



Access and Sensitive Features Appraisal

Coastal Access Programme

This document records the conclusions of Natural England’s appraisal of any potential for environmental impacts from our proposals to establish the England Coast Path in the light of the requirements of the legislation affecting Natura 2000 sites, SSSIs, NNRs, protected species and Marine Conservation Zones.

Burnham-on-Crouch to Maldon, Essex

July 2017

Contents

1. Our approach.....	2
2. Scope	3
3. Baseline conditions and environmental sensitivities	16
4. Potential for interaction	35
5. Assessment of any possible adverse impacts and mitigation measures	39
6. Establishing and maintaining the England Coast Path	81
7. Conclusions.....	85
8. Certification	97
9. References	98
10. Appendices.....	100

Maps

A Overview of ASFA sections and Report Chapters	101
B Key designations – Ramsar sites	102
C Key designations – Blackwater, Crouch, Roach and Colne Estuaries Marine Conservation Zone	103
D Key designations – Essex Estuaries Special Area of Conservation	104
E Key designations – Special Protection Areas	105
F Key designations – Sites of Special Scientific Interest	106
G Key designation – Dengie National Nature Reserve	107
H Location of key roost sites (Panter & Liley, 2016)	108
I Ringed Plover breeding records near St Peters on the Wall, Bradwell	109
J Access proposals and sensitive features - St Lawrence	110
K Access proposals and sensitive features – Stansgate	111

This appraisal should be read alongside Natural England’s related Coastal Access Report in which the access proposal is fully described and explained.

<https://www.gov.uk/government/collections/england-coast-path-burnham-on-crouch-to-maldon>

1. Our approach

Natural England's approach to ensuring the protection of sensitive nature conservation features under the Coastal Access Programme is set out in section 4.9 Coastal Access: Natural England's Approved Scheme 2013. We call our internal processes to support this approach 'Access and Sensitive Features Appraisal' (ASFA) and this document is a record of our conclusions. The appraisal includes our Habitats Regulations Assessment wherever relevant to the site in question.

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

Where our proposals for the England Coast Path and associated Coastal Margin are relevant to a Natura 2000 site, this appraisal fulfils our duty under the Habitats Regulations 2010 to assess their potential implications in order to ensure no likely significant effect on the site. The formal conclusions relating to this are recorded in Part 7 of the document.

2. Scope

In this part of the document we define the geographic extent for the appraisal and the features that are included. Note that this appraisal is concerned with ecological, geological and geomorphological features; any other possible sensitivities, including landscape and historic features, are discussed in our Coastal Access Report.

2.1 Geographic extent

The Burnham-on-Crouch to Maldon stretch of the England Coast Path extends from Burnham-on-Crouch Waterfront to Promenade Park in Maldon, Essex. The 65 km stretch is sub-divided for ease of reference (see Map A):

2.1.1 Burnham Ferry to West Wick

Route sections BCM-1-S001 to BCM-1-S010 within Chapter 1 of the Coastal Access Report.

This section starts in Burnham-on-Crouch on an urban promenade by the Burnham/Wallasea Island ferry pontoon (TQ 952 955) before heading east into the surrounding countryside along a grassy sea wall. It ends at the junction with Public Footpath 17 (TQ 979 952) which allows a circular trail back into Burnham-on-Crouch.

2.1.2 West Wick to Holliwell Farm

Route section BCM-1-S010 within Chapter 1 of the Coastal Access Report.

This section is entirely rural, running eastwards from the junction of Public Footpath 17 with the sea wall south of West Wick (TQ 979 952) to the boundary between the Crouch & Roach Estuaries designated sites and the Dengie designated sites (TR 016 957).

2.1.3 Holliwell Farm to Sandbeach Outfall

Route sections BCM-2-S001 to BCM-2-S012 within Chapter 2 of the Coastal Access Report.

This section is both rural and remote, running eastwards from the Dengie designated sites boundary (TR 016 957) before turning northwards along the open coast to Sandbeach Outfall (where the long-distance Recreational Route St Peter's Way joins the sea wall public footpath (TM 030 053).

2.1.4 Sandbeach Outfall to Bradwell Power Station

Route sections BCM-2-S012 to BCM-2-S025 within Chapter 2 of the Coastal Access Report.

This section runs north from Sandbeach Outfall (TM 030 053), following the long-distance Recreational Route St Peter's Way towards St Peter's on the Wall Chapel and on towards Bradwell Power Station which marks the end of the Dengie designated sites and the start of the Blackwater Estuary designations (TL 998 088).

2.1.5 Bradwell Power Station to Bradwell Marina

Route sections BCM-3-S001 to BCM-3-S012 within Chapter 3 of the Coastal Access Report.

This section runs westwards from Bradwell Power Station (TL 998 088) through the small village of Bradwell Waterside as far as the western end of Bradwell Marina (TL 991 076).

2.1.6 Bradwell Marina to Highfield

Route sections BCM-3-S013 to BCM-3-S020 within Chapter 3 of the Coastal Access Report.

This rural section runs from Bradwell Marina (TL 991 076) westwards, past Orplands managed realignment site and ending at the western end of the saltmarsh in front of Highfield (TL 967 057).

2.1.7 Highfield to Stansgate

Route sections BCM-3-020 to BCM-3-S070 within Chapter 3 of the Coastal Access Report.

This section runs westwards from the western end of the saltmarsh in front of Highfield (TL 967 057) through St Lawrence village and on to Marconi Sailing Club, Stansgate (TL 934 058).

2.1.8 Stansgate to Steeple Hall Farm

Route sections BCM-4-001 to BCM-4-S020 within Chapter 4 of the Coastal Access Report.

This section runs south and west from Marconi Sailing Club, Stansgate (TL 934 058) to where the long-distance Recreational Route St Peter's Way re-joins the coastal footpath near Steeple Hall Farm (TL 922 029).

2.1.9 Steeple Hall Farm to Mundon Creek

Route sections BCM-5-S001 to BCM-5-S035 within Chapter 5 of the Coastal Access Report.

This section starts where the long-distance Recreational Route St Peter's Way joins the sea wall near Steeple Hall Farm (TL 922 029) and runs around Nipsells peninsula and along Maylandsea waterfront to where St Peters Way leaves the coastal footpath to go inland at the head of Mundon Creek (TL 893 022).

2.1.10 Mundon Creek to White House Farm Canal

Route sections BCM-6-S001 to BCM-6-S002 within Chapter 6 of the Coastal Access Report.

This rural section starts where St Peters Way Recreational Route leaves the coast to go inland at the head of Mundon Creek (TL 893 022) and runs along the coast north and westwards through to where the disused White House Farm canal sluice meets the sea wall northwest of Iltney Farm (TL 879 053).

2.1.11 White House Farm Canal to Promenade Park, Maldon

Route sections BCM-6-002 to BCM-6-015 within Chapter 6 of the Coastal Access Report.

The final section runs west from the White House Farm sluice northwest of Iltney Farm (TL 879 053) through to Promenade Park in Maldon (TL 862 065) and includes Northey Island.

2.2 Designated sites

Natural England has determined that the proposed line of the England Coast Path (Burnham-on-Crouch to Maldon) and its associated Coastal Margin is located within or adjacent to, and has the potential to affect, a number of sites designated under national and international legislation for their nature conservation interest. These are shown in Maps B to G.

The **Crouch and Roach Estuaries**. The River Crouch occupies a shallow valley between two ridges of London Clay and the intertidal zone is 'squeezed' between the sea walls of both banks and the river channel. This leaves a relatively narrow strip of tidal mud unlike other estuaries in the county which, nonetheless, is used by significant numbers of birds. One species is present in internationally important numbers and three other species of wader and wildfowl occur in nationally important numbers. Additional interest is provided by the aquatic and terrestrial invertebrates and by an outstanding assemblage of nationally scarce plants. The Crouch and Roach Estuaries Ramsar site, SPA and SSSI boundaries are entirely coincidental.

The **Dengie** is a large and remote area of tidal mudflat and saltmarsh at the eastern end of the Dengie peninsula, between the Blackwater and Crouch Estuaries. The saltmarsh is the largest continuous example of its type in Essex. Foreshore, saltmarsh and beaches support an outstanding assemblage of rare coastal flora. It hosts internationally and nationally important wintering populations of wildfowl and waders, and in summer supports a range of breeding coastal birds including rarities. The formation of cockleshell spits and beaches is of geomorphological interest. The Dengie Ramsar site, SPA and SSSI boundaries are entirely coincidental.

The **Blackwater Estuary** is the largest estuary in Essex north of the Thames and is one of the largest estuarine complexes in East Anglia. Its mudflats, fringed by saltmarsh on the upper shores, support internationally and nationally important numbers of overwintering wildfowl. Shingle and shell banks and offshore islands are also features of the tidal flats. The surrounding terrestrial habitats; the sea wall, ancient grazing marsh and its associated fleet and ditch systems, plus semi-improved grassland are also of high conservation interest. The rich mosaic of habitats supports an outstanding assemblage of nationally scarce plants and a nationally important assemblage of rare invertebrates. The Blackwater Estuary Ramsar site, SPA and SSSI boundaries are entirely coincidental.

Essex Estuaries SAC is a typical, undeveloped, coastal plain estuarine system with associated open coast mudflats and sandbanks. The site comprises the main coastal designated sites of the major estuaries and open coast mudflats and sandbanks listed above, stretching between Shoeburyness and Clacton. Unlike the SSSIs, SPAs and Ramsar sites, the SAC includes sub-tidal areas but excludes areas of coastal grazing marsh inland of seawalls.

The **Blackwater, Crouch, Roach and Colne Estuaries MCZ** is located on the Essex coast and extends from the mean high water mark to where the estuary mouths join the North Sea, and is the largest inshore MCZ. The MCZ builds upon existing designations by offering protection to features which are not already protected.

The **Outer Thames Estuary SPA** lies along the east coast of England, predominantly in the coastal waters of the southern North Sea between the Thames Estuary and the east Norfolk coast and covers an area of c. 3,800km². Water depth within the site ranges from mean low water to 20-50m depth along the seaward boundary. Formal consultation on the existing **Outer Thames Estuary SPA proposed extensions** closed in July 2016 and would afford protection for little tern and common tern foraging areas, enhancing the protection already afforded to their feeding and nesting areas in the adjacent coastal SPAs.

Designated Site	Burnham Ferry to West Wick	West Wick to Holliwell	Holliwell to Sandbeach Outfall	Sandbeach Outfall to Bradwell Power Station	Bradwell Power Station to Bradwell Marina	Bradwell Marina to Highfield	Highfield to Stansgate	Stansgate to Steeple Hall Farm	Steeple Hall Farm to Mundon Creek	Mundon Creek to White House Farm Canal	White House Farm Canal to Promenade Park, Maldon
Essex Estuaries Special Area of Conservation (SAC)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Blackwater, Crouch, Roach and Colne Estuaries Marine Conservation Zone (MCZ)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Outer Thames Estuary Special Protection Area (SPA) and proposed extensions (pSPA)	✓	✓	✓	✓							
Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) Ramsar site	✓	✓									
Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) Special Protection Area (SPA)	✓	✓									
Crouch and Roach Estuaries Site of Special Scientific Interest (SSSI)	✓	✓									
Dengie (Mid-Essex Coast Phase 1) Ramsar site			✓	✓							

Designated Site	Burnham Ferry to West Wick	West Wick to Holiwell	Holiwell to Sandbeach Outfall	Sandbeach Outfall to Bradwell Power Station	Bradwell Power Station to Bradwell Marina	Bradwell Marina to Highfield	Highfield to Stansgate	Stansgate to Steeple Hall Farm	Steeple Hall Farm to Mundon Creek	Mundon Creek to White House Farm Canal	White House Farm Canal to Promenade Park, Maldon
Dengie (Mid-Essex Coast Phase 1) Special Protection Area (SPA)			✓	✓							
Dengie Site of Special Scientific Interest (SSSI)			✓	✓							
Dengie National Nature Reserve (NNR)			✓	✓							
Blackwater Estuary (Mid-Essex Coast Phase 4) Ramsar site					✓	✓	✓	✓	✓	✓	✓
Blackwater Estuary (Mid-Essex Coast Phase 4) Special Protection Area (SPA)					✓	✓	✓	✓	✓	✓	✓
Blackwater Estuary Site of Special Scientific Interest (SSSI)					✓	✓	✓	✓	✓	✓	✓

2.3 Context

The following table provides an overview of the stretches of the England Coast Path affecting the designated sites that lie within the Burnham-on-Crouch to Maldon stretch and Natural England's timetable:

Designated site	England Coast Path stretch (and status) P = in progress
Essex Estuaries SAC	Salcott to Jaywick (P) Mersea Island (P) Maldon to Salcott (P) Wallasea Island to Burnham-on-Crouch (P) Southend-on-Sea to Wallasea Island (P)
Blackwater, Crouch Roach and Colne Estuaries MCZ	Jaywick to Harwich (P) Salcott to Jaywick (P) Mersea Island (P) Maldon to Salcott (P) Wallasea Island to Burnham-on-Crouch (P) Southend-on-Sea to Wallasea Island (P)
Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) Ramsar site	Southend-on-Sea to Wallasea Island (P) Wallasea Island to Burnham-on-Crouch (P)
Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) SPA	Southend-on-Sea to Wallasea Island (P) Wallasea Island to Burnham-on-Crouch (P)
Crouch and Roach Estuaries SSSI	Southend -on-Sea to Wallasea Island (P) Wallasea Island to Burnham-on-Crouch (P)
Blackwater Estuary (Mid-Essex Coast Phase 4) SPA	Salcott to Jaywick (P) Mersea Island (P) Maldon to Salcott (P)
Blackwater Estuary (Mid-Essex Coast Phase 4) Ramsar site	Salcott to Jaywick (P) Mersea Island (P) Maldon to Salcott (P)
Blackwater Estuary SSSI	Salcott to Jaywick (P) Mersea Island (P) Maldon to Salcott (P)
Outer Thames Estuary SPA/pSPA	Tilbury to Southend-on-Sea (P) Southend-on-Sea to Wallasea Island (P) Wallasea Island to Burnham-on-Crouch (P)

2.4 Designated features

Avian Features – of the designated sites listed in 2.2	Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) Ramsar site	Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) Special Protection Area	Crouch and Roach Estuaries Site of Special Scientific Interest	Dengie (Mid-Essex Coast Phase 1) Ramsar site	Dengie (Mid-Essex Coast Phase 1) Special Protection Area	Dengie Site of Special Scientific Interest	Blackwater Estuary (Mid-Essex Coast Phase 4) Ramsar Site	Blackwater Estuary (Mid-Essex Coast Phase 4) Special Protection Area	Blackwater Estuary Site of Special Scientific Interest	Outer Thames Estuary Special Protection Area / Proposed Extension Areas
A046a Dark-bellied brent goose <i>Branta bernicla bernicla</i> (Non-breeding)	✓	✓	✓	✓	✓	✓	✓	✓	✓	
A082 Hen harrier <i>Circus cyaneus</i> (Non-breeding)					✓			✓		
Waterbird assemblage *(Non-breeding)	✓	✓		✓	✓		✓	✓		
Lapwing <i>Vanellus vanellus</i> (Non-breeding)			✓							
A141 Grey plover <i>Pluvialis squatarola</i> (Non-breeding)				✓	✓	✓	✓	✓	✓	
A143 Red knot <i>Calidris canutus</i> (Non-breeding)				✓	✓	✓				
A137 Ringed plover <i>Charadrius hiaticula</i> (Breeding)						✓		✓		
Bearded tit <i>Panurus biarmicus</i> (Breeding)						✓			✓	
A195 Little tern <i>Sterna albifrons</i> (B- Breeding)(F- Foraging Area)							✓B	✓B		✓F
Curlew <i>Numenius arquata</i> (Non-breeding)									✓	
A162 Common redshank <i>Tringa tetanus</i> (Non-breeding)			✓						✓	
A137 Ringed plover <i>Charadrius hiaticula</i> (Non-breeding)									✓	

Avian Features – of the designated sites listed in 2.2	Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) Ramsar site	Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) Special Protection Area	Crouch and Roach Estuaries Site of Special Scientific Interest	Dengie (Mid-Essex Coast Phase 1) Ramsar site	Dengie (Mid-Essex Coast Phase 1) Special Protection Area	Dengie Site of Special Scientific Interest	Blackwater Estuary (Mid-Essex Coast Phase 4) Ramsar Site	Blackwater Estuary (Mid-Essex Coast Phase 4) Special Protection Area	Blackwater Estuary Site of Special Scientific Interest	Outer Thames Estuary Special Protection Area / Proposed Extension Areas
Gadwall <i>Anas strepera</i> (Non-breeding)									✓	
Goldeneye <i>Bucephala clangula</i> (Non-breeding)									✓	
A059 Common pochard <i>Aythya ferina</i> ; (Breeding)							✓	✓	✓	
Shelduck <i>Tadorna tadorna</i> (Non-breeding)			✓						✓	
Teal <i>Anas crecca</i> (Non-breeding)									✓	
Shoveler <i>Anas clypeata</i> (Non-breeding)			✓							
A140 European golden plover <i>Pluvialis apricaria</i> (Non-breeding)			✓							
A156 Black-tailed godwit <i>Limosa limosa islandica</i> (Non-breeding)			✓				✓	✓	✓	
A149 Dunlin <i>Calidris alpina alpina</i> (Non-breeding)			✓			✓	✓	✓	✓	
Turnstone <i>Arenaria interpres</i> (Non-breeding)						✓				
Spotted redshank <i>Tringa erythropus</i> (Non-breeding)									✓	
Red-throated diver <i>Gavia stellata</i> (Non-breeding)										✓
A193 Common tern <i>Sterna hirundo</i> (F - Foraging Area)										✓F

*The main component species of the Crouch and Roach Estuaries SPA waterfowl assemblage include:

Dark-bellied brent goose; Shelduck; Teal; Shoveler; Little egret; Avocet; Ringed plover; Grey plover; Lapwing; Dunlin; Black-tailed godwit; Redshank.

*The main component species of the Blackwater Estuary SPA waterfowl assemblage include:

Dark-bellied brent goose; Shelduck; Wigeon; Gadwall; Teal; Pintail; Red-breasted merganser; Cormorant; Little egret; Avocet; Ringed plover; Golden Plover; Grey plover; Lapwing; Knot; Dunlin; Ruff; Black-tailed godwit; Curlew; Green Sandpiper; Greenshank; Redshank.

*The main component-species of the Dengie SPA assemblage include: Dark-bellied brent goose; Red knot; Dunlin; Grey plover.

Non-Avian Features – of the designated sites listed in 2.2	Essex Estuaries Special Area of Conservation	Blackwater, Crouch, Roach and Colne Estuaries Marine Conservation Zone	Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) Ramsar site	Crouch and Roach Estuaries Site of Special Scientific Interest	Dengie (Mid-Essex Coast Phase 1) Ramsar site	Dengie Site of Special Scientific Interest	Blackwater Estuary (Mid-Essex Coast Phase 4) Ramsar Site	Blackwater Estuary Site of Special Scientific Interest
H1110 Sandbanks which are slightly covered by sea water all the time. (Subtidal sandbanks)	✓							
H1130 Estuaries	✓							
H1140 Mudflats and sandflats not covered by seawater at low tide. (Intertidal mudflats and sandflats)	✓							

Non-Avian Features – of the designated sites listed in 2.2	Essex Estuaries Special Area of Conservation	Blackwater, Crouch, Roach and Colne Estuaries Marine Conservation Zone	Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) Ramsar site	Crouch and Roach Estuaries Site of Special Scientific Interest	Dengie (Mid-Essex Coast Phase 1) Ramsar site	Dengie Site of Special Scientific Interest	Blackwater Estuary (Mid-Essex Coast Phase 4) Ramsar Site	Blackwater Estuary Site of Special Scientific Interest
H1310 <i>Salicornia</i> and other annuals colonising mud and sand. ¹	✓				✓		✓	
H1320 <i>Spartina</i> swards (<i>Spartinion maritimae</i>). (Cord-grass swards) ¹	✓							
H1330 Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) ¹	✓				✓		✓	
H1420 Mediterranean and thermo-Atlantic halophilus scrubs (<i>Sarcocornetea fruticosi</i>). (Mediterranean saltmarsh scrub) ¹	✓							
SM13a - <i>Puccinellia maritima</i> saltmarsh, <i>Puccinellia maritima</i> dominant sub-community				✓		✓		✓
SM14 - <i>Atriplex portulacoides</i> saltmarsh				✓		✓		✓
Lowland ditch systems				✓				✓
A2.4 Intertidal mixed sediments		✓						
Native oyster (<i>Ostrea edulis</i>) beds		✓						
Native oyster (<i>Ostrea edulis</i>)		✓						
Clacton cliffs and foreshore		✓						

¹ The Ramsar Criterion qualifying feature 1a Wetland Characteristics: extent and diversity of saltmarsh habitat present is best exemplified by these SAC features.

Non-Avian Features – of the designated sites listed in 2.2	Essex Estuaries Special Area of Conservation	Blackwater, Crouch, Roach and Colne Estuaries Marine Conservation Zone	Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) Ramsar site	Crouch and Roach Estuaries Site of Special Scientific Interest	Dengie (Mid-Essex Coast Phase 1) Ramsar site	Dengie Site of Special Scientific Interest	Blackwater Estuary (Mid-Essex Coast Phase 4) Ramsar Site	Blackwater Estuary Site of Special Scientific Interest
Mesozoic - Tertiary Fish/Amphibia								✓
Invertebrate assemblage / rare animal species			✓	✓			✓	✓
Vascular plant assemblage / rare plant species			✓	✓	✓	✓	✓	✓
SD2 – <i>Cakile maritima</i> - <i>Honkenya peploides</i> strandline community						✓		✓
Saltmarsh Morphology						✓		

ADDITIONAL INFORMATION

Blackwater Estuary SSSI Vascular Plant Assemblage: slender hare’s ear *Bupleurum tenuissimum*; divided sedge *Carex divisa*; saltmarsh goosefoot *Chenopodium botryodes* (*Chenopodium chenopodioides*); sea barley *Hordeum marinum*; golden samphire *Inula crithmoides*; dittander *Lepidium latifolium*; lax-flowered sea-lavender *Limonium humile*; Borrer’s saltmarsh-grass *Puccinellia fasciculata*; stiff saltmarsh-grass *Puccinellia rupestris*; spiral tasselweed *Ruppia cirrhosa*; perennial glasswort *Sarcocornia perennis*; one-flowered glasswort *Salicornia pusilla*; small cord-grass *Spartina maritima*; shrubby sea-blite *Suaeda vera*; sea clover *Trifolium squamosum*; dwarf eelgrass *Zostera noltii*

Blackwater Estuary Ramsar site nationally scarce plants are: slender hare's ear *Bupleurum tenuissimum*, divided sedge *Carex divisa*, soft hornwort *Ceratophyllum submersum*, small red goosefoot *Chenopodium botryodes*, sea spurge *Euphorbia paralias*, lax-flowered sea-lavender *Limonium humile*, golden samphire *Inula crithmoides*, mousetail *Myosurus minimus*, sea barley *Hordeum marinum*, Borrer's saltmarsh-grass *Puccinellia fasciculata*, stiff saltmarsh-grass *P. rupestris*, brackish water-crowfoot *Ranunculus baudotii*, spiral tasselweed *Ruppia cirrhosa*, the glassworts *Salicornia perennis* and *S. pusilla*, small cord-grass *Spartina maritima*, shrubby sea-blite *Suaeda vera*, bird's-foot clover *Trifolium ornithopodioides*, sea clover *T. squamosum* and the eelgrasses *Zostera angustifolia*, *Z. marina* and *Z. noltii*.

Blackwater Estuary SSSI/Ramsar site invertebrate interest includes the following species (in order of rarity):

Endangered: a water beetle *Paracymus aeneus*; Vulnerable: a damselfly *Lestes dryas*, the flies *Aedes flavescens*, *Erioptera bivittata*, *Hybomitra expollicata* and the spiders *Heliophanus auratus* and *Trichopterna cito*; Rare: the beetles *Baris scolopacea*, *Philonthus punctus*, *Graptodytes bilineatus* and *Malachius vulneratus*, the flies *Campsicnemus magius* and *Myopites eximia*, the moths *Idaea ochrata* and *Malacosoma castrensis* and the spider *Euophrys browningi*.

Crouch and Roach Estuaries SSSI Vascular Plant assemblage/ Ramsar site nationally scarce plants are:

slender hare's ear *Bupleurum tenuissimum*; divided sedge *Carex divisa*; sea barley *Hordeum marinum*; golden-samphire *Inula crithmoides*; lax-flowered sea-lavender *Limonium humile*; curved hard grass *Parapholis incurve*; Borrer's saltmarsh grass *Puccinellia fasciculata*; stiff saltmarsh grass *Puccinellia rupestris*; spiral tasselweed *Ruppia cirrhosa*; one flowered glasswort *Salicornia pusilla*; small cord-grass *Spartina maritime*; shrubby sea-blite *Suaeda vera*; sea clover *Trifolium squamosum*

The Crouch and Roach Estuaries SSSI invertebrate assemblage /Ramsar site invertebrate assemblage include the following species: scarce emerald damselfly *Lestes dryas*, the shorefly *Parydroptera discomyzina*, the soldierfly *Stratiomys singularior*, the large horsefly *Hybomitra expollicata*, the beetles *Graptodytes bilineatus* and *Malachius vulneratus*, ground lackey moth *Malacosoma castrensis* and *Eucosma catoptrana*.

Dengie SSSI Vascular Plant assemblage: sea barley *Hordeum marinum*; golden samphire *Inula crithmoides*; lax-flowered sea-lavender *Limonium humile*; perennial glasswort *Sarcocornia perennis*; one-flowered glasswort *Salicornia pusilla*; small cord-grass *Spartina maritima*; shrubby sea-blite *Suaeda vera*; dwarf eelgrass *Zostera noltei*

Dengie Ramsar site nationally scarce plants: sea kale *Crambe maritima*, sea barley *Hordeum marinum*, golden samphire *Inula crithmoides*, lax-flowered sea-lavender *Limonium humile*, the glassworts *Salicornia perennis* and *S. pusilla*, small cord-grass *Spartina maritima*, shrubby sea-blite *Suaeda vera*, and the eelgrasses *Zostera angustifolia*, *Z. marina* and *Z. noltii*.

Dengie Ramsar site invertebrate assemblage includes the following rare species: a weevil *Baris scolopacea*, a horsefly *Atylotus latistriatus* and a jumping spider *Euophrys browningi*.

2.5 Other features about which concerns have been expressed – where applicable

Feature	Conservation interest
Blue mussel beds (<i>Mytilus edulis</i>)	Proposed additional feature to the Blackwater, Crouch, Roach and Colne Estuaries MCZ
Common Seal (<i>Phoca vitulina</i>) and grey seal <i>Halichoerus grypus</i>	<p>Dengie – up to 40 + individuals reported to use Grange Outfall, with numbers increasing in recent years.</p> <p>Blackwater Estuary – up to 20 common seals regularly hauling out on flats near Mundon Stone Point.</p>
Breeding Avocet	<p>Protected under Schedule 1 of the Wildlife and Countryside Act 1981. The bird, their nests, eggs and young are fully protected at all times. It is an offence to intentionally or recklessly disturb when nesting.</p> <p>18 pairs noted at Ramsey Marsh west of St Lawrence (terrestrial portion of Blackwater Ramsar site (Panter & Liley (2016))).</p>

3. Baseline conditions and environmental sensitivities

In this part of the document we identify any of the features mentioned above that are potentially sensitive to changes in access, and rule out from further consideration those that are not. Where applicable we have some features treated together as 'feature groups'.

3.1 Overwintering dark-bellied brent goose

Current conservation status and use of site by features

Brent geese arrive in Essex in October and nearly all have left by the end of April.

Historically most Brent geese fed on sea grass (*Zostera* spp.) and the green marine algae (*Enteromorpha*) or on saltmarsh plants. However, there has been a widespread decline in sea grasses and Brent geese now appear to be largely dependent on terrestrial habitats such as farmland (winter wheat and winter barley, oil seed rape), grass fields and amenity grasslands.

Dark-bellied Brent geese feeding on farmland are more wary and more easily put up than when on mudflats (Owens 1977). The maximum as well as the mean distance at which geese were disturbed increased with increasing flock size. A number of studies have also concluded that larger flocks of birds are warier and more easily disturbed than smaller flocks because there is a greater chance of larger flocks containing "jumpy" individuals which are liable to startle the rest of the flock (Owens 1977); Owens also noted that at the beginning of winter Brent geese were put to flight by a higher proportion of people approaching to within 50 -200m than in late winter and that they were more easily disturbed on fields behind the sea wall than on the saltings.

In 2016 Footprint Ecology produced a report for Natural England with accompanying maps and datasets, which together provided a summary of the key bird species and their distribution along the Essex coast SPAs (Panter & Liley 2016). Where habitat outside a site boundary is used by an interest feature it is normally referred to as 'functionally linked habitat' and recognises that the area in question, whilst outside the site, has an important role in supporting the interest feature and is therefore linked to the designated site because of the function it performs. The most relevant species for which functionally linked land is relevant is brent goose.

In order to identify potential functionally linked land Footprint Ecology used data from agri-environment schemes to highlight land within 1.5km of the SPA under the following Higher Level Stewardship (HLS) grassland options:

- HK10 Maintenance of wet grassland for wintering waders and wildfowl
- HK12 Restoration of wet grassland for wintering waders and wildfowl
- HK14 Creation of wet grassland for wintering waders and wildfowl

We have used this information in the absence of other evidence, or along with other evidence, as it is indicative of locations that might be used by brent geese.

Footprint Ecology also plotted licences issued by Natural England to shoot brent geese in order to prevent damage to crops meaning a landowner has successfully made a case to Natural England that there is enough brent geese feeding on winter cereals to justify shooting. That suggests regular visits by a fairly big flock somewhere nearby.

The absence of such indirect evidence is not taken as proof an area is not important.

Crouch & Roach Estuaries – held 3.0% of national population in SPA suite.

There are currently no relevant HLS agreements within 1.5 km of the SPA but on arable land east of Burnham-on-Crouch there are several Shooting to Kill brent geese licences.

Dengie – held 2.2% of national population in SPA suite.

There are relevant HLS agreements under options at Sandbeach and East Hall Farm as well as several Shooting to Kill brent geese licences. Personal communication with the farm manager at Dammerwick Farm told of high numbers of brents in Holliwell and Deal Hall area.

Blackwater Estuary – held 14.9% of national population in SPA suite.

There are relevant HLS agreements at Ramsey Marsh, south Stansgate, land east of Mayland Creek, land either side of Limbourne Creek as well as Northey island. There are numerous (18+) Shooting to Kill brent geese licences along this section of coast.

- Within Blackwater head of estuary and land around Northey in particular importance
- Northey Island –undisturbed due to remote geography, cut off by tides and with low current visitor access this is known to be an importance refuge in this important area of the Blackwater Estuary.

Sensitivities to changes in access

Dark-bellied Brent geese would be sensitive to changes in access that led to:

- more frequent interruptions to feeding both on the coast and on terrestrial / functionally-linked land. Sensitivity will depend on how close people are to feeding areas; how people (and their dogs) behave; sightlines and any features that act as a buffer between the path and feeding areas.
- more frequent displacement from places where birds congregate to roost at high tide. Brents usually prefer the outer seaward edge of saltmarshes to roost and so sensitivity is greater in these areas.
- Loss of feeding areas

Disturbance to dark-bellied brent goose results in increased energy expenditure & reduced feeding rates.

Saltmarsh may act as a buffer between sea wall footpaths and exposed mud at low tides but in areas where saltmarsh is narrow or is not found, birds feeding on mud are more sensitive to terrestrial access as they are pushed ever closer to the sea wall by the rising tide.

Conclusion: Due to these sensitivities to changes in access dark-bellied brent geese are ruled in for further consideration.

3.2 Non-breeding hen harrier

Current conservation status and use of site by features

In winter hen harriers move off the upland moors to hunt over lowland farmland, coastal marshes and river valleys. Numbers will be greater in periods of severe winter weather when hen harriers move to Britain from continental Europe. Hen Harriers hunt especially over saltmarsh, grazing marsh and farmland inland of seawalls taking small passerines, small mammals and waders.

During winter, Hen Harriers gather at communal roost sites at night. These can hold significant numbers of individuals and are usually located in inaccessible wetlands such as carr woodland, marshes and reedbeds, although they sometimes occur on conifer plantations.

Numbers of overwintering hen harriers have declined in line with national breeding populations but remain an important feature of the Dengie & Blackwater Estuary SPAs. They are also a Birds of Conservation Concern 4 (BoCC 4) Red list.

