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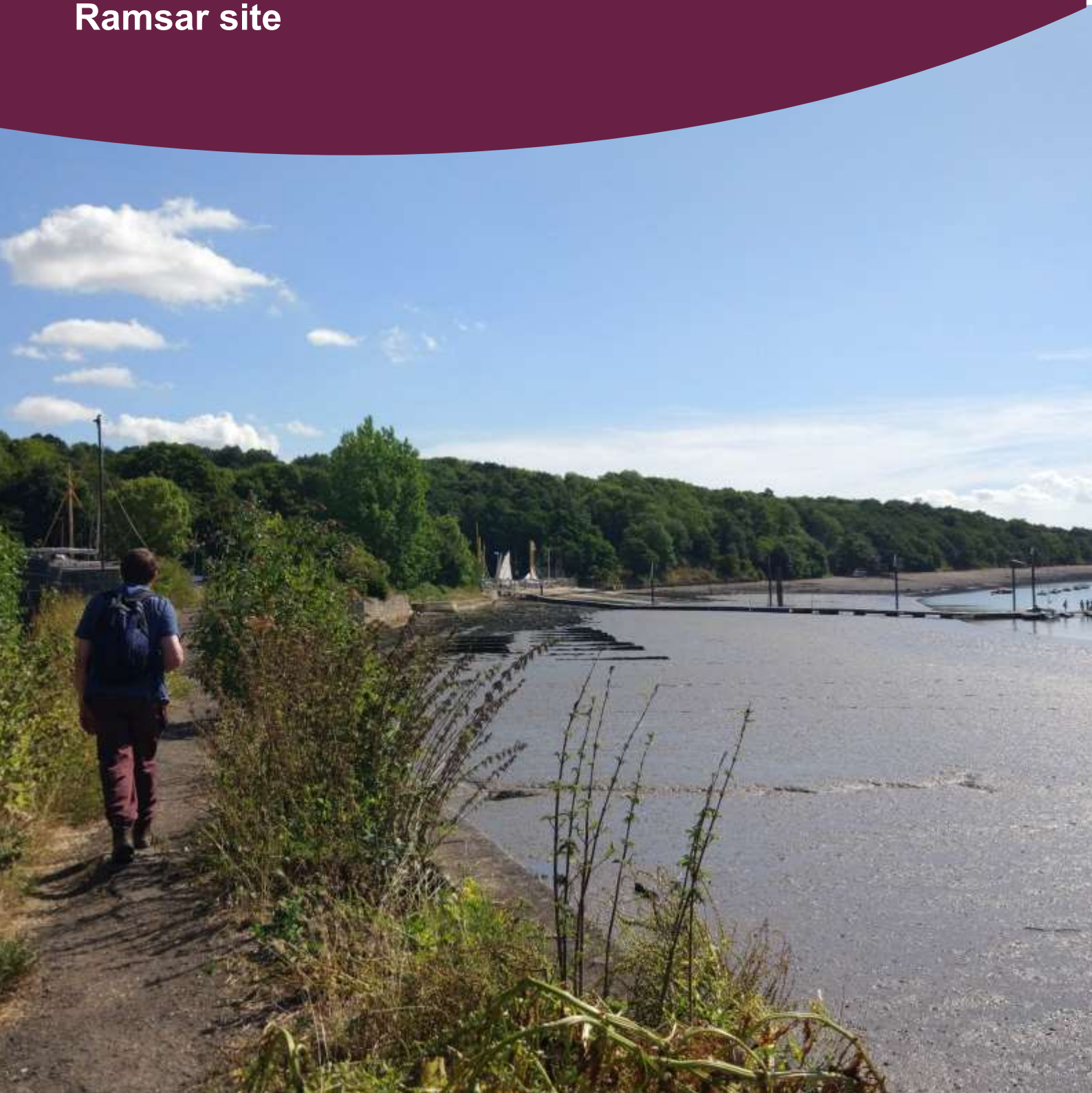
NATURAL ENGLAND

Habitats Regulation Assessment of England Coast Path proposals between **Iwade and Grain** On **Medway Estuary and Marshes Special Protection Area and Ramsar Site, The Swale Special Protection Area and Ramsar Site & the Thames Estuary and Marshes Special Protection Area and Ramsar site**



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I) Introduction

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

Natural England has a statutory duty under the Marine and Coastal Access Act 2009 to improve access to the English coast. This assessment considers the potential impacts of our detailed proposals for coastal access from Iwade to Grain on the following sites of international importance for wildlife: Thames Estuary and Marshes, Medway Estuary and Marshes and The Swale Special Protection Area (SPA) and Ramsar sites.

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

https://www.gov.uk/government/publications/england-coast-path-from-iwade-to-grain-comment-on-proposals

II) Background

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

Table 1: Summary of main wildlife interest

Interest	Description
Breeding waterbirds	The Medway Estuary and Marshes SPA and The Swale SPA are recognised for their breeding waterbirds. Breeding waterbirds require suitable nesting habitats coupled with low disturbance levels to prevent egg abandonment, chilling and predation, plus safe areas for successful fledging.
Non-breeding waterbirds	During the winter months, the Medway, Swale and Thames estuaries support an internationally recognised population of non-breeding waterbirds. The extensive areas of soft mud exposed at low tide, and grazing marshes are the main feeding areas and these protected birds need suitable undisturbed places to roost at high tide.
Wetland and coastal plants and invertebrates	The Medway Estuary and Marshes, The Swale, and the Thames Estuary and Marshes Ramsar sites support endangered plant species, nationally scarce plants of wetland habitats and British

Interest	Description
	Red Data Book invertebrates. These species are mainly found in the intertidal habitat, grazing marshes and ditches.

III) Our approach

Natural England's approach to ensuring the protection of sensitive nature conservation features under the Coastal Access Programme is set out in section 4.9 Coastal Access: Natural England's Approved Scheme 2013 [Ref 8].

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, environmental consultants and occupiers. We have also drawn on wintering and breeding bird evidence local birders, such as Kevin Thornton, Geoff Orton, Bob Knight, Alan Fossey, Bill Jones and Derek Tutt and breeding wader surveys undertaken for the North Kent Breeding Wader Project by environmental consultant Carol Donaldson and the RSPB. The approach includes considering 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.

IV) Aim and objectives for the design of our proposals

The new national arrangements for coastal access will establish a continuous, well-maintained walking route around the coast and clarify where people can access the foreshore and other parts of the coastal margin. A particular concern during the development of our proposals for this stretch of coast has been disturbance to non-breeding waterbirds as a result of recreational activities. Our aim in developing proposals for the North Kent coast has been to secure and enhance opportunities for people to enjoy their visit whilst ensuring appropriate protection for non-breeding waterbirds. Objectives for design of our proposals have been to:

- avoid exacerbating disturbance at sensitive locations by making use of established paths

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

V) Conclusion

We have considered whether our detailed proposals for coastal access between Iwade and Grain might have an impact on Medway Estuary and Marshes, The Swale & the Thames Estuary and Marshes SPAs and Ramsar sites. In Part C of this assessment we identify some possible risks to the relevant qualifying features and conclude that proposals for coastal access, without incorporated mitigation, may have a significant effect on these sites. In Part D we consider these risks in more detail, taking account of avoidance and mitigation measures incorporated into our access proposal, and conclude that there will not be an adverse effect on the integrity of either site. These measures are summarised in Table 2 below.

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

Risk to conservation objectives	Relevant design features of the access proposal
Repeated disturbance to foraging or resting waterbirds during winter and on passage, following changes in recreational activities as a result of the access proposal, leads to reduced fitness and reduction in population and/or contraction in the distribution of qualifying features within the site.	■ Route Alignment ■ The proposed inland route at Chetney peninsular, Barksore Marshes, Upchurch peninsula (ie Hamgreen Saltings, Bayford, Horsham Marsh, and Otterham Creek), and Motney Hill will avoid interaction with the key feeding and roosting wintering birds. ■ A diversion into the orchard to avoid the greenshank roost at Bedlams Bottom, which, together with the new verge nearby at Raspberry Hill Lane, will be created outside of the late summer redshank and greenshank moulting season (July – September). ■ Following existing rights of way in the remainder of the SPA ■ Coastal Margin

Risk to conservation objectives	Relevant design features of the access proposal
	■ Access will be restricted year round at the wintering roosts at Chetney Marsh and Deadman's Island, Barksore Marshes and the seawall at Great Barksore Farm, Horsham Marsh (and Admiralty Tip), Bayford Marsh and the seawall from Hamgreen Saltings to Bayford Marsh, Fort Darnet (near Bishop Saltings) and during winter only fields inland of Horsham Marsh by a formal direction on nature conservation grounds. ■ Access will be restricted to dogs on leads at the hay field at Otterham Creek on land management grounds, and public access will be excluded at the seawall at Motney Hill Sewage Treatment Works by a formal direction on land management and public safety grounds. ■ Much of the foreshore, and the saltmarsh islands are unsuitable for walking and access will be excluded by direction ■ The proposed route will be well marked and clear to follow and therefore visitors are unlikely to stray from the path ■ Interpretation and collaboration with Bird Wise (see p 17 below) ■ There will be collaboration with Bird Wise and Kent Wildfowlers (see page 30 below) to install and maintain new interpretation panels in key locations to encourage responsible behaviour
Repeated disturbance to breeding waterbirds during the breeding season following changes in recreational activities as a result of the access proposal, leads to nest trampling and abandonment, and the	<u>Route Alignment</u> ■ The proposed route inland of Chetney Marshes, Barksore Marshes, Bayford Marshes, Horsham Marsh and Motney

Risk to conservation objectives	Relevant design features of the access proposal
resultant reduction in the breeding population.	Hill, will avoid interaction with the key sites for breeding birds. ■ Following existing rights of way in the remainder of the SPA <u>Coastal Margin</u> ■ Access will be restricted year round at the breeding sites at Chetney Marsh and Deadman's Island, Barksore Marshes, Horsham Marsh (and Admiralty Tip), Bayford Marsh, and Fort Darnet (near Bishop Saltings). ■ Public access will be excluded at the seawall at Motney Hill Sewage Treatment Works by a formal direction on land management and public safety grounds. ■ The saltmarsh islands which provide important breeding sites for seabirds are unsuitable for walking and access will be excluded by direction. ■ The proposed route will be well marked and clear to follow and therefore visitors are unlikely to stray from the path
The installation of access management infrastructure may lead to a loss of habitat which supports the qualifying features, including all necessary stages of the non-breeding/wintering period (moulting, roosting, loafing, and feeding).	Our proposals will only install one interpretation panel, which is located in the edge of saltmarsh at Raspberry Hill Lane; and one interpretation panel and three waymarker posts, which are located in grazing marsh habitat at Stoke Marshes, Kingsnorth Grazing Marsh and south of Horsham Marsh respectively. The rest of the infrastructure are located on seawalls, tracks and road verges which are not considered supporting habitats in the Supplementary Advice on Conservation Objectives.

Risk to conservation objectives	Relevant design features of the access proposal
The repeated trampling of wetland plants and of the habitats that support wetland invertebrates may lead to a direct loss of habitat and habitat which supports the qualifying features within the sites.	Route Alignment ■ The proposed inland route at Chetney peninsular, Barksore Marshes, Upchurch peninsula (ie Hamgreen Saltings, Bayford, Horsham Marsh) and Hoo Marsh will avoid creating a new path on sensitive vegetation which could suffer from repeated trampling. ■ The route at Funton Creek/ Bedlams Bottom is landward of the saltmarsh habitat being on the edge of an orchard and on a road verge. ■ Following existing rights of way in the remainder of the SPA Coastal Margin ■ Access will be restricted year round at the following sites (albeit for wintering and breeding bird purposes), and these sites are also likely to support sensitive vegetation: Chetney Marsh and Deadman's Island, Barksore Marshes, Horsham Marsh, Bayford Marsh by a formal direction on nature conservation grounds. ■ Much of the saltmarsh foreshore, and the saltmarsh islands are unsuitable for walking and access will be excluded by direction ■ The proposed route will be well marked and clear to follow and therefore visitors are unlikely to stray from the path

VI) Implementation

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

VII) Thanks

The development of our proposals has been informed by input from people with relevant expertise within Natural England and other key organisations. The proposals have been thoroughly considered before being finalised and our initial ideas were modified during an iterative design process. We are grateful to local bird recorders: Kevin Thornton, Geoff Orton, Bob Knight, Alan Fossey, Bill Jones and Derek Tutt as well as consultant Carol Donaldson and other organisations and local experts such as the RSPB whose contributions and advice have helped to inform the development of our proposals.

PART A: Introduction and information about the England Coast Path

A1. Introduction

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

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

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

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

Natural England's approach to ensuring the protection of sensitive nature conservation features under the Coastal Access Programme is set out in the Coastal Access Scheme [Ref 8]. Note that, following a ruling by the Court of Justice of the European Union (Case C-323/17 – usually cited as People over Wind), we have issued a technical memorandum concerning the application of this methodology where assessment under the Habitats Regulations is required.

A2. Details of the plan or project

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

Our proposals for coastal access have two main components:

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

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

England Coast Path

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

Coastal Margin

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

Coastal margin is typically subject to new coastal access rights, though there are some obvious exceptions to this. The nature and limitations of the new rights, and the key types of land excepted from them, are explained in more detail in Chapter 2 of our Coastal Access Scheme [Ref 8]. Where there are already public or local rights to do other things, these are normally unaffected and will continue to exist in parallel to the new coastal access rights. The exception to this principle is any pre-existing open access rights under Part 1 of the Countryside and Rights of Way Act 2000 (CROW) over land falling within the coastal margin: the new coastal access rights will apply in place of these.

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

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

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

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

The North Kent Marshes are the three sites that run along the North Kent coast from the inner Thames estuary in the west to the eastern mouth opening out to the North Sea. From west to east they are Thames Estuary and Marshes, Medway Estuary and Marshes and The Swale. The three sites are designated as Special Protection Areas (SPAs) and also as Ramsar Sites and form a contiguous swathe of coastal habitats along the North Kent shore. The designations reflect the importance of the area for wintering waterfowl, breeding waterfowl and also encompass a range of rare plant and invertebrate species. The connection between these three sites was also recognised by a report by the British Trust for Ornithology from 2005 (Ref 1), which looked at the high tide counts and found possible movements of certain birds away from the Medway during high tide to sites within the Thames and the Swale.

Medway Estuary and Marshes SPA and Ramsar Site

The estuary forms a single tidal system with the Swale and joins the southern part of the Thames Estuary between the Isle of Grain and Sheerness.

The site has a complex arrangement of tidal channels, which drain around large islands of salt marsh and peninsulas of grazing marsh. There are large areas of mudflat, which have high densities of invertebrates providing a good food source for wading birds. Grazing marsh can also be found landward of some sea walls in the area. Small shell beaches occur too, particularly in the outer parts of the estuary. The area is very flat and low lying, with large expanses of uninterrupted views.

The complex and diverse mixes of coastal habitats support important numbers of waterbirds throughout the year. In summer, the estuary supports breeding waders and terns, whilst in winter it holds important numbers of geese, ducks, grebes and waders. The middle and outer parts of the estuary represent the most important areas for the birds. Important areas for birds include the Saltings and Hoo flats on the north side and the stretch from Copperhouse marshes eastwards towards Chetney marshes on the south side. The islands within the Medway also provide good habitat for SPA birds, in particular some of the breeding species.

The Swale SPA and Ramsar Site

The Swale is located in North Kent on the south east coast of England and separates the Kent mainland from the Isle of Sheppey. It adjoins the Medway Estuary to the west.

The Swale was originally part of a river valley, however, due to isostatic sea level change, the water divided the mainland from the Isle of Sheppey to form the Swale estuary. The Swale comprises extensive intertidal mudflats that encompass the entire northern and southern shores of the estuary extending from Ferry Marshes in the west down to Whitstable on the southern shore and Leysdown-on-Sea on the northern shore.

The SPA also contains the largest expanse of grazing marsh in Kent (although is much reduced from its previous extent), which provide important feeding and roosting grounds for many waterbirds. Elmley National Nature Reserve (NNR) is the best example of grazing marsh and covers an area of 1212.43ha. The grazing marshes contain a complex of brackish and freshwater ditches and areas of open water. Other areas of grazing marsh include Graveney Marshes and Teynham Level on the southern shore.

Areas of saltmarsh can be found bordering the intertidal mudflats at the north bank of the Swale NNR and a large area east of Flanders Mare on the north shore, in addition to areas bordering muddy creeks such as at Conyer Creek and Windmill Creek located on the southern and northern shores respectively. There are also fragmented patches located within the South Bank of the Swale Nature Reserve and Oare Marshes Nature Reserve.

There are several patches of littoral rock located at Shellness point on the northern shore (mussel beds are also located here), in addition to north of Cleve marshes on the southern shore.

The large areas of intertidal mudflats are submerged at high tide, and exposed in the estuary at low tide, providing an important feeding habitat for birds. The estuary also provides extensive roosting sites for large populations of waterbirds and is of major importance during the winter for duck and wader species and for supporting wader populations moving to the south east coast of Britain during the spring and autumn migration periods.

Thames Estuary and Marshes SPA and Ramsar Site

The estuary includes extensive mudflats, saltmarsh, and substantial areas of low-lying grazing marsh. In winter and during the autumn and spring migration the site holds major concentrations of waterbirds, especially waders, ducks and geese. A series of disused quarry pits have been transformed to create an extensive series of ponds and lakes at Cliffe Pools. The intertidal areas are bound mostly by seawalls, occasionally featuring small beaches, such as those around the Isle of Grain.

