of the reserve and outside its boundary fence, except in the northern part of the reserve, where it runs just within the boundary following an existing permissive route set well back from the reserve’s managed realignment site; and dogs will be restricted to the trail year round and must be kept on leads when within the reserve boundary.
- At Howlands Marsh EWT reserve on the east side of Flag Creek (see D3.2D) on the new seabank route open during the summer, dogs must be kept on a short lead and on the trail; and access will be excluded year round from an area of grazing marsh that falls within the coastal margin at the northern end of this section.
- At Colne Point EWT reserve, the key location for breeding ringed plover and little tern (see D3.2E) the route is aligned along the seabank inland of the reserve. On the reserve and NNR land new coastal access rights in the margin will be excluded, seaward to and including the vegetated strandline; on the reserve’s beach below the strandline no dogs will be allowed; and a lockable gate will be installed on the footbridge over Ray Creek.

- The proposal includes signage in several places - particularly where the route provides new access - to inform walkers of local restrictions on coastal access rights (made on nature conservation, land management or safety grounds) and, where appropriate, of ways to reduce disturbance to breeding birds.
- Though breeding redshank is not a European site qualifying feature on this stretch, the risk of increased disturbance to the species’ breeding population has been considered because it could have knock-on effects on the non-breeding population, which is a feature of the Colne Estuary SPA and a main component of both SPAs’ non-breeding waterbird assemblages. Redshank breed on saltmarsh and grazing marsh. Nearly all the saltmarsh adjacent to the route is unsuitable for walking, so access will be excluded by direction year round under S25A. Areas of grazing marsh and other potentially suitable nesting habitat are either on excepted MoD land, are inland of the route, or are in locations where access will be excluded by direction on land management or nature conservation grounds.

Can ‘no adverse effect’ on site integrity be ascertained? Yes, taking into account the design features explained in D3.2 and summarised above, as well as the following points:

- Along most of this stretch, where the route follows existing PRowS, only small increases in levels of use above current baseline levels are expected.
- On sections where the route provides new access, use is only expected to increase to moderate levels at most, because there is little public parking space available near these sections and housing densities nearby are low.
- Nesting and feeding areas on the large Fingringhoe Ranges MoD training area will be unaffected by the proposals, because the route diverts inland around the training area and access onto it is prohibited under MoD byelaws or, in the case of Langenhoe Point, will be excluded by direction year round.
- In several other places the route skirts inland to avoid other excepted land types, again reducing the risk of disturbance to nesting and feeding areas on or seaward of the excepted land.
- All locations with records of breeding pochard lie outside of spreading room along this stretch, as do nearly all the areas of apparently suitable breeding habitat for the species. They are either inland of the coastal margin, on land restricted under MoD byelaws, or on land where access will be excluded by direction on land management, safety or nature conservation grounds.
- Most of the borrow dykes inland of seabanks where the route provides new access appear to be unsuitable as breeding habitat for pochard because they are either too narrow, shallow, choked or silted up, or have too little fringing vegetation to be suitable.

Are there residual effects? Yes

Trampling, and cutting to maintain the trail

Risk to conservation objectives: Repeated trampling, following changes in recreational activities as a result of the access proposal, may damage sensitive habitats, plant communities or species, leading to long-term declines in their quality, distribution or numbers within the site. Types of possible effect include physical changes to habitats (for example through compaction of the substrate), shifts in the species composition of plant communities, and reductions in species’ population size or distribution. Regular cutting could have similar effects on species that occur on or immediately adjacent to the trail.

Qualifying features affected: Saltmarsh^{2,4,5} (*Salicornia* and other annuals colonising mud and sand^{2,4,5}; *Spartina* swards^{2,4,5}; Atlantic salt meadows^{2,4,5}; Mediterranean and thermo-Atlantic halophilous scrubs^{2,4,5}); Estuaries⁵ (saltmarsh sub-feature only); Wetland plant assemblages^{2,4}; Wetland invertebrate assemblages^{2,4}

Relevant design features of the access proposals:

- The route is not aligned on saltmarsh anywhere on this stretch.
- Nearly all the saltmarsh seaward of the route is unsuitable for walking, so access will be excluded by direction under S25A. The only exceptions are two areas totalling about 14 ha which are registered common land; most of this is eroding and is now dissected by deep channels and difficult to access. We consider that the proposal is unlikely to increase levels of use on these areas.
- The route is only aligned on grazing marsh (a supporting habitat for some wetland assemblage plants and invertebrates) at one location: Wick Marsh West (see 3.2B). Here the trail runs around the inland edge of the marsh for about 1 km but access to the coastal margin will be excluded. Unlike the rest of the marsh, much of the field edge is relatively dry, semi-improved grassland and therefore unlikely to be important for wetland assemblage species. We know of no records of assemblage species from the affected area.
- At Colne Point EWT reserve (see D3.2E) the route is aligned along the seabank inland of the reserve. New coastal access rights to the reserve and NNR land in the margin will be excluded, seaward to and including the vegetated strandline. The excluded area will cover all the Mediterranean saltmarsh scrub on the reserve, along with the other vegetation types sensitive to trampling that support wetland plant and invertebrate assemblage species.

Can ‘no adverse effect’ on site integrity be ascertained? Yes, taking into account the design features explained in D3.2 and summarised above, as well as the following points:

- Most of the wetland plant assemblage species found mainly on seabanks rather than on saltmarsh require brackish, relatively open ground. They benefit from some ground disturbance to create bare patches and are more tolerant of trampling than the true saltmarsh species.
- Along most of this stretch, where the route follows existing PRowS along seabanks, only small increases in levels of use above current baseline levels are expected.

- On sections where the route provides new access, use is only expected to increase to moderate levels at most, because there is little public parking space available near these sections and housing densities nearby are low.
- The proposal will establish a well maintained and easy to follow Coast Path, with signage to inform walkers where there are access restrictions on sensitive habitats in the coastal margin. This may reduce trampling damage to qualifying features in the margin despite small to moderate increases in footfall along parts of the trail itself.

Are there residual effects? Yes

Habitat loss caused by installation of infrastructure

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

Qualifying features affected: Non-breeding brent goose^{1,2,3,4}; Non-breeding waterbirds^{1,2,3,4}; Wetland plant assemblages^{2,4}; Wetland invertebrate assemblages^{2,4}

Relevant design features of the access proposals:

- On this stretch no infrastructure is proposed within a European site on any habitats that are SAC or Ramsar site qualifying features.
- At Wick Marsh West (see D3.2B), signage, a kissing gate and two footbridges are proposed on grazing marsh, a supporting habitat for SPA birds and Ramsar site wetland plants and invertebrates. But the ‘footprint’ of this infrastructure is small: about 27 m² - less than 0.001% of the roughly 430 ha of grazing marsh on the Colne Estuary SPA. And the footbridges that make up the majority of it (24 m²) are unlikely to have an adverse effect on the ditches they span. Also, the land affected is considered of low value for qualifying features because: (i) it lies close to boundary hedges, where few waterbirds are likely to feed or rest; and (ii) unlike the rest of the grazing marsh it is mainly relatively dry, semi-improved grassland, so of low value for wetland plants and invertebrates.
- The remaining infrastructure within European site boundaries (mainly kissing gates, signage and two footbridges) will be on habitats that are effectively site fabric for SAC and SPA features, though they could support some Ramsar site wetland plants and invertebrates. But most of this infrastructure (38 m² of the 69 m² total) will be on seabank crests, which are of low value for Ramsar site assemblage species when compared to habitats either side of the crest.
- Before infrastructure is installed, pre-works checks for wetland plant assemblage species will be carried out and locations adjusted if necessary to avoid them.
- The only part of the route within European site boundaries where surfacing is proposed is a 195 m section of heavily used public footpath on a seabank crest that is largely bare trampled mud, so unlikely to support any qualifying features.