Dengie - overwintering hen harriers (September to April) use the whole of the site during the winter. They are dispersed and it is suspected the site supports hen harriers from adjacent sites as well. There are increasing records of hen harrier from the nearby Wallasea Island.

Blackwater Estuary – Numbers of overwintering hen harriers (August to March) have declined in line with national breeding populations but remain an important part of the overall bird assemblage on the Backwater Estuary. No roost sites are known for this stretch (south shore of Blackwater) though they are occasionally spotted hunting over sites on the northern shore of the Blackwater including Tollesbury Wick Marshes and Old Hall Marshes. They favour roost sites in inaccessible reedbeds or scrub.

Sensitivities to changes in access

Non-breeding hen harriers would be sensitive to changes in access that led to

- more frequent disturbance to their roost sites;
- new public access to favoured and previously inaccessible hunting areas ;
- a reduction in their prey (passerines, small mammals and waders).

Conclusion: As overwintering hen harrier could be affected if England Coast Path proposals provided new public access close to a previously inaccessible and undisturbed roost site or a particularly favoured hunting area, hen harrier is ruled in for further consideration.

3.3 Overwintering and passage waterbirds

Composition of feature group

This feature group includes all the overwintering & passage waterbirds of the Outer Thames, the Crouch & Roach Estuaries, the Dengie and Blackwater Estuary listed in section 2.4 (apart from dark-bellied brent goose which is treated separately).

Outer Thames SPA

Red-throated diver

Crouch & Roach Estuaries

Lapwing, redshank, shelduck, shoveler, golden plover, black-tailed godwit, dunlin and waterbird assemblage (main component species of the SPA assemblage include the species already listed and also teal; little egret; avocet; ringed plover; grey plover).

Dengie

Grey plover, red knot, dunlin, and waterbird assemblage (main component species of the SPA assemblage include the species already listed and also golden plover, bar-tailed godwit, black-tailed godwit, lapwing, turnstone and oystercatcher).

Blackwater

Dark bellied brent geese, black-tailed godwit, dunlin, grey plover, red knot and waterbird assemblage (the main component species of the SPA assemblage include species already listed and also cormorant , shelduck , teal, pintail, red-breasted merganser, avocet , grey plover, lapwing, redshank.

Current conservation status and use of site by features

The majority of overwintering waterbirds in this feature group, including the majority of the waders, feed mainly or exclusively on exposed intertidal sediments and saltmarsh at low tide and congregate to roost on higher areas of saltmarsh or shingle at high tide.

As well as the main group of 'intertidal feeding and intertidal roosting' species, it is worth identifying three smaller ecological groups:

- 1) 'Farmland feeders': Species that feed or roost on wet grassland or arable fields inland of seawalls, as well as in the intertidal zone. These include: wigeon, golden plover, lapwing and to a lesser extent curlew.
- 2) 'Freshwater feeders': Species that feed and roost mainly on fresh or brackish water bodies inland of seawalls, rather than in the intertidal zone. These include: gadwall, shoveler and some other dabbling and diving ducks.
- 3) 'Diving waterbirds': foraging in intertidal areas at high tide and further offshore. These include: red-throated diver, cormorant, red-breasted merganser and great crested grebe.

The above groups have blurred boundaries (with some species being difficult to categorise) and they share characteristics in relation to disturbance to a significant extent. They are therefore not treated as separate 'feature groups' in this report. But they are worth noting because their different patterns of habitat use affect their sensitivity to land-based disturbance to some degree.

'Farmland feeding' species are generally more susceptible to land-based disturbance than those feeding and roosting more or less exclusively in the intertidal zone due to farmland being more accessible to uncontrolled dogs..

'Diving waterbirds' are generally less susceptible to land-based disturbance.

The Outer Thames Estuary:

This SPA is classified for the protection of the largest aggregation of wintering red-throated diver in the UK, an estimated population of 6,466 individuals (38% of the wintering population of Great Britain). They use

both in-shore and off-shore marine waters for maintenance behaviours and foraging and are not generally present close in-shore. However during severe weather at sea, small numbers may look to take refuge in creeks, lagoons, harbours or sheltered bays for short periods of time.

Crouch & Roach Estuaries:

The River Crouch occupies a shallow valley between two ridges of London Clay and the intertidal zone is 'squeezed' between the sea walls of both banks and the river channel. This leaves a relatively narrow strip of tidal mud along the main channel compared to other estuaries in the county, which is exposed to strong tidal flows and so is largely composed of hard clay and stony material. As a result it is a less favoured feeding habitat than areas of soft mud in the more sheltered side channels and bays, where birds tend to be concentrated. Nonetheless, the main channel is used by significant numbers of birds at times.

High tide roosts: There are no major roost sites along this stretch (Panter & Liley 2016). With the exception of two small bays the saltmarsh along this section is narrow and linear, running alongside the seawall. There is only one block of saltmarsh of any size.

Low tide interest: A large proportion of the saltmarsh and mudflats between Burnham-on-Crouch and Holliwell Point lies within 60m of the proposed route, close enough for birds using them to be disturbed by walkers on the seawall. There is also the potential for disturbance from commercial and recreational water-based activities in the relatively narrow channel at the Burnham end in particular. BTO WeBS low tide count maps (Frost et al 2017) show low densities for most waterbird species in this stretch. The main exceptions are shelduck, dunlin and lapwing, which are sometimes present at moderate to high densities, mainly towards the Burnham end. But even for these species, the small area of intertidal habitat available in this stretch means it only holds a small proportion of the species' total for the SPA.

Habitats inland of the seawall: The land between Burnham-on-Crouch and Holliwell Point is predominantly arable, though there is horse grazing at Wick Farm, just east of Burnham. East of the caravan parks in Burnham there is a borrowdyke running the length of the sea wall and a small number of scattered ponds further inland.

Dengie:

The Dengie is a large and remote area of open coast tidal mudflat and saltmarsh. These are very extensive mudflats, extending seaward for up to 2.5 km from the outer edge of the saltmarsh. As the saltmarsh itself exceeds a further 0.75 km, at its maximum width low mean water lies nearly 3km from the sea wall i.e. the nearest non-intertidal land. The saltmarsh is the largest continuous example of its type in Essex.

High tide roosts: Panter & Liley (2016) map high tide roosts on saltmarsh: at Coate Outfall; south of Bridgewick Outfall: north and south of Grange Outfall (two roosts); east of Marsh House Farm; between Sandbeach Outfall and Glebe Outfall; north of Glebe Outfall; west of Gunners Creek; and at Tip Head in front of St Peters Chapel .

Low tide interest: Vast area of mudflats and therefore capacity to support very large numbers of wildfowl and waders. BTO WeBS low tide count maps for the mudflats at Dengie (Frost et al 2017) show that the 18 waterbird species mapped tend to be quite evenly distributed across the site, with little sign of consistent areas of high concentration. One exception is bar-tailed godwit, which tends to be more concentrated between the Marsh Hall outfall and St Peter's Chapel than elsewhere. The birds on the site are generally driven before the tides ebb and flow in search of exposed or low depth areas for feeding.

Habitats inland of the seawall: The land is predominantly arable and edged by a borrowdyke for the majority of the length of the sea wall which is of considerable width (over 20 m) in a number of places.

Blackwater:

The Blackwater mudflats, fringed by saltmarsh on the upper shores, support internationally and nationally important numbers of overwintering wildfowl.

High tide roosts: Panter & Liley (2016) map high tide roosts at seaward edge of: western half of Highfield saltmarsh & in front of St Lawrence Caravan Park – viewed as acting as a pair; saltmarsh to west of Steeple Creek; saltmarsh of Coopers Creek; saltmarsh on north east of Northey Island; and on Pewet Island.

Low tide interest: BTO WeBS low tide count maps (Frost et al 2017) show that along the south side of the Blackwater Estuary, the numbers and variety of waders and wildfowl tend to be higher in the upper parts of the estuary (from Lawling Creek westward) with Southey Creek, Mundon Creek and Mayland Creek being particularly important. Further east, the extensive mudflats of St Lawrence Bay are important for shelduck and several wader species, including dunlin, knot and lapwing.

Habitats inland of the seawall: The land is predominantly arable but with several notable areas of wet grassland. There is a borrowdyke running alongside the majority of the sea walls and a number of scattered ponds inland.

Sensitivities to changes in access

Activities causing disturbance anytime during the autumn or spring migration periods or over the winter can affect overwintering or passage waterbirds by reducing their feeding rates and increasing their energy expenditure (Panter & Liley 2016). Disturbance during the core winter period of November to March is probably more likely to contribute to mortality than at other times of year because day lengths are short, severe weather is more likely and food resources may be depleted. But in autumn newly-arrived long-distance migrants with depleted fat reserves could also be susceptible. And disturbance in spring while migrants are feeding-up before leaving for their arctic breeding grounds may also be damaging because breeding success is linked to early arrival and the birds' condition on arrival (Owen & Black 1990).

Overwintering and passage waterbirds sensitive would be sensitive to changes in access that led to:

- more frequent interruptions to feeding: sensitivity will depend on how close people are to feeding areas, how people (and their dogs) behave, sightlines and features that act as a buffer between the path and feeding areas.
- more frequent displacement from places where birds congregate to roost at high tide. Birds usually prefer the outer seaward edge of saltmarshes to roost and so sensitivity is greater in these areas. Disturbance of the main roost sites is likely to be especially significant because of the large numbers and variety of birds using them. The birds' energy expenditure may be increased both directly (particularly if they are repeatedly flushed) and indirectly (if disturbance forces birds to roost further from their preferred feeding areas).
- degradation or loss of feeding and roosting habitats i.e. saltmarsh, mudflats as key habitats of the intertidal zone
- disturbance to diving waterbirds taking refuge in sheltered locations during severe weather

Saltmarsh may act as a buffer between sea wall footpaths and exposed mud at low tides but in areas where saltmarsh is narrow or is not found, birds feeding on mud are more sensitive to terrestrial access as they are pushed ever closer to the sea wall by the rising tide.

Conclusion: Due to sensitivities to changes in access this feature group is ruled in for further consideration.

3.4 Breeding birds of bare or sparsely vegetated sand, shingle or shell banks

Composition of feature group
Little tern, common tern and ringed plover
Current conservation status and use of site by features
<p>All are ground nesters on bare or sparsely vegetated sand, shingle or shell banks on the edge of saltings or offshore islands.</p> <p>Little tern – Little terns generally arrive at their nesting areas from late April to early May and numbers of adults and young peak around July/early August, with most leaving for their West African wintering grounds by mid-September. However, an extended breeding season can begin in early March onwards to May and there can be up to three broods so flightless young may still be present in August.</p> <p>Recreational disturbance is a factor in reducing breeding success (Wood 2007). Populations are dynamic and will relocate to new sites (favoured little tern nesting habitat is ephemeral and subject to dynamic change (storm events while more stable sites may be lost to encroaching vegetation). Little tern are currently identified as a species of conservation priority. They are ‘amber’ listed in Birds of Conservation Concern (2015 update) protected under Schedule 1 of the Wildlife & Countryside Act 1981 (as amended) and in the EC Birds Directive – listed in Annex 1 and as a migratory species - the highest level of legal protection in the UK. Schedule 1 of the Act contains a list of birds for which all offences carry harsher penalties and for which the following extra protection applies. Under the legislation it is illegal to intentionally or recklessly disturb a Schedule 1 bird while it is building a nest or is in or near a nest containing eggs or young or intentionally or recklessly disturb dependent young while it is in use or being built during the breeding season.</p> <p>Ringed plover - They are ‘amber’ listed in Birds of Conservation Concern (2015 update) and have an extended breeding season beginning late March onwards to early September. Egg-laying starts in early April and there can be 2 or 3 broods (Snow & Perrins 1998). The species’ British breeding population declined by c.37% between 1984 and 2007 (Balmer <i>et al.</i> 2013). In Essex, available evidence suggests a decline of c.50% - to 100-200 pairs - between the early 1980s and the early 2000s (Wood 2007). Between 1987 and 1991, shortly before the four mid-Essex Coast SPAs were classified, the four sites were estimated to support an average of 135 pairs of ringed plovers. There has been no recent survey of these SPA’s breeding populations but records summarised in Panter & Liley (2016) suggest that the number of pairs breeding in the Blackwater estuary has remained well below 50 in recent years. Essex Bird Report 2012 indicates 25 pairs from 15 sites.</p> <p>Common Tern - have been declining in recent years and are classified in the UK as an Amber List species under the Birds of Conservation Concern review. As part of a national review with the aim of giving protection to their whole life span, Common Tern foraging areas are proposed for protection through a number of Proposed Extensions to Special Protection Areas. Terns forage mainly off-shore and return to breeding colonies to feed adult partners or chicks, with common terns also using coastal or inland wetlands for foraging.</p>
Outer Thames Estuary pSPA
<u>Common tern</u> - The relevant proposed marine extension area (the Foulness Extension) affords protection for foraging areas for common tern and extends part way along the Dengie coast and into the Crouch and

Roach Estuaries SPA, enhancing the protection already afforded to their feeding and nesting areas in the adjacent Foulness SPA.

Dengie

Ringed plover - Panter & Liley (2016) has breeding mapped: Shell Bank, south east of Middlewick; Gunners Creek near St Peters Chapel; foreshore east of Orthona; and the foreshore just west of Sales Point.

Blackwater Estuary –

Little tern - Panter & Liley (2016) has breeding mapped at: Pewet Island

Ringed plover - Panter & Liley (2016) has breeding mapped at: Bradwell Marina and Pewet Island.

Sensitivities to changes in access

Breeding birds of bare or sparsely vegetated sand, shingle or shell banks would be sensitive to changes in access that led to:

- new areas of this habitat becoming available to the public for the first time;
- an increase in access to this habitat during their nesting season

these would result in potential trampling of eggs; disturbance by dogs; nest desertion; and increased predation of eggs and young.

- Loss or degradation of the habitat;
- Connectivity between breeding areas and off-shore foraging areas is also potentially sensitive in that the presence of walkers and dogs in certain locations may disrupt or change normal flight routes.

Breeding ringed plovers are very susceptible to disturbance because their nesting season largely coincides with the summer holiday period and their nesting habitat is very popular for seaside recreation. This is particularly true along the Essex coast, where sand and shingle are confined to quite short stretches, so are often heavily used by the public. Not surprisingly, field studies have shown that levels of disturbance have a major impact on the species' breeding density at coastal sites (Liley & Sutherland 2007). The current high level of use by walkers and their dogs is probably a major reason for the erratic occurrence and low numbers of ringed plovers attempting to nest.

Access to the coastal margin is a significant factor in reducing the breeding success of ringed plover. In some sections the potential provision of spreading room has the potential to introduce recreational disturbance to stretches of foreshore not formerly accessible to the public. For species such as little tern and ringed plover it is possible that breeding pairs have not been reported from remoter areas, particularly those with little or no public access.

Conclusion: Due to sensitivities to changes in access this feature group ruled in for further consideration in this appraisal.

3.5 Breeding bearded tit

Current conservation status and use of the site

Bearded tits have been declining in recent years classified in the UK as an Amber List species under the Birds of Conservation Concern review, and are listed on Schedule 1 of the Wildlife and Countryside Act (1981, as amended).

Bearded tits are mainly found in large reedbeds where they feed on insects and reed seeds. They build their nests low down amongst the reeds, often on piles of dead reed stems.

Dengie – Panter & Liley (2016) has bearded tit mapped breeding in the borrowdyke close to the proposed route in the following locations: east of Deal Hall; Bridgewick Outfall; just north of Grange Outfall; Marshouse Outfall and north of Glebe Outfall.

Pers Comms – Bradwell Bird Observatory –bearded tit were once found breeding in the wide borrowdykes of the Dengie but over time (as the reed has not been managed for wildlife) the habitat has become less favourable for breeding bearded tit and so there are no/ low records.

Blackwater Estuary — Panter & Liley (2016) shows no records of breeding bearded tit on the Burnham-on-Crouch to Maldon stretch of the Blackwater.

Essex Bird Report (2012) suggests breeding at Old Hall Marshes (Maldon to Salcott stretch).

Ecological sensitivities to changes in access

Bearded tits usually nest and stay concealed in dense reed beds are probably less prone to disturbance than many other bird species. Breeding bearded tit would be sensitive to changes in access that led to:

- new areas of this habitat becoming available to the public for the first time;
 - a marked increase in access to this habitat during their nesting season
- these would result in potential trampling of eggs; disturbance by dogs; nest desertion; and increased predation of eggs and young.
- Loss or degradation of the habitat.

No areas of reedbed are proposed for coastal access and given the distance between the alignment of the England Coast Path and preferred bearded tit breeding habitat, disturbance by walkers is likely to be negligible.

Conclusion: Although the alignment of the England Coast Path along the sea wall and the suitable habitat along the borrowdyke may be in close proximity, due to the natural segregation between people following the path and nest sites amongst reeds and given the topography, vegetation, behaviour of breeding birds means that we don't consider the birds will be sensitive so the impacts of access on breeding bearded tit is ruled out from further consideration in this appraisal.

3.6 Breeding pochard

Current conservation status and use of the site

Designated interest feature for the Blackwater Estuary and Birds of Conservation Concern 4 (BoCC 4) Red list.

Pochard nest in reeds or other dense fringing emergent vegetation by fresh or slightly brackish waterbodies. Near the Essex coast the species usually breeds in coastal grazing marsh with wide, well vegetated fleets, ditches or ponds. The species is normally single brooded and nests from late April to early July.

Panter & Liley (2016) has one record of pochard breeding along this stretch (inland on fishing lakes at Nipsells Peninsula).

Ecological sensitivities to changes in access

Breeding pochard would be sensitive to changes in access that led to:

- new areas of this habitat (used by birds for breeding) becoming available to the public for the first time;
- an increase in access to this habitat during their nesting season

these would result in potential trampling of eggs; disturbance by dogs; nest desertion; and increased predation of eggs and young.

- Loss or degradation of the habitat.

No areas of fresh and brackish water or borrowdykes are proposed for coastal access.

Conclusion: Although the alignment of the England Coast Path along the sea wall and the suitable habitat along the borrowdyke may be in close proximity, due to the natural segregation between people following the path and nest sites amongst reeds and given the topography, vegetation, behaviour of breeding birds means that we don't consider the birds will be sensitive so the impacts of access on breeding pochard is ruled out from further consideration in this appraisal.

3.7 Estuaries

Current conservation status and use of the site

The Essex Estuaries SAC is a typical, undeveloped, coastal plain estuarine system with associated open coast mudflats and sandbanks. The site comprises the major estuaries of the Colne, Blackwater, Crouch and Roach rivers and is important as an extensive area of contiguous estuarine habitat. The SAC feature H1130 Estuaries encompasses the independent mosaic of subtidal and intertidal habitats, which are closely associated with surrounding terrestrial habitats. Several of the component habitats – such as H1110 subtidal sandbanks, H1140 intertidal mudflats and sandflats, and H1330 Atlantic salt meadows – are Annex I habitat types and interest features of the Essex Estuaries SAC in their own right.

Ecological sensitivities to changes in access

The Estuaries SAC feature includes some intertidal habitat types that are potentially sensitive to land-based coastal access. However, their sensitive components are all interest features in their own right and so are considered separately (see sections 3.8 to 3.11).

3.8 Sandbanks which are slightly covered by sea water all the time (sub-tidal sandbanks)

Composition of feature group

Sandbanks which are slightly covered by sea water all the time (H1110) consist of sandy sediments that are permanently covered by shallow sea water, typically at depths of less than 20 metres below chart datum (but sometimes including channels or other areas greater than 20 metres deep). The habitat comprises distinct banks (i.e. elongated, rounded or irregular 'mound' shapes) which may arise from horizontal or sloping plains of sandy sediment. Where the areas of horizontal or sloping sandy habitat are closely associated with the banks, they are included within the Annex I type.

Current conservation status and use of the site
Shallow sandy sediments are typically colonised by burrowing fauna of worms, crustaceans, bivalve molluscs and echinoderms. Mobile epifauna at the surface of the sandbank may include shrimps, gastropods molluscs, crabs and fish. Many of these species are exploited by birds as an important feeding resource.
Ecological sensitivities to changes in access
By definition, this feature is submerged at all states of the tide and so is inaccessible to walkers and outside the Coastal Margin. It is therefore ruled out from further consideration in this sensitive features appraisal.

3.9 Intertidal mudflats and sandflats

Composition of feature group
H1140 Mudflats and sandflats not covered by seawater at low tide. This includes a wide range of sediment flat communities, from estuarine muds, sands and muddy sands to fully saline, sandy mudflats with extensive growths of <i>Zostera</i> spp. on the open coast; Intertidal mixed sediments. Mixed sediments comprise unsorted pebbles, gravels, sands and mud, and they may also include rocks and a few large boulders. This type of shoreline tends to occur in more sheltered locations, and is not found where there is strong wave action. With such a broad range of seabed types on a single shoreline, the animal and plant communities are very diverse. Brown and green seaweeds can live on the larger rocks, and barnacles may also be abundant on any hard surfaces. Animals living on or in the sand and mud or between the pebbles include many worms such as ragworms, mud shrimps and sandhoppers, cockles and other bivalve shells, as well as the spire shell snail.
Current conservation status and use of the site
Mudflats and sandflats not covered by seawater at low tide - Essex Estuaries SAC feature Intertidal mixed sediments - Blackwater, Crouch, Roach and Colne Estuaries MCZ feature - The distribution of intertidal mixed sediments in the Blackwater, Crouch, Roach and Colne Estuaries Marine Conservation Zone tends to be further into the channels of the estuary. References: (JNCC) and (MCZ conservation advice 2017).
<u>Crouch & Roach Estuaries</u> - The River Crouch occupies a shallow valley between two ridges of London Clay and the intertidal zone is 'squeezed' between the sea walls of both banks and the river channel. This leaves a relatively narrow strip of tidal mud.
<u>Dengie</u> - The Dengie is a large and remote area of tidal mudflat extending seaward for up to 2.5 km from the outer edge of the saltmarsh.
<u>Blackwater Estuary</u> - The Blackwater Estuary mudflats, fringed by saltmarsh on the upper shores, support internationally and nationally important numbers of overwintering wildfowl.
Ecological sensitivities to changes in access

Intertidal mudflats and sandflats not covered at low tide would be sensitive to changes in access that led to:

- increased trampling as this could potentially result in: structural damage; compaction, erosion.

Conclusion: Due to ecological sensitivities to changes in access this habitat type is ruled in for further consideration in this appraisal.

3.10 Native oyster and native oyster beds

Current conservation status and use of site by features

These features are set to recover under the Blackwater, Crouch, Roach and Colne Estuaries Marine Conservation Zone MCZ i.e. they're currently in unfavourable condition and need action to make sure they recover.

Natural England is delivering a management plan for these features with many stakeholders including the Kent & Essex Inshore Fisheries and Conservation Authority (IFCA). Native oysters are found sporadically throughout the MCZ, and some points are recorded relatively close to the proposed route. However, it is likely that these points recorded are individual oysters, as native oysters and beds are found in 2 to 5m of water depth and therefore it is unlikely that native oysters could live for very long outside of the intertidal area.

Sensitivities to changes in access

Native oysters need to be in an area where they are at the very least partially submerged regularly to survive

Conclusion: Because the native oyster's typical habitat is inaccessible to walkers we can therefore rule out any potential impact of the proposed route on native oysters or native oyster beds in the MCZ.

References: (Jackson 2007) and (MCZ conservation advice 2017).

3.11 Saltmarsh

Composition of feature group

H1310 *Salicornia* and other annuals colonising mud and sand;

H1320 *Spartina* swards (*Spartinion maritimae*) /Cord-grass swards;

H1330 Atlantic salt meadows *Glauco-Puccinellietalia maritimae* including SM13 *Puccinellia maritima* saltmarsh community and SM14 *Halimone portulacoides* saltmarsh community. Golden samphire *Inula crithmoides* is a characteristic species of these marshes, occurring both on the lower marsh and on the drift-line;

H1420 Mediterranean and thermo-Atlantic halophilus scrubs (*Sarcocornetea fruticosi*)

SM13a - *Puccinellia maritima* saltmarsh, *Puccinellia maritima* dominant sub-community

SM14 - *Atriplex portulacoides* saltmarsh

Saltmarsh morphology [Dengie]

Current conservation status and use of the site

All the herbaceous saltmarsh communities are sensitive to trampling. The effects include an increase in bare, poached mud and a shorter and less species-rich sward, often reverting towards pioneer annual species and invasive common cord-grass. Saltmarsh's sensitivity to trampling is exacerbated because the more unusual and species-rich communities - and those most likely to include nationally scarce species - tend to occur in the more accessible parts of the intertidal zone: close to seawalls and on transitions to sand/shingle.

Salicornia and other annuals colonising mud and sand – these plants and their substrate are both fragile but they are generally relatively inaccessible and away from the top end of the intertidal zone.

Spartina swards restricted to stands of the native small cord-grass *S. maritima*, the introduced smooth cord-grass *S. alterniflora* or their infertile hybrid Townsend's cord-grass *S. x townsendii*, all of which are rare.

H1330 Atlantic salt meadows *Glauco-Puccinellietalia maritimae* Atlantic salt meadows develop when halophytic vegetation colonises soft intertidal sediments of mud and sand in areas protected from strong wave action. This vegetation forms the middle and upper reaches of saltmarshes, where tidal inundation still occurs but with decreasing frequency and duration.

Mediterranean saltmarsh scrub - vascular plant assemblage (part): shrubby sea-blite (*Suaeda vera*). Distribution is limited to upper saltmarsh zones and on shingle or shell banks and is subject to trampling. Saltmarsh scrub is probably less sensitive to trampling than herbaceous saltmarsh vegetation but is still vulnerable, particularly where paths are forced through it. The community's restriction to the highest parts of the intertidal zone and its association with transitions from mud to sand/shingle increases its vulnerability. Even when the scrub itself remains largely intact, trampling may degrade the plant community by damaging associated herbaceous species. Main stands are in locations heavily used by the public are dissected by many 'desire line' paths. This vegetation type is also at risk from accidental fires. Mediterranean saltmarsh scrub may form a barrier between the trail and the shingle beach or shell banks which are often favoured for recreational activities.

SM13a - *Puccinellia maritima* saltmarsh, *Puccinellia maritima* dominant sub-community Muds, silts, clays and muddy sands of high organic content and routinely inundated by the sea support vascular salt marsh plant communities dominated by dense tufts or hummocks *Puccinellia maritima*. These habitats typically occur in sheltered conditions of estuaries and bays. *Puccinellia maritima* dominated communities may also be pioneer communities, forming on lower shore muds, on the fallen edges of saltmarsh, on the edges of creeks or pans, and in recently disturbed areas of saltmarsh, such as the ruts left by vehicles or grazing animals. Isolated swards may occur in the higher marsh in disturbed or slumped areas.

SM14 - *Atriplex portulacoides* saltmarsh A low shrub of muddy or sandy saltmarshes, commonly fringing intertidal pools and creeks, and often forming extensive stands on ungrazed saltings.

Saltmarsh morphology: The Dengie is a rare example of an open coast marsh. At Sales Point on the Dengie cockleshell spits and ridges form beaches. This feature is of geomorphological importance and shows coastal erosion. These open shell/sand beaches encroach over saltmarsh forming hooks and banks mostly in the St Peter's Flat area.

Ecological sensitivities to changes in access

Saltmarsh would be sensitive to changes in access that led to increased trampling.

H1420 Mediterranean and thermo-Atlantic *halophilus* scrubs (*Sarcocornetea fruticosi*) would be particularly sensitive to changes that led to unmanaged access to shingle beach or shell banks which are often favoured

for recreational activities on the far side of the trail from the Mediterranean saltmarsh scrub.

Conclusion: Due to ecological sensitivities to changes in access saltmarsh is ruled in for further consideration in this appraisal.

3.12 *Cakile maritima-Honkenya peploides* strandline community

Current conservation status and use of the site

Both a Blackwater Estuary and a Dengie SSSI feature – present to varying degrees on the upper tidal limit of beaches and shell banks, providing habitat for shoreline invertebrates and feeding resource for turnstone and ringed plover. A few areas on the south side of the Blackwater Estuary but they are small and scattered compared to the Dengie.

The presence of a variety of strandline debris at various levels on shell banks, upper saltmarsh and the sea wall is important in providing a variety of topographical and microclimatic features. Strandline communities support nationally scarce and Red Data Book invertebrates.

Ecological sensitivities to changes in access

The strandline community would be sensitive to changes in access that led to increased trampling.

Conclusion: Due to ecological sensitivities to changes in access *Cakile maritima-Honkenya peploides* strandline community is ruled in for further consideration.

3.13 Lowland ditch systems

Current conservation status and use of the site

The lowland ditch system of the Blackwater Estuary and Crouch & Roach Estuaries includes networks of freshwater to brackish ditches draining areas of grazing marsh and also brackish to strongly saline borrow dykes just behind seawalls that drain into the estuaries, usually through flap sluices. These ditches provide supporting habitats for unusual aquatic invertebrates and plants, waterbirds, and other notable wildlife such as water voles.

Crouch & Roach Estuaries – the section of the coast being considered (between Burnham-on-Crouch and Holliwell Point) is largely arable with only a borrowdyke behind the sea wall. Although there is an area of grazing marsh east of Burnham this does not fall within the SSSI boundary.

Blackwater Estuary – the majority of the southern shoreline of the Blackwater Estuary is in the form of a sea wall, the majority of have landward borrowdykes/ lowland ditch systems. The SSSI boundary extends inland at a number of locations notably: east Orplands; Ramsey Marsh west of St Lawrence; either side of Steeple Creek; south-eastern shore of Mayland Creek; Brickhouse Farm, Mundon and Limbourne Creek adjacent to South House Farm, on Southey Creek.

Ecological sensitivities to changes in access

Sensitivities to disturbance of waterbirds using the borrowdykes, grazing marshes and their associated ditch systems are considered above (see sections 3.1, 3.3, 3.5 and 3.6). Those considerations aside, ditches and their other fauna and flora are unlikely to be sensitive to changes in access because (i) the large majority of ditches are landward of the Trail and outside the Coastal Margin; and (ii) there is no public access onto the grazing marsh fields at those notable sites named above.

Conclusion: Due to the geographic separation of the main habitats and the alignment of the England Coast Path the impacts of access on the lowland ditch systems is ruled out from further consideration in this appraisal.

3.14 Other geological/geomorphological features

Composition of feature group
<p>Mesozoic – Tertiary fish/amphibians</p> <p>Clacton cliffs and foreshore</p>
Current conservation status and use of the site
<p>Mesozoic – Tertiary fish/amphibians: Blackwater Estuary SSSI feature - 'soft rock' coastline located in the inter-tidal zone, Blackwater Estuary Unit 59, on the east bank of Lawling Creek, near Maylandsea .</p> <p>Clacton cliffs and foreshore: a geological SSSI located near Clacton but lying within the Blackwater, Crouch, Roach and Colne Estuaries MCZ.</p>
Sensitivities to changes in access
<p>As Clacton cliffs and foreshore is a geological feature located a minimum of 13km from the nearest point on these Burnham-on-Crouch-to Maldon stretch proposal, this distance means this feature will not be sensitive to our access proposals.</p> <p>The Mesozoic – Tertiary fish/amphibians feature is 'soft rock' located on the intertidal zone where both the mudflats and saltmarsh are proposed for a long-term access restriction (s25A, unsuitable for public access) and as there is no attractor for walkers, this feature will not be affected by our proposals.</p> <p>Conclusion: Due to the geographic separation of the features from the proposed alignment of the England Coast Path, and with the long-term access restriction proposed, the impacts of access are ruled out from further consideration in this appraisal.</p>

3.15 Vascular plant assemblage / rare plant species

Composition of feature group
<p><u>Crouch and Roach Estuaries SSSI Vascular Plant assemblage/ Ramsar site nationally scarce plants are:</u> slender hare's ear; divided sedge; sea barley; golden-samphire; lax-flowered sea-lavender; curved hard grass; Borrer's saltmarsh grass; stiff saltmarsh grass; spiral tasselweed; one flowered glasswort; small cord-grass; shrubby sea-blite; sea clover.</p> <p><u>Dengie Ramsar site nationally scarce plants:</u> sea kale, sea barley, golden samphire, lax-flowered sea-lavender, the glassworts <i>Salicornia perennis</i> and <i>S. pusilla</i>, small cord-grass, shrubby sea-blite, and the eelgrasses <i>Zostera angustifolia</i>, <i>Z. marina</i> and <i>Z. noltii</i>.</p> <p><u>Dengie SSSI Vascular Plant assemblage:</u> sea barley; golden samphire; lax-flowered sea-lavender; perennial glasswort; one-flowered glasswort ; small cord-grass; shrubby sea-blite; dwarf eelgrass</p> <p><u>Blackwater Estuary SSSI Vascular Plant Assemblage:</u> slender hare's ear; divided sedge; saltmarsh goosefoot; sea barley; golden samphire; dittander; lax-flowered sea-lavender; Borrer's saltmarsh-grass; stiff saltmarsh-grass; spiral tasselweed; perennial glasswort; one-flowered glasswort; small cord-grass; shrubby sea-blite; sea clover; dwarf eelgrass</p>

Blackwater Estuary Ramsar site nationally scarce plants are: slender hare's ear, divided sedge, soft hornwort, small red goosefoot, sea spurge, lax-flowered sea-lavender, golden samphire, mousetail, sea barley, Borrer's saltmarsh-grass, stiff saltmarsh-grass, brackish water-crowfoot, spiral tasselweed, the glassworts *Salicornia perennis* and *S. pusilla*, small cord-grass, shrubby sea-blite, bird's-foot clover s, sea clover and the eelgrasses *Zostera angustifolia*, *Z. marina* and *Z. noltii*.