Table 3. Qualifying features

Qualifying feature	Medway Estuary and Masrhes SPA	Medway Estuary and Marshes Ramsar	The Swale SPA	The Swale Ramsar	Thames Estuary and Marshes SPA	Thames Estuary and Marshes Ramsar
A046a *Branta bernicla bernicla* dark-bellied brent goose (non-breeding)	✓	✓	✓	✓		
A048 *Tadorna tadorna* common shelduck (non-breeding)	✓	✓		✓		

Qualifying feature	Medway Estuary and Masrhes SPA	Medway Estuary and Marshes Ramsar	The Swale SPA	The Swale Ramsar	Thames Estuary and Marshes SPA	Thames Estuary and Marshes Ramsar
A054 *Anas acuta* northern pintail (non-breeding)	✓	✓				
A132 *Recurvirostra avosetta*; avocet (Breeding)	✓					
A132 *Recurvirostra avosetta*; avocet (non-breeding)	✓				✓	
A137 *Charadrius hiaticula*; ringed plover (non-breeding)	✓	✓		✓	✓	✓
A141 *Pluvialis squatarola*; grey plover (non-breeding)	✓	✓		✓	✓	✓
A143 *Calidris canutus*; red knot (non-breeding)	✓	✓			✓	✓
A149 *Calidris alpina alpina*; dunlin (non-breeding)	✓	✓	✓	✓	✓	✓
A162 *Tringa totanus*; common redshank (non-breeding)	✓	✓		✓	✓	✓
A195 *Sterna albifrons*; little tern (breeding)	✓					
A156 *Limosa limosa islandica* black-tailed godwit (non-breeding)		✓			✓	✓
A082 *Circus cyaneus*; hen harrier (non-breeding)					✓	
A160 *Numenius arquata;* curlew (non-breeding)		✓		✓		
Podiceps cristatus; great-crested grebe (non-breeding)		✓				

Qualifying feature	Medway Estuary and Masrhes SPA	Medway Estuary and Marshes Ramsar	The Swale SPA	The Swale Ramsar	Thames Estuary and Marshes SPA	Thames Estuary and Marshes Ramsar
Tringa nebularia; greenshank *(non-breeding)*		✓				
A130 *Haematopus ostralegus*; oystercatcher (non-breeding)		✓		✓		
A056 *Anas clypeata;* shoveler (non-breeding)		✓				
Tringa erythropus; spotted redshank (non-breeding)		✓				
A704 *Anas crecca;* teal (non-breeding)		✓		✓		
A169 *Arenaria interpres;* ruddy turnstone (non-breeding)		✓				
A050 *Anas penelope*; wigeon (non-breeding)		✓		✓		
Waterbird assemblage (non-breeding)[1]	✓	✓	✓	✓	✓	✓
Breeding bird assemblage	✓		✓			
Wetland plant assemblage		✓		✓		✓
Wetland invertebrate assemblage		✓		✓		✓

Notes:

[1] A waterbird assemblage is a qualifying feature of both the SPA and Ramsar sites. When classifying a waterbird assemblage as an SPA qualifying feature, the Ramsar Conventions Strategic Framework definition of 'waterbird' is used and as such we consider the two qualifying features synonymous. Current abundance and composition of the assemblage feature is taken into account in our assessment.

Bird Wise North Kent

Bird Wise [Ref 2] is North Kent's strategic, landscape scale response to tackling increased visitor pressure on the coast, arising from new residential development. Bird Wise is funded by contributions from house builders and covers the Thames, Swale and Medway estuaries and has been set-up to develop a strategy to accommodate increasing housing growth in the area, whilst protecting sensitive features. Much of North Kent lies within the Thames Gateway, a Government priority for regeneration and economic development.

Proposals for the England Coast Path between Iwade and Grain have been mindful of the work of the Bird Wise project. We have worked with representatives of Bird Wise to ensure that our proposals complement this initiative.

B2. European Site Conservation Objectives (including supplementary advice)

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

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

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

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

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

Supplementary advice on the conservation objectives can be viewed using the links below and the relevant issues have been assessed as part of this report:

Medway Estuary and Marshes SPA:

https://designatedsites.naturalengland.org.uk/Marine/SupAdvice.aspx?SiteCode=UK9012031&SiteName=medway&SiteNameDisplay=Medway+Estuary+and+Marshes+SPA&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=

The Swale SPA:

https://designatedsites.naturalengland.org.uk/Marine/SupAdvice.aspx?SiteCode=UK9012011&SiteName=swale&SiteNameDisplay=The+Swale+SPA&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=

Thames Estuary and Marshes SPA:

https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK9012021&SiteName=thames&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=

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

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

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

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

Conclusion:

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

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

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

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

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

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

C2.1 Risk of Significant Effects Alone

The first step is to consider whether any elements of the project are likely to have a significant effect upon a European site 'alone' (that is when considered in the context of the

prevailing environmental conditions at the site but in isolation of the combined effects of any other 'plans and projects'). Such effects do not include those deemed to be so insignificant as to be trivial or inconsequential.

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

For the purposes of this assessment, the qualifying features of the European Sites listed in B1 have been grouped as follows:

Table 4. Feature groups

Feature group	Qualifying feature(s)
Non-breeding waterbirds	Dark-bellied brent goose; common shelduck; northern pintail; avocet; ringed plover; grey plover; red knot; dunlin; redshank; black-tailed godwit; curlew; great-crested grebe; greenshank; oystercatcher; shoveler; spotted redshank; teal; wigeon; waterbird assemblage (non-breeding)
Hen harrier	Hen harrier (non-breeding)
Breeding waterbirds	Avocet; little tern; breeding bird assemblage
Wetland plants and invertebrates	Ramsar wetland plant and invertebrate assemblage features associated with saltmarsh/ intertidal habitats and freshwater wetlands. The sites support several nationally scarce plants and British Red Data Book species of wetland invertebrates.

Table 5. Assessment of likely significant effects alone

Feature	Relevant pressure	Sensitivity to coastal access proposals	Assessment of risk to site conservation objectives	LSE alone?
Non-breeding waterbirds	Disturbance of feeding or resting birds	Birds feeding on or near the foreshore or grazing marsh or resting in the vicinity of a coastal path may be disturbed by recreational activities including walking and walking with a dog.	The level of risk is higher where the access proposals are likely to bring people close to places on which large numbers of birds depend including undisturbed high tide roost sites and	Yes

Feature	Relevant pressure	Sensitivity to coastal access proposals	Assessment of risk to site conservation objectives	LSE alone?
			important feeding areas.	
Non-breeding waterbirds	Loss of supporting habitat through installation of access management infrastructure	The supporting habitats of the qualifying features may be permanently lost due to the installation of new access management infrastructure.	The level of risk is higher where there is a permanent and irreversible loss of the extent of supporting habitat which the birds depend on.	Yes
Hen harrier	Disturbance of resting birds	Birds roosting in the vicinity of a coastal path may be disturbed by recreational activities including walking and walking with a dog.	No appreciable risk because: ■ There are no known regularly used roost sites along the Iwade to Grain stretch of coast (confirmed by the North Kent Hen Harrier Roost Coordinator - pers comms)	No
Breeding waterbirds	Disturbance of breeding birds	Breeding waterbirds that breed in the vicinity of a coastal path may be disturbed, or nests may be trampled by recreational activities.	The level of risk is higher at places where the access proposals are likely to place breeding birds at risk from recreational activities.	Yes
Breeding waterbirds	Loss of supporting habitat through installation of access management infrastructure	The supporting habitats of the qualifying features may be permanently lost due to the installation of new access management infrastructure.	The level of risk is low because: ■ The access infrastructure will not be located in or near breeding habitats.	Yes

Feature	Relevant pressure	Sensitivity to coastal access proposals	Assessment of risk to site conservation objectives	LSE alone?
Wetland plants and invertebrates.	Regular trampling of sensitive vegetation	The associated habitats of the qualifying features may be damaged due to trampling where people regularly walk away from established paths.	The level of risk is higher at places where the access proposals are likely to place wetland plants and the habitats that support wetland invertebrates at risk from repeated trampling.	Yes
Wetland plants and inverts.	Loss of supporting habitat through installation of access management infrastructure	Habitat may be lost due to the installation of new access management infrastructure	There will be a minor loss of land (<0.5m^2) within coastal grazing marsh and saltmarsh due to the installation of signage. These items will be located to the edge of the designated site, therefore there is a low risk of significant effects to qualifying features.	Yes

Conclusion:

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

- non-breeding waterbirds (dark-bellied brent goose; common shelduck; northern pintail; avocet; ringed plover; grey plover; red knot; dunlin; redshank; black-tailed godwit; curlew; great-crested grebe; greenshank; oystercatcher; shoveler; spotted redshank; teal; wigeon; waterbird assemblage (non-breeding)
- breeding waterbirds (avocet; little tern; breeding bird assemblage) – as a result of disturbance
- wetland plant and invertebrate assemblages

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

- hen harrier (non-breeding)
- breeding waterbirds (avocet; little tern; breeding bird assemblage) – as a result of loss of habitat

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

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

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

Step 1 – Are there any appreciable risks from the access proposal?

Our assessment in C2.1 also considered possible impacts of the access proposal on:

- hen harrier (non-breeding)

Since no residual and appreciable risks have been identified, no assessment of in-combination effects is required.

Conclusion:

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

- hen harrier (non-breeding)

C3. Overall Screening Decision for the Plan/Project

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

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

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

PART D: Appropriate Assessment and Conclusions on Site Integrity

D1. Scope of Appropriate Assessment

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

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

Table 6. Scope of Appropriate Assessment

Environmental pressure	Qualifying Feature(s) affected	Risk to Conservation Objectives
Disturbance of feeding or resting birds	Non-breeding waterbirds (dark-bellied brent goose; common shelduck; northern pintail; avocet; ringed plover; grey plover; red knot; dunlin; redshank; black-tailed godwit; curlew; great-crested grebe; greenshank; oystercatcher; shoveler; spotted redshank; teal; wigeon; waterbird assemblage)	Repeated disturbance to foraging or resting waterbirds during winter and on passage, following changes in recreational activities as a result of the access proposal, leads to reduced fitness and reduction in population and/or contraction in the distribution of qualifying features within the site.
Disturbance of breeding birds	Breeding waterbirds (avocet; little tern; breeding bird assemblage)	Repeated disturbance to breeding waterbirds during the breeding season following changes in recreational activities as a result of the access proposal, leads to nest trampling and abandonment, and the resultant reduction in the breeding population.
Loss of supporting habitat through installation of access management infrastructure	Non-breeding waterbirds (dark-bellied brent goose; common shelduck; northern pintail; avocet; ringed plover; grey plover; red knot; dunlin; redshank; black-tailed godwit; curlew; great-crested grebe; greenshank; oystercatcher; shoveler; spotted redshank;	The installation of access management infrastructure may lead to a loss of habitat which supports the qualifying features. This includes all necessary stages of the non-breeding/wintering period (moulting, roosting, loafing, and feeding) and breeding period.

Environmental pressure	Qualifying Feature(s) affected	Risk to Conservation Objectives
	teal; wigeon; waterbird assemblage) Wetland plants and invertebrates	
Regular trampling of sensitive vegetation	Wetland plants and invertebrates	The repeated trampling of wetland plants and of the habitats that support wetland invertebrates may lead to a direct loss of habitat and habitat which supports the qualifying features within the sites.

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

The 64.7 km (40.2 mile) Iwade to Grain England Coast Path passes through three SPAs and Ramsar sites: the Medway Estuary and Marshes, The Swale and the Thames Estuary and Marshes. Only 2.3 km (1.4 mile) of the stretch passes through or nearby the designated grazing marshes and intertidal habitats of the Swale, and only 1 km (0.6 mile) of the stretch is aligned adjacent to the designated intertidal sediment habitat of the Thames Estuary and Marshes. The vast majority of the Iwade to Grain stretch, c95% or 61.4 km (38.1 mile), passes through or nearby to the Medway Estuary and Marshes, therefore the following contextual status will focus primarily on the latter SPA and Ramsar site.

Additional England Coast Path assessments relating to these SPA and Ramsar sites can be found here:

Thames Estuary and Marshes SPA and Ramsar site

- The Habitats Regulation Assessment for the Grain to Woolwich England Coast Path was published 5 June 2019.
- The Habitats Regulation Assessment for the Tilbury to Southend England Coast Path is yet to be published.

The Swale SPA and Ramsar site

- The Access and Sensitive Features Appraisal for the Whitstable to Iwade England Coast Path was published 21 June 2017.
- The Habitats Regulation Assessment for Isle of Sheppey England Coast Path is yet to be published.

Disturbance of feeding or resting non-breeding waterbirds

One of the factors we take into account when proposing the alignment of the England Coast Path is the potential for the disturbance of birds. The SPAs, and in particular Medway Estuary and Marshes SPA, have extensive areas of intertidal sediment and grazing marsh, and islands of saltmarsh and sandy/shingle beaches. The southern section of the Medway Estuary has several peninsulas of extensive grazing marsh, such as Chetney, Barksore and Horsham Marshes where there is currently no or limited permitted access for the public. The Medway Estuary also has a complex arrangement of tidal channels, which drain around large islands of saltmarsh.

The wintering waterbirds typically feed on the intertidal sediment, undisturbed grazing marshes and terrestrial wetlands, and use a network of sites within the estuary as high tide roosts. The preferred high tide roosts sites of the Medway are Chetney Marshes, Barksore Marshes and Horsham Marshes (& Bayford) and the extensive saltmarsh islands (such as Burntwick Island, Greenborough and Slayhill Marshes, Millfordhope Marsh, Bishop Saltings and parts of Nor Marsh) as well as the saltings at Riverside Country Park, Motney Hill and Twinneys. Footprint Ecology further identified Hoo Island, Hoo saltmarsh and Elphinstone Point as high-tide roosts in the north of the Estuary, and the arable fields near Hoo St Werburgh and Stoke provide additional feeding areas for brent geese. However, many of the saltmarsh roost sites submerge during high spring tides.

The integrity of the whole network of high tide roosts seems to be important in the southern Medway for various reasons. With no sediment recharge of the islands planned; coupled with rising sea levels, we can expect the saltmarsh island roosts to be submerged for longer periods at more frequent intervals in the future. Other factors in the wider Medway Estuary and Marshes SPA, such as recreational disturbance from walkers and dog walkers, bait digging, widespread wildfowling, and waterborne recreational activities with associated unconsented boat landings means that the non-breeding waterbirds rely heavily on a wide network of high tide roost sites being available at different times.

Within the Iwade to Grain stretch, disturbance is potentially problematic for passage and wintering birds, and is especially damaging when it occurs repeatedly. Recreational activities causing disturbance during the autumn or spring migratory periods, or over the winter, can affect the birds' ability to feed or to rest effectively at roost sites, and it also increases energy expenditure.

As part of the Supplementary Advice on Conservation Objectives for the SPAs, Natural England has set targets for all the qualifying features, in order to meet the conservation objectives for the site. The following non-breeding qualifying features have a target to 'restore' the population, as there have been significant declines since classification:

<u>Medway Estuary and Marshes SPA</u>

- Ringed plover, grey plover, dunlin, redshank, dark-bellied brent goose, shelduck and pintail. All the features also have a target to 'reduce disturbance caused by human activities'.

The Swale SPA

- There are no targets to 'restore' the population of qualifying features of this SPA as there is no evidence to demonstrate declining populations. All the features also have a target to 'reduce disturbance caused by human activities'.

Thames Estuary and Marshes SPA

- Ringed plover, grey plover, dunlin, redshank, and knot. All the features also have a target to 'reduce disturbance caused by human activities'.

In 2012, a study of wintering bird disturbance in North Kent between Gravesend and Whitstable (Thames Estuary and Marshes SPA, Medway Estuary and Marshes SPA and The Swale SPA) [Ref 7] came to nine broad conclusions regarding new residential development and the need for mitigation, the most relevant to this assessment being:

- There have been marked declines in the numbers of birds using the three SPAs. Declines are particularly apparent on the Medway and have occurred at the locations with the highest levels of access.
- Disturbance is a potential cause of the declines. The disturbance study shows birds are responding to the presence of people, and there is evidence that the busiest locations (which have seen the most marked bird declines) support particularly low numbers of birds.
- Access levels are linked to local housing, with much of the access involving frequent use by local residents.
- Dog walking, and in particular dog walking with dogs off leads, is currently the main cause of disturbance. Other particular activities are those that involve people on the mudflats or the water.
- Areas currently undisturbed, and in particular the main roost sites should, in particular, be protected from additional recreational pressure.

The Thames, Medway and Swale Estuaries Strategic Access Management and Monitoring Strategy [Ref 5] and the Bird Wise North Kent Mitigation Strategy [Ref 14] set out the visitor management measures required to mitigate for human disturbance issues on the North Kent Marshes resulting from new residential development. The Bird Wise Strategy objectives include:

- Raising awareness of the importance of the SPAs in North Kent
- Providing information on the birds that rely on the SPAs to survive
- Preventing additional bird disturbance caused by recreational activities on the coast
- Encouraging visitors to enjoy the North Kent coast in a responsible manner.