Can ‘no adverse effect’ on site integrity be ascertained? Yes, taking into account the design features explained in D3.2 and summarised above.

Are there residual effects? No

Conclusion:

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

- Loss of species’ supporting habitat through installation of access management infrastructure.

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

- Disturbance of feeding or resting birds during the winter or passage periods
- Disturbance of nesting, feeding or resting birds during the breeding season
- Trampling or other physical damage from recreational activities, or cutting to maintain the trail.

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

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

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

Residual risk of insignificant impacts from the access proposals

Natural England considers that in this case the potential for adverse effects from the access proposals has not been wholly avoided by the incorporated or additional mitigation measures outlined in section D3. It is therefore considered that there are residual and appreciable effects likely to arise from this project which have the potential to act in-combination with those from other proposed plans or projects. These residual effects are shown in Table 11.

Table 11. Residual risk of insignificant impacts from the access proposals

Residual risk	Qualifying features affected
Disturbance of feeding or resting <u>non-breeding birds</u> during the winter or passage periods	Non-breeding brent goose ^{1,2,3,4} ; <u>Non-breeding waterbirds</u> ^{1,2,3,4} (grey plover ^{1,2} ; black-tailed godwit ^{1,2} ; dunlin ^{1,2} ; redshank ^{3,4} ; waterbird assemblages ^{1,2,3,4}); Non-breeding hen harrier ^{1,3}

Residual risk	Qualifying features affected
Disturbance of nesting, feeding or resting <u>breeding birds</u> during the breeding season	<u>Birds breeding on shingle/ sand</u> ^{1,3} (ringed plover ^{1,3} ; little tern ^{1,3}); Breeding pochard ^{1,3}
Trampling or other physical damage to <u>saltmarsh and associated wetland assemblage species</u> from recreational activities	<u>Saltmarsh</u> ^{2,4,5} (<i>Salicornia</i> and other annuals colonising mud and sand ^{2,4,5} ; <i>Spartina</i> swards ^{2,4,5} ; Atlantic salt meadows ^{2,4,5} ; Mediterranean and thermo-Atlantic halophilous scrubs ^{2,4,5}); Estuaries ⁵ (saltmarsh sub-feature only); Wetland plant assemblages ^{2,4} ; Wetland invertebrate assemblages ^{2,4}

Notes: Feature groups are underlined, with their constituent features listed in brackets.

- ¹ Blackwater Estuary SPA feature or feature group
- ² Blackwater Estuary Ramsar site feature or feature group
- ³ Colne Estuary SPA feature or feature group
- ⁴ Colne Estuary Ramsar site feature or feature group
- ⁵ Essex Estuaries SAC feature or feature group

Combinable risks arising from other live plans or projects

In this section (as shown in Table 12) we consider other live plans or projects we are aware of, that might interact with the access proposals, to identify any insignificant and combinable effects that have been highlighted in corresponding Habitats Regulations Assessments.

Table 12. Review of other live plans and projects

Competent Authority	Plan or project	Have any insignificant and combinable effects been identified?
Colchester Borough Council Tendring District Council	Colchester Emerging Local Plan 2017-2033 Tendring Emerging Local Plan 2017-2033	No. These emerging Local Plans each comprise a joint ‘North Essex Authorities Shared Strategic Section 1 Local Plan’ [Ref 3] and a separate Section 2 plan for each authority. They were submitted to the Planning Inspectorate in October 2017. As of early 2020, the shared Section 1 plan is under examination by the Planning Inspector. The Section 2 plans will be examined subsequently. The plans specify minimum numbers of additional homes to be built during the plan period that equate to population increases of roughly 20% for Colchester and Tendring. The two councils are collaborating with 10 other Essex LPAs to develop and implement the Essex Coast Recreational disturbance Avoidance & Mitigation Strategy (Essex Coast RAMS – see section D2 above) which aims to deliver the mitigation necessary to avoid significant adverse effects from ‘in-combination’ impacts of new residential development on SPAs, SACs and Ramsar sites on the Essex Coast [Ref 23]. Formal implementation of the RAMS is expected to start in 2020, before the new Local Plans are adopted. Once formal implementation has started,

Competent Authority	Plan or project	Have any insignificant and combinable effects been identified?
		<p>adherence to the RAMS by the collaborating LPAs should mean that there are no adverse effects on the integrity of SPA, SAC or Ramsar sites or appreciable residual effects on them due to housing growth to be taken into account. Until such time as the Local Plans are adopted, project level HRAs in line with the Essex Coast RAMS are required to ensure compliance with the Habitats Regulations.</p>
<p>Tendring District Council</p>	<p>Lower Farm, East End Green, Brightlingsea</p> <p>Application ref: 19/00188/FUL</p> <p>Mixed use tourist and residential scheme comprising enabling development of retirement living apartments (36 units), detached farmstead houses (5 units) and a lodge or club house serving a number of timber holiday lodges (104 units) and ancillary activities such as glamping, toilet facilities and play areas which will be the main focus of the development.</p>	<p>Yes. A moderately large tourist and residential development just east of Brightlingsea. It is about 175 m from the Colne Estuary SPA at its nearest point, in an area (the west side of Flag Creek) where the Coast Path proposal includes new access to the seabank. As of mid-July 2020, the planning application (19/00188/FUL) is awaiting a planning decision. Details on the LPA’s website indicate that (i) the holiday lodges are intended for use at any time of year; and (ii) the total number of beds in the tourist and residential accommodation combined is over 200.</p> <p>A HRA including an Appropriate Assessment (AA) of the proposal, prepared by Essex County Council’s ecological consultancy Place Services and adopted by Tendring District Council, concludes that provided the mitigation measures described in the AA are implemented in their entirety, the project will have no adverse effect on site integrity for the Colne Estuary SPA and Ramsar site and other European sites, either alone or in combination with other plans or projects. In our statutory response Natural England agrees with that conclusion, providing all mitigation measures are appropriately secured in any planning permission given. Those measures include on-site mitigation (such as extensive areas of green space with dog-walking routes within the site) and also a financial contribution in line with the Essex Coast RAMS tariff applied to the residential components of the development, to mitigate in combination effects. However, residual effects from the non-residential component (the holiday lodges) that could act in combination with the residual effects of the Coast Path proposals cannot be ruled out.</p>
<p>Tendring District Council</p>	<p>Lower Farm, East End Green, Brightlingsea</p> <p>Application ref: 20/00686/AGRIC</p> <p>Excavation to create a 1.7 ha water-storage</p>	<p>No. Proposal to excavate about 1.7 ha of agricultural land to a depth of about 4 m, and use the spoil to create a 3 m high bund surrounding the excavation site, to form a water-storage reservoir for agricultural purposes. The proposed location, on a low-lying field just south of the upper part of Flag Creek, is about 70 m from the Colne Estuary SPA at its nearest point. On 2 June 2020 the land owner submitted</p>