Current conservation status and use of the site

These plant species fall into two broad types (a) species found mainly on saltmarsh and other inter-tidal habitats including the seaward slope of sea walls (b) species found mainly inland of the intertidal zone including the crest and landward slopes of seawalls.

The nationally scarce species found inland of the intertidal zone tend to require open brackish habitat on or behind the crest of the seawall but cannot tolerate regular inundation with seawater. Most are usually found on the folding between the sea wall and adjacent borrowdyke or on the crest or inland slope of the sea wall, particularly where poaching by livestock, farm vehicles or walkers has created some muddy bare patches. Areas where there is some seepage of brackish water through the sea wall or seasonal flooding form a brackish borrowdyke. The species concerned are slender hare's-ear, sea clover, sea barley, curved hard-grass, stiff saltmarsh-grass and Borrer's saltmarsh-grass.

With the exception of shrubby sea-blite, the current distribution of these species along this stretch of coast is not accurately known.

Ecological sensitivities to changes in access

Saltmarsh vegetation is vulnerable to trampling. Increased usage by members of the public is likely to exacerbate erosional processes as the footfall may damage the plants that knit the sediment together, leading to increased erosion, or by physically eroding the sediment itself, such as collapsing edges under foot.

Slender hare's-ear could potentially benefit from light to moderate poaching as a consequence of increased pedestrian access along sea walls and foldings, but the benefits of this would need to be assessed along with any changes in management as a consequence of changes in access.

Herbaceous saltmarsh plants, including golden samphire, lax-flowered sea lavender, the glassworts *Salicornia perennis* and *S. pusilla* and small cord-grass would be sensitive to trampling and poaching as a consequence of any access to areas of saltmarsh.

Shrubby sea-blight is a woody perennial and would be less sensitive to trampling than the more sensitive herbaceous plants, but would potentially be sensitive to changes in management. The fact that both golden samphire and shrubby sea blight occur within the upper saltmarsh and strandline communities along the seaward side of the sea wall make them more likely to be close to any new access route and therefore potentially more susceptible to the impacts of changes in access.

As dwarf eel-grass inhabits areas of intertidal mudflat, it is unlikely to be impacted by changes to terrestrial access.

Divided sedge (a creeping perennial sedge usually found in brackish grazing marsh swards inland of borrowdykes) and spiral tasselweed (a submerged aquatic of brackish ditches) are unlikely to be sensitive to changes in access.

Conclusion: Due to the potential for some species to be found in the upper saltmarsh zone and as some species will be susceptible to changes in management, the vascular plant assemblage/ rare plant species are ruled in for further consideration.

3.16 Invertebrate assemblage / rare animal species

Composition of feature group
<p>The Crouch and Roach Estuaries SSSI invertebrate assemblage /Ramsar site invertebrate assemblage include the following species: scarce emerald damselfly, the shorefly <i>Parydroptera discomyzina</i>, the soldierfly <i>Stratiomys singularior</i>, the large horsefly <i>Hybomitra expollicata</i>, the beetles <i>Graptodytes bilineatus</i> and <i>Malachius vulneratus</i>, ground lackey moth <i>Malacosoma castrensis</i> and <i>Eucosma catoptrana</i>.</p> <p>Dengie Ramsar site invertebrate assemblage includes the following rare species: a weevil <i>Baris scolopacea</i>, a horsefly <i>Atylotus latistriatus</i> and a jumping spider <i>Euophrys browningi</i>.</p> <p>Blackwater Estuary SSSI/Ramsar site invertebrate interest includes the following species (in order of rarity):</p> <p>Endangered: a water beetle <i>Paracymus aeneus</i>; Vulnerable: a damselfly <i>Lestes dryas</i>, the flies <i>Aedes flavescens</i>, <i>Erioptera bivittata</i>, <i>Hybomitra expollicata</i> and the spiders <i>Heliophanus auratus</i> and <i>Trichopterna cito</i>; Rare: the beetles <i>Baris scolopacea</i>, <i>Philonthus punctus</i>, <i>Graptodytes bilineatus</i> and <i>Malachius vulneratus</i>, the flies <i>Campsicnemus magius</i> and <i>Myopites eximia</i>, the moths <i>Idaea ochrata</i> and <i>Malacosoma castrensis</i> and the spider <i>Euophrys browningi</i>.</p>
Current conservation status and use of the site
<p>Habitats that are important for scarce coastal invertebrates, Kirby (2001) include:</p> <ul style="list-style-type: none"> • Mid-upper and driftline saltmarsh, especially where it is sheltered (for example behind a shingle spit), 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. • 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. • 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. • Any habitat with abundant nectar sources, whether on saltmarsh, or on/inland of seawalls.
Ecological sensitivities to changes in access
<p>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 a new route was opened up and became heavily used across important areas of these habitats where there had been little or no previous access. We are not proposing such a change between Burnham-on-Crouch and Maldon.</p> <p>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 the invertebrate and plant communities. Or if new access rights required changes to the way vegetation on and behind seawalls is managed - such as changes in grazing or cutting - that might also be damaging in some circumstances. Again, we are not</p>

proposing such a change between Burnham-on-Crouch and Maldon.

Conclusion: This feature group is ruled out for further consideration in this appraisal.

3.17 Blue mussel beds (*Mytilus edulis*)

Current conservation status and use of the site

Proposed additional feature to the Blackwater, Crouch, Roach and Colne MCZ

Ecological sensitivities to changes in access

Typically found low down in the inter-tidal where we are not proposing any changes in access.

Conclusion: Due to the geographic separation of the feature and the alignment of the England Coast Path, the impacts of access are ruled out from further consideration in this appraisal.

3.18 Seals

Composition of feature group

Common seal *Phoca vitulina* and grey seal *Halichoerus grypus*

Current conservation status and use of the site

Common seals and the occasional grey seal forage in the waters around this stretch. Both species are protected in UK waters by the Offshore Marine Conservation (Natural Habitats, & c.) Regulations 2007, Conservation of Habitats and Species Regulations 2010, Wildlife and Countryside Act 1981 and the Conservation of Seals Act 1970.

Dengie – up to 40 + individuals, believed to be common seals, have reported to gather at Grange Outfall, with numbers increasing in recent years.

Blackwater Estuary – up to a dozen common seal regularly haul out on flats near Mundon Stone Point on Lawling Creek.

Ecological sensitivities to changes in access

Seals foraging offshore are unlikely to be sensitive to changes in land-based coastal access, however, changes that allow people closer to their haul-outs are likely to cause disturbance.

Conclusion: As we are neither proposing any new access to seal haul-outs nor proposing any changes in access that allow people closer access to seal haul-outs, this feature group is ruled out for further consideration in this appraisal.

3.19 Breeding avocet

Current conservation status and use of the site

18 pairs at Ramsey Marsh, west of St Lawrence– present on the Blackwater Ramsar site (Panter & Liley (2016)) of 159 pairs in 2012. Ramsey Marsh is a large freshwater wetland (former fleet) extending over 900 metres inland from the sea wall.

Ecological sensitivities to changes in access

Breeding avocet would be sensitive to changes in access that led to:

- new areas of this habitat (used by birds for breeding) becoming available to the public for the first time;
- a significant increase in access to this habitat during their nesting season

these would result in potential trampling of eggs; disturbance by dogs; nest desertion; and increased predation of eggs and young.

- Loss or degradation of the habitat.

North of Ramsey Marsh we are proposing walkers follow the existing Public Footpath on the sea wall crest with the landward margin being the landward edge of the sea wall crest. Few walkers currently detour from the path.

Conclusion: Although the northern edge of Ramsey Marsh lies just 25 metres from the proposed alignment of the England Coast Path we are not proposing access into this area, and due to the natural segregation between people following the path and the main habitats and given the topography, vegetation and behaviour of breeding birds this means that we do not consider the birds will be sensitive, so the impacts of access on breeding avocet is ruled out from further consideration in this appraisal.

4 Potential for interaction

4.1 Burnham Ferry to West Wick

Outline of changes in access

Proposed Trail – this follows the route of existing Public Rights of Ways throughout. Starting from the main quayside in Burnham-on-Crouch, the proposal runs along the town’s promenade before following a grassy sea wall until it reaches the junction with Public Footpath 17 (which allows a circular link back to Burnham).

Landward spreading room – no significant areas proposed.

Seaward spreading room – there are no attractors within the coastal margin. Saltmarsh and mudflats are proposed for a Section 25A Restriction.

Potential for interaction (or lack of it)

A new National Trail is proposed adjacent to or passing through a number of designated sites. Potential for interaction with relevant ecological sensitivities listed as in scope in section 3. See 5.1

4.2 West Wick to Holliwell Farm

Outline of changes in access

Proposed Trail – this follows the route of existing Public Rights of Ways throughout. Running along the crest of a grassy sea wall this subsection extends eastwards from the junction with Public Footpath 17 (Burnham end) to just east of the junction with Public Footpath 20 to the end of the Crouch & Roach Estuaries designations.

Landward spreading room – no significant areas proposed.

Seaward spreading room - there are no attractors within the coastal margin. Saltmarsh and mudflats are proposed for a Section 25A Restriction.

Potential for interaction (or lack of it)

A new National Trail is proposed adjacent to or passing through a number of designated sites. Potential for interaction with relevant ecological sensitivities listed as in scope in section 3. See 5.2

4.3 Holliwell Farm to Sandbeach Outfall

Outline of changes in access

Proposed Trail – this runs along the crest of the sea wall (either grass or concrete surface) following the route of existing Public Rights of Ways throughout.

Landward spreading room – no significant areas proposed.

Seaward spreading room – the only attractor within the coastal margin is a very small cockle shell beach adjoining the sea wall just south of Coate Outfall. There are currently no barriers to people accessing this area and access is not discouraged. Saltmarsh and mudflats are proposed for a Section 25A Restriction.

Potential for interaction (or lack of it)

A new National Trail is proposed adjacent to or passing through a number of designated sites. Potential for interaction with relevant ecological sensitivities listed as in scope in section 3. See 5.3

4.4 Sandbeach Outfall to Bradwell Power Station

Outline of changes in access

Proposed Trail – for the vast majority this follows the route of existing Public Rights of Ways (including lengths of St Peters Way Recreational Route) with the exception of two short lengths near St Peter’s Chapel, Bradwell where we follow well-established existing walked lines: firstly, south of St Peter’s Chapel, we cross a meadow (135m) which the public currently access freely and secondly, north of St Peter’s Chapel, we follow the crest of the sea wall where there is a short length (350m) not designated as Public Footpath.

Landward spreading room – no significant areas proposed.

Seaward spreading room - the areas along this sub-section include a small wooded area south of St Peter’s Chapel where there is currently limited access as well as beaches which are currently well used by the public and not areas where access is discouraged. Saltmarsh and mudflats are proposed for a Section 25A Restriction.

Potential for interaction (or lack of it)

A new National Trail is proposed adjacent to or passing through a number of designated sites. Potential for interaction with relevant ecological sensitivities listed as in scope in section 3. See 5.4

4.5 Bradwell Power Station to Bradwell Marina

Outline of changes in access

Proposed Trail – this follows the route of existing Public Rights of Ways or Public Footway for the vast majority of the sub-section with the exception of one short length (37m) where we propose to follow a well-established walked line.

Landward spreading room – no significant areas proposed.

Seaward spreading room – apart from a number of grassy areas which are already well used by the public there are no attractors within the coastal margin. Saltmarsh and mudflats are proposed for a Section 25A Restriction.

Potential for interaction (or lack of it)

A new National Trail is proposed adjacent to or passing through a number of designated sites. Potential for interaction with relevant ecological sensitivities listed as in scope in section 3. See 5.5

4.6 Bradwell Marina to Highfield

Outline of changes in access

Proposed Trail – this follows the route of existing Public Rights of Ways throughout.

Landward spreading room – no significant areas proposed.

Seaward spreading room - there are no attractors within the coastal margin. Saltmarsh and mudflats are proposed for a Section 25A Restriction.
Potential for interaction (or lack of it)
A new National Trail is proposed adjacent to or passing through a number of designated sites. Potential for interaction with relevant ecological sensitivities listed as in scope in section 3. See 5.6

4.7 Highfield to Stansgate

Outline of changes in access
Proposed Trail – this follows an existing Public Right of Way west from Highfield until we reach the caravan parks at the eastern edge of St Lawrence. Here we propose following a mixture of Public Footpath, existing walked lines and Public Footway until we reach the western end of the village, where we again propose to follow existing Public Right of Way through to Marconi Sailing Club at Stansgate. Landward spreading room – areas of amenity mown grass adjacent to the caravan parks in St Lawrence which are already well used by the public. Seaward spreading room – a number of areas are proposed which are either beach or accessible foreshore all of which are currently accessed by the public and not areas where access is discouraged. Saltmarsh and mudflats are proposed for a Section 25A Restriction.
Potential for interaction (or lack of it)
A new National Trail is proposed adjacent to or passing through a number of designated sites. Potential for interaction with relevant ecological sensitivities listed as in scope in section 3. See 5.7

4.8 Stansgate to Steeple Hall Farm

Outline of changes in access
Proposed Trail – As the trail leaves Marconi Sailing Club at Stansgate the proposal is to leave the Public Footpath and create a new coastal route on the eastern side of Steeple Creek (approx. 1.3km) before re-joining and following existing Public Right of Ways for the remainder of this sub-section. Landward spreading room – no significant areas proposed. Seaward spreading room - a number of areas are proposed which are either beach or accessible foreshore all of which are currently accessed by the public and not areas where access is discouraged. Saltmarsh and mudflats are proposed for a Section 25A Restriction.
Potential for interaction (or lack of it)
A new National Trail is proposed adjacent to or passing through a number of designated sites. Potential for interaction with relevant ecological sensitivities listed as in scope in section 3. See 5.8

4.9 Steeple Hall Farm to Mundon Creek

Outline of changes in access

Proposed Trail – this follows the route of existing Public Rights of Ways (including lengths of St Peters Way Recreational Route) for the vast majority of the sub-section with the exception of two places where we propose to follow a well-established walked line instead – firstly along the north-west corner of Nipsells Peninsula and secondly, near the head of Mundon Creek.

Landward spreading room – no significant areas proposed.

Seaward spreading room - the stony foreshore in Maylandsea which is currently accessed by the public is included and there are currently no barriers to people accessing this area and access is not discouraged.

Potential for interaction (or lack of it)

A new National Trail is proposed adjacent to or passing through a number of designated sites. Potential for interaction with relevant ecological sensitivities listed as in scope in section 3. See 5.9

4.10 Mundon Creek to White House Farm Canal

Outline of changes in access

Proposed Trail – this follows the grassy crest of the sea wall following the route of existing Public Rights of Ways throughout.

Landward spreading room – no significant areas proposed.

Seaward spreading room - there are no attractors within the coastal margin. Saltmarsh and mudflats are proposed for a Section 25A Restriction.

Potential for interaction (or lack of it)

A new National Trail is proposed adjacent to or passing through a number of designated sites. Potential for interaction with relevant ecological sensitivities listed as in scope in section 3. See 5.10

4.11 White House Farm Canal to Promenade Park, Maldon

Outline of changes in access

Proposed Trail – this follows the route of existing Public Rights of Ways or Public Footway for the vast majority of the sub-section with the exception of two short lengths at Limbourne Creek and Promenade Park where we propose to follow well-established walked lines.

Landward spreading room– no significant areas proposed.

Seaward spreading room - Northey Island is an attractor within the coastal margin currently promoted as a visitor destination - public access is currently managed and controlled by the land owner. Saltmarsh and mudflats are proposed for a Section 25A Restriction.

Potential for interaction (or lack of it)

A new National Trail is proposed adjacent to or passing through a number of designated sites. Potential for interaction with relevant ecological sensitivities listed as in scope in section 3. See 5.11

5. Assessment of any possible adverse impacts and mitigation measures

In this part of the document we look in more detail at sections of coast where there could be an interaction between the access proposal and sensitive features. We discuss possible risks to sensitive features and explain how these have shaped the design of our proposals and/or led to the inclusion of any specific mitigation measures. For the Access Assessments below (see sections 5.1.4, 5.2.4, 5.3.4 etc) we use a standardised scoring system to predict changes in levels of use of the trail and the adjacent coastal margin.

Access predictions

As part of our considerations about possible risks to sensitive features, we need to understand how patterns and levels of public access locally might be affected by our proposals. An overview of our approach to assessing patterns and levels of public access is described in our Coastal Access Scheme (see Figure 16 on page 46) and we use this approach where there might be a need for intervention to manage access to a site.

There are several factors that can influence the pattern and level of use of a site by the public. Proximity and convenience to a place where people live, or stay whilst on holiday, is often the dominant factor, although it is not influenced by our proposals. Where new or significantly improved opportunities for access are created as a result of our proposals, it is an important consideration. Other factors we consider are availability of parking and other facilities for visitors, and features of the location that might be attractive to visitors, such as a view point or sandy beach.

In carrying out our assessment of current and possible changes in use of the site, we make use of available local sources of evidence, including the findings from previous visitor surveys or counts where these exist, as well as information from local tourism businesses. We seek advice from site managers and local experts with knowledge of access in the area. We also take account of the views of the landowner and local groups or people that know the site e.g. local wildfowling groups and other user groups. As part of developing our proposals for England Coast Path we undertake a detailed site survey including assessing existing physical features that are relevant to the assessment, such as the presence of paths or barriers to access.

Where there is a potential interaction between a sensitive feature and our access proposals, we make a more in-depth assessment of patterns and levels of access and how they might be affected by our proposals. The main way that our proposals can influence visits to a particular location is through improving the quality and range of access opportunities available for the public. We identify entry points to a site and consider how use of our proposed route for the England Coast Path and access within the associated Coastal Margin might be affected. We consider use by local people and visitors from further afield. The local evidence gathered informs the assessment and where possible, quantitative information is used e.g. the capacity of nearby parking. We also make use of information from studies of visitor behaviour at comparable locations elsewhere, for example concerning the profile of users and duration of visits. Advice from experts in managing public access is used in the process to complete the assessment of how we expect the pattern and level of access to be affected by our proposals. Our conclusions are fully explained and incorporated into the assessment of possible risk to sensitive features.

Please refer to maps D through to T in the Burnham-on-Crouch to Maldon Natural England's Report to the Secretary of State: Overview for details regarding the exclusions in each section listed below.

5.1 Burnham Ferry to West Wick

5.1.1 Environmental sensitivity

The sensitive features / feature groups listed below occur in this subsection, along with the time when they may be present and their sensitivities. The nature of the possible interaction with these features is examined in detail in section 5.1.5

3.1 Overwintering dark-bellied brent goose

Occurring October to April. Sensitivities: more frequent interruptions to feeding both on the coast and on terrestrial land; more frequent displacement from places where birds congregate at high tide; loss/erosion of feeding areas.

3.3 Overwintering and passage waterbirds

Occurring August to April with sensitivity heightened in core winter period November to March.

Sensitivities: more frequent interruptions to feeding both on the coast and on terrestrial land; more frequent displacement from places where birds congregate at high tide; loss/erosion of feeding areas.

Red-throated diver – sensitivity: disturbance whilst using coastal or inland refuge areas during times of extreme weather at sea

3.4 Breeding birds of bare or sparsely vegetated sand, shingle or shell banks - Tern foraging areas

Sensitivities: disruption to normal flight routes between breeding areas and any inland or coastal foraging areas.

3.9 Intertidal mudflats and sandflats

Sensitivities: trampling.

3.11 Saltmarsh

Sensitivities: trampling;

3.15 Vascular plant assemblage / rare plant species

Sensitivities: trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime.

5.1.2 Current access provisions and use of site for recreation

Good existing access and heavy established recreational use near Burnham-on-Crouch. The proposed Trail follows existing Public Rights of Way throughout that are mostly in good condition and well signposted. Very few detour from the path.

The stretch starts in Burnham-on-Crouch (population circa 7,500) which is the principal settlement in the wider Dengie peninsula area (population 20,000).

This subsection starts on Burnham-on-Crouch promenade running along Burnham quay past numerous pedestrian access points, maritime businesses, pubs and sailing clubs. There is a high density of properties within 500m of the shoreline and multiple car park provision for visitors.

Burnham-on-Crouch is a popular place for sailing throughout the year, with multiple pontoons and jetties providing access to the water. An annual 'Burnham week', marketed as the 'east coast premier regatta' attracts large numbers of yachts and tourists each summer. The river is also used for commercial shipping, and there is a seasonal pedestrian ferry operating across to Wallasea Island.

Leaving Burnham-on-Crouch the route follows a Public Footpath on crest of the sea wall into open

countryside with scattered properties, all situated some distance from the coast. The majority of users are local dog walkers or recreational walkers/runners though there are occasional cyclists. It a popular estuary for bird watching.

The level of use decreases eastwards. Based on levels of wear on the grassy public footpath many walkers travel less than a kilometre before turning around and returning the same way. Others do a longer circular loop back to Burnham using informal, unauthorised access tracks through Burnham Wick farmland (once permissive access routes) whilst others proceed on to Public Footpath 17 at the end of this sub-section which forms another popular circular route back to Burnham well-used by local dog owners and walkers. A minority proceed further on eastwards.

East of Burnham-on-Crouch there are a small number of thin sandy areas on the seaward edge of the saltmarsh. All these are flooded at high tide and generally not accessed by the public. A small number of locals fish from the seawall or saltmarsh and a local wildfowling group shoot either side of the sea wall for the last circa 400m.

Burnham Tourist Information Centre and the local District Council are working to promote tourism in the area including a number of walks which start in Burnham-on-Crouch and follow the proposed route, including their 'Saltmarsh Coast' Trail.

5.1.3 Access proposal

The only improvements we propose for this sub-section are:

1. To add the England Coast Path logo to existing waymarkers. These will help guide walkers and build their confidence in terms of exploring the Trail further:
2. Removal of step-stile to make the route more accessible to users with mobility issues

Interpretation and/or information boards in Burnham-on-Crouch are to be proposed as part of the establishment works of the adjacent Wallasea Island to Burnham stretch of England Coast Path.

Coastal margin includes excepted land (buildings, curtilage or garden). All areas of saltmarsh and mudflats are considered unsuitable for public access and proposed for Section 25A restrictions. It is worth noting that while Section 25A exclusions are applied where the Coastal Margin is not suitable for access, rather than on nature conservation grounds, these exclusions are important in reducing the potential for adverse impacts on non-breeding waterbirds and other sensitive features in this section of the route. If in the future there is a proposal to remove or relax the Section 25A exclusions, then an appraisal of the effects of those changes on sensitive features would be essential.

5.1.4 Predicted change in use of site for recreation

Trail - Medium increase in use

The project team consider that there will be a medium increase in the use of the path along this sub-section.

Although a new link in the path network will not be established and people that live nearby are not likely to use the path more frequently as a result of establishment works, as there are good existing visitor facilities in Burnham-on-Crouch and there will be trail improvements in terms of signage as well as raised profile by becoming a National Trail and the path is likely to attract more walkers from further afield. However, from talking with Burnham Tourist Information Centre and Maldon District Council it is probable that the increase will actually be to the west of Burnham, where there are excellent circular links to Althorne and

North Farnbridge using the local train line (trails currently being developed and promoted by the local Coastal Community Team).

There will be a negligible increase in levels of use along Burnham town quayside which is a well-used promenade in a popular destination –any increase will be at the eastern end of this sub-section, which currently has lower access levels.

Margin – negligible change

Although we predict an increase in use along this sub-section we are not proposing any significant areas of spreading room. Coastal margin includes excepted land (buildings, curtilage or garden).

5.1.5 Possible risks to sensitive features

Overwintering dark-bellied brent goose (disturbance in/near feeding & roosting areas; loss of feeding areas): Local land owners report low numbers scattered throughout the subsection but no known areas for large congregations. A recent shooting licence application in the vicinity (Panter & Liley 2016) suggests some geese feed on the extensive arable farmland north of the route.

Overwintering and passage waterbirds (disturbance in/near feeding & roosting areas; loss of feeding areas): Found along length though no major high tide roosts on this sub-section, the nearest being on Wallasea Island on the opposite side of the river (Panter & Liley 2016). From BTO WeBS low tide count maps (Frost et al 2017) numbers of birds feeding in this stretch are generally low. This may be due partly to sub-optimal habitat and partly as Burnham-on-Crouch is a well-visited location and birds feeding on the narrow strip of intertidal mudflat will be prone to disturbance from people using the adjacent seawall footpath.

As this section lacks creeks, lagoons, harbours or sheltered bays red-throated diver and other diving waterbirds are unlikely to be sensitive to land-based disturbance here.

With regard to the above feature and feature group: England Coast Path usage is expected busiest in those months with better weather whilst the large majority of non-breeding waterbird species are most abundant in months less attractive to walkers, in particular during the core winter period of November to March. In addition, England Coast Path proposals: do not take people closer to either coastal or terrestrial feeding areas nor closer to potential roosts than the existing PROW; do not change existing sightlines; do not remove buffers between the route and feeding areas nor propose new access to important areas of supporting habitat landward or seaward of the Trail. The availability of extensive areas of flat arable farmland to the north and east reduces the risk that brent geese or other waterbirds feeding in fields next to the seawall will be seriously affected by localised disturbance from the path.

Breeding birds of bare or sparsely vegetated sand, shingle or shell banks - Tern foraging areas (disruption to flight routes between breeding areas and foraging areas): There are no tern colonies or inland foraging areas that require connectivity considering along this section of path. The potential for walkers/dogs to disrupt tern behaviour whilst foraging is low as walkers/dogs do not present any substantial barrier to movement.

Intertidal mudflats and sandflats (trampling): Narrow mudflats occur along the length with a high percentage within 60m of shore throughout.

Saltmarsh (trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime): Found only east of Burnham. All areas are relatively narrow strips adjacent to the sea wall where existing Public Footpath runs.

With regard to the above feature groups: proposals do not take people closer to these than the existing

PROW; saltmarsh and mudflats are unattractive to walkers and proposed for a Section 25A Restriction throughout this subsection. There are no proposed surfacing works and the walking surface is currently well maintained.

Vascular plant assemblage / rare plant species (trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime): There are no proposed surfacing works and the walking surface is currently well maintained. Although a few species, such as shrubby sea-blite occur on the seaward face of the sea wall and will not be restricted we: do not envisage proposals increasing existing levels of access to these areas; nor are there any existing barriers or detractors being proposed to be removed; nor are there any attractors seaward of the proposed path. There are occasional slivers of sandy beach between saltmarsh and mudflat along this subsection but these are judged too small to act as an attractor to access.

5.1.6 Any mitigation measures included in the access proposal and how they address the possible risks

None specifically for nature conservation reasons.

5.1.7 Conclusion

We have fully considered ecological sensitivities in this area alongside the current and predicted access levels. The proposal aligns the route along existing well-visited, well-maintained Public Rights of Way and is coupled with a s25A CROW direction which restricts public access to the saltmarsh and mudflats. Taking these and other points in section 5.1.5 into account, we have concluded that our proposal is unlikely to have any significant adverse effects on sensitive features in this subsection.

5.2 West Wick to Holliwell Farm

5.2.1 Environmental sensitivity

The sensitive features / feature groups listed below occur in this subsection, along with the time when they may be present and their sensitivities. The nature of the possible interaction with these features is examined in detail in section 5.2.5

3.1 Overwintering dark-bellied brent goose

Occurring October to April. Sensitivities: more frequent interruptions to feeding both on the coast and on terrestrial land; more frequent displacement from places where birds congregate at high tide; loss/erosion of feeding areas.

3.3 Overwintering and passage waterbirds

Occurring August to April with sensitivity heightened in core winter period November to March.

Sensitivities: more frequent interruptions to feeding both on the coast and on terrestrial land; more frequent displacement from places where birds congregate at high tide; loss/erosion of feeding areas.

Red-throated diver – sensitivity: disturbance whilst using coastal or inland refuge areas during times of extreme weather at sea

3.4 Breeding birds of bare or sparsely vegetated sand, shingle or shell banks - Tern foraging areas

Sensitivities: disruption to normal flight routes between breeding areas and any inland or coastal foraging areas.

3.9 Intertidal mudflats and sandflats

Sensitivities: trampling.

3.11 Saltmarsh

Sensitivities: trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime.

3.15 Vascular plant assemblage / rare plant species

Sensitivities: trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime.

5.2.2 Current access provisions and use of site for recreation

Good existing access

Running along the crest of a grassy sea wall this subsection follows existing Public Rights of Way eastwards from the junction with Public Footpath 17 (West Wick end) to just east of the junction with Public Footpath 20 to the end of the Crouch & Roach Estuaries designations, south of Holliwell Farm. The Public Footpaths are in good condition, well signposted and clear to follow. Few users detour from the path.

It is a remote part of the coast/countryside with a low density of properties within 500m of the shoreline. With a sparse path network and with no public car parks, amenities or visitor attractions existing access levels are low. The majority of users are part of organised walking groups or occasional birdwatchers.

There is no infrastructure providing access to the water though both pleasure and commercial craft are active in the river.

A small private car park south of Holliwell Farm, accessed through locked gated tracks, is used by a local wildfowling group and a small number of local fishermen. Locals fish from the sea wall and the wildfowlers shoot either side of the sea wall for the length of this sub-section.

Burnham Tourist Information Centre and the local District Council are working to promote tourism in the Dengie Peninsula including their 'Saltmarsh Coast' Trail which follows the proposed route.

5.2.3 Access proposal

The only improvements we propose for this sub-section are to add the England Coast Path logo to existing waymarkers. These will help guide walkers and build their confidence in terms of exploring the Trail further on this remote section of the coast.

All areas of saltmarsh and mudflats are considered unsuitable for public access and proposed for Section 25A restrictions. It is worth noting that while Section 25A exclusions are applied where the Coastal Margin is not suitable for access, rather than on nature conservation grounds, these exclusions are important in reducing the potential for adverse impacts on non-breeding waterbirds and other sensitive features in this section of the route. If in the future there is a proposal to remove or relax the Section 25A exclusions, then an appraisal of the effects of those changes on sensitive features would be essential.

5.2.4 Predicted change in use of site for recreation

Trail – Negligible change in use

The project team consider that there will be a negligible change in the use of the path along this sub-section.

Although the profile of the route will be raised by becoming a National Trail there: won't be a new path created nor a new link in the path network established; the existing path is not proposed to be substantially upgraded; and there are no visitor facilities available; nor do we believe that people living nearby will use it more ; nor do we believe it will attract more than a few more walkers from further afield.

Margin – negligible change as we consider: there will be negligible change in use in the Trail: there are no attractors in the margin; we are not removing any barriers to access.

5.2.5 Possible risks to sensitive features

Overwintering dark-bellied brent goose (disturbance in/near feeding & roosting areas; loss of feeding areas): A cluster of Kill by Shooting Licences midway along the subsection are a good indication that the winter cereals in this area are important for brents and this is backed up by the land owner who highlighted large numbers feeding on arable on the eastern extent.

Overwintering and passage waterbirds (disturbance in/near feeding & roosting areas; loss of feeding areas): Found along length though Panter & Liley (2016) Essex Bird Report noted no major high tide roosts on this sub-section but a number on Foulness Island on the opposite side of the river.

As this section lacks creeks, lagoons, harbours or sheltered bays it is not known as a refuge for red-throated diver.

With regard to the above feature and feature group: England Coast Path usage is expected busiest in those months with better weather whilst the large majority of non-breeding waterbird species are most abundant in months less attractive to walkers, in particular during the core winter period of November to March. In addition, England Coast Path proposals: do not take people closer to either coastal or terrestrial feeding areas nor closer to potential roosts than the already existing PROW; do not change existing sightlines; do not remove buffers between route and feeding areas nor propose access to significant areas of new land landward or seaward of the Trail. The availability of extensive areas of flat arable farmland to the north reduces the risk that brent geese or other waterbirds feeding in fields next to the seawall will be seriously affected by localised disturbance from the path.