A corresponding visitor survey was also carried out in winter 2010/11 [Ref 4]. Survey locations were selected based on their popularity with visitors in the three North Kent estuaries. 10 out of the 21 visitor survey sites were located in the Iwade to Grain England

Coast Path stretch. These sites are: Upchurch, Motney Hill turning, Riverside Country Park, The Strand (Gillingham), Lower Upnor, Hoo St Werburgh, Middle Stoke, Stoke Ouze A228 layby, Grain Beach and Grain Power Station. Of these sites, all of them are located in the Medway Estuary and Marshes SPA, except for Grain Beach, which is located in the Thames Estuary and Marshes SPA. The most popular coastal sites for visitors in Medway Estuary are Riverside Country Park, Motney Hill and Hoo St Werburgh, which is unsurprising given the large urban towns nearby these sites. Stoke Ouze A228 layby, Middle Stoke and Upchurch conversely received much fewer visitors, most likely given the larger distance to urban towns such as Gillingham, Rainham and Hoo St Werburgh. The monitoring also revealed the importance of the North Kent estuaries and marshes as a place for visitors to take and exercise their dogs and found that 76% stayed to marked paths. Most people interviewed went to a particular location because it was close to home and also because it was 'good for the dog'.

The digitised map of walking routes used by the visitors of this survey in the Medway Estuary showed that the existing public rights of way and permissive paths currently available (such as the promoted route Saxon Shore Way) are, in general, very well used already. A few areas though, such as Chetney, Barksore and Horsham Marshes in the south of the estuary, which do not currently permit public access, and the industrial coastline between Kingsnorth Power Station and Grain Power Station, which is largely fenced off from access and further away from urban areas, appear to be mostly or entirely free from public access. This also corresponds with Strava Heat Map[2].

Disturbance of breeding waterbirds

Repeated disturbance to breeding waterbirds during the breeding season following changes in recreational activities can lead to birds being dissuaded from making nesting attempts, nest trampling and abandonment, so that eggs are exposed to chilling or predation, and the resultant reduction in the breeding population. Breeding little tern and ringed plover are especially vulnerable to human activity, due to their preference for nesting on beaches, and are likely to abandon their nests if repeatedly displaced.

The Medway Estuary and Marshes SPA provides the following suitable habitat which supports the waterbirds for all necessary stages of its breeding cycle (courtship, nesting, feeding): intertidal mud: 3154ha, intertidal sand and muddy sand: 0.6ha, saltmarsh: 852ha, freshwater and coastal grazing marsh: 644ha, and coastal lagoons: 7 ha.

The key areas for breeding waterbirds along this stretch are the grazing marshes/wetlands and saltmarsh of the following areas: Chetney peninsula, Barksore Marsh, Upchurch peninsula (Horsham Marsh, Bayford, Hamgreen Saltings), Motney peninsula, Hoo and Kingsnorth, and Stoke/Middle Stoke Marsh, as well as the saltmarsh islands within the estuary. In 2011 there were 802 breeding pairs of Sandwich terns, Mediterranean gulls and common terns principally on Burntwick and Greenborough and Nor Marshes. Little tern prefer bare substrates such as the shingle beaches at Deadman's Island.

[2] Strava is a website and mobile app used to track cycling and running activities via GPS. Users upload workouts and the logged activities includes route data. This route data can be viewed on the global heatmap.

Breeding wader surveys are currently undertaken as part of the North Kent Breeding Wader Project on sites in the North Kent Marshes with Higher Level Stewardship agreements targeting wet grassland for breeding waders. Other data has been ascertained from the Kent Breeding Bird Atlas (2008-13) and further site specific information has been provided by local bird recorders.

Little terns have historically nested on the shingle at Deadman's Island, north of Chetney Marsh, however nests in recent years have been unsuccessful although they still attempt to breed each year. The nests have most likely been unsuccessful due to avian predators, such as gulls, and tidal inundation from increased storm events.

Key areas for breeding avocets, which favour shallow saline or brackish lagoons, include the newly created breeding islands at Horsham Marsh (which has seen up to 36 breeding pairs in 2016), as well as in various locations at Chetney peninsula (150 breeding pairs in 2006), and Bayford (23 birds in 2018).

Loss of supporting habitat for non-breeding and breeding waterbirds, and wetland plants and invertebrates

The Supplementary Advice on Conservation Objectives for the SPAs has set a target to maintain the extent, distribution and availability of suitable habitat (either within or outside the site boundary) which: supports the non-breeding bird qualifying features for all the necessary stages of the non-breeding period including moulting, roosting, loafing and feeding; supports the breeding bird features for all necessary stages of its breeding cycle (courtship, nesting, feeding). Inappropriate management and direct or indirect impacts which may affect the extent and distribution of habitats may adversely affect the population and alter the distribution of birds.

The Supplementary Advice for the Medway Estuary and Marshes SPA has also provided baseline information (based on the best available evidence) on the extent and distribution of supporting habitat used by the qualifying features: intertidal mud: 3154 ha, intertidal sand and muddy sand: 0.6 ha, saltmarsh: 852 ha, freshwater and coastal grazing marsh: 644 ha, coastal lagoons: 7 ha, intertidal coarse sediment (extent unknown), intertidal mixed sediments (extent unknown), and water column (extent unknown).

The Supplementary Advice for the Thames Estuary and Marshes SPA that is applicable (see Map 1) to this England Coast Path stretch is approximately intertidal mud: 194ha.

The Supplementary Advice for The Swale SPA applicable to this England Coast Path stretch is approximately: intertidal mud: 17.3ha, saltmarsh: 15.8ha, and freshwater and coastal grazing marsh: 50ha.

The installation of new infrastructure on habitat that supports wetland plants and of the habitats that support wetland invertebrates may lead to a direct loss of habitat and habitat which supports the qualifying features within the sites. The wetland plant and invertebrate features that are listed in the Information Sheet on Ramsar Wetlands for the Medway Estuary and Marshes, The Swale and the Thames Estuary and Marshes are generally found in saltmarsh and grazing marsh habitats.

Regular trampling of sensitive vegetation

Repeated trampling of wetland plants and of the habitats that support wetland invertebrates may lead to a direct loss of habitat and habitat which supports the qualifying features within the sites. The wetland plant and invertebrate features that are listed in the Information Sheet on Ramsar Wetlands for the Medway Estuary and Marshes, The Swale and the Thames Estuary and Marshes are generally found in saltmarsh and grazing marsh habitats.

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

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

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

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

The key nature conservation issues for the Medway Estuary and Marshes, The Swale, and the Thames Estuary and Marshes SPA and Ramsar site (Map 1) is the protection of non-breeding, breeding waterbirds, trampling of sensitive vegetation and loss of supporting habitat. In this section of the assessment we describe our overall approach to the issues and the main mitigation measures proposed to address the impacts and risks.

Non-breeding waterbirds

A strategy for influencing the behaviour of walkers, walkers with dogs and other recreational users has been developed by Bird Wise focusing on raising awareness of: the importance of the North Kent estuaries to wintering and migratory birds; the risk of disturbance; and how to avoid it. Bird Wise work with users at key locations that are important for wintering birds and popular for recreation, promoting responsible behaviour that minimises disturbance. Other more inaccessible locations function as refuge areas. There is an opportunity for the England Coast Path to influence both existing and new users' behaviour by collaborating with Bird Wise.

In order to support the conservation objectives of the SPAs, and complement the Bird Wise strategy, we have designed our proposals for the stretch to maintain refuge areas for wintering and breeding waterbirds, where access is discouraged, such as at Chetney Marshes, Barksore Marshes, Horsham Marshes (including Bayford and Hamgreen Saltings).

Some new sections of path are proposed along this stretch of coast, and we have assessed these on a case by case basis to ensure refuge areas will not be impacted (each is considered in more detail in the next section of this assessment). Elsewhere, the route we have proposed for the Coast Path is already easy to follow, with a good surface for walking

and free of obstructions. The main works needed are marking the route with the National Trail acorn symbol. Some increase in the popularity of the route is likely, not least given an expected increase in demand for local greenspace as a result of housing allocations in the current Local Plan.

To inform our assessment of risk, we have reviewed how relevant sections of coast are currently used for recreation, how this might change as a result of known factors (such as planned housing), and how the established patterns and levels of access might be affected by our proposed improvement to access. The predictions we have made from this work are informed by available information, including reports commissioned to support development of the local plans (Ref 7), on-line mapping and aerial photography, travel and visitor information, site visit and input from local access managers. The findings of this work are incorporated into the assessments below.

The cumulative effect of more frequent use of a path on disturbance pressure depends on the circumstances and is difficult to predict with complete confidence. Away from more sensitive areas, such as roost and nesting sites, the main measurable impact is likely to be a greater chance of interruptions to feeding behaviour in waterbirds close to the path, including alertness or short escape flights. Such impacts are unlikely to produce a noticeable effect on birds use of the estuary or SPA population levels and by focusing management on the selected coastal path, and promoting responsible behaviour amongst path users, the chance of more harmful disturbance events in other areas is expected to be reduced.

The majority of the proposals will follow paths that have existing highways or rights of way or are promoted as the long distance walking route, Saxon Shore Way. There will be very little in terms of infrastructure improvements, so in general, the Coast Path proposals will result in a negligible to small increase in access. At the following sites, after discussion with Bird Wise, we have not proposed any mitigation in addition to the Bird Wise Strategy. These sites include Ridham Dock, Lower Halstow to Ham Green, Riverside Country Park, Lower Upnor to Hoo St Werburgh, Stoke Marshes and Grain Coastal Park.

However at key sites, Natural England and Bird Wise will develop joint interpretation that focuses on specific well placed information. These interpretation panels will be aimed at encouraging the responsible behaviour of visitors, such as dogs under close control. Bird Wise wardens have advised us on the details of the signage to ensure that it is clear and relevant to each location. The areas where Bird Wise have recommended new signage and the Coast Path will fund is: Hoo St Werburgh, the A228 layby in Stoke and Raspberry Hill Lane. There will be on-going maintenance of the signs once the access rights on the ECP are commenced. The signs at Hoo and Stoke will be maintained by Bird Wise and the sign at Raspberry Hill Lane by Kent Wildfowlers.

Breeding waterbirds

We have also considered the key breeding sites that are likely to be at risk of disturbance during the breeding season. The following breeding sites provide suitable habitat to support the breeding little terns, avocets and the breeding waterbird assemblage. The assemblage designation covers all waterbirds including oystercatcher, lapwing, ringed plover, redshank, shelduck, mallard, teal, shoveler, pochard and common tern.

Saltmarsh and grazing marsh (with associated waterbodies) at Ridham Marshes, Burntwick Islan, Greenborough & Slayhills Marshes, Bishop's Saltings & Nor Marsh, Hoo Saltmarsh and Marshes, Kingsnorth/Damhead Creek, Middle Stoke/Stoke Saltings, Stoke Marshes and Greatchalk Fleet (near A228 BP Oil)

At these sites, the route either follows the existing public right of way, the Saxon Shore Way and/or a highways footway, or these sites are not physically accessible by foot. These breeding sites are separated from Coast Path by physical and natural features such as borrow dykes, scrub, ditches, fence lines or the curtilage of built development such as Kingsnorth Power Station and BP Oil Distribution Terminal. Any saltmarsh that falls within the coastal margin will have a direction to restrict public access as it is unsuitable to walk on. Many of the islands in the Medway Estuary are used for breeding by common tern, Sandwich tern and Mediterranean gull, such as Bishops Saltings, Greenborough and Burntwick, but they are not accessible by foot. We therefore consider that there is a low risk of increased disturbance to the breeding features at these aforementioned sites.

Saltmarsh and grazing marsh (with associated waterbodies), unvegetated shingle and sandy beaches at Chetney peninsula and Deadman's Island, Barksore Marshes, Horsham Marsh, Bayford and Kingsnorth Grazing Marsh..

The key breeding sites in the SPAs for little tern, avocets and the breeding bird assemblage in these aforementioned locations has no or limited existing access currently. Therefore these sites are at risk of disturbance during the breeding season, and the risk will be assessed in more detail below.

Loss of supporting habitat for non-breeding and breeding waterbirds, and wetland plants and invertebrates

We have also considered whether the installation of access management infrastructure will lead to a loss of the habitat which supports the qualifying features for all necessary stages of the non-breeding/wintering period (moulting, roosting, loafing, and feeding), all necessary stages of the breeding period (courtship, nesting, feeding) and the habitat that supports wetland plant and wetland invertebrate assemblages. Our proposals will see the installation of the following new infrastructure items in the designated sites across approximately 64.7km of trail: 12 signs, 4 interpretation panels, 2 roadside sign, 6 sets of timber steps and 1 dropped kerb, in addition to the replacement of 5 stiles with pedestrian gates. Aside from 1 interpretation panel, which is located in the edge of saltmarsh at Raspberry Hill Lane, and 1 interpretation panel and 3 waymarker posts, which are located in grazing marsh at Stoke Marshes, Kingsnorth Grazing Marsh and land south of Horsham Marsh, the rest of the infrastructure are located on seawalls, tracks and road verges which are not considered supporting habitats in the Supplementary Advice on Conservation Objectives (listed in D2). We recognise that seawalls could potentially function as a roost for the qualifying features, however the infrastructure locations are not positioned within any of the known key roosts, which are detailed in D3.2.

The construction of a new footway adjacent to the A228 (near Greatchalk Fleet at BP Oil) is located entirely outside of the designated sites. 100m of the footway will be built over a highways ditch, so the ditch will be re-profiled to maintain water capacity. On inspection, we

consider it unlikely that this ditch contains rare wetland plants and invertebrates that support the designated site, given the following: the proximity to the busy A228 where many HGVs pass continuously in this industrial area, the (likely contaminated) runoff from the road that enters the ditch, and the dominance of common reed and roadside rubbish.

Regular trampling of sensitive vegetation

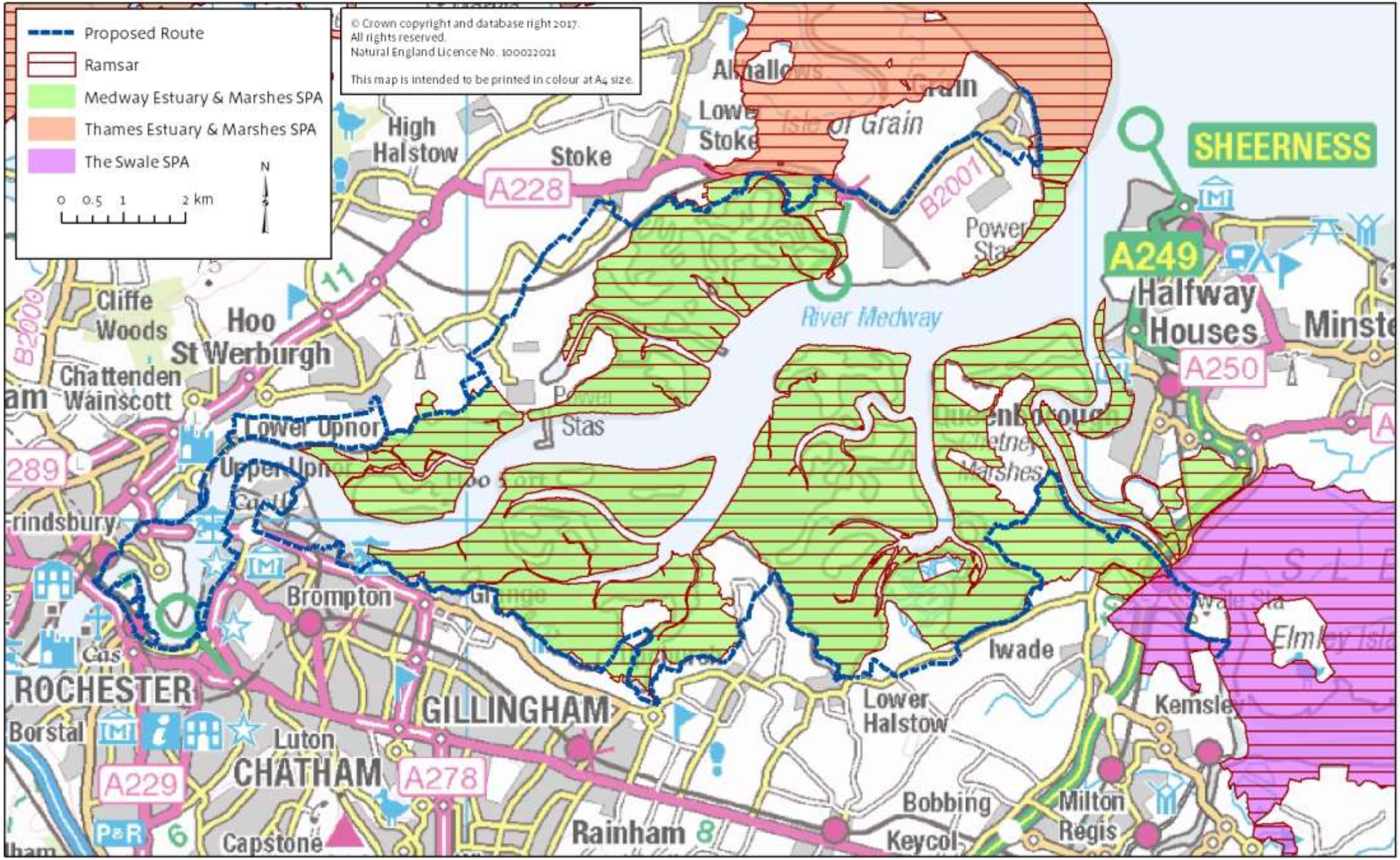
We have considered whether the repeated trampling of wetland plants and of the habitats that support wetland invertebrates may lead to a direct loss of habitat and habitat which supports the qualifying features within the sites. The level of risk is low because the trail for the Coast Path is principally aligned on established paths. Of the 5.8km where we are proposing new access, most of it is either located outside of the Medway Estuary and Marshes Ramsar site, or where new access is located within the Medway Estuary and Marshes Ramsar site, the trail will be aligned either on a road verge, or around the edge of a copse. Where the Coast Path follows established paths, the route is principally aligned on top of seawalls and well-worn terrain.