Competent Authority	Plan or project	Have any insignificant and combinable effects been identified?
	reservoir for agricultural purposes.	<p>to Tendring District Council an ‘Application to determine if prior approval is required for a proposed: Excavations or Deposits of Waste Material reasonably necessary for the purposes of Agriculture’ under Schedule 2, Part 6, of The Town and Country Planning (General Permitted Development) (England) Order 2015 (as amended). On 23 June the local authority determined that prior approval was not required. Natural England was not consulted. It is planned to commence construction in Q2-3 2020 and complete over an 8 to10 week period, ideally before winter.</p> <p>As of late July 2020, no HRA for this proposal is available but the potential for non-significant residual effects that could combine with those of the Coast Path appears to be very limited. This is because (i) construction is proposed for summer/autumn 2020, before this Coast Path stretch will be implemented; and (ii) provided the reservoir is only used for agricultural water-storage purposes, its operation post-construction is unlikely to increase disturbance to waterbirds in the vicinity.</p>
Tendring District Council	<p>Land at Robinson Road, Brightlingsea</p> <p>Application ref: 17/01318/FUL</p> <p>Residential development of 115 dwellings together with garages, access roads, parking, fencing, walling, public open space, landscaping, drainage, highways infrastructure and other ancillary works.</p>	<p>Yes. A moderately large housing development just east of Brightlingsea. It is about 200 m from the Colne Estuary SPA at its nearest point, in an area (the west side of Flag Creek) where the Coast Path proposal includes new access to the seabank. Planning permission was granted in August 2018 and the development is now under construction.</p> <p>There is an HRA screening assessment available on the LPA’s website along with other planning documents for this application. It was prepared by the developer’s ecological consultant and is dated August 2017. This assessment estimates that the development will result in about 255 new residents living close to the Colne Estuary SPA and that, without mitigation measures, a significant effect on the SPA’s non-breeding waterbirds is likely as a result of increased recreational disturbance. In paragraph 5.3, the assessment goes on to outline the mitigation measures required to prevent this adverse effect. These include on-site provision of SANGS, signage in and near the development site to direct residents away from parts of the SPA where disturbance could be caused, and “payment of a one-off contribution per household to the emerging LPA mitigation strategy to provide for other off-site measures, such as new public open greenspace and appropriate monitoring and management of the Colne Estuary N2K</p>

Competent Authority	Plan or project	Have any insignificant and combinable effects been identified?
		<p>site”. This refers to developer contributions in line with the Essex Coast RAMS.</p> <p>In response to the LPA’s statutory consultation on this application, Natural England advised that we have no objections “subject to the inclusion of planning conditions to secure all of the mitigation measures outlined in paragraph 5.3 of the HRA screening report.”</p> <p>However, from the planning documents on the LPA’s website, it appears that permission was granted without securing all the specified mitigation measures and without the LPA either carrying out or adopting a HRA that includes an Appropriate Assessment (as is now required for any project that includes mitigation). Though some on-site mitigation is included in the proposal, it appears that a developer contribution to fund strategic off-site mitigation measures has not been secured. Therefore the possibility of residual effects that may act in combination with the residual effects of the Coast Path proposals cannot be ruled out.</p>
Tendring District Council	<p>Development at The Priory Estate, St Osyth</p> <p>Application refs: 11/00333/OUT and 11/00328/FUL to 11/00332/FUL and others, involving about 332 new dwellings in total.</p>	<p>Yes. A large, mainly residential development on the Priory Estate just west of St Osyth village, near the east side of Flag Creek. The new housing will be concentrated at:</p> <p>(i) Wellwick: at the north end of the estate just east of the B1027. At its nearest point, this site is about 500 m from the Colne Estuary SPA at the north end of the Howlands Marsh EWT reserve;</p> <p>(ii) West Field: at the south end and about 100 m from the SPA boundary at St Osyth Creek at its nearest point.</p> <p>The development was described in six planning applications submitted in 2011: an outline application for Wellwick, four full applications for West Field, and one for the Priory Park. These involved 190, 123 and 19 new dwellings respectively. There have been many further applications and design modifications since then but the figures above do not appear to have changed much. Most permissions have now been given but construction is at an early stage. An Environmental Statement submitted with the 2011 applications states the 332 new dwellings will house about 939 new residents. This equates to a population increase of roughly 22% for St Osyth (which had 4,277 residents at the last census in 2011).</p>

Competent Authority	Plan or project	Have any insignificant and combinable effects been identified?
		<p>Following HRA screening, an Appropriate Assessment was prepared for Tendring District Council by Colchester Borough Council in 2011. This assessment (available on the LPA’s website under application 11/00333/OUT) considers all six planning applications together. It concludes that, without mitigation, the proposals are likely to have significant effects on the Colne Estuary SPA and Ramsar site and the Essex Estuaries SAC. It then lists the mitigation measures required and goes on to conclude no adverse effect on site integrity, either alone or in-combination, provided those mitigation measures are implemented. In our consultation responses Natural England agreed with that conclusion.</p> <p>However, the assessment pre-dates the development of the Essex Coast RAMS by several years and the mitigation measures it describes do not include a contribution to fund strategic off-site measures to prevent in-combination effects on European sites. The assessment makes no statement on whether non-significant residual effects which might act in combination with future plans or projects are expected. But as these planning proposals will result in several hundred more people living within a few 100 m of the Colne Estuary, we consider that residual combinable effects are likely.</p>
Colchester Borough Council	<p>MoD Fingringhoe Ranges, Lodge Lane, Langenhoe</p> <p>Application ref: 181189</p> <p>Construction of two 600 m Firing Ranges with 8m high stop-butts and facilities, two control buildings, one range support building, together with associated demolition and site clearance work, access, turning areas, parking areas, drainage and associated infrastructure, and to enable the operation of the Ranges to extend the Range Danger Area</p>	<p>No. This development involves installation and operation of two new firing ranges and associated infrastructure. It was granted planning permission in late 2018. As of summer 2020, scrub clearance and other preparatory work has been done but construction is at an early stage.</p> <p>The construction footprint largely occupies the shallow, east facing slope between the MoD boundary east of the Langenhoe Hall solar farm and the MoD grazing marshes on the lower ground further east. The new range butts will impinge slightly onto the western edge of the grazing marsh proper. The buildings and the western ends of the new ranges will lie outside the SPA boundary. The footprint overlaps an existing grenade range and demolition area just to the south. It also had some blocks of trees and mature scrub, most of which were cleared several years ago before grazing was introduced.</p> <p>An HRA prepared by MoD ecologists assesses effects of the range development on features of the Colne Estuary SPA and Ramsar site and the Essex Estuaries SAC. The HRA is informed by MoD-commissioned surveys of non-</p>