Breeding birds of bare or sparsely vegetated sand, shingle or shell banks - Tern foraging areas (disruption to flight routes between breeding areas and foraging areas): There are no tern colonies or inland foraging areas that require connectivity considering along this section of path. The potential for walkers/dogs to disrupt tern behaviour whilst foraging is low as walkers/dogs do not present any substantial barrier to movement.

Intertidal mudflats and sandflats (trampling): Narrow mudflats occur along the length with a high percentage within 60m of shore throughout.

Saltmarsh (trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime): All areas are relatively narrow strips adjacent to the sea wall where existing Public Footpath runs.

With regard to the above feature groups: proposals do not take people closer to these than the already

existing PROW; saltmarsh and mudflats are unattractive to walkers and proposed for a Section 25A Restriction throughout this subsection. There are no proposed surfacing works and the walking surface is currently well maintained.

Vascular plant assemblage / rare plant species (trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime): There are no proposed surfacing works and the walking surface is currently well maintained. Although a few species, such as shrubby sea-blite occur on the seaward face of the sea wall and will not be restricted we: do not envisage proposals increasing existing levels of access to these areas; nor are there any existing barriers or detractors being proposed to be removed; nor are there any attractors seaward of the proposed path. There are occasional slivers of sandy beach between saltmarsh and mudflat along this subsection but these are judged too small to act as an attractor to access.

5.2.6 Any mitigation measures included in the access proposal and how they address the possible risks

None specifically for nature conservation reasons.

5.2.7 Conclusion

We have fully considered ecological sensitivities in this area alongside the current and predicted access levels. We have concluded that the predicted absence of significant increase in use, combined with the proposal to align the route along existing Public Rights of Way and with the s25A CROW direction on public access delivers all necessary mitigation.

5.3 Holliwell Farm to Sandbeach Outfall

5.3.1 Environmental sensitivity

The sensitive features / feature groups listed below occur in this subsection, along with the time when they may be present and their sensitivities. The nature of the possible interaction with these features is examined in detail in section 5.3.5

3.1 Overwintering dark-bellied brent goose

Occurring October to April. Sensitivities: more frequent interruptions to feeding both on the coast and on terrestrial land; more frequent displacement from places where birds congregate at high tide; loss/erosion of feeding areas.

3.2 Non-breeding hen harrier.

Occurring September to April. Sensitivities: more frequent disturbance to their roost sites; new public access to favoured and previously inaccessible hunting areas; a reduction in their prey (passerines, small mammals and waders).

3.3 Overwintering and passage waterbirds

Occurring August to April with sensitivity heightened in core winter period November to March. Sensitivities: more frequent interruptions to feeding both on the coast and on terrestrial land; more frequent displacement from places where birds congregate at high tide; loss/erosion of feeding areas.

Red-throated diver – sensitivity: disturbance whilst using coastal or inland refuge areas during times of extreme weather at sea

3.4 Breeding birds of bare or sparsely vegetated sand, shingle or shell

Breeding March to September. Sensitivities: new areas of this habitat becoming available to the public for the first time; a significant increase in access to this habitat during their nesting season - both these would result in potential trampling of eggs; disturbance by dogs; nest desertion; and increased predation of eggs and young. Loss or degradation of the habitat.

Tern foraging areas: Sensitivities: disruption to normal flight routes between breeding areas and any inland or coastal foraging areas.

3.9 Intertidal mudflats and sandflats

Sensitivities: trampling.

3.11 Saltmarsh

Sensitivities: trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime.

3.12 *Cakile maritima-Honkenya peploides* strandline community

Sensitivities: trampling.

3.15 Vascular plant assemblage / rare plant species

Sensitivities: trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime.

5.3.2 Current access provisions and use of site for recreation

Good existing access

Running along the crest of the sea wall this subsection follows existing Public Rights of Way east and north from the start of the Dengie designations, east of Holliwell Farm, through to the junction where the Recreational Route St Peters Way joins at Sandbeach Outfall. The Public Footpaths are in good condition, well signposted and clear to follow. Few users detour from the path.

It is a very remote part of the coast and countryside with a low local population, and a sparse path network with few circular links and with no car parks, amenities or visitor attractions current access levels are very low. There are only a few houses locally and at moderate distances from the coast.

There are two private car parks, accessed through locked gated tracks, used by local wildfowling groups. Wildfowling shoot large areas of the saltmarsh and mudflat on this sub-section. The majority of users are wildfowling who shoot either side of the sea wall for a large proportion of this sub-section. Organised walking groups (usually in summer months due to the exposed nature of this location) or occasional birdwatchers are also seen.

The mudflats form part of Dengie NNR whose access arrangements state: This NNR is currently closed to the public. This will be because: the site is unsafe; our tenure of the land does not allow public access; the site is so fragile that any form of access would damage the wildlife interest

There is no infrastructure providing access to the water.

Burnham Tourist Information Centre and the local District Council are working to promote tourism in the Dengie Peninsula including their 'Saltmarsh Coast' Trail which follows the proposed route.

5.3.3 Access proposal

The following improvements are proposed along this sub-section:

1. **Signage and interpretation** – we are proposing a number of new waymarkers and interpretation along the length of this sub-section. These will help guide walkers and build their confidence in terms of exploring the Trail further;
2. **Removal of physical barriers** – removal of gate at Shell Bank, east of Middlewick Farm will make the route more accessible to users.

All areas of saltmarsh and mudflats are considered unsuitable for public access and proposed for Section 25A restrictions. It is worth noting that while Section 25A exclusions are applied where the Coastal Margin is not suitable for access, rather than on nature conservation grounds, these exclusions are important in reducing the potential for adverse impacts on non-breeding waterbirds and other sensitive features in this section of the route. If in the future there is a proposal to remove or relax the Section 25A exclusions, then an appraisal of the effects of those changes on sensitive features would be essential.

5.3.4 Predicted change in use of site for recreation

Trail – Negligible change in use

The project team consider that there will be a negligible change in the use of the Trail along this sub-section.

Although the profile of the route will be raised by becoming a National Trail: there won't be a new path created nor a new link in the path network be established; the existing path is not proposed to be substantially upgraded; and there are no visitor facilities available; nor do we believe that people living nearby will use it more; nor do we believe it will attract more than a few more walkers from further afield.

Margin – Negligible change in use as we consider: there will be negligible change in use in the Trail and there are no attractors in the margin.

The saltmarsh and mudflats are considered unsuitable for public access and proposed for Section 25A restrictions.

5.3.5 Possible risks to sensitive features

Overwintering dark-bellied brent goose (disturbance in/near feeding & roosting areas; loss of feeding areas): Local land owners report low numbers scattered throughout the subsection but no known areas for large congregations. A handful of Kill by Shooting Licences along the length (Panter & Liley 2016) suggests some geese feed on the extensive arable farmland west of the route.

Overwintering and passage waterbirds (disturbance in/near feeding & roosting areas; loss of feeding areas): found along length Panter & Liley (2016) noted roost sites near: Coate Outfall, Bridgewick Outfall, north and south of Grange Outfall and east of Marsh House Farm.

This northern extent of this length has a number of creeks and sheltered bays which may be used as a refuge by red-throated diver, but these are located at the seaward edge of the saltmarsh.

With regard to the above feature and feature group: England Coast Path usage is expected busiest in those months with better weather whilst the large majority of non-breeding waterbird species are most abundant in months less attractive to walkers, in particular during the core winter period of November to March. In addition, England Coast Path proposals: do not take people closer to either coastal or terrestrial

feeding areas nor closer to potential roosts than the already existing PROW; do not change existing sightlines; do not remove buffers between route and feeding areas nor propose access to significant areas of new land landward or seaward of the Trail. The availability of extensive areas of flat arable farmland to the west reduces the risk that brent geese or other waterbirds feeding in fields next to the seawall will be seriously affected by localised disturbance from the path.

Non-breeding hen harrier (disturbance to their roost sites; new access to favoured and previously inaccessible hunting areas; reduction in their prey): there are no known roosts along this length, nor are we proposing access to any new areas that don't have an existing level of use.

Breeding birds of bare or sparsely vegetated sand, shingle or shell (new areas of this habitat becoming available to the public for the first time; a significant increase in access to this habitat during their nesting season; Loss or degradation of the habitat): Panter & Liley (2016) has ringed plover breeding mapped at the small cockle beach at Shell Bank, southeast of Middlewick. This small but attractive area currently has no barriers to access and no signage alerting walkers to the potential presence of breeding birds so there is a risk of people accessing this small beach at sensitive times.

Tern foraging areas (disruption to flight routes between breeding areas and foraging areas): There are no tern colonies or inland foraging areas that require connectivity considering along this section of path. The potential for walkers/dogs to disrupt tern behaviour whilst foraging is low as walkers/dogs do not present any substantial barrier to movement.

Intertidal mudflats and sandflats (trampling): narrow flats close to the route of the proposed path at the south of the subsection, but as the trail turns and runs northwards at Holliwell Point the flats become extensive, firstly running adjacent to the trail and then being on the seaward edge of very extensive saltmarsh, vastly reducing the percentage of mudflat within 60m from the shoreline.

Saltmarsh (trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime): there is an isolated block of saltmarsh at the start of the subsection near Holliwell Point, and a vast extent north of Shell Bank.

***Cakile maritima-Honkenya peploides* strandline community (trampling):** there are a number of cockle shell beaches on the outer edge of the saltmarsh along this section, which as explained above, generally lie 0.5 to 1.5km away from the proposed route. Only one cockle beach, at Shell Bank, is currently accessible to the public lying directly adjacent to the Public Footpath –all others are inaccessible due to the deeply dissected saltmarsh.

With regard to the three feature groups above: proposals do not take people closer to these than the already existing PROW; saltmarsh and mudflats are unattractive to walkers and proposed for a Section 25A Restriction throughout this subsection. There are no proposed surfacing works and the walking surface is currently well maintained.

Vascular plant assemblage / rare plant species (trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime): There are no proposed surfacing works and the walking surface is currently well maintained. Although a few species, such as shrubby sea-blite occur on the seaward face of the sea wall and will not be restricted we do not envisage proposals increasing existing levels of access to these areas; nor are there any existing barriers or detractors being proposed to be removed; nor are there any attractors seaward of the proposed path.

5.3.6 Any mitigation measures included in the access proposal and how they address the possible risks

A Section 26 Restriction with explanatory signage is proposed for the ringed plover breeding season for the

accessible cockle beach at Shell Bank (Map D in Coastal Access Report).

5.3.7 Conclusion

We have fully considered ecological sensitivities in this area alongside the current and predicted access levels. We have concluded that the predicted absence of notable increase in use combined with the proposal to align the route along existing Public Rights of Way, the s26 restriction at Shell Bank and with the s25A CROW direction on public access delivers all necessary mitigation.

5.4 Sandbeach Outfall to Bradwell Power Station

5.4.1 Environmental sensitivity

The sensitive features / feature groups listed below occur in this subsection, along with the time when they may be present and their sensitivities. The nature of the possible interaction with these features is examined in detail in section 5.4.5

3.1 Overwintering dark-bellied brent goose

Occurring October to April. Sensitivities: more frequent interruptions to feeding both on the coast and on terrestrial land; more frequent displacement from places where birds congregate at high tide; loss/erosion of feeding areas.

3.2 Non-breeding hen harrier.

Occurring September to April. Sensitivities: more frequent disturbance to their roost sites; new public access to favoured and previously inaccessible hunting areas; a reduction in their prey (passerines, small mammals and waders).

3.3 Overwintering and passage waterbirds

Occurring August to April with sensitivity heightened in core winter period November to March. Sensitivities: more frequent interruptions to feeding both on the coast and on terrestrial land; more frequent displacement from places where birds congregate at high tide; loss/erosion of feeding areas.

3.4 Breeding birds of bare or sparsely vegetated sand, shingle or shell

Breeding March to September. Sensitivities: new areas of this habitat becoming available to the public for the first time; a significant increase in access to this habitat during their nesting season - both these would result in potential trampling of eggs; disturbance by dogs; nest desertion; and increased predation of eggs and young. Loss or degradation of the habitat.

3.9 Intertidal mudflats and sandflats

Sensitivities: trampling.

3.11 Saltmarsh

Sensitivities: trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime.

3.12 *Cakile maritima-Honkenya peploides* strandline community

Sensitivities: trampling.

3.15 Vascular plant assemblage / rare plant species

Sensitivities: trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime.

5.4.2 Current access provisions and use of site for recreation

Good existing access

The proposed Trail follows existing Public Rights of Way and existing walked lines which are all in good condition and well signposted throughout.

The sub-section starts where the Recreational Route St Peters Way joins sea wall at Sandbeach Outfall. St Peter's Way is a 45 mile walk from Chipping Ongar to the ancient chapel and, as one of only two Recreational Routes in Essex, it is popular with the more dedicated walking groups during the spring, summer and autumn.

The proposed route then runs northwards to St Peter-on-the-Wall chapel. St Peter-on-the-Wall is an iconic building that is already well promoted as a destination, especially at a district level. Chelmsford Cathedral estimate 10,000 visitors come a year (extrapolated from visitors' book and prayer cards) but although there is a small car park and a small number of information boards, with no toilets or refreshments, visitor facilities are poor. From anecdotal evidence we believe the majority of people visit the chapel and go for a short walk (generally northwards) before returning to their car. Generally, levels of use decreases as you move further from St Peter-on-the-Wall, though the circular walking route from St Peter-on-the-Wall to Bradwell Waterside and then returning on old permissive farm paths is a popular route for organised walking groups.

St Peter-on-the-Wall sits in a meadow dissected by footpaths and we are proposing the Trail follows an existing walked line to re-join the sea wall which then runs north. This meadow is the location for the annual 'Bradwell Festival'. This is organised by the Othona Community who live just north of the chapel approximately 50 metres from the sea wall and proposed trail. Othona can have up to 90 people living on site, including residential school groups, many of whom access the foreshore for education activities and to swim.

This is a destination for local dog walkers (with the majority driving to St Peters and walking to the beaches north of Sales Point) as well as for birdwatchers. Bradwell Bird Observatory is located in a small wooded area to the south of the chapel (adjacent to Linnet Cottage) and is visited regularly by its members.

There are only a few houses locally and at moderate distances from the coast. There is no infrastructure providing access to the water.

The mudflats form part of Dengie NNR whose access arrangements state: This NNR is currently closed to the public. This will be because: the site is unsafe; our tenure of the land does not allow public access; the site is so fragile that any form of access would damage the wildlife interest. However, a small number of licensed bait diggers do access the mudflats.

The saltmarsh is entirely covered by high tides and is a detractor to access for many. However, there is unauthorised access across the saltmarsh in front of St Peter-on-the-Wall to reach the cockle beach. This has resulted in worn paths through the saltmarsh, which widen considerably in the winter when the surface is wetter. The saltmarsh south of St Peter-on-the-Wall is leased by Essex Wildlife Trust and is signed 'No Access to Beach'. North of Sales Point there is an area of high saltmarsh scrub dominated by shrubby sea blight where high levels of unauthorised access to the beach beyond has resulted in a well-worn network of paths and a lack of other species in the associated plant community.

The beaches north of Sales Point are the most popular with dog walkers, local people and fishermen with a high level of unauthorised access, particularly in the spring, summer and autumn months. Local

wildfowlers shoot over much of the land both landward and seaward of the proposed trail. During 2016/2017 there has been an increase in quadbikes and scramble bikes trying to access the beaches in the area. The Othona Community residents and visitors often access the small beach, owned by Othona, in front of their property as part of their activities.

Burnham Tourist Information Centre and the local District Council are working to promote tourism in the Dengie Peninsula including St Peters Chapel and their 'Saltmarsh Coast' Trail which follows the proposed route.

This sub-section ends west of the beach at Bradwell Power Station and the Dengie site boundary.

5.4.3 Access proposal

The following improvements are proposed along this sub-section:

1. **Signage and interpretation** – we are proposing a number of new waymarkers as well as the addition of the England Coast Path logo onto existing directional signage. These will help guide walkers and build their confidence in terms of exploring the Trail further as well as raise awareness of the England Coast Path with the general public visiting the area. Interpretation is proposed at St Peters Chapel and west of Sales Point as well as new advisory signage all of which will help guide walkers and encourage them to explore the immediate surrounds responsibly.
2. **Clear defined accessible route at St Peters on the Wall Chapel** – we are proposing to clearly guide people from the sea wall south of St Peters on the Wall Chapel through to re-join the sea wall north of St Peters on the Wall Chapel. The Public Footpath currently aligns along the frequently inundated saltmarsh and is not walked; instead there is an existing walked line which runs in front of a holiday let and a bird observatory before following a poorly maintained rough path through woodland where badger holes and low branches make access difficult. We are proposing to guide people landward of the wood, following the route of the recreational footpath St Peters Way before creating a new link on existing walked lines on the meadows surrounding St Peters Chapel before re-joining the sea wall Public Footpath to the north.

We are proposing to route the Trail along a section of sea wall adjacent to the Othona Community (just north of St Peters on the Wall Chapel) which does not currently have public access rights. However, on the ground this is the well-established well-used walked line and as such the change in designation will not improve accessibility.

3. **Step repairs** – we are proposing minor repairs to the steps on to the sea wall north of St Peters on the Wall Chapel which may make the route marginally more attractive to follow for the more casual walker;
4. **Coastal margin** – includes excepted land (buildings, curtilage or garden). There are 3 main areas of spreading room proposed:
 - a) **woodland south of St Peters on the Wall Chapel** –we propose to re-direct the trail landward meaning the wood would fall within the margin. However, as the woodland edge is thick shrub and looks uninviting to the walker and the informal walked line currently runs through the eastern extent, it is predicted this woodland may experience reduced access as a result of our proposals;
 - b) **Beach south of Sales Point but north of Othona community** – there is a low level of established informal access on this sand, mainly by the neighbouring resident Othona Community and to a much lesser extent visitors coming to St Peters Chapel as a destination;

c) **Beaches between Sales Point and Bradwell Power Station** - there is a high level of established informal access on these area, predominantly local people, dog walkers, picnickers and fishermen.

All mudflats throughout this subsection are proposed for a Section 25A Restriction.

All saltmarsh throughout this subsection, with the exception of an area of degraded saltmarsh scrub west of Sales Point, is proposed for a Section 25A Restriction.

It is worth noting that while Section 25A exclusions are applied where the Coastal Margin is not suitable for access, rather than on nature conservation grounds, these exclusions are important in reducing the potential for adverse impacts on non-breeding waterbirds and other sensitive features in this section of the route. If in the future there is a proposal to remove or relax the Section 25A exclusions, then an appraisal of the effects of those changes on sensitive features would be essential.

5.4.4 Predicted change in use of site for recreation

Trail –small increase in use

The project team consider that there will be a small increase in the use of the path along this sub-section.

As St Peters on the Wall is an attractor and there will be trail improvements in terms of signage and interpretation plus raised profile by becoming a National Trail the path is likely to attract more walkers from further afield but the lack of visitor facilities such as toilets will limit its appeal and dwell times greatly. Local people are not likely to use the path more frequently as a result of establishment works nor is a new link in the path network being established.

There will be less of an increase in the use of the path south of St Peters on the Wall due to the lack of circular links.

Margin –possible increase in use

As we predict a small increase in the usage of the Trail along this sub-section, and as the spreading room is attractive beaches, we could see a possible increase in use of these areas.

We would, however, expect a decrease in use of the saltmarsh and cockle shell ridge/beach on its seaward extent directly in front of Othona and St Peters on the Wall as a result of our proposals.

5.4.5 Possible risks to sensitive features

Overwintering dark-bellied brent goose (disturbance in/near feeding & roosting areas; loss of feeding areas): large flocks regularly seen along this subsection, especially on the fields north of St Peter where large congregations are regularly seen from existing Public Footpaths. There are several Kill by Shooting Licences along the subsection which is a good indication that the winter cereals in this area are important for brent geese.

Overwintering and passage waterbirds (disturbance in/near feeding & roosting areas; loss of feeding areas): found along length Panter & Liley (2016) noted roost sites near: Sandbeach Outfall and Glebe Outfall; north of Glebe Outfall; west of Gunners Creek; seaward edge of saltmarsh at Tip Head in front of St Peters Chapel.

With regard to the above feature and feature group: England Coast Path usage is expected busiest in those months with better weather whilst the large majority of non-breeding waterbird species are most

abundant in months less attractive to walkers, in particular during the core winter period of November to March. In addition, England Coast Path proposals: do not take people closer to either coastal or terrestrial feeding areas nor closer to potential roosts than the already existing PROW; do not change existing sightlines; do not remove buffers between route and feeding areas nor propose access to significant areas of new land landward or seaward of the Trail. The availability of extensive areas of flat arable farmland to the west reduces the risk that brent geese or other waterbirds feeding in fields next to the seawall will be seriously affected by localised disturbance from the path.

Non-breeding hen harrier (disturbance to their roost sites; new access to favoured and previously inaccessible hunting areas; reduction in their prey): there are no known roosts along this length, nor are we proposing access to any new areas that don't have an existing level of use.

Breeding birds of bare or sparsely vegetated sand, shingle or shell (new areas of this habitat becoming available to the public for the first time; a significant increase in access to this habitat during their nesting season; Loss or degradation of the habitat): See Map I

Panter & Liley (2016) note breeding ringed plover mapped at: Gunners Creek near St Peters Chapel; foreshore east of Othona; and foreshore just north & west of Sales Point. No access is proposed for the first two of these locations. However the busiest beach, west of Sales Point, is proposed to have coastal access rights. There is currently no interpretation west of Sales Point.

Historically, the Dengie has supported between 100 and 200 pairs of breeding ringed plover (Wood (2007). Across Essex the population has declined by 50% in the 1990s. Dengie has had public access throughout the period of the Site of Special Scientific Interest and the area of beach west of Sales Point is particularly favoured by people due to its ease of access and its terrain being more favourable than the typical Essex mudflat. We note that the Dengie ringed plover population has not declined as steeply compared with other sites along the Essex coast. Essex Wildlife Trust lease 'Bradwell Cackle Spit Nature Reserve' - an area of foreshore including saltmarsh and cockle shell ridges and have a number of reserve signs stating "No Access To Beach" - however these signs could be repositioned in more prominent and therefore potentially more effective locations.

Intertidal mudflats and sandflats (trampling): to the south of the subsection there are very extensive mudflats (approx. 1.5 -2km wide) on the seaward edge of extensive saltmarsh (0.5 to 1.5km wide). Mudflat within 60m from the shoreline is only found between Othona and Bradwell Power Station where the saltmarsh is either narrow or absent.

Saltmarsh (trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime): to the south of the subsection extensive saltmarsh (between 0.25km and 0.75km to seaward edge) then tapers off north of St Peters Chapel. In front of St Peters Chapel there is a cluster of clear trample lines through the saltmarsh to the shell and sand beach beyond. Past Sales Point there are two sizeable areas of saltmarsh. One of these has an area of high saltmarsh scrub dominated in particular by shrubby sea blight. Although less sensitive to trampling, high levels of unauthorised access to the beach beyond has resulted in a well-worn network of paths and a lack of other species in the associated plant community.

***Cakile maritima-Honkenya peploides* strandline community (trampling):** – there are a number of cockle shell beaches on the outer edge of the saltmarsh along this section, which as explained above generally lie 0.5 to 1.5km away from the proposed route. The public currently access the small beach in front of St Peters Chapel (between Gunners Creek and Sales Point) and all the beaches from Sales Point westwards to Bradwell Power Station. All other beaches are inaccessible due to the deeply dissected saltmarsh

With regard to the above feature groups: proposals do not take people closer to these than the already

existing PROW; saltmarsh and mudflats are unattractive to walkers and proposed for a Section 25A Restriction throughout this subsection. There are no proposed surfacing works and the walking surface is currently well maintained.

Vascular plant assemblage / rare plant species (trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime): Past Sales Point there is an area of high saltmarsh scrub dominated by shrubby sea blite where high levels of unauthorised access to the beach beyond has resulted in a well-worn network of paths and a lack of other species in the associated plant community. There are no proposed surfacing works and the walking surface is currently well maintained. Although a few species, such as shrubby sea-blite occur on the seaward face of the sea wall and will not be restricted we do not envisage proposals significantly increasing existing levels of access to these areas; nor are there any existing barriers or detractors being proposed to be removed.

5.4.6 Any mitigation measures included in the access proposal and how they address the possible risks

We are proposing an information board at St Peters Chapel highlighting the wildlife value of the saltmarsh and cockle beach and reinforcing the message there is no public access across the saltings – and directing people to the beach north and west of Sales Point.

We will work with Essex Wildlife Trust to review the location of their “No Access To Beach” information signage at their Bradwell Cockle Spit nature reserve.

We are proposing an information board north of Sales Point highlighting the wildlife value of the immediate surrounds, including the shrubby sea-blite and favoured habitat for breeding ringed plover.

5.4.7 Conclusion

We have fully considered ecological sensitivities in this area alongside the current and predicted access levels. It is expected that new signage will encourage responsible behaviour, raise awareness of sensitive features and help to reduce any impacts on them. We have concluded that the above mitigation, combined with the s25A CROW direction on public access, will make a positive contribution to management of the site and minimise the risks associated with a possible increase in use.

5.5 Bradwell Power Station to western end of Bradwell Marina

5.5.1 Environmental sensitivity

The sensitive features / feature groups listed below occur in this subsection, along with the time when they may be present and their sensitivities. The nature of the possible interaction with these features is examined in detail in section 5.5.5

3.1 Overwintering dark-bellied brent goose

Occurring October to April. Sensitivities: more frequent interruptions to feeding both on the coast and on terrestrial land; more frequent displacement from places where birds congregate at high tide; loss/erosion of feeding areas.

3.2 Non-breeding hen harrier.

Occurring August to March. Sensitivities: more frequent disturbance to their roost sites; new public access to favoured and previously inaccessible hunting areas; a reduction in their prey (passerines, small mammals)

and waders).

3.3 Overwintering and passage waterbirds

Occurring August to April with sensitivity heightened in core winter period November to March.

Sensitivities: more frequent interruptions to feeding both on the coast and on terrestrial land; more frequent displacement from places where birds congregate at high tide; loss/erosion of feeding areas.

3.4 Breeding birds of bare or sparsely vegetated sand, shingle or shell

Breeding March to September. Sensitivities: new areas of this habitat becoming available to the public for the first time; a significant increase in access to this habitat during their nesting season - both result in potential trampling of eggs; disturbance by dogs; nest desertion; and increased predation of eggs and young. Loss or degradation of the habitat.

3.9 Intertidal mudflats and sandflats

Sensitivities: trampling.

3.11 Saltmarsh

Sensitivities: trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime.

3.15 Vascular plant assemblage / rare plant species

Sensitivities: trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime.

5.5.2 Current access provisions and use of site for recreation

Good existing access and high recreational use, especially in the western half. The proposed Trail follows the route of existing Public Footpaths or Public Footway throughout that are all in good condition, frequently used and the majority are well signposted.

This sub-section starts west of the beach at Bradwell Power Station and the Blackwater Estuary designated site boundaries. The seawall Public Footpath runs south past a small caravan park to Bradwell Waterside hamlet. Here there is limited seasonal roadside parking, a bus service, a sailing club, a pub and a circular walking route with inland Public Footpaths which appears well used by local dog walkers.

Bradwell Outdoors is a local authority run residential outward bound centre with slipway catering for up to 100 people a day on a number of land and water based activities including canoeing, sailing, power boating, crabbing, high ropes and climbing. They also manage the majority of moorings in Bradwell Creek.

The Public Footpath comes off the sea wall at Bradwell Outdoors and runs landward of the property to Bradwell Marina. Bradwell Marina offers over 350 berths plus room for 50 visiting boats as well as a commercial business building and fitting out heavy duty vessels. A car park, toilets plus a number of green spaces are maintained for marina visitors to use, however the marina tolerates the current level of unauthorised public use as they have a restaurant/ bar open to non-members.

Burnham Tourist Information Centre and the local District Council are working to promote tourism in the district including their 'Saltmarsh Coast' Trail which follows the proposed trail.

This sub-section ends where the Trail re-joins the sea wall to the west. A minority of people walk beyond this point.

5.5.3 Access proposal

The following improvements are proposed along this sub-section:

1. **Signage and interpretation** – we are proposing a number of new waymarkers as well as the addition of the England Coast Path logo onto existing directional signage. These will help guide walkers and build their confidence in terms of exploring the Trail further as well as raise awareness of the England Coast Path with the general public visiting the area;
2. **Coastal margin** – there are 2 attractive areas
 - a) **Green open spaces at Bradwell marina** – these are already well-used by marina residents and visitors as well as members of the public visiting Bradwell marina café;
 - b) **Bradwell Marina sea walls** – these already have Public Footpaths on them and are well used by the visiting public for coastal vistas.

Coastal margin includes excepted land (buildings, curtilage or garden). All areas of saltmarsh and mudflats are considered unsuitable for public access and proposed for Section 25A restrictions.

As Pewet Island is not accessible on foot at low tide (separated by Bradwell Creek) it does not fall within the coastal margin and is therefore not considered further in this ASFA.

5.5.4 Predicted change in use of site for recreation

Trail –small increase in use

The project team consider that there will be a small increase in the use of the path along this sub-section. Although parking is limited, the pub and café at Bradwell Waterside and Bradwell Marina offer hot food and customer toilets and this is one of the few places in the locality where visitors can access the coast. In addition there are promoted circular walks to St Peters-on-the-Wall, a significant attractor, as well as shorter inland options. There will be trail improvements in terms of signage plus raised profile by becoming a National Trail so we believe the path is likely to attract more walkers from further afield but the lack of a wider visitor offer will limit this appeal.

Local people are not likely to use the path more frequently as a result of establishment works nor is a new link in the path network being established.

Margin –negligible change in use

Although we predict a small increase in the usage of the Trail along this sub-section, the areas along this sub-section proposed for coastal access rights are already easily accessed and well used green spaces that would not attract visitors from further afield and our access proposals are unlikely to have a noticeable difference to visitor numbers here.

The remainder of the coastal margin is either excepted land or considered unsuitable for public access and proposed for Section 25A restrictions. It is worth noting that while Section 25A exclusions are applied where the Coastal Margin is not suitable for access, rather than on nature conservation grounds, these exclusions are important in reducing the potential for adverse impacts on non-breeding waterbirds and other sensitive features in this section of the route. If in the future there is a proposal to remove or relax the Section 25A exclusions, then an appraisal of the effects of those changes on sensitive features would be essential.

5.5.5 Possible risks to sensitive features

Overwintering dark-bellied brent goose (disturbance in/near feeding & roosting areas; loss of feeding areas): occasional flocks are seen on the fields west of Bradwell Power Station where there is one Kill by Shooting Licence in this area suggesting that this area is regularly used by brent geese.

Overwintering and passage waterbirds (disturbance in/near feeding & roosting areas; loss of feeding areas): found along this length Panter & Liley (2016) noted a roost site on Pewet Island. Pewet Island lies a significant distance from the proposed route and being physically separated from the mainland by Bradwell Creek it represents an important refuge. The only other areas of saltmarsh are the two small blocks found either side of Essex Outdoors slipway

With regard to the above feature and feature group: England Coast Path usage is expected busiest in those months with better weather whilst the large majority of non-breeding waterbird species are most abundant in months less attractive to walkers, in particular during the core winter period of November to March. In addition, England Coast Path proposals: do not take people closer to either coastal or terrestrial feeding areas nor closer to potential roosts than the already existing PROW; do not change existing sightlines; do not remove buffers between route and feeding areas nor propose access to significant areas of new land landward or seaward of the Trail.

Non-breeding hen harrier (disturbance to their roost sites; new access to favoured and previously inaccessible hunting areas; reduction in their prey): there are no known roosts along this length, nor are we proposing access to any new areas that don't have an existing level of use.

Breeding birds of bare or sparsely vegetated sand, shingle or shell (new areas of this habitat becoming available to the public for the first time; a significant increase in access to this habitat during their nesting season; Loss or degradation of the habitat):

Ringed plover – Panter & Liley (2016) has breeding mapped at Bradwell Marina, though it is believed this record relates to Pewet Island slightly offshore.

Ringed plover and little tern - Panter & Liley (2016) has breeding mapped at and Pewet Island however, Pewet Island does not form part of the coastal margin.

Intertidal mudflats and sandflats (trampling): there is a narrow strip of mudflat within the coastal margin, the vast majority of which lies within 60m of the shoreline.