When considering the risk of trampling to habitats landward or seaward of the trail, with respect to saltmarsh, no new access rights will be created here as these habitats are unsuitable for public access and will be restricted by direction. Where a well-established trail passes nearby grazing marsh and there is a natural or physical separation of grazing marshes by borrow dykes, ditches, scrub or curtilage of a built development, it is also unlikely that the Coast Path proposals will result in increased trampling. Examples of these sites are Ridham Marshes, Ferry Marshes, Abbot's Court, Kingsnorth, Stoke Marshes and Smithfield Marshes.

However, for Chetney peninsula, Barksore, and Horsham Marsh (& Bayford), we will assess the risk of trampling the grazing marsh in more detail below.

Coastal Access - Iwade to Grain - Habitats Regulations Assessment

Map 1: Natura 2000 designations within the Iwade to Grain ECP Stretch



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

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

The relationship between the locations referred to in this assessment and the corresponding Coastal Access Reports in which the access proposal is described is shown in the table below.

Table 7. Summary of key locations

Location	Cross reference to the access proposal	Non-breeding waterbirds	Breeding waterbirds	Wetland plants and invertebrates
Chetney peninsula (and Deadman's Island)	IGR 2/ route sections IGR-2-S001 to IGR-2-S0010 (Maps IGR 2a to IGR 2c)	✓	✓	✓
Funton Creek/ Bedlams Bottom	IGR 3/ route sections IGR-3-S001 to IGR-3-S008 (Maps IGR 3a)	✓		✓
Barksore Marshes	IGR 4/ route sections IGR-4-S001 to IGR-4-S024 (Map IGR 4a and IGR 4b)	✓	✓	✓
Upchurch peninsula (Horsham Marsh, Bayford, Hamgreen Saltings and Otterham Creek)	IGR 6/ route sections IGR-6-S001 to IGR-6-S025 (Maps IGR 6a and IGR 6b)	✓	✓	✓
Motney Hill	IGR 7/ route sections IGR-7-S009 to IGR-7-S010 (Map IGR 7a)	✓	✓	
Hoo Marsh	IGR 9/ route sections IGR-9-S053 to IGR-9-S057 (Map IGR 9d)	✓	✓	✓

D3.2A Chetney peninsula (and Deadman's Island)

Current situation

Chetney peninsula is an extensive area of grazing marsh bordered by saltmarsh, and surrounded by tidal creeks. To the north of the peninsula is Deadman's Island, an island of saltmarsh with pockets of unvegetated shingle beaches. Chetney peninsula and Deadman's Island both form part of the Medway Estuary and Marshes SPA and Ramsar site.

Chetney peninsula is regularly used by wintering and on passage waders that feed on the mudflats at low tide, particularly at Queenborough Spit and Ham Ooze, and congregate to roost at high tide on the shoreline and grazing marsh, particularly at the north west of the peninsula. The key roosts in Chetney peninsula and Deadman's Island are shown on Map 2. These are used interchangeably with the saltmarsh roosts at Burntwick Island and Greenborough Marshes, with the roosts at Chetney being preferred when the saltmarsh islands are completely inundated during high spring tides. The roosts at Chetney peninsula are particularly favoured by lapwing, avocet, oystercatcher, golden plover, pintail, dark-bellied brent goose, dunlin (the latter three species have a target to restore the size of the non-breeding population above current levels).

The marshes and wetlands at Chetney are also used by breeding avocets (150 breeding pairs in 2006), shelduck, oystercatcher, lapwing, redshank, teal, shoveler, pochard and gadwall. Deadman's Island provides the only regular nesting site for little tern in the SPA with 10 pairs surveyed in 2017 and 6 in 2018. Unfortunately due to predation and tidal inundation, these nesting attempts have been unsuccessful in recent years. Little tern often feed in the summer months in the tidal channel to the north east of Chetney Marshes. Deadman's Island also provides a nesting site for common tern, Sandwich tern and Mediterranean gull.

Chetney peninsula has existing public footpaths on southern half of the seawall and this footpath forms part of the promoted long distance walking route, the Saxon Shore Way. However, for large areas in the north of the peninsula, including Deadman's Island, the landowners do not welcome visitors as the area is fenced off and signs inform users of the Saxon Shore Way that recreational access to the north is prohibited. Illegal landings by boats can be an issue, especially during summer time.

The current footpath network on the peninsula is not well used, this is most likely due to the lack visitor infrastructure, such as car parks and visitor centres, and the long distance it takes to walk from one end to the other (Strava Heat Map, and North Kent Visitor Survey Report).

The coast at Chetney peninsula has not been prioritised for active Bird Wise warden engagement (Appendix 1) as the public do not currently have access to much of the coast here and the areas with existing access rights have a low footfall so there is a low risk of disturbance from walkers/dog walkers to wintering birds.

Detailed design and assessment of risk

The proposed route for the Coast Path at Chetney peninsula will follow existing paths promoted route Saxon Shore Way (Map 2). There will be no improvements to the path. Land

seawards of the Coast Path would become part of the coastal margin by default, however, no new coastal access rights would be created over the mudflats and the saltmarsh on grounds that it is dangerous and unsuitable for public access.

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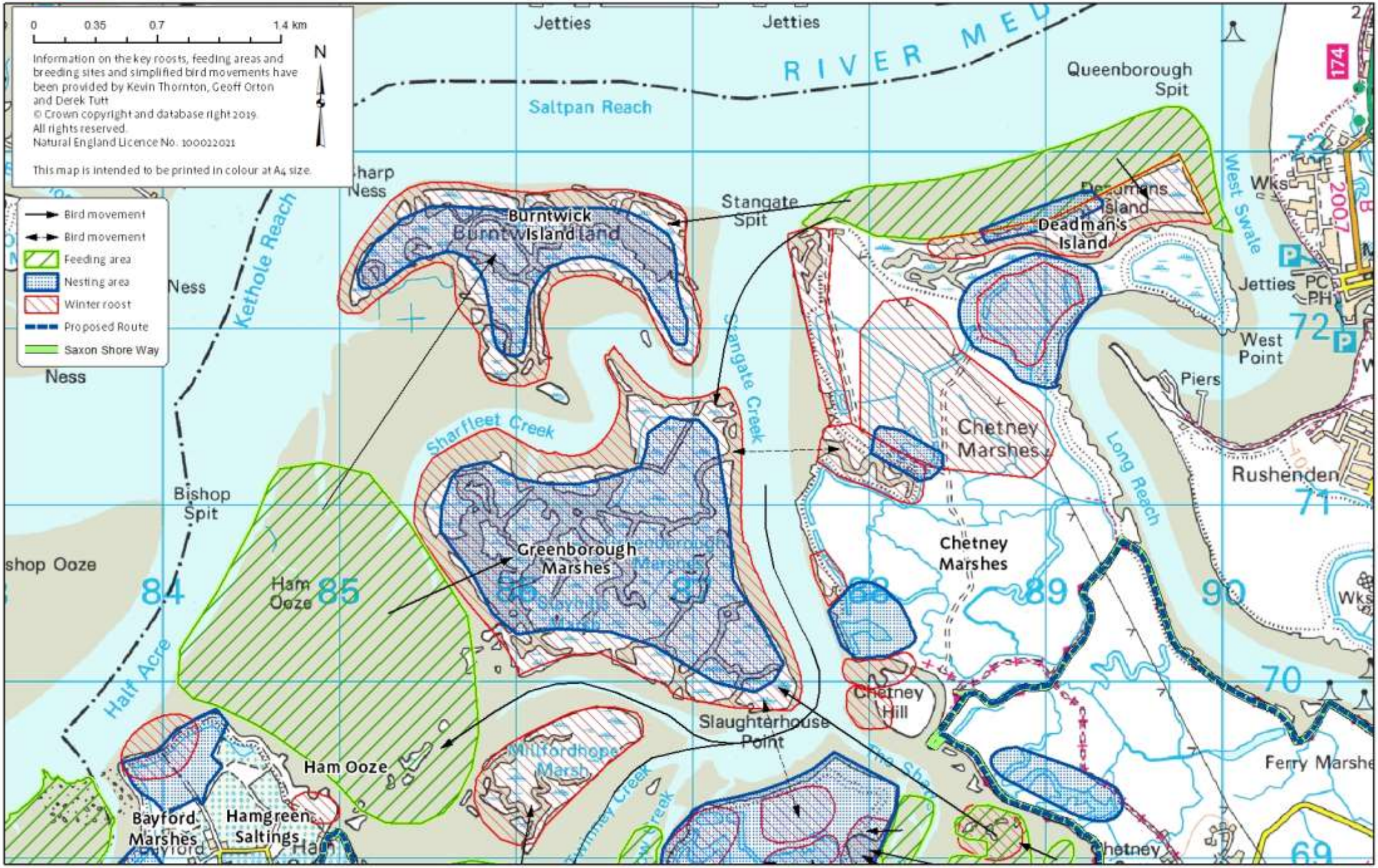
Map 2: Design of access proposal to address possible risks at Chetney Peninsula (and Deadman's Island)



Considering each of the possible risks to qualifying features:

i. Disturbance of waterbirds feeding on the mudflats

The proposed path will follow existing public footpaths thereby avoiding the feeding birds on the mudflats north of Deadman's Island and north-west of the peninsula. Knot and golden plover are known to feed on the mudflats near the footpath on Chetney at Bedlams Bottom, however, we expect a negligible increase in the frequency of use of our proposed route as it follows the already well-promoted Saxon Shore Way.

ii. Disturbance to waterbirds roosting on the shoreline and grazing marsh of Chetney Marshes and the saltmarsh roost at Bedlams Bottom

Based on current demand, we expect a negligible increase in the frequency of use of our proposed route. In addition, we note that the level of use of the route is likely to be influenced by planned housing growth in Swale district [Ref 7]. The proposed route at Chetney peninsula will avoid direct access to key roosts shown on map 2. Chetney Marsh will have a nature conservation access exclusion applied all year (see 'Directions Map IGR 2A', available in Report IGR 2) due to the risk of disturbance to wintering, on passage, and breeding bird features (see below for discussion for breeding features). The landowners of the marshes will maintain the existing fencing that currently separates the Saxon Shore Way from Chetney Marshes, and the 'keep out' signs to ensure that Chetney Marshes is closed to visitors and that trespassers are actively advised of the access restrictions.

The saltmarsh island roosts near Bedlams Bottom are unlikely to be effected given the negligible change in access in this location. These islands are often covered by moderate spring tides, so waders using this roost already utilise other sites in the area. Our proposals have sought to maintain the network of key roosts in this area, such as Chetney Marshes and Greenborough Marshes, so the qualifying features will be able to utilise these alternative local refuges if disturbance does result in a major flight.

iii. Disturbance to breeding waterbirds at Chetney peninsula and Deadman's Island

The proposed route will avoid the key breeding areas in Chetney Marshes and Deadman's Island shown on Map 2. The key breeding areas will also have a nature conservation access exclusion applied all year. The ponds and ditches approximately 100m landward of the Coast Path in the south which have supported breeding avocets in the past and continue to support breeding ducks will not be subject to new access rights. The Coast Path on the seawall is clearly marked in this location, so it is unlikely that visitors will stray from the trail.

iv. Trampling of sensitive vegetation

The proposed route at Chetney peninsula is on a seawall and is well marked and clear to follow. Access to Chetney Marshes will be excluded by an all year access exclusion on nature conservation grounds, and access to saltmarsh will be excluded as it is dangerous and unsuitable to walk on. It is therefore unlikely that the Coast Path proposals will lead to an increase in trampling of sensitive vegetation which supports the qualifying wetland plants and invertebrates of the Ramsar site.

Conclusion

Natural England has considered the possible risks to qualifying features at this location, and given the avoidance and mitigation measures detailed above, consider that no new significant disturbance or trampling will be caused. The proposals will therefore not adversely affect the achievement of the conservation objectives in this location. Establishing a well maintained and easy to follow Coast Path along the alignment proposed will also help this the long-term management of visitors to the site.

D3.2B Funton Creek/ Bedlams Bottom

Current situation

Bedlams Bottom is an area of low lying mudflat and saltmarsh bordered by Chetney peninsula to the east and Barksore Marshes to the west. Funton Creek is a small freshwater stream, and together with Bedlams Bottom, forms part of the Medway Estuary and Marshes SPA and Ramsar site. The saltmarsh to the south of Bedlams Bottom is used by moulting redshank and up to 30 moulting greenshank between July and September. Moulting greenshank and redshank, contrary to ducks, do not become flightless when they are moulting so are less vulnerable. Ducks including 200 pintail, 200 wigeon and hundreds of shelduck often loaf and feed on the water column at high tide near Raspberry Hill, and the mudflats near Raspberry Hill supports a small number (up to 100) of waders feeding 1 hour before the high tide. The mudflats near Funton Creek are regularly used by wintering and on passage waders that feed on the mudflats at low tide and congregate to roost at high tide on Barksore Marsh's grazing marsh and wetlands (Map 3). The redshank and greenshank that use the roosts south of Bedlams Bottom in the moulting season also fly to Barksore Marshes if disturbed. The hay field at Raspberry Hill can be used by up to 40 wintering curlew at high tide.

The feeding areas at Funton Creek are particularly favoured by large numbers of avocet, black-tailed godwit, greenshank, turnstone, golden plover, redshank and dunlin (the latter two species have a target to restore the size of the non-breeding population above current levels).

The functional unit of Bedlams Bottom and Funton Creek is highly connected with Barksore Marshes. So any disturbance resulting in a major flight of roosting or feeding birds at Bedlams Bottom will lead to birds making use of nearby Barksore Marshes for roosting and the adjacent mudflats.

Raspberry Hill Lane is a public highway along the coastline which sees fast vehicles and is well-used by cyclists (National Cycle Network 1), as seen on the Strava Heat Map. Therefore there already a low level of disturbance from fast cars and cyclists. There are no existing access rights on the hay field and old orchard at Raspberry Hill, and any current visitors, particularly birdwatchers, tend to park their car in the laybys along Raspberry Hill Lane and remain close by (North Kent Visitor Survey Report).

Residents from the nearby village of Iwade (which is over 1km away) either tend to use greenspace closer to home which is good for dog walking, or accessible coastal sites with

safe parking (Strava Heat Map, North Kent Visitor Survey). This stretch of coast at Funton Creek/Bedlams Bottom has been given a medium priority for active Bird Wise warden engagement (Appendix 1) as there are a medium to high number of birds, albeit with a low footfall.

Detailed design and assessment of risk

The proposed route for the Coast Path at Funton Creek/Bedlams Bottom will follow a newly created road verge (consisting of an unsurfaced strimmed path), and a new route through a hay field and an old orchard at Raspberry Hill as shown on Map 3. Due to Kent Highway's safety concerns advising not to cross the road on a bend, in the west the route crosses the road southwards to align on the edge of an arable field south of the road behind an established hedgerow prior to joining the byway near Funton Brickworks. The new path will be easy to use and follow, and other improvements include: new gates to replace existing barriers, new waymarking and steps. Land seawards of the Coast Path would become part of the coastal margin by default, however no new coastal access rights would be created over the mudflats and the saltmarsh on grounds that it is dangerous and unsuitable for public access.