Competent Authority	Plan or project	Have any insignificant and combinable effects been identified?
	to the MoD freehold boundary at Fingringhoe which will include an intensification of the usage of the Range Danger Area.	<p>breeding and breeding birds, vegetation and protected species, as well as a noise assessment including field measurements and noise modelling. Natural England provided pre-application advice on the main protected sites issues and on a draft of the HRA.</p> <p>The HRA concludes there are unlikely to be any significant effects on European site features, either alone or in combination. This is largely a consequence of the location of the new ranges: on higher ground west and south of the key areas of grazing marsh and saltmarsh, and several 100 m from the nearest important high tide roosts. The HRA does not identify any non-significant residual effects that might act in combination with future projects. In relation to the Coast Path proposal, we consider the risk of an in-combination recreational disturbance effect on SPA birds is very low. This is mainly because the proposed route runs inland around the MoD training area with access to the margin excluded under military byelaws. And on the non-MoD land at Wick Marsh West (over 200 m northwest of the new ranges at their nearest point, and naturally screened from them) the route skirts around the edge of the grazing marsh with access to the margin excluded by direction on nature conservation grounds (see D3.2B for details).</p>
Natural England	Implementation of coastal access from Maldon to Salcott	<p>No. This adjacent stretch runs along the north side of the Blackwater Estuary, south and west of the present stretch. It follows existing public footpaths along seabanks for nearly all of its length. Proposals for this stretch were approved by the Secretary of State (SoS) in January 2018 after public consultation in 2017. Work to establish the route is currently taking place.</p> <p>An Access and Sensitive Features Appraisal (ASFA) published with the other consultation documents in 2017 assessed the effects of the proposal on European site and other sensitive features [Ref 17]. Taking into account mitigation measures included in the proposal, the ASFA concluded no adverse effects on European site qualifying features, either alone or in combination.</p>
Natural England	Implementation of coastal access on Mersea Island	<p>Yes. This adjacent stretch runs around Mersea Island, using existing public footpaths for the great majority of its length. A public consultation on our proposals for the stretch took place in 2017. They are currently with the SoS awaiting determination. The western end of length 2 of the</p>

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

Competent Authority	Plan or project	Have any insignificant and combinable effects been identified?
		<p>Salcott to Jaywick stretch connects to the Mersea Island stretch at the north end of the Strood causeway.</p> <p>As the Mersea Island stretch has not yet been determined by the SoS, a new HRA for it is being prepared but is not yet available. However the ASFA for the stretch, published with the other consultation documents in 2017, identified non-significant residual effects after mitigation with respect to disturbance of non-breeding birds, breeding ringed plover and pochard, and trampling of saltmarsh [Ref 18].</p>
Natural England	Implementation of coastal access from Jaywick to Harwich	<p>No. This adjacent stretch runs northeast from Jaywick along 16 km of open coast to Walton-on-the-Naze, then around Hamford Water and north to Harwich. Between Jaywick and Hamford Water there are no coastal European sites, much of the seafront is developed, and nearly all of the route follows existing PROWs. A public consultation on our proposals for the stretch took place in 2017. They are currently with the SoS awaiting determination.</p> <p>As the Jaywick to Harwich stretch has not yet been determined by the SoS, a new HRA for it is being prepared but is not yet available. The ASFA for the stretch, published with the other consultation documents in 2017, identified non-significant residual effects after mitigation with respect to disturbance of non-breeding birds, breeding ringed plover and little tern, and trampling of wetland plant assemblage species [Ref 19]. However, these residual effects apply to the Hamford Water SPA, Ramsar site and SAC, which at their nearest point are over 10 km from the Colne Estuary SPA and Ramsar site and the Essex Estuaries SAC. Therefore these effects cannot act in combination with the residual effects of the Salcott to Jaywick stretch.</p>

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

- Mixed use tourist and residential scheme at Lower Farm, Brightlingsea
- Residential development at Robinson Road, Brightlingsea
- Residential development at the Priory Estate, St Osyth
- Implementation of coastal access on Mersea Island

Assessment of in-combination effects

In light of the conclusions above, we have made an assessment of the risk of in combination effects. The results of this risk assessment, taking account of each qualifying feature of each site and in view of each site’s Conservation Objectives, are given below, in order of the type of qualifying feature that could be affected (non-breeding birds, breeding birds, and saltmarsh and associated wetland assemblage species; see Table 11 for details).

I Qualifying features affected: Non-breeding birds

In-combination pressure:

Increased use of the Coast Path is expected as a result of improvements to the quality of the path and its promotion as a National Trail. Other plans or projects that would increase local demand for recreational routes could similarly increase use of coastal paths and lead to more frequent disturbance to foraging or resting non-breeding birds during the winter or spring and autumn passage periods.

Assessment of risk to site conservation objectives:

The three developments listed above may produce non-significant residual disturbance effects that could act in combination with those resulting from the Salcott to Jaywick Coast Path proposal. All lie within a few 100 m of Flag Creek: the St Osyth Priory development on the east side and the two Brightlingsea developments on the west. The St Osyth development will increase the population of the village by about 22% (adding 939 new residents to the 4,277 at the 2011 census). As these new residents will live closer to the SPA than the average current resident of St Osyth, they may increase footfall on adjacent parts of the Coast Path by more than that.

On the west side of Flag Creek, the two Brightlingsea developments represent a smaller increase in the local population size. While the in-combination effects of the residential part of the Lower Farm scheme will be mitigated by the developer’s funding contribution to the Essex Coast RAMS, those of the Robinson Road development will not be. The latter will add about 255 residents, roughly 3% of the population of Brightlingsea (8,076 at the 2011 census) but may increase levels of use on the nearest parts of the Coast Path by more than 3% because of their proximity. In addition, temporary residents of the Lower Farm holiday lodges (up to about 170 at maximum occupancy) will add footfall.

From the figures above, some level of in combination effect seems probable. But taking other factors into consideration, including the mitigation measures built into the Coast Path proposals and all three developments, we consider this will not amount to an adverse effect on site integrity, for the following main reasons:

- On the east side of Flag Creek, the proposed new seabank route will be closed from September to April inclusive, when significant numbers of non-breeding waterbirds are usually present (see D3.2D for details). Access to it during this sensitive period will be barred by lockable gates and fencing. An alternative route inland of EWT’s Howlands Marsh reserve will be available year round.

- On the west side of Flag Creek, routes along PRowS from the new developments to the section of seabank where we propose new access are 1 to 1.5 km long and include several 100 m long roads. A circular route from the developments, taking in the 3 km of new seabank access, is over 5 km long with about 1 km on roads. This is likely to be used by some of the new residents and holiday visitors but is probably too long to become popular as a daily dog-walking route (research has found these average about 2.7 km).
- All three developments include communal green space within their boundaries, with provision for dog walking.
- The HRAs of both residential developments (St Osyth and Robinson Road) include signage within and beyond the development site to inform residents of the disturbance risk to sensitive wildlife on adjacent European sites and to suggest green space and walking routes nearby where there is little or no risk of disturbing overwintering waterbirds.
- There is scope for collaboration between development site management and Natural England to augment and refine these mitigation measures, as and when necessary.
- Though views from the Flag Creek seabanks are likely to increase footfall, there are no features like beaches or jetties that could attract people into the coastal margin, nearly all of which will be restricted on either safety or nature conservation grounds.
- The in-combination effect on levels of use will probably be lower during the sensitive period for non-breeding birds than in the summer, due to shorter daylengths, inclement weather, and lower occupancy of the Lower Farm holiday lodges.

Adverse effect in combination? No.

In-combination pressure:

Increased use of adjacent parts of the Mersea Island Coast Path stretch could lead to more frequent disturbance to non-breeding birds. This could act in combination with more frequent disturbance along the mainland shoreline due to use of the Salcott to Jaywick stretch.