Saltmarsh (trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime): two small blocks found either side of Essex Outdoors slipway. The proposed trail follows the Public Footpath adjacent to the northern block. However, west of Waterside road the proposed trail runs inland on the Public Footpath landward side of Bradwell outdoors Residential Centre whose thick evergreen hedging provides additional screening.

With regard to the above feature groups: proposals do not take people closer to these than the already existing PROW; saltmarsh and mudflats are unattractive to walkers and proposed for a Section 25A Restriction throughout this subsection. There are no proposed surfacing works and the walking surface is currently well maintained.

Vascular plant assemblage / rare plant species (trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime): There are no proposed surfacing works and the walking surface is currently well maintained. Although a few species, such as shrubby sea-blite occur on the seaward face of the sea wall and will not be restricted we: do not envisage proposals increasing existing levels of access to these areas; nor are there any existing barriers or detractors being proposed to be removed; nor are there any attractors seaward of the proposed path.

5.5.6 Any mitigation measures included in the access proposal and how they address the possible risks
None specifically for nature conservation reasons.

5.5.7 Conclusion
We have fully considered ecological sensitivities in this area alongside the current and predicted access levels. It is expected that the predicted absence of a significant increase in use coupled with the s25A CROW direction on public access, delivers all necessary mitigation.

5.6 Bradwell Marina to Highfield

5.6.1 Environmental sensitivity
<p>The sensitive features / feature groups listed below occur in this subsection, along with the time when they may be present and their sensitivities. The nature of the possible interaction with these features is examined in detail in section 5.6.5</p> <p>3.1 Overwintering dark-bellied brent goose Occurring October to April. <u>Sensitivities</u>: more frequent interruptions to feeding both on the coast and on terrestrial land; more frequent displacement from places where birds congregate at high tide; loss/erosion of feeding areas.</p> <p>3.2 Non-breeding hen harrier. Occurring August to March. <u>Sensitivities</u>: more frequent disturbance to their roost sites; new public access to favoured and previously inaccessible hunting areas; a reduction in their prey (passerines, small mammals and waders).</p> <p>3.3 Overwintering and passage waterbirds Occurring August to April with sensitivity heightened in core winter period November to March. <u>Sensitivities</u>: more frequent interruptions to feeding both on the coast and on terrestrial land; more frequent displacement from places where birds congregate at high tide; loss/erosion of feeding areas.</p> <p>3.9 Intertidal mudflats and sandflats <u>Sensitivities</u>: trampling.</p> <p>3.11 Saltmarsh <u>Sensitivities</u>: trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime.</p> <p>3.15 Vascular plant assemblage / rare plant species <u>Sensitivities</u>: trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime.</p>

5.6.2 Current access provisions and use of site for recreation
Good existing access. The proposed Trail follows existing Public throughout which are in good condition, well signposted and clear to follow. Few users detour from the path.

The proposed Trail travels west from Bradwell Marina, around the rear of the Orplands managed realignment site before re-joining the sea wall near the small Blackwater caravan park and ending at the western extent of the saltmarsh in front of Highfield farm.

It is a remote part of the coast/countryside with few houses, all some distance from the shore, though there is a small caravan park abutting the sea wall east of Highfield. There are no circular footpath links and with no car parks, no infrastructure providing access to the water apart from one private slipway, no amenities and no visitor attractions. Existing access levels are low, with few local walkers from Bradwell and St Lawrence using this sub-section. Few users detour from the path.

The majority of Orplands managed realignment site is used by a local wildfowling group, as is the eastern half of the saltmarsh in front of Highfield.

Burnham Tourist Information Centre and the local District Council are working to promote tourism in the district including their 'Saltmarsh Coast' Trail which follows the proposed trail.

5.6.3 Access proposal

The following improvements are proposed along this sub-section:

1. **Signage** – we are proposing to add the England Coast Path logo to existing waymarkers. These will help guide walkers and build their confidence in terms of exploring the Trail further on this remote section of the coast;
2. **Coastal margin** – includes a small beach in front of Blackwater Caravan Park.

All areas of saltmarsh and mudflats are considered unsuitable for public access and proposed for Section 25A restrictions. It is worth noting that while Section 25A exclusions are applied where the Coastal Margin is not suitable for access, rather than on nature conservation grounds, these exclusions are important in reducing the potential for adverse impacts on non-breeding waterbirds and other sensitive features in this section of the route. If in the future there is a proposal to remove or relax the Section 25A exclusions, then an appraisal of the effects of those changes on sensitive features would be essential.

5.6.4 Predicted change in use of site for recreation

Trail – negligible change in use

The project team consider that there will be a negligible change in the use of the path along this sub-section.

Although the profile of the route will be raised by becoming a National Trail there: won't be a new path created nor a new link in the path network be established; the existing path is not proposed to be substantially upgraded; and there are no visitor facilities available; nor do we believe that people living nearby will use it more; nor do we believe it will attract more than a few more walkers from further afield.

Margin – negligible change in use

The only area within coastal margin proposed as spreading room is the small and already accessible beach that adjoins the Trail near Blackwater Caravan Park.

As we predict negligible change in use of the Trail in this location and we are not removing any barriers to access, we envisage negligible change in use of this area.

5.6.5 Possible risks to sensitive features

Overwintering dark-bellied brent goose (disturbance in/near feeding & roosting areas; loss of feeding areas): Kill by Shooting Licences inland from Orplands (Panter & Lily 2016) suggest that the winter cereals in this area are important for brents and this is backed up by a local land owner.

Overwintering and passage waterbirds (disturbance in/near feeding & roosting areas; loss of feeding areas): found along length though Panter & Lily (2016) noted just 1 major high tide roost on this subsection at Highfield. The eastern side of this saltmarsh is shot by a local wildfowling club. This roost is ecologically coupled with a roost on saltmarsh in front of two caravan parks in St Lawrence (see subsection 7) with this Highfield area acting as a refuge for the more disturbed St Lawrence area. If disturbance were to occur simultaneously on both roosts then there is a risk that the integrity of the roosts may be affected.

With regard to the above feature and feature group: England Coast Path usage is expected busiest in those months with better weather whilst the large majority of non-breeding waterbird species are most abundant in months less attractive to walkers, in particular during the core winter period of November to March. In addition, England Coast Path proposals: do not take people closer to either coastal or terrestrial feeding areas nor closer to potential roosts than the already existing PROW; do not change existing sightlines; do not remove buffers between route and feeding areas nor propose access to significant areas of new land landward or seaward of the Trail.

Non-breeding hen harrier (disturbance to their roost sites; new access to favoured and previously inaccessible hunting areas; reduction in their prey): there are no known roosts along this length, nor are we proposing access to any new areas that don't have an existing level of use.

Intertidal mudflats and sandflats (trampling): St Lawrence Bay mudflats are a huge expanse extending up to 1km from the shoreline, meaning there is a relatively low percentage of mudflat within 60m of the shoreline.

Saltmarsh (trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime): this subsection includes the substantial managed realignment site at Orplands. Now well established this site represents a valuable saltmarsh resource. There is an additional sizeable extent seaward of Highfield.

With regard to the above feature groups: proposals do not take people closer to these than the already existing PROW; saltmarsh and mudflats are unattractive to walkers and proposed for a Section 25A Restriction throughout this subsection. There are no proposed surfacing works and the walking surface is currently well maintained.

Vascular plant assemblage / rare plant species (trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime): There are no proposed surfacing works and the walking surface is currently well maintained. Although a few species, such as shrubby sea-blite occur on the seaward face of the sea wall and will not be restricted we: do not envisage proposals increasing existing levels of access to these areas; nor are there any existing barriers or detractors being proposed to be removed; nor are there any attractors seaward of the proposed path.

5.6.6 Any mitigation measures included in the access proposal and how they address the possible risks

None specifically for nature conservation reasons.

5.6.7 Conclusion

We have fully considered ecological sensitivities in this area alongside the current and predicted access levels. It is expected that the predicted absence of a significant increase in use coupled with the s25A CROW direction on public access, delivers all necessary mitigation.

5.7 Highfield to Stansgate

5.7.1 Environmental sensitivity

The sensitive features / feature groups listed below occur in this subsection, along with the time when they may be present and their sensitivities. The nature of the possible interaction with these features is examined in detail in section 5.7.5

3.1 Overwintering dark-bellied brent goose

Occurring October to April. Sensitivities: more frequent interruptions to feeding both on the coast and on terrestrial land; more frequent displacement from places where birds congregate at high tide; loss/erosion of feeding areas.

3.2 Non-breeding hen harrier.

Occurring August to March. Sensitivities: more frequent disturbance to their roost sites; new public access to favoured and previously inaccessible hunting areas; a reduction in their prey (passerines, small mammals and waders).

3.3 Overwintering and passage waterbirds

Occurring August to April with sensitivity heightened in core winter period November to March. Sensitivities: more frequent interruptions to feeding both on the coast and on terrestrial land; more frequent displacement from places where birds congregate at high tide; loss/erosion of feeding areas.

3.9 Intertidal mudflats and sandflats

Sensitivities: trampling.

3.11 Saltmarsh

Sensitivities: trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime.

3.12 *Cakile maritima-Honkenya peploides* strandline community

Sensitivities: trampling.

3.15 Vascular plant assemblage / rare plant species

Sensitivities: trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime.

5.7.2 Current access provisions and use of site for recreation

Good existing access with high levels of recreational use near St Lawrence.

The proposed Trail follows existing Public Rights of Way or existing walked lines throughout that are in good condition and well signed where appropriate.

Leaving Highfield the Public Footpath runs west along the sea wall to the village of St Lawrence. St

Lawrence has circa 1,500 residents and two caravan parks, with a relatively high density of people living in close proximity to the shoreline. The village offers a bus service, a public car park, a pub and an inn - but is limited in its appeal as a visitor destination by having no public toilets.

East of The Stone there are two caravan parks (longest occupancy March to December inclusive) with two slipways, a small fishing lake and a small but well-used sandy beach which boost numbers accessing the coast during the summer months.

A temporary permission for December occupancy (for a period of 3 years) for the western caravan park was agreed with a number of mitigation measures including a short 'winter diversion' which guides walkers to the landward base of the sea wall; associated signage and explanation of appropriate behaviour e.g. dogs under control; restrictions on direct access to the sea wall from the caravan park.

North of the caravan parks the Public Footpath follows the sea wall until near the junction with the private road, Seaway. Here the Public Footpath runs along the foreshore past the Stone to re-join the sea wall at the western end of The Stone Sailing Club. This foreshore footpath is not available at all states of the tide and the walking surface changes with the state of the tide and over time. Whilst some parts are firm stony beach others parts are sticky mud and seaweed-covered 'rocks', making this an unattractive and potentially hazardous route to some. Instead many prefer to go inland across the green open space 'Seaway Passage' (which has a notice stating that 'Pedestrian use entirely at your own risk' and the land does not have a Public Right of Way), along Seaway and then Main Road to The Stone.

At The Stone there is a busy watersports club, well known for its water skiing and powered boat racing.

West of The Stone, the existing walked line follows the sea wall landward of The Stone Sailing Club dinghy park (rather than the Public Footpath on the shore which then dissects the Club dinghy park). It then re-joins the sea wall Public Footpath at the west end of St Lawrence and runs along the sea wall to end at the busy Marconi Sailing Club at Stansgate.

The majority of walkers along this sub-section are local dog walkers and residents from the caravan parks, and from local conversations we understand a minority venture far beyond this sub-section extent. There are also a number of recreational walkers/runners and bird watchers using the footpaths whilst locals, visitors and watersports enthusiasts use the foreshore, with tractor units launching dinghies, jet skis and powered boats at various locations.

Burnham Tourist Information Centre and the local District Council are working to promote tourism in the district including their 'Saltmarsh Coast' Trail which follows the proposed route.

5.7.3 Access proposal

The following improvements are proposed along this sub-section:

1. **Signage and interpretation** – we are proposing a number of fingerposts and waymarkers along the length of this sub-section. These will help guide walkers and build their confidence in terms of exploring the Trail and Coastal Margin further as well as raise awareness of the England Coast Path with the general public;
2. **Following existing walked lines at the following locations:**
 - a) **Waterside Holiday Park, St Lawrence** – the existing walked line is more easily accessed than the seaward Public Footpath so helping those with mobility issues;
 - b) **Between Seaway and The Stone Sailing Club, St Lawrence** – the Public Right of Way comes down steps off the sea wall at the seaward end of Seaway, and runs along the foreshore past the Stone to re-join the sea wall crest after a set of steps at the western end of The Stone Sailing Club. The

eastern part of this footpath (between Seaway and The Stone) is regularly covered at high tide and is not a suitable walking surface. The section from The Stone to the western end of The Stone Sailing Club is inundated less frequently but does not make for the most accessible walking surface. Using the existing walked lines of Seaway, Main Road pavements and the sea wall crest path west of The Stone will allow continuity at all states of the tide as well as making it more accessible to those with mobility issues;

3. **Improvements to the winter alternative route at St Lawrence Caravan Park** – we are proposing to repair the steps and improve the signage which will make the path more effective mitigation and safer to access;
4. **Coastal margin** – there are several attractive areas within the margin which are already well used by local residents, visitors to the caravan parks, sailing and watersports clubs and to a lesser extent visitors from the wider district:
 - a) **Beach and stony foreshore running from St Lawrence Caravan Park to western St Lawrence;**
 - b) **Beach and stony foreshore running from The Wade to Marconi Sailing Club.**

Coastal margin includes excepted land (buildings, curtilage or garden).

All areas of saltmarsh and mudflats are considered unsuitable for public access and proposed for Section 25A restrictions. It is worth noting that while Section 25A exclusions are applied where the Coastal Margin is not suitable for access, rather than on nature conservation grounds, these exclusions are important in reducing the potential for adverse impacts on non-breeding waterbirds and other sensitive features in this section of the route. If in the future there is a proposal to remove or relax the Section 25A exclusions, then an appraisal of the effects of those changes on sensitive features would be essential.

Access to a number of watersports and sailing clubs is restricted on land management grounds.

5. **Remove obstructions** –removing a number of unauthorized obstructions on the Public Right of Way will make the route more accessible to users with mobility issues.

5.7.4 Predicted change in use of site for recreation

Trail –small increase in use

The project team consider that there will be a small increase in the use of the path along this sub-section.

As St Lawrence is one of the accessible sections of coast with public transport links, and with a pub and accessible foreshore plus raised profile by becoming a National Trail the path is likely to attract a small increase in visitors but the lack of visitor facilities, in particular public toilets will clearly limit its appeal as a destination to dwell. We do not believe local people are likely to use the path more frequently nor is a new link in the path network being established.

Margin –possible increase in use

The accessible beach and foreshore east and west of The Stone are already very well accessed by local people, residents from the caravan parks plus water sports enthusiasts. Dwell times for the general public are limited by lack of public toilets.

Our access proposals are unlikely to have a noticeable impact on visitor numbers to the small beach adjacent to the residential caravan parks.

The foreshore east and west of The Stone is already a busy area and is popular with locals and watersport enthusiasts; the possible small increase in the usage of the Trail along this sub-section could see a possible increase in use of the foreshore however this impact is considered to be small compared to existing levels

of use.

5.7.5 Possible risks to sensitive features

Overwintering dark-bellied brent goose (disturbance in/near feeding & roosting areas; loss of feeding areas): Panter & Liley (2016) noted suitable HLS agreements at Ramsey Marsh on the west of this subsection. No known areas for large congregations though low numbers are regularly seen off the stony foreshore west of The Stone, an already busy area with locals and watersport enthusiasts alike.

Overwintering and passage waterbirds (disturbance in/near feeding & roosting areas; loss of feeding areas): found along length though Panter & Liley (2016) noted just 1 major high tide roost on this subsection in front of St Lawrence Caravan Park. This roost is ecologically coupled with a roost on saltmarsh in front of Highfield, west of St Lawrence with the Highfield area acting as a refuge for the more disturbed St Lawrence area. If disturbance were to occur simultaneously on both roosts then there is a risk that the integrity of the roosts may be affected – however, negligible change in use of Trail and margin is expected at Highfield (see subsection 5.6.4).

With regard to the above feature and feature group: England Coast Path usage is expected busiest in those months with better weather whilst the large majority of non-breeding waterbird species are most abundant in months less attractive to walkers, in particular during the core winter period of November to March. In addition, England Coast Path proposals: do not take people closer to either coastal or terrestrial feeding areas nor closer to potential roosts than the already existing PROW; do not change existing sightlines; do not remove buffers between route and feeding areas nor propose access to significant areas of new land landward or seaward of the Trail.

In addition, improvements to the existing winter diversion at St Lawrence Caravan Park will make this more effective and help protect the integrity of feeding and roosting areas – as will our proposal to follow the more inland walked line at Waterside Caravan Park (rather than follow the relic sea wall closer to the saltmarsh and mudflats). See Map J

Our proposal to follow the inland route of Seaway and Main Road will potentially reduce the numbers of people walking the foreshore Public Right of Way, further reducing risk of disturbance.

Non-breeding hen harrier (disturbance to their roost sites; new access to favoured and previously inaccessible hunting areas; reduction in their prey): there are no known roosts along this length, nor are we proposing access to any new areas that don't have an existing level of use.

Intertidal mudflats and sandflats (trampling): St Lawrence Bay mudflats to the east are a huge expanse extending up to 1km from the shoreline tapering west until The Stone, meaning there is a low percentage of mudflat within 60m of the shoreline. West of The Stone the mudflats are narrower meaning a higher percentage is within 60m of the shoreline.

Saltmarsh (trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime): this subsection includes a small but important area of saltmarsh seaward of the two caravan parks in St Lawrence. There are also smaller areas west of the Stone which tend to be higher saltmarsh scrub dominated by shrubby sea blite, including a good stand at Horseshoe Bay.

With regard to the above feature groups: proposals do not take people closer to these than the already existing PROW; the inland route proposed between Seaway and west of Stone Sailing Club potentially reduces trampling pressure on areas of mudflat; saltmarsh and mudflats are unattractive to walkers and proposed for a Section 25A Restriction throughout this subsection. There are no proposed surfacing works and the walking surface is currently well maintained.

***Cakile maritima-Honkenya peploides* strandline community (trampling):** there is a sizeable area of accessible foreshore and/or beach lying both east and west of The Stone, St Lawrence where we believe there may be a possible increase in use. However, there are clear points of access (steps and slipways) from the proposed route to these areas so we do not envisage new access routes being used/established and so we do not envisage new trampling of this feature.

Vascular plant assemblage / rare plant species (trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime): There are no proposed surfacing works and the walking surface is currently well maintained. Although a few species, such as shrubby sea-blite occur on the seaward face of the sea wall and will not be restricted we: do not envisage proposals increasing existing levels of access to these areas; nor are there any existing barriers or detractors being proposed to be removed.

5.7.6 Any mitigation measures included in the access proposal and how they address the possible risks

We are proposing improved infrastructure on the alternative winter route adjacent to the caravan parks which will encourage people to use this as will the proposed improved interpretation & signage highlighting the wildlife value and sensitives of the immediate surrounds.

5.7.7 Conclusion

We have fully considered ecological sensitivities in this area alongside the current and predicted access levels. It is expected that the predicted absence of a significant increase in use coupled with choice of route alignment, existing and proposed visitor management measures and the s25A CROW direction on public access, delivers all necessary mitigation.

5.8 Stansgate to Steeple Hall Farm

5.8.1 Environmental sensitivity

The sensitive features / feature groups listed below occur in this subsection, along with the time when they may be present and their sensitivities. The nature of the possible interaction with these features is examined in detail in section 5.8.5

3.1 Overwintering dark-bellied brent goose

Occurring October to April. Sensitivities: more frequent interruptions to feeding both on the coast and on terrestrial land; more frequent displacement from places where birds congregate at high tide; loss/erosion of feeding areas.

3.2 Non-breeding hen harrier.

Occurring August to March. Sensitivities: more frequent disturbance to their roost sites; new public access to favoured and previously inaccessible hunting areas; a reduction in their prey (passerines, small mammals and waders).

3.3 Overwintering and passage waterbirds

Occurring August to April with sensitivity heightened in core winter period November to March. Sensitivities: more frequent interruptions to feeding both on the coast and on terrestrial land; more frequent displacement from places where birds congregate at high tide; loss/erosion of feeding areas.

3.9 Intertidal mudflats and sandflats

Sensitivities: trampling.

3.11 Saltmarsh

Sensitivities: trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime.

3.15 Vascular plant assemblage / rare plant species

Sensitivities: trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime.

5.8.2 Current access provisions and use of site for recreation

Good existing access

Overall access is good although this is a little walked sub-section of the stretch having no public facilities, attractions, or parking for the public. Where the proposed trail follows existing Public Rights of way these are in good condition, well signed and clear to follow.

It is possible to walk this between start and finish points of this subsection on existing Public Footpaths but on a more inland alignment south of Stansgate along a private road, Stansgate Road. The majority of users are part of organised walking groups or occasional local dog walkers.

Steeple village with a population of circa. 500 lies over 1km to the south of the route offers public transport links as well as 2 pubs. Inland Public Footpaths allow for a loop to the village of Steeple using a section of the Recreational Route St Peters Way though this is not believed to be a well-used route. With the exception of the few properties at Stansgate this is a remote part of the coast/countryside with a low density of properties within 500m of the shoreline.

The subsection starts at Marconi Sailing Club, a 'members only' club, gated at the end of a Private Road which hosts occasional open days and has on-site camping for limited periods in the summer. Their slipway is busy with vehicles launching and recovering boats.

The proposed route passes Steeple Bay Caravan Park. Here the sea wall path, picnic benches, two slipways and small beaches are well used by holiday makers (open March to October), but from talking with the owners and looking at conditions on the ground, people do not regularly venture far from the site and with dog owners using well-worn paths across the fields east of the site. The Caravan Park slipways are well-used by powered boats and jet skis which access to Mayland Creek, Lawling Creek and the main River Blackwater.

Wildfowling takes place inland near Steeple Creek adjacent to the existing PROW.

The sub-section finishes where the Recreational footpath, St Peters Way joins the sea wall on the east side of Mayland Creek before running south.

Burnham Tourist Information Centre and the local District Council are working to promote tourism in the district including their 'Saltmarsh Coast' Trail which follows part of the proposed route.

5.8.3 Access proposal

The following improvements are proposed along this sub-section:

1. **Improved signage**— we are proposing a number of waymarkers along the sub-section. These will help guide walkers and build their confidence in terms of exploring the Trail further;

2. **Approx. 1.3km new access south of Stansgate** - We are proposing a more coastal route south of Stansgate properties following the sea wall and/or associated folding. Although there are various fences and gates blocking access, from site visits it is clear this route has a level of trespass to establish a visible walked line on the sea wall crest.
3. **Coastal margin**– the following are within the margin:
 - a) **Stony foreshore at Stansgate** – this is walked at low tide by a small number of people looking to progress around the coast, as well as accessed by visitors to the Marconi Sailing Club. Signage erected by residents states “Private garden - Please use the beach or Stansgate Road if you wish to walk further”. This whole area is inaccessible at high tide.
 - b) **Small beaches at Steeple Bay Caravan Park** – these beaches are well-used by the residents of the caravan park.

There are areas of excepted land (e.g. buildings, curtilage or garden).

Land at Marconi Sailing Club will have restricted access on land management grounds.

All areas of saltmarsh and mudflats are considered unsuitable for public access and proposed for Section 25A restrictions. It is worth noting that while Section 25A exclusions are applied where the Coastal Margin is not suitable for access, rather than on nature conservation grounds, these exclusions are important in reducing the potential for adverse impacts on non-breeding waterbirds and other sensitive features in this section of the route. If in the future there is a proposal to remove or relax the Section 25A exclusions, then an appraisal of the effects of those changes on sensitive features would be essential.

5.8.4 Predicted change in use of site for recreation

Trail –small increase in use

The project team consider that there will be a small increase in the use of the path along this sub-section. This is largely due to a new route being established plus improved signage and raised profile by becoming a National Trail. However, we do not believe local people are likely to use the path more frequently and there are no visitor facilities or attractions on this remote sub-section of the coast

Margin –negligible change

The small increase in the usage of the Trail along this sub-section, could mean a possible increase in use of the margin – however the foreshore at Stansgate is already accessed by people and the beaches at Steeple Bay caravan park are heavily used when the park is open between March and October – the same period we envisage the majority of England Coast Path users. Our access proposals are therefore likely to have a negligible change to visitor numbers to these areas.

A large area of saltmarsh and mudflat is considered unsuitable for public access and proposed for Section 25A restrictions.

5.8.5 Possible adverse impacts to sensitive features

Overwintering dark-bellied brent goose (disturbance in/near feeding & roosting areas; loss of feeding areas): Panter & Liley (2016) mapped large areas along this sub-section under of suitable wet grassland HLS options and the arable between these areas has a Kill by Shooting Licence suggesting this area is potentially important for brent geese. The fields east of Steeple Bay Holiday Park are known to hold large congregations.

Overwintering and passage waterbirds (disturbance in/near feeding & roosting areas; loss of feeding

areas): found along length though Panter & Liley (2016) noted one major high tide roost on this sub-section on Steeple Creek. Steeple Creek and Mayland Creek are both narrow sheltered creeks whose soft mud provides important feeding areas.

We are not proposing new access to significant areas landward or seaward of the Trail.

With regard to the above feature and feature group: England Coast Path usage is expected busiest in those months with better weather whilst the large majority of non-breeding waterbird species are most abundant in months less attractive to walkers, in particular during the core winter period of November to March.

Proposals westwards from the head of Steeple Creek: do not take people closer to either coastal or terrestrial feeding areas than the already existing public footpaths, walked lines or currently accessed areas; do not change existing sightlines; and do not remove buffers between route and feeding areas. The availability of extensive areas of farmland to south reduces the risk that brent geese or other waterbirds feeding in fields next to the seawall will be seriously affected by localised disturbance from the path.

However, circa 1.3km of new access proposed south of Stansgate on Steeple Creek takes people closer to both coastal feeding areas and known roosts than the existing public footpath; changes existing sightlines; and removes the buffer between existing routes, feeding/roosting areas and functionally linked land (albeit there is already sufficient unauthorised access along the sea wall crest to form clear walked lines). **See Map K.**

Of the total length, approximately 450 metres is proposed along the sea wall crest with approximately 850 metres along the landward folding (highlighted in yellow on map).

Where proposals run through land with livestock, walkers will be reminded to keep dogs under effective control. Where proposals come off the crest of the sea wall and run along the folding due to sections of collapsing sea wall, advisory signage will highlight this danger.

Feeding areas, roosts and functionally linked land potentially affected are:

- a) Intertidal mud on Steeple Creek – mudflats adjacent to the section of proposed new access are extensive and coupled with the majority of the Trail length running along the landward folding and with only a small increase in use, it is envisaged impacts will be minimal.
- b) Saltmarsh on Steeple Creek – the roost on this saltmarsh is on western side of Steeple Creek (shown as green diamond on map), whilst the new access is proposed for the eastern side – a minimum of 170m away. With this geographic separation when coupled with a small increase in use, and the Trail running along the folding behind the sea wall it is envisaged impacts will be minimal. Distances to the roost from new access proposed on the sea wall crest are a minimum of 400 metres.
- c) Grazing marsh east of Steeple Creek – a borrowdyke separates the proposed section of new access from this grazing marsh; in other parts of the Essex coast brent geese often show less response to walkers on an adjacent seawall when separated from them by a borrowdyke. However, this may not be true for some other farmland feeding waterbirds.

Non-breeding hen harrier (disturbance to their roost sites; new access to favoured and previously inaccessible hunting areas; reduction in their prey): there are no known roosts along this length, but we are proposing access following a length (approx. 1.3 km) of sea wall adjacent to coastal grazing marsh. As we are not dissecting the site, it is envisaged impacts will be minimal.

Further to these areas:

Intertidal mudflats and sandflats (trampling): mudflats on the main Blackwater Channel are quite extensive extending up to 0.5km for the shoreline, meaning there is a low percentage of mudflats within 60m of the shoreline. However, as Mayland Creek is narrow a high percentage is within 60m of the

shoreline and the proposed route (which follows existing public footpaths).

Saltmarsh (trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime): this subsection includes one large section of saltmarsh at Steeple Creek, a significant portion of which is currently heavily grazed. There are also smaller areas around Steeple Bay Holiday Park and narrow strips along Mayland Creek shoreline.

With regard to the above feature groups: saltmarsh and mudflats are unattractive to walkers and proposed for a Section 25A Restriction throughout this subsection. There are no proposed surfacing works and the walking surface is currently well maintained.

Vascular plant assemblage / rare plant species (trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime): There are no proposed surfacing works and the walking surface is currently well maintained. A new length of sea wall will be cut by the access authority south of Stansgate, though sea wall vegetation is currently cut/ managed to maintain its flood defence function. Although a few species, such as shrubby sea-blite occur on the seaward face of the sea wall and will not be restricted we: do not envisage proposals increasing existing levels of access to these areas; nor are there any existing barriers or detractors being proposed to be removed.

5.8.6 Any mitigation measures included in the access proposal and how they address the possible risks

None specifically for nature conservation reasons.

5.8.7 Conclusion

We have fully considered ecological sensitivities in this area alongside the current and predicted access levels. It is expected that the predicted absence of a significant increase in use coupled with the s25A CROW direction on public access, delivers all necessary mitigation.

5.9 Steeple Hall Farm to the head of Mundon Creek

5.9.1 Environmental sensitivity

The sensitive features / feature groups listed below occur in this subsection, along with the time when they may be present and their sensitivities. The nature of the possible interaction with these features is examined in detail in section 5.9.5

3.1 Overwintering dark-bellied brent goose

Occurring October to April. Sensitivities: more frequent interruptions to feeding both on the coast and on terrestrial land; more frequent displacement from places where birds congregate at high tide; loss/erosion of feeding areas.

3.2 Non-breeding hen harrier.

Occurring August to March. Sensitivities: more frequent disturbance to their roost sites; new public access to favoured and previously inaccessible hunting areas; a reduction in their prey (passerines, small mammals and waders).

3.3 Overwintering and passage waterbirds

Occurring August to April with sensitivity heightened in core winter period November to March.

Sensitivities: more frequent interruptions to feeding both on the coast and on terrestrial land; more frequent displacement from places where birds congregate at high tide; loss/erosion of feeding areas.

3.9 Intertidal mudflats and sandflats

Sensitivities: trampling.

3.11 Saltmarsh

Sensitivities: trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime.

3.15 Vascular plant assemblage / rare plant species

Sensitivities: trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime.

5.9.2 Current access provisions and use of site for recreation

Good existing access with high recreational use in the vicinity of Maylandsea waterfront. The proposed Trail follows the route of existing Public Footpaths or walked lines throughout, the majority of which are in good condition and well signposted.

The sub-section starts where the Recreational Route St Peters Way joins the sea wall near Steeple Hall Farm and runs south to the head of Mayland Creek. It then follows the Public Footpath and existing walked lines around Nipsells peninsula to Maylandsea. On the eastern side of the peninsula one length of PROW is currently overgrown with scrub (due to be cleared) and people walk on the adjacent saltmarsh. On the western side of the peninsula a length of PROW is now on the foreshore (due to coastal erosion) and people walk on the grassy headland. The route re-joins St Peters Way at Maylandsea Waterfront forming a popular loop with local people and dog walkers. St Peters Way heads west from Maylandsea, with existing levels of access decreasing accordingly. This subsection ends where St Peters Way leaves the sea wall at the head of Mundon Creek.

Mayland and Maylandsea have a population circa 3,800. Maylandsea has numerous pedestrian access points as well as two sailing clubs and a commercial marina providing infrastructure to access the water, as well as a high density of properties within 500m of the shoreline. Although the village offers public transport links, on street parking, two public houses/restaurants and a parade of shops the lack of public toilets does limit its visitor appeal. The majority of users are local people and dog walkers, with occasional organised walking groups and unauthorised cyclists.

Burnham Tourist Information Centre and the local District Council are working to promote tourism in the district including their 'Saltmarsh Coast' Trail which follows the majority of the proposed route.

5.9.3 Access proposal

The following improvements are proposed along this sub-section:

- 1. Improved signage**– we are proposing a number of waymarkers along the sub-section. These will help guide walkers and build their confidence in terms of exploring the Trail further;
- 2. Following existing walked line at Nipsells peninsula** – as a result of coastal erosion on the north-west of Nipsells peninsula the Public Right of Way now runs along the foreshore, is covered at high tide and is not a safe or suitable walking surface. Using the existing walked lines along the meadow will allow continuity at all states of the tide as well as making it more accessible to those with mobility issues; and

3. **Coastal margin**– the following are proposed as spreading room:
- a) **Stony foreshore at Maylandsea** – these areas have low level existing use
 - b) **Registered Common at Maylandsea** – existing open access rights will be replaced by coastal access rights.