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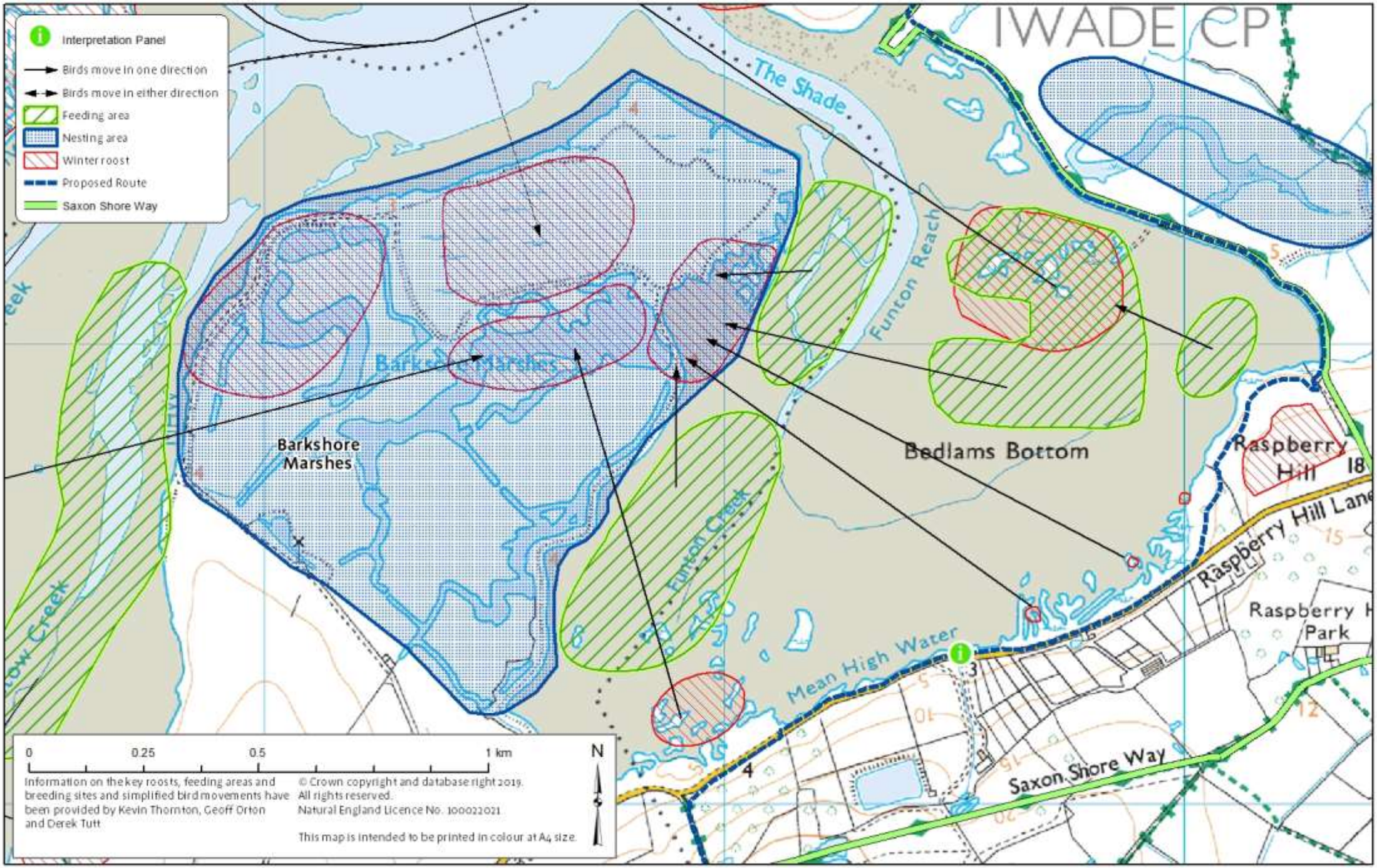
Map 3: Design of the access proposal to address possible risks at Funton Creek/ Bedlams Bottom



Considering each of the possible risks to qualifying features:

i. Disturbance of waterbirds feeding on the mudflats

The proposed path will take a new road-verge route which is approximately a minimum of 300m away from the principal foraging areas being the southern extent of Funton Reach and Funton Creek, thereby avoiding the feeding birds on the mudflats near to Raspberry Hill Lane. There is also at least 100m depth or more of saltmarsh seaward of the route. The small number of waders feeding close to Raspberry Hill may be more frequently disturbed due to the creation of a new route in the hay field. The amount of disturbance will be minimised however by the screening provided by existing scrub seaward of the Coast Path and the distance between the trail and the intertidal area which is a minimum of 40m. The level of disturbance is likely to be limited to a 1 hour window before the high tide when the waders will be feeding closer to the shore. Any waders that will be disturbed from the mudflats during the high tide and that results in major flight, will be able to remain within the functional unit by making use of Funton Creek and Barksore Marshes, as they do currently.

ii. Disturbance to waterbirds roosting on the saltmarsh at Bedlams Bottom, loafing ducks at high tide near Raspberry Hill and roosting curlew at Raspberry Hill hay field

Based on current demand, we expect a medium increase in the frequency of use of our proposed route as a result of the creation of new access rights and the proposed path improvements. In addition, we note that the level of use of the route is likely to be influenced by planned housing growth in Swale [Ref 7]. The proposed new route enters a field and continues adjacent to the shore at the base of Raspberry Hill until it meets the orchard. Advice we have received from local ornithologists suggests this field is occasionally used by up to 40 wintering curlew (representing approx. 3.6% of the current Ramsar site population), that mainly feed at the top of the hill. We consider that given the size of the hay field, and the clear sight lines it affords (being on a hill) that the curlews can continue to make use of the hay field further away from the path. The proposed route may also disturb ducks which loaf in the hundreds on the water in the bay below Raspberry Hill and into Bedlams Bottom. Current disturbance from walkers on the seawall at Chetney peninsula appears to result in them swimming away from the shoreline and into the body of the bay. Although our proposals may result in increased frequency of these ducks swimming away, it is unlikely to result in either significant energy expenditure and hence mortality, or to significantly change their distribution within the SPA.

The route through the old orchard primarily follows its seaward edge, however it takes an inland diversion into a newly created path in the orchard to avoid a beach roost used by up to 30 greenshank during the late summer moult. Walkers would be encouraged to use the inland route as it will be a wide and clearly way marked route and will also avoid a deep and difficult step down to the beach caused by coastal erosion. One side of the roost is also fenced off by barbed wire fencing that goes down to low tide. The creation of a new route through the old orchard will be carried out outside of the late summer moulting season (July to September inclusive).

The saltmarsh at Bedlams Bottom is quite extensive (a minimum of 100m wide and approximately 31ha). The proposal to create a new road-verge route at Bedlams Bottom will not affect the ability of moulting redshank and greenshank to be able to find suitable undisturbed roosting sites in this large area in the late summer. The key roost in the west of Bedlams Bottom is located at least 60m from the road. At this location, the route crosses the road to the south and runs along the edge of an arable field south of the road with a dense established hedgerow screening the roost from the path. The Raspberry Hill Lane section is also unlikely to attract dog walkers, as most dog owners would be unwilling to let their dogs off the lead given the proximity of a fast road. The creation of the new verge adjacent to Raspberry Hill Lane will be carried out outside of the late summer moulting season (July to September inclusive).

iii. Trampling of sensitive vegetation

The proposed route at Raspberry Hill and Raspberry Hill Lane is landward of the saltmarsh habitat. The proposed road-verge route consists of rank vegetation and is consistent with species typically found on a road verge given the regular nutrient deposition from vehicles. Access to saltmarsh will be excluded as it is dangerous and unsuitable to walk on. It is therefore unlikely that the Coast Path proposals will lead to an increase in trampling of sensitive vegetation which supports the qualifying wetland plants and invertebrates of the Ramsar site.

Conclusion

Natural England has considered the possible risks to qualifying features at this location, and given the avoidance and mitigation measures detailed above, consider that no new significant disturbance or trampling will be caused. The proposals will therefore not adversely affect the achievement of the conservation objectives in this location. Establishing a well maintained and easy to follow Coast Path along the alignment proposed will also help this the long-term management of visitors to the site.

D3.2C Barksore Marshes

Current situation

Barksore Marshes is located in the northern part of Barksore peninsula. Barksore Marshes consists of grazing marsh and wetland habitat bordered by saltmarsh in the north and surrounded on all sides by extensive mudflats and tidal creeks. Barksore Marshes forms part of the Medway Estuary and Marshes SPA and Ramsar site.

Barksore Marshes is regularly used by wintering and on passage waders that feed on the mudflats on either side of the peninsula at low tide, particularly at Funton Creek/Reach and Halstow Creek. They congregate to roost at high tide on the shoreline, wetlands and grazing marsh. The key roosts in Barksore peninsula are shown on Map 4. The roosts at Barksore Marshes are used interchangeably with the saltmarsh roosts at Greenborough Marshes, with the roosts at Barksore being preferred when the saltmarsh islands are completely inundated during high spring tides. Barksore Marshes are particularly favoured by avocet, golden plover, turnstone, greenshank, wigeon, teal, shoveller, curlew, black-tailed godwit, shelduck, redshank, and dunlin (the latter three species have a target to restore the size of the non-

breeding population above current levels). There is also a wintering roost north of Great Barksore Farm to the south-west of Barksore Marshes, which is linked to the roost at Twinney's Saltings to the west (see Map 4). When the saltmarsh at Twinney's Saltings is inundated during high spring tides (for a few hours approximately every two weeks), wintering birds such as whimbrel, curlew, golden plover, black-tailed godwit, greenshank and up to 700 redshank fly over from Twinneys to the roost north of Great Barksore Farm. There may also be occasional flocks of dark-bellied brent geese foraging on the arable field east of Lower Halstow Yacht Club. However, local recorders in the area have confirmed that this is not a roost that they have seen brent geese utilising. Even if it were being used on occasion, they do not consider it to be an important part of the network. Redshank and dark-bellied brent geese have a target to restore the size of the non-breeding population above current levels.

The marshes and wetlands at Barksore Marshes are also used by breeding oystercatcher, lapwing, ringed plover, redshank, curlew, teal, marsh harrier and pochard.

Barksore peninsula, which includes Barksore Marshes, does not have any existing public footpaths or any permissive access whatsoever. The landowners actively discourage public access on their land. The long distance walking route, the Saxon Shore Way, follows fields, orchards and the road in Lower Halstow to the south of Barksore peninsula.

The coast at Barksore peninsula has not been prioritised for active Bird Wise warden engagement (Appendix 1) as the public do not currently have access to much of the coast here and the areas with existing access rights have a low footfall so there is a low risk of disturbance from walkers/dog walkers to wintering birds.

Detailed design and assessment of risk

The proposed route for the Coast Path at Barksore peninsula will follow the existing public byway off Raspberry Hill Lane to join the public footpath and Saxon Shore Way at Funton Brickworks. Near Basser Hill the Coast Path will create new access on the edge of arable and hay fields at Great Barksore Farm and then joins the seawall at Lower Halstow Yacht Club. Land seawards of the Coast Path would become part of the coastal margin by default, however no new coastal access rights would be created over the mudflats and the saltmarsh on grounds that it is dangerous and unsuitable for public access. Access to the Lower Halstow Yacht Club will also be restricted on land management grounds.

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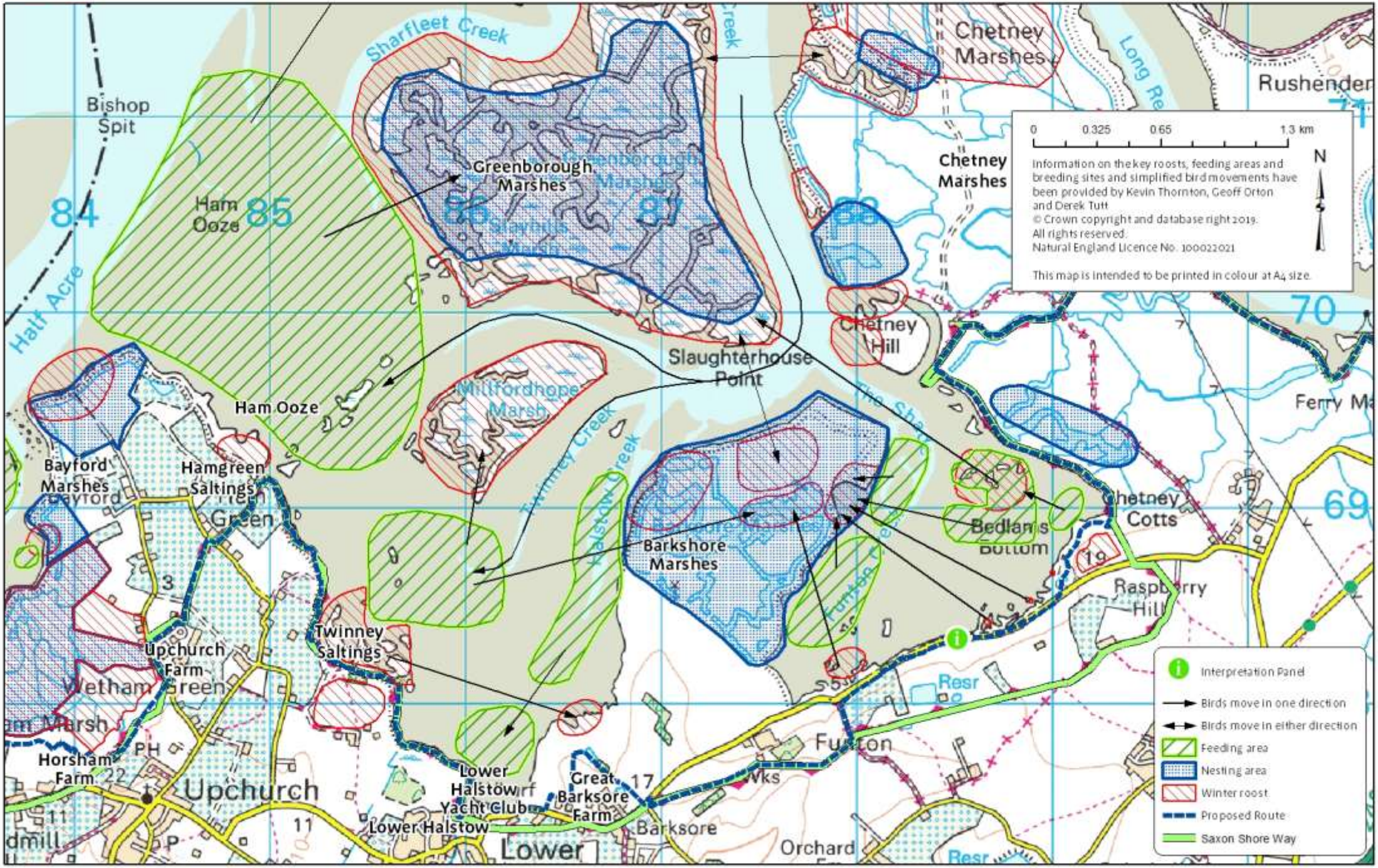
Map 4: Design of the access proposal to address possible risks at Barksore Marshes



Considering each of the possible risks to qualifying features:

i. Disturbance of waterbirds feeding on the mudflats

The proposed path will take follow the existing public footpaths and byways inland and only joins the seawall at Lower Halstow Yacht club where there is existing access. The Coast Path will therefore avoid the key feeding areas at Funton Creek/Funton Reach and Halstow Creek.

ii. Disturbance to waterbirds roosting at Barksore Marshes and north of Great Barksore Farm

Based on current demand, we expect a medium increase in the frequency of use of our proposed route, due to the proximity of the village of Lower Halstow and the good views of the estuary it affords. In addition, we note that the level of use of the route is likely to be influenced by planned housing growth in Swale district [Ref 7]. The proposed route at Barksore peninsula will avoid direct access to key roosts shown on map 4. Barksore Marshes will have a nature conservation access exclusion applied all year (see 'Directions Map IGR 4A', available in Report IGR 4) due to the risk of disturbance to wintering, on passage, and breeding bird features (see below for discussion for breeding features).

The Coast Path is at least 130m south of the Great Barksore Farm roost which is sufficient for visitors not to be visible to the birds. Whilst we understand that the vast majority of people stick to the marked path (North Kent Visitor Survey), there may be a few people who will access the roost near the shoreline. In order to minimise people straying from the route, part of the Coast Path will follow a fenced-in route and we intend to install a new kissing gate, "no access to the seawall" signs, and waymarkers that will clearly mark the path on the ground. From the roost, part of the seawall east of the Yacht Club is undulating and wet for most of the year and will therefore deter people from using it. Whilst we consider that the Great Barksore Farm roost is important as it provides a safe refuge at high tide for the waders at Twinney's roost during the fortnightly high spring tides, the Barksore roost is not their preferred roost and it is unlikely that there will be repeated disturbance during the aforementioned critical times from a minority of people straying from the path. The seawall near the Great Barksore Farm wintering roost will therefore also have a nature conservation access exclusion applied all year (see 'Directions Map IGR 4A', available in Report IGR 4) due to the risk of disturbance to wintering features and to make the direction clearer to understand and manage on the ground. There will be no new access rights to the arable field east of Lower Halstow Yacht Club, which may support occasional flocks of dark-bellied brent geese, as land that has been ploughed within 12 months is considered excepted from coastal access rights. This field is also entirely separated from the route by a robust fence.

iii. Disturbance to breeding waterbirds at Barksore Marshes

The proposed route will avoid the key breeding areas in Barksore Marshes shown on Map 4. The key breeding area will also have a nature conservation access exclusion applied all year, as discussed above. The Coast Path on the seawall will be clearly marked, so it is unlikely that visitors will stray from the trail.

iv. Trampling of sensitive vegetation

The proposed route at Barksore peninsula is south of the sensitive grazing marsh at Barksore Marshes. Access to Barksore Marshes will be excluded by an all year access exclusion on nature conservation grounds, and access to saltmarsh will be excluded as it is dangerous and unsuitable to walk on. It is therefore unlikely that the Coast Path proposals will lead to an increase in trampling of sensitive vegetation which supports the qualifying wetland plants and invertebrates of the Ramsar site.

Conclusion

Natural England has considered the possible risks to qualifying features at this location, and given the avoidance and mitigation measures detailed above, consider that no new significant disturbance or trampling will be caused. The proposals will therefore not adversely affect the achievement of the conservation objectives in this location. Establishing a well maintained and easy to follow Coast Path along the alignment proposed will also help with the long-term management of visitors to the site.