Assessment of risk to site conservation objectives:

The main risk of significant in-combination disturbance effects is in intertidal areas lying between the north side of Mersea Island and the adjacent mainland, because that is where the two stretches are relatively close (within 0.5 to 1 km in places). But we consider the in-combination effect will be considerably less than that required to produce an adverse effect on site integrity, for the following main reasons:

- The northern part of the Mersea Island stretch follows existing public footpaths for the great majority of its length.
- For short sections west and east of the Strood causeway where it does not, it runs alongside a road or an existing walked route and is separated from the nearest mudflats and important roost sites by 100 m to 400 m of saltmarsh.
- Access to all the saltmarsh and mudflat in the coastal margin along the north side of Mersea Island (like that along the adjacent mainland shoreline) will be excluded by direction on safety grounds.

- We predict that promotion of the Mersea Island Coast Path stretch will only result in a small increase in footfall above current baseline levels, because the trail follows existing walked routes and the island is already a popular visitor destination.

Note: We consider the risk of an equivalent in-combination effect on SPA breeding birds is negligible because of the lack of sand/shingle nesting habitat for ringed plover or little tern on the north side of Mersea Island, and because the only potentially suitable habitat for nesting pochard near the route is a small amount of borrow dyke habitat inland of the margin.

Adverse effect in combination? No.

II Qualifying features affected: Breeding birds

In-combination pressure:

Increased use of the Coast Path is expected as a result of improvements to the quality of the path and its promotion as a National Trail. Other plans or projects that would increase local demand for recreational routes could similarly increase use of coastal paths and lead to more frequent disturbance to breeding waterbirds at or near their nesting areas.

Assessment of risk to site conservation objectives:

The Brightlingsea and St Osyth Priory developments lie either side and within a few 100 m of Flag Creek. As with non-breeding birds, the risk of significant in-combination effects on breeding birds is likely to be highest within easy walking distance of these developments. The nearest nesting locations cited in annual Essex Bird Reports [Ref 5] for the three SPA breeding species are as follows:

Little tern: Occasional nesting attempts on Cindery Island in the Brightlingsea Channel. The island is over 1 km from the developments and in mid-channel, so not susceptible to disturbance from the Coast Path.

Ringed plover: Records of single pairs from ‘St Osyth, Flag Creek’ in 2007 and 2008 [Ref 5]. The exact location of these records is uncertain. The only suitable nesting habitat in the vicinity appears to be on the Wellwick Wharf waste transfer site (which was previously a sand/gravel extraction site), or possibly on very small areas of coarse sediment at the toe of the Howlands Marsh seabank. The waste transfer site is excepted land, so new coastal access rights will not apply to it. With respect to the Howlands Marsh seabank, our proposals include the restriction that dogs must be kept on short leads. Taking into account that there are only small areas of sub-optimal nesting habitat at the toe of the seabank, and the lack of breeding records in the vicinity since 2008, we consider this is sufficient mitigation to avoid significant adverse effects on breeding ringed plover, either alone or in combination with other projects.

Pochard: Occasional breeding records from Howlands Marsh EWT reserve. Suitable nesting habitat on the reserve is either inland of the coastal margin or, at the north end of the reserve, access will be excluded from it on nature conservation grounds. The ‘dogs on leads’ restriction on the seabank route will prevent dogs straying off the trail into these areas.

Based on the information above, we consider that the in-combination effect on SPA breeding species will be considerably less than that required to produce an adverse effect on site integrity.

Adverse effect in combination? No.

III Qualifying features affected: Saltmarsh and associated wetland assemblage species

In-combination pressure:

Increased use of the Coast Path is expected as a result of improvements to the quality of the path and its promotion as a National Trail. Other plans or projects that would increase local demand for recreational routes could similarly increase use of coastal paths and lead to more frequent trampling of sensitive features.

Assessment of risk to site conservation objectives:

The Brightlingsea and St Osyth Priory developments lie either side and within a few 100 m of Flag Creek. As with disturbance effects on SPA birds, in-combination effects as a result of trampling on saltmarsh are likely to be highest within easy walking distance of these developments. However nearly all the saltmarsh in the vicinity will be excluded by direction as unsuitable for public access, and signage at appropriate points will make this clear. The only exception is a 5 ha area of marsh on the west side of Flag Creek, which is registered common land (see D3.2D for details). The walked-route distance between this saltmarsh and the Brightlingsea developments is about 1 km. The Coast Path route runs inland of it and will be clearly signed. We therefore consider that any in-combination effect from a possible increase in trampling will be considerably less than that required to produce an adverse effect on site integrity.

Adverse effect in combination? No.

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

D5. Conclusions on Site Integrity

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

Natural England has concluded that:

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



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

Ramsar site, the Colne Estuary SPA and Ramsar site or the Essex Estuaries SAC either alone or in combination with other plans and projects.

PART E: Permission decision with respect to European Sites

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

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

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

Certification

HRA prepared by:

Name: Charles Williams

Date: 28 July 2020

HRA approved by:

Name: John Torlesse

Date: 31 July 2020

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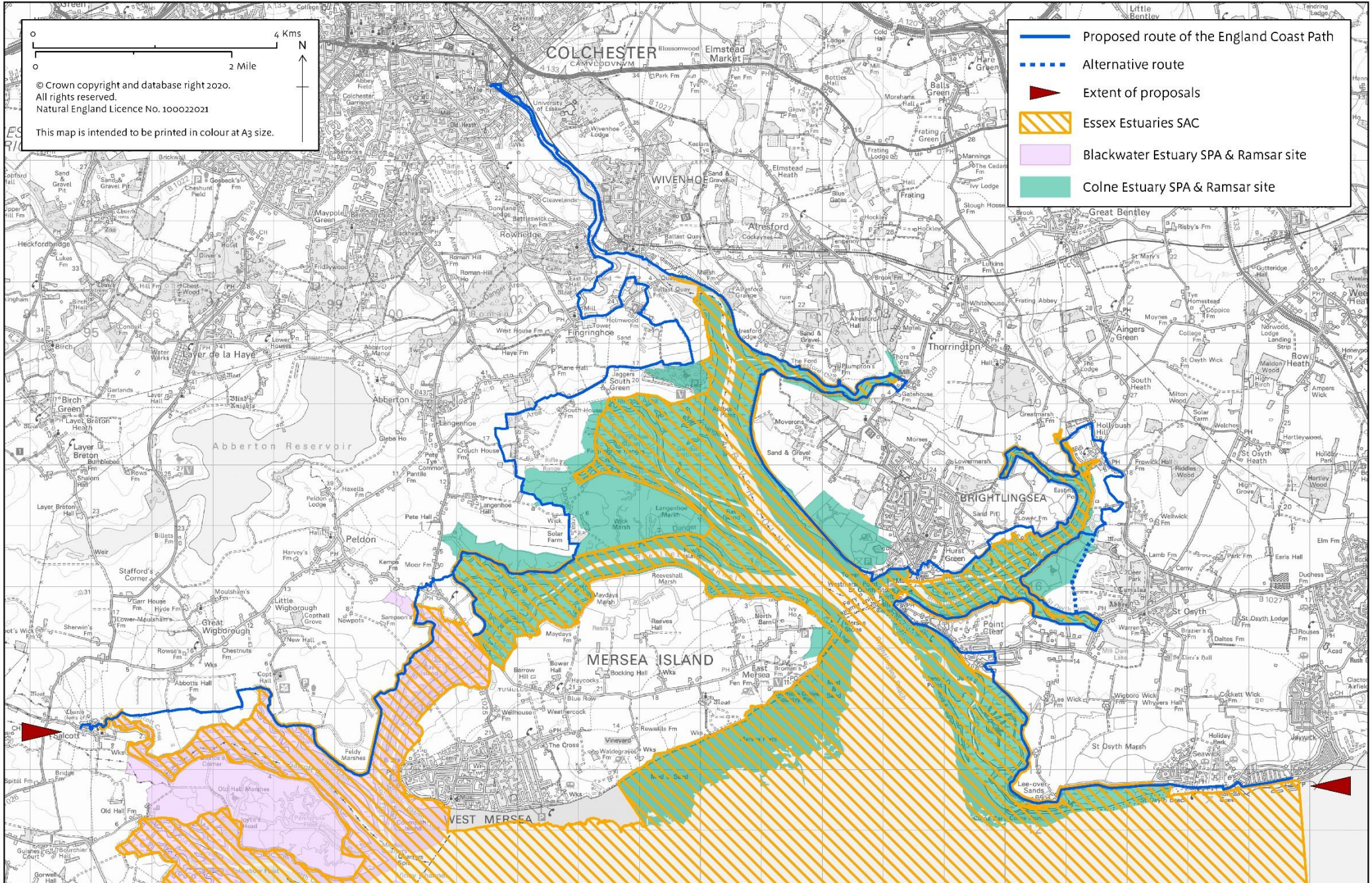
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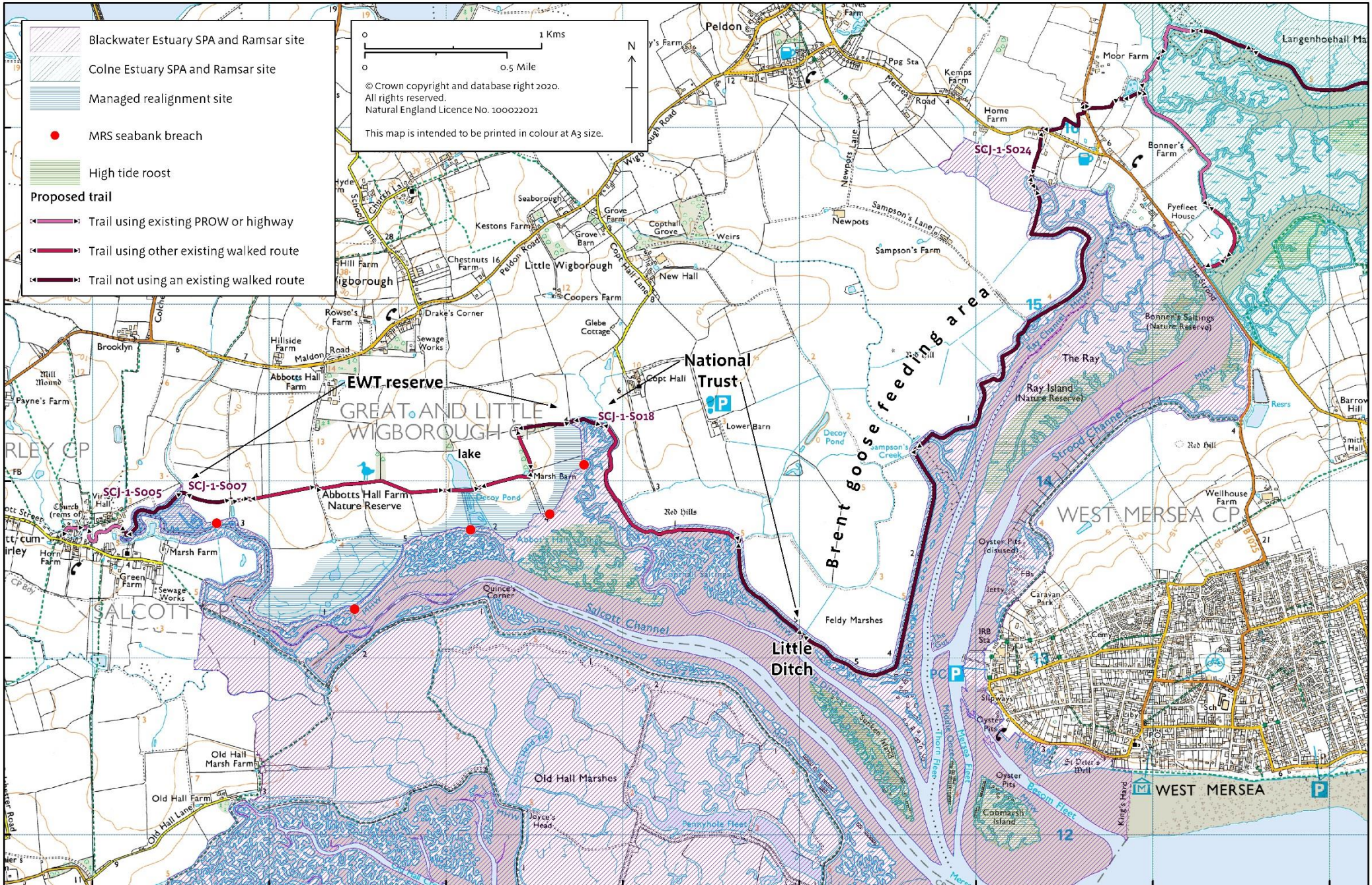
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Map 1 - Designations (SPAs, Ramsar sites and SAC)