The coastal margin contains excepted land (e.g. buildings, curtilage or garden).

All areas of saltmarsh and mudflats are considered unsuitable for public access and proposed for Section 25A restrictions. It is worth noting that while Section 25A exclusions are applied where the Coastal Margin is not suitable for access, rather than on nature conservation grounds, these exclusions are important in reducing the potential for adverse impacts on non-breeding waterbirds and other sensitive features in this section of the route. If in the future there is a proposal to remove or relax the Section 25A exclusions, then an appraisal of the effects of those changes on sensitive features would be essential.

5.9.4 Predicted change in use of site for recreation

Trail –small increase in use

The project team consider that there will be a small increase in the use of the path along this sub-section.

As Maylandsea is one of the locations to access this section of coast with public transport links as well as a public car park, and there are some visitor facilities plus raised profile by becoming a National Trail the path is likely to attract a small increase in visitors. However the lack of a main visitor attraction and in particular the lack of public toilets will clearly limit its appeal. We do not believe local people are likely to use the path more frequently nor is a new link in the path network being established.

Margin – negligible change in use

Although we envisage a small increase in use of the Trail, we consider there will be negligible change in the use of spreading room (limited areas of Maylandsea foreshore) as these are already accessible, no barriers are being removed and as a muddy stony foreshore, it is not a major attractor.

5.9.5 Possible adverse impacts to sensitive features

Overwintering dark-bellied brent goose (disturbance in/near feeding & roosting areas; loss of feeding areas): Nipsells Peninsula is a known area for large congregations and Countryside Stewardship funded fencing to separate existing walkers and their dogs from brents in these fields is due before December 2017. Should in the future this fence be lost for any reasons a Section 26 nature conservation restriction for dogs on leads would be considered.

Overwintering and passage waterbirds (disturbance in/near feeding & roosting areas; loss of feeding areas): found along this length though Panter & Liley (2016) noted no key high tide roosts on this sub-section. Mayland Creek and Mundon Creek are narrow sheltered creeks whose soft mud provides important feeding areas.

With regard to the above feature and feature group: England Coast Path usage is expected busiest in those months with better weather whilst the large majority of non-breeding waterbird species are most abundant in months less attractive to walkers, in particular during the core winter period of November to March. In addition, England Coast Path proposals: do not take people closer to either coastal or terrestrial feeding areas nor closer to potential roosts than the already existing PROW; do not change existing sightlines; do not remove buffers between route and feeding areas nor propose access to significant areas of new land landward or seaward of the Trail.

Non-breeding hen harrier (disturbance to their roost sites; new access to favoured and previously inaccessible hunting areas; reduction in their prey): there are no known roosts along this length, nor are we proposing access to any new areas that don't have an existing level of use.

Intertidal mudflats and sandflats (trampling): Mayland Creek, Lawling Creek and Mundon Creek are relatively narrow meaning a high percentage of mudflat is within 60m of the shoreline and the proposed route which follows the existing and already well used PROW and walked lines. The improvements to the path proposed for the western side of Nipsells peninsula will potentially reduce existing effects on the foreshore.

Saltmarsh (trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime): this subsection includes narrow strips along Mayland Creek shoreline as well as a sizeable extent on the eastern shore of Nipsells peninsula.

With regard to the above feature groups: proposals do not take people closer to these than the already existing public footpaths; saltmarsh and mudflats are unattractive to walkers and proposed for a Section 25A restriction throughout this subsection. There are no proposed surfacing works and the majority of the walking surface is currently well maintained – the length proposed for scrub clearance will not affect the features but will result in reduced trampling pressure on the saltmarsh.

Vascular plant assemblage / rare plant species (trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime): There are no proposed surfacing works and the walking surface is generally currently well maintained (the length proposed for scrub clearance will not affect the features). Although a few species, such as shrubby sea-blite occur on the seaward face of the sea wall and will not be restricted we: do not envisage proposals increasing existing levels of access to these areas; nor are there any existing barriers or detractors being proposed to be removed; nor are there any attractors seaward of the proposed path.

5.9.6 Any mitigation measures included in the access proposal and how they address the possible risks

None specifically for nature conservation reasons.

Should for any reason the fence around the northern end of Nipsells peninsula be lost in the future, a Section 26 nature conservation restriction for dogs on leads would be considered.

5.9.7 Conclusion

We have fully considered ecological sensitivities in this area alongside the current and predicted access levels. It is expected that the predicted absence of a significant increase in use coupled with the s25A CROW direction on public access, delivers all necessary mitigation.

5.10 Mundon Creek to White House Farm

5.10.1 Environmental sensitivity

The sensitive features / feature groups listed below occur in this subsection, along with the time when they may be present and their sensitivities. The nature of the possible interaction with these features is examined in detail in section 5.10.5

3.1 Overwintering dark-bellied brent goose

Occurring October to April. Sensitivities: more frequent interruptions to feeding both on the coast and on terrestrial land; more frequent displacement from places where birds congregate at high tide; loss/erosion of feeding areas.

3.2 Non-breeding hen harrier.

Occurring August to March. Sensitivities: more frequent disturbance to their roost sites; new public access to favoured and previously inaccessible hunting areas; a reduction in their prey (passerines, small mammals and waders).

3.3 Overwintering and passage waterbirds

Occurring August to April with sensitivity heightened in core winter period November to March. Sensitivities: more frequent interruptions to feeding both on the coast and on terrestrial land; more frequent displacement from places where birds congregate at high tide; loss/erosion of feeding areas.

3.9 Intertidal mudflats and sandflats

Sensitivities: trampling.

3.11 Saltmarsh

Sensitivities: trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime.

3.15 Vascular plant assemblage / rare plant species

Sensitivities: trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime.

5.10.2 Current access provisions and use of site for recreation

Good existing access. Running along the crest of a grassy sea wall throughout this subsection follows existing Public Rights of Way, which are in good condition, well signposted and clear to follow. This subsection starts at the junction of the Recreational Route St Peters Way at the head of Mundon Creek and runs north and west along Public Rights of Way as far as the disused White House Farm canal.

This is a remote part of the coast/ countryside with a low density of properties within 500m of the shoreline. With a sparse path network and with no public car parks, amenities or visitor attractions nearby existing access levels are low. The majority of users are part of organised walking groups and occasional birdwatchers.

There are 2 private slipways/jetties providing access to the water though both pleasure and to much a lesser extent commercial craft are active in the river. There is a level of unauthorised access by boat users onto Mundon Stone Point.

There is wildfowling over areas of the coastal margin.

5.10.3 Access proposal

The only improvements we propose for this sub-section are to add the England Coast Path logo to existing waymarkers. These will help guide walkers and build their confidence in terms of exploring the Trail further on this relatively remote section of the coast.

Areas of saltmarsh and mudflats are considered unsuitable for public access and proposed for Section 25A

restrictions. It is worth noting that while Section 25A exclusions are applied where the Coastal Margin is not suitable for access, rather than on nature conservation grounds, these exclusions are important in reducing the potential for adverse impacts on non-breeding waterbirds and other sensitive features in this section of the route. If in the future there is a proposal to remove or relax the Section 25A exclusions, then an appraisal of the effects of those changes on sensitive features would be essential.

5.10.4 Predicted change in use of site for recreation

Trail – Negligible change in use

The project team consider that there will be a negligible change in the use of the path along this subsection.

Although the profile of the route will be raised by becoming a National Trail there: won't be a new path created nor will a new link in the path network be established; the existing path is not proposed to be substantially upgraded; and there are no visitor facilities available; nor do we believe that people living nearby will use it more; nor do we believe it will attract more than a few more walkers from further afield.

Margin – negligible change as we consider: there will be negligible change in use in the Trail: there are no attractors in the margin; and we are not removing any barriers to access.

5.10.5 Possible adverse impacts to sensitive features

Overwintering dark-bellied brent goose (disturbance in/near feeding & roosting areas; loss of feeding areas): Land owners at Brickhouse Farm and Iltney Farm both report high numbers of brents using their fields in winter. Within the Blackwater Estuary this eastern end is noted as particularly important for brent geese.

Overwintering and passage waterbirds (disturbance in/near feeding & roosting areas; loss of feeding areas): found along length though Panter & Liley (2016) noted a key high tide roost at Coopers Creek.

With regard to the above feature and feature group: England Coast Path usage is expected busiest in those months with better weather whilst the large majority of non-breeding waterbird species are most abundant in months less attractive to walkers, in particular during the core winter period of November to March. In addition, England Coast Path proposals: do not take people closer to either coastal or terrestrial feeding areas nor closer to potential roosts than the already existing public footpaths; do not change existing sightlines; do not remove buffers between route and feeding areas nor propose access to significant areas of new land landward or seaward of the Trail. The availability of extensive areas of flat arable farmland to south and west reduces the risk that brent geese or other waterbirds feeding in fields next to the seawall will be seriously affected by localised disturbance from the path.

Non-breeding hen harrier (disturbance to their roost sites; new access to favoured and previously inaccessible hunting areas; reduction in their prey): there are no known roosts along this length, nor are we proposing access to any new areas that don't have an existing level of use.

Intertidal mudflats and sandflats (trampling): Lawling Creek, Mundon Creek and Southey Creek are relatively narrow meaning a high percentage of mudflat is within 60m of the shoreline and the proposed route which follows the existing public footpaths and walked lines. Mudflats by Coopers Creek are further from the proposed route apart from pinch points at the eastern and western extents where proximity results in a higher potential for disturbance.

Saltmarsh (trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime): this subsection includes sizeable extents on the northern shore of Lawling Creek and around Coopers Creek as well as narrower strips on Southey Creek.

With regard to the above feature groups: proposals do not take people closer to these than the already existing PROW; saltmarsh and mudflats are unattractive to walkers and proposed for a Section 25A restriction throughout this subsection. There are no proposed surfacing works and the walking surface is currently well maintained.

Vascular plant assemblage / rare plant species (trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime): There are no proposed surfacing works and the walking surface is currently well maintained. Although a few species, such as shrubby sea-blite occur on the seaward face of the sea wall and will not be restricted we do not envisage proposals increasing existing levels of access to these areas; nor are there any existing barriers or detractors being proposed to be removed; nor are there any attractors seaward of the proposed path.

5.10.6 Any mitigation measures included in the access proposal and how they address the possible risks

None specifically for nature conservation reasons.

5.10.7 Conclusion

We have fully considered ecological sensitivities in this area alongside the current and predicted access levels. It is expected that the predicted absence of a significant increase in use coupled with the s25A CROW direction on public access, delivers all necessary mitigation.

5.11 White House Farm Canal to Promenade Park, Maldon including Northey Island

5.11.1 Environmental sensitivity

The sensitive features / feature groups listed below occur in this subsection, along with the time when they may be present and their sensitivities. The nature of the possible interaction with these features is examined in detail in section 5.10.5

3.1 Overwintering dark-bellied brent goose

Occurring October to April. Sensitivities: more frequent interruptions to feeding both on the coast and on terrestrial land; more frequent displacement from places where birds congregate at high tide; loss/erosion of feeding areas.

3.2 Non-breeding hen harrier.

Occurring August to March. Sensitivities: more frequent disturbance to their roost sites; new public access to favoured and previously inaccessible hunting areas; a reduction in their prey (passerines, small mammals and waders).

3.3 Overwintering and passage waterbirds

Occurring August to April with sensitivity heightened in core winter period November to March.

Sensitivities: more frequent interruptions to feeding both on the coast and on terrestrial land; more frequent displacement from places where birds congregate at high tide; loss/erosion of feeding areas.

3.9 Intertidal mudflats and sandflats

Sensitivities: trampling.

3.11 Saltmarsh

Sensitivities: trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime.

3.15 Vascular plant assemblage / rare plant species

Sensitivities: trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime.

5.11.2 Current access provisions and use of site for recreation

Good existing access and heavy established recreational use nearer to Maldon.

The proposed Trail follows existing Public Rights of Way and walked lines throughout that are mostly in good condition and signposted.

This subsection starts near the disused White House Farm canal and runs north westwards on the grassy sea wall towards Maldon.

Just south of Maldon The National Trust own South House Farm, the site of the oldest recorded battlefield in Britain the AD991 Battle of Maldon and Northey Island which is accessible at low tide by vehicle and foot along a well-maintained causeway. This is a promoted National Trust destination site offering a permissive circular walk around the outer edge of the island's fields and a bird screen with views over to Heybridge Basin. Access to the island is by prior arrangement, with National Trust members visiting for free and non-members paying a small charge.

Northey House, gardens and outbuildings are let on a private lease and are not open to visitors.

A new housing development south of Maldon and with footpath links to the sea wall east of South House Farm means the coastal Public Footpath between Northey Island Causeway and Promenade Park is well used.

Maldon is the main town of the district with a population circa 14,500. Promenade Park, situated adjacent to Maldon's popular Hythe Quay and with excellent parking plus leisure facilities including play areas, splash park, sand pits, football and cricket pitches, attracts over 300,000 visitors per annum with peaks during public bank holidays and the summer period. Northey Island is signposted from within Promenade Park but signs are few and not located in the busier areas so both awareness of the route out of the park and the Island itself as an attraction could be missed.

Maldon is a popular place for maritime leisure throughout the year, with both leisure and commercial craft using the water.

Maldon Tourist Information Centre and the local District Council are working to increase tourism in the area by promoting a number of walks which start in Maldon and include the proposed England Coast Path route, and their 'Saltmarsh Coast' Trail.

5.11.3 Access proposal

The following improvements are proposed along this sub-section:

1. **Signage and interpretation** – we are proposing directional signage and information boards along the length of this sub-section. These will help guide walkers out of Promenade Park and build their confidence in terms of exploring the Trail and Coastal Margin further as well as raise awareness of the England Coast Path with the general public;
2. **Surface improvements** – surface improvements will be made to the length of path adjacent to the old landfill south of Promenade Park as this is often muddy, and people choose to walk on the adjacent saltmarsh which then gets damaged also;
3. **Following existing walked lines at the following locations:**
 - **Limbourne Creek** – the existing direct walked line follows the line of the sea wall and is more easily accessed than the Public Footpath loop so helping those with mobility issues;
 - **Promenade Park, Maldon** - the existing walked line is more easily accessed than the Public Footpath so helping those with mobility issues;
4. **Coastal margin** – Northey Island is accessible on foot via a causeway at low tide and so falls within the coastal margin. Our proposal includes signage to highlight the tidal nature of the island and its sensitive wildlife.

Additional interpretation and/or information boards in Promenade Park, Maldon are proposed as part of the coastal access establishment works for the adjacent Maldon to Salcott stretch of England Coast Path. Coastal margin includes excepted land (buildings, curtilage or garden and park).

All areas of saltmarsh and mudflats are considered unsuitable for public access and proposed for Section 25A restrictions. It is worth noting that while Section 25A exclusions are applied where the Coastal Margin is not suitable for access, rather than on nature conservation grounds, these exclusions are important in reducing the potential for adverse impacts on non-breeding waterbirds and other sensitive features in this section of the route. If in the future there is a proposal to remove or relax the Section 25A exclusions, then an appraisal of the effects of those changes on sensitive features would be essential.

5.11.4 Predicted change in use of site for recreation

Trail - Medium increase in use

The project team consider that there will be a medium increase in the use of the path along this sub-section.

Although a new link in the path network will not be established, local people are more likely to use the path as a result of raised awareness and establishment works; there are good existing visitor facilities; there are significant attractors in terms of both Northey Island and Promenade Park - as well as raised profile by becoming a National Trail – therefore the path is likely to attract more walkers from further afield.

However, this increase is likely to be concentrated on the length between Promenade Park and Northey Island causeway during the spring, summer and autumn with less of an increase in winter.

Margin – possible increase

With a predicted increase in visits to the Trail, and Northey island an attractor in the coastal margin, Northey Island could have a possible increase in access, concentrated in the spring, summer and autumn months.

5.11.5 Possible adverse impacts to sensitive features

Overwintering dark-bellied brent goose (disturbance in/near feeding & roosting areas or functionally linked land; loss of feeding areas): Within the Blackwater Estuary this eastern end is noted as particularly important for brent geese (Charlie Williams, Natural England Responsible Officer) and land either side of Southey Creek in particular. Chris Keeling, Natural England Responsible Officer, advises brent geese on Northey Island will take flight if disturbed by walkers as they do not appear to be as habituated to walkers as in other parts of the estuary. The island provides a refuge at high tide for Brent geese disturbed from mainland grazing sites with counts of over a thousand birds (WeBs high tide count data). Panter & Liley (2016) noted land under relevant HLS options throughout its length, including Northey Island and a cluster of Kill by Shooting Licences landward, again supporting this is an important area for brents.

Away from this shooting disturbance and with managed habitats and public access limited by tides, Northey Island is regarded as an important relatively disturbance free refuge for brent geese in the Blackwater Estuary. With the inclusion of Northey island in the coastal margin; improvements to signage and interpretation in the nearby busy Promenade Park; with surface improvements proposed for a length between Promenade Park and Northey Island; and with raised awareness of the England Coast Path the resulting increase in walkers to Northey, proposals have the potential to impact on brent geese feeding and roosting on Northey Island.

Overwintering and passage waterbirds (disturbance in/near feeding & roosting areas; loss of feeding areas): Panter & Liley (2016) mapped roost sites on the north eastern extent of Northey island's saltmarsh, over 700m from nearest proposed access.

England Coast Path usage is expected busiest in those months with better weather whilst the large majority of non-breeding waterbird species are most abundant in months less attractive to walkers, in particular during the core winter period of November to March. However, due to the proximity to Maldon and the honeypot attraction of Promenade Park and Northey island there is an existing higher level of usage of this section throughout the year when compared to other locations on the stretch.

England Coast Path proposals: do not take people closer to either coastal or terrestrial feeding areas nor closer to potential roosts than the already existing public or permissive footpaths and walked lines; do not change existing sightlines; do not remove buffers between route and feeding areas nor propose access to significant areas of new land landward of the Trail. The availability of extensive areas of flat arable farmland plus grazing marsh to the south and west reduces the risk that brent geese or other waterbirds feeding in fields next to the seawall will be seriously affected by localised disturbance from the path.

Non-breeding hen harrier (disturbance to their roost sites; new access to favoured and previously inaccessible hunting areas; reduction in their prey): there are no known roosts along this length, nor are we proposing access to any new areas that don't have an existing level of use.

Intertidal mudflats and sandflats (trampling): Southey Creek is relatively narrow meaning a high percentage of mudflat is within 60m of the shoreline and the proposed route which follows the existing PROW and walked lines.

Saltmarsh (trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime): this subsection includes relatively narrow strips on Southey Creek.

With regard to the above feature groups: proposals do not take people closer to these than the already existing PROW; saltmarsh and mudflats are unattractive to walkers and proposed for a Section 25A restriction throughout this subsection.

Proposed surfacing works south of Prom Park will help reduce trampling pressure on the adjacent saltmarsh.

Vascular plant assemblage / rare plant species (trampling; for species growing on the sea wall - surfacing works to improve the Trail or change in cutting/ management regime):

There are proposed surfacing works south of Prom Park. The remaining walking surface is currently well maintained. Although a few species, such as shrubby sea-blite occur on the seaward face of the sea wall and will not be restricted we: do not envisage proposals increasing existing levels of access to these areas; nor are there any existing barriers or detractors being proposed to be removed; nor are there any attractors seaward of the proposed path.

5.11.6 Any mitigation measures included in the access proposal and how they address the possible risks

A Section 26 restriction for overwintering brent geese is proposed for terrestrial land at Northey Island and Northey Causeway (October to April inclusive). This Section 26 restriction will also benefit overwintering and passage waterbirds.

5.11.7 Conclusion

We have fully considered ecological sensitivities in this area alongside the current and predicted access levels. We have concluded that the proposal to align the route along existing Public Rights of Way, have a seasonal s26 restriction at Northey Island (including the causeway) with a number of information boards and with the s25A CROW direction on public access delivers all necessary mitigation.

6 Establishing and maintaining the England Coast Path

In this part of the document we describe how the access proposal would be implemented and arrangements for ongoing management and maintenance once coastal access rights are in place.

Note that before the access proposal can be taken forward, the coastal access report must first be considered by the Secretary of State in light of any representations, any objections from affected owners or occupiers and the Appointed Person's recommendations as to how any objections should be determined.

6.1 Establishment

6.1.1 Works on the ground

Once approval for a coastal access report is received from the Secretary of State, any necessary works can be carried out on the ground to make the trail fit for use and prepare for opening. In this case, works on the ground would be carried out by Essex County Council.

An estimate of the total cost of works needed to establish the trail is given in our coastal access report for the stretch. The cost of establishment works will be met by Natural England. Essex County Council is responsible for ensuring they take appropriate steps to protect sensitive features whilst works on the ground are carried out, in line with any recommendations or conditions agreed in advance.

We have held preliminary discussions with Essex County Council about the works required and believe that it is feasible for them to be carried out without adverse effect on the designated sites considered in this appraisal providing that works affecting designated sites are informed and agreed in discussion with the relevant Natural England Responsible Officer (RO) as set out below.

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

The presence of legally protected species is an important consideration where works involve the destruction of existing physical features or the construction or maintenance of new or existing features where legally protected species are known or suspected to be present. Where legally protected species including breeding birds are known or suspected to be present all works should include appropriate mitigation in line with legislative guidelines

- European Protected Species are those species of plant and animal listed in Annex IV to EC Directive 92/43/EEC ('the Habitats Directive). For a complete list of European Protected Species in England & Wales refer to Schedules 2, 4 and 5 of the Conservation of Habitats & Species Regulations 2010.
- Wild birds are protected under the Wildlife and Countryside Act 1981, as amended, against intentional killing and injuring. This includes damage, destruction or taking of a nest, eggs or young while it

is in use or being built during the breeding season March to August inclusive. The timing of any works on habitats that may support birds, particularly those breeding, should take this into account.

- In addition to the protection afforded to all bird species; those listed on Schedule 1 of the Wildlife & Countryside Act 1981 receive additional protection against disturbance. This includes the intentional or reckless disturbance of birds and their young whilst they are at, on, or near an “active” nest.
- Plants and animals included on Schedules 5 & 8 of the Wildlife and Countryside Act 1981(as amended) are protected from killing and injuring and protection may also apply to their place of shelter.
- Badgers and their setts are protected under the Protection of Badgers Act 1992.
- Activities that affect these species may require a licence from Natural England’s licensing department and advice should be sought on any works that might affect them.

Timing of works	Works should be timed to prevent or reduce disturbance to wintering wildfowl and waders. Severe winter weather restrictions will apply to works likely to disturb wintering wildfowl and waders. Where works are likely to affect breeding birds the works should be timed to avoid the breeding season for the majority of species March to August inclusive.
Use of heavy machinery	Access routes for heavy machinery should be discussed and agreed with the RO to avoid damage to the site or interest features and legally protected species. Screening of machinery to prevent visual and noise disturbance to wintering wildfowl and waders should be considered necessary in discussion with the RO.
Presence of Protected Species	Where legally protected species are known or suspected to be present all works should include appropriate mitigation in line with legislative guidelines. Some species are afforded extra levels of protection and a licence may be required. Advice as to the presence of legally protected species should be sought from the RO.
Storage of plant and materials	Mitigation in preparation for the use of heavy machinery to prevent damage to sensitive site features.
Pollution prevention and control	Pollution prevention and control measures must be agreed with the RO and Environment Agency.
Biosecurity	Where necessary appropriate measures will be taken to prevent the transportation of invasive non-native species

6.1.2 Implementation of mitigation measures

The mitigation measures described in Part 5 of this document ([5.1.5](#) [5.2.5](#) etc) will be implemented as follows:

Measure	Implementation
A Section 26 Restriction for the ringed plover breeding season for the accessible cockle beach at Shell Bank.	Fixtures and posts for signage will be set in place with minimum disturbance using hand tools.
An information board at St Peters Chapel highlighting the wildlife value of the saltmarsh and reinforcing the message there is no public access across the saltings.	Fixtures and posts for signage will be set in place with minimum disturbance using hand tools.
Encourage Essex Wildlife Trust to maintain their information signage regarding no public access to their Bradwell Cockle Spit nature reserve.	Through good liaison with Natural England staff responsible for the Dengie NNR
An information board north of Sales Point highlighting the wildlife value of the immediate surrounds, including shrubby sea-blite and ringed plover.	Fixtures and posts for signage will be set in place with minimum disturbance using hand tools.
An alternative winter route for the sea wall PROW adjacent to St Lawrence Caravan Park for over-wintering waterbirds.	Fixtures and posts for signage will be set in place with minimum disturbance using hand tools. No construction during December to March and all works to be contained landward of the sea wall.
An information board at St Lawrence Caravan Park highlighting the wildlife value of the mudflats & saltmarsh and reinforcing the winter alternative route.	Fixtures and posts for signage will be set in place with minimum disturbance using hand tools.
A Section 26 Restriction for brent geese covering the terrestrial land at Northey Island and its Causeway	Fixtures and posts for signage will be set in place with minimum disturbance using hand tools.
An information board at Northey Island highlighting the wildlife value of the grassland, mudflats & saltmarsh and reinforcing the winter restriction	Fixtures and posts for signage will be set in place with minimum disturbance using hand tools.

6.1.3 Local restrictions or exclusions

Where specific restrictions or exclusions have been included in the proposal and are approved by the Secretary of State, Natural England will give the necessary directions before public rights come into force to make the rights subject to those restrictions or exclusions.

6.2 Maintenance

Where there is a need for ongoing maintenance of any special measures proposed, this will become part of longer term arrangements for upkeep of the trail. An overall estimate of the ongoing cost of maintaining stretches of the England Coast Path is given in the relevant part of our report for the stretch.

6.3 Monitoring

Monitoring of the protected site will continue through established programmes including our common standards monitoring protocols. Issues affecting achievement of conservation objectives for a site will usually be investigated through these arrangements. In the event that public access may be a contributing factor to any problems, coastal access provisions may need to be modified as part of the management response.

The access authority will be responsible for ongoing monitoring of trail condition. Natural England will be tracking general trends, including in the number of people using the path, as part of our evaluation of the coastal access programme nationally.

Prior to opening the new trail checks will be made that establishment works, including any special mitigation measures required at this stage, have been implemented. Once the England Coast Path is open, there will be regular ongoing monitoring of the condition of the trail and its associated infrastructure. Any reports of anti-social behaviour by trail users will usually be dealt with by a trail manager in the first instance.

A Visitor Counter has been in place along the proposed route between Promenade Park, Maldon and Northey Island causeway since June 2016.

6.4 Future changes

The access proposals in this document are designed to ensure appropriate protection of sensitive features, taking account of any mitigation measures that are included. The coast is a dynamic environment and in designing the access proposals we have taken account of any changes predicted by the Environment Agency as a result of coastal erosion or other geomorphological processes. Should it be necessary in the future to identify a new alignment for the trail in line with 'roll back' proposals in the stretch report, due care will be taken at that stage to minimise any potential impacts of this change on sensitive features. The same will be true if any unforeseen other changes arise in the future that may require us to propose a variation of the access arrangements described in these proposals, following due procedures.

7 Conclusions

7.1 Overall conclusion – Natura 2000/Ramsar site

This section presents conclusions on the effects of the Burnham-on-Crouch to Maldon stretch of the England Coast Path proposals on the interest features of the following Natura 2000 and Ramsar sites:

Essex Estuaries Special Area of Conservation (SAC);

Outer Thames Estuary Special Protection Area (SPA) and Proposed Extension Areas (pSPA)

Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) Ramsar site; Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) Special Protection Area (SPA);

Dengie (Mid-Essex Coast Phase 1) Ramsar site; Dengie (Mid-Essex Coast Phase 1) Special Protection Area (SPA);

Blackwater Estuary (Mid-Essex Coast Phase 4) Ramsar site and Blackwater Estuary (Mid-Essex Coast Phase 4) Special Protection Area (SPA).

7.1.1 Population level effects

From the information presented above in parts 3 to 5 of this appraisal document, Natural England concludes that, when considered alone, the proposal for this stretch of the England Coast Path is not likely to cause a significant adverse effect on any SPA, SAC or Ramsar site interest features. This conclusion takes account of the modifications made to our proposal to avoid or reduce the risk of effects as described in Part 5. However, the Conservation of Habitats and Species Regulations 2010 (as amended) also require an assessment of the effects of other ‘live’ plans or projects.

For each SPA, SAC or Ramsar site interest feature the table below gives our conclusion as to whether or not the proposal for this stretch of the England Coast Path could possibly cause an adverse effect. Where effects cannot be ruled out they are considered further as part of the in-combination assessment (7.1.2).

It is worth noting that (i) all the effects listed in the table are assessed as non-significant for the reasons given in Part 5; (ii) some of the effects are not addressed by specific mitigation measures in the proposal because they are judged too small to require that and too diffuse for specific measures to be effective. These are nevertheless considered in the in-combination assessment.

Feature - or feature group	Conclusion
Overwintering dark-bellied brent goose (see section 3.1)	The following non-significant effect associated with the access proposal needs to be further considered alongside possible non-significant effects from other live plans or projects: Possible small increase in disturbance to feeding or roosting brent goose between: <ul style="list-style-type: none"> • Stansgate to Steeple Hall Farm (route subsection 8) • White House Farm Canal to Promenade Park, Maldon including Northey Island (route subsection 11).

Non-breeding hen harrier (see section 3.2)	No possible adverse effects from the access proposal (taking into account any mitigation measures) have been identified.
Overwintering and passage waterbirds (see section 3.3)	The following non-significant effects associated with the access proposal needs to be further considered alongside possible non-significant effects from other live pans or projects: Possible small increase in disturbance to feeding or roosting birds between: Burnham Ferry and West Wick (route subsection 1) Sandbeach Outfall to Bradwell Power Station (route subsection 4) Highfield to Stansgate (route subsection 7) Stansgate to Steeple Hall Farm (route subsection 8) White House Farm Canal to Promenade Park, Maldon including Northey Island (route subsection 11).
Breeding birds of bare or sparsely vegetated sand, shingle or shell banks (see section 3.4)	The following non-significant effects associated with the access proposal needs to be further considered alongside possible non-significant effects from other live pans or projects: Possible small increase in disturbance to ringed plover breeding sites: Sandbeach Outfall to Bradwell Power Station (route subsection 4)
Breeding bearded tit (see section 3.5)	No possible adverse effects from the access proposal (taking into account any mitigation measures) have been identified.
Breeding pochard (see section 3.6)	No possible adverse effects from the access proposal (taking into account any mitigation measures) have been identified.
Estuaries (see section 3.7)	No possible adverse effects from the access proposal (taking into account any mitigation measures) have been identified.
Sandbanks which are slightly covered by sea water all the time (see section 3.8)	No possible adverse effects from the access proposal (taking into account any mitigation measures) have been identified.
Intertidal mudflats and sandflats (see section 3.9)	No possible adverse effects from the access proposal (taking into account any mitigation measures) have been identified.
Native oyster and native oyster beds (see section 3.10)	No possible adverse effects from the access proposal (taking into account any mitigation measures) have been identified.
Saltmarsh (see section 3.11)	No possible adverse effects from the access proposal (taking into account any mitigation measures) have been identified.
Vascular plant assemblage / rare plant species (see section 3.15)	The following non-significant effects associated with the access proposal needs to be further considered alongside possible non-significant effects from other live pans or projects:

	Stansgate to Steeple Hall Farm (route subsection 8)
Invertebrate assemblage / rare animal species (see section 3.16)	No possible adverse effects from the access proposal (taking into account any mitigation measures) have been identified.
Blue mussel beds (see section 3.17)	No possible adverse effects from the access proposal (taking into account any mitigation measures) have been identified.

7.1.2 In combination assessment

7.1.2a Other qualifying plans or projects in-scope for the in-combination assessment (at time of writing)

Competent Authority
Natural England
Plan or project
England Coast Path - Maldon to Salcott stretch (Blackwater Estuary) - published March 2017.
Description
The Coastal Access Report plus its Access and Sensitive Features Appraisal (ASFA) have been published for this stretch which runs up the north shore of the Blackwater Estuary. For the majority the trail proposals follow existing public footpaths along sea walls. Nearly all the saltmarsh and mudflats are considered unsuitable for access and proposed for long-term access exclusions. Mitigation against possible effects on sensitive features forms part of the proposals and includes seasonal access exclusions on two shingle spits to prevent disturbance to nesting birds. Only a small increase in use of the trail is predicted and no change in the existing levels of use of the margin. No possible adverse effects of the proposals on SPA, SAC or Ramsar features are identified in the ASFA.