D3.2D Upchurch peninsula (Horsham Marsh, Bayford Marshes, Hamgreen Saltings, and Otterham Creek)

Current situation

Horsham Marsh and Bayford Marshes are areas of grazing marsh and wetlands located in the north-western part of Upchurch peninsula. Upchurch peninsula is bordered by extensive mudflats, including Ham Ooze in the north east, saltmarsh in the east (including Hamgreen Saltings and Twinney's Saltings), and Otterham Creek, a tidal creek in the west. Horsham Marsh, Bayford Marshes and the extensive mudflats and saltmarsh surrounding Upchurch peninsula form part of the Medway Estuary and Marshes SPA and Ramsar site.

Horsham Marsh, Bayford Marshes and Hamgreen Saltings are regularly used by wintering and on passage waders that feed on the mudflats on either side of the peninsula at low tide, particularly at Ham Ooze and Otterham Creek, and congregate to roost at high tide on the shoreline, wetlands and grazing marsh of the aforementioned sites. The key roosts in Upchurch peninsula are shown on Map 5. Horsham Marshes is particularly favoured by curlew, black-tailed godwit, oystercatchers, redshank, and dark-bellied brent geese (the latter two species have a target to restore the size of the non-breeding population above current levels). There is also a wintering roost at Bayford Marshes to the north of Horsham Marsh. This northernmost roost is not located within the SPA and Ramsar Site, but would be considered functionally linked land. The roosts at Bayford Marshes support oystercatcher, curlew, lapwing, dark-bellied brent geese and shelduck. The latter two species have a target to restore the size of the non-breeding population above current levels. The roost at Hamgreen Saltings supports wigeon, teak, dark-bellied brent geese, shelduck and pintail. The latter three species have a target to restore the size of the non-breeding population above current levels. The mudflats surrounding the upper reaches of Otterham Creek are one of the last areas of mudflat to cover on the rising tide. This area is therefore important for feeding birds (particularly wigeon, teal, redshank, black-tailed godwit, dunlin and knot) as they congregate in a small area as the tide approaches its highest extent prior to roosting.

The marshes and wetlands at Horsham Marshes are also used by breeding avocet (which has seen up to 36 breeding pairs in 2016), oystercatcher, lapwing, ringed plover, redshank, shelduck, and curlew; and at Bayford Marshes they are used by breeding avocet (23 birds in 2018), lapwing, redshank, pochard, oystercatcher and tufted duck.

Upchurch peninsula has existing public footpaths on parts of the south-eastern side of the seawall to Hamgreen Saltings where the public footpath uses roads, farmland tracks, fields and orchards to reach Otterham Quay. This footpath network also forms part of the promoted long distance walking route, the Saxon Shore Way. For large areas in the north and east of the peninsula, there are no access rights for the public along the seawall.

The current footpath network on the peninsula is moderately well used, although the preferred routes are close to Lower Halstow village and areas where there is road parking at Ham Green (Strava Heat Map, and North Kent Visitor Survey Report).

The coast at Upchurch peninsula has been partially prioritised for active Bird Wise warden engagement (Appendix 1). The seawall route close to Lower Halstow has a medium priority due to a medium to low footfall and high number of birds. However the rest of the peninsula has not been prioritised for active Bird Wise warden engagement as the public do not currently have access to much of the coast here.

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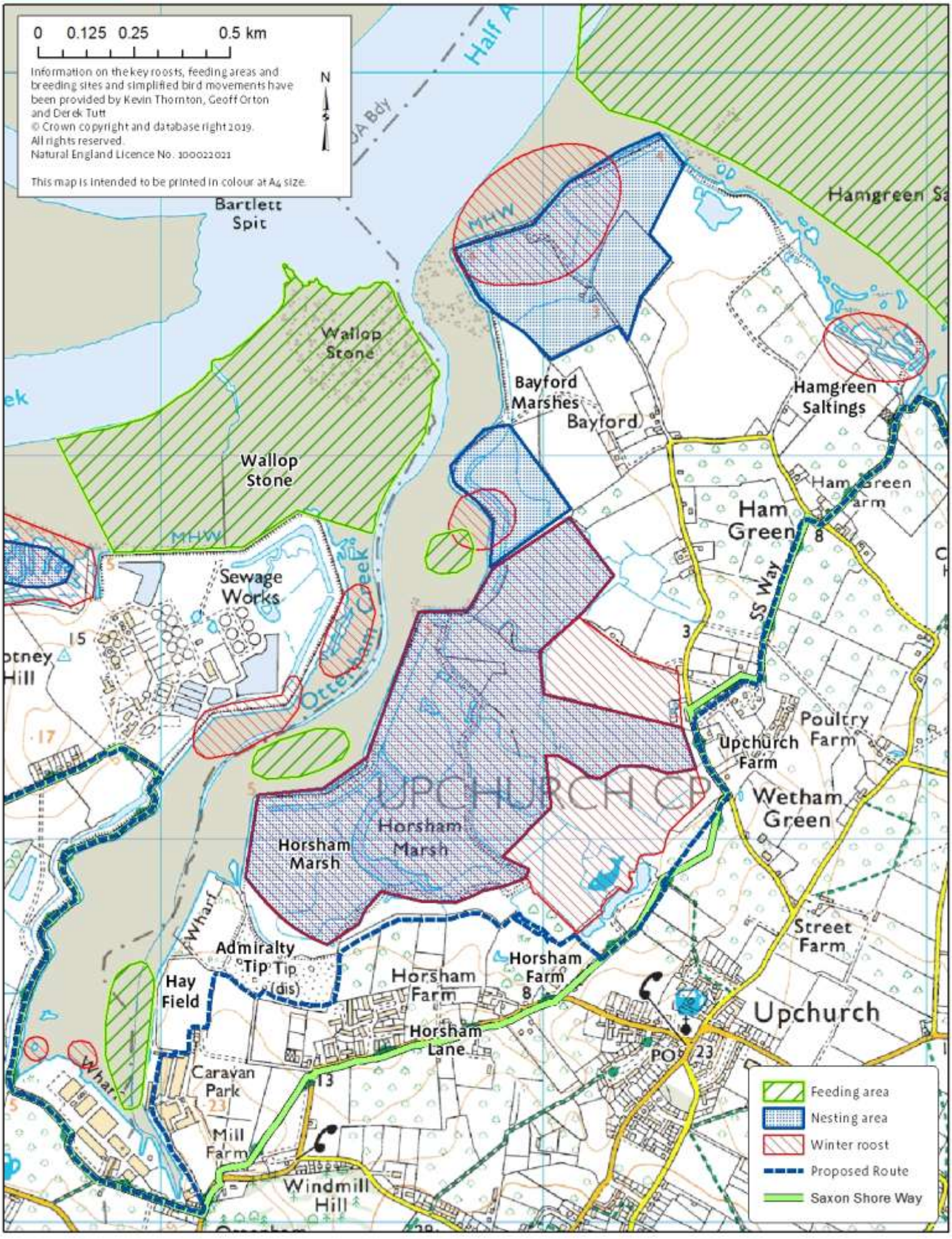
Map 5: Design of the access proposal to address possible risks at Upchurch peninsula



Detailed design and assessment of risk

The proposed route for the Coast Path at Upchurch peninsular will follow existing paths and the Saxon Shore Way until Horsham Lane, then a new route will be created on the edge of fields, a tip and through a caravan park (Map 5). There will be some improvements to the path near Upchurch Farm as it currently gets waterlogged, and we will also install: new steps, new gates/chicane access to replace existing barriers, new waymarking and roadside signs. Land seawards of the Coast Path would become part of the coastal margin by default, however, no new coastal access rights would be created over the mudflats and the saltmarsh on grounds that it is dangerous and unsuitable for public access. The route through the caravan park and the route and coastal margin in the hay field north of the caravan park will also have a restriction for dogs to be on leads on land management grounds.

Considering each of the possible risks to qualifying features:

i. Disturbance of waterbirds feeding on the mudflats

The proposed path will follow the existing public footpaths and Saxon Shore Way thereby avoiding creating new access close to Ham Ooze and the other mudflats to the north and east of the peninsula. The Coast Path only comes close to feeding birds near the upper reaches of Otterham Creek in the hay field north of Beckenham Caravan Park. Based on current demand, we expect a medium increase in the frequency of use of our proposed route near Otterham Creek. In this field, the Coast Path is aligned at least 140m from the feeding birds at the back of the field in order to avoid this key feeding area. The trail in this location is up a hill, so has great views of the estuary, however there is a risk that visitors and their dogs may stray from the path and risk disturbing the feeding birds. The hay field and the adjacent caravan park have a dogs on leads restriction for land management reasons and the caravan park does not allow their residents to keep dogs. There are no car parks in the area, so the majority of new access to the site will most likely come from local Horsham Lane residents who wish to walk their dogs. The North Kent Visitor Survey states that the majority of people stick to the marked path when walking, however there may be a few people who will leave the path and access the shoreline. In order to minimise people straying from the route, the Coast Path will install waymarkers that will clearly mark the path on the ground. Even if a few people do stray from the path, we do not envisage that this will happen on a regular basis at the critical time (the hour before high tide) when the birds are feeding on the adjacent mudflats. In addition, some of this key feeding mudflat is located between the caravan park in the east and an industrial site in the west where the feeding birds can remain undisturbed as there is very limited access and no new coastal access rights proposed.

ii. Disturbance to waterbirds roosting at Horsham Marshes, Bayford Marshes and Hamgreen Saltings

Based on current demand, we expect a negligible increase in the frequency of use of our proposed route where it follows the existing Saxon Shore Way. Where new access is created to the south of Horsham Marsh we expect a medium increase in the frequency of use of our proposed route. In addition, we note that the level of use of the route is likely to be influenced by planned housing growth in Swale district [Ref 7]. The proposed route at

Upchurch peninsula will avoid direct access to key roosts shown on Maps 5 and 6. The landowner of the undesignated hay field south of Horsham Marsh, where the trail is aligned, has alerted us that this field occasionally supports up to 200 wintering brent geese and up to 50 wintering shelduck. However, a local bird recorder of Horsham Marsh has confirmed that they haven't seen any use of this field during their surveys by the birds of Horsham Marsh, so we have concluded that whilst this field is used by these species, it is not functionally important for the qualifying features of the SPA. Horsham Marshes, Bayford Marshes and the entire seawall to Hamgreen Saltings will have a nature conservation access exclusion applied all year (see Direction Map IGR 6A available in Report IGR 6) due to the risk of disturbance to wintering, on passage, and breeding bird features (see below for discussion for breeding features).

Admiralty Tip, to the south of Horsham Marsh, will also be included in the aforementioned access exclusion as the tip is located close to key habitat for avocets and other waterbirds (both roosting and breeding sites). The tip is on much higher ground than Horsham Marsh so any new access near the edge of the tip is likely to disturb the wintering and breeding features in Horsham Marsh given the clear sightlines. The route therefore has been aligned at the back of Admiralty Tip and the rest of the tip has been restricted from access. It is unlikely that visitors will stray from the path in this location, as the tip is generally managed by allowing tall ruderal vegetation to become overgrown which is not appealing to walk through. The Coast Path will be maintained by regularly strimming the vegetation on the trail and by installing waymarkers to ensure the path is clearly marked on the ground. The tenants of Horsham Marsh have agreed to reinstate a field gate at the vehicle entrance to Horsham Marsh and attach to the gate a 'no access' sign together with a map and details of the access exclusion. Certain fields, to the north-west of the Horsham Fishing Lakes in Horsham close to Poot Lane, will only have a nature conservation access exclusion for winter only due to the lack of evidence of breeding birds in these fields.

iii. Disturbance to breeding waterbirds at Horsham Marsh and Bayford Marshes

The proposed route will avoid the key breeding areas in Horsham Marsh and Bayford Marshes shown on Maps 5 and 6 and discussed above. The key breeding area will also have a nature conservation access exclusion applied all year. Admiralty Tip will also have a nature conservation restriction all year, as there are breeding avocet in clear sight lines of the edge of the tip and there are breeding shelduck on the bottom of the bank that separates Admiralty Tip and Horsham Marsh. The Coast Path will be clearly marked, so it is unlikely that visitors will stray from the trail. The undesignated hay field south of Horsham Marsh also supports at least one pair of breeding mallard and one pair of moorhen in a small pond near the proposed trail. The pond is well-screened by scrub, but the medium increase in visitors could lead to increase disturbance of the nesting ducks or abandonment of the site completely. Mallard and moorhens do form part of the breeding bird assemblage, however given the low numbers of breeding birds and the abundance of these species breeding elsewhere in the SPA we do not consider our proposals here will lead to an adverse effect on integrity of the breeding bird assemblage.

iv. Trampling of sensitive vegetation

The proposed route at Upchurch peninsula is south of the sensitive grazing marsh at Horsham Marsh and Bayford Marshes. Access to Horsham Marsh and Bayford Marshes will be excluded by an all year access exclusion on nature conservation grounds, and access to saltmarsh will be excluded as it is dangerous and unsuitable to walk on.

There will be new access created to the north of Horsham Farm, which is designated as grazing marsh for wintering and breeding birds, however it has not been actively managed for the qualifying features for many years. The vegetation is principally grass and a small woodland and the grass is kept low by regular vehicle mowing. The proposed route already shows evidence of trampling by the landowners.

It is therefore unlikely that the Coast Path proposals will lead to an increase in trampling of sensitive vegetation which supports the qualifying wetland plants and invertebrates of the Ramsar site.

Conclusion

Natural England has considered the possible risks to qualifying features at this location, and given the avoidance and mitigation measures detailed above, consider that no new significant disturbance and trampling will be caused. The proposals will therefore not adversely affect the achievement of the conservation objectives in this location. Establishing a well maintained and easy to follow Coast Path along the alignment proposed will also help with the long-term management of visitors to the site.

D3.2E Motney Hill

Current situation

Motney Hill is a c72ha peninsula with reedbed wetland and grazing marsh habitat in the centre of the peninsula. There are further wetlands and ditch systems along the seawall and within Southern Water's Sewage Treatment Works. Motney Hill peninsula is bordered by mudflats, including Wallop Stone mudflats in the north, saltmarsh in the north-west (a RSPB reserve), and Otterham Creek and Rainham Creek, which are both tidal creeks on either side of the peninsula. The wetland habitats, and the extensive mudflats and saltmarsh surrounding the Motney Hill peninsula form part of the Medway Estuary and Marshes SPA and Ramsar site.

Motney Hill peninsula is used by wintering and on passage waders that feed on the mudflats at low tide, particularly at Wallop Stone, and congregate to roost at high tide at the following sites: the shoreline near the sewage works, the RSPB reserve saltmarsh, and the small patches of saltmarsh in the upper reaches of Otterham Creek. The key roosts in Motney Hill peninsula are shown on Map 6. The RSPB reserve roost is often disturbed by bait diggers, and it is also inundated on the high spring tide. Motney Hill itself (south of the RSPB reserve) attracts other recreational users such as dog walkers which can lead to disturbance of the qualifying features. The RSPB roost is used interchangeably with other saltmarsh roosts such as Rainham Saltings, Friars Saltings (east of Nor Marsh), Fort Darnet and Bishop Saltings. However, many of these roosts are already under pressure as they are inundated by high spring tides, and the higher land at Fort Darnet attracts boat landings and overnight

camping, which disturbs the roost there as well as the nearby Bishops Salting's roost and breeding site (see Map 7).

The roosts on the shoreline by the sewage works are relatively undisturbed but it is less favoured by the waterbirds than the RSPB reserve. The roosts on the saltmarsh near the existing Saxon Shore Way on the upper reaches of Otterham Creek are small roosts. Currently, if the waterbirds here are disturbed by walkers on the seawall the birds make use of the following alternative roosts: the RSPB reserve, the sewage works and Horsham Marsh. The roosts are particularly favoured by black-tailed godwit, avocet, dark-bellied brent goose, redshank (the latter two species have a target to restore the size of the non-breeding population above current levels).

The RSPB reserve saltmarsh is also used by breeding shelduck, oystercatcher, lapwing, and redshank. However, it is unlikely that these breeding attempts are successful, or if they are, they are likely to have a low success rate, given regular inundation by high spring tides, as well as recreational disturbance and avian predation. The reedbed/wetland habitat, in the centre of the peninsula and at the sewage works, supports breeding birds including marsh harrier and bearded tit in the centre of the peninsula, amongst other breeding ducks.

Motney Hill peninsula has a well-promoted long distance walking route, the Saxon Shore Way along the seawall on the southern half of the peninsular. However, access is restricted to the north by fencing associated with the sewage works. Access is not permitted and actively discouraged on Motney Hill, the hill just south of the RSPB reserve, however widespread trespassing, principally from bait diggers and dog walkers, has been happening for many years. Given the open nature of the site, the RSPB and other landowners have found the trespassing difficult to manage.

The current Saxon Shore Way is well used in this location, being close to the Riverside Country Park, car parks and the urban conurbations of Rainham and Gillingham. The North Kent Visitor Survey Report also confirms that walkers and dog walkers are trespassing into Motney Hill near the RSPB Reserve and using the seawall and intertidal area around the north end of the peninsula to walk around the sewage works.

The coast at Motney Hill has been grouped together with Riverside Country Park and has been given a high priority for active Bird Wise warden engagement (Appendix 1) as these sites have a high number of birds as well as a high footfall by the public.