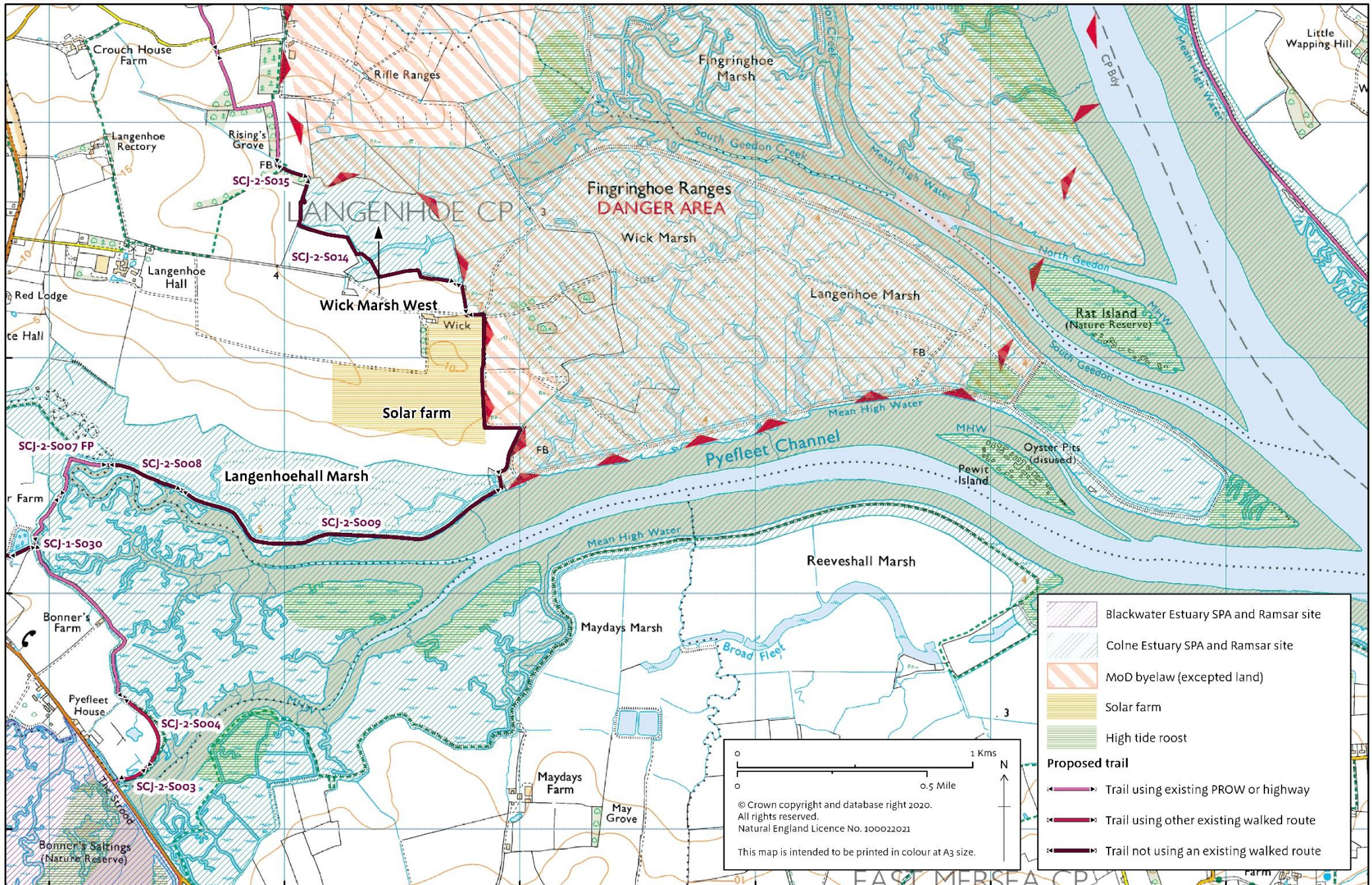
Map 1 - Designations (SPAs, Ramsar sites and SAC)