Competent Authority
Natural England
Plan or project
England Coast Path - Mersea Island stretch (Blackwater Estuary, Colne Estuary) - published June 2017
Description
The Coastal Access Report plus its Access and Sensitive Features Appraisal (ASFA) have been published for this stretch which runs around the perimeter of Mersea Island. Its east side is adjacent to the Colne Estuary whilst its west side lies adjacent to the Blackwater Estuary. For the majority the trail proposals follow existing public footpaths and well-established walked lines. Nearly all the saltmarsh and mudflats are considered unsuitable for access and proposed for long-term access exclusions.

Over the large majority of this stretch only a small increase in use of the trail is predicted. Any changes in use of the coastal margin are predicted to be small, at most, and mainly limited to areas where access exclusions are inappropriate. Mitigation against possible effects on sensitive features forms part of the proposals and includes signage in several places advising visitors on how to avoid causing any damage. The ASFA identifies two residual non-significant effects on Natura 2000 features shared with the Burnham-on-Crouch to Maldon stretch: a possible small increase in disturbance to overwintering/passage waterbirds, and a possible small increase in trampling damage to saltmarsh vegetation. These are both assessed as well below 'likely significant effect' level.

Competent Authority
The Planning Inspectorate
Plan or project
FUL/MAL/16/00814 - residential development (four detached houses) at Blackwater Marina, The Esplanade, Mayland. REFUSED 12/09/2016 – APPEAL IN PROGRESS
Description
Development of four detached houses on a site which lies on the Blackwater Ramsar/SPA site boundary. It currently operates as a commercial marina which has a Public Footpath running through it (proposed route of the England Coast Path) and with leisure offers including a public bar. The addition of four houses in the context of a Mayland /Maylandsea population of circa 3,800 is negligible. Our advice to the planning authority on this proposal is that the very small increase in numbers of new residents is not likely to be significant (either alone or in-combination with other plans and projects), and that subject to seasonal timing constraints, any possible construction phase disturbance to notified bird species should not affect the SPA.

Competent Authority
The Planning Inspectorate
Plan or project
The Maldon Local Development Plan (LDP) 2014-2029 Stage at time of writing: not yet adopted but has been out for consultation (opening statements for the Examination in Public were heard on 10th January 2017)
Description
The Maldon LDP represents the general housing growth in the district within the Plan period; first proposed at 4,410 between 2014 and 2029, and later revised to 4,650 (equivalent to an additional 16 houses per year). Approximately 33% of the site allocation is in Maldon, 32% in Heybridge and 10% in Burnham-on-Crouch. Assuming a housing occupancy rate of 2.4, this represents a population growth of 26% in Maldon, 46% in Heybridge, and 14 % in Burnham-on-Crouch. Royal HaskoningDHK completed a 'Local Development Plan 2014-2029 Sustainability Appraisal Report incorporating Strategic Environmental Assessment and Habitats Regulations Assessment' in 2014. This lists possible impacts as a result of implementing the LDP that could lead to a potentially significant effect on the internationally designated sites. These included: <u>Physical damage</u> : siltation; changes in surface and groundwater flows, and removal/ smothering or damage to habitats

Disturbance: noise; visual; introduction of microbial pathogens ,and introduction of non-native species

Contamination: introduction of non-synthetic and or synthetic compounds; changes in nutrient or organic loading, and changes in turbidity.

Those designated sites deemed in scope included: Blackwater Estuary SPA, Colne Estuary SPA, Crouch & Roach SPA, Dengie SPA and Essex Estuaries SAC.

The majority of LDP policies were considered unlikely to have a significant effect on the integrity of the internationally designated sites and their interest features. However, due to population increase and development locations associated with housing growth in Policy S2 'Strategic Growth' and the location of the proposed garden suburbs in Policy S4 'Maldon and Heybridge' and their proximity to the Blackwater Estuary, further consideration of the potential for a likely significant effect was appropriate.

The majority of housing is proposed to the south of Maldon & north of Heybridge. Natural England identified the need to upgrade the existing sewerage network and Maldon DC amended the policy accordingly. It was proposed that by placing housing away from the international sites, and given the levels of disturbance already arising from the town, it was unlikely that additional properties would result in any significant additional disturbance to the SPA/ Ramsar site from day to day recreation (e.g. dog walking). In addition, the policy originally included provision for the creation of green infrastructure which will provide alternative recreation areas for members of the public, reducing visitor pressures on the international sites. Subsequent to the Local Plan, the proposed country park in the Heybridge area was not taken forward, however alternative green infrastructure was proposed to address the predicted impacts and reduce disturbance to acceptable levels. More detail can be found at:

https://www.maldon.gov.uk/info/20048/planning_policy/8110/evidence_base

Policy H7 'Agricultural and Essential Workers Accommodation' was identified as having the potential to have a likely significant effect on the international site, depending upon its implementation but as the predominantly estuarine nature of the international sites means they are not suitable for development and this development is intended to accommodate small numbers of people, therefore the associated noise and visual disturbance on the international sites would be minimal it was proposed that this policy was not likely to have a significant effect on these sites.

Policy N1 'Green Infrastructure Network' was identified as having the potential to have a likely significant effect on the international site, depending upon its implementation. Through the creation of a green infrastructure network across the district it was judged there was the potential that this policy could result in increased numbers of people along the estuaries, causing a visual and noise disturbance which may put pressure on bird species.

Natural England's 2013 consultation response highlighted the need for wording in Policy D2 'Climate Change' that would ensure the LDP minimises adverse impacts on ecology, landscape and green infrastructure.

In Policy E5 'Tourism', Maldon DC addressed comments from Natural England in relation to the growth of caravan parks along the coast which can result in adverse impacts upon designated sites through recreational disturbance. The policy was modified so that such developments require a project level HRA to be undertaken.

In-combination impacts were also considered looking at with:

- Chelmsford City Council – completed HRA of the Chelmsford Core Strategy updated in 2012. Flagged in-combination impacts could arise as a result of developments in SWF are on Crouch & Rach SPA and Essex Estuaries SAC;
- Colchester Borough Council – HRA of their Core Strategy. Identified Blackwater Estuary SPA and Essex

Estuaries SAC could be affected through non-physical and physical disturbance to sites through increases in housing and tourism facilities. However the MDC pre submission LDP contains wording and policies to prevent any significant impacts to the international sites, any in-combination impacts would be assessed at a project level and mitigation implemented to avoid any effects which may arise from development within the two districts;

- Braintree District Council's HRA concluded that the effects of a population increase through increased development in the adjoining authorities in combination with increase in population of Braintree District could result in a likely significant effect on the Blackwater Estuary SPA/Ramsar and Essex Estuaries SAC. However, the majority of these effects could be avoided and mitigated through policies in the Core Strategy and Development management DPD. It is considered that the policies within Maldon's LDP, which ensure the protection of the international sites from impacts arising from development, should ensure that in-combination effects with development within Braintree do not arise;
- Rochford District Council – the HRA of Core Strategy considered that the mitigation provided by the Core Strategy would be sufficient to avoid likely significant effects as a result of disturbance.

It was concluded that the policies in-combination with the above will not impact on the achievement of the sites conservation objectives and consequently will not result in a significant adverse effect on the integrity of the international sites.

Although a number of individual policies (S2, H7 and N1) were identified as potentially having a likely significant effect, it was determined that at the plan level, with the mitigation provided, there would be no damage or disturbance to the interest features of the international sites.

The overall conclusion was that it was considered that the Maldon LDP is not likely to have a significant effect on any interest features of the international sites detailed above, either alone or in-combination.

However, following Examination in Public and a revision in LDP policies, Royal HaskoningDHK completed a 'Local Development Plan Sustainability Appraisal Report Update following Inspector's Report' in September 2016, re-examining the possible impacts of the amendments that could lead to a potentially significant effect on the internationally designated sites:

S2 – amendment to dwelling provision (equivalent to an additional 16 houses per year) was considered small in relation to previous assessment so Sustainability Appraisal (SA) remains unchanged.

S4 - removal of the requirement to construct a new country park north of Heybridge constitutes a notable change although it is minimised through the focus of provision of access and greenspace between Maypole Road and Langford Road area north of Heybridge, which would also draw recreational (informal) activity to the north away from the designated sites. However, this is not predicted to lessen the avoidance of increased recreation at the designated site. Furthermore, the provision of the requirement for HRA screening as an element of any developments requirements should ensure that no direct or indirect impacts would arise through the relevant consultation process with Natural England on a specific development level.

H7 – no change to SA conclusion.

N1 – amended minor points for clarification which does not affect the impact scale or nature so no proposed change to SA conclusion.

Two Alternative sites and one Reserve site are notable for their proximity to the England Coast Path proposals:

Alternative site – S4 - land south of St Lawrence Drive – capacity to be in region of 150 dwellings (3%)

Alternative site – S6 – land west of Nipsells Chase – submission states up to 228 units (5%)

Reserve Site for development beyond the Plan period - Burnham-on-Crouch –200 dwellings & land north of Burnham.

The Sustainability Appraisal Report Update following Inspector’s Report concluded that the proposed modifications (2016) to policies in the Maldon LDP are not likely to have a significant effect on any interest feature of the international sites either alone or in-combination. Although a number of revised individual policies (S2 and S4) were identified as potentially having a likely significant effect, it was determined that at the plan level, with the mitigations already provided, there would be no damage or disturbance to the interest features of the international sites.

The above represents a factual record of the conclusions of the Local Plan HRA, and modified Plan. It should be noted that, at the time the HRA was consulted on with Natural England, the proposed approach to mitigating the effects of recreational disturbance emphasised the role of strategic green infrastructure to absorb recreational needs. More recently, evidence has suggested that the role of Green Infrastructure (GI) to achieve these ends is limited, given the draw of the coast to residents, and the limitations on GI to provide comparable visitor experience. Consequently, our advice to LPAs in mitigating the cumulative effects of recreational disturbance (and related) impacts has been to advise the need for a strategic solution across multiple LPA boundaries. Such a solution would, for example, use additional measures such as visitor wardens to engage users and promote appropriate behaviours. It would also deploy a range of additional local solutions, and thus form a package approach to mitigation including both on- and off-site measures.

The Maldon Local Plan has yet to be adopted, and may yet be brought into such a strategic solution with other Essex Local Authorities. This in-combination assessment has considered whether the Plan, as currently submitted for Examination, could act to cause a likely significant effect in-combination with the Burnham-on-Crouch to Maldon stretch of the ECP. The majority of this ECP stretch utilises existing Public Rights of Way and the majority of growth is located in the context of existing settlements, with a baseline of disturbance effects. In those limited areas where new or revised access is proposed, we do not believe that growth is of an order of magnitude to cause a likely significant effect in-combination with the ECP. Nevertheless it is appropriate to note that as a promoted trail the ECP can be expected to contribute a residual but non-significant increase in disturbance (and related) impacts in-combination with the Maldon Local Plan.

At the time of carrying out this appraisal, Natural England is not aware of any other qualifying plans or projects that need to be considered.

7.1.2 b Possible in combination effects

Non-significant effect – Burnham-on-Crouch to Maldon England Coast Path access proposal

Possible small increases in disturbance to SPA/Ramsar birds. Applies to:

Overwintering dark-bellied brent goose - Stansgate to Steeple Hall Farm (route subsection 8)

Overwintering and passage waterbirds - Burnham Ferry and West Wick (route subsection 1), Sandbeach Outfall to Bradwell Power Station (route subsection 4), Highfield to Stansgate (route subsection 7), Stansgate to Steeple Hall Farm (route subsection 8) and White House Farm Canal to Promenade Park,

Maldon including Northey Island (route subsection 11).

Breeding ringed plover - Sandbeach Outfall to Bradwell Power Station (route subsection 4).

Possible small increases in trampling damage to saltmarsh vegetation. Applies to:

Mediterranean saltmarsh scrub - Sandbeach Outfall to Bradwell Power Station (route subsection 4).

Non-significant effect – other plans or projects

Possible small increases in disturbance to SPA/Ramsar birds and possible small increases in trampling damage to saltmarsh vegetation:

- England Coast Path - Maldon to Salcott stretch
- England Coast Path - Mersea Island stretch
- The Maldon Local Development Plan (LDP) 2014-2029

In combination conclusion

We do not consider it likely that there will be a significant effect in combination for the following reasons:

1) England Coast Path - Maldon to Salcott stretch plus the Mersea Island stretch

As a promoted National Trail the England Coast Path can be expected to result in an increase in usage of existing coastal public rights of way which could lead to an associated increase in disturbance. However, from the information presented earlier parts of this appraisal document, this possible residual disturbance effects on this (Burnham-on-Crouch to Maldon) stretch, taking mitigation into account, are assessed as well below 'significant effect' level. The possible residual disturbance effects on the Maldon to Salcott stretch and the Mersea Island stretch, taking mitigation into account (in particular, a Recreational Avoidance and Mitigation Strategy is in preparation), are both also assessed as well below 'significant effect' level. Therefore, providing this mitigation is secured the likelihood of any significant in-combination effects is low.

In several respects the England Coast path is likely to make it easier for the existing and projected baseline population to access the coast sensitively –by providing a carefully aligned, well maintained and well waymarked walking route around the coast with interpretation panels at key locations raising awareness on sensitive wildlife and possible disturbance effects.

The developing National Trails Partnership will collate information on the route and provide ongoing liaison with the local authority, land owns and other key stakeholders.

In addition, the coastal access arrangements that we have proposed can, where necessary, be adjusted in the light of future unforeseen circumstances.

2) The Maldon Local Development Plan (LDP) 2014-2029

The provision of the requirement for HRA screening as an element of any developments requirements should ensure that no significant direct or indirect impacts would arise through the relevant consultation process with Natural England on a specific development level.

Whilst the population growth concentrated around Maldon and Heybridge (and to a lesser extent, Burnham-on-Crouch) is not insignificant the parts of the designated sites within walking distance of these allocations are not particularly sensitive to disturbance (with the exception of Northey Island which is proposed for a long-term access restriction at sensitive times of the year). In addition, relative to the size of the existing resident populations at these locations and in our view the predicted increase in usage of the areas – as a result of the England Coast Path – is not likely to be significant.

This in-combination assessment has considered whether the Plan, as currently submitted for Examination, could act to cause a likely significant effect in-combination with the Burnham-on-Crouch to Maldon stretch of the England Coast Path. The majority of this England Coast Path stretch utilises existing Public Rights of Way and the majority of growth is located in the context of existing settlements, with a baseline of disturbance effects. In those limited areas where new or revised access is proposed, we do not believe that growth is of an order of magnitude to cause a likely significant effect in-combination with the ECP. Nevertheless it is appropriate to note that as a promoted trail the ECP can be expected to contribute a residual but non-significant increase in disturbance (and related) impacts in-combination with the Maldon Local Plan.

In addition, the coastal access arrangements that we have proposed can, where necessary, be adjusted in the light of future unforeseen circumstances.

7.1.3 Overall screening decision

In the light of this appraisal, Natural England has reached this conclusion about the new access proposal: (Mark one box only with an X as appropriate)

Outer Thames Estuary SPA/ pSPA

No likely significant effect - as the new access proposal is unlikely to have a significant effect on the Outer Thames Estuary Special Protection Area and Proposed Extension Areas, either alone or in combination with other plans or projects, (taking into account any proposed mitigation measures) no further Habitats Regulations assessment is required;

OR

Likely significant effect - as the new access proposal is likely to have a significant effect on the Outer Thames Estuary Special Protection Area and Proposed Extension Areas, either alone or in combination with other plans or projects (despite any proposed mitigation measures), appropriate assessment is required to consider whether the new access proposal may proceed.

Crouch & Roach Estuaries SPA and Ramsar site

No likely significant effect - as the new access proposal is unlikely to have a significant effect on Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) Special Protection Area and Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) Ramsar site, either alone or in combination with other plans or projects, (taking into account any proposed mitigation measures) no further Habitats Regulations assessment is required;

OR

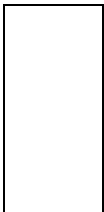
Likely significant effect - as the new access proposal is likely to have a significant effect on Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) Special Protection Area and Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) Ramsar site, either alone or in combination with other plans or projects (despite any proposed mitigation measures), appropriate assessment is required to consider whether the new access proposal may proceed.

Dengie SPA and Ramsar site



No likely significant effect - as the new access proposal is unlikely to have a significant effect on Dengie (Mid-Essex Coast Phase 1) Ramsar site and Dengie (Mid-Essex Coast Phase 1) Special Protection Area, either alone or in combination with other plans or projects, (taking into account any proposed mitigation measures) no further Habitats Regulations assessment is required;

OR



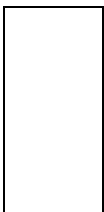
Likely significant effect - as the new access proposal is likely to have a significant effect on Dengie (Mid-Essex Coast Phase 1) Ramsar site and Dengie (Mid-Essex Coast Phase 1) Special Protection Area, either alone or in combination with other plans or projects (despite any proposed mitigation measures), appropriate assessment is required to consider whether the new access proposal may proceed.

Blackwater Estuary SPA and Ramsar site



No likely significant effect - as the new access proposal is unlikely to have a significant effect on Blackwater Estuary (Mid-Essex Coast Phase 4) Ramsar site and Blackwater Estuary (Mid-Essex Coast Phase 4) Special Protection Area, either alone or in combination with other plans or projects, (taking into account any proposed mitigation measures) no further Habitats Regulations assessment is required;

OR



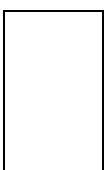
Likely significant effect - as the new access proposal is likely to have a significant effect on Blackwater Estuary (Mid-Essex Coast Phase 4) Ramsar site and Blackwater Estuary (Mid-Essex Coast Phase 4) Special Protection Area, either alone or in combination with other plans or projects (despite any proposed mitigation measures), appropriate assessment is required to consider whether the new access proposal may proceed.

Essex Estuaries SAC



No likely significant effect - as the new access proposal is unlikely to have a significant effect on Essex Estuaries Special Area of Conservation, either alone or in combination with other plans or projects, (taking into account any proposed mitigation measures) no further Habitats Regulations assessment is required;

OR



Likely significant effect - as the new access proposal is likely to have a significant effect on Essex Estuaries Special Area of Conservation, either alone or in combination with other plans or projects (despite any proposed mitigation measures), appropriate assessment is required to consider whether the new access proposal may proceed.

7.2 Overall conclusion - : Sites of Special Scientific Interest (SSSIs)

In the light of this appraisal, Natural England has concluded that the new access proposal:

(Mark one box only with an X below)

Crouch & Roach Estuaries SSSI

complies with Natural England's duty to further the conservation and enhancement of the notified features of the SSSI, consistent with the proper exercise of its functions¹ - and accordingly the new access proposal may proceed as finally specified in this template

OR

would not comply with the duty referred to in (a) – and accordingly permission/ authorisation/ assent should not be given for the new access proposal in the form finally specified in this template, for the following reasons:

Reasons (where second box is ticked):

Dengie SSSI

complies with Natural England's duty to further the conservation and enhancement of the notified features of the SSSI, consistent with the proper exercise of its functions¹ - and accordingly the new access proposal may proceed as finally specified in this template

OR

would not comply with the duty referred to in (a) – and accordingly permission/ authorisation/ assent should not be given for the new access proposal in the form finally specified in this template, for the following reasons:

Reasons (where second box is ticked):

Blackwater Estuary Site of Special Scientific Interest (SSSI)

complies with Natural England's duty to further the conservation and enhancement of the notified features of the SSSI, consistent with the proper exercise of its functions¹ - and accordingly the new access proposal may proceed as finally specified in this template

OR

would not comply with the duty referred to in (a) – and accordingly permission/ authorisation/ assent should not be given for the new access proposal in the form finally specified in this template, for the following reasons:

Reasons (where second box is ticked):

¹ The reference in 7.2 above to Natural England's functions includes its balanced general purposes for access, nature conservation and landscape under the NERC Act 2006, any specific statutory duties it may have to deliver specific improvements to public access, and the access-related policies and priorities it periodically agrees with Defra.

7.3 Overall conclusion: Marine Conservation Zone

In respect of any duties that may arise under section 125 of the Marine and Coastal Access Act 2009, Natural England has concluded for Blackwater, Crouch, Roach and Colne Estuaries Marine Conservation Zone (MCZ) that:

(Mark one box only with an X below)

The access proposal (including any special measures specified in this appraisal) is the one that, consistently with the proper exercise of its functions under section 296 of the same Act, is least likely to hinder the achievement of the conservation objectives for the Marine Conservation Zone - and accordingly may proceed

OR

The above test is not met, and accordingly the access proposal should not be taken forward in this form, for the following reasons:

Reasons (where second box is ticked):

7.4 Overall conclusion - National Nature Reserve

In the light of this appraisal, Natural England has concluded that the new access proposal:

(Mark one box only with an X below)

will not compromise the management of the Dengie National Nature Reserve for its conservation purpose of preserving features of special interest in the area

OR

would compromise the management of the National Nature Reserve for its conservation purpose of preserving features of special interest in the area - and accordingly the new access proposal should not proceed in the form finally specified in this template, for the following reasons:

Reasons (where second box is ticked):

7.5 Other features about which concerns have been expressed

In the light of this appraisal, Natural England has concluded that:

(Mark one box only with an X below)

the appropriate balance has been struck by the new access proposal between NE's conservation and access objectives, duties and purposes - and accordingly the new access proposal should proceed as finally specified in this template

OR

the appropriate balance referred to above has not been struck – and accordingly the new access proposal should not proceed in the form finally specified in this template, for the following reasons:

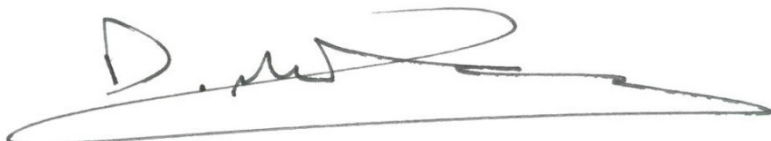
Reasons (where second box is ticked):

8 Certification

8.1 Certification – access proposal

I agree with the conclusions of this appraisal and am satisfied that the final access proposal, incorporating any special measures, is the least restrictive option necessary to ensure appropriate protection of sensitive features.

Signed:



Name:

Darren Braine,
Senior Adviser

Date:

04/07/17

8.2 Certification – environmental impacts

I agree with the conclusions of this appraisal and am satisfied that potential environmental impacts of the access proposal on the: **Outer Thames Estuary SPA/pSPA; Crouch & Roach Estuaries Ramsar site/SPA/SSSI ; Dengie Ramsar site/SPA/SSSI/NNR; Blackwater Estuary Ramsar site/SPA/SSSI ; Essex Estuaries SAC and the Blackwater, Crouch, Roach and Colne Marine Conservation Zone** have been fully addressed.

Signed:



Name:

Nicola Orchard, Senior Protected
Sites Officer

Date:

07/07/17

9 References

- Balmer, D.E., Gillings, S., Caffrey, B.J., Swann, R.L., Downie, I.S. & Fuller, R.J. 2013 *Bird Atlas 2007-11: The breeding and wintering birds of Britain and Ireland*. BTO Books, Thetford.
- British Ornithologists' Union. 2016. The British List, Dec 2016 update.
<https://www.bou.org.uk/wp-content/uploads/2016/12/British-List-12-Dec-2016.pdf>
- Essex Birdwatching Society. The Essex Bird Report – annual reports, latest available 2013.
- Frost, T.M., Austin, G.E., Calbrade, Mellan, H.J., Hearn, R.D., Stroud, D.A., Wotton, S.R. and Balmer, D.E. 2017. Waterbirds in the UK 2015/16: The Wetland Bird Survey. BTO/RSPB/JNCC. Thetford.
<http://www.bto.org/volunteer-surveys/webs/publications/webs-annual-report>
- Jackson, A. (2007) *Ostrea edulis* Native oyster. In Tyler-Walters H. and Hiscock K. (eds) Marine Life Information Network: Biology and Sensitivity Key Information Reviews, [on-line]. Plymouth: Marine Biological Association of the United Kingdom. Available from:
<http://www.marlin.ac.uk/species/detail/11446>
- JNCC website: Special Areas of Conservation (SAC) / SAC selection / Essex Estuaries
<http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0013690>
- Keeling, C (2016) Personal observation, Natural England Lead Adviser for the Blackwater Estuary.
- Kirby, P. 2001. *Habitat Management for Invertebrates: a Practical Handbook*. RSPB, Sandy, Beds.
- Liley, D. & Sutherland, W.J. (2007) Predicting the population consequences of human disturbance for Ringed Plover *Charadrius hiaticula*: a game theory approach. *Ibis* 149: 82-94
- Natural England(2017) Blackwater Estuary (Mid-Essex Coast Phase 4) SPA, Advice on Seasonality
[https://designatedsites.naturalengland.org.uk/Marine/Seasonality.aspx?SiteCode=UK9009245&SiteName=blackwater&SiteNameDisplay=Blackwater+Estuary+\(Mid-Essex+Coast+Phase+4\)+SPA&countyCode=&responsiblePerson=&SeaArea=&IFCAAArea](https://designatedsites.naturalengland.org.uk/Marine/Seasonality.aspx?SiteCode=UK9009245&SiteName=blackwater&SiteNameDisplay=Blackwater+Estuary+(Mid-Essex+Coast+Phase+4)+SPA&countyCode=&responsiblePerson=&SeaArea=&IFCAAArea)
- Natural England (2012) *Conservation Advice for European Marine Sites Outer Thames SPA (UK9020309)*
<http://publications.naturalengland.org.uk/publication/3233957?category=3212324>
- Natural England(2017) *Conservation Advice for Marine Protected Areas, Blackwater, Crouch, Roach and Colne estuaries MCZ – UKMCZ0003*
<https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UKMCZ0003>
- Natural England Conservation Advice for Marine Protected Areas Essex Estuaries SAC - UK0013690
<https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK0013690&SiteName=Essex%20Estuaries&countyCode=&responsiblePerson=>
- Natural England (2013) *Coastal Access Natural England's Approved Scheme 2013*, Published by Natural England, Catalogue Code: NE446
<http://publications.naturalengland.org.uk/publication/5327964912746496?category=50007>
- Owens, N.W. (1977) Responses of wintering Brent Geese to human disturbance, *Wildfowl* 28: 5-14.

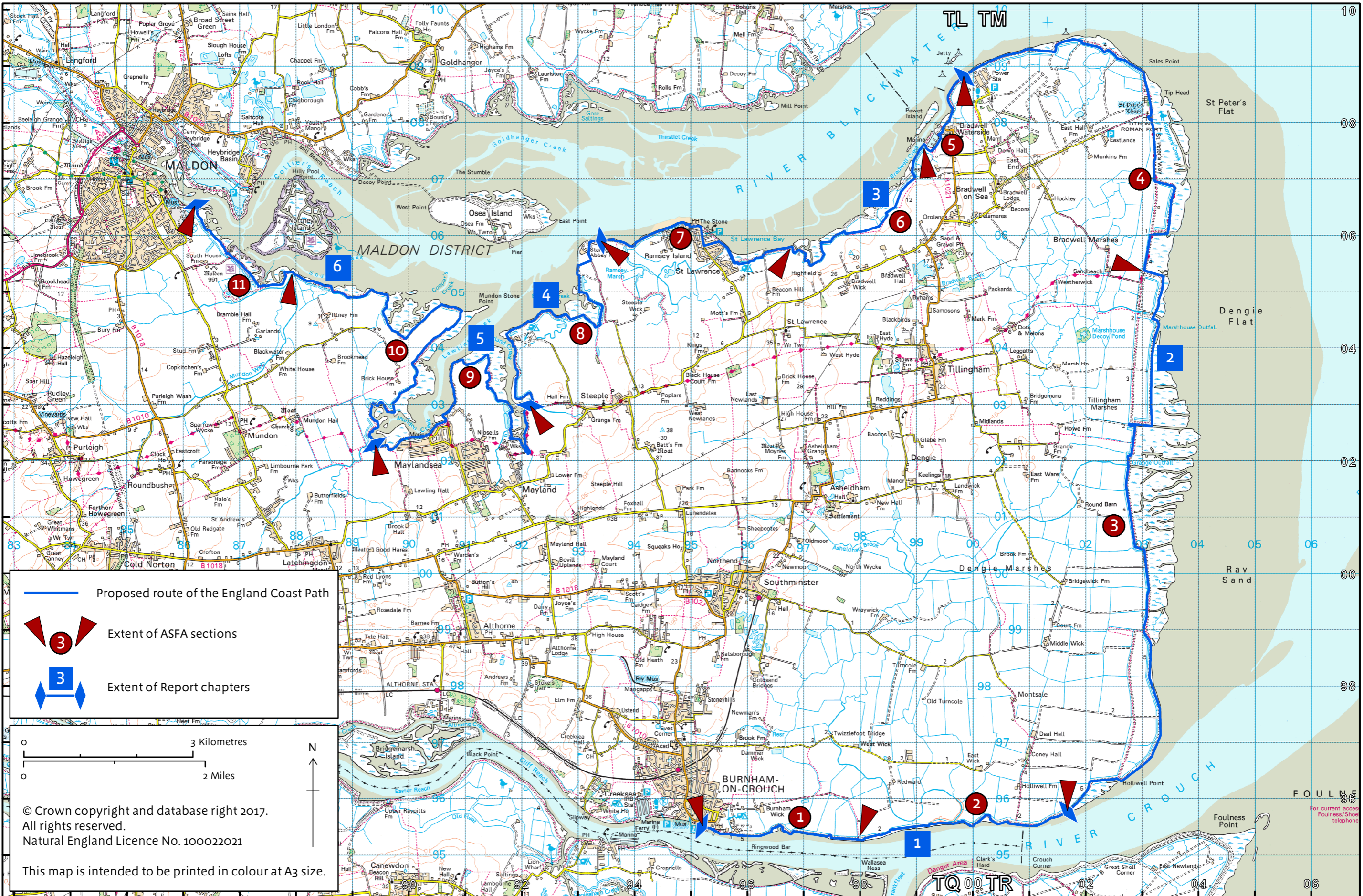
- Owen, M., & Black, J.M. 1990. *Waterfowl Ecology*. Blackie, Glasgow & London.
- Panter, C., & Liley, D. (2016) *Distribution of key bird species and access infrastructure along the Essex Coast Special Protection Areas (SPAs)*, unpublished report by Footprint Ecology for Natural England.
- Parkin, M. (2016) Personal observation, Natural England Lead Adviser for the Dengie.
- Royal HaskoningDHK (2014) *Maldon District Council Pre-Submission Local Development Plan 2014-2029 Sustainability Appraisal Report incorporating Strategic Environmental Assessment and Habitats Regulations Assessment*
- Royal HaskoningDHK (2016) *Maldon District Council Local Development Plan Sustainability Appraisal Report Update following Inspector's Report*
- Snow, D.W., & Perrins, C.M. 1998. *The birds of the Western Palearctic, Concise Edition. Volume 1, Non-Passerines*. Oxford University Press, Oxford.
- Williams, C (2016) Personal observation, Natural England Lead Adviser for Crouch & Roach Estuaries
- Wood, S. (2007) *Birds of Essex*. Bloomsbury Publishing Plc.