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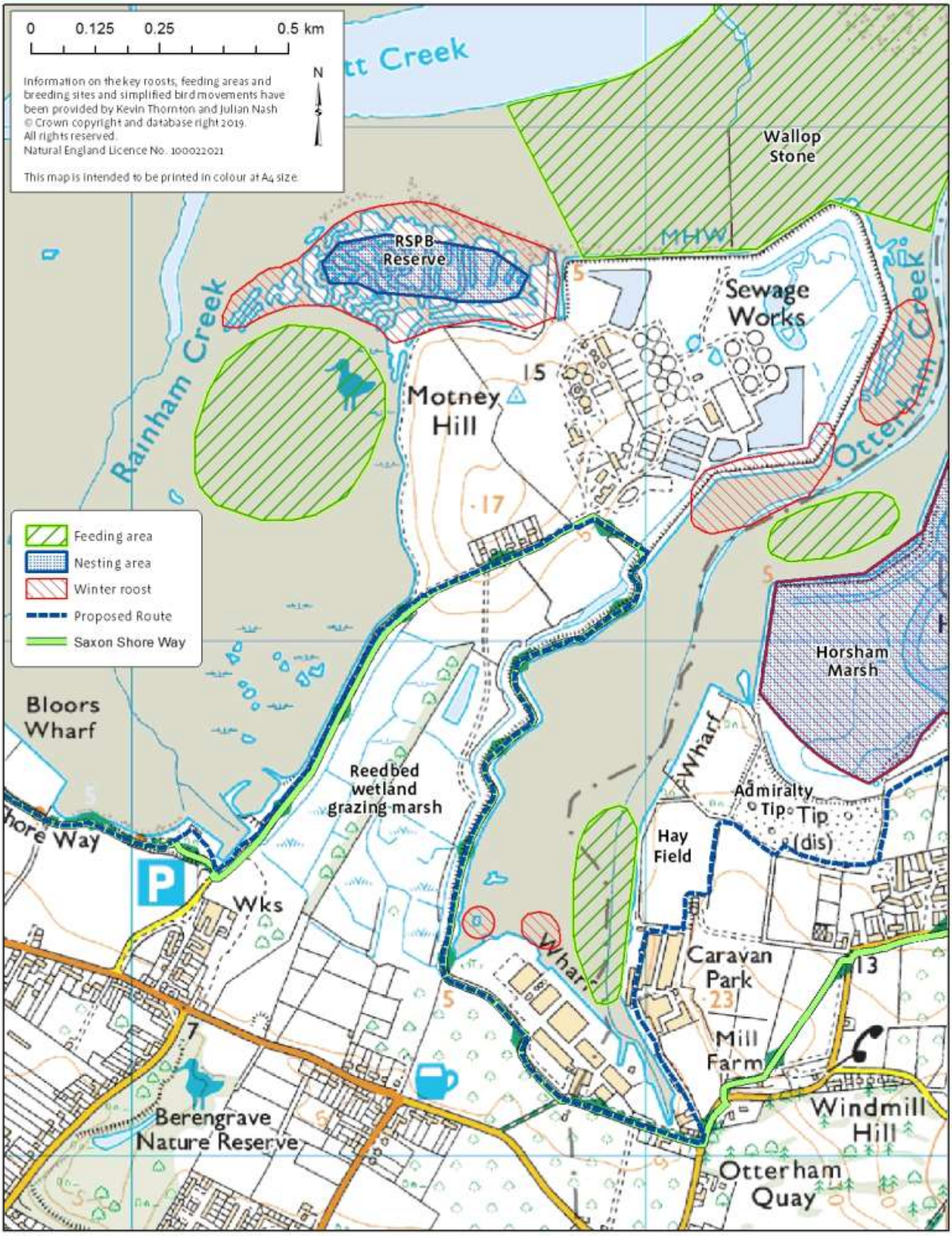
Map 6: Design of the access proposal to address possible risks at Motney Hill



Detailed design and assessment of risk

The proposed route for the Coast Path at Motney Hill peninsula will follow the existing Saxon Shore Way (Map 6). There will be some improvements to the path on the seawall by Motney Hill Road where we will remove a stile to create a gap in order to make it easier to use and follow. Land seawards of the Coast Path would become part of the coastal margin by default, however, no new coastal access rights would be created over the mudflats and the saltmarsh on grounds that it is dangerous and unsuitable for public access. No new access rights will be created on the land associated with the sewage treatment works on leads on land management and public safety grounds.

Considering each of the possible risks to qualifying features:

i. Disturbance of waterbirds feeding on the mudflats

The proposed path will follow the existing Saxon Shore Way thereby avoiding the following key feeding areas: the mudflats north of the sewage works at Wallop Stone, near the RSPB reserve and north eastern part of Otterham Creek.

ii. Disturbance to waterbirds roosting on the shoreline and saltmarsh of Motney Hill and inter-connected network of saltmarsh island roosts (Rainham Saltings, Friars Saltings and Bishop Saltings)

Based on current demand, we expect a negligible increase in the frequency of use of our proposed route. In addition, we note that the level of use of the route is likely to be influenced by planned housing growth in Medway [Ref 7]. The proposed route at Motney Hill peninsula will avoid direct access to most of the key roosts shown on Map 6. The roosts on the upper reaches of Otterham Creek in the saltmarsh are unlikely to be affected by the negligible increase in access from the Coast Path. In addition, the roosts at Horsham Marsh and the sewage works will not be affected by coastal access so will be still available to use, as they currently are, as an alternative roost even if there is a small increase in the frequency of disturbance above current levels. Southern Water already maintains the fence line restricting access north of the proposed Coast Path and this fence line extends into the intertidal area. We have decided not to exclude Motney Hill itself from coastal access rights, as there is such widespread access to this site already and we do not expect any significant change in access above current levels due to the Coast Path. The RSPB also agree that an access restriction would not resolve the issues on the ground either, given the historic and ongoing use.

The RSPB reserve roost is also unlikely to be affected given the negligible change in access by aligning on an existing promoted route and also no new coastal access rights would be created over the saltmarsh on grounds that it is dangerous and unsuitable for public access.

There will be no new coastal access rights on the wider network of inter-connected saltmarsh island roosts (Rainham Saltings, Friars Saltings and Bishop Saltings) as it is dangerous and unsuitable for public access. However, the current boat landings at high tide and unauthorised access to the raised land at Fort Darnet (due to its historic interest) is already causing disturbance to the roost there and to the adjacent wintering roost at Bishop's Saltings, so we have applied a nature conservation access exclusion all year round to Fort

Darnet to protect the roosts from any additional disturbance from increased use arising from new access rights. Bird Wise has also confirmed that the nature conservation exclusion at Fort Darnet will support their efforts to manage bird disturbance in the Medway Estuary.

iii. Disturbance to breeding waterbirds at Motney Hill peninsula and saltmarsh island breeding sites (Nor Marsh and Bishop Saltings)

The proposed route will avoid the key breeding areas in Motney Hill peninsula shown on Map 6. There will be no new coastal access rights on any of the breeding sites. The breeding area at the RSPB reserve is saltmarsh, therefore no new coastal access rights will be created on the grounds that it is dangerous and unsuitable for public access. There will be no new coastal access rights to breeding sites, ditch systems and seawall within the Southern Water sewage treatment works compound, as access rights will be excluded here on land management and public safety grounds. The breeding birds in the wetlands in the centre of the peninsula are landward of the Coast Path and are generally well protected from access due to the presence of ditches, scrub and dense reedbed. The Coast Path on the seawall will be clearly marked in this location, so it is unlikely that visitors will stray from the trail.

There will be no new coastal access rights on the saltmarsh island breeding sites (Nor Marsh and Bishop Saltings) as it is dangerous and unsuitable for public access. However, the current boat landings on the raised land at Fort Darnet is causing disturbance to the adjacent breeding site at Bishop's Saltings, so we have applied a nature conservation access exclusion all year round to Fort Darnet protect breeding seabirds from additional disturbance arising from the new rights.

Conclusion

Natural England has considered the possible risks to qualifying features at this location, and given the avoidance and mitigation measures detailed above, consider that no new significant disturbance will be caused. The proposals will therefore not adversely affect the achievement of the conservation objectives in this location. Establishing a well maintained and easy to follow Coast Path along the alignment proposed will also help this the long-term management of visitors to the site.

D3.2F Hoo Marsh

Current situation

Hoo Marsh is an area of grazing marsh, wetlands and arable fields to the south east of Hoo St Werburgh. Hoo Marsh is bordered by Hoo Flats mudflats and saltmarsh to the south with Hoo Island about 1km offshore. The wetland habitat at Abbots Court, the grazing marsh west of Kingsnorth Power Station, and the mudflats, saltmarsh and Hoo Island form part of the Medway Estuary and Marshes SPA and Ramsar site.

During the winter period, dunlin can roost on Hoo Island in large numbers (peak count 2500 dunlin 2015/16) and also occasionally make use of the saltmarsh near the seawall and the old boats near Hoo Marina. The saltmarsh is only used on occasion by dunlin and redshank as the saltmarsh is often inundated by high spring tides and is disturbed by walkers and dogs walkers. Hoo Marsh is also important for large numbers of dark-bellied brent geese that

use the nearby arable fields north (up to Ratcliffe Highway) and south of Abbots Court for foraging and roosting. Kingsnorth Grazing Marsh is also used by brent geese in the winter, and 900 brent geese were recorded in the field below Abbots Court in 2018/19. Hoo's importance for brent geese on the scale of the whole SPA was confirmed by the Kent Bird Report, which found that the highest counts of brent geese recorded in the Medway Estuary were found in Hoo St Werburgh. The key roosts in Hoo Marsh and Flats are shown on Map 8. Both dunlin and dark-bellied brent geese have a target to restore the size of the non-breeding population above current levels.

Kingsnorth Grazing Marsh is also important for breeding ducks and geese including greylag geese, mallards and gadwall. Also smaller numbers of redshank, lapwing and oystercatcher breed here. The lakes at Abbots Court are used for breeding tufted duck, pochard, coots and moorhens.

Hoo Island is not accessible on foot from the shore as the old causeway is now covered at low tide, and the vast majority of the disturbance to this roost is from boats. Hoo Marsh is very well used current for recreational walking and dog walking being in close proximity to the village of Hoo St Werburgh and a car park. Part of the proposed Coast Path route at Hoo Marsh is also a well-promoted long distance walking route, the Saxon Shore Way. In this location the Saxon Shore Way heads inland towards High Halstow and conveniently forms a well-used 3km circular route from the car park for use by local residents. Hoo Marsh is well served by public footpaths which follow the edges of the marshes and arable fields. The North Kent Visitor Survey Report confirms that most people use the circular routes from Hoo and also use the seawall to Kingsnorth Power Station, with fewer people making use of the inland footpaths closer to Kingsnorth Power Station and east of Abbots Court. The current public footpath running north/south parallel to the power station is not currently used as the crossings over the ditches have ceased to be maintained due to the frequent damage caused by free roaming cattle as well as the wet nature of the site. This footpath is difficult to navigate and also very muddy, again not helped by cattle poaching. The Environment Agency have set out their intentions to carry out a managed realignment of Kingsnorth Grazing Marsh within the next 10 years [Ref 3] so Medway Council are reluctant to carry out expensive infrastructure works given the likely ongoing damage caused by cattle and with the knowledge that any works will be redundant once the managed realignment is carried out.

The coast at Hoo Marsh has been given a high priority for active Bird Wise warden engagement (Appendix 1) as these sites have a high number of birds as well as a medium footfall by the public.

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Map 7: Design of the access proposal to address possible risks at Hoo Marsh

Information on the key roosts, feeding areas and breeding sites and simplified bird movements have been provided by Bob Knight, Julian Nash and Footprint Ecology.

This map is intended to be printed in colour at A4 size.

Detailed design and assessment of risk

The proposed route for the Coast Path at Hoo Marsh will follow existing paths on the seawall and the Saxon Shore Way. The Coast Path then goes inland, on an informal route, to then follow the public footpath on the landward side of Kingsnorth Grazing Marsh. The more coastal route has been discounted for the land management reasons given above. The Coast Path route on the landward edge of Kingsnorth Grazing Marsh also crosses over ditches but can be easily traversed when the ditches are not full. When the ditches are full and difficult to cross we have proposed an Optional Alternative Route following a public footpath and farm track further inland (Map 7). There will be some improvements to the trail at Kingsnorth Grazing Marsh by replacing stiles with kissing gates and replacing a field gate with a dual pedestrian/field gate. There will be new waymarking, steps off the seawall and trail information signs to advise about potential flooding on the main route. Land seawards of the Coast Path would become part of the coastal margin by default, however, no new coastal access rights would be created over the mudflats and the saltmarsh on grounds that it is dangerous and unsuitable for public access. No new coastal access rights will be created over Hoo Island as Hoo Island is not connected to the mainland at low tide.

Considering each of the possible risks to qualifying features:

i. Disturbance of waterbirds feeding on the mudflats

The proposed path will follow the existing public footpaths and Saxon Shore Way thereby avoiding creating new access close to Hoo Flats.

ii. Disturbance to waterbirds roosting at Hoo Island, saltmarsh and boats, Kingsnorth Grazing Marsh and arable fields used by brent geese

Based on current demand, we expect a small increase in the frequency of use of our proposed route. In addition, we note that the level of use of the route is likely to be influenced by planned housing growth in Medway district [Ref 7]. The key roosts are shown on Map 8. The proposed route at Hoo Marsh will avoid creating new access rights on the key dunlin roosts at Hoo Island and on the old boat roost near Hoo Marina. The roost at the saltmarsh is only occasionally used by dunlins however disturbance of this roost has been flagged as an issue when walkers stray off the seawall. In order to minimise any impact to birds roosting on the saltmarsh caused by Coast Path users, in collaboration with Bird Wise, we will install two new interpretation panels at either end of the seawall. The panels will advise walkers about Bird Wise's key messages, which in this location is to keep dogs under close control and avoid straying from the path.

Brent geese use a network of different sites in this area for foraging and roosting, and their preferred sites generally depend on suitable crop availability. Kingsnorth Grazing Marsh is also occasionally used by brent geese as part of the wider network. The proposed Coast Path on the seawall is seaward of the vast majority of the roost network, including the large arable fields just south of Ratcliffe Highway. Within Kingsnorth Grazing Marsh most of the site is protected from visitors by a series of ditches and pools. In the 12ha field south of Abbots Court, where 900 brent geese were seen in winter 2018/19, we have proposed an optional alternative route along the eastern side of this field which will only be used when the main route is too flooded to use. This optional alternative route would on the face of it

encircle this area of land, but follows an existing public footpath on a farm track. Coupled with the wide availability of roosting habitat in Hoo and that by the nature of arable crop rotation, not all fields are available in all years, we consider it unlikely that a small increase in visitors using this optional alternative route will deter brent geese from using this field and or the wider roost network. The Coast Path will be clearly marked in this location, so it is unlikely that visitors will stray from the trail.

iii. Disturbance to breeding waterbirds at Kingsnorth Grazing Marsh and Abbots Court lakes

The proposed route will avoid the key breeding area in Kingsnorth Grazing Marsh as the main route is landward of the series of ditches that prevent physical access to the breeding areas. The key breeding areas are shown on Map 8. Abbots Court lakes are landward from the route, and the Coast Path does not pass close by. The Coast Path will be clearly marked, so it is unlikely that visitors will stray from the trail.

iv. Trampling of sensitive vegetation

The proposed route at Kingsnorth Grazing Marsh follows an existing public footpath on grazing marsh habitat. We predict a small increase in visitors to this area, so it is unlikely to result in a significant additional trampling of the vegetation here. We also predict no change in visitors accessing the rest of the grazing marsh seaward of the path as it is difficult to cross the series of ditches and pools. It is therefore unlikely that the Coast Path proposals will lead to an increase in trampling of sensitive vegetation which supports the qualifying wetland plants and invertebrates of the Ramsar site.

Conclusion

Natural England has considered the possible risks to qualifying features at this location, and given the avoidance and mitigation measures detailed above, consider that no new significant disturbance and trampling will be caused. The proposals will therefore not adversely affect the achievement of the conservation objectives in this location. Establishing a well maintained and easy to follow Coast Path along the alignment proposed will also help with the long-term management of visitors to the site.