Map 2 - Salcott to The Strood



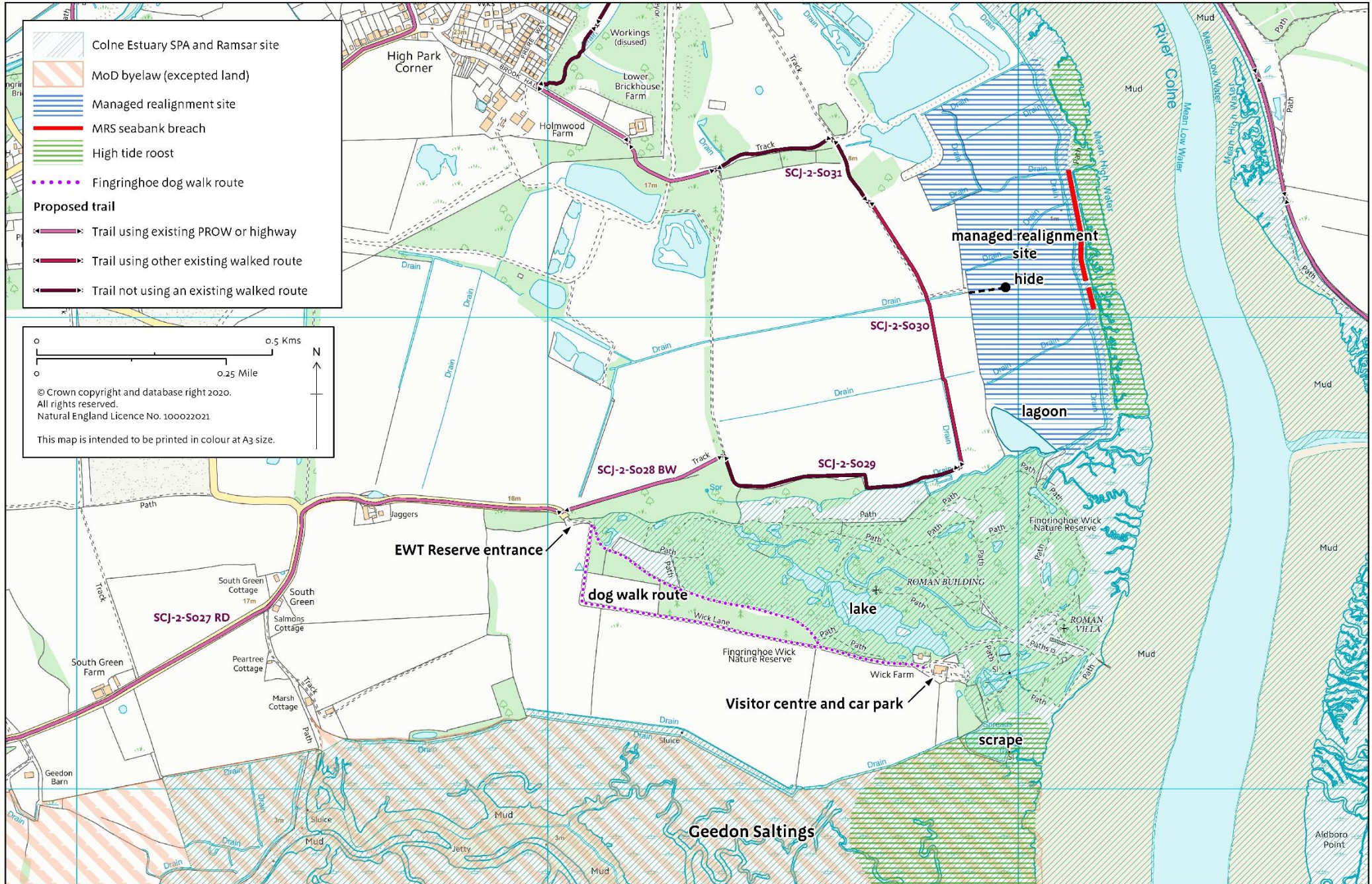
Map 2 - Salcott to The Strood

Map 3 - Upper Pyefleet Channel and Langenhoe grazing marshes

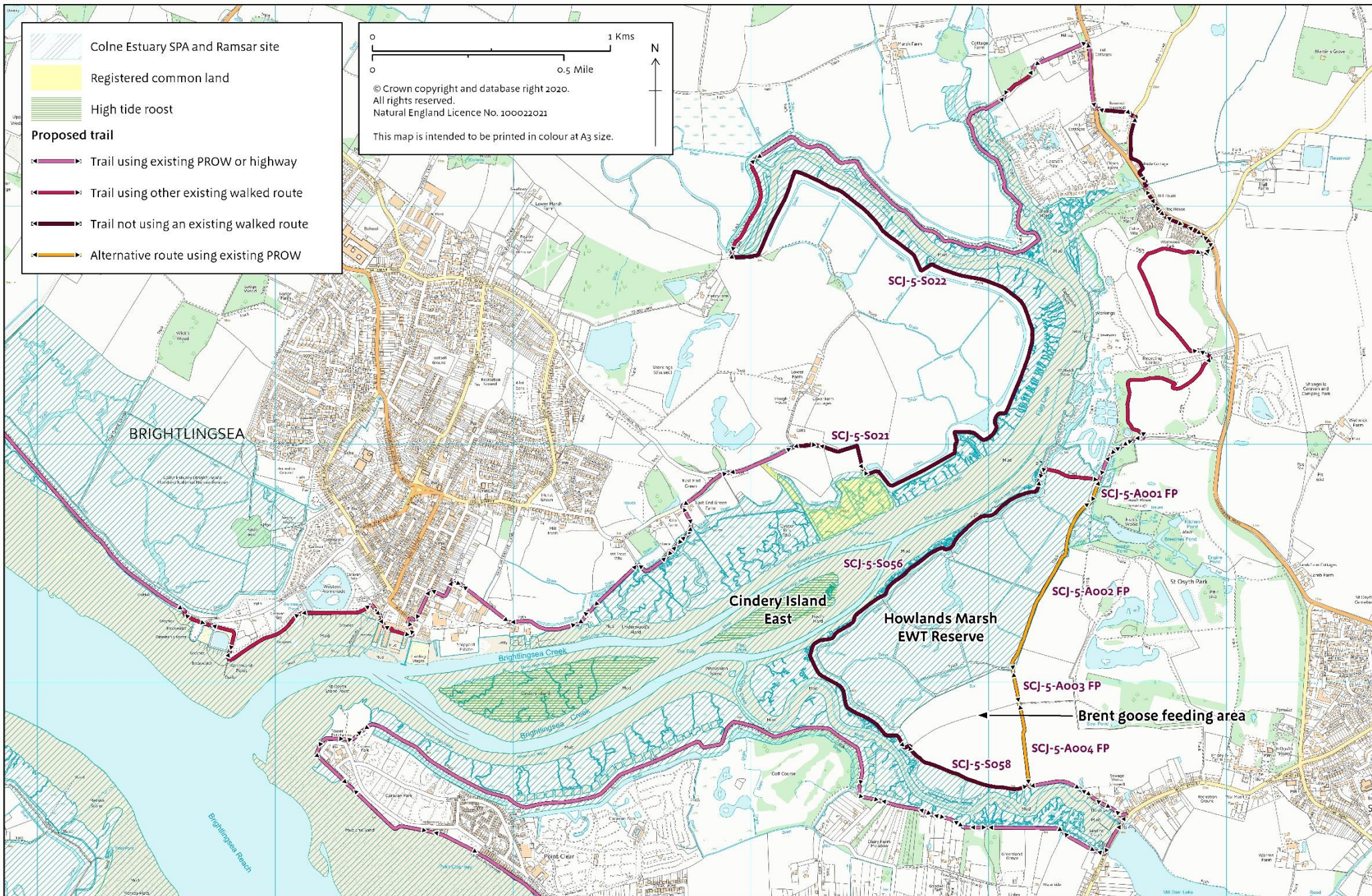


Map 3 - Upper Pyefleet Channel and Langenhoe grazing marshes

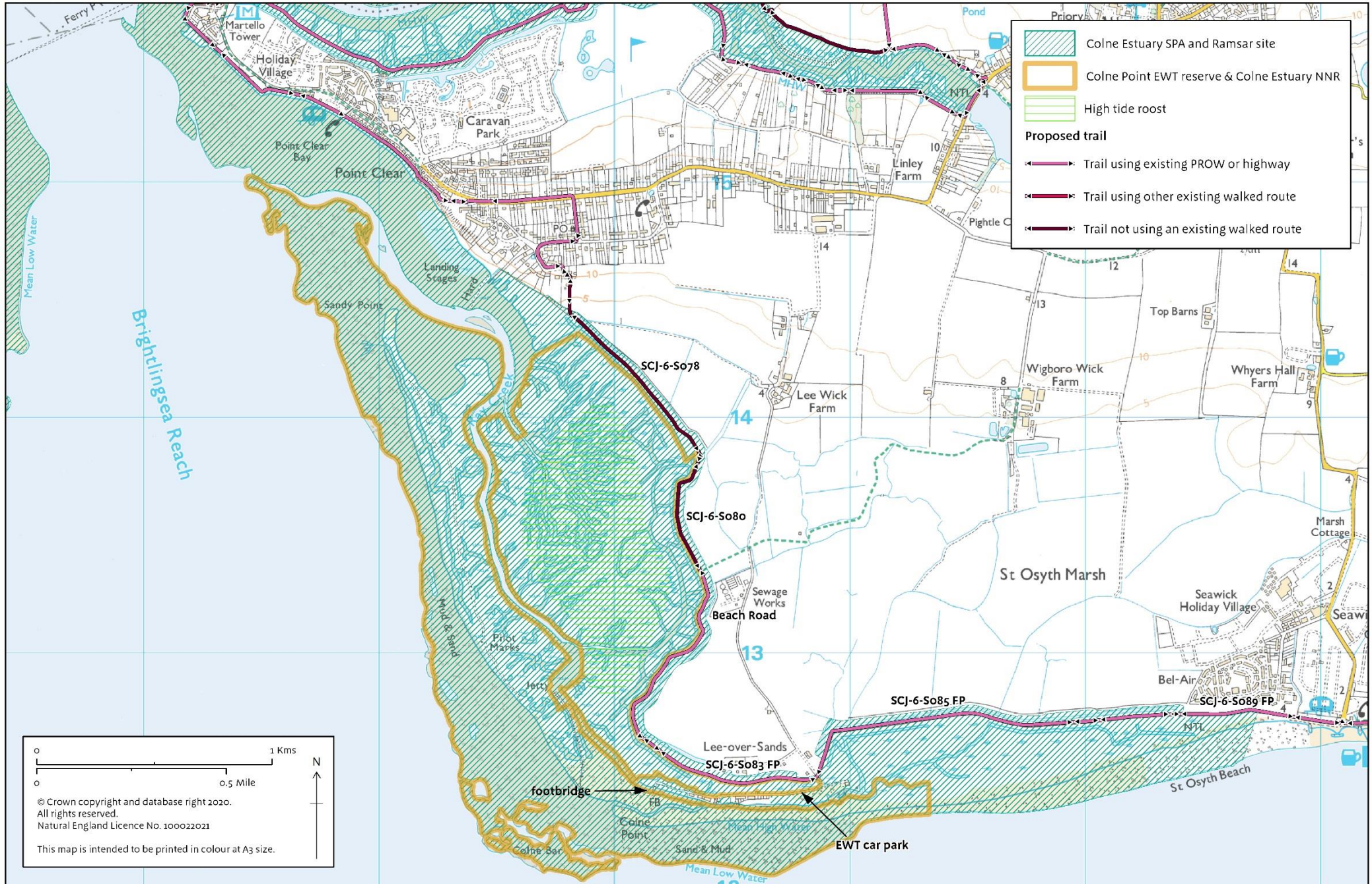
Map 4 - Fingringhoe Wick EWT Reserve



Map 5 - Flag Creek



Map 6 - Colne Point



Map 6 - Colne Point

0 0.5 Mile 1 Kms

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This map is intended to be printed in colour at A3 size.