10. Appendices

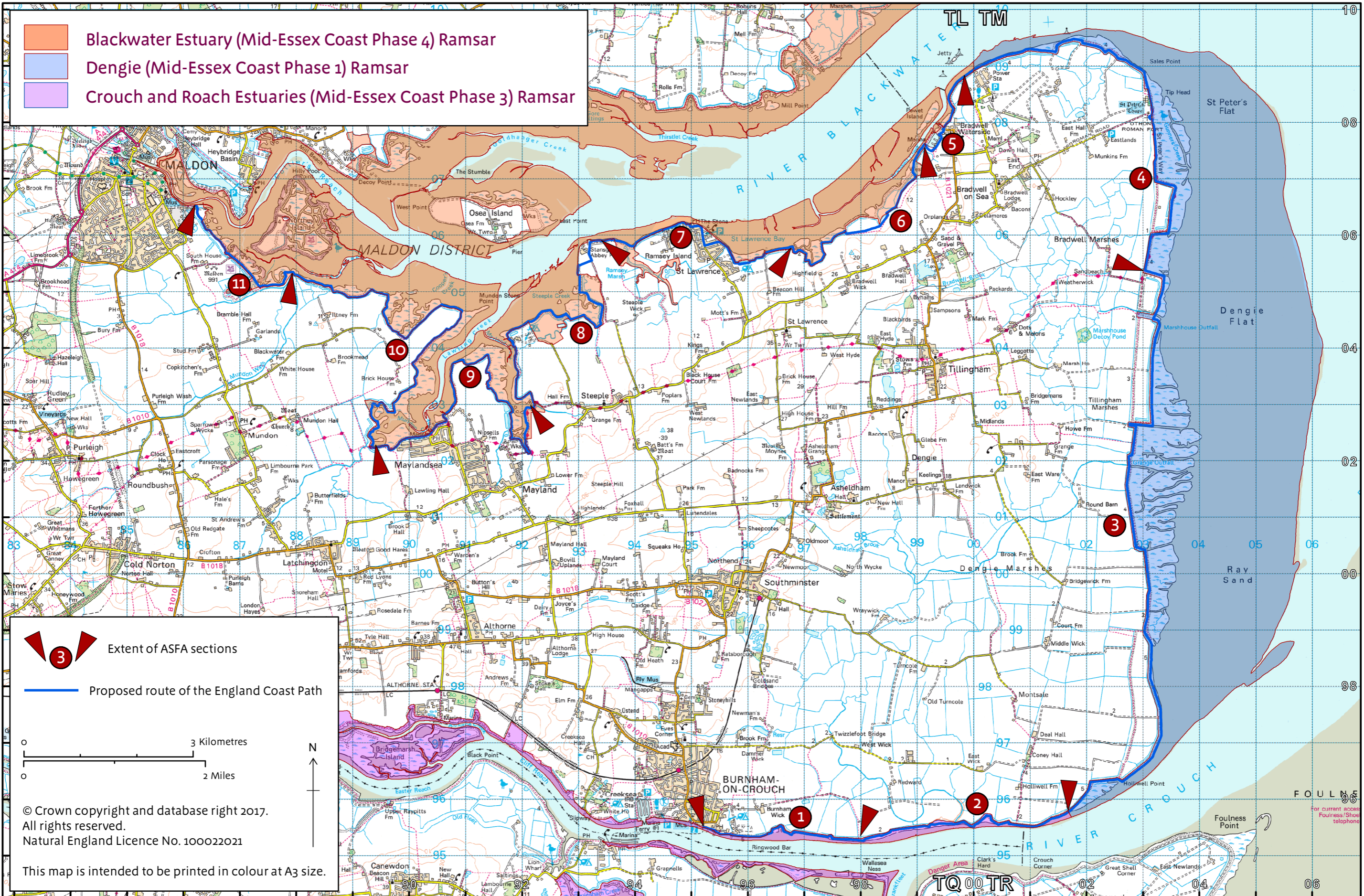
Appendix A – Bird species mentioned in the text for which the IOC International name differs from the British vernacular name

British vernacular name	IOC International English name	Scientific name
Brent goose	Brant goose	<i>Branta bernicla</i>
Shelduck	Common shelduck	<i>Tadorna tadorna</i>
Wigeon	Eurasian wigeon	<i>Anas penelope</i>
Teal	Eurasian teal	<i>Anas crecca</i>
Pintail	Northern pintail	<i>Anas acuta</i>
Shoveler	Northern shoveler	<i>Anas clypeata</i>
Pochard	Common pochard	<i>Aythya ferina</i>
Goldeneye	Common goldeneye	<i>Bucephala clangula</i>
Cormorant	Great cormorant	<i>Phalacrocorax carbo</i>
Avocet	Pied avocet	<i>Recurvirostra avosetta</i>
Oystercatcher	Eurasian oystercatcher	<i>Haematopus ostralegus</i>
Golden plover	European golden plover	<i>Pluvialis apricaria</i>
Lapwing	Northern lapwing	<i>Vanellus vanellus</i>
Ringed plover	Common ringer plover	<i>Charadrius hiaticula</i>
Curlew	Eurasian curlew	<i>Numenius arquata</i>
Turnstone	Ruddy turnstone	<i>Arenaria interpres</i>
Knot	Red knot	<i>Calidris canuta</i>
Greenshank	Common greenshank	<i>Tringa nebularia</i>
Redshank	Common redshank	<i>Tringa tetanus</i>
Bearded tit	Bearded reedling	<i>Panurus biarmicus</i>

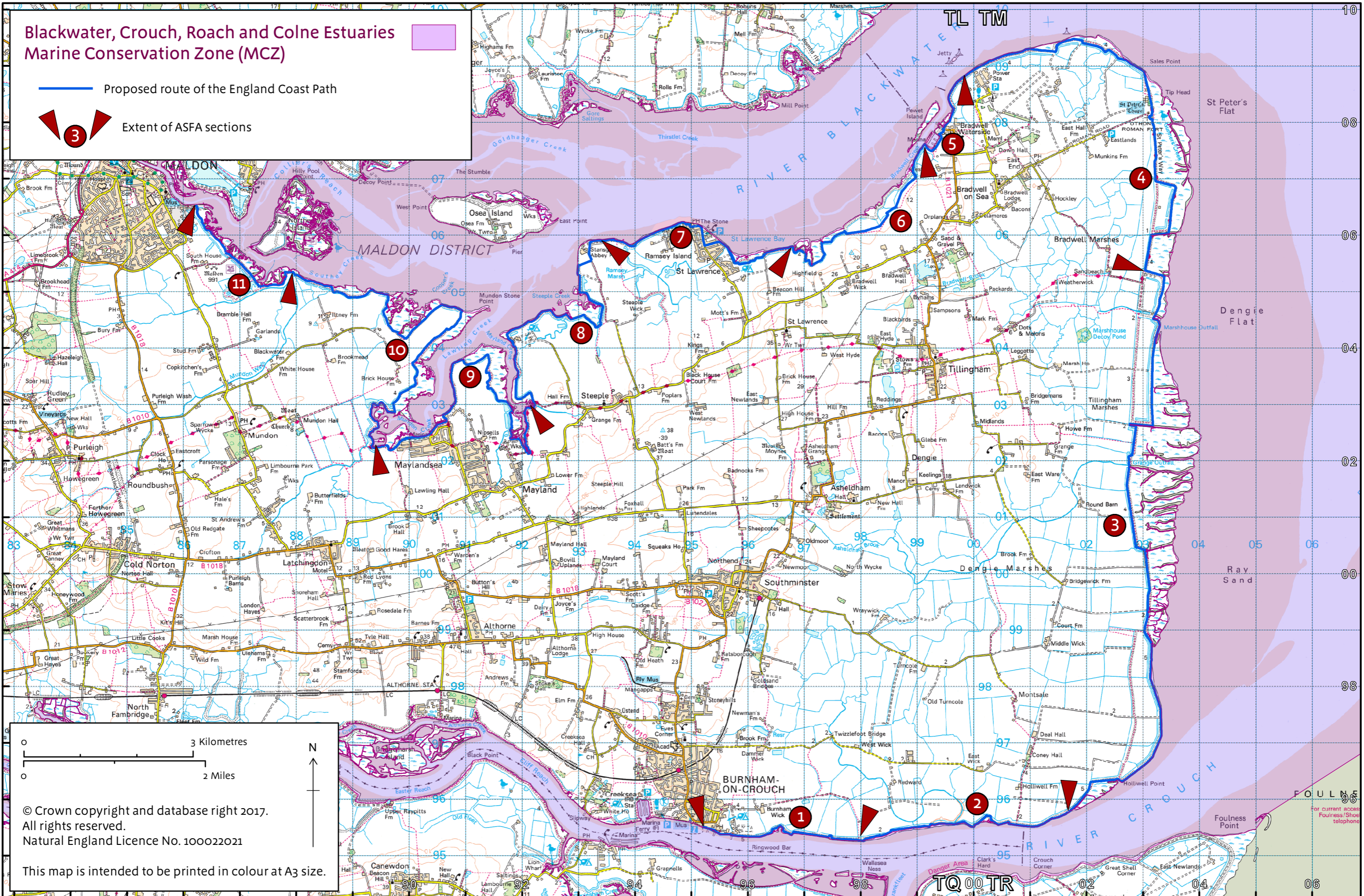
A. Overview of ASFA sections and Report chapters



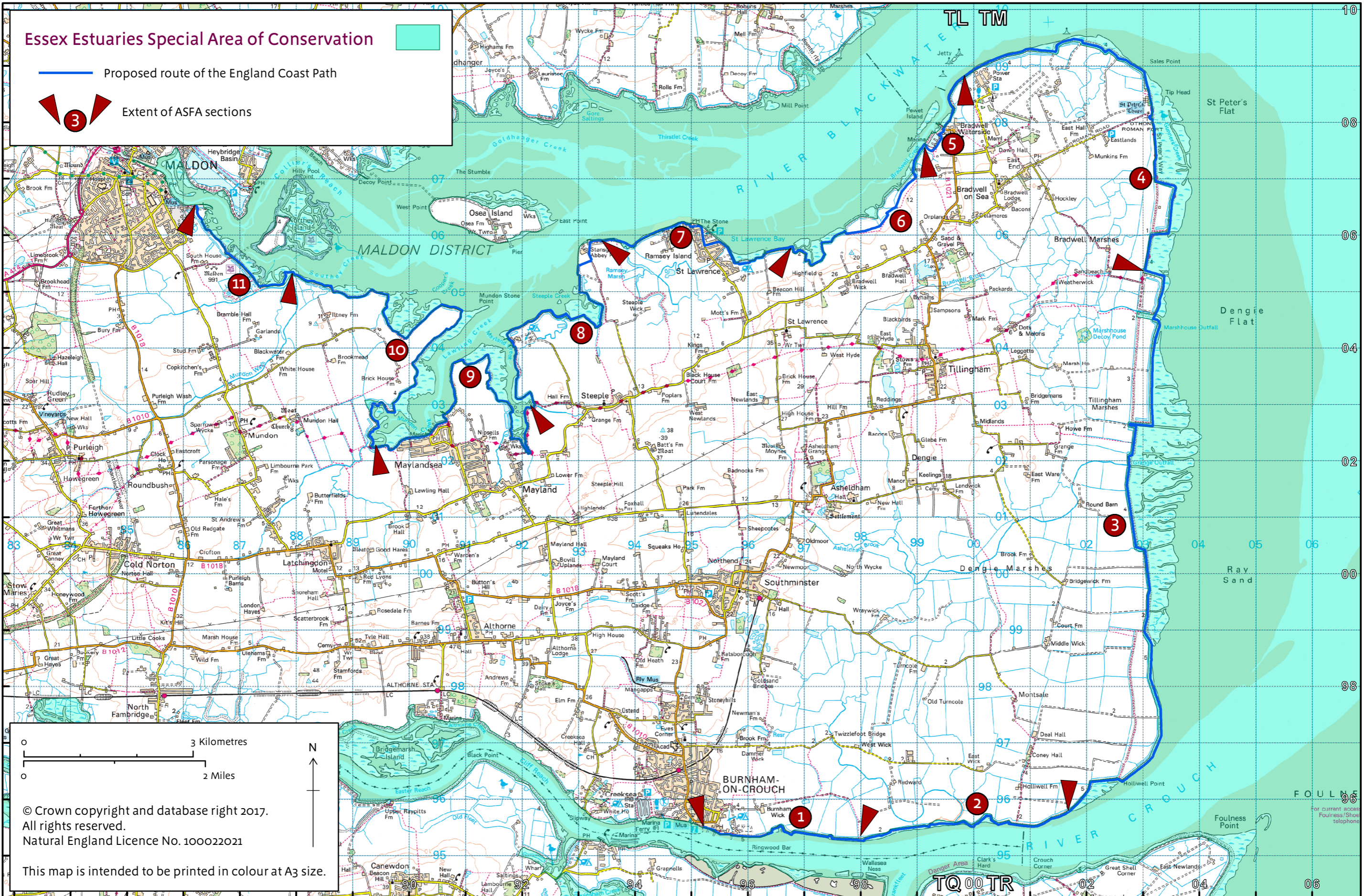
B. Key designations - Ramsar sites



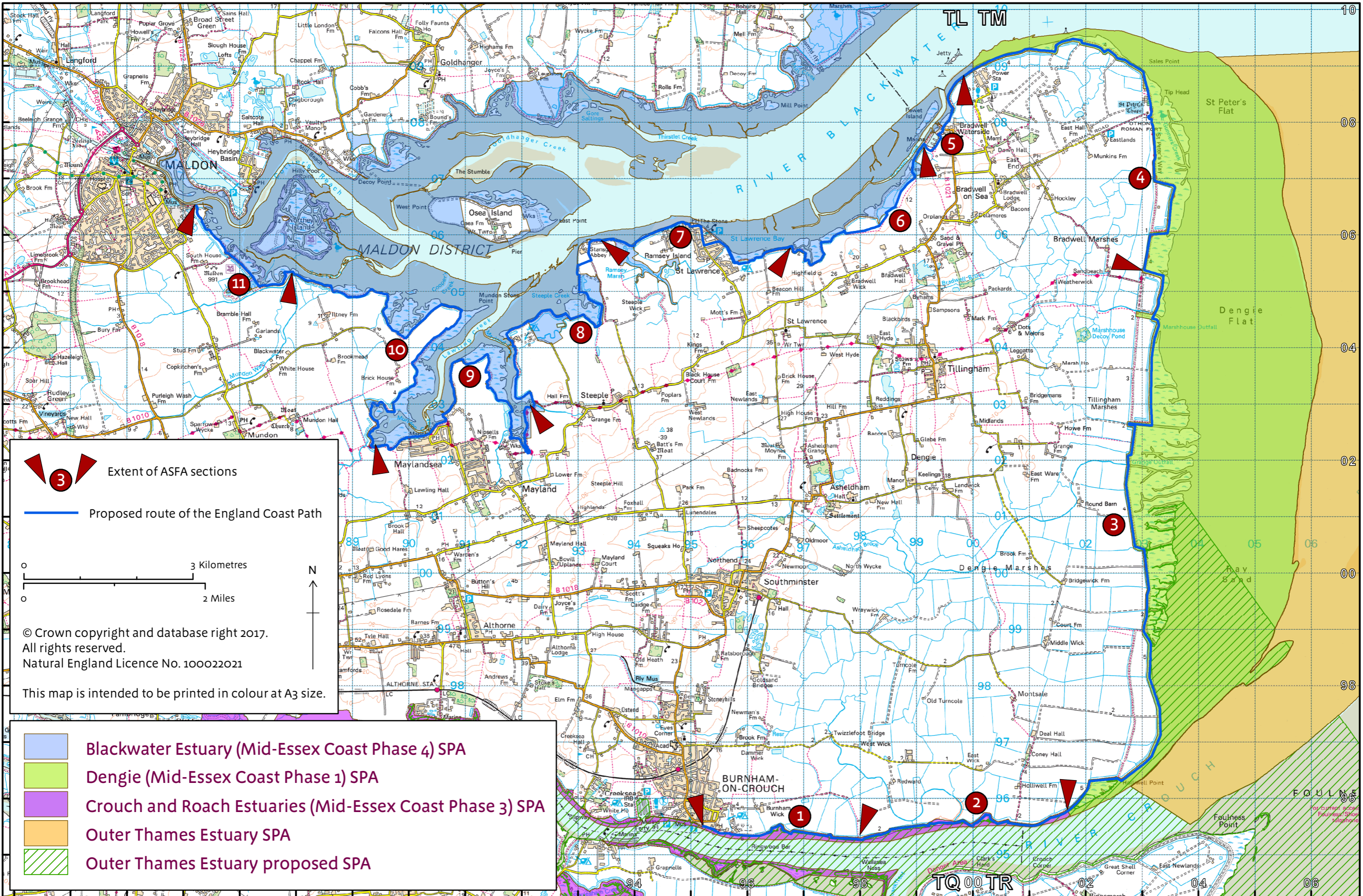
C. Key designation - Blackwater, Crouch, Roach and Colne Estuaries Marine Conservation Zone (MCZ)



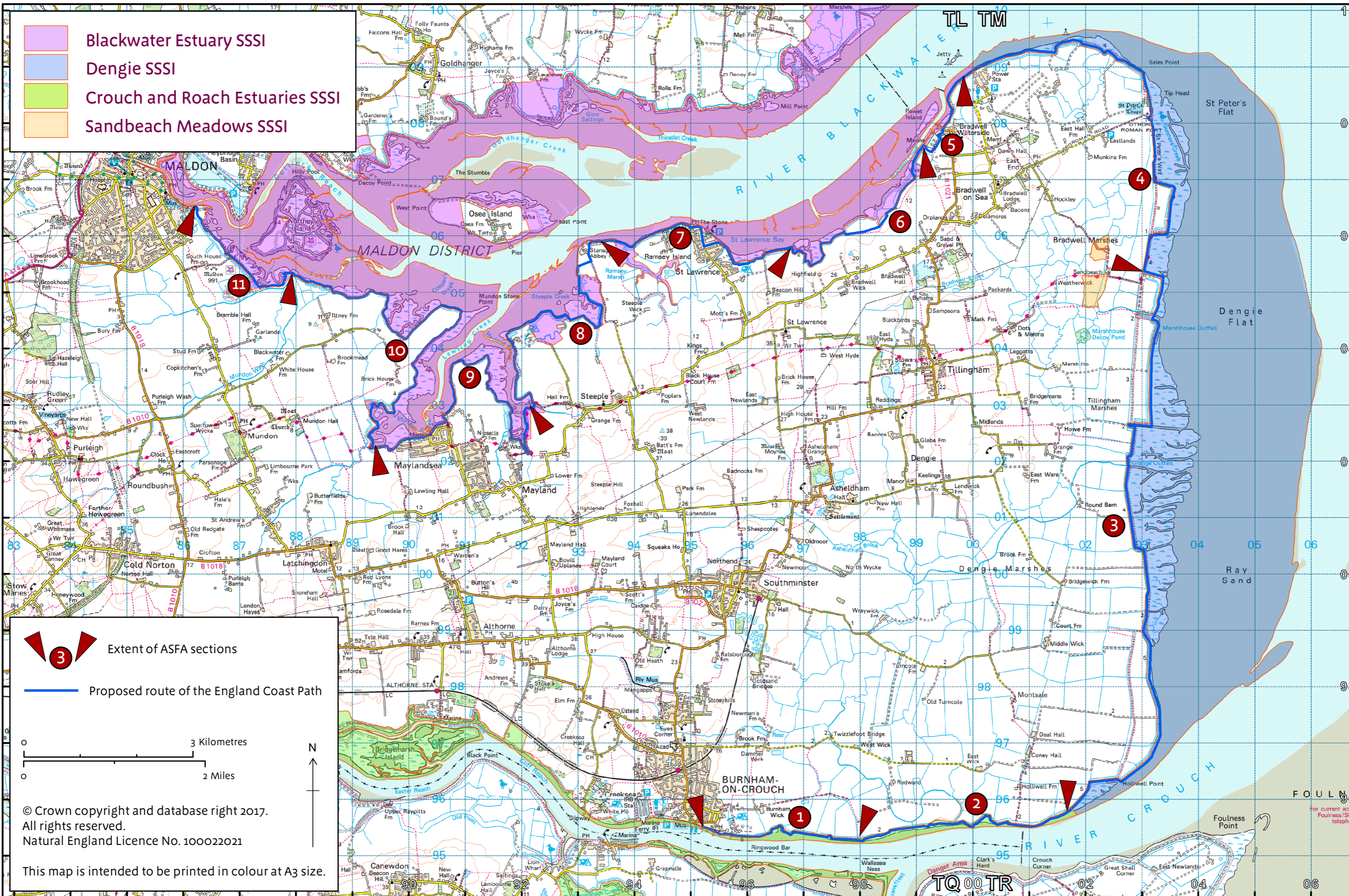
D. Key designation - Essex Estuaries Special Area of Conservation (SAC)



E. Key designations - Special Protection Areas (SPA)



F. Key designations - Sites of Special Scientific Interest (SSSI)

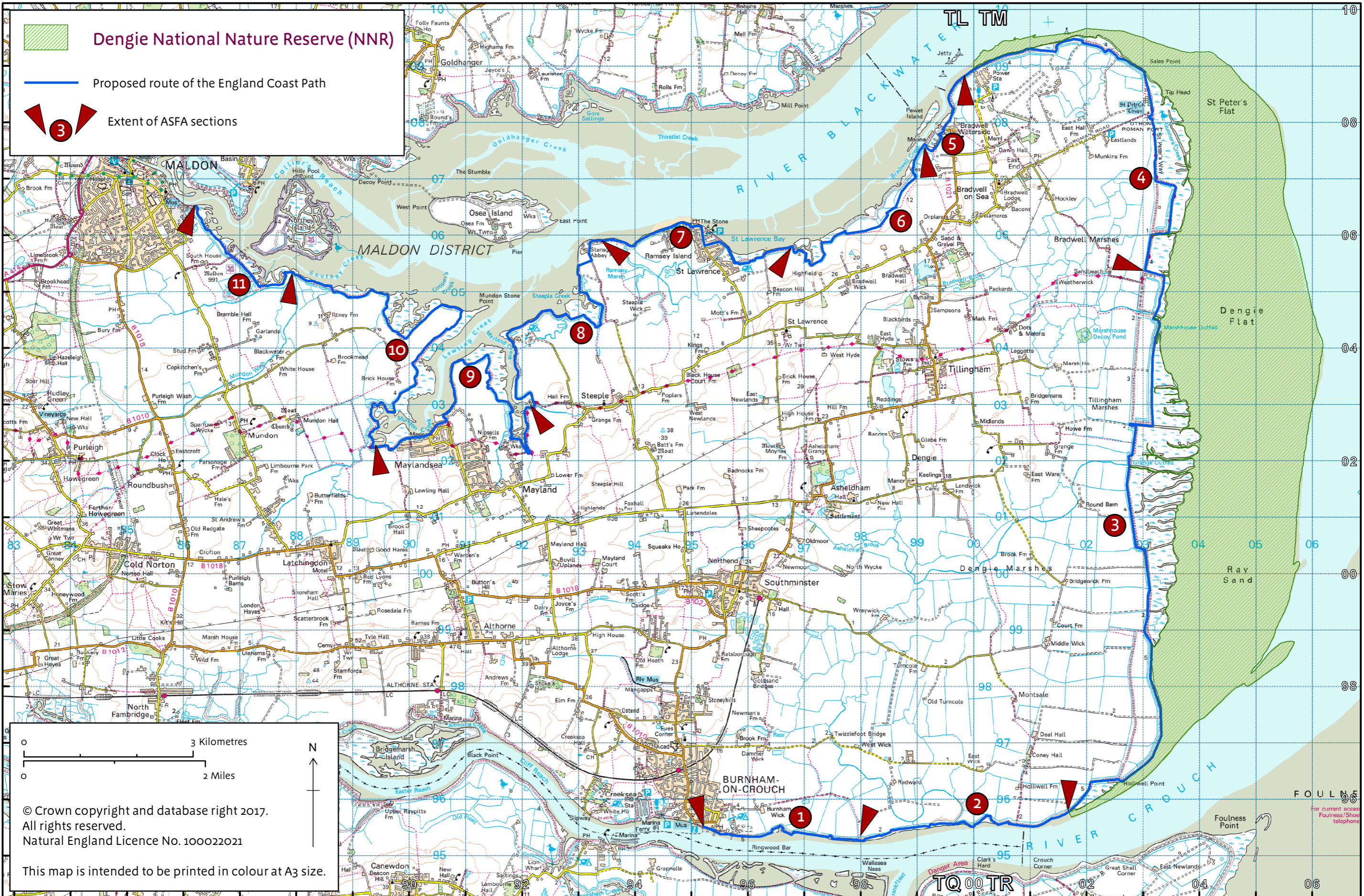


F. Key designations - Sites of Special Scientific Interest (SSSI)

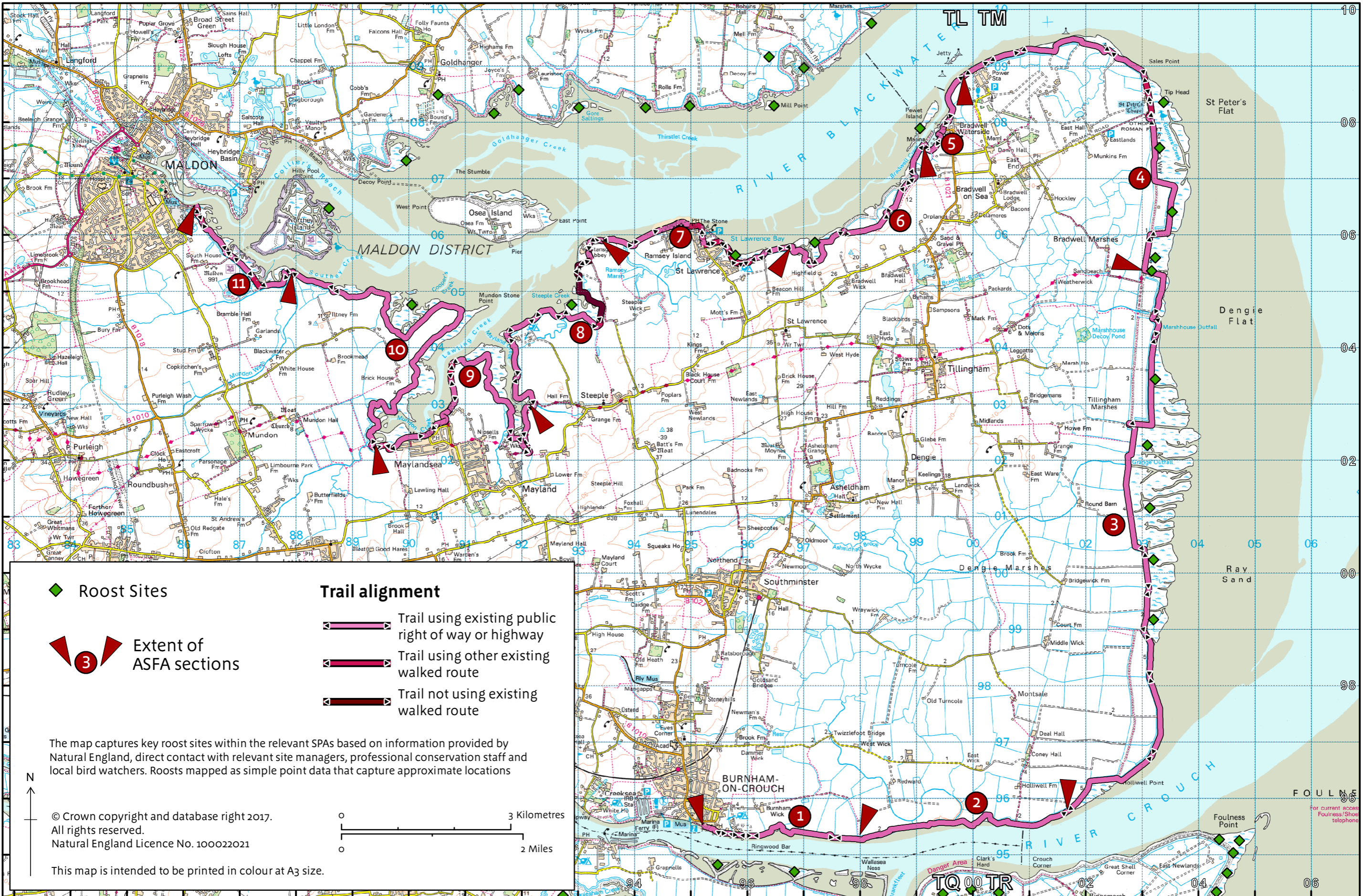
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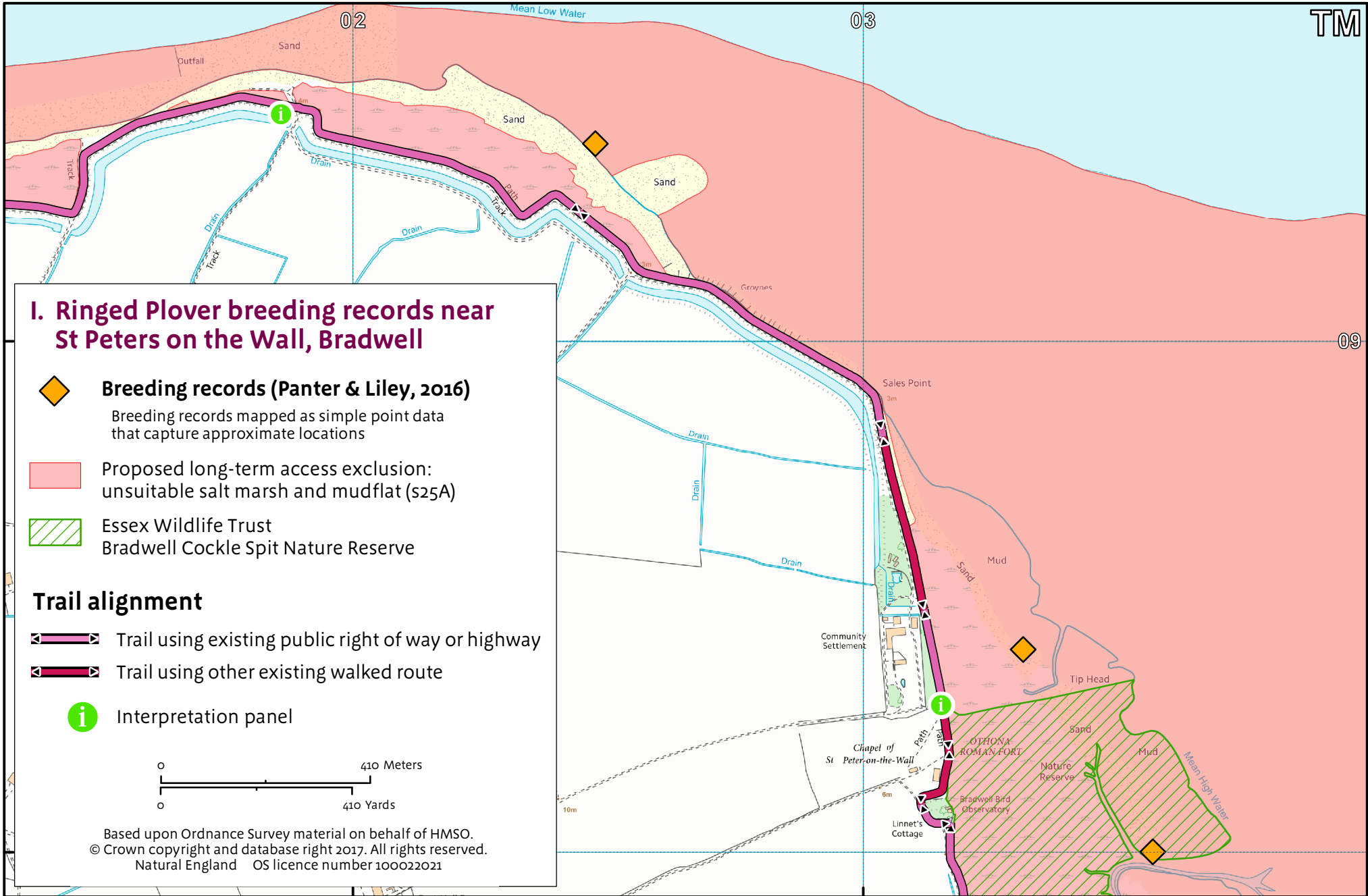
This map is intended to be printed in colour at A3 size.

G. Key designation - Dengie National Nature Reserve (NNR)



H. Location of key roost sites (Panter & Liley, 2016)



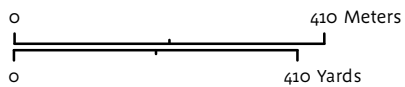


I. Ringed Plover breeding records near St Peter's on the Wall, Bradwell

- Breeding records (Panter & Liley, 2016)**
Breeding records mapped as simple point data that capture approximate locations
- Proposed long-term access exclusion: unsuitable salt marsh and mudflat (s25A)**
- Essex Wildlife Trust Bradwell Cockle Spit Nature Reserve**



Trail alignment

- Trail using existing public right of way or highway
- Trail using other existing walked route
- Interpretation panel








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J. Access proposals and sensitive features - St Lawrence

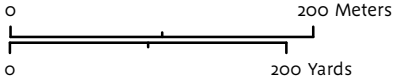
-  Roost site (Panter & Liley, 2016)
-  Proposed long-term access exclusion: unsuitable salt marsh and mudflat (S25A)

Trail alignment

-  Trail using existing public right of way or highway
-  Trail using other existing walked route
-  Winter alternative route
-  Interpretation panel
-  Public footpaths



The map captures key roost sites within the relevant SPA based on information provided by Natural England, direct contact with relevant site managers, professional conservation staff and local bird watchers. Roosts mapped as simple point data that capture approximate locations








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K. Access proposals and sensitive features - Stansgate

-  Roost site (Panter & Liley, 2016)
-  Proposed long-term access exclusion: unsuitable salt marsh and mudflat (s25A)

Trail alignment

-  Trail using existing public right of way or highway
-  Trail using other existing walked route
-  Trail not using existing walked route

The map captures key roost sites within the relevant SPA based on information provided by Natural England, direct contact with relevant site managers, professional conservation staff and local bird watchers. Roosts mapped as simple point data that capture approximate locations

Length of Trail proposed to run along the folding, behind the sea wall.

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