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

Table 8. Assessment of adverse effect on site integrity alone

Risk to conservation objectives	Relevant design features of the access proposal	Can 'no adverse effect' on site integrity be ascertained? (Yes/No) Give reasons.	Residual effects?
Disturbance to foraging or resting non-breeding waterbirds, following changes in recreational activities as a result of the access proposal, leads to reduced fitness and reduction in population and/or contraction in the distribution of qualifying features within the site.	<u>Route Alignment</u> ■ The proposed inland route at Chetney peninsular, Barksore Marshes, Upchurch peninsula (i.e. Hamgreen Saltings, Bayford, Horsham Marsh and Otterham Creek) and Motney Hill will avoid interaction with the key feeding and roosting wintering birds. ■ A diversion into the orchard to avoid the greenshank roost at Bedlams Bottom, which, together with the new verge nearby at Raspberry Hill Lane, will be created outside of the late summer redshank and greenshank moulting season (July – September). ■ Following existing rights of way in the remainder of the SPA <u>Coastal Margin</u> ■ Access will be restricted year round at the wintering roosts at Chetney Marsh and Deadman's Island,	Yes. Our proposals are designed to maintain important refuges and facilitate responsible recreation in ways that minimise disturbance to non-breeding waterbirds. Key roosts at Chetney Marshes, Barksore Marshes, Horsham Marshes (including Bayford and Hamgreen Saltings, Upchurch peninsula), Motney Hill and the saltmarsh islands will continue to function as important refuges in the SPA through careful alignment of the Coast Path, and by excluding access to the Coastal Margin in these locations. In the rest of the SPA, there is already existing access rights along the coast which are generally well used in the Medway, and on the mudflats, where waterbirds forage, is unsuitable for walking over. Coastal access rights will be excluded from these area, thus formally clarifying the legal position on public access. Additional measures are included in our proposals to encourage visitors to stick to the path and keep their dog under close control where the route passes close to important roosting sites.	Yes

Risk to conservation objectives	Relevant design features of the access proposal	Can 'no adverse effect' on site integrity be ascertained? (Yes/No) Give reasons.	Residual effects?
	Barksore Marshes and the seawall at Great Barksore Farm, Horsham Marsh (and Admiralty Tip), Bayford Marsh and the seawall from Hamgreen Saltings to Bayford Marsh, Fort Darnet (Bishop Saltings) and during winter only on fields inland of Horsham Marsh by a formal direction on nature conservation grounds. ■ Access will be restricted to dogs on leads at the hay field at Otterham Creek, and public access will be excluded at the seawall at Motney Hill Sewage Treatment Works by a formal direction on land management and public safety grounds. ■ Much of the foreshore, and the saltmarsh islands are unsuitable for walking and access will be excluded by direction ■ The proposed route will be well marked and clear to follow and therefore visitors are unlikely to stray from the path.	Providing access to wildlife sites through carefully selected and promoted routes is an effective management technique for reducing disturbance pressure over a site. However, managing access in this way requires a co-ordinated approach between partners involved to be effective. The environmental conditions of Medway Estuary and Marshes, The Swale and the Thames Estuary and Marshes SPA and Ramsar site are dynamic and influenced by a number of human activities. It is possible there are other plans and projects currently in development that could, in combination with the Coast Path, lead to adverse effects on the integrity of the site. In light of this uncertainty, and in order to ensure that the implementation of coastal access in this area doesn't lead to adverse effects on integrity in combination with other planned initiatives, we have carried out a further in-combination assessment below.	

Risk to conservation objectives	Relevant design features of the access proposal	Can 'no adverse effect' on site integrity be ascertained? (Yes/No) Give reasons.	Residual effects?
	Interpretation and Collaboration with Bird Wise ■ There will be collaboration with Bird Wise and Kent Wildfowlers to install and maintain new interpretation panels in key locations to encourage responsible behaviour.		
Disturbance to breeding waterbirds during the breeding season following changes in recreational activities as a result of the access proposal, leads to nest trampling and abandonment, and the resultant reduction in the breeding population	Route Alignment ■ The proposed inland route at Chetney peninsular, Barksore Marshes, Bayford, Horsham Marsh and Motney Hill will avoid interaction with the key sites for breeding birds. ■ Following existing rights of way in the remainder of the SPA Coastal Margin ■ Access will be restricted year round at the breeding sites roosts at Chetney Marsh and Deadman's Island, Barksore Marshes, Horsham Marsh (and Admiralty Tip), Bayford Marsh and Fort Darnet (Bishop Saltings). ■ Public access will be excluded at the seawall at Motney Hill Sewage Treatment Works by a formal direction on land	Yes Our proposals are designed to maintain important refuges and facilitate responsible recreation in ways that minimise disturbance to breeding waterbirds. Key breeding sites at Chetney peninsular, Barksore Marshes, Bayford, Horsham Marsh, Motney Hill and the extensive saltmarsh islands and grazing marshes of the SPA will continue to function as breeding sites in the SPA through careful alignment of the Coast Path, and by excluding access to the Coastal Margin in these locations. Additional measures are included in our proposals to encourage visitors to stick to the path where the route passes close to important breeding sites. Providing access to wildlife sites through carefully selected and promoted routes is an effective management technique for reducing disturbance pressure over a site. However, managing	Yes

Risk to conservation objectives	Relevant design features of the access proposal	Can 'no adverse effect' on site integrity be ascertained? (Yes/No) Give reasons.	Residual effects?
	management and public safety grounds. ■ The saltmarsh islands which provide important breeding sites for seabirds are unsuitable for walking and access will be excluded by direction. ■ The proposed route will be well marked and clear to follow and therefore visitors are unlikely to stray from the path	access in this way requires a co-ordinated approach between partners involved to be effective. The environmental conditions of Medway Estuary and Marshes, The Swale and the Thames Estuary and Marshes SPA and Ramsar site are dynamic and influenced by a number of human activities. It is possible there are other plans and projects currently in development that could, in combination with the Coast Path, lead to adverse effects on the integrity of the site. In light of this uncertainty, and in order to ensure that the implementation of coastal access in this area doesn't lead to adverse effects on integrity in combination with other planned initiatives, we have carried out a further in-combination assessment below.	
The installation of access management infrastructure may lead to a loss of habitat which supports the qualifying features. This includes all necessary stages of the non-breeding bird period (moulting, roosting, loafing, and feeding); the breeding bird period (courting,	Our proposals will only install one interpretation panel, which is located in saltmarsh at Raspberry Hill Lane; and one interpretation panel and three waymarker posts, which are located in grazing marsh habitat at Stoke Marshes, Kingsnorth Grazing Marsh and south of Horsham Marsh respectively. The rest of the infrastructure are located on seawalls, tracks and road verges which are not considered supporting habitats in the	Yes. Only 2 x 10 cm posts (for the interpretation at Raspberry Hill Lane) will be installed in the edge of the saltmarsh. The other interpretation panel (similar footprint) will be located on the bottom of a grazing marsh seawall near a layby and the three 10 cm waymarker posts will be located on either an existing walked route, or desire line, through a grazing marsh. This loss equates to less than 0.07m^2 of designated habitat. The location of this infrastructure located is not located near a key site for non-breeding waterbirds. It	No

Risk to conservation objectives	Relevant design features of the access proposal	Can 'no adverse effect' on site integrity be ascertained? (Yes/No) Give reasons.	Residual effects?
nesting and feeding); and the habitats that support wetland plants and the habitats that support wetland invertebrates.	Supplementary Advice on Conservation Objectives.	is therefore considered that the loss of this habitat will not lead to an adverse effect on integrity of the site.	
Trampling of wetland plants and of the habitats that support wetland invertebrates may lead to a direct loss of habitat and habitat which supports the qualifying features within the sites.	<u>Route Alignment</u> ■ The proposed inland route at Chetney peninsular, Barksore Marshes, Hamgreen Saltings, Bayford, Horsham Marsh and Hoo Marsh will avoid creating a new path on sensitive vegetation which could suffer from repeated trampling. ■ The route at Bedlams Bottom is landward of the saltmarsh habitat being on the edge of an orchard and on a road verge. ■ Following existing rights of way in the remainder of the SPA <u>Coastal Margin</u> ■ Access will be restricted year round at the following sites (albeit for wintering and breeding bird purposes), and these sites are also likely to support sensitive vegetation: Chetney Marsh,	Our proposals avoid creating a new trail in either saltmarsh or grazing marsh habitat where the qualifying wetland plants and habitats that support wetland invertebrates could be subjected to repeated trampling so as to impact of these features. Of the 5.8km where we are proposing new access, most of it is either located outside of the Ramsar site, or where new access is located within the Ramsar site, the trail will be aligned either on a road verge, or around the edge of a copse. Where the Coast Path follows established paths, the route is principally aligned on top of seawalls and other well-worn terrain. All the saltmarsh habitat within the coastal margin has been excluded from public access as it is unsuitable for use. Key grazing marsh habitat such as Chetney Marsh, Barksore Marshes, Horsham Marsh, Bayford Marsh will be restricted from public access by a formal direction on nature conservation grounds. Regular trampling of the grazing marsh at Kingsnorth Grazing Marsh is unlikely due to a series of	Yes

Risk to conservation objectives	Relevant design features of the access proposal	Can 'no adverse effect' on site integrity be ascertained? (Yes/No) Give reasons.	Residual effects?
	Barksore Marshes, Horsham Marsh, Bayford Marsh by a formal direction on nature conservation grounds. ■ Much of the saltmarsh foreshore, and the saltmarsh islands are unsuitable for walking and access will be excluded by direction ■ The proposed route will be well marked and clear to follow and therefore visitors are unlikely to stray from the path	ditches impeding access to the site. Providing access to wildlife sites through carefully selected and promoted routes is an effective management technique for reducing disturbance pressure over a site. However, managing access in this way requires a co-ordinated approach between partners involved to be effective. The environmental conditions of Medway Estuary and Marshes, The Swale and the Thames Estuary and Marshes SPA and Ramsar site are dynamic and influenced by a number of human activities. It is possible there are other plans and projects currently in development that could, in combination with the Coast Path, lead to adverse effects on the integrity of the site. In light of this uncertainty, and in order to ensure that the implementation of coastal access in this area doesn't lead to adverse effects on integrity in combination with other planned initiatives, we have carried out a further in-combination assessment below.	

Conclusion:

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

- The installation of access management infrastructure may lead to a loss of habitat which supports the qualifying features, including for all necessary stages of the non-breeding/wintering period (moulting, roosting, loafing, and feeding).

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

- Disturbance to foraging or resting non-breeding waterbirds
- Disturbance to breeding birds
- Trampling of sensitive vegetation

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

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

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

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

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

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

We have reviewed other plans or projects that we are aware of at the time of making this assessment and might also give rise to insignificant and combinable effects. In the Table below we identify those for which appreciable effects that are not considered by the relevant competent authority to be significant alone, but which could combine with effects of our access proposal that we would otherwise consider to be insignificant (it is not the purpose of in-combination assessment to consider the effects of other plans or projects that are thought to be significant in their own right).

Table 9. Review of other live plans and projects

Competent Authority	Plan or project	Have any insignificant and combinable effects been identified?
Medway Council	Medway Local Plan 2012-2035	**No.** The Appropriate Assessment associated with the plan considers the risk of disturbance to non-breeding waterbirds' use of the estuary as a result of more people living within 6km of the coast. A Strategic Access Management and Monitoring (SAMM) Strategy has been developed that will be implemented over the planning period. It is designed to avoid effects of increased visitors and urbanisation which arise from additional housing near a European site. As a result, it was concluded that the planned allocation of new homes would not lead to an adverse effect on integrity, and no further residual impacts were identified.
Swale Borough Council	Swale Local Plan (2017)	**No.** The Appropriate Assessment associated with the plan considers the risk of disturbance to non-breeding waterbirds' use of the estuary as a result of more people living within 6km of the coast. A Strategic Access Management and Monitoring (SAMM) Strategy has been developed that will be implemented over the planning period. It is designed to avoid effects of increased visitors and urbanisation which arise from additional housing near a European site. As a result, it was concluded that the planned allocation of new homes would not lead to an adverse effect on integrity, and no further residual impacts were identified.
Planning Inspectorate	Kemsley Paper Mill (Development Consent Order granted but project not implemented yet)	**No.** The Appropriate Assessment concluded that residual impacts can be ruled out.
Planning Inspectorate	Wheelabrator Kemsley Generating Station (K3) and Wheelabrator Kemsley North	**No.** The application has not been submitted to the Planning Inspectorate and therefore the project is not at a stage where an assessment of likely significant effects has been carried out.

Competent Authority	Plan or project	Have any insignificant and combinable effects been identified?
	(WKN) Waste to Energy Facility	
Kent County Council	Incinerator Bottom Ash (IBA) recycling facility at Ridham Dock	**No.** The proposals for the recycling facility at Ridham Dock, are not at a stage where an assessment of likely significant effects has been carried out.
Swale Borough Council	Erection of a building for the storage and distribution of cement, Ridham Dock	**No.** The Appropriate Assessment did not identify any insignificant residual impacts due to the proposed mitigation.
Medway Council/Swale Borough Council/Environment Agency	Medway Estuary and Swale Coastal Flood and Erosion Risk Strategy	**No.** The detailed proposals for managed realignment at Chetney Peninsular and Kingsnorth Grazing Marsh, as part of the MEASS Plan, are not at a stage where an assessment of likely significant effects has been carried out.
Natural England	Implementation of coastal access from Grain to Woolwich	**Yes.** The Appropriate Assessment for the Thames Estuary and Marshes SPA determined that they could not rule out residual disturbance impacts to foraging or resting non-breeding waterbirds, and breeding waterbirds.
Natural England	Implementation of coastal access at Isle of Sheppey	**No.** The proposals for the Isle of Sheppey coastal access stretch are not at a sufficiently detailed stage where an assessment of likely significant effects on has been carried out.
Natural England	Implementation of coastal access from Whitstable to Iwade	**Yes.** The Access and Sensitive Features Appraisal for The Swale SPA and Ramsar site, published on 21 June 2017, could not rule out residual disturbance impacts to resting non-breeding waterbirds.
Natural England	Implementation of coastal access from Tilbury to Southend-on-Sea	**No.** The proposals for the Tilbury to Southend-on-Sea coastal access stretch are not at a sufficiently detailed stage where an assessment of likely significant effects on the Thames Estuary and Marshes SPA and Ramsar site has been carried out.

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

- Implementation of coastal access from Grain to Woolwich on the Thames Estuary and Marshes SPA and Ramsar site (disturbance to foraging or resting non-breeding waterbirds and disturbance to breeding waterbirds)
- Implementation of coastal access from Whitstable to Iwade on The Swale SPA and Ramsar site (disturbance to resting non-breeding waterbirds)

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

In light of the conclusions of Steps 1 & 2, we have made an assessment of the risk of in combination effects. The results of this risk assessment, taking account of each qualifying feature of each site and in view of each site's Conservation Objectives, are as follows:

Table 10. Assessment of adverse effect on integrity in-combination

Residual risk	In-combination effect	Assessment of risk to site conservation objectives	Potential adverse effect?
A higher frequency of interactions between people using the coast path and waterbirds feeding close to the shore on the Thames Estuary and Marshes SPA and Ramsar site	There is a possible risk of increased disturbance pressure if partners do not work together effectively to manage recreational use.	There are no breeding sites or wintering roost sites in Grain Coastal Park just mudflats used for foraging. The Grain to Woolwich Coast Path follows existing public footpaths and where a new trail is created it has avoided creating new access adjacent to important feeding mudflats. The Iwade to Grain Coast Path follows existing public footpaths and uses the existing popular route along the Grain promenade, and would therefore not have a long-term effect on the ability of the site to support the non-breeding waterbirds.	No
A higher frequency of interactions between people using the coast path and waterbirds	There is a possible risk of increased disturbance pressure if partners do not work together effectively to	The Whitstable to Iwade Coast Path identified residual impacts to wintering roost sites from visitors using existing public footpaths. The Iwade to Grain Coast Path follows existing public footpaths in Ridham Dock and has not identified any	No

Residual risk	In-combination effect	Assessment of risk to site conservation objectives	Potential adverse effect?
resting close to the shore on The Swale SPA and Ramsar site	manage recreational use.	wintering roost sites in this area, so the Coast Path would therefore not have a long-term effect on the ability of the site to support the non-breeding waterbirds.	

D5. Conclusions on Site Integrity

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

Natural England has concluded that:

It can be ascertained, in view of site conservation objectives, that the access proposal (taking into account any incorporated avoidance and mitigation measures) will not have an adverse effect on the integrity of Medway Estuary and Marshes SPA and Ramsar site, The Swale SPA and Ramsar site and the Thames Estuary and Marshes SPA and Ramsar site either alone or in combination with other plans and projects.

PART E: Permission decision with respect to European Sites

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

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

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

Certification

Assessment prepared and completed by:	Francesca Sanchez	*On behalf of the Coastal Access Programme Team*
Date	16 December 2019	
Assessment quality assured by:	Jenny Bowen	*On behalf of the Coastal Access Programme Team*
Date	16 December 2019	
HRA approved:	Kristoffer Hewitt	*Senior officer with responsibility for protected sites*
Date	16 December 2019	

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Appendices

Appendix 1. Bird Wise North Kent Seasonal Ranger Report 2018 (prioritisation of sites for ranger engagement)

Location	**Bird Wise Priority Sites**
Chetney peninsula (and Deadman's Island)	■ Not a priority as low footfall/inaccesible
FuntonCreek /Bedlams Bottom	■ Bedlams Bottom - Medium Priority: Low footfall, medium to high number of birds
Barksore Marshes	■ Not a priority as currently inaccessible
Lower Halstow (and Twinney's Saltings)	■ Medium Priority: Medium to low footfall, high number of birds
Horsham Marsh, Bayford, Hamgreen Saltings and Otterham Creek	■ Not a priority as currently inaccessible
Motney Hill/Riverside Country Park	■ High Priority: High footfall, high number of birds
The Strand	■ Medium Priority: Medium footfall, medium number of birds
Hoo Marsh/Hoo Flats	■ High Priority: Medium footfall, high number of birds
Grain Coastal Park	■ Medium Priority: Medium footfall, medium number of birds

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

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Enquiries about the proposals should be addressed to:

Coastal Access Delivery Team – South East

Natural England

International House

Floor 9

Dover Place

Ashford

Kent

TN23 1HU

Telephone: 0208 026 8045

Email: southeastcoastalaccess@naturalengland.org.uk

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https://www.gov.uk/government/collections/england-coast-path-improving-public-access-to-the-coast

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